

PROPRIETARY NOTICE AND LIABILITY DISCLAIMER

The information disclosed in this document, including all designs and related materials, is the valuable property of NEC Corporation (NEC) and/or its licensors. NEC and/or its licensors, as appropriate, reserve all patent, copyright and other proprietary rights to this document, including all design, manufacturing, reproduction, use, and sales rights thereto, except to the extent said rights are expressly granted to others.

The NEC product(s) discussed in this document are warranted in accordance with the terms of the Warranty Statement accompanying each product. However, actual performance of each such product is dependent upon factors such as system configuration, customer data, and operator control. Since implementation by customers of each product may vary, the suitability of specific product configurations and applications must be determined by the customer and is not warranted by NEC.

To allow for design and specification improvements, the information in this document is subject to change at any time, without notice. Reproduction of this document or portions thereof without prior written approval of NEC is prohibited.

Versa is a U.S. registered trademark of NEC Technologies, Inc.

All other product, brand, or trade names used in this publication are the trademarks or registered trademarks of their respective trademark owners.

First Printing — June 1996

Copyright 1996
NEC Technologies, Inc.
1414 Massachusetts Avenue
Boxborough, MA 01719
All Rights Reserved

Copyright 1996
NEC Corporation
7-1 Shiba 5-Chome, Minato-Ku
Tokyo 108-01, Japan
All Rights Reserved

Using this Guide

The *NEC Versa® 4200 Series User's Guide* gives you the information you need to maximize the use of your Versa 4200 notebook computer. Read this guide to familiarize yourself with the Versa 4200 and its features. For specific information see:

- Chapter 1, “Getting Started,” to acquaint yourself with system hardware.
- Chapter 2, “Introducing the Software,” for a concise summary of the applications pre-installed on your system. We included software to let you experience the full spectrum of the system, from using the speakers to creating vivid presentations.
- Chapter 3, “Using Setup,” to customize your notebook’s parameter and power management settings.
- Chapter 4, “Using the Hardware,” for an understanding of NEC Versa 4200 features and functionality. You’ll also master procedures for connecting external options like headphones, microphones, or speakers.
- Chapter 5, “Using Multimedia,” for steps on integrating video and sound clips into impressive presentations.
- Chapter 6, “Traveling with Your Versa 4200,” lists valuable tips for getting the most out of your system while on the road.
- Chapter 7, “Solving Problems,” provides simple solutions to common problems that may arise while operating your notebook.
- Appendix A, “Setting Up a Healthy Work Environment,” provides guidelines to help promote a healthy work setting.

-
- Appendix B, “Specifications and Environment,” reviews the NEC Versa 4200 system specifications.

TEXT SETUP

To make this guide as easy to use as possible, text is set up in the following ways:

- Warnings, cautions, and notes have the following format.



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 system hardware or software.



Notes give particularly important information about whatever 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 information related to the NEC Versa 4200 system operation:

- Your *NEC Versa 4200 Quick Setup Sheet*.
- Your *NEC Versa 4200 Quick Reference Card*.
- The Microsoft® Windows for Workgroups, Windows 95, and MS-DOS operating system online documentation that comes with your NEC Versa 4200 computer.

(For United States Use Only)

**FEDERAL COMMUNICATIONS COMMISSION
RADIO FREQUENCY INTERFERENCE STATEMENT**

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.

Use a shielded and properly grounded I/O cable to ensure compliance of this unit to the specified limits of the rules.

(For Canadian Use Only)

This equipment is a Class B digital apparatus which complies with the Radio Interference Regulations, C.R.C., c.1374.

Cet appareil numérique de la classe B est conforme au Règlement sur le brouillage radioélectrique, C.R.C., ch.1374.

Contents

Using this Guide

Text Setup.....	x
Related Documents	xi

1 Getting Started

Getting To Know Your NEC Versa 4200	1-2
Around the System – Front	1-3
LCD.....	1-3
Controls and Microphone.....	1-4
Status Icons.....	1-5
Keyboard.....	1-7
Infrared (IR) Port.....	1-7
NEC VersaGlide.....	1-7
Diskette Drive, CD-ROM Reader, and the NEC VersaBay II™.	1-8
Around the System — Back.....	1-9
Around the System — Left Side.....	1-10
Around the System — Right Side.....	1-11
Around the System — Bottom.....	1-12
Power Sources For Your NEC Versa	1-13
Using the AC Adapter.....	1-13
Powering on.....	1-15
Using the Main Battery Pack.....	1-15
Replacing the Battery Pack	1-17
Extended Battery Life	1-20
Using the NEC Versa 4000 DC Car Adapter.....	1-20
Internal Li-Ion Batteries	1-21
CMOS Battery	1-21
Bridge Battery	1-21
System Care	1-21
Precautions.....	1-21
NEC Versa 4200 and AC Adapter.....	1-21
Lithium-Ion Battery	1-22
Storage Requirements	1-24
Routine Cleaning	1-24

2 Introducing the Software

Windows Introduction.....	2-2
Windows 95	2-2
Windows for Workgroups.....	2-3
DOS Introduction	2-4
Guide to On-Line Help.....	2-4
NEC Versa 4200 InfoCenter	2-4
Additional On-line Topics	2-6
Guide To NEC Utilities.....	2-6
NEC Diskette Creator.....	2-6
NEC Battery Gauge.....	2-7
PowerPanel.....	2-7
PHDisk.....	2-7
CardWizard.....	2-8
Other Software	2-8
Official Airline Guide (OAG).....	2-8
LapLink	2-9
When to Use LapLink.....	2-9
How to Use LapLink.....	2-10
On-line Services.....	2-11
America Online.....	2-13
CompuServe.....	2-13
Netscape Navigator.....	2-13
McAfee Anti Virus Software.....	2-14
XingMPEG Player™ and Presentation Software	2-15
ESS Audio/Audio Rack	2-15
NeoMagic Video Configuration Utility – Windows for Workgroups.....	2-15
NeoMagic Property Page for Windows 95.....	2-17

3 Using Setup

Setup Utility	3-1
How to Enter Setup.....	3-1
How to Use Setup.....	3-2
Looking at Screens.....	3-2
Using Keys	3-3
Checking/Setting System Parameters.....	3-4
PowerPanel.....	3-9
Reviewing PowerPanel Default Power Settings.....	3-10
Reviewing PowerPanel Default Command Settings.....	3-11

PowerPanel Menu.....	3-11
Preferences	3-12
Customize.....	3-12
Profile Manager.....	3-12
Minimize	3-13
Help	3-13
Setup Utility and PowerPanel.....	3-13

4 Using The Hardware

LCD Panel.....	4-1
Keyboard.....	4-2
NEC VersaGlide.....	4-4
Making VersaGlide Adjustments	4-5
Changing the Button Configuration	4-6
VersaGlide Ergonomic Tips	4-6
NEC VersaBay II	4-7
Removing a Device from the VersaBay II.....	4-7
Installing a Device in the VersaBay II.....	4-9
Customizing Your System with the VersaBay II	4-10
6x CD-ROM Reader.....	4-11
CD Loading.....	4-13
CD Care	4-13
PC Card Slots (PCMCIA).....	4-14
IR Port	4-15
Increasing System Storage And Memory	4-16
Hard Disk.....	4-16
Installing a Memory Card	4-20
Installing Options.....	4-22
External Monitor	4-23
Printer	4-24
Parallel Devices	4-24
Serial Devices.....	4-26
External Keyboard/Mouse.....	4-27
External Bar Code Scanner	4-29
External Audio Options.....	4-29
Docking the NEC Versa 4200	4-30
NEC Versa PortBar 4000	4-31
NEC Versa Docking Station 4000.....	4-31
Setting Switches	4-32
Updating the BIOS	4-32

5 Using Multimedia

Audio	5-1
Recording	5-1
Line-In	5-2
CD-ROM Input	5-2
Microphone	5-3
Mixing.....	5-3
Playing Back	5-3
Using Headphones	5-3
Using Internal Speakers	5-3
Using External Stereo Speakers.....	5-4
MIDI Files.....	5-4
Video.....	5-4
Using Digital Video Files	5-4
Using Animation Files.....	5-4
Multimedia Applications	5-5
VideoSaver.....	5-5
XingMPEG Player Software	5-6

6 Traveling with Your NEC Versa 4200

Power Connections	6-1
Checklists.....	6-2
What to Take.....	6-2
Preparing Your NEC Versa for Travel	6-2

7 Solving Problems

Problem Checklist.....	7-1
Start-Up Problems	7-3
Post Error Messages	7-4
Using the Restore CD	7-6
Restoring All Application Files in DOS.....	7-7
Restoring Individual Files in Windows 95 and Windows for Workgroups.....	7-7
Selecting Files.....	7-8
Checking Selected Files.....	7-9
Restoring the Files	7-9
System Recovery	7-10
System Recovery in DOS.....	7-10
Restoring System Files in Windows 95 or Windows for Workgroups.....	7-11

If You Need Assistance.....	7-12
Getting Help	7-12
NEC Warranty/Non-Warranty Repair Service.....	7-14

A Setting Up a Healthy Work Environment

Making Your Computer Work For You.....	A-1
Arrange Your Equipment	A-2
Adjust Your Chair	A-2
Adjust Your Input Devices.....	A-3
Adjust Your Screen Or Monitor	A-4
Vary Your Workday	A-5
Pre-Existing Conditions And Psychosocial Factors	A-5

B Specifications and Environment

System Processor.....	B-1
Random Access Memory (RAM)	B-1
Read-Only Memory (ROM).....	B-1
Calendar Clock.....	B-1
Input/Output Facilities	B-1
PCMCIA (PC) Card Slots.....	B-2
LCD Display	B-2
Keyboard.....	B-2
Diskette Drive.....	B-3
6x-Speed CD-ROM Reader	B-3
Hard Disk Drive	B-3
Power.....	B-4
Dimensions.....	B-4
Weight.....	B-5
Recommended Environment	B-5
Options for the NEC Versa 4200.....	B-5

Glossary

Index

1

Getting Started

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 4200 is ready to go! To get started, look at 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.
- Take the on-line *System Tour* to get acquainted with the NEC Versa 4200.
- View the on-line *Owner’s Manual* in the NEC Versa 4200 InfoCenter.
- Read through this guide to familiarize yourself with the NEC Versa.

GETTING TO KNOW YOUR NEC VERSA 4200

The NEC Versa 4200 Series notebook computer offers you a portable system filled with exciting resources for home, business or travel. Standard features include a powerful Intel® Pentium 100 MHz or 133 MHz microprocessor that works together with the latest VL-Bus Accelerated Video architecture.

In addition, your system provides a high performance hard disk drive, floppy diskette drive (or interchangeable CD-ROM reader), and Personal Computer (PC) card support. As a multimedia system, your NEC Versa also provides the tools needed to create and present impressive images using video clips and sound.



The CD-ROM Reader only ships with the 133MHz systems.

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



NEC Versa 4200 Series notebook computer

Around the System — Front

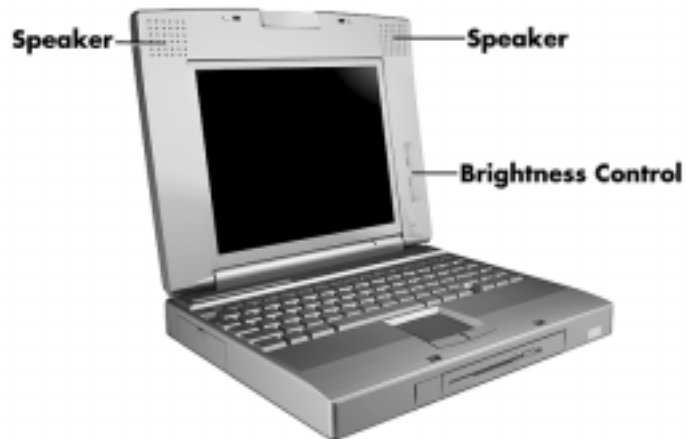
The NEC Versa 4200 is compact with features on every side. First, look at the front of the NEC Versa 4200. The following section describes the front features beginning with the liquid crystal display (LCD).

LCD

Your NEC Versa 4200 comes with a color liquid crystal display (LCD) that you can adjust for a comfortable viewing position. The LCD provides a 10.4-inch Super Video Graphics Array (SVGA) Thin Film Transistor (TFT) display.

LCD panel features include:

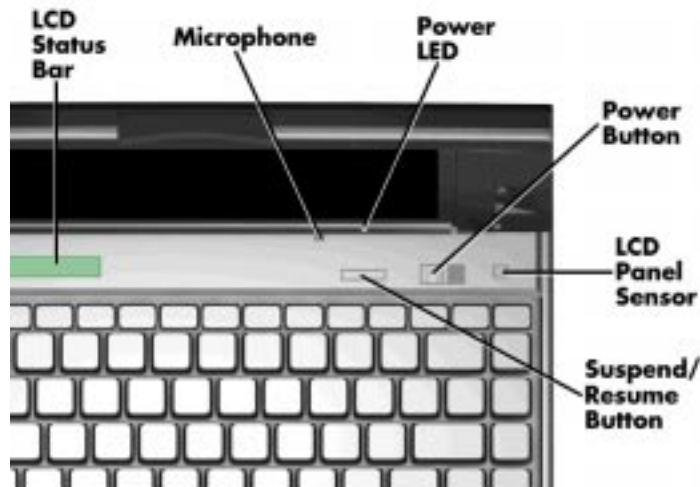
- Built-in Stereo Speakers — provides stereo sound for your multimedia presentations, or listening pleasure.
- Brightness Control — a slide switch to adjust the screen backlight brightness.



LCD features

Controls and Microphone

The NEC Versa 4200 controls and the built-in microphone are shown in the following figure. These features are described after the figure.



Controls and microphone

- **LCD Status Bar** — the status panel keeps you informed about your NEC Versa's current operating status. See "Status Icons" in the next section for icon descriptions.
- **Microphone** — allows you to record monophonic sound directly into your notebook computer.
- **Power LED**
 - Lights green when the system is powered on.
 - Blinks green when the system is in Suspend mode.
 - Blinks amber to indicate that battery power is low and needs to be recharged.
- **Suspend/Resume (S/R) Button** — press the S/R button to put the unit into Suspend mode when you need to be away from your system for a short period of time and want to return to where you left off. Press S/R button again to bring the NEC Versa 4200 out of Suspend mode.

Specifically, suspend mode shuts down all devices in the system while retaining data and system status.

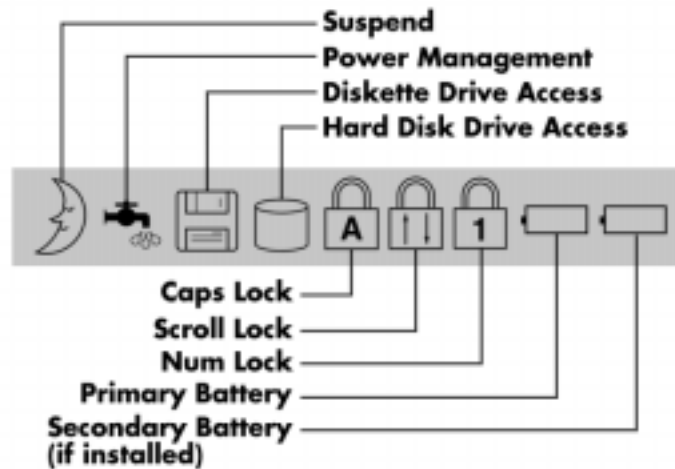
- **Power Button** — slide the power button to the right to power on and power off the notebook computer.

The power button is a “smart” switch, meaning that it recognizes when the system is in Suspend mode. You cannot power off the system until you press the suspend button and bring it out of Suspend mode first.

- **LCD Panel Sensor**— senses when the LCD panel is closed and turns off the panel.

Status Icons

The NEC Versa 4200 uses nine LCD icons that communicate system status. See the following figure and list for each icon’s meaning.



Reviewing status icons

- **Suspend** — appears when the system is in Suspend mode. Suspend mode conserves system power by shutting down all devices in the system while retaining data and system status.

-
- **Power Management** — shows the current power management mode in use, including Off, Longest battery life, Highest performance, or Custom settings.
 - **Diskette Drive Access** — appears when writing data to or retrieving from a diskette.
 - **Hard Disk Drive Access** — shows when writing data to or retrieving data from the system's hard disk.
 - **Caps Lock** — appears when caps lock is in effect.
 - **Scroll Lock** — shows that scroll lock is in effect.
 - **Num Lock** — appears when Num Lock mode is active.
 - **Battery** — displays the percent of battery power available. If you have two battery packs installed, two battery icons appear.
 - 4 bars indicate a 76 - 100% charge
 - 3 bars indicate a 51 - 75% charge
 - 2 bars indicate a 26 - 50% charge
 - 1 bar indicates a 1 - 25% charge.



When installing a new battery, the first and third bars on the battery gauge may flash. This indicates an unknown battery status. To correct the reading, recharge your battery for a minimum of 8 hours. If the battery still shows an unknown status, contact the dealer from whom you purchased the battery for a replacement.

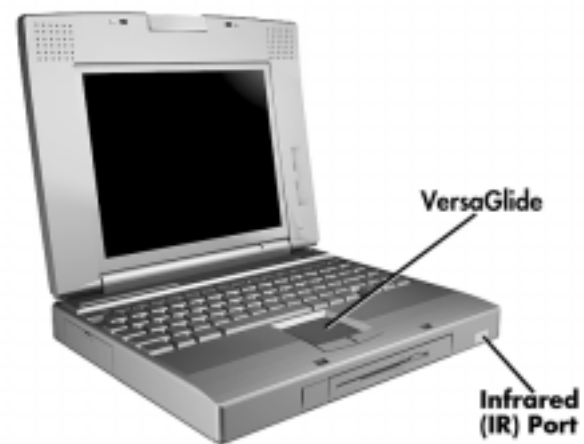
Keyboard

The NEC Versa 4200 keyboard uses 83 keys (79 keys for International), with the standard QWERTY-key layout. See Chapter 4, “Keyboard” for details. You can also refer to the on-line information in the NEC Versa 4200 InfoCenter.

Infrared (IR) Port

The infrared (IR) port on your system lets your NEC Versa 4200 communicate with other devices with infrared ports. You can easily transfer files between your NEC Versa and another IR-equipped computer or print to an IR-equipped printer without using cables. (Device drivers are required for some devices including printers.)

This port is Serial-Infrared (S-IR), IrDA compatible.



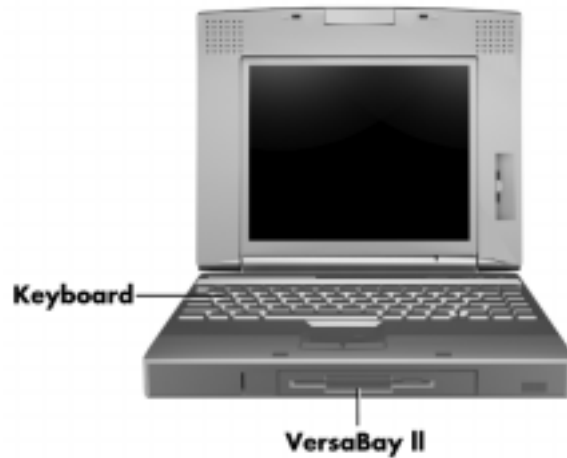
NEC VersaGlide

The NEC VersaGlide 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 and deselect menu items. Or, single tap on the VersaGlide to select and double tap to execute.

Diskette Drive, CD-ROM Reader, and the NEC VersaBay II™

Depending on the NEC Versa 4200 model you purchased, either a 1.44-MB diskette drive or a 6x CD-ROM drive is installed in the VersaBay II. If your system has the 1.44-MB diskette drive, you can remove it from the VersaBay II and replace it with the 6x CD-ROM reader. It's your choice!

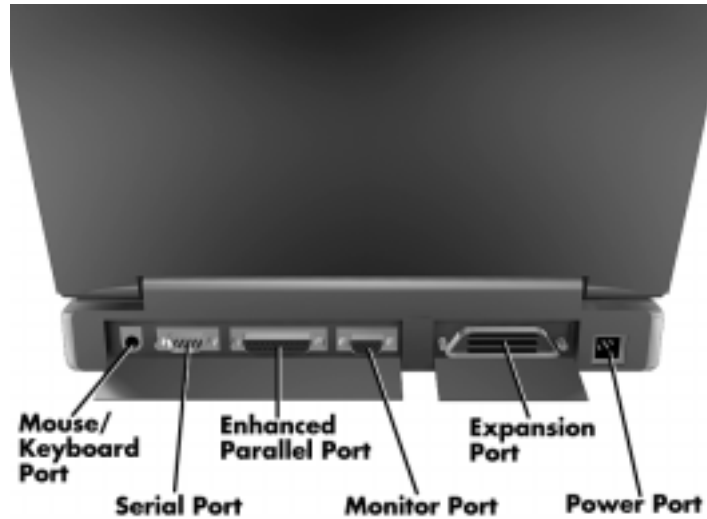
The VersaBay II lets you install additional options, including an optional second Li-Ion battery or an additional hard disk drive, see "Customizing Your System with the VersaBay II," in Chapter 4 for more details.



VersaBay II

AROUND THE SYSTEM — BACK

You'll find system ports for connecting your NEC Versa 4200 to optional devices (like a printer, docking station, or external monitor) on the back of your NEC Versa. For an understanding of each feature, see the descriptions that follow the figure.



Back system features

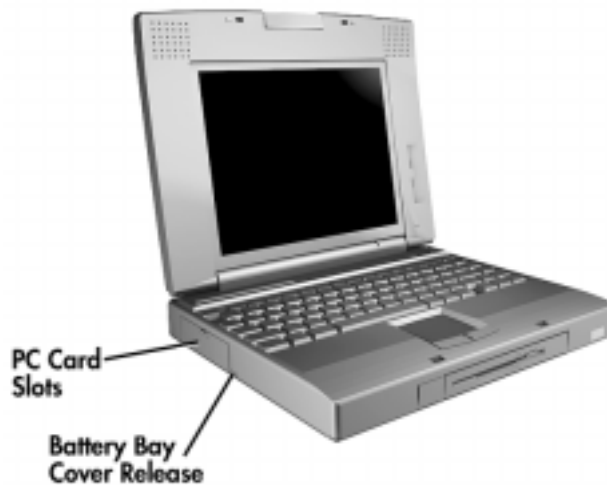
- **Mouse/Keyboard Port** — Use the standard PS/2 port to connect an external PS/2-style mouse or a PS/2-style keyboard to the system. With an optional Y-cable adapter, you can connect both a mouse and a keyboard at the same time. Note that the VersaGlide is disabled when an external mouse is connected.
- **Serial Port** — Use this port to connect an external modem or other serial device. A serial cable has a 9-pin connector.
- **Enhanced Parallel Port (EPP)** — Use this port to connect a parallel printer or other parallel device. A parallel cable has a 25-pin cable connector. The Versa 4200 series also supports Extended Capability Port (ECP).
- **Monitor (Video) Port** — Use this 15-pin connector port to attach an external monitor to your NEC Versa. You can run the LCD display and the external monitor simultaneously or run each alone.

-
- Expansion Port — This bus connector is dedicated to the optional NEC PortBar 4000 or NEC Versa Docking Station 4000.
 - Power Port — Use the power jack to attach the NEC Versa to an AC or DC power source such as the AC adapter or the available car adapter.

AROUND THE SYSTEM — LEFT SIDE

The left side of your NEC Versa 4200 has two slots for inserting two Type II PC Cards (formerly called PCMCIA cards). You can also insert one Type III PC Card. The PC Card is a standard interface for peripheral devices. It is about the size and shape of a credit card and is inserted into one of the PC Card slots.

The battery bay cover release is also located on the left side of the unit. The battery bay (located on the bottom of the unit) contains a Lithium Ion (Li-Ion) battery that lets you run your system on DC power.



Left side features

AROUND THE SYSTEM — RIGHT SIDE

The Kensington lock socket, hard disk drive, cover release latch, and audio ports are located on the right-side of the NEC Versa 4200. For an understanding of each feature, see the descriptions that follow the figure.



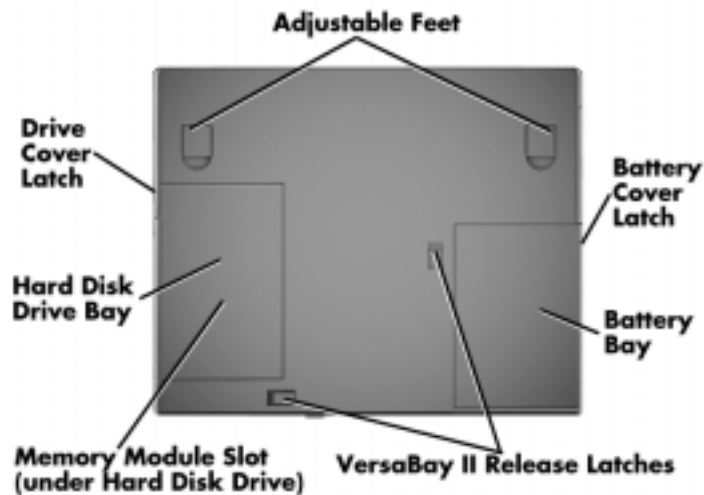
Right side features

- Kensington Lock Socket — Lets you provide added security by installing an optional Kensington Lock.
- Hard Disk Drive Cover Release Latch — Used to release and remove the cover to gain access to the hard disk drive bay, which contains the removable hard disk drive.
- Volume Control Dial — Allows you to control the speaker and headphone volume.
- Headphones — Lets you connect external headphones or speakers to your NEC Versa 4200. Plugging in headphones disables the built-in system speakers.
- Microphone (MIC) — Allows you to connect an external microphone for monophonic recording or amplification through the unit. Plugging in an external microphone disables the built-in microphone.

-
- **Line-Out** — Lets the NEC Versa 4200 act as an input source for another audio system. Connect this port to a Line-In port on another audio system to play or record.
 - **Line-In** — Lets you use another audio system, like a home stereo, as an input source. Use a cable to connect to the Line-Out port on the other audio system to record or play.

AROUND THE SYSTEM — BOTTOM

The bottom of the NEC Versa 4200 contains the features shown. For an understanding of each feature, see the descriptions that follow the figure.



Bottom features

- **Hard Disk Drive Bay** — Contains the system's standard hard disk drive. If you remove the hard disk drive, you'll see a memory module connector for expanding system memory. You'll also see four dip switches. These are explained in Chapter 4, "Using Your Hardware."

When you turn the system upside down with the front towards you, the hard disk drive is located on the left front of the system.

- **Memory Module Slot** — Located just under the hard disk drive, this slot lets you add an optional memory card to expand your system's memory. See the online *Options Catalog* for a list of available memory options.

-
- NEC VersaBay II Release Latches — These latches release the device, such as diskette drive, CD-ROM reader, etc. currently installed in the bay.
 - Adjustable Feet — The adjustable feet let you change the angle and level of the NEC Versa 4200.
 - Battery Bay — Contains the system's standard Lithium Ion (Li-Ion) battery that lets you run your system on DC power. The battery bay is located on the right front of the system when the system is upside down with the front towards you.

POWER SOURCES FOR YOUR NEC VERSA

The NEC Versa 4200 can be powered using three different sources, making it a truly portable system. Operate your NEC Versa 4200 just about anywhere using one of the following power sources:

- the AC adapter connected to an electrical wall outlet (using AC power)
- the battery pack and/or an optional second battery pack
- the optional DC adapter connected to a car cigarette lighter.

Read the following sections for specific steps on powering on the system.

Using the AC Adapter

Use the AC adapter that came with your NEC Versa to run your computer on alternating current (AC) power, or to recharge the battery pack. Use the AC adapter whenever a wall outlet is nearby.

Keep the adapter connected whenever possible. The AC adapter charges the battery whether or not you are using the NEC Versa.



AC Power Adapter



Check that the AC outlet voltage falls in the range of 100–240 Volts AC. Verify that the cord and plug are appropriate for your AC source.

Connect the AC adapter as follows:

1. With the front of the NEC Versa facing you, connect the AC adapter cable to the power port on the back left side of your NEC Versa 4200.
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 wall outlet.



Different countries use different types of AC power cables. Contact a local dealer to purchase the correct power cable.

Powering on

Power on the system as follows.

1. Locate the latch on the front of the LCD panel, press the latch up, and raise the panel.
2. Locate the power button (see the following figure) and slide it to the right to turn on system power.



Powering on the system

Using the Main Battery Pack

The NEC Versa 4200 comes with a rechargeable Lithium Ion (Li-Ion) battery pack. You can run your system on battery power for up to 5.5 hours with Power Management or 2.5 hours without Power Management. The battery is easy to install and remove.

Your NEC Versa 4200 provides some tools to help you monitor the battery power level; the status bar icons described earlier in this chapter, and the battery gauge in the Power Panel toolbar. Both let you know how much battery power remains. See Chapter 3, *Using Setup*, for more details on using PowerPanel.



When installing a new battery, the first and third bars on the battery gauge may flash. This indicates an unknown battery status. To correct the reading, recharge your battery for a minimum of 8 hours. If the battery still shows an unknown status, contact the dealer from whom you purchased the battery for a replacement.

When battery power is very low, a single bar on the battery status LCD blinks. If the system speaker is enabled, 3 low battery warning beeps are emitted.

When battery power gets low, do any of the following:

- Put your system in Suspend mode, remove the battery pack, and replace it with a fully charged Li-Ion battery.
- Leave the battery pack in the system and connect your NEC Versa to the AC adapter and a wall outlet. If you connect the system to AC power, the battery recharges in 2.5 hours, or more depending on the system usage.
- Leave the battery pack in the system and connect your NEC Versa to the optional NEC Versa 4000 DC car adapter (system runs on car battery power.)

You can also buy an optional battery charger to quickly charge your battery. See the on-line *Options Catalog*.

WARNING

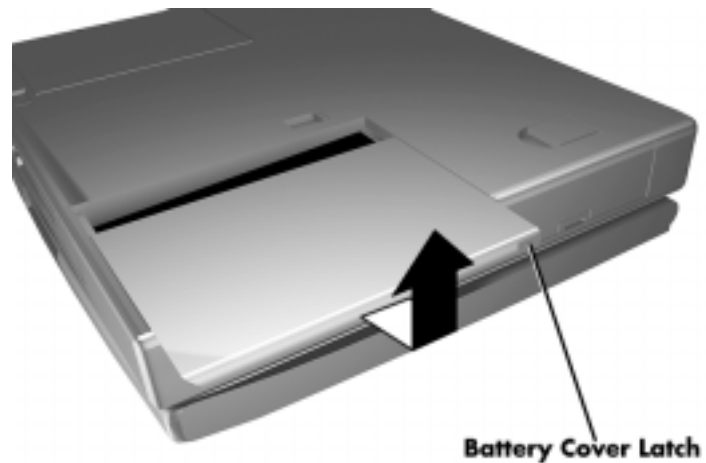
To prevent accidental battery ignition or explosion, adhere to the following:

- Keep the battery away from extreme heat.
- Keep metal objects away from the battery terminals to prevent causing a short circuit.
- Make sure the battery is properly installed in the battery bay.
- Read the precautions printed on the battery itself and in the on-line *Owner's Manual* in the NEC Versa 4200 InfoCenter.

Replacing the Battery Pack

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

1. Save your files, exit Windows, and press the Suspend button or turn off the system power.
2. Close the LCD and turn the system over.
3. Release the battery cover latch and slide the battery bay cover away from the system.
4. Then lift the cover up and away from the system.



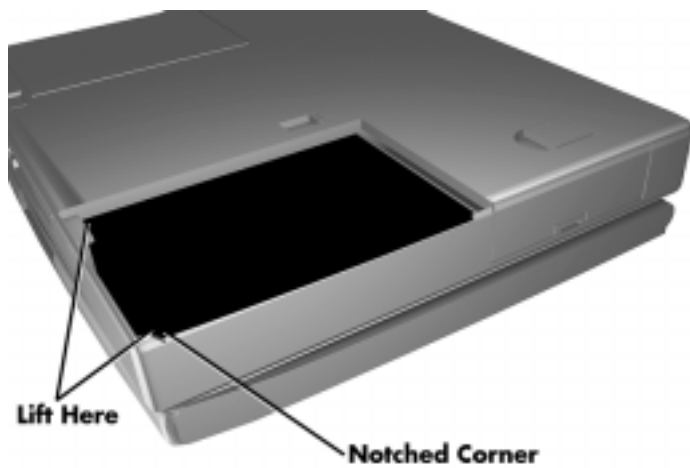
Removing the cover

5. Locate the notched corner on the battery. Placing your fingers in the notched corner, lift the battery out of the system.



CAUTION

Always lift the battery out of the system by the notched end. Failure to do so can damage the battery terminals.



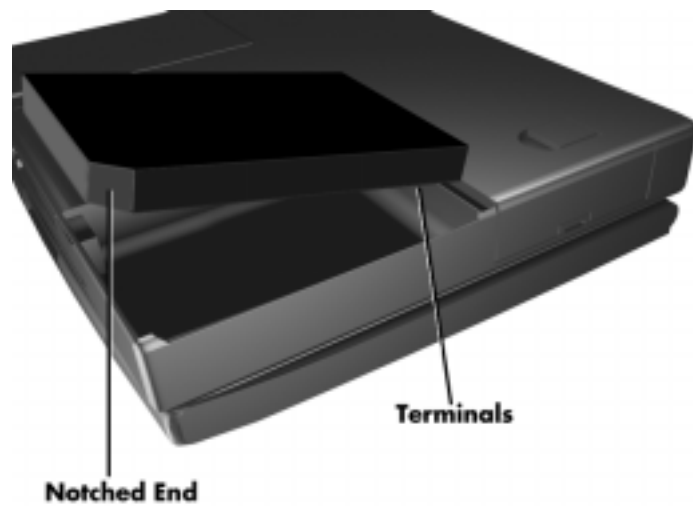
Removing the battery

6. Insert the new battery as follows:
 - Align the battery terminals with the terminals in the system.
 - Lower the terminal end of the battery pack into the bay.
 - Next, lower the notched end into the bay.



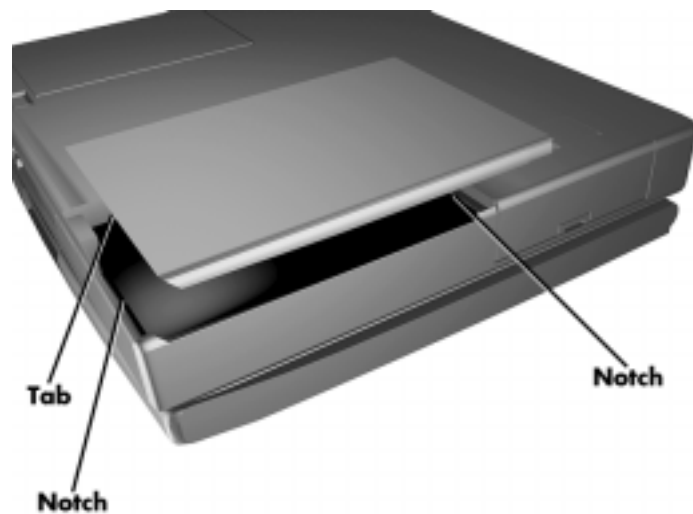
CAUTION

When installing a battery pack, be careful not to twist the terminals.



Inserting the battery pack

7. Replace the battery bay cover as follows:
- Align the tabs on the battery cover with the notches in the system.
 - Lower the cover onto the system.
 - Slide the cover towards the middle of the unit until the cover locks into place.



Replacing the cover

Extended Battery Life

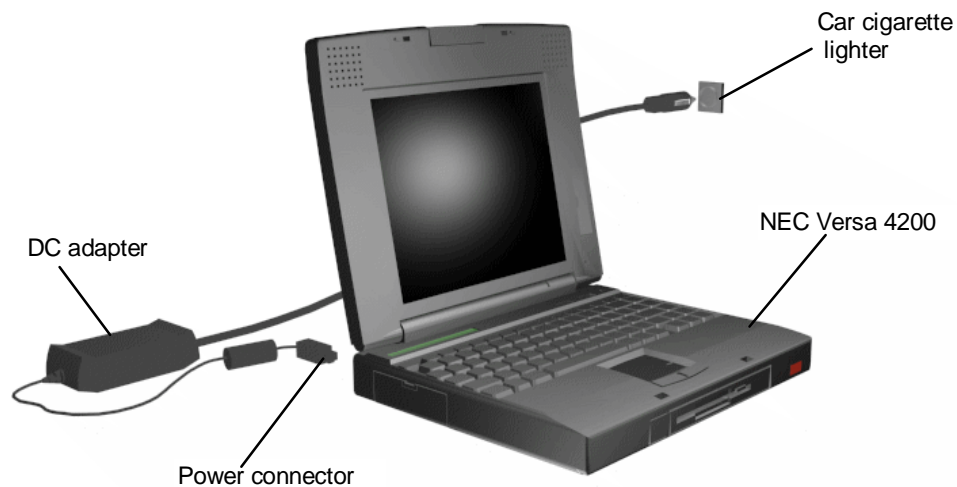
While on the road, it is important to be aware of the simple things you can do to extend the life of the system's main battery. One way is to keep the LCD backlight setting to Standard instead of Full. You can toggle between these two settings by pressing the function keys (**Fn + F5**).

You will find an extensive explanation of how best to apply the power management tools that your system offers in the *Owner's Manual* in the on-line documentation under the NEC Versa 4200 InfoCenter. Other important topics to view in the on-line document include Maximizing Battery Life, When to Change the Battery, and Charging and Disposal.

Using the NEC Versa 4000 DC Car Adapter

The NEC Versa 4200 can run on car battery power using the optional NEC Versa 4000 DC car adapter.

1. Disconnect the AC adapter from the system, if connected.
2. Plug the appropriate end of the car DC adapter into the power port on the system.
3. Connect the plug of the DC car adapter to a car cigarette lighter.



Connecting the car DC adapter

Internal Li-Ion Batteries

A Lithium Ion (Li-Ion) battery provides the main power source in your NEC Versa 4200 computer. See Appendix B for a list of Li-Ion battery specifications. In addition to this battery, the CMOS battery and bridge battery provide system backup.

CMOS Battery

This lithium battery provides battery backup and prevents data loss in the system's complementary metal oxide semiconductor (CMOS) RAM. This memory area contains information on the system's configuration, for example date, time, drives, and memory. The CMOS battery lasts approximately two years.

Only an authorized NEC dealer can change a CMOS battery.

Bridge Battery

The bridge battery saves your system status in Suspend mode, retaining memory contents and system status while the spent battery is removed and replaced. This gives you time to install a fully charged battery or plug in AC power when your battery charge becomes low.

Only an authorized NEC dealer can change a bridge battery.

SYSTEM CARE

The NEC Versa 4200 is a durable, dependable system built for extensive use and travel. Follow these guidelines to maintain the condition and performance of your computer.

Precautions

Follow these precautions when using your NEC Versa 4200, AC adapter, and the Li-Ion battery. For additional information, contact the NEC Customer Technical Support Center.

NEC Versa 4200 and AC Adapter

- Avoid dropping or bumping the computer or the AC adapter.
- Do not stack heavy objects on the computer.
- Avoid moving the NEC Versa 4200 during system operation, especially while the hard disk or diskette 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 AC. Never use the AC adapter if the voltage falls outside of this range. (Watch for this when traveling to foreign countries.)
 - Turn computer power off before attaching or removing non-plug and play devices.
 - Avoid using the computer or AC adapter for extended periods in direct sunlight.
 - Do not use the system in humid or dusty environments.
 - Turn the computer power off before cleaning it.
 - Avoid exposing the NEC Versa 4200 or AC adapter to extreme changes in temperature or humidity. If it is unavoidable, allow your NEC Versa to adjust to room temperature before using.
 - When cleaning the system, use a soft, clean, dry cloth. Avoid wiping the display surface with abrasive material, including rough fabric.
 - If the AC adapter becomes extremely hot, unplug the adapter and let it cool.
 - Do not direct an IR port towards the LCD panel.
 - Keep the AC adapter away from the IR port.

Lithium-Ion Battery

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

- Keep the battery away from heat sources including direct sunlight, open fires, microwave ovens, and high-voltage containers. Temperatures over 140°F (60°C) may cause damage.
- Do not drop or impact 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 terminals. Metal objects that come in contact with the terminals can cause a short circuit and damage the system.

If the battery fluid leaks:

- If the battery fluid 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; immediately 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.

Recharging Precautions:

- Use only the NEC battery charger designed for your NEC Versa battery type. Different NEC Versa models require different batteries and battery chargers.
- Charge the battery for the specified charge time only.
- During charging, keep the environment temperature between 32°F and 104°F (0°C to 40°C).
- Read the instructions that came with the battery charger before charging the battery.

Handling

- Use only the Li-Ion battery designed for your system in the NEC Versa. Mixing other manufacturer's 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 terminals with a dry cloth when they get dirty.

-
- Keep the battery out of the reach of children.

Storage Requirements

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

- Maintain storage temperatures between -4°F and 104°F (-20°C and 40°C).



CAUTION

If the temperature of the NEC Versa suddenly rises or falls (for example, when you move the system from a warm place to a cold 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 can evaporate.

- Do not store the computer and AC adapter in an area with vibrations or 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 4200.

These cleaners are usually high in alkalinity which is measured in pH. Using these cleaners can cause the plastic surface to crack or discolor.

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

2

Introducing the Software

The following software comes with your NEC Versa 4200:

- Windows 95 or Windows for Workgroups
- MS-DOS[®]
- On-line Help
- NEC Utilities
 - Phoenix[®] PowerPanel[™]
 - Battery Gauge
 - NEC Diskette Creator
 - PHDisk
- Other Software
 - CardWizard[™] (Windows for Workgroups only)
 - Official Airline Guide (OAG)
 - Laplink Traveling Software
 - Netscape Navigator
 - CompuServe[®]
 - America Online[®]
 - McAfee Anti-Virus (WebScan[™] and VirusScan[™])
 - XingMPEG Player[™] & Presentation Software
 - ESS Audio/Audio Rack
 - NeoMagic Configuration Utility for Windows for Workgroups
 - NeoMagic Property Page for Windows 95

WINDOWS INTRODUCTION

Your NEC Versa 4200 gives you the one-time option of loading either Windows 95 or Windows for Workgroups to use on your system. Both Microsoft operating systems provide a means of running applications, navigating through your file structure, and using your notebook computer. Each operating system offers its own look and means of operation.

Both Windows 95 and Windows for Workgroups employ a graphical interface to make the operating systems easy to use.

Windows 95

Windows 95 gives you the newest features offered by Microsoft, including a Desktop with room to maneuver, a Taskbar for quick navigation between open windows, plug and play features, on-line networking functions, and more.

When you choose to install Windows 95, the following icons are loaded on your desktop:

- My Computer — provides access to drives, printers, the control panel, and network features.
- Inbox — lets you access the Microsoft fax and mail software as well as Microsoft network services.
- Microsoft Network — lets you access the Microsoft Network online services with an optional PC card or external modem.
- Recycle Bin — gives you a trash container in which to put unwanted files.
- My Briefcase — gives you quick access to files you frequently use.
- Start — displays a pop-up menu with which to start programs and applications, open documents, access system settings, look at on-line help, and shut down your system.
- NEC Versa 4200 InfoCenter — provides several levels of information about your NEC Versa 4200. (This is discussed in more detail later in this chapter.)
- Internet — lets you set up a connection via a modem or network PC card to the Internet.

For instructions on using Windows 95, see the online *Using Windows 95*.

Windows for Workgroups

Windows for Workgroups offers the Windows interface to which experienced users are accustomed. Application icons are placed in groups, which are represented by group icons. To start an application, highlight and double click or double tap on the application icon.

The Program Manager contains the following groups:

- VideoSaver — contains VideoSavers screen saver programs.
- NEC Versa 4200 Utilities — Includes small programs written by NEC to help you manage your NEC Versa computer.
- NEC Versa 4200 InfoCenter — Includes on-line topics specific to the NEC Versa, NEC customer support, and Windows and DOS.
- Main — Includes programs and tools to help you control printing; set up printers, plotters, customize the desktop; and manage files.
- NEC Versa 4200 Demo — contains the NEC Versa 4200 demonstration program.
- MPEG Player — contains the XingMPEG player software.
- VirusScan — contains McAfee virus scanning programs.
- Laplink for Windows — contains the file transfer and remote access program.
- Audio Rack — contains the sound playback and recording software.
- Online Install — contains the setup program for America Online, CompuServe, and Netscape Navigator software programs.
- OAG Flight Disk — contains the travel planning software.
- Accessories — Includes desktop programs that come with Windows, such as a simple word processing program, a drawing program, and a calculator.
- Startup — Lets you add programs to start automatically when you enter Windows.
- Network — contains the programs to configure Microsoft networking with an optional network adapter, and a networked calendar utility called Scheduler.

-
- Games — Gives you a way to practice your VersaGlide skills or just relax.

See the on-line *Windows QuickStart* document in the NEC Versa 4200 InfoCenter program group for detailed instructions on using Windows.

DOS INTRODUCTION

MS-DOS is the Microsoft disk operating system that runs the computer. DOS uses commands that every personal computer user needs to know a little about. The Windows environment makes it possible for you to manage your system and application programs without knowing DOS commands, but as you become more comfortable with computers you may want to begin learning DOS.

For detailed instructions on how to use MS-DOS, refer to the on-line book *MSDOS QuickStart 6.22* in the NEC Versa 4200 InfoCenter program group.

GUIDE TO ON-LINE HELP

The NEC Versa 4200 has plenty of information for you on-line. The NEC Versa 4200 InfoCenter group contains information about your NEC Versa 4200, warranty coverage, customer services, and options available for use with your NEC Versa.

NEC Versa 4200 InfoCenter

The NEC Versa 4200 InfoCenter contains several specific areas of information to help you.

- *System Tour*

The *System Tour* gives you a complete tour of the system, pointing out components, switches, software, and utilities. Take the tour to become comfortable with your new NEC Versa 4200.

- *Owner's Manual*

The *Owner's Manual* highlights the NEC Versa 4200's basic and advanced features. Basic topics include using the keyboard and VersaGlide pad, using multimedia functions, and caring for your system. You also can learn about more advanced topics like docking your NEC Versa, connecting external devices, increasing memory, using the Power Management and Plug and Play features. In addition, this segment describes how to add options like PC Cards and drivers.

- *Product Information Center*

The *Product Information Center* provides you with the detailed product information like the system's specifications, switch settings, and NEC utilities. You can even get answers to commonly asked questions right at your fingertips.

- *Support Center*

The NEC *Support Center* gives solutions if you encounter any common problems. And if you can't find the answer here, the *NEC Customer Support Guide* can provide various levels of support (like phone numbers) that NEC offers. In addition, the *NEC UltraCare Guide* explains the warranty program that can help you protect your investment in the NEC Versa 4200!



If you purchased and/or are using this computer outside the U.S., please contact the local NEC office or dealer for the warranty available in your country.

- *Options Catalog*

The *Options Catalog* describes and lists ordering information for options available for your NEC Versa 4200. The NEC Versa 4200 is part of the Versa 4000 family and the options are compatible.



The price information in the *Options Catalog* is only applicable for North America.

Additional On-line Topics

- NEC Customer Support Guide

The *NEC Customer Support Guide* discusses the various levels of support NEC offers you, our customer. We provide information to help you become self-sufficient with your NEC Versa, but if you need help, we're there for you.

- NEC UltraCare Guide

The *NEC UltraCare Guide* describes NEC's three-year warranty program to help you protect your investment in an NEC Versa Series computer.

- The Windows QuickStart 3.11 Guide

This on-line "book" provides lessons on using Microsoft Windows, which runs on the NEC Versa 4200. (This file is available only when Windows for Workgroups 3.11 is the operating system loaded.)

- The MS-DOS QuickStart 6.22 Guide

This on-line "book" offers lessons on using MS-DOS, which also runs on the NEC Versa 4200. (This file is available only when Windows for Workgroups 3.11 is the operating system loaded.)

- Using Windows 95

This on-line help file lets you explore Windows 95 and learn about navigating through the new interface. (This file is available only when Windows 95 is the operating system loaded.)

GUIDE TO NEC UTILITIES

NEC provides several programs and routines designed to make your NEC Versa 4200 run more efficiently. These programs are known as utilities.

NEC Diskette Creator

This utility lets you create diskette copies of the NEC utilities and certain programs that come with your NEC Versa 4200. Store the diskettes in a safe place in case you ever need to reload the system.



Please note the following if you request the Windows for Workgroups pre-configured software from the NEC Fulfillment Center. The replacement pre-configured software that will be sent to you will contain certain software utilities and applications that were not included on the system when you purchased your system.

If you purchased this computer outside of the U.S. and you want to request the WfWG pre-configured software, please contact the local NEC office in your country.

The Windows 95 Restore CD is shipped with the 133 MHz NEC Versa 4200 systems. If you prefer the Windows for Workgroups Restore CD, just send the Windows 95 Restore CD to the NEC Fulfillment Center, and request the Restore CD for Windows for Workgroups. The Windows for Workgroups Restore CD will be sent to you.

Battery Gauge

This utility checks the percentage of battery life on your Li-Ion battery.

PowerPanel

PowerPanel lets you view and control a variety of system settings related to power use and conservation. You access PowerPanel via a toolbar displayed in either Windows for Workgroups or Windows 95.

See Chapter 3, Using Setup, and the on-line *Owner's Manual* for a discussion of PowerPanel. In addition, PowerPanel has an extensive on-line help, accessible by pressing the PowerPanel menu button, the rightmost button on the toolbar.

PHDisk

This utility creates a file on the hard disk that is large enough to contain all the software in memory. Its default size is approximately 17-MB. You will need to update this utility only if you upgrade the amount of memory to more than 16-MB in your NEC Versa 4200 (if either the 16 or 32-MB memory module is installed). This utility must be run in DOS mode/environment. (It will not run on a compressed drive.) To use this utility, enter the following at the DOS prompt:

PHDisk /create

CardWizard

CardWizard, available only with Windows for Workgroups, lets you manage your PC Cards and slots. Through CardWizard you can:

- view card slot activity and availability
- be alerted to missing or improperly installed card drivers
- receive help to address resource conflicts and memory window allocation problems.

Once CardWizard identifies and resolves configuration issues, it automatically configures PC Cards each time they are installed.



CardWizard is not available with Windows 95. Windows 95 includes its own PC Card software.

OTHER SOFTWARE

Your NEC Versa 4200 comes with other programs that let you take full advantage of your system resources. The rest of this chapter discusses each program, including what it can do for you, how to get started, and how to use the program help.

Official Airline Guide (OAG)

This program demonstrates the convenience of “information to go.” You can purchase the full package or subscribe to future releases through the software publisher. The software publisher also provides technical support for these programs.

The Official Airline Guide is an on-line service that gives you access to flight details for all commercial airlines worldwide. NEC provides a sample of the monthly data that OAG provides. You can call for a free copy of the most current information. OAG offers NEC Versa owners a special rate when they subscribe to OAG for monthly updates.

OAG is an invaluable service for anyone who travels on a regular basis. All you have to do is enter your departure city, destination city, and date. If you have a preferred airline, you can also enter its name. The service then lists all the flights available from the departure city, the times, and the flight numbers. You can also check on seat availability and prices.

1. Access OAG as follows.
 - Purchase and install a modem card into your NEC Versa 4200 computer. Make sure the card is connected to a working phone line.
 - From the Program Manager in Windows for Workgroups, locate and double click on the OAG FlightDisk Worldwide Edition icon in the OAG FlightDisk program group.
 - In Windows 95, press **Start**, move the cursor to the Programs group, to the Travel Services, and open the OAG FlightDisk group. In the group, highlight “OAG FlightDisk Worldwide Edition” and release the mouse button.
2. The first time you open OAG, an agreement screen appears. Follow the on-screen instructions.
3. In the Trip Plan screen, fill in the fields with the trip information requested. Press **Enter** after making selections from the available drop-down lists.
4. To retrieve seat availability and price information, press the appropriate button.
5. Follow the on-screen instructions to register for a free trial of the OAG travel service.

LapLink

LapLink helps you stay in touch with your home office system or get in touch with other systems through infrared port, modem, network, or cable.

When to Use LapLink

Use LapLink to transfer files, gain access to files on a remote system, or exchange written information with another user on a remote system. LapLink even bridges the communication gap between Windows 3.11 and Windows 95 systems. LapLink offers the following features:

-
- **File Transfer** — lets you move or copy files between computers. To speed file transfer, LapLink compares files being updated and transfers only the changed information.
 - **Remote Control** — gives you access and control over a remote computer. Activity you perform on a local system, such as keystrokes, file access and changes, and program execution, actually occurs on the remote system.
 - **Chat** — provides a way for you to exchange information, instructions, or other messages to a user at a remote computer.

LapLink software must be loaded on both the sending (local) and receiving (remote) system for communication between them to work.

How to Use LapLink

Follow these steps to get started using LapLink. Once you have LapLink up and running, refer to LapLink's on-line help for more information.

1. Start LapLink as follows:

- In Windows for Workgroups, locate and double click the LapLink for Windows icon in the Laplink for Windows program group.

A screen box appears informing you that the Windows display driver has been uninstalled. At the prompt, "Do you want to re-install the driver now?", select **Yes**. You are then prompted to restart Windows to enable the Remote Control host. Select **OK**. Once Windows has restarted, you are asked to select a computer name. Enter a unique computer name.

- In Windows 95, press Start, move the cursor up to Programs, and locate LapLink for Windows 95. Highlight the LapLink for Windows 95 line and press the VersaGlide selection button or tap the VersaGlide pad once.

If you do not have a port enabled, LapLink prompts you to enable one. Press **Yes** to do so and follow the on-screen instructions to configure the port. Otherwise, press **No**.

2. Once your ports are configured, select your communication method by pressing the appropriate button. The buttons give you the following connection options:

-
- Connect over cable
 - Connect over wireless
 - Connect over modem (if installed)
 - Connect over network
 - Connect over dial-up network

Once communication is established between systems, the LapLink window is displayed.

3. Select the procedure you want to use by pressing one of the last three buttons in the LapLink toolbar at the top of the screen.
 - Press the file transfer button to transfer files between systems.
 - Press the Remote Control button to exercise control over a remote system.
 - Press the Chat button to converse with another user at the remote system.
4. When you finish, press the disconnect button to break the link between the local and remote systems. Press **OK**.

The other system is notified of the break in communications.

To find out more about LapLink capabilities and uses, refer to the on-line help that is available when you open LapLink.

On-line Services

Your NEC Versa comes with the most popular on-line services available today including America Online, CompuServe, and Netscape Navigator. For a fee, on-line services give you access to the Internet, e-mail, the World Wide Web, travel information, news reports, and more, depending on the service selected. Some on-line services give you a free trial period.

Here are the things you must do in order to use an on-line service:

- purchase and install a modem card into your NEC Versa 4200 computer. Make sure the PC card is connected to a working phone line. The line must be an analog line. If you are unsure what type of line you have, call your local telephone company.

-
- set up the selected on-line service on your NEC Versa 4200 computer using an easy-to-follow setup program.
 - select the newly created on-line service icon, register with the service, and begin your on-line adventure.

Just follow these steps to set up and use your selected on-line service:

1. Connect your (optional) modem card to a phone line.
2. Continue as follows:
 - From the Program Manager in Windows for Workgroups, locate and double click on the Online Install program group. Double click on the icon for the service you want to install.
 - In Windows 95, press Start, move to the Programs group, slide to Online Install, and slide to the on-line service group that you want to install. Tap the VersaGlide pad once or click once.
3. The setup screen for the selected on-line service displays. Follow the on-screen instructions to install the service on your NEC Versa.

For both Windows for Workgroups and Windows 95, a program group will be created for your selected on-line service.

4. To use the selected on-line service, follow the on-screen instructions to log onto the service.



It is strongly recommended that you install the modem card in your NEC Versa prior to running the on-line service setup program. As part of the setup program, it recognizes your modem information. If you run the setup program without an installed modem, you will have to manually enter the modem information the first time you use the on-line service.

America Online

To find out about America Online features, highlight “America Online” in the America Online program group. Double click in Windows for Workgroups or simply release the mouse button in Windows 95. From the Help drop-down menu, select “Contents.”

CompuServe

To find out about CompuServe features, highlight “CompuServe Directory” in the CompuServe program group. Double click in Windows for Workgroups or simply release the mouse button in Windows 95.



If you are using this computer outside North America, there may not be any local access points for these on-line services. It may require a long distance or international call.

Netscape Navigator

Netscape lets you access all that the Internet has to offer. You will need to use the Netscape Navigator Install program to install Netscape Navigator. You will also need to select an Internet provider in order to connect to the Internet and use Netscape. For additional information on this, refer to the online Netscape Navigator help file that comes with your NEC Versa 4200.

The Install program includes the Netscape Navigator Setup. You will be asked if you want to establish dial-up networking services to the Internet (recommended). You will be prompted to complete several pieces of information about you and your site. Once all the required information is entered, the system reboots.

In Windows 95, the completion of Netscape Navigator Setup generates a Netscape Navigator group and a shortcut icon on your desktop.

In Windows for Workgroups, the completion of Netscape Navigator Setup generates a Netscape Navigator program group.

McAfee Anti Virus Software

The McAfee AntiVirus software is installed to scan your system for any virus infections. WebScan and VirusScan are two scanning software tools included on the NEC Versa 4200. In Windows for Workgroups, a Vshield icon is shipped minimized as an icon on the desktop to easily determine whether protection-level software is running or not, as well as provide a virus alert chime message when a virus is resident.

- WebScan software protects your system against virus infection from files attached to mail messages or from files you download from the Internet. WebScan is activated any time you download executable and Microsoft Word document files and scans mail through the Pegasus Mail system. Also included is the SPRY Mosaic browser and the WebScan Web browser, which gives access to the Internet.
- VirusScan, detects, identifies and disinfects known DOS, Windows for Workgroups, and Windows 95 computer viruses. It checks memory as well as both the system and data areas of disks for virus infections. In most cases, it will eliminate and fully repair infected programs or system areas to their original condition.

Set up the WebScan software on your NEC Versa 4200 computer using the easy-to-follow setup program.



Before you can use the WebScan software and connect to the Internet, you must first purchase and install a modem card into your NEC Versa 4200 computer. Make sure the PC Card is connected to a working phone line. The line must be an analog line. If you are unsure what type of line you have, call your local telephone company.

It is strongly recommended that you install the modem card in your NEC Versa prior to running the WebScan Setup program. As part of the Setup program, it recognizes the modem information. If you run the Setup program without an installed modem, you will have to manually enter the modem information the first time you use the on-line service.

XingMPEG Player and Presentation Software

XingMPEG (Moving Pictures Experts Group) Player program is a Windows for Workgroups and Windows 95 application which lets you create and view presentation videos by controlling the playback of compressed MPEG files. The features of the XingMPEG Player include the following:

- view the presentation videos at data rates of up to 1.8Mbits/second
- VCR-style controls for playing MPEG files
- flexible display modes
- diagnostic and benchmark tools.

To access the XingMPEG player from Windows for Workgroups, click on the XingMPEG Player icon in the MPEG Player program group.

To access the XingMPEG player from Windows 95, select Start, then XingMPEG Player.



The CD-i menu selection in the XingMPEG player only works when a CD (in CD-i format) is installed in the CD-ROM reader.

ESS Audio/Audio Rack

The ESS audio system that comes on your NEC Versa 4200 provides exceptional sound capabilities. Control the ESS audio system through the Windows Audio Rack.

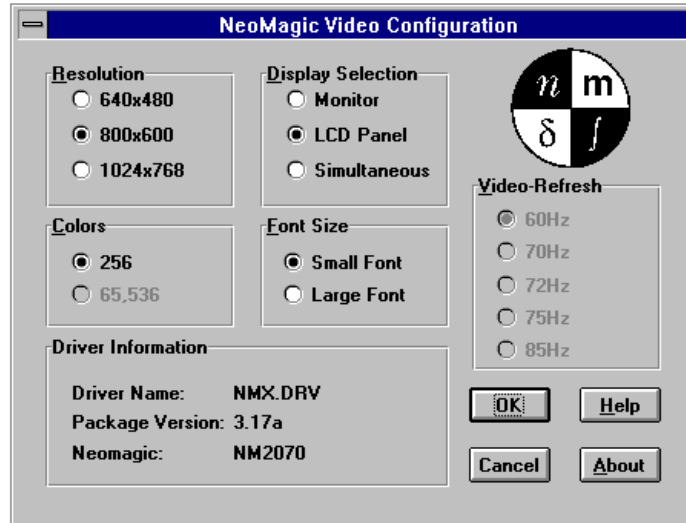
The Audio Rack (or AudioRack32 for Windows 95) uses your NEC Versa 4200 computer's audio capabilities so you can play, record, and compress sound in WAV or AUD formats and as MIDI files. With the multi-source mixer, you can blend these sources with line-in and microphone sources in a multitude of ways. Then you can record your music as wave files and edit them with the Audio Recorder. The voice activation feature makes the Digital Audio Player perfect for recording messages.

NeoMagic Video Configuration Utility – Windows for Workgroups

The NeoMagic Video Configuration utility lets you configure your display the way you want it. First you select a screen display resolution (640 x 480, 800 x 600, or 1024 x 768) and then select other options as necessary.

To access the utility from Windows for Workgroups, follow these steps.

1. Select Control Panel from the Main program group.
2. Select Video Configuration. The NeoMagic Video Configuration screen appears as shown here.



3. From this screen, select information in the following categories:
 - Resolution – Select the desired screen resolution: 640 x 480, 800 x 600, or 1024 x 768
 - Colors – Each display resolution supports various colors. For the best performance, select the smallest color depth. Choose the Resolution before selecting the Colors. If resolution is 800 x 600 or 1024 x 768, 256 colors is the only option. For 640 x 480, you can select either 256 colors or 65,536 colors.
 - Display Selection – Select whether you want the display to appear on an external monitor, the NEC Versa 4200's built-in LCD panel, or simultaneous (both the external monitor and the NEC Versa's built-in LCD panel are active).
 - Font Size – Select the font size you want to display: either the small font or the large font.

-
- Video Refresh – Used only with an external monitor. Select the highest refresh rate that your monitor can support. (See the documentation that came with your monitor for refresh rate capabilities.) Note that when using the NEC Versa 4200's built-in LCD panel, the Video Refresh selection is disabled.
 - Driver Information – Displays the Driver Name and Driver Version.



If a port (in Windows 95) or a driver (in Windows for Workgroups) is enabled for Laplink, then this driver information will not appear.

NeoMagic Property Page for Windows 95

Used in Windows 95, the NeoMagic Property Page permits you to alter the display frequency (ranging from 60 Hz to 85 Hz).

To access the utility, follow these steps.

1. From the Windows 95 desktop, select Start, Settings, and then Control Panel.
2. From the Control Panel, click on Display. The Display Properties screen appears.
3. Select NeoMagic. A display appears permitting you to adjust the frequency range (also known as the refresh rate) between 60Hz to 85 Hz.
4. Click OK to accept.

3 Using Setup

SETUP UTILITY

Your NEC Versa 4200 comes with a BIOS configuration utility called Setup that allows you to view and set system parameters. Setup also includes security features that protect your system from unauthorized use.

Use Setup to:

- set the current time and date
- customize your system hardware and Power Management parameters
- secure your system with a password
- balance your performance needs with power conservation.

How to Enter Setup

You can access Setup at power-on. Just press **F2** when the following prompt appears.

Press <F2> to enter SETUP

The Setup Main screen appears, displaying current parameter settings.

When you press F2 to enter Setup, the system automatically detects current parameter settings with the Power-On Self-Test (POST).

- If the system detects an error during POST, it prompts you with a double beep and a message: "Press <F1> to resume, <F2> for Setup". If you press F1, POST continues. If you want to fix the error, carefully read the error message that appears above the prompt, and press **F2**. After you press F2, the system displays the Setup Main screen.
- If no error messages display, press **F2** when the prompt appears. After you press F2, the system displays the Setup Main screen with all the current hardware parameters for your system.

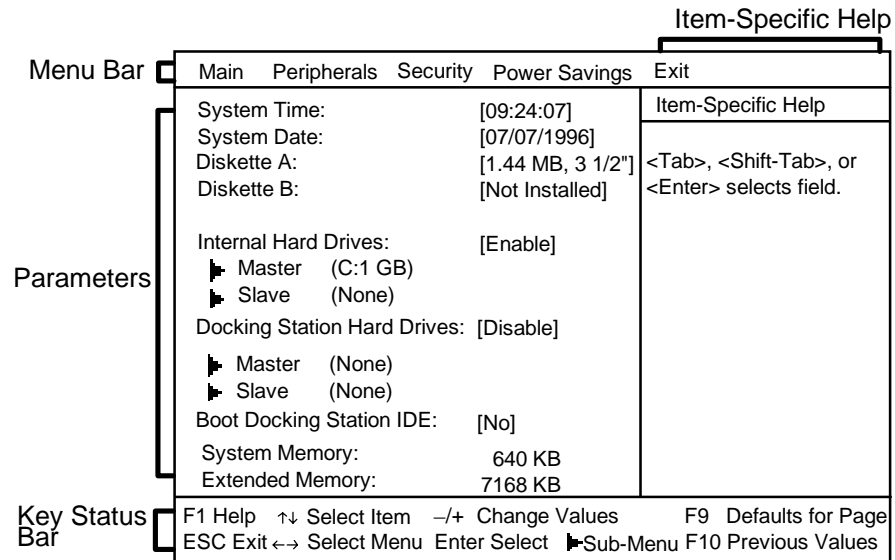
How to Use Setup

The following sections describe how to use Setup, including these topics:

- Looking at screens
- Using keys
- Checking and setting system parameters.

Looking at Screens

Setup screens have four areas as shown next.



- **Menu Bar**
The top line of the screen. Each of the five selections displays its own screen.
- **Parameters**
The left part of the screen. This area lists parameters and their current settings.

-
- **Item-Specific Help**
The right part of the screen. This area describes each parameter and its available settings.
 - **Key Status Bar**
The bottom part of the screen. These lines display the keys available to move the cursor, select a particular function, and so forth.

Using Keys

The following table lists Setup keys and their functions.

Setup Key Functions

KEY	WHAT IT DOES
← →	Chooses a selection from the menu bar.
Home/End	Moves to the first/last parameter on the current screen.
PgUp/PgDn	Places the cursor at the top or bottom of the current screen.
↑ ↓	Moves the cursor between the displayed parameters.
Enter	Displays additional fields for parameters marked with a ▶.
Tab	For some parameter settings, moves the cursor between the subfields. For example, for System Time, Tab moves the cursor from hour to minute to second.
-/+	Selects the next lower/higher setting. (Same as F5/F6.)
F1	Displays the General Help screen.
F5/F6	Selects the next lower/higher setting. (Same as -/+.)
F9	Selects the default settings for the currently displayed parameters only.
F10	Selects the settings of the displayed parameters as they were upon entering Setup.
Esc	Displays the Exit screen.

Checking/Setting System Parameters

See the following table for a list of parameters, their factory default settings, and alternate settings. As you set each parameter, its available settings are explained in the Item-Specific Help area in the right part of the screen.

When in the Setup utility, reset the parameters on the current page to their factory default settings by pressing **F9**. Or, reset all parameters by selecting Set Default Values on the Exit screen.

Setup Parameters

PARAMETER	DEFAULT SETTING	ALTERNATE SETTINGS
Main		
System Time	HR:MIN:SEC	
System Date	MO/DAY/YEAR	
Diskette Drive A	1.44MB, 3.5"	1.2MB, 5.25"/Not Installed
Diskette Drive B	Not Installed	1.44MB, 3.5"/1.2MB, 5.25"
Internal Hard Drives	Enabled	Disabled
Master	Auto	BIOS Defined/None/CD/User
Slave	None	BIOS Defined/Auto/CD/User
Docking Station Hard Drives*	Disabled	Enabled
Docking Station Master*	None	BIOS Defined/CD/User/Auto
Docking Station Slave	None	BIOS Defined/CD/User/Auto
Boot Docking Station IDE	No	Yes
System Memory	640K	
Extended Memory	7168KB	11264KB (w/4MB card) 15360KB (w/8MB card) 23552KB (w/16MB card) 39936KB (w/32MB card) 12MB card not supported
Peripherals		
Serial Port	Enabled	Disabled/Reconfigurable
Infrared Location	Enabled	Disabled
Infrared Serial Port	COM2	Reconfigurable
Parallel Port	LPT1	Disabled/Reconfigurable/LPT2
Parallel Mode	Bidirectional	Unidirectional/Enhanced/ECP
NumLock	Off	On
Keyboard auto-repeat rate	30 per sec	2/6/10/13/19/22/27 per second
Keyboard auto-repeat delay	½ sec	¼, 1 sec, ¾
Security		
User Password is	Disabled	Enabled
Set Password	Press Enter	

PARAMETER	DEFAULT SETTING	ALTERNATE SETTINGS
Password on boot	Disabled	Enabled
Password on resume	Disabled	Enabled
Power Savings		
Power Management under AC	Off	On
Power Savings	Custom	Highest Performance/Longest Battery Life/Off
Hard Disk Timeout	15 seconds	1/2/4/6/8/10/15 min/Off 10/30/45 sec
Panel Backlight	Auto	Full/Standard
Video Timeout	2 minutes	1/4/6/8/10/15 min/Off 10/15/30/45 sec
Serial Timeout	On	Off
Parallel Timeout	On	Off
CPU Power Save	Off	On
Standby Timeout	2 minutes	1/4/6/8/12/16 min/Off
Suspend Mode	Suspend	Save To File
Auto Suspend Timeout	15 minutes	5/10/20/30/40/60 min/Off
Auto Save to File	On	Off
Suspend Warning Tone	On	Off
PCMCIA Power	On	Off
Sound Power	On	Off
Serial Port Ring Resume	Off	On
Wake from Resume at:	00:00:00	

Main

The Setup Main screen displays the System Time and System Date parameters as well as drive parameters.

■ Time/Date

Use System Time and System Date to set the current time and date. The settings remain in memory even after you turn off system power.

To set the time, enter the current hour, minute, and second in *hh:mm:ss*, 24-hour format. Use the Tab key to move from field to field. For example, type **13:30:00**, tabbing from field to field for 1:30 p.m.

To set the date, enter the current day, month, and year in *mm/dd/yyyy* format.



When setting the time and date, enter leading zeroes. For example, to enter 9:20 a.m. and February 4, 1996, type 09:20:00 and 02/04/1996.

Drives

The drive parameters let you check and change settings for your drives, including internal hard drives, diskette drives, and docking station hard drives.

This option may only appear when the NEC Versa 4200 is docked at the Docking Station 4000 or the PortBar 4000. To boot from an IDE drive installed in the docking station, select “Yes” for Boot Docking Station IDE. Note that if you select “Yes,” you can no longer access the NEC Versa 4200’s internal drives (floppy, hard disk, or CD-ROM)

Or, select “No” to boot from either the internal hard drive or from a bootable option (floppy, hard disk, or CD-ROM).

Peripherals

The Peripherals screen displays the location of the connection between the system and the Input/Output (I/O) ports.

Power Savings

The Power Savings screen lets you balance high performance and energy conservation using parameters including the following:

- **Power Management Under AC** Normally, whenever AC power is connected to the NEC Versa 4200, power management is disabled. If you enable this parameter, the system automatically activates the power management profile you set in Power Savings.
- **Power Savings** The Highest Performance setting provides the greatest system performance. Longest Battery Life provides maximum power saving, and Off disables all device timeouts. Your system comes preset with Custom Settings as the default. You can enter values for device timeouts.

-
- **Suspend Mode** Suspend mode includes a method of operation called Suspend/Resume that stores information in RAM and maintains RAM contents after shutting down all local devices. You can also select Save to File, which saves all your open data files to a special file on the hard disk and turns the system completely off. When you turn the system back on or when you select Resume, all your data is automatically recovered from where you left off.
 - **Suspend Warning Tone** This parameter lets you enable or disable a warning tone when Suspend mode starts. Keep this option enabled.
 - **PCMCIA (PC) Card Power** This parameter lets you turn off power to the PC Card slots in order to conserve power. Slot power cannot be turned off if a card is installed in the slot.

Fn and F7

Another way to toggle between the power settings described here is using the function key, Fn + F7. Press **Fn + F7** to toggle through the various Power Management settings. The faucet icon on the status bar changes to reflect the new setting.

Any selection you make by pressing Fn + F7 overrides the settings you made on the Power Savings Setup screen. The Setup power settings are not in effect until the next power-on.

Security

Your NEC Versa 4200 supports a password for system security on several levels. Using the Security screen, you can require that a password be entered

- to use Setup
- at each startup or boot
- each time the system resumes from Suspend mode.

To use your system, you are not prompted to enter a password until you set an initial password. Your system is not protected until you set a password.

Once you set a password, you must enter it before you can enter Setup; this feature allows only an authorized user to change system parameters. In addition, you can choose to require the password be entered each time you start the system and each time the system resumes from Suspend mode.

A Quick Lock feature lets you lock your keyboard when you are away from your computer. This feature works only if you set a password in Setup.

Setting an Initial System Password

Set an initial password as follows:

1. Select Security from the menu bar.
2. Select "Set Password" by pressing **Enter**.
3. At the prompt, enter a password up to seven characters long. Then, as prompted, reenter your password for verification. Write your password down and keep it in a secure place in case you forget it.
4. Press **Enter** to return to the Security screen.
5. If you want to require the password each time you start your system, move the cursor to "Password on boot" and select "Enabled."
6. If you want to require the password each time the system resumes from Suspend mode, move the cursor to "Password on Resume" and select "Enabled."
7. Press **ESC** to display the Exit screen. Here you can select "Save Changes and Exit" to save your password and reboot your system.

Removing a Password

To remove a password, press **Enter** at "Enter new password" and again at "Re-enter new password." Your password clears and you are no longer prompted to enter one.

You can also use the "Enter new password" and "Re-enter new password" prompts to change to a new password.

Quick Lock

The Quick Lock feature is activated only after you have enabled a password.

Once the Quicklock feature is enabled, press **Ctrl + Alt + Back Space** to lock the keyboard. To unlock the keyboard, enter your password.

When the password is removed, the keyboard cannot be locked.



When the Quick Lock feature is activated and your keyboard is locked, the Caps Lock and Scroll Lock LCD icons on the LCD status bar will blink in an alternating fashion.

POWERPANEL

Your NEC Versa 4200 system gives you a tool that simplifies changing the system configuration settings discussed previously in this chapter, including power management. When you power on in either Windows for Workgroups or Windows 95, note the colorful icons on the PowerPanel toolbar. The location of the toolbar can be changed by selecting the desired Toolbar Position from the PowerPanel Preferences screen.

Use the VersaGlide to move the cursor over the desired icon, and select the icon with a touch of the left selection button (or a tap using the VersaGlide itself). The purpose of PowerPanel is to provide a quick and easy way to change from one setting to the next, as your location varies. Isn't that what mobile computing is all about?

The first five icons (profiles) in the PowerPanel that NEC designed for you let you toggle between power management settings. The next seven icons let you toggle between system settings. The last icon, represented by the atom, is a permanent icon. Selecting the atom icon opens the PowerPanel menu. Use the PowerPanel menu to edit or create your own version of PowerPanel, according to your own needs.

Reviewing PowerPanel Default Power Settings

The following table describes power management icons and settings in the PowerPanel provided by NEC.



The displayed settings are those preset when the system is shipped. If you customize the settings, they are recognized and used by the system; but only the default settings appear on the PowerPanel display.

PowerPanel Default Power Settings

ICON	SETTING	WHEN TO USE
Faucet with three droplets	Power Management off	Office environment, using AC power
Chart	Presentation mode	Video presentation, keeps video on all the time while conserving power.
Hand with faucet	Custom Settings	Offers the ability to the user to select a combination of settings that will be most useful.
Faucet with two droplets	Highest performance	On the road, provides best performance and good battery life.
Faucet with one droplet	Longest Battery Life	Airplane use, provides best battery life and good performance.

Reviewing PowerPanel Default Command Settings

The following table describes additional command icons in the PowerPanel.

PowerPanel Default Command Settings

ICON	SETTING	WHEN TO USE
Notebook computer with IR port	Enable	Enable/disable the IR port.
Speaker Volume	Volume high/off/low/med.	During a presentation.
CD Audio Source	Internal/External	Toggles the sound source from the internal CD audio (VersaBay II) to the external CD audio (Docking Station 4000)
LCD crossed out	Video/LCD off	Using an external monitor instead of the NEC Versa 4200 LCD.
Three Z's (signifies system in a pause state.)	Save to File	When you need to leave your system for a short period of time, and want your work saved, this will turn off the system while saving the work for quick recovery.
Crescent moon	Suspend	When trying to conserve battery power. Power management is enabled while your away from your system.
AC plug	Charging power percentage remaining	Verify battery power.
Atomic icon (the PowerPanel menu)	Preferences/Customize/Profile Manager	Customizes the PowerPanel toolbar and profiles.

PowerPanel Menu

Click on the PowerPanel menu button to

- display a menu of selections you can use to tailor the PowerPanel
- access on-line help, with detailed instructions for PowerPanel use.

The PowerPanel menu items are described next. These include Preferences, Customize, Profile Manager, Minimize, and On-line Help.

Preferences

PowerPanel lets you specify a profile to use when the system is on AC power. You can use any available profile, or create one for this purpose. For information on creating profiles, see the section “Profile Manager” or see the on-line Help.

PowerPanel also lets you specify the toolbar to use and its location on the desktop. You can position the PowerPanel at the top or bottom and center, left, or right of the screen.

To specify an AC profile, select Preferences from the PowerPanel menu. Click on the AC Profile tab, and then select a profile.

If you want to switch from battery to AC power, you can continue to use the profile that was previously active. You can also select to disable the profile switch.

Customize

Use the Customize menu to change the PowerPanel profile commands and icons according to your needs. You can view the current toolbar image to help you decide if changes need to be made. Use Customize to change the power profile or command assigned to the button. Also use Customize to add, delete, update, or move a button.

Profile Manager

The Profile Manager describes all existing profiles in detail.

The Profile Manager lists all the existing profiles. Select a profile, and read the description below it. If you select View, you can see the specific settings that make up the selected profile.

You can use the Profile Manager to create your own profiles. Select “Create” from the Profile Manager screen, and then enter the requested information.

While you are working, the current profile is the one with the button that appears pressed down.

For more information on creating profiles, see the on-line PowerPanel help text.

Minimize

Select Minimize to change the PowerPanel toolbar into a single icon, named PowerPanel Custom Settings.

Help

The last four PowerPanel menu items provide on-line help. Review the on-line help for more complete information on using PowerPanel, customizing the toolbar and learning more about profiles and commands.



The displayed settings are those preset when the system is shipped. If you customize the settings, they are recognized and used by the system; but only the default settings appear on the PowerPanel display.

Setup Utility and PowerPanel

When you start your system, the parameter settings you last made on the Power Savings screen in Setup are in effect.

The Setup parameter settings remain in effect until you start PowerPanel. When you start PowerPanel, the profile last selected using Preferences is in effect. The rightmost profile on this toolbar is the active profile until you select another.

When the custom setting profile is in effect, PowerPanel looks at the Power Management settings defined in Setup.

4

Using The Hardware

The more you use your NEC Versa 4200 system, the more proficient you will become at everything from using function keys, to setting up for a presentation to sending a fax across the country.

This chapter gives concise information on these and other important tasks, including how to use:

- the LCD panel
- the keyboard
- the NEC VersaGlide
- the NEC VersaBay II
- the 6x CD-ROM reader
- the PC Card slots
- IR port.

In addition, this chapter focuses on installing options, expanding hard disk space and memory, setting the system switches, and if appropriate, updating the System Basic Input/Output System (BIOS).

LCD PANEL

When you open your NEC Versa 4200 notebook LCD panel you'll notice the speakers and brightness control. Slide the brightness control up to make your screen brighter. Slide the brightness control down to make your screen darker.

The two system speakers work automatically with your audio application software. However, if you plan on using external speakers, see "External Audio Options."

KEYBOARD

The NEC Versa 4200 keyboard is equipped with many features including:

- Function keys
- Cursor control keys
- Typewriter keys
- Numeric keypad
- Control keys
- Windows 95 keys.

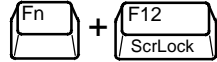
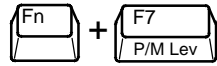
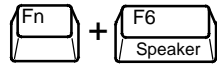
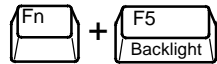
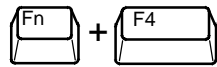
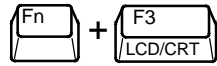
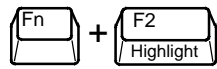
Feature keys are located as shown in the following figure. Key operations are described after the figure.



Keyboard

Function keys — There are twelve function keys, **F1** to **F12**. Seven of these work with the **Fn** key to activate special functions and are preprogrammed. Some have dual functions, which are printed in blue on the key. For example to add speaker volume, press and hold **Fn** while you press **F6**.

Function keys are application-driven. See the specific application's user guide for information about how each function key works within the application you are using. See the following function key combinations.



- Fn + F2 Highlights text. Select On to highlight or Off for no highlighting. (Off is the default.)
- Fn + F3 LCD/CRT (Only operates with external monitors attached)
- Fn + F4 Expands the text and graphic screen area in video modes with resolutions below 800 x 600 as well as with DOS text. Toggle the key combination to either expand to the maximum screen width or retain the smaller screen area.
- Fn + F5 Backlight (auto/standard)
- Fn + F6 System Speaker Volume (off/high/med/low)
- Fn + F7 Power Management (P/M)
- Fn + F12 Scroll Lock On/Off

-
- Windows 95 keys — If you have Windows 95, you can use the following two key combinations to facilitate your work.

- **Fn + x** – Quick access to shortcut menus

- **Fn + z** – Display the Start menu

- Cursor Control keys — These keys position the cursor on the screen where you want. The cursor is a blinking underline or block, depending on the application. The cursor indicates where to insert the next text.
- Typewriter keys — The typewriter keys (also called alphanumeric keys) are used to enter text and characters. Keys with blue printing on them behave differently when combined with control keys or the Fn key.
- Numeric Keypad — Pressing **Num Lock** on the keyboard activates the numeric keypad numbers and functions printed in blue on the keys. Num Lock works only when no external keyboard or scanner is connected.

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

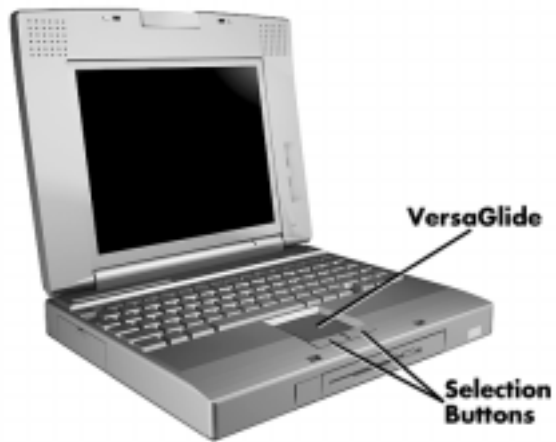
When you press Num Lock again, the keys revert to their normal functions as typewriter keys.

- Control keys — **Ctrl**, **Fn**, **Alt**, 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**. How the key combination works depends on the applications you are running.

NEC VERSAGLIDE

The NEC VersaGlide is an easy way to control the cursor with your finger. Lightly glide your finger across the NEC VersaGlide and the cursor follows. Tapping gently, you can select items in one of two ways:

- Double tap your finger on the VersaGlide.
- Double click the left button (this is the primary button). You can select the right button as your primary button. See the section, Changing the Button Configuration.



VersaGlide

Try both ways and decide which you prefer. If you find the double tap difficult to use, go to the next section for general directions about adjusting the touchpad properties.

Making VersaGlide Adjustments

The NEC VersaGlide offers a number of options that let you customize how it functions with the cursor. To access these options, locate the Control Panel and double click on the VersaGlide icon. (In Windows 3.11, look in the Main program group; in Windows 95, look in the Settings group.)

The options let you control the size and color of the cursor, the cursor speed, the accepted double-click speed, and selection button orientation. You can also disable the touchpad tap and drag feature.

Changing the Button Configuration

To change the default (left button) mouse button configuration so they are saved when you reboot the system, follow these steps.

1. In Windows 95, select Start, Settings, Control Panel, and the NEC VersaGlide icon.

In Windows for Workgroups, select the Main program group, Control Panel, and the NEC VersaGlide.

2. The NEC VersaGlide Control Panel screen displays. Select Orientation.
3. Select Set Buttons.
4. Press the mouse button that you want as the primary button. Select OK.

The button that you pressed is saved and will continue to function when you reboot the system.

The NEC VersaGlide also offers an autocentering feature that makes finding the cursor on your screen quick and easy. If you are away from your system and then return, the cursor is always located where you specified on the screen.

Use the NEC VersaGlide on-line help button for details about configuring your VersaGlide.

VersaGlide Ergonomic Tips

Follow these basic ergonomic tips while working:

- Use a light touch on the VersaGlide surface.
- Set up the NEC Versa 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."

NEC VERSABAY II

The NEC VersaBay II is the drive bay located below the VersaGlide. Depending on the NEC Versa 4200 model you purchased, either a 1.44-MB diskette drive or a 6x CD-ROM drive is installed in the VersaBay II. If your system has the 1.44-MB diskette drive, you can remove it from the VersaBay II and replace it with the 6x CD-ROM reader.



VersaBay II

Removing a Device from the VersaBay II

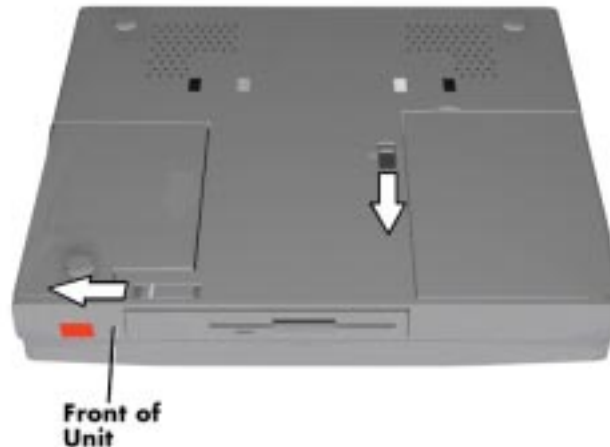
Follow these steps to remove the standard diskette drive (or other device) from the VersaBay II, and replace it with the 6x CD-ROM reader that may be configured with your system.



A CD-ROM reader installed in the VersaBay II must be specified as a slave device in the Setup utility. Also check that the switch on the back of the CD-ROM Reader is set to the position next to S for slave.

If you install an optional 19mm hard disk drive in the NEC Versa 4000 HDD Cradle Pak, it becomes the master drive from which the system boots. (Note that the 12.5mm hard disk or the CD-ROM can be set either to master or slave.) For ordering information see the on-line *Options Catalog*.

1. Make sure the NEC Versa 4200 is powered off, all external options are disconnected, and the LCD panel is closed.
2. Turn the system upside down with the front facing you.
3. Locate the VersaBay II release latches on the bottom of the unit.



VersaBay II release latches

4. Slide the front latch towards the PC Card slots and hold it.
5. Push the middle latch towards you until the drive pops part way out of the unit.

-
6. Continue to hold the latch near the front of the system to the left, and pull the device the rest of the way out of the system.



If you release the front latch before completely removing the device, the device casing may catch on the inside of the latch.

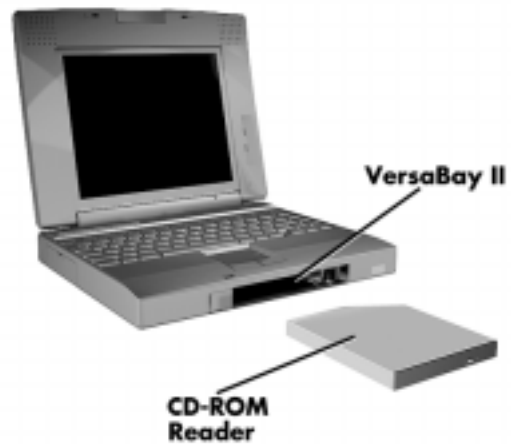


Releasing the drive

Installing a Device in the VersaBay II

Use the following steps to install a device in the VersaBay II. Specifically, these steps explain how to install the 6x CD-ROM reader that may ship with the system.

1. Align the CD-ROM reader in the VersaBay II and push it in until it locks in place.



Inserting the CD-ROM reader pack

2. Turn the system over and power on.
3. If you are running the Windows 95 operating system, your system automatically identifies the correct CD-ROM drivers.

However, if you are running the Windows for WorkGroups operating system, you will need to select "CD-ROM configuration" from the Startup menu after the Post Summary Information screen appears.

Customizing Your System with the VersaBay II

It's easy to customize your NEC Versa using the VersaBay II. If you find you require additional hard disk space or increased battery longevity, simply remove one device and plug in an optional hard disk drive or battery.



If you install a second 12.5mm hard disk drive in the VersaBay II, it can be set to either master or slave.

If you install an optional 19mm hard disk drive via the NEC Versa 4000 HDD Cradle Pak, it becomes the master drive from which the system boots. (Note that the 12.5mm hard disk or the CD-ROM can be set either to master or slave.) For ordering information see the on-line *Options Catalog*.

Use the optional VersaBay II Adapter Kit to insert either an old or new style hard disk drive (12.5mm or 19mm) into a docking station or a desktop. For ordering information see the on-line *Options Catalog*.

Add another hard disk drive or second Li-Ion battery pack as follows.

1. Remove the diskette drive or CD-ROM reader from the VersaBay II as described in the previous section, steps 1 through 6.
2. Prepare your option for installation as follows:
 - To install a battery pack, first connect it to the bay adapter that came with the battery. (Follow the instructions that came with the battery pack.)
 - To install a hard disk drive, first connect it to the appropriate bay adapter. (Follow the instructions that come with the adapter.)
3. Align the option and its carrier in the VersaBay II and push it in until the option clicks into place.
4. Turn the system over and power on. The system should automatically recognize the newly installed option.

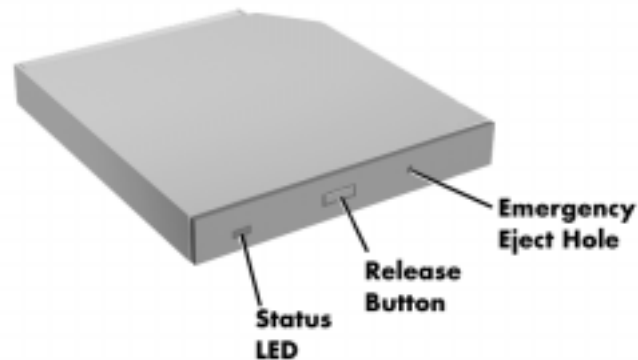
6x CD-ROM Reader

Your NEC Versa 4200 may come with a 6x-CD-ROM reader. The CD-ROM reader is assigned the next available drive letter.

Use the CD-ROM reader to load and start programs from a compact disc (CD). You can also use the CD-ROM reader to play audio CDs.

The CD-ROM reader operates at different speeds depending on whether the CD you are using contains data or music. This allows you to get your data faster and to see smoother animation and video.

CD-ROM reader features are shown in the following figure. Descriptions of these features follow.



6x CD-ROM reader

- **Status LED** — lights during data read operations. Do not eject the CD or turn off the NEC Versa 4200 when the indicator is lit.
- **Release Button** — ejects the CD tray. Press this button when power is on to insert a CD into or remove a CD from the reader.
- **Emergency Eject Hole** — allows you to manually remove a disc from the CD-ROM reader if the eject function is disabled by software or a power failure occurs.

To remove a disc, insert a tiny screwdriver (jeweler-type screwdriver) or the end of a paper clip into the emergency eject hole. Gently push until the disc tray emerges.

CD Loading

To insert a CD into the CD-ROM reader, follow these steps.

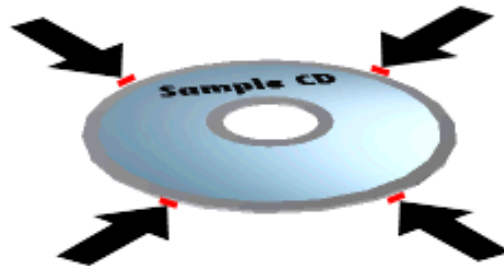
1. Press the release button. The CD tray emerges from the reader door.
2. Put your CD, printed side up, into the circular impression in the tray.
3. Gently push the front of the tray in until the door clicks shut.

To remove a CD, simply press the stop/eject button and remove the CD when the tray slides out.

CD Care

When handling CDs, keep the following guidelines in mind.

- Always pick up the disc by its edges.



Holding a CD

- Avoid scratching or soiling the side of the disc that has no printing or writing on it. This is the data side of the disc.
- Do not write on or apply labels to either 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.

PC Card Slots (PCMCIA)

Your NEC Versa 4200 notebook integrates two PC Card slots for inserting two Type II PC Cards or you can also insert one Type III PC Card.

Using the system's PC Card slots, you can add optional PC Cards and connect external devices to your NEC Versa 4200. These devices include peripheral devices, such as modems, LAN cards, and storage cards. For details on how to obtain these options, see the on-line *Options Catalog*.



If you purchased and/or are using this computer outside the U.S., please contact the local NEC office or dealer for the options available in your country.

To insert a PC Card, open the slot cover and follow these steps.

1. Align the card so that the 68-pin connector points towards the slot.
2. Slide the card into either slot. A low tone followed by a high tone lets you know that the card is fully inserted and recognized. (If you turn off the sound through Setup or PowerPanel, no sound is emitted.)

Other two-tone sequences such as high, then low tones indicate that the card is inserted, but the card type is unknown.



Inserting a card

3. If Windows for Workgroups is your operating system, check the Card-Wizard™ icon in the Program Manager. It shows which slot contains a PC Card and which is empty. In Windows 95, a PC Card icon is available on the task bar.

To remove the card, press the button on the side of the slot. A high tone followed by a low tone sounds.

IR Port

The IR port on the front of your system lets your NEC Versa communicate with other devices that also use infrared technology. The IR port is Serial-Infrared (S-IR), Infrared Data Association (IrDA) compatible. You can easily transfer files between your NEC Versa and an IR-equipped desktop, or print to an IR-equipped printer without using cables (appropriate drivers for printers required).

For the infrared technology to work, you need to follow these guidelines:

- position the NEC Versa 4200 no more than three feet away from the IR peripheral device you are using
- make sure the angle is no greater than 30° between the computer and the device.



Using an IR port

The LapLink software that ships with your NEC Versa 4200 system provides ways for you to use the IR port. Read the instructions in Chapter 2, “Introducing the Software” for steps on using the software with the IR port.

In Windows 95, the Microsoft IR utility, IRMON can also be used for file transfers between two Window 95 systems. This utility includes a driver to use with IR-equipped printers.

INCREASING SYSTEM STORAGE AND MEMORY

As your needs grow and change, you may need to add an optional hard disk drive with a greater capacity, or additional memory. Read this section to learn how to install an optional hard disk drive, or a memory module.

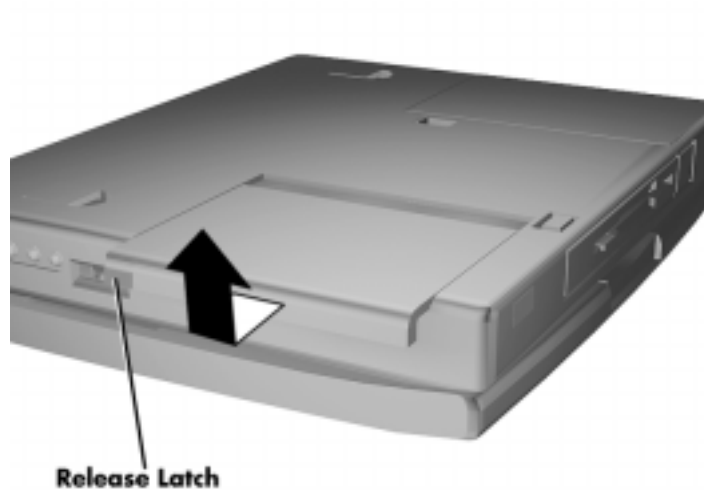
Hard Disk

You can increase the system’s storage capacity by replacing the standard hard disk drive or adding a second hard disk drive in the VersaBay II. (Adding a second hard disk drive is described in the section “Customizing Your System with the VersaBay II.”)

Replace the hard disk drive as follows:

1. Check that the NEC Versa power is off.

-
2. Turn the NEC Versa 4200 upside down with the front of the unit facing right.
 3. Remove the drive cover as follows:
 - Locate the drive cover release latch. Push the drive cover release latch to the right while at the same time pressing the slide cover towards you.
 - Lift the cover up and off the system.



Removing the drive bay cover

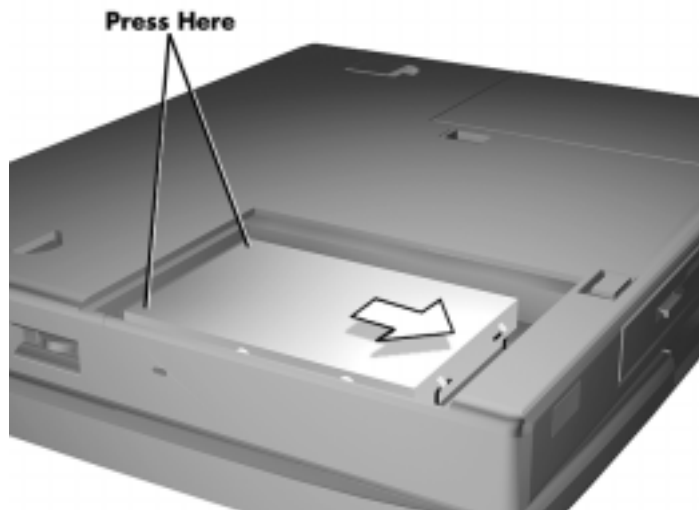
4. Remove the hard disk drive as follows:
 - Using your fingers, press down on the hard disk drive at the end closest to the connector.
 - While maintaining pressure, slide the drive towards the front of the system.



CAUTION

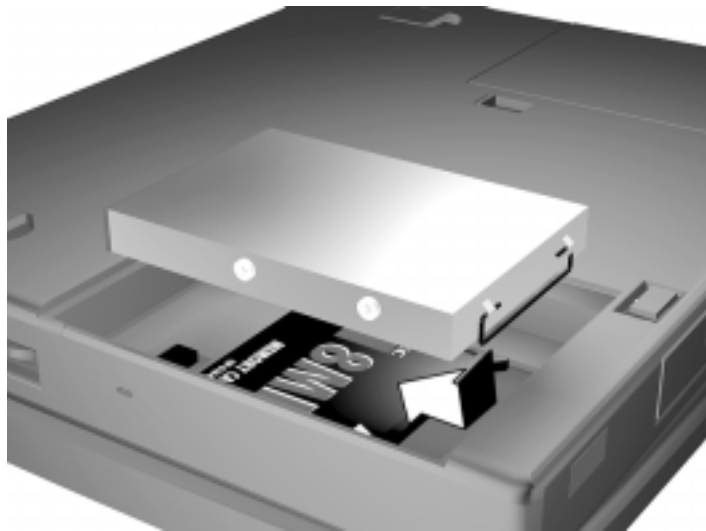
Do not lift the drive out of the system before releasing it from the system connector. Doing so can damage the connectors.

- Once the drive is disconnected, lift the drive up and out of the system.



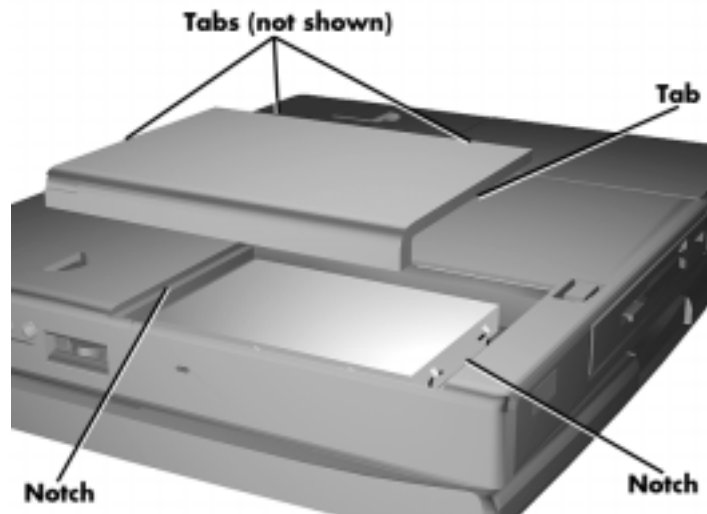
Removing the hard disk drive

5. Lower the new drive into the drive bay and align its connector with the hard disk drive connector in the system.



Inserting the hard disk drive

6. Slide the hard disk drive back and push firmly to secure the connection.
7. Replace the cover as follows:
 - Align the two tabs on the drive cover with the two notches on the system chassis.
 - Slide the cover towards the center of the unit.
 - Gently push the cover until it snaps into place.



Replacing the drive bay cover

8. Turn the system over, power on, and run Setup to check the new configuration.

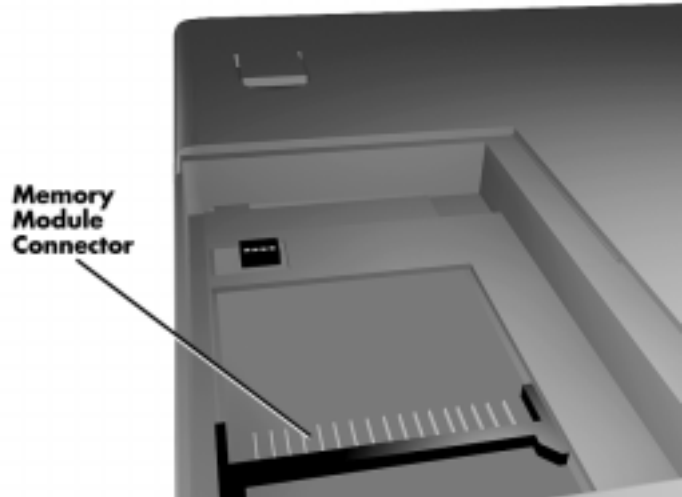
Installing a Memory Card

Your NEC Versa 4200 comes standard with 8 megabytes (MB) of random access memory (RAM). You can increase system memory to a maximum of 40 MB by installing one of the following memory cards in the system.

- 4-MB memory card
- 8-MB memory card
- 16-MB memory card
- 32-MB memory card

Use the following steps to install a memory card.

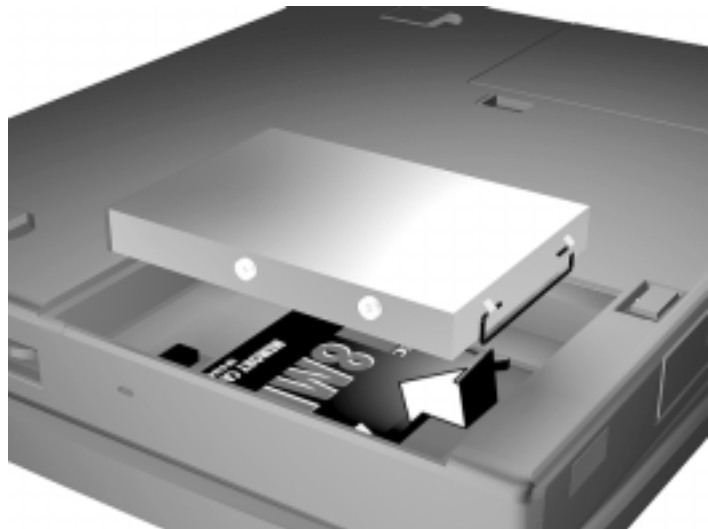
1. Follow steps 1 through 4 in the preceding section, "Hard Disks," to remove the hard disk drive.
2. Locate the memory connector in the drive bay. (Note that the memory connectors are located below the plastic plate and are visible in this drawing for illustration purposes.)



Memory
Module
Connector

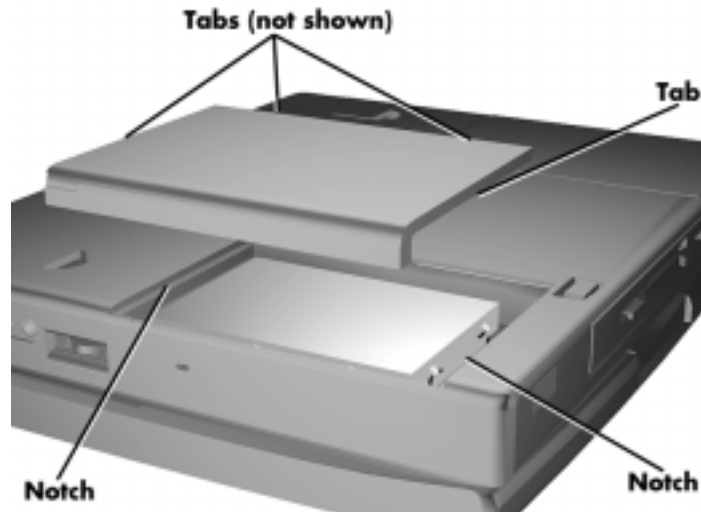
Locating the connector

3. Lower the module into the drive bay. Align the module with the system's connectors and push the module into the connectors.
4. Replace the hard disk drive into the drive bay and align its connector with the hard disk drive connector in the system.



Replacing the drive

-
5. Slide the hard disk drive back and push firmly to secure the connection.
 6. Replace the cover as follows:
 - Align the two tabs on the drive cover with the two notches on the system chassis.
 - Slide the cover towards the center of the unit.
 - Gently push the cover until it snaps into place.



Replacing the drive bay cover

7. Turn the system over and power on. The system automatically configures the new memory. The Setup summary screen will display the new amount.

INSTALLING OPTIONS

The back and right side of your NEC Versa 4200 notebook provides industry-standard connectors so that you can integrate the following:

- External monitor
- Printers (parallel and serial)
- External keyboard

-
- External mouse
 - External bar code scanner
 - External audio options.

In addition, NEC offers the following optional equipment developed to work specifically with your NEC Versa 4200.

- NEC Versa 4000 Series docking station
- NEC Versa PortBar 4000
- NEC Versa 4000 DC car adapter.

See the following sections for steps on using the options.

External Monitor

You can add a standard external monitor to your NEC Versa 4200. You need a display signal cable (usually provided with the monitor). One end of the cable must have a 15-pin connector for the system.

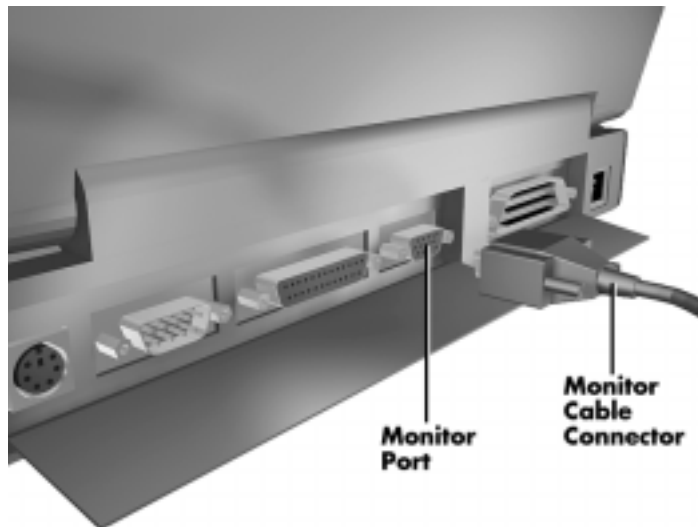
Follow these steps to connect an external monitor to your NEC Versa 4200.

1. Check that the NEC Versa is in Suspend mode or powered off and the monitor power switch is turned off.



The NEC Versa must be in Suspend mode or powered off while the monitor is being connected.

2. Open the port cover on the back of the system.
3. Attach the monitor's video cable (15-pin cable connector) to the monitor port on the back of the system. Secure the cable connection with the screws provided.



Connecting a monitor

4. Connect the monitor's power cable and plug it into a properly grounded wall outlet.
5. Follow any setup instructions in the monitor's user's guide.
6. Turn on power to the monitor.
7. Press the Suspend button to resume Active mode or power on the NEC Versa 4200.

Press the **Fn** and **F3** function key combination to toggle between the LCD, CRT, or simultaneous display on both.

Printer

You can attach a printer with either a parallel or a serial connector. A parallel printer connector has 25 pins; a serial connector has 9 pins. Some printers come with both types of connectors.

Parallel Devices

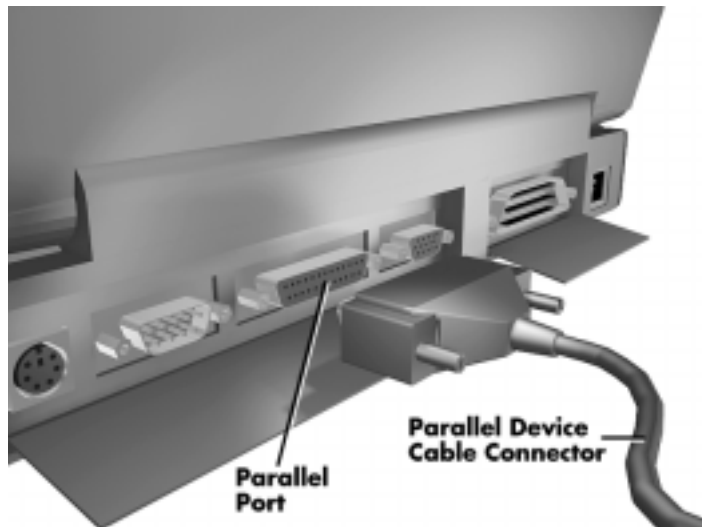
To install a parallel device, such as a printer, you need a cable with a male 25-pin connector for the system and, for most parallel printers, a Centronics®-compatible 36-pin connector.



When you connect a printer, be sure to install the appropriate printer driver through the Windows Control Panel.

Connect a parallel device to your NEC Versa 4200 as follows.

1. Check that both the NEC Versa and parallel device's power are off.
2. Open the port cover on the back of the system and locate the parallel port.
3. Align and connect the 25-pin parallel cable connector to the parallel port on the system. Secure the cable with the screws provided.
4. Align and connect the other end of the cable to the parallel port on the device. Lock the connector clips.



Connecting a parallel printer

5. Connect the power cable to the device and a properly grounded wall outlet.
6. Turn on power to the system and the device.



Check that the device is on-line before you try to use it. See the instructions that came with the device for more information.

Serial Devices

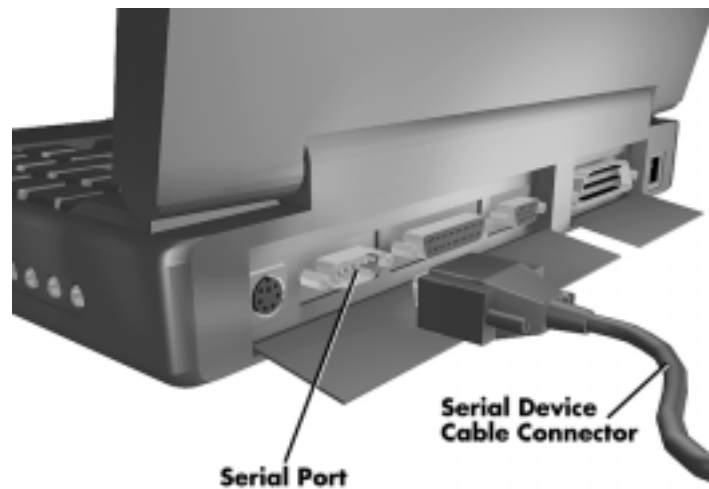
To install a serial device such as a printer or an external modem, you need a cable with a female 9-pin connector.



When you connect a printer, be sure to install the appropriate printer driver through the Windows Control Panel.

Follow these steps to connect a serial device to your NEC Versa 4200.

1. Check that both the NEC Versa and the devices' power are off.
2. Open the port cover on the back of the system and locate the serial port.
3. Align and connect the 9-pin connector with the serial port on the system. Secure the connection with the screws provided.
4. Align and connect the other end of the cable to the appropriate port on the device. Secure the connections with the screws provided.



Connecting a serial device

5. Connect the power cable to the device and a properly grounded wall outlet.
6. Turn on power to the system and the device.



Make sure your printer is on-line before trying to print. See the printer guide for instructions.

External Keyboard/Mouse

You can add a full-size PS/2-style keyboard or mouse to your NEC Versa 4200. You can continue to use the system keyboard while an external keyboard is connected. The GlidePoint is disabled when an external mouse is used.

If you want to attach both an external keyboard and a PS/2-style external mouse at the same time, use the optional Versa “Y” connector. For ordering information see the on-line *Options Catalog*.

Follow these steps to connect an external keyboard/mouse to your system.

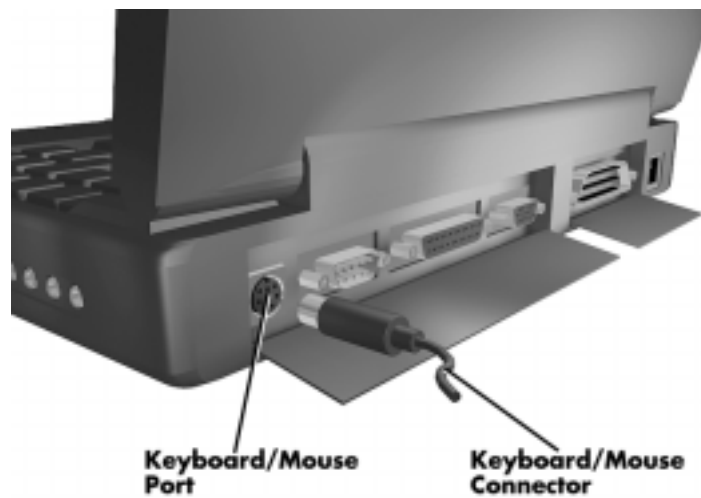
-
1. Press the Suspend button on the NEC Versa. Check that the system is in Suspend mode.



CAUTION

Make sure the NEC Versa is in Suspend mode (look for the moon icon on the Status Bar) or powered off whenever you add or remove the keyboard. Connecting an external keyboard to the system in Operating mode can damage the keyboard controller chip.

2. Connect the keyboard/mouse cable connector to the keyboard/mouse port on the system.



Connecting an external keyboard/mouse

3. Press the Suspend button again to resume Active mode.

The system immediately recognizes the keyboard/mouse.

After you connect an external keyboard, you can use both the built-in keyboard and external keyboard simultaneously. (Only the numeric keypad on the external keyboard works in this case.)



For instructions on connecting an external keyboard or mouse to a docking station, see the user's guide that came with your docking station.

External Bar Code Scanner

You can use an external bar code scanner using a PS/2-style connector with your NEC Versa 4200's Plug and Play feature. You can still use the system keyboard while a scanner is connected.

To connect a bar code scanner, follow the instructions under "External Keyboard" or refer to the documentation that ships with the bar code scanner.

External Audio Options

The NEC Versa 4200 comes equipped with built-in audio ports that let you record and play sound.

Connect audio jacks, like a microphone or headphones, to the audio ports as follows.

1. Locate the audio port that you want to use.
2. Plug the jack into the port on the side of the NEC Versa.



Audio ports



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

Some feedback is caused by having the microphone and speakers too close to each other, so moving the external audio option away from the unit may also help.

Docking the NEC Versa 4200

You can further enhance your NEC Versa 4200's capabilities by connecting the notebook computer to an optional NEC docking station.



If you have a CD-ROM reader installed in your NEC Versa 4200 and another CD-ROM reader installed in the docking station, equipped with sound, you must select the audio source you want to use.

Check for the CD-ROM reader icon in the PowerPanel toolbar. Click to specify the CD-ROM reader to use.

NEC Versa PortBar 4000

The NEC Versa PortBar™ 4000 duplicates the ports found on the back of your NEC Versa 4200 system. Keep the PortBar in your office connected to peripherals while you take your NEC Versa 4200 on the road.

See the instruction sheet that comes with the PortBar or the *Owner's Manual* in the on-line NEC Versa 4200 InfoCenter for details about installing and using the PortBar.



CAUTION

Do not use the tilt feet when installing the PortBar. Doing so can damage the connector.

NEC Versa Docking Station 4000

The optional NEC Versa Docking Station™ 4000 lets you turn your portable computer into a desktop or a full-blown multimedia workstation, providing

- three internal expansion slots
- one internal bay for a hard disk drive
- two external bays for a 5.25-inch device
- high-quality speakers

When your notebook is connected to the docking station, the docking station's external speakers will automatically be used and the internal speakers disabled.

See the *NEC Versa Docking Station 4000 User's Guide* for instructions on connecting and using the docking station.

SETTING SWITCHES

A four-position dip switch is located next to the hard disk drive connector in the hard disk drive bay. The following lists each switch setting and its special function.



Switch setting 4 is reserved for NEC factory use only.

- Switch 1 — Default setting is “ON.” Change the setting to “OFF” when you update your system’s basic input/output system (or BIOS) flash memory. See “Updating the BIOS” next, to complete this procedure.
- Switch 2 — Default setting is “OFF.” Use this to override a password. For example, if you forget your password and cannot access the data on your NEC Versa, change the setting to “ON” and your current password is erased.
- Switch 3 — Default setting is “ON” for the U.S. (83 key) keyboard. “OFF” is used for the United Kingdom and German (79 key) keyboard.
- Switch 4 — Reserved for factory use.

Updating the BIOS

Use the following steps to update your NEC Versa 4200 system BIOS with the BIOS Update diskette (BUD).

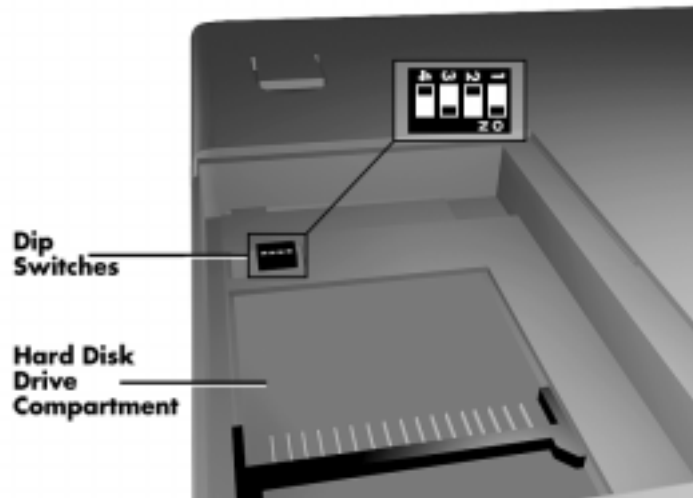
If you are informed that the default BIOS needs an upgrade, you can receive a copy of the BUD by contacting the NEC Versa Diskette Fulfillment Center at (800) 842-6446, or NEC Customer Service and Support (800) 632-4525 Fax (508) 635-4666.

You should only use the BIOS upgrade diskette for your specific model.



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

-
1. Check that computer power is off. Turn you NEC Versa 4200 upside down with the front of the unit facing you.
 2. Follow the hard disk drive removal procedures listed previously in the “Hard Disk Drive” section and remove the hard disk drive.
 3. Locate switch 1 on the four-position dip switch in the hard disk drive bay.



Locating the switch settings

4. Set the switch to “off” to enable BIOS reprogramming.
5. Replace the hard disk drive (see the procedures listed previously in the “Hard Disk Drive” section) and the compartment cover.

Now you are ready to begin the actual update procedure using the following process to update the BIOS.

6. Make sure that the computer is mobile (not docked) with AC power attached, but the system power is off. Insert the BIOS Update diskette into diskette drive A.
7. Power on the computer with the diskette in drive A. The computer boots and automatically loads the utility. A message similar to the following appears:

FLASH ROM EQUIPPED

WARNING: The BIOS Update Procedure is about to begin, press ENTER to continue.
To abort, remove the diskette and reset the unit.

8. Press **Enter** to continue.

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

9. 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.

10. Highlight the "Install New BIOS" option and press **Enter**.

11. Press **Y**, then press **Enter**. After a brief pause, a message appears telling you to remove the diskette in drive A.

12. 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 4200 computer BIOS revision level.

13. When the update is complete, reset the dip switch to the "on" position, and enter Setup to restore the default parameter settings.

5

Using Multimedia

With its fast Pentium™ processor and enhanced audio and video capabilities, you can perform fantastic multimedia feats with your NEC Versa 4200! This section describes the NEC Versa 4200's multimedia features and how you can use them to create high-quality, powerful presentations.

Multimedia combines audio, text, animation, photo images, and video sources into one presentation.



AUDIO

The NEC Versa 4200 provides entertainment-level sound quality through stereo speakers. It handles MIDI files, digital audio files, and analog audio sources. This means the NEC Versa 4200 recognizes .WAV, .MID, and .AVI files. The system is Sound Blaster Pro™ compatible.

Recording

All information on a computer must be stored in digital form. Analog audio signals from sources such as tape cassettes or music CDs must be digitized before being recorded and stored on disk.

You can make recordings from two classes of audio inputs: line level and microphone level. Line level accepts analog audio signals from electronic sources such as tape cassettes, VCRs, and CD players through the Line-In port. Microphone level inputs come through the microphone port.

Line-In

Analog signals come in through the NEC Versa 4200's Line-In port. The analog signals are converted into digital bits and bytes (digitized) through a converter known as an ADC (analog-to-digital converter). The resulting digital sound bytes can be stored, edited, processed, and transferred. You can record ambient sound effects, specific sound effects, or music to enhance a presentation.

Ambient sound effects create a sense of place or environment and include sounds such as rain, heavy traffic, chirping birds. *Specific* sound effects accent or illustrate an action. Examples of specific sound effects include footsteps, a crash, a clock chime. There are many sources of prerecorded sound effects available on the market, or, you can record your own sounds.

Line-In accepts analog signals from external devices such as a tape deck, a stereo CD-player, a docking station, or a stereo tuner. The Line-In port has a mini-type connector. You may need an adapter to connect your input device to the NEC Versa 4200 through Line-In.

CD-ROM Input

You can record music and sound effects from a CD (compact disc) and store them on your hard disk. The audio signal from a CD-ROM reader, such as the NEC MultiSpin™, CD-ROM connects directly to your NEC Versa 4200 through the audio Line-In port. The CD-ROM can be connected through a parallel to SCSI port. The MultiSpin CD-ROM Reader is QuickTime compatible.

Optionally, you can install the VersaBay II CD-ROM reader directly into your notebook computer or connect a CD-ROM reader to your NEC Versa 4200 through the Docking Station 4000. The VersaBay II CD-ROM can be used in a VersaBay II adapter kit inside a Versa Docking Station 4000.



The VersaBay II CD-ROM can be used in a Versa Docking Station 4000 using the optional VersaBay II Adapter Kit.

Microphone

You can capture and record sounds through the internal microphone on the NEC Versa 4200 or through an external microphone that connects to the system through the microphone port. You can record voice-overs for narrations.

Mixing

With the Audio Applications software on your NEC Versa 4200, you can mix analog and digital sounds to produce an overall quality effect. You cut, copy, and paste portions of your soundtrack. The NEC Versa 4200 provides a Sound Blaster Pro-compatible mixer map and an extended access mixer map. You can also mix the microphone volume.

Mixing allows you to blend digital and MIDI audio files to get the final, high-quality soundtrack you want.

Playing Back

You can listen to the playback of your recorded soundtrack through stereo headphones, the internal NEC Versa 4200 stereo speakers, or external stereo speakers. You can play .WAV and MIDI files as well as CD audio. You can adjust the volume through the software or with the volume control knob on the right side of the system.

The NEC Versa 4200 has Indeo™ Video technology playback of digital video files.

Using Headphones

The NEC Versa 4200 headphone port delivers sound at half a watt and you can control the volume. The stereo headphones plug in through the headphone jack located on the right side of the NEC Versa 4200. You can adjust the volume with the audio software on the NEC Versa 4200 or, if your headphones have one, a built-in volume control.

Using Internal Speakers

The NEC Versa 4200 has built-in stereo speakers that are always available. Adjust the volume through the software or with the volume control knob located on the right side of the NEC Versa 4200. Use the **Fn + F6** function key combination to toggle the volume between speaker low, medium, high, and off.

Using External Stereo Speakers

For full stereo sound impact, you can use a pair of stereo speakers that plug into the line out jack located on the right side of the system. You can adjust the volume through the software or with the volume control knob located on the right side of the system.

MIDI Files

MIDI (musical instrument digital interface) allows you to enhance a presentation by adding computer-generated music and sound effects. Using MIDI you can record multiple tracks of performances from a master controller, such as a keyboard, and orchestrate playback on one or more instruments. Or, you can purchase a wide range of public domain and commercial recordings in MIDI format.

MIDI files require only a fraction of the storage space of digital audio files.



VIDEO

The NEC Versa 4200's super VGA TFT display has the industry's first high resolution of 800 x 600 pixels with 256 colors. You get a sharp display on the Versa itself or projected onto an external CRT monitor.

The NEC Versa 4200 supports drivers for Microsoft Video for Windows. This provides full-screen, full-motion playback and MIDI support.

Using Digital Video Files

With commercial video capture hardware and application software, you can plug any video device, including VCRs, televisions, camcorders, and laser disc players into your NEC Versa 4200 and record motion graphics to your hard drive.

Use a video frame grabber and store a stream of grabbed stills on your hard disk.

Using Animation Files

You can create a dynamic presentation using an animation application. Animation can illustrate a concept, drive home an important point, or command attention. Graphics animation can add punch to a presentation with an animated illustration, a flashing arrow, or a flying logo.



MULTIMEDIA APPLICATIONS

A growing number of multimedia applications are available for PC users including graphics software, animation software, and authoring packages.

- Animation software allows you to create 3-D effects, 3-D titles and add interest to an otherwise static presentation.
- Authoring packages let you pull all the elements of your design into an exciting, interactive multimedia presentation.

For example, the VideoSaver software package that comes preloaded on your system gives a variety of full-screen video clips that you can use as screen savers. Simply select VideoSaver from the list of screen savers in your Windows list.

VideoSaver™

The VideoSaver software package that comes preloaded on your system gives a variety of full-screen video clips that you can use as screen savers. Simply select VideoSaver from the list of screen savers in your Windows list. Modify how the screen saver runs as follows:

In Windows for Workgroups, follow these steps.

1. Double click the Control Panel icon in the Main program group.
2. Double click the Desktop icon in the Control Panel.
3. Go to the Screen Saver tab and select VideoSaver.
4. Press the Test button to see the current video clip selected. To modify the video settings, press the Setup button.

The settings screen shows the available video clips and gives options to:

- Rearrange the order in which the clips appear.
- Mute the sound.

Preview the videos available.

In Windows 95, follow these steps.

1. Click Start, Settings, and Control Panel.

-
2. Double click on the Display icon from the Control Panel. The Display Properties screen appears.
 3. Click Screen Saver from the choices along the top of the screen.
 4. Scroll through the screen saver choices. Highlight and click on Video Saver.
 5. To modify the video settings, press the Settings button.
The settings screen shows the available video clips and gives options to:
 - Identify which clips you want to use.
 - Determine the order to display the video clips (random or in order specified).
 - Mute the sound.
 - Preview the videos available.
 - Get information to upgrade to the VideoSaver Pro video clips.
 6. To adjust the wait time before the VideoSaver is initiated, use the up or down arrow to adjust the time.
 7. Click OK to accept. The VideoSaver is now activated.



ScreenSaver only operates with AC power. VideoSaver does not run with DC power in order to enhance the life of your battery.

XingMPEG Player Software

XingMPEG (Moving Pictures Experts Group) Player program is a Windows application which lets you create and view presentation videos by controlling the playback of compressed MPEG files. The features of the XingMPEG Player include the following:

- view the presentation videos at data rates of up to 1.8Mbits/second
- VCR-style controls for playing MPEG files including
- flexible display modes
- diagnostic and benchmark tools.

To access the XingMPEG player from Windows for Workgroups, click on the Xing MPEGPlayer icon in the Xing MPEG Player program group.

To access the XingMPEG player from Windows 95, select Start, then XingMPEG Player.

6 Traveling with Your NEC Versa 4200

The NEC Versa 4200 makes a natural traveling companion. Using a battery, you can use the computer anywhere you go. Here is some information you might find helpful when taking the NEC Versa on the road:

- Carry an extra charged battery pack (and, optionally, a VersaBay II adapter) for additional battery power.
- Check that you have everything you need before you leave on a trip. Be sure you have all the necessary cables and accessories.
- If you run your system with battery power, maximize battery life by using power-saving features whenever possible.
- Take the AC adapter in case you have an electrical outlet handy. This saves battery power for when you really need it.
- Take along any application or data files on diskette that you might need.

POWER CONNECTIONS

With the right accessories, you can run your NEC Versa 4200 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 4200 adapts to voltages ranging from 100 to 240 volts.

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 and transformer. There are five different plugs available worldwide. You can buy these at an electronics supply store.

CHECKLISTS

The following checklists can help you prepare for your trip with your NEC Versa 4200. Look them over and use what fits your situation.

What to Take

Take the following with you when you travel with your NEC Versa.

- Extra fully charged batteries (and, optionally a VersaBay II battery adapter)
- Single-outlet surge protector
- Appropriate AC plug adapter
- Copy of proof of purchase for computer and other equipment for customs check
- Customer support phone numbers for your software
- *NEC Versa 4200 Series Quick Reference*
- AC extension cord.



When using a modem (not shipped with the system) outside the U.S. and Canada, you may need an international telephone adapter. You can buy this at an electronics supply store.

Preparing Your NEC Versa for Travel

Here is what you should do before you leave home:



Speed the trip through airport security by carrying a charged system. Inspectors 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.
 - Put your system into Suspend or Save to File mode so you can 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.

7

Solving Problems

Once in a while you may encounter a problem with your NEC Versa 4200. The on-line NEC Versa 4200 InfoCenter has *Solutions to Common Problems* that might be helpful to you.

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	SOLUTION
The system does not power on	<p>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.</p> <p>If you have the AC adapter attached, check that the electrical outlet you are using works.</p>
LCD screen is dark and blank	<p>Power-saving mode has shut off the backlight. Press a keyboard key, Fn F5, or the Suspend button.</p> <p>The built-in LCD may not be selected. Press Fn F3 once or twice. (Fn F3 only works with external monitors attached.)</p> <p>Brightness control needs adjustment. Adjust the control.</p> <p>The system entered Suspend mode due to low battery power. (Check the Status bar for a half-moon icon.) Plug in the AC adapter or replace the battery pack, then press the Suspend button to resume operation.</p>
Battery power does not last long	Use power-saving modes.
Information on the LCD screen is difficult to see	Adjust the brightness control.
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.
The Suspend/Resume button does not work	<p>A disk drive might be busy. Wait until the disk drive stops and try again.</p> <p>The NEC Versa may be connected to a docking station. Some power management functions do not work when the NEC Versa is docked.</p>

START-UP 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 Auto 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.



When the NEC Versa detects an error related to display devices, it cannot display on either the LCD or a CRT. The system warns you by beeping.


POST ERROR MESSAGES

The NEC Versa 4200 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 the POST, the system displays an error message. If this happens, follow the instructions in the POST error message table.

POST Error Messages

MESSAGE	WHAT TO DO
Diskette drive A or B failure or No Floppy Drive	Drive A does not work or is not properly connected. Drive A is the diskette drive. Check that drive A is securely connected and power is on. Press F2 to start Setup to check the diskette drive parameters. If there's still a problem, the drive might need repair.
General Failure Reading Drive A or Diskette Read Failure – press F2 to run Setup. Press any other key to retry boot	Remove the diskette from drive A and press F2 to start the system from the hard disk. Or, insert a bootable disk in drive A and press F2 .
Non-system disk or disk error; Replace and press any key when ready	Remove the diskette from drive A and press any key to start the system from the hard disk. Or, insert a bootable disk in drive A and press any key.
Operating System Not Found or Fixed Disk Failure	Press F2 to start Setup. Change the hard disk type to the correct setting. Exit and save Setup changes.
Invalid configuration information – run Setup program	One or more system configuration parameters are not properly set. Start Setup, set them correctly, and exit and save to update the parameters.
Real time clock failure	Set time and date using Setup. Exit and save to update the parameters.

POST Error Messages

MESSAGE	WHAT TO DO
Time-of-day not set – run Setup	Set the time and date using Setup. Exit and save Setup changes to update the parameters.
System CMOS Checksum Bad – run Setup or Press (F1) to resume, (F2) to setup.	Press F2 to enter Setup. Under Exit, set the default values. Under Main, set the date and time. Save your changes and exit.
Fixed disk configuration error	Start Setup. Exit and save to update the parameters. Check to see if the hard disk connector is seated properly. If there is still a problem, the hard disk might need repair.
Fixed disk failure	Press F2 to start Setup. Exit and save to update the parameters. Check to see if the hard disk connector is seated properly. If there is still a problem, the hard disk might need repair.
Fixed disk controller failure	Press F2 to start Setup. Exit and save to update the parameters. Check to see if the hard disk connector is seated properly. The hard disk controller does not work and might need repair.
Keyboard clock line failure	Unplug external keyboard if attached. Have the keyboard repaired.
Keyboard data line failure	Unplug external keyboard if attached. Have the keyboard repaired.
Keyboard controller failure	Unplug external keyboard if attached and reboot the system. If it still fails, have the keyboard repaired.
	 NOTE Repeated keystrokes during boot may produce an error message.

POST Error Messages

MESSAGE	WHAT TO DO
xx Key Stuck Keyboard Error	A key is jammed. Remove any obstruction you find. You may have repeatedly pressed the F2 key when trying to enter Setup. If the error message remains, the keyboard may need repair.

USING THE RESTORE CD

The Restore CD, available only with the 133 MHz model, is used to reinstall and restore system software.



The Windows 95 Restore CD is shipped with the 133 MHz systems. If you have a 133 MHz system, and would prefer the Windows for Workgroups Restore CD, just send the Windows 95 Restore CD to the NEC Fulfillment Center, and request the Restore CD for Windows for Workgroups. The Windows for Workgroups Restore CD will be sent to you.

The Recovery CD gives you the following two options if you experience file corruption or loss of applications due to a system failure:

■ Restore Individual Files

NEC lets you restore individual files in the DOS-based or Windows 95 environment. The DOS-based version restores all application files to their original state (excluding operating system files). The Windows 95 version gives you the option of restoring specific files only.



If you restore individual files, you will get conflict errors on open files. Press the I (for ignore) key several times for each error.

- System Recovery

NEC lets you perform a system recovery in the Windows for Workgroups or Windows 95 environment. The System Recovery option provides a *full* system recovery. This option lets you restore your system to its original factory-shipped state. Full System Recovery reformats Hard drive C and erases all information on the disk. It then restores files on drive C from the System Recovery CD.

Restoring All Application Files in DOS

Restore all application files (not the operating system) to your hard disk as follows:

1. Insert the Recovery CD into the system's CD ROM reader. Power on the NEC Versa 4200 system.
2. Select "File Recovery" to restore all original files that were on the hard disk C from the Restore CD.
3. Read the onscreen "Restore Files" explanation and press **Alt C** to continue.
4. Press **Alt Y** if you are sure you want to continue.
5. Read the onscreen license agreement and select "I agree" to continue.
6. The System Refill screen appears. Select "Ok" to start the file recovery procedure.
7. The application files are restored. Select "Ok" to complete the procedure. Remove the Recovery CD.

Restoring Individual Files in Windows 95 and Windows for Workgroups

Restore individual files to your hard disk as follows:

1. With system power on, insert the NEC Versa Series Product Recovery CD into the CD-ROM reader.
2. On the Windows 95 desktop, double click "My Computer."
3. In WFWG, open file manager and select the CD-ROM reader drive (when the system ships this is the f: drive).

-
4. Double click the CD-ROM reader “(f:)” icon. The NEC System Restore screen appears.

In WFWG, select the “Tools” directory. Next, select “Safetycd.exe”.

The rest of the procedure is the same for both operating systems as described in the following steps.

5. At the System Restore screen, click “OK” to restore individual files. A license agreement appears.
6. Read the license agreement and click “I agree” to continue. The Restore Individual Files screen appears. The screen is divided into two areas:
 - 1 Select files to restore — This is where you select the specific files you want to restore.
 - 2 Check list of files to be restored — This area lets you check the files you selected for restoration.

The following sections explain how to use the Restore Individual Files screen. Complete all sections to restore your files.

Selecting Files

Under “Select files to restore,” select your files as follows:

1. From the left dialog box, highlight the directory that contains the files you want to restore.
2. From the right dialog box, highlight the files you want to use:
 - To restore all of the files listed, click “Select all of the above.” This highlights and selects all the files listed.
 - To restore only some of the files listed, click the file or files you want. This highlights the appropriate file or files.
3. Once your files are highlighted, select the appropriate button under the list. The buttons include:
 - Add selected files to list — click this button to add the selected files to the list of files to be restored.
 - Clear all selections — click this button to deselect the files listed.

-
4. Repeat steps 1 through 3 to select files from other directories. Continue until all the files you want restored are selected.

Checking Selected Files

To continue the restoration process, check the files to be restored as follows:

1. Look at the list of files in the “Check list of files to be restored” area of the screen.
2. If you need to add any files to the list, go back to the preceding section and repeat those steps.
3. If you need to remove any files from the list, do so as follows.
 - To remove only selected files, highlight the file name and click “Delete item in list.” This method lets you remove one item at a time.
 - To remove the entire list, click “Clear list.”

Once the list is set, continue to the next section.

Restoring the Files

Complete the restoration process as follows:

1. In the “Restore the files listed” area of the screen, locate the two options:
 - Restore the files listed — this option lets you proceed with the restoration and continue to the next step. Go to the next step to complete the restoration.
 - Cancel — click this option to cancel the restoration. This returns you to the NEC System Restore menu.
2. To proceed with the restoration, click “Restore the files listed.” When the restoration is completed, a file restore message appears.
3. Click “OK.”
4. If you replaced any Windows system files, exit Windows and reboot the system.

System Recovery

If your preinstalled software becomes unusable and you cannot reboot from the hard disk, you can restore your system to its initial shipping configuration.

System Recovery *erases* and resets the hard disk *completely* before reinstalling the files.



CAUTION: If you are doing a Full System Recovery, ALL files on the hard drive will be deleted and replaced by the factory installed files.

A Full System Recovery should only be used if the preinstalled software is unusable. If you are unsure about using this procedure, call the NEC Technical Support Center (TSC). TSC representatives will help you determine if this is your situation. See “Getting Help” at the end of this chapter for the technical support telephone number.

System Recovery in DOS

The System Recovery requires booting from the Restore CD. Use the following procedure to start the system recovery procedure. The procedure takes about 10 to 15 minutes, depending on the size of your hard disk.

1. Insert the Recovery CD into the system’s CD ROM reader. Power on the NEC Versa 4200 system.
2. Select “System Recovery.”
3. The System Recovery screen appears. Press **Alt C** to continue.



NOTE Do not interrupt the System Recovery process. Wait until the procedure is complete before accessing your system.

4. The next screen appears confirming the start of System Recovery. Press **Alt C** to continue. A license agreement appears.

-
5. Select “Yes” to continue.
 6. Read the license agreement and click “I agree” to continue. The Start System recovery screen appears.
 7. The Start System Recovery screen states that the procedure will automatically reformat the hard drive and reinstall all system applications. Press **Enter** to start the procedure.

Now wait a few minutes for the hard drive to reformat and extract all files.

8. You will see a message similar to the following:

The hard disk drive has been successfully rebuilt! Remove the CD and reboot your machine.

9. Select “Ok” and remove the Restore CD.
10. Power off and then power on the system. Follow the online instructions to reinstall the operating system. The operating system (Windows 95 or Windows for Workgroups) remains the same as the one installed prior to performing the System Recovery.

For example, if you chose Windows 95 as your initial operating system, complete the installation procedures for Windows 95.

Restoring System Files in Windows 95 or Windows for Workgroups

Restore application and operating system files to your hard disk as follows:

1. With system power on, insert the NEC Versa Series Product Recovery CD into the CD-ROM reader.
2. On the Windows 95 desktop, double click “My Computer.”
3. In WFWG, open file manager and select the CD-ROM reader drive (when the system ships this is the e: drive).
4. Double click the CD-ROM reader “(f:)” icon. The NEC System Restore screen appears.

In WfWG, select the “Tools” directory. Next, select “Safetycd.exe.”

The rest of the procedure is the same for both operating systems as described in the following steps.

-
5. Select “Refill Hard Drive.”
 6. Select the **Alt + I** keys to agree to the license agreement.
 7. Select “Refill from System Restore CD.”
 8. When the process completes, press **Enter** and remove the Restore CD. Reboot your system and reset system parameters.

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, call the NEC Technical Support Center (TSC), toll free, at 1-800-632-4525. Direct technical assistance is available 24 hours a day, seven days a week.



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

When TSC receives a call from you, a technician attempts to diagnose your problem over the telephone. The technician determines if your problem requires troubleshooting your system remotely with the Remote Support Session software that comes on your bootable NEC diskette.

GETTING HELP

NEC is ready and willing to help you with our products. Here's how to reach us.



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

NEC Versa Diskette Fulfillment Center: (800)842-6446

NEC provides driver files and BIOS updates free of charge through our Bulletin Board System (BBS). Also, diskettes containing these updates can be mailed at a rate of \$15/per disk for duplication, shipping and handling.

If you installed Windows for Workgroups as your operating system, contact the Fulfillment Center to obtain a Restore CD for Windows for Workgroups. The Restore CD contains the operating system files so you can fully reinstall your Windows for Workgroups hotload (as shipped).



The NEC Versa 4200 133 Mhz system ships with a Windows 95 Restore CD. This CD permits you to restore the original factory-shipped version of the Windows 95 operating system. If you have a 133 Mhz system and if you prefer the Windows for Workgroups Restore CD, just send the Windows 95 Restore CD to the NEC Diskette Fulfillment Center, and request the Restore CD for Windows for Workgroups. The Windows for Workgroups Restore CD will be sent to you.

NEC Customer Technical Support Center: (800) 632-4525

For assistance in resolving problems that arise while using your NEC Versa 4200 notebook computer.

NEC Customer Service: (800) 632-4525

Fax (508) 635-4666

Spare parts ordering, warranty claims, repair services, and service authorizations.

NEC FastFacts: U.S. and Canada (800) 366-0476

International (708) 775-7999

Automated fax service that offers product brochures, installation procedures, quick reference guides, promotional forms, troubleshooting information, and more.

NEC Electronic Bulletin Board**(508) 635-4706**

Remote data base system containing files that are dedicated to enhancing the functions of NEC products. It also gives general public access to drivers for NEC products to be used with various software applications.

CompuServe Password**"GO NECTECH"****Internet Address:****tech-support@NECTECH.com****America On-line:****nectech****Worldwide Web Address: www.nec.com**

NEC is a member of TSANet (Technical Support Alliance Network).

NEC WARRANTY/NON-WARRANTY REPAIR SERVICE

Before you call for repair service, see the previous sections in this chapter to determine if you can solve the problem yourself, within your company, or through your NEC authorized dealer.



If you purchased and/or are using this computer outside the U.S., please contact the local NEC office or dealer for the warranty available in your country.

Direct assistance is available 24 hours a day, 7 days a week. Call the Technical Support Center (TSC) at 1-800-632-4525 for the following support:

- Preinstalled software — toll-free phone support for 90 days from your first phone call.
After the initial 90 days, preinstalled software support is available for a fee.
- System hardware — toll-free phone support for three years after the date of purchase (standard warranty).

For hardware support after the 3 year warranty, system hardware support is available for a fee.

Before calling, please have ready your system name, model number, serial number, and purchase date. Also have ready as much information as possible about the problem you are having, including any error message that occurred.



Free technical specifications, troubleshooting tips and other helpful information for out-of-warranty products are available through NEC FastFacts at 1-800-366-0476 and requesting catalog number seven.

A

Setting Up a Healthy Work Environment

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 this appendix.

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.

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.

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.

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.



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 (90° to 105°). 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.



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 and Environment

The following specifications are standard except where noted.

System Processor

NEC Versa 4200 SVGA TFT High Resolution model – Intel Pentium 100 MHz or 133 MHz

Random Access Memory (RAM)

Standard Main Memory – 8-MB high-speed interleaved access

Optional Expansion – 1 slot. Expandable in 4-MB, 8-MB, 16-MB, or 32-MB increments. Maximum of 40MB total.

Video RAM – 1 MB

Cache RAM – L1: 8 KB for code, 8 KB for data; L2: 256 KB

Read-Only Memory (ROM)

256 KB x 8 bit, Flash ROM

Calendar Clock

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

Input/Output Facilities

Integrated industry-standard interfaces

- Parallel – 1 port, 25-pin, D-sub
- Serial – 1 port, 9-pin D-sub
- Infrared – 1 port (on the front), IrDA-1 compatible
- VGA – 1 port, 15-pin high-density D-sub

-
- External Keyboard/External Mouse – 1 port, PS/2, 6-pin MiniDin; exclusionary use or both supported with optional Y-adapter
 - Expansion – 1 port, SVGA CRT signal, external keyboard signal, PS/2 mouse signal, ISA bus signals
 - Speakers – 2 built-in, .15 watts (W) each with a maximum .3-W output
 - Mono MIC IN – 1 port, 3-pin, Mini Pin Jack
 - Stereo Headphones – 1 port, 3-pin, Mini Pin Jack, .5 watts per channel
 - Stereo Line In – 1 port, 3-pin, Mini Pin Jack
 - Stereo Line Out – 1 port, 3-pin, Mini Pin Jack

PCMCIA (PC) Card Slots

Two slots for two Type II PC cards or one Type III PC card, 5 V or 3.3 V interface

LCD Display

SVGA Thin Film Transistor (TFT), CCFT Backlit Color

- Diagonal Size – 10.4 inch
- Resolution – 800 x 600 pixels
- Dot Pitch – 0.26 mm
- Colors – 256, 18 bits

Keyboard

Membrane 83 keys with standard QWERTY-key layout, (79 keys for International)

- Function keys – 12 keys
- Cursor Control keys – 8 keys; arrow keys arranged in inverted T layout
- Numeric keypad – embedded
 - Fn key – function key for ROM-based key functions. For Windows 95,
 - Fn** and **x** – quick access to shortcut menus
 - Fn** and **z** – displays the Start menu
- Stroke – 3 mm

Diskette Drive

Standard 1.44-MB drive

- Size – 3.5 inch
- Capacity – 720 KB or 1.44 MB
- Access Time (average) – 94 ms
- Transfer Rate – 250 to 500 K/bps
- Interleave 1:1

6x-speed CD-ROM Reader

Built-in TEAC 6x CD-ROM drive, removable

- Dimensions: TEAC CD-46E (Basic Drive)
 - Size – 4.7 mm x 1.8 mm (Front Indicator)
 - Height – 17.0 mm (excluding the Front Bezel)
 - Width – 130.6 mm
 - Depth – 140.5 mm (excluding the Eject button)
 - Weight – 320 grams or less
- Data Buffer Capacity – 128 kilobytes (KB)
- Data Transfer Rate (average sustained rate/x6 speed) – 900 kilobytes (KB)/second
- Data Transfer Rate (programmed I/O) – 16.7 Mbytes/second maximum
- Burst Transfer Rate – 16.7 Mbytes/second (PIO mode 4)
- Access Time – 190 milliseconds (MS) average (x6 speed)
- Interface – IDE (ATAPI)
- Photo CD Compatibility – single/multi-session

Hard Disk Drive

Internal 2.5-inch, 810 MB or 1.08 GB drive, removable

- Track-to-track seek rate – 4 ms
- Average seek time – 13 ms (read), 14 ms (write)
- Revolutions per minute – 4000
- I/F data rate – Mode 3 with a maximum throughput of up to 11 MB per second

-
- Media data rates – 39.5 - 27 Mbps

Power

AC Adapter

- Input Voltage – 100 to 240 volts (V) AC, 50 or 60 Hz, 1.0-0.5 A
- Output Voltage – 13.5 V DC 3 A, (40.5 W)

Battery Pack

- Type – Lithium Ion (Li-Ion)
- Output Voltage – 10.8 V
- Capacity – 2,500 mAH
- Battery Life – Approximately 5.5 hours, depending on model, under typical operating conditions
- Recharging Time
 - 2.5 hours when the system is off (Quick Charge)
 - 2.5hours or more (depends on system usage) when the system is on (Normal Charge), depending on system operation status.
- Bridge Battery

Fully charged, backs up memory contents and system status for up to 5 minutes under Suspend mode.

Dimensions

System

- Width – 11.69 (297 mm)
- Depth – 9.4 inch (240.5 mm)
- Height – 2.1 inch (53.5 mm)

Battery Pack

- Width – 3.13 inch (79.5 mm)
- Depth – 4.53 inch (115.5 mm)
- Height – 0.83 inch (21 mm)

Weight

NEC Versa 4200 TFT – 6.58 lb (2.98 kg)

Battery Pack – 0.64 lb (0.29 kg)

Recommended Environment

Operation

- Temperature – 41°F to 95°F (5°C to 35°C)
- Relative Humidity – 29% to 80% (Noncondensing)

Storage

- Temperature – -4°F to 104°F (-20°C to 40°C)
- Relative Humidity – 20% to 80% (Noncondensing)

Options for the NEC Versa 4200

- 6x CD Rom Option Kit (ships with the 133 MHz model)
- NEC Versa 4000 AC Adapter
- NEC Versa 4000 Battery Charger
- NEC Versa 4000 DC Adapter
- NEC Versa 4000 HDD Cradle Pak
- NEC Versa 4000 Lithium-Ion Battery Pak
- NEC Versa Docking Station 4000
- NEC Versa PortBar 4000
- NEC Versa “Y” Connector

Battery Replacement

A lithium battery in your computer maintains system configuration information. In the event that the battery fails to maintain system configuration information, NEC recommends that you replace the battery.

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.

ATTENTION

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

Battery Disposal

Your bridge battery (not your main battery) is made of nickel-cadium (NiCd). The NiCd bridge battery must be collected, recycled, or disposed of in an environmentally-approved manner.

Your main battery, made of Lithium Ion (Li-Ion), and your CMOS lithium battery are not generally recyclable at the time of this publication.

The incineration, landfilling, or mixing of Nicad batteries with the municipal solid waste stream is prohibited by law in most areas.

Return NiCd batteries to a federal or state-approved recycler.

This may be where you purchased the battery or a local seller of automotive batteries. In the United States of America, call 1-800-225-PRBA if you need further disposal information.

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

Glossary

A AC Adapter

A device that connects a Versa portable computer and an AC wall outlet to provide AC power for running the system or recharging the battery.

A/D Conversion

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

animation

The art of making things appear to move in two-dimensional (2-D) or three-dimensional (3-D) 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 frequencies that humans hear.

B base RAM

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

BIOS

Basic Input Output System. A collection of primitive 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. Board onto 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 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 reader

A computer-controlled device that reads high-capacity optical discs and sends the output to the computer.

CD-I

Compact disk-interactive. A format for storing and handling data for the CD-i video or karaoke compact disks. The CDs are viewed as one big file via the XingMPEG player. These files are not visible via the File Manager (WfWG) or Windows Explorer (Windows 95).

clock

Electronic timer used to synchronize computer operations.

CMOS

Complementary Metal Oxide Semiconductor. A chip that contains nonvolatile memory in the Versa. CMOS is backed up by an internal lithium 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.

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.

digital audio

Recorded sounds such as speech and sound effects. These are played back by the sound card'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.

DSTN

Double-Scan Super-Twisted Nematic. A type of technology used in some Versa LCD screen displays.

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 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 (such as **Ctrl-Alt-D**) that you press simultaneously for a particular function.

I 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.

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.

mode

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

modem

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

MPEG

(Moving Pictures Experts Group) player program is a Windows for Workgroups and Windows 95 application that lets you create and view presentations by controlling the playback of compressed MPEG files.

multimedia

Computer technology that integrates different 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. Non-volatile memory in the Versa is a complementary metal oxide semiconductor (CMOS) chip which 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 eight bits at a time.

parallel printer

A printer with a parallel interface.

parameter

A characteristic of a device or system.

password

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

PC Cards

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.

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, 640 by 480. 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.

software

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

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.

T TFT

Thin Film Transistor. A type of Versa LCD color screen that supports 256 colors and provides exceptional screen display.

V VGA

Video Graphics Array. Graphics technology that supports up to 256 colors and a graphics resolution of 640 by 480 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 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) or the reset button. The system returns to an initial or arbitrarily selected condition.

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.

Index

A

AC adapter, 1-13, 1-20, 6-1 – 6-2

AC outlet, 1-14

Adjustable feet, 1-13

America Online, 2-13

Audio

.WAV files, 5-1

AVI files, 5-1

MIDI files, 5-1

Audio rack, 2-15

B

Battery, 1-6

AC adapter, 1-20

bay cover, 1-21

bridge, 1-21

CMOS, 1-21

cover, 1-19

extended life, 1-20

gauge, 2-7

Lithium, 1-15. *See* Lithium battery.

pack, 6-1

secondary, 6-1

status, 1-15

warning, 1-16

Bridge battery, 1-21

Brightness control, 1-3

C

CardWizard, 2-8

CD-ROM, 1-2, 1-8, 4-7, 4-11, 4-12

care, 4-13

input, 5-2

loading, 4-13

Cleaning your NEC Versa, 1-24

CMOS battery, 1-21

CompuServe, 2-13

D

Direct technical support, 7-12

Diskette drive, 1-8

Docking station, 4-31

E

Entering setup, 3-1

ESS audio, 2-15

Expansion port, 1-10

Extended battery life, 1-20

External

audio options, 4-29

bar code scanner, 4-29

F

Function keys, 4-3

H

Hard disk, 4-16

Hard disk drive

bay, 1-12

release latch, 1-11

replacing, 4-16, 4-18

Headphones, 1-11

I

Increasing system memory

adding a memory module, 4-20

Increasing system storage

hard disk drive, 4-16

Initial password, 3-7

Installing options, 4-22

external monitor, 4-23

memory, 4-20

mouse/keyboard, 4-27

parallel device, 4-24
printer, 4-24
serial device, 4-26
IR port, 1-7, 4-15

K
Kensington lock, 1-11
Keyboard, 1-7, 4-2
 control keys, 4-2
 cursor control keys, 4-2
 function keys, 4-2
 lock feature, 3-8
 numeric keypad, 4-2
 port, 1-9
 typewriter keys, 4-2

L
LapLink, 2-9
 software, 4-16
 using, 2-10
LCD panel
 SVGA, 1-3
 TFT, 1-3
LCD status bar, 1-5
Li-Ion battery. *See* Lithium-Ion battery.
Line-In, 1-12, 5-2
Line-Out, 1-12
Lithium-Ion battery, 1-10, 1-15, 1-21
Local standby mode, 6-3
Low battery power, 1-16

M
Main battery, 1-21
Main power source
 DC power, 6-1
McAfee anti-virus, 2-14
Memory module
 connectors, 4-20
 slot, 1-12
Microphone, 1-4, 1-11
MIDI files, 5-4

Monitor port, 1-9
Mouse port, 1-9
MS-DOS, 2-4
Multimedia
 applications, 5-5
 audio, 5-1
 digital files, 5-4
 microphone, 5-3
 mixing, 5-3
 recording, 5-1
 using animation files, 5-4
 using external speakers, 5-4
 using headphones, 5-3
 using internal speakers, 5-3
 video, 5-4

N
NEC
 diskette creator, 2-6
 utilities, 2-6
 battery gauge, 2-7
 NEC diskette creator, 2-6
 PHDisk, 2-7
 PowerPanel, 2-7
 Versa Docking Station 4000, 4-30
 Versa PortBar 4000, 4-31
 VersaBay II, 1-8
 warranty, 7-14
Netscape Navigator, 2-13

O
OAG. *See* Official Airline Guide.
Official Airline Guide, 2-8
Online
 documentation, 1-1
 help, 2-4
 questions and answers, 7-1
 Services. *See* America Online,
 CompuServe, Netscape Navigator.
 topics, 2-6

Operating systems. *See* Windows 95 or
Windows for Workgroups
Optional battery charger, 1-16
Options catalog, 1-16

P

Parallel port, 1-9
PC card, 1-2
 inserting a card, 4-14
 slots, 4-14
PCMCIA power, 3-7
Pentium microprocessor, 1-2
Peripheral Component Interconnect (VL),
 1-2
PHDisk, 2-7
POST error messages, 7-4
Power
 connections, 6-1
 LED, 1-4
 management and PowerPanel, 3-13
 management modes, 1-6
 management under AC, 3-6
 port, 1-10
 savings
 highest performance, 3-6
 longest battery life, 3-6
 off, 3-6
 sources, 1-13
Power Panel, 2-6, 3-9
 help, 3-13
 menu, 3-11
Powering on, 1-15
Power-on self test (POST), 3-1
Power-saving modes
 Local standby, 6-3
 Suspend, 6-3
Precautions
 AC adapter, 1-21
 Lithium-Ion battery, 1-22
Preparing your NEC Versa for travel, 6-2

Printer, 4-25
Problem checklist, 7-1

R

Recharging the battery, 1-16
Removing a new password, 3-8
Replacing the battery pack, 1-17
Restore CD, 7-6, 7-7, 7-8, 7-9, 7-10,
 7-11, 7-12, 7-13
 how to use, 2-7, 7-6
 individual files, 7-6
 individual files in DOS, 7-7
 individual files in Windows 95, 7-7
 system recovery in DOS, 7-10

S

Security, 3-7
Serial port, 1-9
Setting
 an initial password, 3-8
 system parameters, 3-4
 hard disk drive, 3-6
 peripherals, 3-6
 power savings, 3-6
 time and date, 3-5
 up a healthy work environment, A-1
Setup
 key functions, 3-3
 main screen, 3-1
 utility, 3-1
 main screen, 3-5
Sound Blaster Pro, 5-1
Speakers, 4-1
Specifications, B-1
Start-up problems, 7-3
Status icons
 battery 1, 1-5
 battery 2, 1-5
 battery status, 1-5
 cap lock, 1-5

- diskette drive, 1-5
- hard disk drive, 1-5
- num lock, 1-5
- power management, 1-5
- scroll lock, 1-5
- suspend, 1-5
- Stereo speakers, 1-3
- Storage requirements, 1-24
- Support
 - phone numbers, 7-12
- Suspend
 - button, 1-5
 - mode, 1-5, 6-3
 - warning tone, 3-7
- Switch settings, 4-32
- System
 - care, 1-21
 - date, 3-5
 - features
 - back, 1-9
 - bottom, 1-12
 - front, 1-3
 - left side, 1-10
 - right side, 1-11
 - recovery, 7-7, 7-10
 - time, 3-5

T

- Technical support center (TSC), 7-12
- Traveling
 - checklist, 6-2
 - with your system, 6-1

U

- Unknown battery status, 1-6, 1-16
- Updating the BIOS, 4-32
- Using
 - keyboard lock, 3-8
 - LCD panel controls, 4-1
 - the CD-ROM reader, 4-9

- the NEC VersaGlide, 4-4
- the setup utility
 - time/date, 3-5

V

- VersaBay II, 4-7
 - installing a device, 4-9
 - release latch, 1-13
 - removing a device, 4-7– 4-8
- VersaGlide, 1-7
 - adjustments, 4-5
 - tips, 4-5
- Video configuration utility, 2-15, 2-17
- VideoSaver, 5-5, 5-6
- Volume control, 1-11

W

- Windows 95, 2-2, 4-4
- Windows for Workgroups, 2-3

X

- XingMPEG, 2-15, 5-6

Y

- Y-adapter, 4-27
- Y-cable adapter, 1-9