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NEC V6200 Series

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Using this Guide

The *NEC Versa® 6200MX User's Guide* gives you the information you need to maximize the use of your NEC Versa 6200MX notebook computer. Read this guide to familiarize yourself with the NEC Versa 6200MX 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 loaded on your system. We included software to let you experience the full spectrum of the system, from transferring files without cables to creating vivid presentations.
- Chapter 3, “Using Setup,” to customize your notebook’s parameter and power management settings.
- Chapter 4, “Using Your NEC Versa 6200MX,” for an understanding of NEC Versa 6200MX features and functionality. You’ll also master procedures for connecting external options like an external monitor, headphones, a printer, or speakers.
- Chapter 5, “Using Multimedia,” for steps on integrating video and sound clips into impressive presentations.
- Chapter 6, “Traveling with Your NEC Versa 6200MX,” for valuable tips for getting the most out of your system while on the road.
- Chapter 7, “Solving Problems,” for simple solutions to common problems that may arise while operating your notebook.
- Appendix A, “Setting Up a Healthy Work Environment,” for guidelines that help promote a healthy work setting.
- Appendix B, “Specifications,” to review NEC Versa 6200MX system specifications.
- Appendix C, “Questions and Answers,” for a look at questions that users commonly ask and the answers to those questions.

TEXT SETUP

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

- 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 additional information on your NEC Versa 6200MX notebook computer:

- Your *NEC Versa 6200MX Quick Setup* sheet.
- Your *NEC Versa 6200MX Quick Reference* card. (The quick reference card does not ship with some systems purchased outside of the United States.)
- Depending on the operating system installed, Windows 95 or Microsoft® Windows for Workgroups, MS-DOS operating system online documentation comes loaded on your NEC Versa 6200MX computer.

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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 6200MX 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 online *System Tour* to get acquainted with the NEC Versa 6200MX. (The *System Tour* is in the Windows NEC Information group under the NEC Versa 6200MX InfoCenter.)



If you purchased your NEC Versa outside of the United States, your system may come with an online user’s guide instead of the InfoCenter.

- View the online system *Basics*. (*Basics* is in the Windows NEC Information group under the NEC Versa 6200MX InfoCenter.)
- Read through this guide to familiarize yourself with the NEC Versa.

GETTING TO KNOW YOUR NEC VERSA 6200MX

The NEC Versa 6200MX Series notebook computer offers you a portable system filled with exciting resources for home, business or travel. Standard features include a powerful Intel® Pentium 166-MHz microprocessor that works together with the latest Peripheral Component Interconnect (PCI) architecture.

In addition, your system provides a high-performance hard disk drive, diskette drive, interchangeable 10X CD-ROM reader, and 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.

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



NEC Versa 6200MX Series notebook computer

Around the Front of the System

The NEC Versa 6200MX is compact with features on every side. First, look at the front of the NEC Versa 6200MX. The following sections describe front features, beginning with the liquid crystal display (LCD) panel.

LCD Panel

The LCD panel on your system offers the features shown in the following figure. Features are described after the figure.

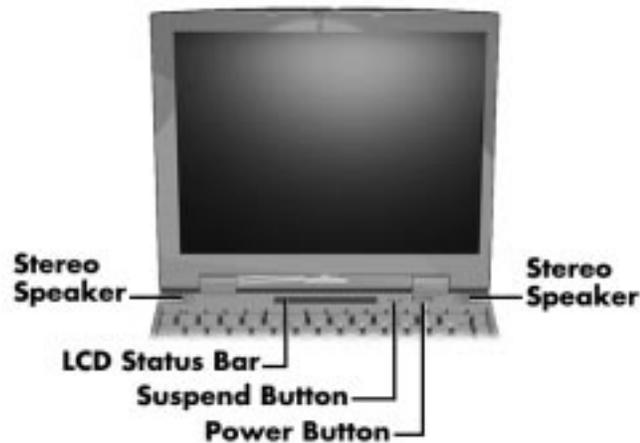


LCD panel features

- LCD — a 13.3-inch color Thin Film Transistor (TFT) Extended Graphics Array (XGA) display that you can easily adjust for comfortable viewing.
- Power LED — a light that is visible with the LCD panel opened or closed. The Power LED indicates the following:
 - 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.
- Brightness Control — a slide switch that adjusts screen brightness. Increasing the brightness increases screen contrast.

Control Panel

The NEC Versa 6200MX control panel provides the features shown in the following figure. These features are described after the figure.



Control panel

- **Stereo Speakers** — provide stereo sound for your multimedia presentations or listening pleasure. The built-in sound system also supports 3D sound, which simulates the latest surround-sound technology.
- **LCD Status Bar** — keeps you informed of your NEC Versa's current operating status. Description of icons appear in the following section.
- **Suspend/Resume (S/R) Button** — press the S/R button to put the unit in 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 the S/R button again to bring the NEC Versa 6200MX out of Suspend mode.

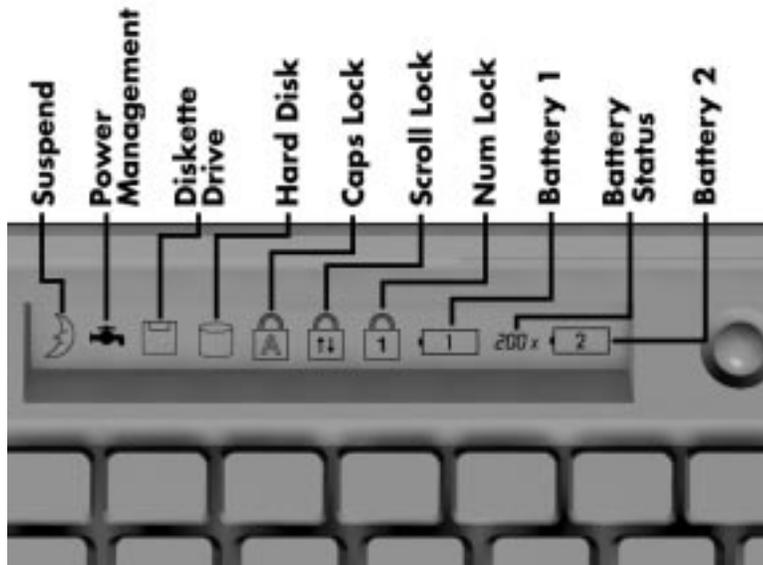
Suspend mode shuts down all devices in the system while retaining data and system status. You can find more detailed information on using Suspend mode in Chapter 3, "Using Setup."

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

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

Status Icons

The NEC Versa 6200MX uses LCD icons that communicate system status. See the following figure and list for each icon’s meaning.



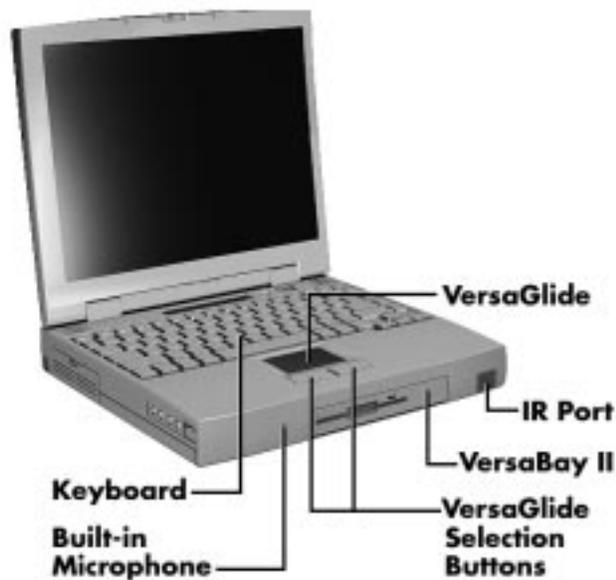
Reviewing status icons

- 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, Custom, Low, or High.
- Diskette Drive — appears when the NEC Versa writes data to or retrieves data from a diskette.
- Hard Disk — shows when the NEC Versa accesses either the hard disk drive or the CD-ROM reader.

-
- 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 Status — displays the percentage of battery power available.
 - Battery 1 appears when you have one or more batteries installed.
 - Battery 2 appears when you have an optional battery installed in the VersaBay II.
 - A number between the battery icons indicates the percentage of total battery power remaining. If battery status is unknown, dashes appear instead of a percentage.

Keyboard Panel and Base Unit

The NEC Versa 6200MX keyboard panel and base unit contain the following features, which are described after the figure.



Keyboard and base unit

-
- Keyboard — 85 keys with the standard QWERTY-key layout. See Chapter 4 for complete details. (Models purchased outside of the U.S. ship with country-specific keyboard layouts.)
 - 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 menu items. VersaGlide settings and features are described in detail in Chapter 4.
 - Microphone — A strategically positioned built-in microphone allows you to record monophonic sound directly into your notebook computer. See Chapter 5, “Using Multimedia,” for details about recording.
 - NEC VersaBay II™ — A 1.44-MB diskette drive comes installed in the NEC VersaBay II on the front of your system. You can use this diskette drive, or remove it from the VersaBay II and replace it with the 10x CD-ROM reader that also ships with your system. It’s your choice!

The VersaBay II lets you add 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.

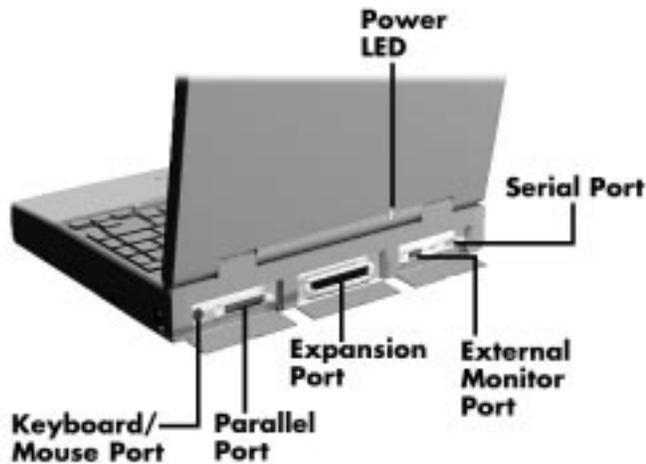
 **CAUTION**

Remember to power off your system before installing an option. Hot swapping is not supported.

- IR Port — The infrared (IR) port on the NEC Versa 6200MX lets you send and receive information from other IR-equipped devices such as printers or desktop computers. Using the LapLink® software, you can transmit, receive, and gain access to files on a remote system. See “LapLink” in Chapter 2.

Around the Back of the System

You’ll find system ports for connecting optional devices (like printers, a docking station, or external monitor) on the back of your NEC Versa. These ports are described following the figure.



Ports on the back of the system

- **Keyboard/Mouse 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.
- **Parallel Port** — Use this port to connect a parallel printer or other parallel device. The port is an Enhanced Capabilities Port (ECP). The ECP standard provides you with a greater processing speed than the conventional parallel port. It also supports Enhanced Parallel Port (EPP) bi-directional and uni-directional protocols.
- **Expansion Port** — This port (also called the Docking port) provides a connection for NEC Versa 6200MX options including the NEC Docking Station 6000 Plus, the NEC PortBar 6000, and the NEC Floppy Disk Drive (FDD) Connector.

 **CAUTION**

Only dock the NEC Versa 6200MX on the NEC Docking Station 6000 Plus. The cover of the docking station is specially designed to allow for proper system cooling.

-
- **Monitor (Video) Port** — Use this 15-pin port to attach an external monitor to your NEC Versa. You can run the LCD display and the external monitor simultaneously or run either alone.
 - **Serial Port** — Use this port to connect an external modem or other serial device.

Around the Left Side of the System

The left side of your NEC Versa 6200MX offers the following features, which are described after the figure.



Left side features

- Two slots for inserting two Type I or Type II PC cards (formerly called PCMCIA cards). You can also insert one Type III PC card.
- A battery bay and battery bay cover release latch. The battery bay contains an eight-cell Lithium Ion (Li-Ion) battery that lets you run your system on DC power.
- Audio ports and a volume control knob.
 - **Volume Control** — Allows you to control the speaker volume.

-
- Headphones — Lets you connect external headphones or speakers to your NEC Versa 6200MX. Plugging in headphones disables the built-in system speakers.
 - Line-Out — Lets the NEC Versa 6200MX 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.
 - 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.

Around the Right Side of the System

The right-side of the NEC Versa 6200MX offers the features shown in the following figure. Features are described after the figure.



Right side features

-
- **Hard Disk Drive Bay and Cover Release Latch** — The hard disk drive bay contains the removable hard disk drive. Your NEC Versa 6200MX comes equipped with a 2.1-gigabyte (GB) hard disk drive. (Some models may ship with a different capacity hard disk drive.)

To access the hard disk drive, power off the system, turn the system over, remove the hard disk drive bay cover screw and lift up the hard disk drive bay cover release latch while pushing the cover away from the system.

- **Kensington Lock** — Lets you provide added security by installing an optional Kensington Lock.
- **Fan Vents** — Allow your system to cool properly and maintain a safe operating temperature.



CAUTION

Always keep the fan vents clear to allow proper system cooling.

- **TV Out Port** — Lets you use your television set as an external monitor. This port supports both NTSC and PAL signals.



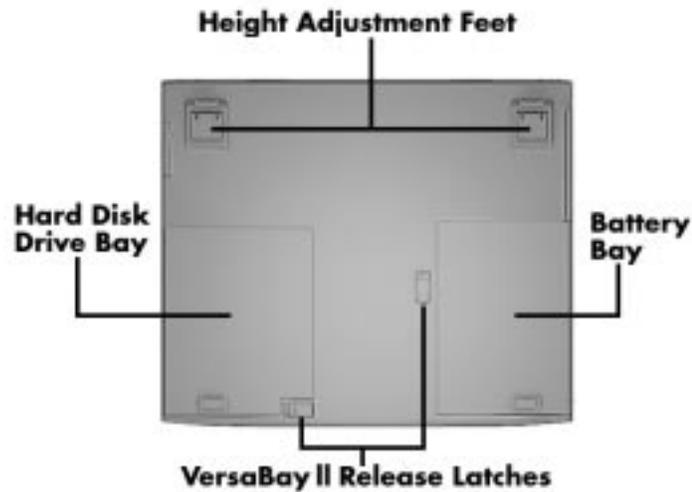
The TV Out port does not support the SECAM signal used in some countries.

For proper display, video mode must be set to 640 x 480.

- **AC Power Port** — Use the power jack to attach the NEC Versa to a DC power source, such as the AC adapter or the optional DC car adapter.

Around the Bottom of the System

The bottom of the NEC Versa 6200MX offers the features shown next. Descriptions of the features follow the figure.



Bottom features

- Adjustable Feet — Allow you to modify the angle of the NEC Versa for easier viewing and typing.
- Hard Disk Drive Bay — Contains the system's standard 2.1 gigabyte (GB) hard disk drive. (Some models may ship with different capacity hard disk drive.)
- NEC VersaBay II Release Latches — Let you remove the option currently installed in the bay.
- Battery Bay — Contains the system's main battery. It is an eight-cell, Lithium-Ion (Li-Ion) battery.

POWER SOURCES FOR YOUR NEC VERSA

The NEC Versa 6200MX can be powered using three different sources, making it a truly portable system. Operate your NEC Versa 6200MX 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 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.

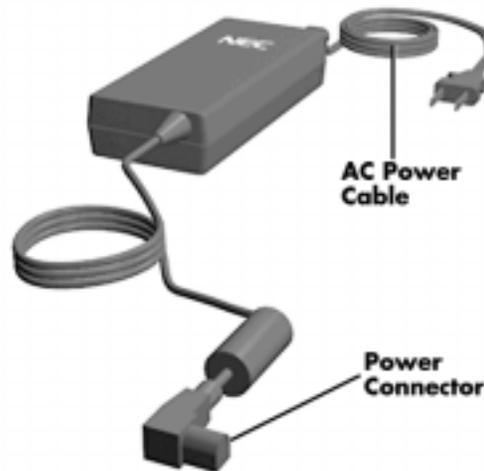
Using the AC Adapter

Use the AC adapter and power cable 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 or have the system powered on.

WARNING

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



AC adapter



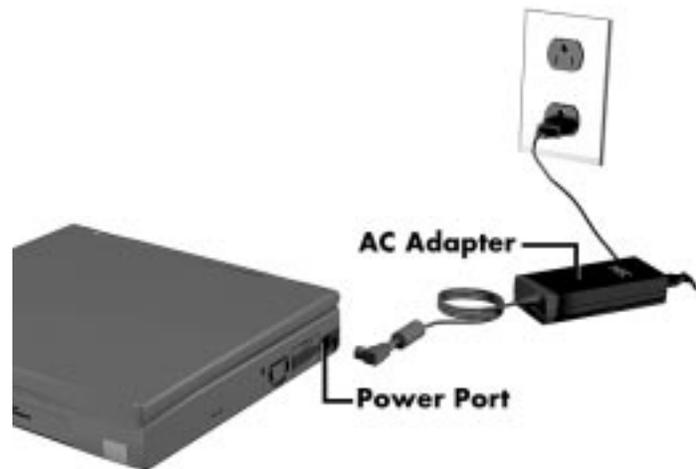
Check that the AC outlet voltage falls in the range of 100–240 Volts AC. Verify that the cord and plug are appropriate for your AC source.

Connect the AC adapter as follows:

1. Connect the AC adapter cable to the power port on the right side of your NEC Versa 6200MX.
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.



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



Connecting the AC adapter



CAUTION

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

Powering On

Power on the system as follows.

1. Locate the latch on the front of the LCD panel, slide it to the right, and raise the panel.
2. Locate the power button and slide it to the right to turn on system power.



Powering on the system

Using the Main Battery Pack

The NEC Versa 6200MX comes with a rechargeable Lithium-Ion (Li-Ion) battery pack. You can run your system on battery power for approximately two to four hours with power management features enabled. It's easy to install and remove.

Your NEC Versa 6200MX system provides two tools to help you keep track of the main (or an optional) battery's power level. These include the battery percentage status described earlier in this chapter under “Status Icons” and the Power Gauge utility. Both let you know how much battery power remains. See Chapter 3, “Using Setup,” for more details on using the Power Gauge.

When battery power is very low, the power LED flashes amber.

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

- Press the Suspend button to 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 and keep the system within standard operating temperatures, the battery recharges in approximately 2 hours whether or not you use your system.

You can also buy an optional NEC Versa 6200MX battery charger to quickly charge your battery. See the online *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 a short circuit.
- Make sure the battery is properly installed in the battery bay.
- Read the precautions printed on the battery and in the online *Basics*.

Determining Battery Status

You can determine battery status via the battery icon in the status bar discussed earlier in this chapter. If you have one battery pack installed, one battery icon appears. If you have two battery icons, two battery packs appear.

A blinking battery icon indicates that the battery is charging. Two dashes in place of the percentage number appear in the following cases:

- when installing a new battery
- when battery status is unknown
- when there is a problem with the battery.

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

- remove and then reinstall the battery
- reinstall the battery in your NEC Versa and fully recharge the battery (to 100%).

The battery percentage icon blinks when battery power is low.

When to Change the Battery

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

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

Battery Handling

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

- Use Li-Ion batteries only in the NEC Versa computer for which they are designed.
- 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.

Replacing the Battery Pack

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



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

1. Save your files, exit Windows, and press the suspend button or turn off 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.



Removing the cover

-
4. Place a finger in the notch on the battery and lift the battery out of the system. (The notch has an arrow next to it.)

 **CAUTION**

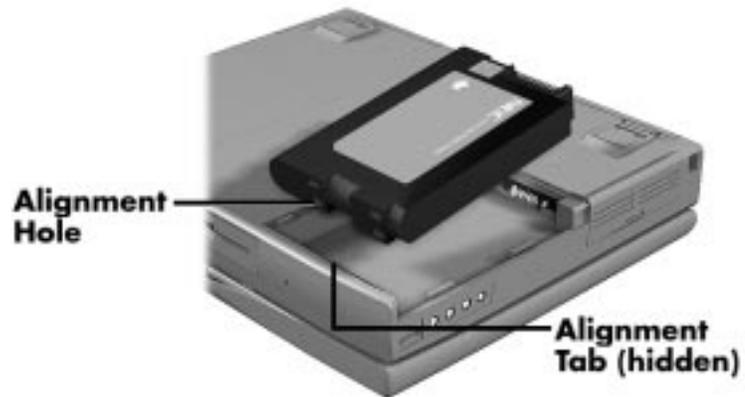
Always lift the battery out of the system by the notch. Failure to do so can damage the battery terminals.



Removing the battery

5. Insert the new battery as follows:
- Locate the alignment groove on the end of the battery opposite the terminals.
 - Locate the alignment tab inside the battery bay at the end opposite the terminals.
 - Fit the battery alignment groove over the tab inside the bay.

-
- Lower the battery into the battery compartment, pressing gently to secure the terminal connections.



Inserting the battery pack

6. Replace the battery bay cover as follows:
 - Align the tabs on the bay cover with the grooves on the system chassis.
 - Lower the cover onto the bay and slide it into place.



Replacing the cover

7. Turn the system over.

Battery Precautions

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



WARNING

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

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

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

If the battery leaks:

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

Recharging Battery Precautions

Adhere to the following precautions when recharging the Li-Ion battery.

- 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 environmental 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.

Extending Battery Life

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

You will find an extensive explanation of how best to apply the power management tools that your system offers in *Advanced Topics* in the online InfoCenter (in some countries, the system ships with an online user's guide instead of the InfoCenter). Other important topics to view in the online document include *Maximizing Battery Life*, *Battery Charging* and *Disposal*.

NEC VersaBay II Battery and Adapter Kit

The NEC VersaBay II Battery and Adapter Kit provides a second Lithium-Ion (Li-Ion) battery and adapter to use in your NEC Versa 6200MX computer. Inserting a second fully charged battery increases battery life to approximately 4 to 5 hours.

See the online *Options Catalog* in the NEC Versa 6200MX InfoCenter, or your authorized NEC dealer for details about the NEC VersaBay II Battery and Adapter Kit.

Using the DC Car Adapter

Another way to power your NEC Versa 6200MX is via car battery power using the optional DC car adapter. Connect your system to the optional DC car adapter as follows.

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. Plug the DC car adapter into a car cigarette lighter.



Connecting the car DC adapter

Internal Batteries

The eight-cell Lithium-Ion (Li-Ion) battery provides the main power source in your NEC Versa 6200MX computer. See Appendix B for a list of Li-Ion battery specifications. In addition to this battery, the CMOS battery and bridge battery also provide system power.

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. An authorized NEC service technician can replace the CMOS battery for you.

Bridge Battery

The bridge battery saves your system status in Suspend mode for up to five minutes. 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.



CAUTION

Connect your NEC Versa system to AC power for a full 24 hours before using it on battery power for the first time. Doing so insures that the bridge battery is fully charged and that no data is lost during a battery change.

SYSTEM CARE

The NEC Versa 6200MX is a durable, dependable system built for extensive use and travel. Follow these guidelines to maintain the condition and performance of your computer.



CAUTION

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

- The power cord is damaged or frayed.
- Liquid spills on or into the NEC Versa.
- Someone drops the system or damages the casing.

Precautions

Follow these precautions when using your NEC Versa 6200MX, AC adapter, and VersaBay II.

- Always plug the AC adapter cord into an easily accessible outlet. It is important to be able to easily shut off power to the computer by unplugging the AC adapter.

-
- Avoid dropping or bumping the computer or the AC adapter.
 - Do not stack heavy objects on the computer, the AC adapter, or the battery packs.
 - Avoid moving the NEC Versa 6200MX 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 other countries.)
 - Turn computer power off before attaching or removing non-plug and play devices.
 - Do not push any foreign objects into the NEC Versa option bays, connectors, and slots.
 - Avoid using the computer or AC adapter for extended periods in direct sunlight.
 - Do not use the system in humid or dusty environments.
 - Turn computer power off before cleaning it.
 - Avoid exposing the NEC Versa 6200MX or AC adapter to extreme changes in temperature or humidity. If it is unavoidable, allow your NEC Versa to adjust to room temperature before use.
 - When cleaning the system, use a soft, clean, dry cloth. Avoid wiping the display surface with abrasive material, including rough fabric. Do not use a cleaning solution; this may damage the notebook's plastic.
 - If the AC adapter becomes extremely hot, unplug the adapter and let it cool.
 - Keep the AC adapter away from the IR ports.

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.

- Keep the storage area free from vibration and magnetic fields.
- Keep the system and its components away from organic solvents or corrosive gases.
- Avoid leaving the system and its components in direct sunlight or near heat sources.

Routine Cleaning

Clean or dust your system as follows.

 **CAUTION**

Never use harsh solutions, household cleaners, or spray cleaners that contain caustic materials on the NEC Versa 6200MX.

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

This chapter introduces you to the software* that comes with the NEC Versa 6200MX, including:

- the Windows 95 operating system, or the Windows for Workgroups operating system with MS-DOS[®]
- Online Help
- NEC Utilities
 - Setup
 - NEC Customize Utility
 - Power Gauge Utility
 - HDPREPEZ Utility
 - Backup Utility
- Other Software
 - LapLink[®]
 - McAfee VirusScan and WebScan
 - MediaMatics Arcade[™] MPEG Player
 - XingMPEG Player[™]
 - America Online[®]
 - CompuServe[®]
 - Netscape Navigator[®] Dial-Up Edition
 - Official Airline Guide (OAG[™])

*The software listed here is current as of February 1997. The list is subject to change without notice.

WINDOWS INTRODUCTION

Your NEC Versa 6200MX gives you the option of loading either Windows 95 or Windows for Workgroups to use on your system. During the initial system start-up, selecting one operating system deletes the other. 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 tools.

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, online 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.
- Recycle Bin — gives you a trash container in which to put unwanted files.
- Network Neighborhood— shows you the network, integrated LANs, and WANs (if your system is connected to a network).
- My Briefcase — allows easy transfer of files between the NEC Versa 6200MX and another system.
- NEC Customize — installs NEC-designed desktop features, including custom wallpaper, the latest VersaGlide software controls, and the automatic running of McAfee antivirus software each time you boot.
- NEC Versa InfoCenter — provides quick access to a variety of online topics. (In some countries, the system ships with an online user's guide instead of the InfoCenter.)

-
- Start — displays a pop-up menu with which to start programs and applications, open documents, access system settings, look at online help, and shut down your system.

See the online *Using Windows 95* in the NEC Versa 6200MX InfoCenter group for detailed instructions on using Windows 95.

Windows for Workgroups

Windows for Workgroups offers the well-established Windows interface. Application icons are placed in groups, which are represented by group icons. To start an application, highlight and double click or double tap the application icon.

The Program Manager contains the following groups.

- Main — Includes programs and tools to help you control printing; set up printers, plotters, and modems; customize the desktop; and manage files.
- Accessories — Includes desktop programs that come with Windows, such as a simple word processing program, a drawing program, a calendar, and a calculator.
- Startup — Lets you add programs to start automatically when you enter Windows.
- Games — Gives you a way to practice your VersaGlide skills or just relax.
- Applications — Includes any applications that Windows detects on your hard disk during installation.
- NEC Versa InfoCenter — Includes online topics specific to the NEC Versa, NEC customer support, and Windows and DOS. (In some countries, the system ships with an online user's guide instead of the InfoCenter.)
- NEC Utilities — Includes small programs written by NEC to help you manage your NEC Versa computer.

See the online *Windows QuickStart 3.11* in the NEC Versa 6200MX InfoCenter group for detailed instructions on using Windows for Workgroups.

DOS INTRODUCTION

MS-DOS is the Microsoft disk operating system that runs the computer when Windows for Workgroups is loaded. DOS uses commands that every personal computer user needs to know at least 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 online book *MS-DOS 6.22 QuickStart* in the NEC Versa InfoCenter program group, if you selected the Windows for Workgroups operating system.

GUIDE TO ONLINE HELP

The NEC Versa 6200MX has plenty of information for you online. The NEC Versa 6200MX InfoCenter group contains information about your NEC Versa 6200MX, warranty coverage, and customer services.

NEC Versa 6200MX InfoCenter

The NEC Versa 6200MX InfoCenter contains several specific areas of information to help you. Audio tracks and animated examples make this an exciting learning experience. (In some countries, the system ships with an online user's guide instead of the InfoCenter.)

- *System Tour*

The NEC Versa *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 6200MX.

- *Basics*

Basics describes the NEC Versa 6200MX main features, how to travel with the system, use power management, and care for the system.

- *Advanced Topics*

Advanced Topics covers specific areas such as adding options, changing setup settings, and solving problems.

- *Questions and Answers*

Questions and Answers provides frequently asked questions and answers about portable computers to help you solve common problems yourself.

- *Options Catalog*

The *Options Catalog* lists options such as memory cards, hard drives, carrying cases, and PC cards that you can purchase for use with the NEC Versa 6200MX.



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

Additional Online Topics

In addition to the InfoCenter, your NEC Versa also contains the following online help.

- **Customer Support Guide**

The *NEC Customer Support Guide* discusses the various levels of support NEC offers you, our customer. We provide lots of information to help you become self-sufficient with your NEC Versa, but if you need help, we're there for you. If you purchased the computer outside the U.S., please contact a local NEC office or dealer for the warranty program in your area.

- **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. If you purchased the computer outside the U.S., please contact a local NEC office or dealer for the warranty program in your area.

- **The Windows QuickStart 3.11 Guide**

This online "book" provides lessons on using Microsoft Windows, which runs on the NEC Versa 6200MX. (This file is available only when you choose the Windows for Workgroups 3.11 operating system.)

- **The MS-DOS 6.22 QuickStart Guide**

This online "book" offers lessons on using MS-DOS, which also runs on the NEC Versa 6200MX. (This file is available only when you choose the Windows for Workgroups 3.11 operating system.)

- Using Windows 95

This online 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 6200MX run more efficiently. These programs are called *utilities*.

Setup Utility

The Setup utility automatically configures your NEC Versa each time you start it up. This utility is not accessible from Windows. To change settings, press **F2** to access Setup when the screen displays the following prompt at boot-up:

Press <F2> to enter SETUP

See Chapter 3, “Using Setup,” and *Advanced Topics* for a discussion of the Setup utility. In addition, online help assists you in making appropriate settings.

NEC Customize Utility

In Windows 95 systems, the NEC Customize utility installs NEC-designed desktop features, including custom wallpaper, the latest VersaGlide software controls, and the automatic running of McAfee antivirus software each time you boot.

Power Gauge Utility

The Power Gauge utility communicates the percentage of total battery power remaining for one or two batteries.

In Windows for Workgroups systems, double click the NEC Utilities icon and select the PwrGauge utility. (The NEC PwrGauge icon may appear minimized in the lower-left corner of your screen.) In Windows 95, double click the battery icon that appears on the right side of the taskbar to call up the power gauge. (If you are using AC power, the icon appears as a plug.) If you simply move your cursor over the icon, it indicates battery power percentage as balloon help.

HDPREPEZ Utility

NEC provides the HDPREPEZ utility to automatically configure your NEC Versa system hard disk space when you increase system memory. You only need to access this utility when you install more than 32 MB of additional memory.



For more details about the HDPREPEZ utility, see the HDPREPEZ.DOC file in the NECUTILS/HDPREP directory.

Using HDPREPEZ in Windows for Workgroups

In Windows for Workgroups, use these steps to run the HDPREPEZ utility.

1. Exit Windows.
2. At the c: prompt, type **cd \necutils\hdprep** and press **Enter** to change to the \necutils\hdprep directory.
3. Type **HDPREPEZ** and press **Enter**. The utility automatically prepares your NEC Versa for the newly installed memory.

Using HDPREPEZ in Windows 95

In Windows 95, use these steps to run the HDPREPEZ utility.

1. Power off and restart your NEC Versa.
2. At the statement "Starting Windows 95," press **F8**.
3. From the Startup menu, select Option 6, "Safe Mode Command Prompt Only."
4. Enter MS-DOS. At the c: prompt, type **cd \necutils\hdprep** and press **Enter** to change to the \necutils\hdprep directory.
5. Type **HDPREPEZ** and press **Enter**. The utility automatically prepares your NEC Versa for the newly installed memory.
6. Power off your system and then power on. The newly installed system memory is now reallocated to the appropriate resources.

Backup Utility

The NEC Backup utility gives you quick access to Microsoft's back-up software. For details about using the Microsoft back-up software, see the operating system user's guide.

OTHER SOFTWARE

Your NEC Versa 6200MX 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.

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. 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 change, and program execution, actually occurs on the remote system.
- Chat — provides a way for you to exchange information, instructions, or other messages with a user at a remote computer.

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

How to Use LapLink

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

1. Start the LapLink Traveling software as follows:

- In Windows for Workgroups, locate and double click the LapLink group icon. Select LapLink for Windows.
- In Windows 95, press **Start**, slide the cursor over to Programs, and locate the LapLink for Windows 95 folder. In the folder, highlight the LapLink 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. (Balloon help displays each button's function.)

- Connect over cable
- Connect over wireless
- Connect over modem
- 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. (Balloon help displays each button's function.)

- 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 online help that is available when you open LapLink.

McAfee VirusScan

The McAfee VirusScan software is set up to scan your system daily. You can change these settings through the VShield Configuration Manager. Access the configuration manager as follows.

1. From the McAfee VirusScan95 program group, highlight the VShield Configuration Manager.
2. Open the configuration manager. It contains a set of four tabs with various configuration features. The Detection tabs give you control over what is scanned and when scanning occurs.

McAfee WebScan

Scans data and files that you import from Web sites before loading the files onto your system. If the data or files contain viruses, WebScan warns you and lets you cancel the action.

WebScan is ready to install once you have installed a Web browser.

MediaMatics Arcade MPEG Player

Provides MPEG Playback software for Windows 95. See Chapter 5, "Using Multimedia," for instructions on using this application.

XingMPEG Player

Provides MPEG Playback software for Windows for Workgroups. See Chapter 5, "Using Multimedia," for instructions on using this application.

Online Services

Your NEC Versa comes with all the software you need to get started on the most popular online services available today.



Before using online services, you must connect an optional modem to your system. Your modem must also be connected to a working telephone line.

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

For a fee, online 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 online services give you a free trial period.

Before choosing and registering for an online service, make sure your modem is connected to a working phone. The line must be an analog line. If you are unsure what type of line you have, call your local telephone company.

Access online services preloaded on your system as follows:

1. Connect an optional modem to your system and to a phone line.
2. Continue as follows:
 - From the Program Manager in Windows for Workgroups, locate and double click on the program group for the service you want to investigate. Double click on the program icon to open the program.
 - In Windows 95, press **Start**, slide to the Programs group, slide to Online Services, and slide to the online service group that you want to open. In the group, highlight the service and release the mouse button.
3. Follow the on-screen instructions to log onto the service.

America Online

To find out about America Online features, highlight “America Online” in the America Online program group. In Windows for Workgroups, double click. In Windows 95 release highlight “AOL & Internet FREE Trial!” and release the mouse button. From the Help drop-down menu, select “Contents.”

CompuServe

Find out more about CompuServe and its features as follows:

1. Locate the CompuServe Setup icon in one of the following places:
 - In Windows for Workgroups, the icon is found in the CompuServe program group.
 - In Windows 95, it is in the Online Services program group.
2. Double click the CompuServe Setup icon.
3. Select Yes to start the installation.
4. In the Welcome screen, press the View Readme button.

When you finish reading the readme text, exit the file and press Cancel to stop the installation. If you decide to install the software, press the appropriate button and follow the on-screen instructions.

Netscape Navigator Dial-Up Edition

Netscape lets you access all that the Internet has to offer.

You will need to use the Netscape Navigator Install program in the Netscape Dial-Up Edition menu or program group to install Netscape Navigator. Follow the on-screen instructions to complete the installation.

Installing Netscape Navigator generates a Netscape Navigator group and a shortcut icon on your desktop.

Official Airline Guide (OAG)

The Official Airline Guide is an online 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 the software company 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.

Access OAG as follows.

1. Connect an optional modem to your system and to a phone line.
2. Start OAG as follows:
 - From the Program Manager in Windows for Workgroups, locate and double click on the OAG program icon.
 - In Windows 95, press **Start**, slide to the Programs group, and open the OAG FlightDisk group. In the group, highlight “OAG FlightDisk Worldwide Edition” and release the mouse button.
3. The first time you open OAG, an agreement screen appears. Read the agreement and press Continue to accept the agreement. Press Continue again to access the trip plan screen.
4. 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.
5. To retrieve seat availability and price information, press the appropriate button and follow the on-screen instructions to register for a free trial of the OAG travel service.

3

Using Setup

Your NEC Versa 6200MX comes with a hardware program called Setup that allows you to view and set system parameters. Setup also allows you to set password features that protect your system from unauthorized use.

Use Setup to

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

HOW TO ENTER SETUP

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

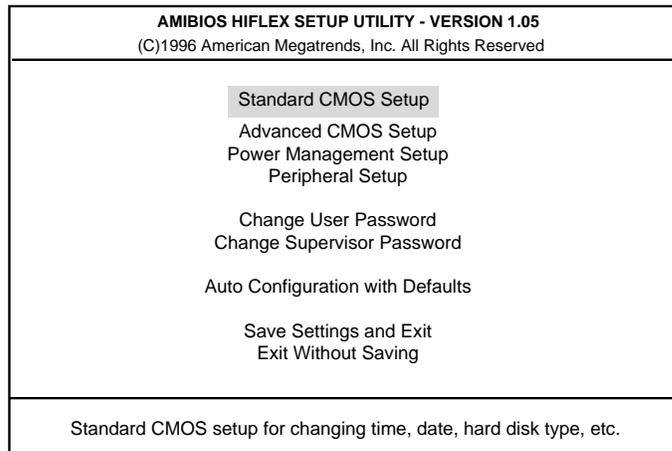
Press <F2> to enter Setup

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." If you press **F1**, the system enters Setup automatically.

Setup Utility Main Menu

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



Setup Main Menu

Use the up and down arrow keys (located on the lower right corner of the keyboard) to toggle through the Setup menu items. (The Change User Password option is only available if a Supervisor Password is defined.)

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 three areas as shown next.

AMIBIOS SETUP - ADVANCED CMOS SETUP		
(C)1996 American Megatrends, Inc. All Rights Reserved		
BootUp Sequence	A:,C:	Available Options:
Plug and Play Aware O/S	Auto	C:,A:
NumLock (at BOOT)	Off	A:,C:
Keyboard Auto-repeat Rate	30/sec	
Keyboard Auto-repeat Delay	1/2 sec	
Password Check	Setup	
		ESC:Exit ↑↓:Sel
		PgUp/PgDn:Modify
		F3/F4:Color

Advanced CMOS Setup menu

- **Parameters**
The left part of the screen. This area lists parameters and their current settings
- **Available Options**
The right part of the screen. This area lists alternate settings.
- **Key Legend**
The bottom right corner of the screen. These lines display the keys that move the cursor and select parameters.

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

Using Keys

The following table lists Setup keys and their functions.

Setup Key Functions

KEY	WHAT IT DOES
↑ ↓	Moves the cursor between the displayed parameters.
PgUp/PgDn	Modifies the current parameter settings.
Tab	For some parameter settings, moves the cursor between the subfields. Also moves the cursor to the next line or selection. For example, for System Time, Tab moves the cursor from hour to minute to second.
Esc	Exits the current screen and returns to the Main Menu screen. From the Main Menu screen, displays the prompt "Quit without saving."
F3/F4	Changes the screen color.

Checking/Setting System Parameters

See the following table for a list of parameters, their factory default settings, and alternate settings. A description of each setting follows the table.

To reset all parameters to the default settings, select Auto Configuration with Defaults from the Setup Main Menu and press **Y** and **Enter**.

Setup Parameters

PARAMETER	DEFAULT SETTING	ALTERNATE SETTING(S)
Standard CMOS Setup		
System Date	MO/DAY/YEAR	
System Time	HR:MIN:SEC	
Diskette Drive A	1.44 MB, 3.5"	Not installed/360 KB 5.25"/ 1.2 MB, 5.25"/720 KB 3.5"
Diskette Drive B	Not Installed	1.2 MB, 5.25"/1.44 MB 3.5"
Internal Hard Disk Drive	Enabled	Disabled
Primary Master	Auto	Not installed/BIOS Defined/User Defined/CD-ROM
Primary Slave	Auto	Not installed/ BIOS Defined/User Defined/CD-ROM
Docking Station Hard Drives*	Enabled	Disabled
Secondary Master*	Auto	Not installed/BIOS Defined/User Defined/CD-ROM
Secondary Slave*	Auto	Not installed/BIOS Defined/User Defined/CD-ROM
Boot DS IDE*	No	Yes
System Memory	640 KB	
Extended Memory	31744 KB	(automatically detected)
Advanced CMOS Setup		
Bootup Sequence	A:, C:	C:, A:
Plug and Play Aware O/S	No	Yes
NumLock (at Boot)	Off	On
Keyboard Auto-Repeat Rate	30/sec	2/sec, 6/sec, 10/sec, 13/sec, 19/sec, 22/sec, 27/sec
Keyboard Auto-Repeat Delay	1/2 sec	1/4 sec, 3/4 sec, 1 sec
Password Check	Setup	Always
Power Management Setup		
Power Management under AC	Off	On
Power Savings Level	Longest Life	High Perform/Custom /Off
Hard Disk Timeout	2 min.	5/30/45 sec; 1/4/6/8/10/15 min.; Off
Video Timeout**	2 min.	30/45 sec.; 1/4/6/8/10/15 min.; Off
Serial Timeout**	On	Off
Audio Device Timeout**	On	Off
Standby Timeout**	4 min.	Off/1/2/6/8/10/15 min.
Auto Suspend Timeout**	10 min.	Off/5/10/15/20/25/30 min.
Suspend Mode	Suspend	STF
Auto Save to File	On	Off
Panel Backlight	Full	Standard/Auto
Video Highlight	Full	Standard
Suspend Warning Tone	On	Off

Setup Parameters

PARAMETER	DEFAULT SETTING	ALTERNATE SETTING(S)
PCMCIA Power	On	Off
Modem Ring Resume	Off	On
Wake Up from Suspend Alarm	Off	On
Resume Alarm Time	Off	On Set time in 5 min. increments when wake up is set to On.
Peripheral Setup		
Serial Port	Reconfigure (PnP OS Setup)	Disabled COM1 (3F8, IRQ4) COM2 (2F8, IRQ3) COM3 (3E8, IRQ4) COM4 (2E8, IRQ3)
Parallel Port	Reconfigure (PnP OS Setup)	Disabled LPT1 (378, IRQ7) LPT2 (278, IRQ5)
Parallel Mode	ECP	Uni-Directional/Bi-Directional/EPP
IR Serial Port	Reconfigure (PnP OS Setup)	Disabled COM3 IRQ9 COM2 (2F8, IRQ3) COM4 (2E8, IRQ3)
IR Serial Mode	SIR	MIR, FIR
TV Mode	NTSC	PAL
Sound	Reconfigure	Disabled/User Defined
Sound IRQ	N/A	5***/7/9/10/11
SB-compatible DMA	N/A	DMA #0/DMA #1***
Full Duplex Mode DMA	N/A	DMA #0/DMA #3***
Docking Station MPU-401*	Disabled	Reconfigure/300h/310h/320h/330h
Docking Station Game Port*	Disabled	Reconfigure****

- * Visible or available only when notebook is docked.
- ** Can only be modified when power management is set to Custom.
- *** Default options when sound setup is set to User Defined.
- **** If the docking station game port is set to reconfigure, use I/O Address 201.

Setup Menus

Read the following descriptions for explanations of items that appear in the Setup menus, as listed in the preceding table. See the item-specific help that appears on the Setup screen for more details.

Standard CMOS Setup

When you select the Standard CMOS Setup screen you will see System Time and System Date parameters as well as drive parameters.

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

To set the date use the **Tab** or arrow keys to move from field to field. Use the **PgUp** or **PgDn** key to change the numbers within each field.

- **Time** — To set the time, enter the current hour, minute, and second in *hr/min/sec*, 24-hour format..

To set the time use the **Tab** or arrow keys to move from field to field. Use the **PgUp** or **PgDn** key to change the numbers within each field.

- **Diskette Drives** — The diskette drive parameters let you check and change settings for your diskette drives.
- **Internal Hard Disk Drive** — This field allows you to enable or disable the internal hard drive in your system. You can also define primary master and slave drives.
- **Docking Station Drives** — This field lets you enable and disable the hard drives installed in a docking station. You can also specify the docking station hard drive as the boot drive. (These options are only available when the NEC Versa is docked.)
- **System Memory** — Two fields display the amount of system memory and expanded memory installed in your system. These are display-only fields. The system automatically senses the amount of installed memory.

Advanced CMOS Setup

Advanced CMOS settings let you define the following functions.

- **BootUp Sequence** — Sets the order that the drives (A:, C:) initialize, or sets the order to search for the boot disk.

-
- Plug and Play Aware O/S — Selects whether or not the system boots to a Plug and Play operating system.
 - NumLock (at Boot) — Specifies whether NumLock is On or Off at system startup.
 - Keyboard Auto-Repeat Rate — Defines the speed at which a repeat key repeats.
 - Keyboard Auto-Repeat Delay — Defines how long a key waits before beginning to repeat.
 - Password Check — Specifies if the system prompts you to enter a password when resuming operation from a Save to File state.

Power Management Setup

The Power Management Setup menu lets you balance high performance and energy conservation using parameters including the following.



Some operating systems such as Windows for Workgroups and Windows 95 have their own power management software which overrides CMOS settings. In this case, be sure to set your desired power management settings accordingly.

- Power Management Under AC — Specifies whether to enable power management features when AC power is in use. When AC power is connected to your NEC Versa system, power management is usually disabled. If you enable this parameter, the system automatically activates the power management profile you set even when AC power is used.
- Power Savings Level — Lets you choose one of four levels of power management.
 - High Perform provides the greatest system performance with only minimal power conservation.
 - Long Battery provides the maximum amount of power savings.
 - Off disables power management and all device timeouts.

— Custom lets you can define your own power management configuration by selecting values for specific device timeouts. Custom lets you set the following timeouts.

- Hard Disk Timeout – Allows you to select the amount of time before your hard disk shuts down.
 - Video Timeout – Allows you to select the amount of time before your video shuts down.
 - Serial Port Timeout – Lets you choose the amount of time before your serial port shuts down.
 - Audio Device Timeout – Selects the amount of time before your audio device shuts down.
 - Standby Timeout – Allows you to select the system standby timeout period.
 - Auto Suspend Timeout – Defines how much time elapses before the system automatically enters Suspend Mode.
- Suspend Mode — Allows you to specify either Suspend or Save to File (STF) as the default power management mode. In Suspend, after a specified amount of inactivity, your NEC Versa shuts down all devices as you specified in Setup or applies default timeouts. All your data is automatically recovered from where you left off when you Resume.

In automatic STF, after 30 minutes in Suspend mode the current file is automatically saved to a special file on the hard disk and the system shuts down. To resume, you must press the power button. The system reads the saved file and sets up your system accordingly.

If Auto Save to File is set to Off and HDPREPEZ is present, pressing the **Fn-Suspend** key combination puts the system into Save to File mode.

- Panel Backlight — Lets you select the LCD screen backlight intensity.
- Video Highlight — Allows you to select the text intensity at system start-up.
- Suspend Warning Tone — Specifies whether the system warning tone sounds when Suspend mode starts. It is best to keep this option enabled.

-
- PCMCIA Power — Turns power to the PC card slots on and off. If PC cards are not in use, turning off slot power conserves considerable power. Slot power cannot be turned off if a PC card is installed.
 - Modem Ring Resume — Lets you choose whether the system resumes automatically when an optional modem receives a transmission.
 - Wake Up from Suspend Alarm/Resume Alarm Time — Lets you set a resume time from Suspend mode.

Peripherals Setup

The Peripherals Setup menu displays the connection locations between the system and the Input/Output (I/O) ports. This menu also lets you specify different port assignments as needed.



If you disable a device in Setup, you cannot enable or assign it using the Windows 95 device manager. The device is not listed in the Windows 95 device list. To control the device using the Windows 95 device manager, select any setting other than "Disable" in Setup.

- Serial Port — Allows you to disable the port or change its address assignment.
- Parallel Port/Parallel Mode — Lets you disable or reassign the parallel port and select a parallel port mode.
- IR Serial Port/IR Serial Mode— Allows you to disable or reassign the IR Serial port and select an IR mode.
- TV Out Port — Specifies the signal type used by the TV being connected to the TV Out port.
- Sound/Sound IRQ/Sound SB-Compatible DMA/Full-Duplex Mode DMA — Selects the sound parameter to user defined, disabled or reconfigure. Change additional sound related items as needed.

Other Setup Options

Setup offers other options, including the following:

- **Change User Password** — Lets you set a user password once a Supervisor password is set.
- **Change Supervisor Password** — Sets a Supervisor password at system startup.
- **Auto Configuration with Defaults** — Loads default settings.
- **Save Settings and Exit** — Accepts changes made to current settings, saves to CMOS, and exits Setup.
- **Exit Without Saving** — Reverts to previously selected settings and exits Setup.

USING SETUP TO SET POWER MANAGEMENT

Setup allows you to use the factory-defined power savings level (Longest Life), or choose between High Perform, Custom, or Off. Each provides a special value to your current work effort. These power management levels were designed with you in mind. For example, you can use them under the following circumstances:

- **Longest Life** — Provides best battery life and good performance. Use while traveling long distances.
- **High Perform** — Provides best performance and good battery life. Use while on the road, traveling short distances.
- **Custom** — Lets you decide! Set power management levels according to your own needs and present environment.
- **Off** — Works well in an office environment while powering your NEC Versa with AC power.

Using the Save to File (STF) Feature

STF protects the integrity of your working files. For example, if you are called away from your NEC Versa and Suspend mode is selected with auto Save to File active, your system automatically goes into Suspend mode. After 30 minutes, if you don't return, your working environment is saved to a special file on your hard disk.

There are two ways to set your NEC Versa's STF feature. One method is via the Setup utility. Select Power Management from the Setup Main Menu. Move the cursor down and highlight Suspend Mode. Press the **PgUp** key and select STF. Save the settings and exit Setup.

The second method is to press the **Fn-Suspend** combination before you leave your NEC Versa. This function initiates STF on demand.



When the status bar reads that there is only 4% power remaining in the system, the NEC Versa automatically performs a Save to File.

STF Benefits

Using STF can benefit you in the following ways.

- When in STF, there is minimum battery drain.
- Preserves the life of your NEC Versa.
- Saves you time. When you return from that urgent call or meeting, you don't have to reboot.

4

Using Your NEC Versa 6200MX

The more you use your NEC Versa 6200MX system, the more proficient you will become at everything from using function keys, to setting up a presentation to accessing the speakerphone.

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 10X CD-ROM reader
- the PC card slots
- the IR port.

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

LCD PANEL

When you open your NEC Versa 6200MX notebook LCD, you'll notice the brightness control. Slide the brightness control right to make your screen brighter. Slide the brightness control left to make your screen darker and conserve energy.

KEYBOARD

The NEC Versa 6200MX keyboard is equipped with many features. These include:

- Function keys

-
- Window 95 keys
 - Cursor control keys
 - Typewriter keys
 - Numeric keypad
 - Control keys.

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



Keyboard

- Function keys — Twelve function keys, **F1** through **F12**, are available on the NEC Versa 6200MX keyboard. These keys work together with the **Fn** key to activate special functions. Seven keys are preprogrammed with dual functions, six of which are printed in blue on the key. (**Fn-F4** is unmarked; it immediately puts the system into Standby mode.)

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.

The following function key combinations are preprogrammed for the NEC Versa 6200MX.

	Highlight
	LCD/CRT/Simul/TV Out
	Standby
	Backlight
	System Speaker Volume
	Power Management
	Scroll Lock On/Off
	Save to File on Demand

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



Quick access to shortcut menus



Display the Start menu

- Cursor Control keys — Cursor control keys let you position the cursor on the screen where you want. On the screen, the cursor is a blinking underline, block, or vertical line depending on the application. The cursor indicates where the next text typed is inserted.
- 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 NumLock on the keyboard activates the numeric keypad numbers and functions printed in blue on the keys.

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

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

- Control keys — **Ctrl**, **Alt**, **Fn**, and **Shift** are controls used in conjunction with other keys to change their functions. To use control keys, press and hold the control key while pressing another key. For example, “press **Ctrl c**” means to hold down the **Ctrl** key and type the letter **c**. How the key combination works depends on the application 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. The system ships with the standard Microsoft mouse drivers. When you use the NEC Customize utility, VersaGlide mouse drivers are installed and give you access to many more features. To use the VersaGlide, you can

- Double tap your finger on the VersaGlide touchpad.
- Double click the left button (this is the primary button).



VersaGlide features

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.



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

Making VersaGlide Adjustments

The NEC VersaGlide offers a number of options that let you customize how it functions. 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.

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.

With the NEC VersaGlide drivers, you can create customized key combinations for common tasks, define on-screen hotspots, and specify autojump locations in dialog boxes or popup windows.

For more details, see the help files that you can access through the NEC VersaGlide Control Panel.

VersaGlide 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.

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- Take regular breaks from the computer to rest your eyes. Perform stretching exercises to relax your fingers, hands, wrists, forearms, and shoulders.

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

NEC VersaBay II

The NEC VersaBay II is the drive bay located below the VersaGlide. Your NEC Versa 6200MX ships with a standard 3.5 inch, 1.44-MB diskette drive installed in the bay. However, if you choose, you can remove the diskette drive and install the 10X CD-ROM reader that also ships with your system.



Locating the VersaBay II

In addition to the CD-ROM reader, the VersaBay II accepts the following options:

- a second battery pack
- a second hard disk drive.

See the *Options Catalog* or your authorized NEC dealer for details about these VersaBay II options.

Removing a Device from the VersaBay II

Use the following steps to remove the standard diskette drive or other device from the VersaBay II.

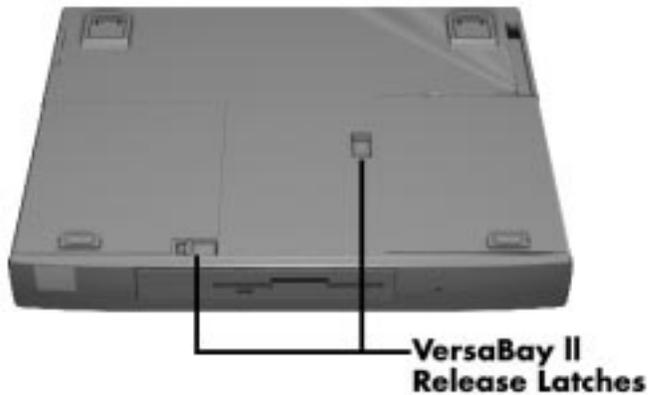
1. Make sure the NEC Versa 6200MX is powered off, all options are disconnected, and the LCD panel is closed.



CAUTION

Your system *must* be powered off before removing or inserting devices in the VersaBay II.

2. Turn the system upside down.
3. Locate the VersaBay II release latches on the bottom of the unit.



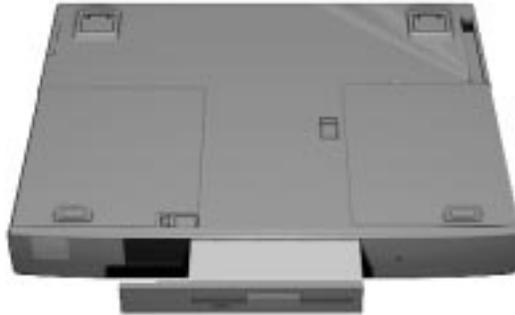
VersaBay II release latches

4. Slide the front latch towards the hard disk drive side of the system and hold it.
5. Push the middle latch towards the front of the system until the drive pops part way out of the unit.

-
6. Continue to hold the latch near the front of the system 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 catches on the inside of the latch.



Releasing the device

Installing a Device in the VersaBay II

Use the following steps to install a device in the VersaBay II. These steps show how to install the 10X CD-ROM reader that ships standard with the system. Use these steps for installing other devices as well.



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 reader is set to the right (positioned next to the S for Slave).

If you install a hard disk drive from a Versa model E, V, M, or P in the VersaBay II, it becomes the master drive from which the system boots.

Your system *must* be powered off before removing or inserting devices in the VersaBay II.



To use a hard disk drive in the VersaBay II, the drive must be connected to the appropriate adapter. See the *Options Catalog* or your authorized NEC dealer for details about the Hard Disk Drive Cradle Pak.

1. Make sure the NEC Versa 6200MX is powered off, all options are disconnected, and the LCD panel is closed.
2. Turn the system upside down.
3. Locate the VersaBay II release latches on the bottom of the unit.
4. Slide the front latch towards the hard disk drive side of the system and hold it.
5. Align the CD-ROM reader in the VersaBay II and push it in until it locks into place.



Inserting the CD-ROM reader

6. Turn the system over and open the LCD panel.
7. Power on the system.

Customizing Your System with the VersaBay II

Customizing your NEC Versa is easy using the VersaBay II. If you find you require additional hard disk space or increased battery longevity, simply remove the standard device and plug in an optional hard disk drive or battery.



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

However, if you install a hard disk drive from a Versa model E, V, M, or P in the VersaBay II, it becomes the master drive from which the system boots.

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

1. Remove the standard diskette drive or CD-ROM reader from the VersaBay II as described in “Removing a Device from the VersaBay II.”
2. Prepare your option for installation as follows:
 - To install a battery pack, first connect it to the VersaBay adapter that came with the battery. (Follow the instructions that come with the battery pack.)
 - To install a hard disk drive, first connect it to the appropriate Cradle Pak. (Follow the instructions that come with the adapter.)
3. Holding the front VersaBay II release latch towards the hard disk drive bay, align the option and its carrier in the VersaBay II.
4. Push in the option until it clicks into place.
5. Turn the system over, open the LCD panel, and power on. The system automatically recognizes the newly installed option.

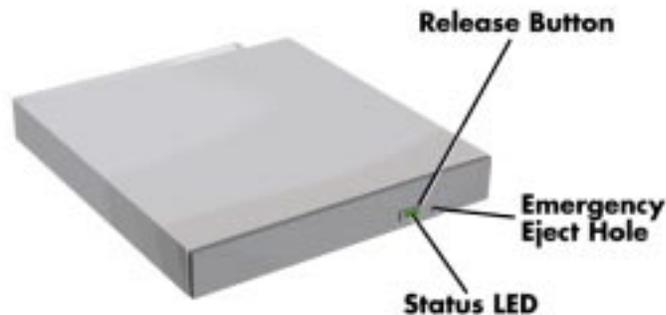
10X CD-ROM READER

Your NEC Versa 6200MX comes with a 10X-CD-ROM reader that features the latest in CD-ROM technology. The CD-ROM reader is assigned an 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 your audio CDs (see “Audio CDs” in this chapter). The 10X CD-ROM reader is fully compatible with Kodak Multisession Photo CDs™ and standard 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.



10X CD-ROM reader

- 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 the end of a paper clip into the eject hole, and push in until you hear a click. Manually open the drawer.

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- Status LED — lights during data read operations. Do not eject the CD or turn off the NEC Versa 6200MX when the indicator is lit.

CD Loading

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

1. Press the release button. The CD tray emerges a short way out of the reader door.
2. Gently pull the tray out until you can easily position a disc in the tray.
3. Put your CD, printed side up, into the circular impression in the tray.
4. Push the CD tray in until it clicks shut.

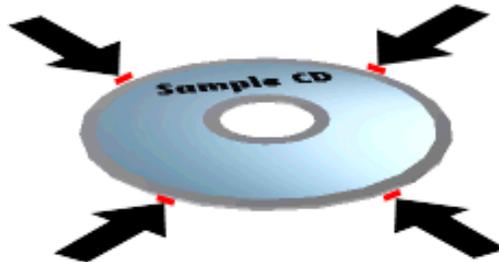


Some CDs vibrate when playing. This does not effect the CD-ROM reader.

CD Care

When handling CDs, keep the following guidelines in mind.

- Always pick up the disc by its edges.



Holding a CD

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- 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

Your NEC Versa 6200MX notebook integrates two card bus slots for inserting two Type I or Type II PC cards. (You can insert one Type I and one Type II PC card in the slots at the same time.) You can also insert one Type III PC card.

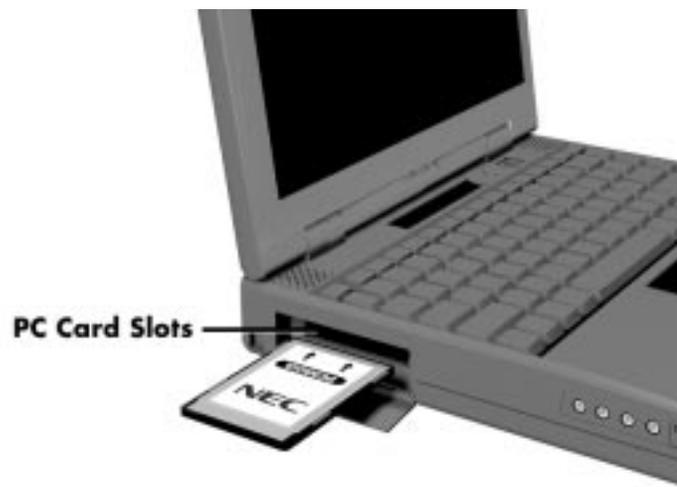
Using the system's card bus slots, you can add optional PC cards and connect external devices to your NEC Versa 6200MX. These devices include peripheral devices, such as modems, LAN cards, and storage cards. For details on how to obtain these options, see the online *Options Catalog*.

Inserting a PC Card

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 the function keys or volume control, no sound is emitted.)

Other tone sequences such as high, then low tones, or a single tone in Windows for Workgroups, indicate that the card is inserted, but the card type is unknown.



Inserting a card

3. Use the CardWizard™ software preinstalled on your system to check PC card slot availability. To do so, look for the SystemSoft icon in the Windows for Workgroups Program Manager or the PC Card icon in the Windows 95 Control Panel. It shows which slot contains a PC card (PCMCIA) and which is empty.

Removing a Card

Procedures for removing cards from Windows for Workgroups systems and Windows 95 systems differ. See the instructions appropriate for your system.

Windows for Workgroups

Remove PC cards from Windows for Workgroups (Windows 3.11) systems as follows.

1. To remove the card, press the button on the side of the slot. A double tone sounds.
2. Pull the card firmly out of the slot.



PC cards draw power even when not in use. To save energy, press the button to disconnect the card when it is not in use. You can leave the card in the slot while it is disconnected for easy storage.

Windows 95 Systems

Remove PC cards from Windows 95 systems as follows.

1. From the screen, select “My Computer” and “Control Panel.” (Or, you can also select the Taskbar PCMCIA icon.)
2. Select the PCMCIA icon.
3. Select the PCMCIA card to remove, and select “Stop.”

Windows 95 alerts you if any applications are still using the card. If all applications using the card are closed, services for that card are shut down. You receive a message saying that it is safe to remove the card.

4. Press the button on the side of the PC card in the slot.
5. Pull the card firmly out of the slot.

PC Card Drivers and Enablers

Your NEC notebook computer is configured to support a variety of PC cards. In Windows for Workgroups, the AUTOEXEC.BAT and CONFIG.SYS files contain and load the PC card drivers. You can modify these files using a text editor to remove drivers in order to free needed memory.

Some PC cards come with software called Enablers to be used instead of Card Services. Before installing Enablers, try your PC card with the pre-loaded drivers. The NEC Versa 6200MX Card and Socket Services works with many PC cards.

PC Card Drivers and Utilities

The following are the CardSoft drivers (for Windows for Workgroups systems only) and utilities used on your NEC Versa 6200MX. Some of these drivers may be disabled in the system files to conserve memory.

- **Card Socket Services (SSCBT1.SYS)**

This driver manages the card socket services on your system.

- **Card Services (CS.SYS)**

This driver manages competition for system resources and manages adapter and card resources and configuration.

- **Resource Allocation Utility (CSALLOC.EXE)**

CSALLOC is a DOS utility that scans the system for available memory, I/O port, and IRQ resources, updates the file CSALLOC.INI with this information, and then displays the list of available resources that Card Services can use. In addition, keywords can be added to CSALLOC.INI to force CSALLOC to exclude resources from being scanned or include resources that are not detectable (due to security features or hardware design). Other keywords let you reserve resources that may be needed by a particular PC card or other system component.

- **IDE/ATA Support (ATADRV.EXE)**

ATADRV.EXE is a block device driver that supports ATA Type II Flash Disk or ATA Type III Hard Disk PC cards. The ATAINIT.EXE utility places a hard disk partition table onto a blank ATA drive.

- **SRAM Driver (MTSRAM.EXE)**

MTSRAM is a driver that supports SRAM cards. This file is remarked out to save memory.

- **Memory Technology driver (MTDDRV.EXE)**

This component must be installed to support Flash Memory cards. It works in conjunction with card-specific MTDs to support a wide variety of Flash Memory cards. It also supports SRAM cards (providing MTSRAM.EXE is also installed) and allows sharing of drive letters between the different types of memory cards (Flash, SRAM, and ATA).

- **Card Identification (CARDID.SYS)**

This client device driver detects the insertion and removal of PC cards, automatically determines the card type upon insertion, and then configures the card/slot adapter.

- Card Services Power Management Enabler (CS_APM.EXE)

CS_APM.EXE is a DOS-based background task that enables Card Services to process system power management Suspend/Resume requests. When system power management software initiates a Suspend request, CS_APM notifies Card Services, which then verifies that the PC card slots are idle and can be powered down. Card Services passes this information back to CS_APM, which then notifies the power management software that the sockets can be powered off.

When CS_APM receives a Resume request, it informs Card Services, which powers on the sockets again.

Enablers

Some PC cards have custom software written by the card manufacturer, known as Enablers, instead of Card and Socket Services. This custom software works well if only one or two PC cards are used on a particular system.

Although many of these were considered compliant with PCMCIA Release 2.0 specifications, they did not provide a truly compatible environment for exchanging and sharing PCMCIA operations. The following are some guidelines for using PC cards with Enablers.

Do not use more than one Enabler at once unless you know what system resources are used by each Enabler. One Enabler may crash another if there is a conflict.

- Hot swap may not work with some Enablers.
- An Enabler may only work in Windows Standard Mode.
- Enablers have minimal memory requirements. For example, they require as little as 4 KB for a modem, 16 KB for Ethernet, and 24 KB for Token Ring.

Know your system resources (see the CONFIG.SYS file) — command line arguments cannot use resources being used by other devices.

PC cards operate in a variety of operating system environments. Cards can be inserted or removed while the operating system is responding to other peripheral devices.



Most applications, such as communications software, are not PCMCIA aware. Make sure the card is inserted and ready before using an application.

CardWizard Services

CardWizard, a software interface, manages the automatic allocation of system resources in Windows for Workgroups systems. It detects when a PC card is installed or removed. CardWizard also provides an interface to other software in order to load any necessary hardware drivers.

CardWizard provides Socket Services, a Basic Input Output System (BIOS) software interface that isolates driver software from the hardware. It provides a variety of system-specific functions, such as system slot and card detection while the system is operating.

Reinstalling PC Card Software

You can reinstall PC card software in one of two ways:

- by downloading the latest version from the NEC Bulletin Board at (508) 635-4706.
- by installing an NEC PCMCIA Utility from diskette.



If you are using this unit outside of the United States, contact a local NEC dealer for the latest version of the PCMCIA software.

Available PC Cards

A variety of PC cards are available on the market today. Some are used for communications and others for data storage.

Communications Cards

You can use both fax/modem and network PC cards with your NEC Versa 6200MX. Here are some suggestions to help you get the best system performance.



If you are using this unit outside of the United States, contact a local NEC dealer for availability information.

- **Network Cards** — You can use a network card with your system to gain access to a local area network (LAN).

You can insert a network card into either slot.

Included in the network cards are approved for use with NEC notebook systems.

— NEC High Performance10BaseT Ethernet Card

— IBM Token Ring Card

- **Fax/Modem Cards** — You can use a PC card modem with your system to communicate with others via fax, e-mail, or connect to an online service or bulletin board.



Outside the U.S. and Canada, you might need a modem and telephone adapter approved for the local telephone system. Check with your local dealer for details about purchasing this equipment.

You can insert a fax/modem in either slot.

Always insert the fax/modem card before using your fax/modem software application. If you start the application before inserting the fax/modem card, the application typically does not find the card.

The following fax/modem cards are approved for use with NEC notebook systems (in the U.S. only).

— NEC 14.4 Kbps Data/Fax Modem

Telephone Line Connections

The NEC Versa PC card modem comes with a telephone cable jack. You can connect the jack directly to a wall telephone outlet.

Connecting to a Phone Cable Only

Use the cable that comes with your optional modem to connect the modem's telephone jack to a wall telephone outlet. Follow these steps to connect your optional modem to a phone line.

1. Connect the small end of the cable to the modem connector with the arrow pointing up.
2. Connect the other end of the telephone cable to the wall outlet (you might have to unplug the telephone if it is plugged into the outlet).

Connecting to a Phone and the System

To connect both your system and a telephone to the wall outlet, use a dual-RJ11 connector. Use the following procedure to attach a dual-RJ11 connector.

1. Connect one end of a modular telephone cable to the modem's telephone jack.
2. Connect the other end of the telephone cable to the single jack on the dual-RJ11 connector.
3. Unplug the telephone cable from the wall outlet. Connect the cable to one of the two available jacks of the dual-RJ11 connector and to the telephone.
4. Connect another telephone cable to the other available jack of the dual-RJ11 connector and to the wall outlet.



When using a modem outside the U.S. and Canada, you might need an international telephone adapter. You can buy this at an electronics supply store.

Storage Cards

When you insert a memory or storage card in an NEC notebook computer, it appears as a unique drive depending on the type of card and the slot you are using.

The following table provides sample drive designations.

Sample PCMCIA Drive Designations

DRIVE LETTER	LOCATION/DEVICE
C:	Internal hard disk
D:	Internal hard disk, 2nd partition
E:	Slot 0, IDE/ATA memory card
F:	Slot 1, IDE/ATA memory card
G:	Slot 0, high-speed memory card
H:	Slot 1, high-speed memory card

The SUNDISK 5-MB Storage PC Card is approved for use with NEC notebook systems. The SUNDISK card is typically used as Drive G or H.

Interface Cards

You can connect most standard Small Computer System Interface (SCSI) devices using the optional NEC PCMCIA SCSI card, New Media "Visual Media" 500-KB Card.

Other Cards

Many other kinds of PC cards are available to notebook computer users. They include the following cards:

- Global Positioning System (GPS) – to enable the tracking of remote units (for example, delivery trucks)

-
- Serial – for adding an extra serial communications port
 - Multimedia – for combining animation and sound
 - Audio – to enable the use of sound (for example, in voice mail)

Cards Tested for Compatibility

The following PC cards were successfully tested by NEC for use in the NEC Versa 6200MX series notebook computers.

Cards Tested for NEC Versa 6200MX

CATEGORY	NAME
Network	NEC High-Performance Ethernet IBM Token Ring
Interface	New Media 500-KB SCSI
Hard Disk	SUNDISK 5-MB Storage
Fax/Modem	NEC 14.4 Kbps Data/Fax Modem NEC 28.8 Kbps Data/Fax Modem

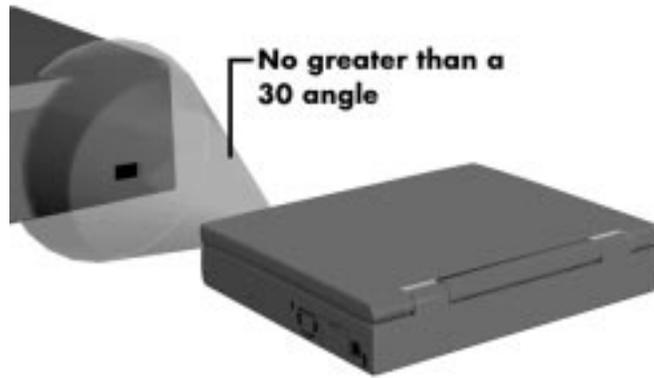
This list is current as of January 1997. For an up-to-date listing, call the NEC FastFacts Service at (800) 366-0476 in the U.S. or contact a local NEC office or dealer if using this unit outside of the U.S.

IR PORT

The IR port on the front of your system lets your NEC Versa 6200MX communicate with other devices that also use infrared technology. The IR port is Fast-Infrared (FIR), 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.

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

- Position the NEC Versa 6200MX no more than three feet way from the IR peripheral device you are using.
- Make sure there is no greater than a 30° angle between the computer and the device.



Using the IR port

The LapLink software that ships with your NEC Versa 6200MX system provides ways for you to use the IR port. Read the instructions in Chapter 2, "How to Use LapLink," for steps on using the software with the IR port.

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 the following sections to learn how to install an optional hard disk drive, or a memory module.

Hard Disk

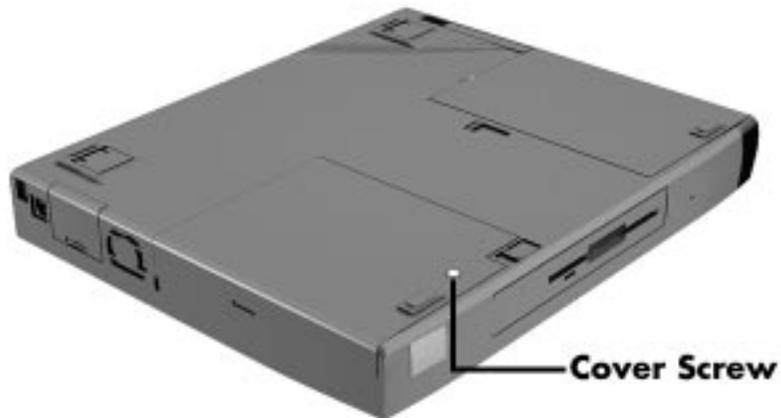
You can increase the system's storage capacity by replacing the standard hard disk drive or adding a second hard disk drive in the VersaBay II. (Adding a second hard disk drive is described in the section "Customizing Your System with the VersaBay II.")



NEC Versa 6200MX hard disk drives can be used in other NEC notebook computers such as the NEC Versa 2000 and 4000 Series systems. However, hard disk drives from earlier models can only be used in the VersaBay II. Check the top of the hard drive for a blue dot. If the drive case has the blue dot on it, you can use the drive in either the drive bay or the VersaBay II.

Replace the hard disk drive as follows.

1. Check that the NEC Versa power is off.
2. Turn the NEC Versa 6200MX upside down.
3. Remove the drive cover as follows:
 - Remove the Phillips-head screw that secures the drive cover.



Removing the screw that secures the cover

-
- Locate and push up on the drive cover release latch while using some pressure to slide the cover away from the system.
 - 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

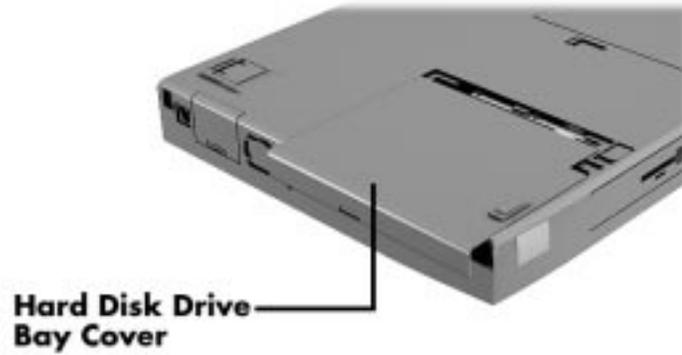
5. Lower the new drive into the drive bay and align its connector with the hard disk drive connector in the system.



Inserting the hard disk drive

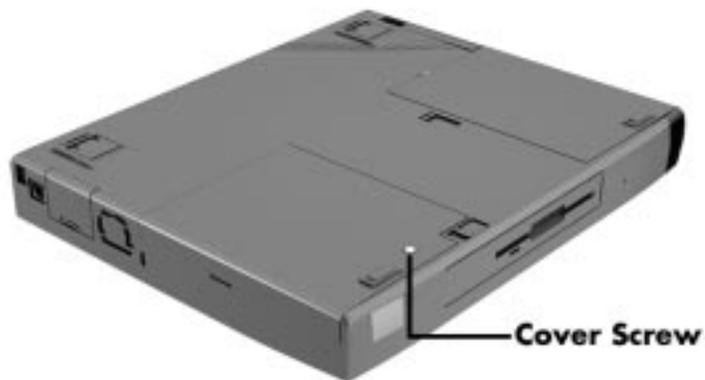
6. Slide the hard disk drive back and push firmly to secure the connection.
7. Replace the cover as follows:
 - Align the three tabs on the drive cover with the three notches on the system chassis.
 - Slide the cover towards the center of the unit.

-
- Gently push the cover until it snaps into place.



Replacing the drive bay cover

- Replace the screw that secures the bay cover.



Replacing the screw that secures the cover

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

Memory Module Installation

Your NEC Versa 6200MX comes standard with 32 megabytes (MB) of random access memory (RAM). You can increase system memory to a maximum of 128 MB. The RAM combinations possible are 32, 48, 64, 96 and 128 MB depending on which two of the listed dual inline memory modules (DIMM) are used.

- 16-MB memory module
- 32-MB memory module
- 64-MB memory module

The following table shows the memory expansion possibilities.

System RAM Expansion

BASE MEMORY	EXPANSION MEMORY	TOTAL MEMORY
32 MB	16 MB	48 MB
32 MB	32 MB	64 MB
32 MB	64 MB	96 MB
64 MB*	64 MB	128 MB

*Replacing the provided 32-MB DIMM with a 64-MB DIMM provides optimum memory expansion.

Installing a memory module involves the following procedures:

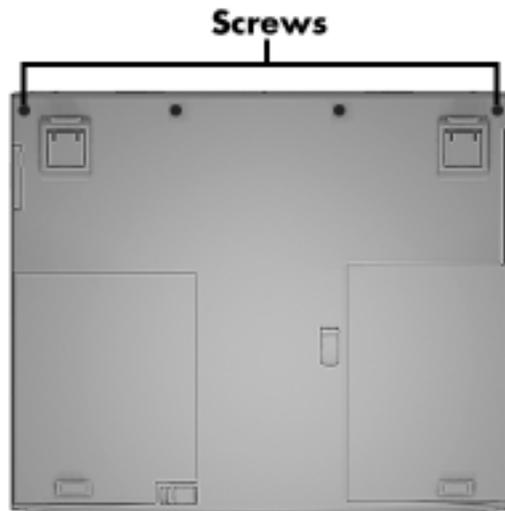
- removing the speaker caps
- lifting and moving the keyboard out of the way
- installing the DIMM
- reassembling the unit.

Use the following steps to install a memory module.

1. Make sure the system is powered off and that no peripheral devices are attached.

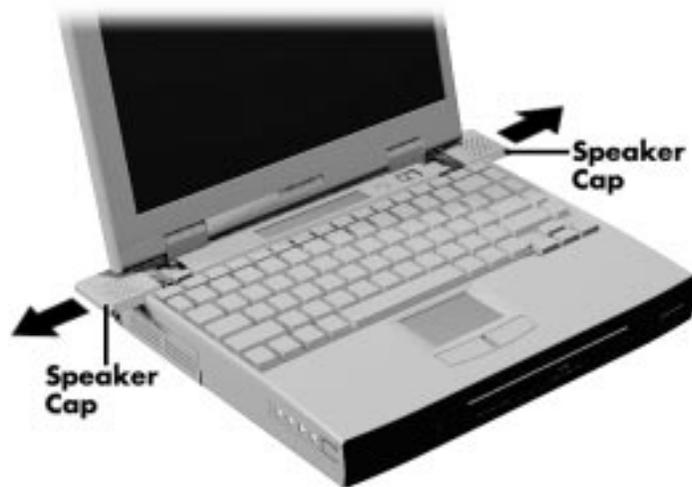
-
2. Locate and remove the two Phillips-head screws on the bottom of the NEC Versa 6200MX that secure the speaker caps.

Put the screws in a safe place for reassembly.



Locating the speaker cap screws

3. Turn the NEC Versa 6200MX over and open the LCD panel.
4. Locate the two speaker caps, slide each one toward the outside edge of the system, and remove it.



Removing the speaker caps

5. Gently lift up the edge of the keyboard nearest the LCD and slide the keyboard toward the LCD screen to release the tabs that secure it.

! CAUTION

Be careful not to disconnect the keyboard or keyboard cable entirely from the system.



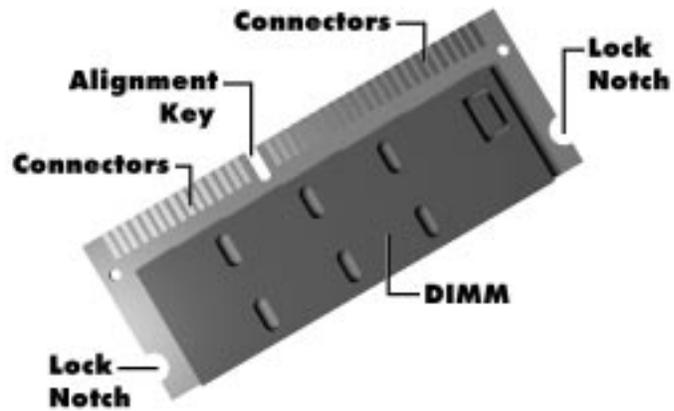
Lifting up the keyboard

6. Carefully turn over the keyboard and place it face down on the Versa-Glide. Be careful not to twist or disconnect the keyboard cable.



Positioning the keyboard

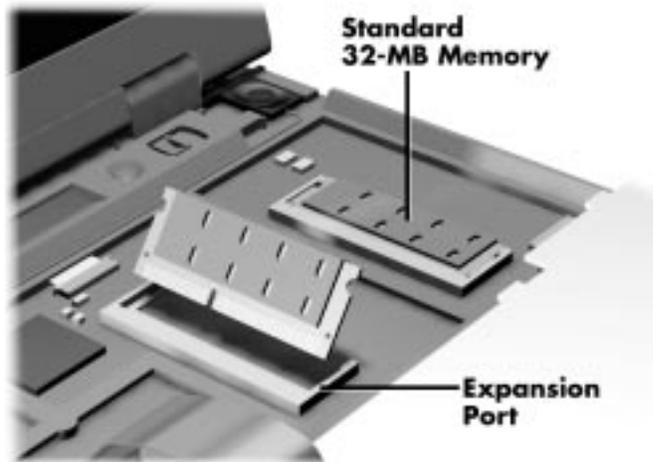
7. Locate the lock notches and alignment key on the DIMM.



DIMM features

8. Locate the DIMM expansion port and proceed as follows:

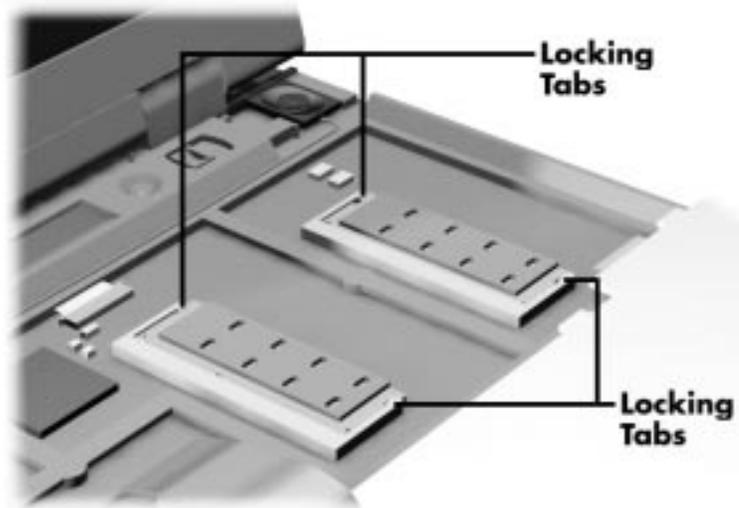
- Hold the DIMM at a 45 degree angle and align the DIMM contacts with the socket in the system. Push the connector into the socket.
- Press down on the edge of the DIMM opposite the contacts until the lock tabs on the sides snap into place, securing the module.



Installing the DIMM

If you are replacing a DIMM and need to remove one that is already installed, do so as follows:

- Press the locking tabs away from the sides of the DIMM and hold while gently lifting on the edge of the DIMM.
- When the edge of the DIMM pops up and is at approximately a 60 degree, pull the DIMM from the socket.



Removing an installed DIMM

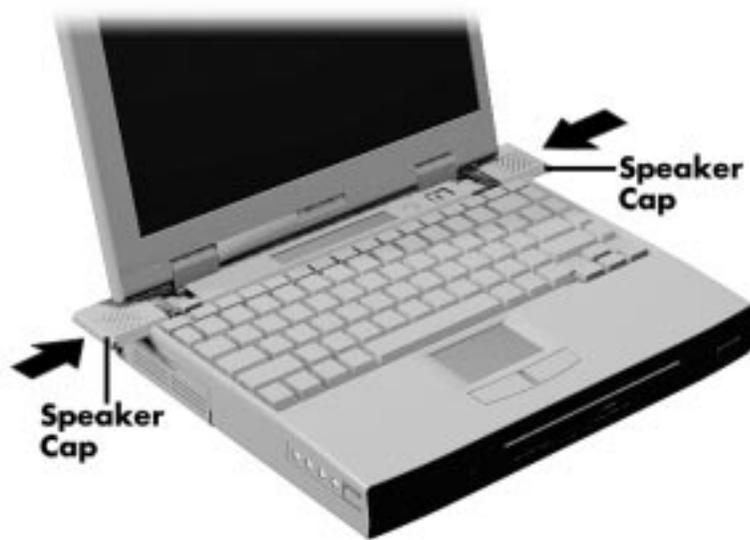


The system switches are also located underneath the keyboard. Therefore, if you need to set any system switches, you might want to do so while the system is already disassembled.

9. Reassemble the system as follows:

- Lift up the keyboard and align the tabs on the front of it with the grooves in the system.
- Reseat the keyboard in its original position.

-
- Slide the speaker caps back onto the system.



Reassembling the system

- Close the LCD panel and turn the system upside down.
- Replace the speaker cap screws.

USING EXTERNAL OPTIONS

The back and sides of your NEC Versa 6200MX notebook provide 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 television connection
- External audio options.

In addition, NEC offers the following optional equipment developed to work specifically with your NEC Versa 6200MX.

- NEC Docking Station 6000 Plus
- NEC Versa PortBar 6000
- NEC Versa 6000 DC car adapter.

See the following sections for steps on connecting the options.

External Monitor

You can add a standard external monitor to your NEC Versa 6200MX. 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.

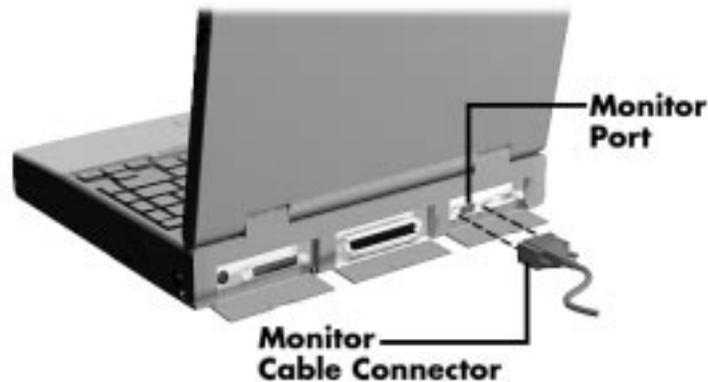
Follow these steps to connect an external monitor to your NEC Versa 6200MX.

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. Otherwise, the system will not recognize the monitor type.

2. Open the right-most port cover on the back of the system.
3. Attach the 15-pin cable connector to the monitor port on the system. Secure the cable connection with the screws provided.



Connecting a monitor

4. Connect the monitor 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 6200MX.

Press **Fn-F3** to toggle between the LCD, CRT, simultaneous CRT/LCD display, and TV Out.

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.

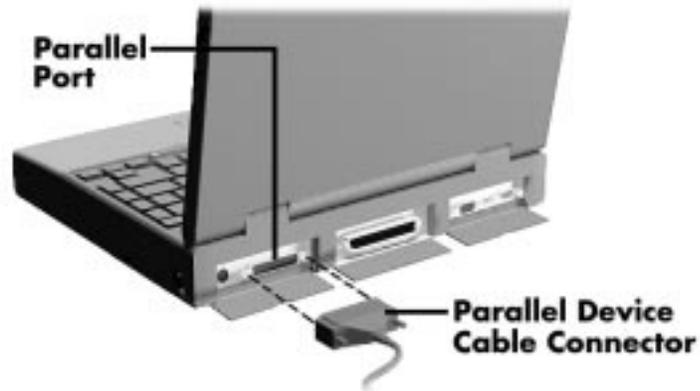


When you connect a printer, be sure to install the appropriate printer driver through the Windows Control Panel.

Connect a parallel device to your NEC Versa 6200MX as follows.

1. Check that both the NEC Versa and parallel device 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.

-
- Align and connect the other end of the cable to the parallel port on the device. Lock the connector clips.



Connecting a parallel printer

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



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

Serial Devices

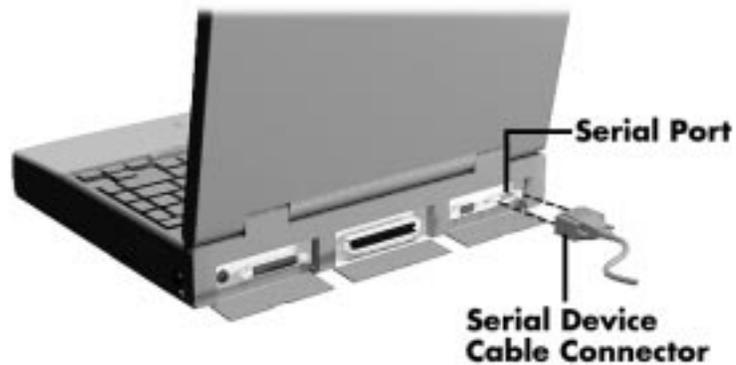
To install a serial device such as a printer or an external modem, you need a cable with a female 9-pin connector.



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 6200MX.

-
1. Check that both the NEC Versa and the device 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 online before trying to print. See the printer guide for instructions.

External Keyboard/Mouse

You can add a full-size PS/2-style keyboard or PS/2-style mouse to your NEC Versa 6200MX. You can continue to use the system keyboard while an external keyboard is connected. Connecting an external mouse disables the built-in VersaGlide.

To attach both an external keyboard and a external mouse at the same time, use the optional NEC Y-adaptor. For ordering information, see the online *Options Catalog*. If you purchased this product outside the U.S., contact the local NEC office or their dealers for ordering information.

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

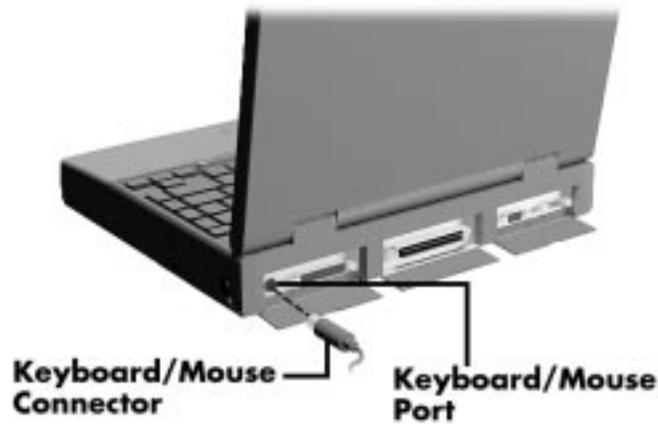
1. Press the Suspend button on the NEC Versa. Check that the system is in Suspend mode.



CAUTION

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



Connecting an external mouse disables the VersaGlide.

For instructions on connecting an external keyboard or external 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 6200MX'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/Mouse."

External Television Connection

You can use a television as an external display device. Do so as follows:

1. In the Windows control panel, change the system display setting to 640 x 480. (Display settings are found under Display Properties on the Settings tab.)
2. Attach one end of an RCA-to-RCA cable to the NEC Versa TV Out port and to the Line In port on the TV.
3. Use **Fn+F3** to toggle to TV Out display mode.



The default TV Out setting is for NTSC transmission. The U.S. and Japan use the default NTSC signal; Hong Kong and most European countries use the PAL signal. If you require the PAL setting, you must go into Setup to change the setting.

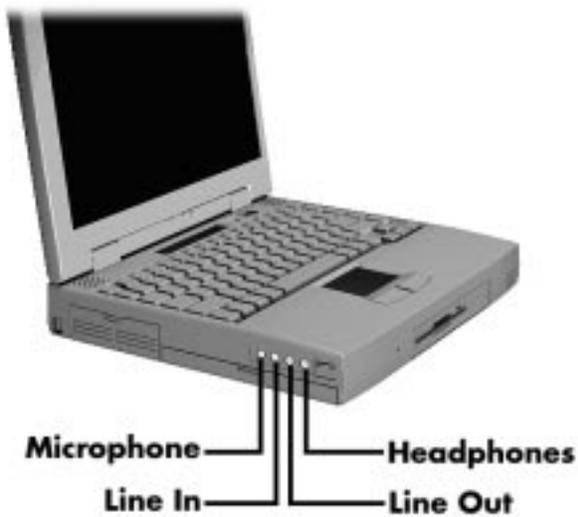
The NEC Versa does not support the SECAM signals used in some countries.

External Audio Options

The NEC Versa 6200MX comes equipped with built-in audio ports that let you record and play sound.

Connect audio jacks, like a microphone, headphones, or external speakers 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 6200MX.



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.

NEC Versa PortBar 6000

The NEC Versa PortBar™ 6000 duplicates the ports found on the back of your NEC Versa 6200MX system, providing the following:

- Monitor Port
- External Diskette Drive Port
- Parallel Port
- Serial Port
- Keyboard Port

-
- Mouse Port
 - Line Out Port
 - DC In Port.

Keep the PortBar 6000 in your office connected to peripherals while you take your NEC Versa 6200MX on the road.

See the instruction sheet that comes with the PortBar or the online *Advanced Topics* for details about installing and using the PortBar.

NEC Docking Station 6000 Plus

The optional NEC Docking Station™ 6000 Plus 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.

See the *NEC Docking Station 6000 User's Guide* for instructions on connecting and using the docking station.



CAUTION

Only dock the NEC Versa 6200MX on an NEC Docking Station 6000 Plus. The cover is specially designed to allow for proper cooling during system operation.

SETTING SWITCHES

A six-position dip switch is located underneath the keyboard. (Instructions for accessing the switches follow the section that explains updating the BIOS.) The following lists identifies each switch setting and its function.



Switches 3, 4, and 6 are reserved for NEC factory use only. Switch 5 is not used.

- Switch 1, BIOS Flash Protection Switch — The 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 System BIOS,” to complete this procedure.
- Switch 2, Password Override Switch — The default setting is “OFF.” 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 dissolves.

To enter a new password, reset the switch to “OFF,” and follow the instructions in Chapter 3, “Using Setup,” to set up a new password. You may want to keep this password in a special place so that you don’t forget it again!

- Switch 3 — Reserved for factory use.
- Switch 4 — Reserved for factory use.
- Switch 5 — Not used.
- Switch 6 — Reserved for factory use.

Updating the System BIOS

Use the following steps to update your NEC Versa 6200MX system BIOS with the BIOS Update Diskette (BUD). Specifically, the BIOS is the code transmitted onto your system’s microprocessor, or central processing unit (CPU).



You only need to update the BIOS if NEC makes significant improvements or fixes to the current system BIOS. Your authorized NEC dealer or Technical Support Services representative can help you determine this.

If you are informed that the default BIOS needs an upgrade, to receive a copy of the BUD contact the NEC Versa Diskette Fulfillment Center at (800) 842-6446, or NEC Customer Service and Support at (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.

Updating the BIOS involves the following procedures:

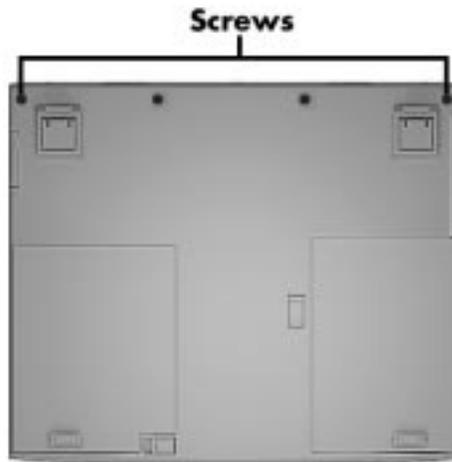
- removing the speaker caps
- lifting and moving the keyboard out of the way
- setting the switch
- reassembling the unit and updating the BIOS
- resetting the switch.

Changing Switch Settings

Use the following steps to change switch settings.

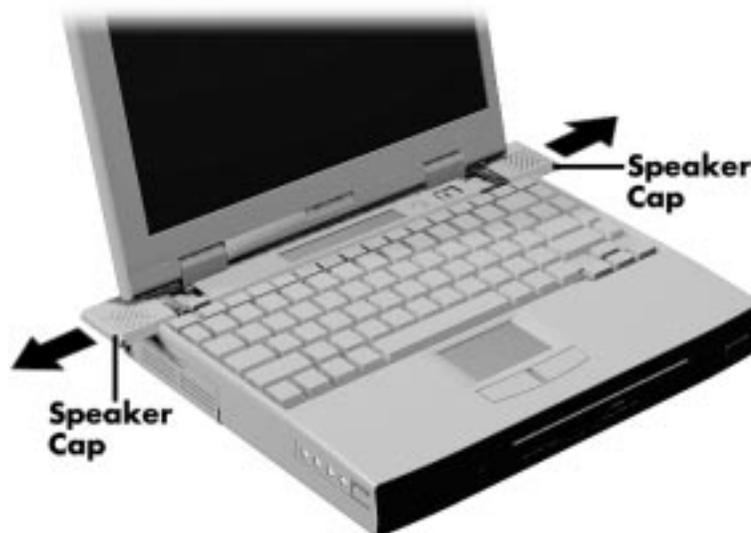
1. Make sure the system is powered off and that no peripheral devices are attached.
2. Locate and remove the two Phillips-head screws on the bottom of the Versa 6200MX that secure the speaker caps.

Put the screws in a safe place for reassembly.



Locating the speaker cap screws

3. Turn the NEC Versa 6200MX over and open the LCD panel.
4. Locate the two speaker caps, slide each one towards the outside edge of the system, and remove them.



Removing the speaker caps

-
5. Gently lift up the edge of the keyboard nearest the LCD and slide the keyboard towards the LCD screen to release the tabs that secure it.

⚠ CAUTION

Be careful not to disconnect the keyboard or keyboard cable entirely from the system.



Lifting the Keyboard

6. Carefully turn over the keyboard and place it face down on the VersaGlide. Be careful not to twist or disconnect the keyboard cable.



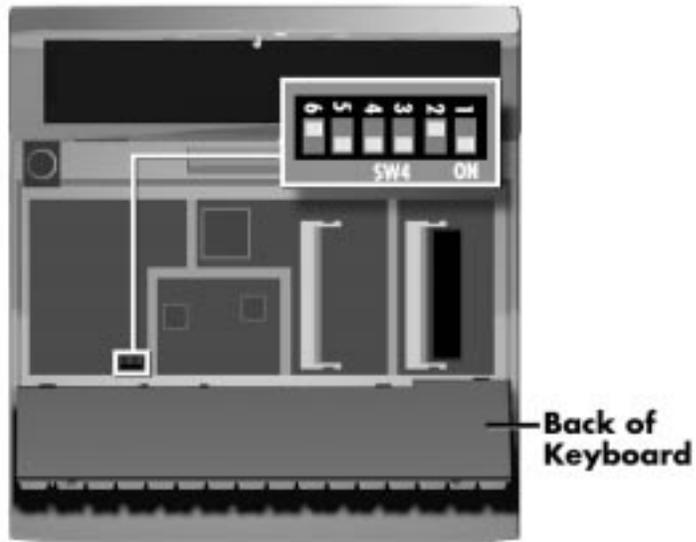
Positioning the keyboard

7. Locate the dip switch block. Using a fine tipped object, change the Dip Switch 1 setting to Off. (For other functions, set the appropriate switch to the required setting. See “Setting Switches” for switch functions and settings.)



CAUTION

Never use a lead pencil to change switch settings.



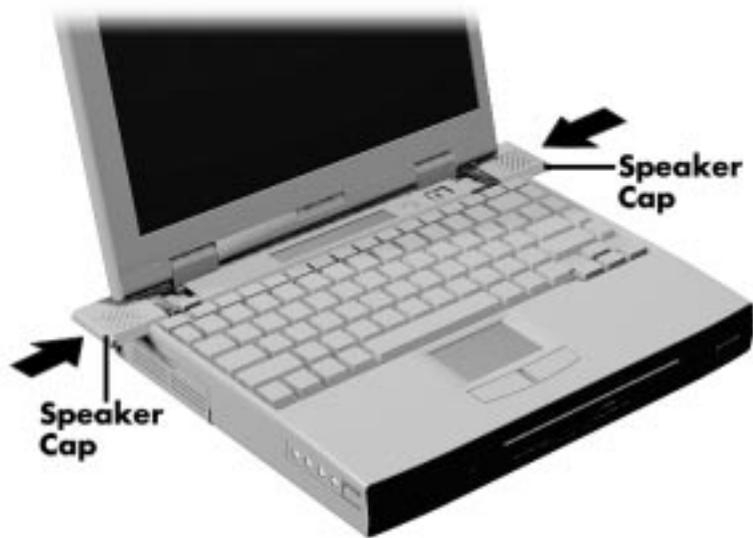
Setting the Dip Switch



The system memory expansion slots are also located underneath the keyboard. Therefore, if you need install DIMM modules, you might want to do so while the system is already disassembled.

8. Reassemble the system as follows:

- Lift up the keyboard and align the tabs on the front of it with the grooves in the system.
- Reseat the keyboard in its original position.
- Slide the speaker caps back onto the system.



Reassembling the system

- Close the LCD panel and turn the system upside down.
 - Replace the speaker cap screws.
9. Your system is now ready for the BIOS update. Continue to the next section to update the BIOS.

Performing the BIOS Update

Use the following procedure to perform the actual BIOS update.

1. Make sure that the computer is operating under AC power, and that the power is off. Insert the BIOS Update diskette into diskette drive A.
2. 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.

3. Press **Enter** to continue.

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

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

Press any key to return to the Main Menu.

5. Highlight the "Install New BIOS" option and press **Enter**.
6. Press **Y** and then press **Enter**. After a brief pause, a message appears telling you to remove the diskette in drive A.
7. Remove the diskette and press any key to continue. The utility updates the BIOS.

Power off your computer. The next time you power on your computer, you will have the latest NEC Versa 6200MX computer BIOS revision level.

8. When the update is complete, follow the instructions in the previous section and reset dip switch 1 back to the ON position.
9. 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 6200MX! This section describes the NEC Versa 6200MX'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 6200MX provides entertainment-level sound quality through stereo speakers. It handles MIDI files, digital audio files, and analog audio sources. This means the NEC Versa 6200MX recognizes .WAV, .MID, and .AVI files. The system is 3D-stereo, 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 input: 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.



When using the built-in microphone, make sure the speaker volume is turned down before enabling the microphone or feedback may occur.

The following procedure describes how to use the AudioRack software to record sound into a file on the NEC Versa. (You can also use the Microsoft Sound Recorder. Look in Accessories for the Multimedia group and select “Sound Recorder.”)

1. To record from an external device such as a portable tape player, you need a cable with audio jacks on both ends. Set up your hardware as follows:
 - Connect one end of the audio cable to the Line Out jack on the external device. (On some devices, you can record from the headphones port.)
 - Connect the other end of the cable to the Line In port on the NEC Versa. (You can also use the microphone port to record monaural sound.)

To record from the internal CD-ROM or from file, start with step 2.

2. From Windows, open the AudioRack program group and start the AudioRack program (in Windows 95, this is called AudioRack32). The AudioRack control panel (similar to the following) appears on your screen.

The control panel provides six different panels. (If your control panel offers fewer, simply press the device buttons next to the power button. The missing panels will appear.) These panels include the following:

- The top four control power (power panel), stereo mixing (3D-Stereo panel), volume control (Mixer panel), and recording (DAT panel).
 - The lower two panels control your input sources, including:
 - MIDI panel for recording from existing MIDI or RMI files.
 - CD panel for recording from the CD-ROM reader.
3. Prepare for your recording as follows:
 - From the Power panel, press the button that specifies your recording source. For example, press CD to pick CD input and display the CD control panel if it is not shown.

-
- In the 3D-Stereo panel, specify the spatial attributes to use for 3D-stereo recording. (See the online help that comes with AudioRack for details.)
 - In the Mixer panel, press the record button to indicate that you are planning to make a recording. Specify which recording device you plan to use by pressing the appropriate button on the right-hand side of the Mixer panel.

If needed, adjust the volume of the input device by moving the slide bars directly above the device button. Adjust the volume here if your recording is distorted. Usually lowering the volume corrects the distortion. (See the online help that comes with AudioRack for details.)

- To change the sampling rates or other recording attributes, go to the DAT panel and press the New button. Enter recording options from the dialog box that appears.
4. Go to the control panel for the device from which you plan to record. For example, go to the CD panel to record from CD. Press the play button.
If you are recording from an external device, press its Play button to start the sound.
 5. Go to the DAT panel and press the Record button (it has a red dot in the middle).
 6. When you finish recording, press the Stop button (it has a square in the middle) on the DAT panel to end the session. Press the Stop button on the device panel to stop the player.

If you are recording from an external device, press its stop button.

7. To save your file, press the “Save” button on the far right side of the DAT panel and enter a file name.

To listen to the sounds you’ve recorded, use the press the Playback button in the Mixer panel and the play button on the DAT panel.

To close the AudioRack control panel, press the Power button.

Line-In

Analog signals come in through the NEC Versa 6200MX'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 6200MX 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 the CD-ROM reader connects directly to your NEC Versa 6200MX. Simply follow the instructions in "Recording" to record sound from your CD player.

Microphone

You can capture and record sounds through the internal microphone on the NEC Versa 6200MX or through an external microphone that connects to the system through the microphone port. You can record voice-overs for narration, reminders, or special instructions.

See "Recording," explained earlier in this chapter, for details about recording sound with the microphone. Although the example given shows how to record sound from a tape, the procedure is the same for recording with a microphone.

Mixing

With the AudioRack software on your NEC Versa 6200MX, you can mix data from two separate wave files to create a new sound file. You can also mix the microphone volume to create soft background sounds to accompany a voice-over or another more prominent sound. Mixing lets you blend digital and MIDI audio files to get the final, high-quality soundtrack you want.

This example shows how to mix a music soundtrack with a voice-over in Windows for Workgroups.

1. Open AudioRack Sound Recorder and activate the file from which you want to copy sound.
2. Using the VersaGlide and the left selection button, go into the soundwave display and highlight the part of the sound that you want to copy. (Press the Play button to check the portion you've selected.)
3. From the Edit menu, select Copy.
4. Open the file where you want to add the sound clip and position your cursor where you want the clip to go.
5. From the Edit menu, select Paste Mix.

See the online help that is available with the AudioRack for more information.

Playing Back

You can play back your recorded soundtrack through stereo headphones, the internal NEC Versa 6200MX stereo speakers, or external stereo speakers. You can play .WAV and MIDI files as well as CD audio. Adjust the volume through the software or with the volume control knob on the left side of the system.

Play audio from files or audio devices as follows. (This example shows how to use the Media player option in Accessories. You can also play audio through the AudioRack. See the AudioRack help files for details on its use.)

1. From the Accessories group, highlight the Multimedia Media Player option.

-
2. Select your audio source as follows:
 - If playing a file, use the File menu to specify the file name.
 - If playing from a device, use the Device menu to select your audio source.
 3. Once your file is open or your source specified, press the play button.
 4. Press the square Stop button to stop playing the audio.

Using Headphones

The NEC Versa 6200MX headphone port delivers sound at half a watt. The stereo headphones plug in through the headphone jack located on the left side of the NEC Versa 6200MX. Adjust the volume with the audio software on the NEC Versa 6200MX.

If the software sets the volume to medium, the knob controls volume from low to medium. If software sets the volume to high, the knob controls volume from low to high.



Using headphones disables the internal speakers.

Using the Built-In Speakers

The NEC Versa 6200MX has built-in stereo speakers that are always available. Adjust the volume through the software or with the volume control knob located on the left side of the NEC Versa 6200MX.

Using External Stereo Speakers

For full stereo sound impact, you can plug a pair of stereo speakers into the line-out jack located on the left side of the system. Adjust the volume through software, with the volume control knob located on the left side of the system, or through the controls on the speakers.

MIDI Files

The musical instrument digital interface (MIDI) lets you 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. You can also 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 6200MX features a dazzling TFT 64-K color high-resolution display for sharp effective visuals right on the NEC Versa or on an external CRT monitor. The NEC Versa 6200MX super XGA TFT display has high resolution of 1024 x 768 pixels.

The NEC Versa 6200MX comes with the Microsoft Video for Windows player. Your system has hardware assisted MPEG which supports full motion, full-screen MPEG video. In Windows for Workgroups, the Xing player gives you MPEG capabilities; in Windows 95, the Mediamatics Arcade player gives you MPEG capabilities.

Access either the Microsoft or the MPEG video player as follows:

1. Open the Media Player in Accessories.
2. Under Device, select the video player you want to use.
3. Open your file and press the play button. (To play full screen MPEG video, you may need to press the Window maximize button to bring your video to full size.)

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 6200MX 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. These multimedia software packages include graphics packages, animation software, and presentation authoring systems as follows:

- Animation software allows you to create 3-D effects and 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.

VideoSaver

The VideoSaver software package loads on your system the first time you use the MMX CD that comes with your NEC Versa. VideoSaver provides 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:



When running MPEG video clips as a screen saver, power management will not occur due to the disk and panel activity.

1. Double click the Display icon in the Control Panel.
2. Go to the Screen Saver tab and select VideoSaver.
3. Press the Preview button to see the current video clip selected. To modify the video settings, press the Settings button.

The settings screen shows the available video clips and lets you:

- Rearrange the order in which the clips appear.
- Mute the sound.
- Preview the videos available.

6

Traveling with Your NEC Versa 6200MX

The NEC Versa 6200MX 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 its 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. (See the checklist at the end of this chapter.)
- 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 6200MX 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 6200MX 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. 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 6200MX. Look them over and use what fits your situation.

What to Take

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

- Extra fully charged batteries (and 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 6200MX Series Quick Reference*
- AC extension cord.



When using an optional modem outside of the U.S. and Canada, you might need a modem and telephone adapter approved for the local telephone system. Contact the local NEC dealer or representative for information.

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.
 - Insert a fully charged battery to make sure your system is ready to quickly boot up at the airport security check.
 - Fully charge all your batteries.
- Tape your business card to your NEC Versa, AC adapter, and batteries.

7

Solving Problems

Once in a while you may encounter a problem with your NEC Versa 6200MX. The Online Information program group has *Questions and Answers* 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 brightness control is adjusted properly.
- If using battery power, check that the battery pack is properly inserted and fully charged.

Troubleshooting

PROBLEM

WHAT TO DO

The system does not power on.

If you are operating the system with battery power, check that the battery pack is correctly inserted. Attach the AC adapter to recharge the battery.

If you have the AC adapter attached, check that the electrical outlet you are using works.

LCD screen is dark and blank.

Power-saving mode has shut off the backlight. Press a keyboard key or the Suspend button.

The built-in LCD may not be selected. Press **Fn F3** once or twice.

Brightness control needs adjustment. Adjust the control.

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, and then press the Suspend button to resume operation.

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.

A disk drive might be busy. Wait until the disk drive stops and try again.

The NEC Versa may be connected to a docking station. Some power management functions do not work when the NEC Versa is docked.

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 6200MX 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 or emits a series of beep signals. If this happens, follow the instructions in the POST Error Messages table or the Beep Code table, as appropriate.

POST Error Messages

MESSAGE	WHAT TO DO
Diskette drive A or B failure or No Floppy Drive or FDC Failure	<p>Drive A does not work or is not properly connected. Drive A is the diskette drive.</p> <p>Check that drive A is securely connected and power is on.</p> <p>Press F2 to start Setup to check the diskette drive parameters.</p> <p>If there's still a problem, the drive might need repair.</p>
Invalid system disk	Replace the disk and then press any key.
Diskette boot failure	Insert a bootable disk in drive A and press any other key.
Non-system disk or disk error; Replace and strike any key when ready	<p>Remove the diskette from drive A and press any key to start the system from the hard disk.</p> <p>Or, insert a bootable disk in drive A and press any key.</p>
Operating System Not Found or C: drive failure	Press F2 to start Setup. Change the hard disk type to the correct setting. Exit and save Setup changes.
No ROM BASIC	No bootable sector is found on either drive A or drive C. Remove the installed diskette and use a bootable diskette.
CMOS settings wrong – run Setup. Press F1 to resume	One or more system configuration parameters are not properly set. Press F1 to start Setup, correct the settings, exit and save to update the parameters.
Real time clock failure	Set time and date using Setup. Exit and save to update the parameters.
CMOS Battery state low	Have an authorized NEC dealer replace the CMOS battery.
CMOS date and time not set	Set the time and date using Setup. Exit and save Setup changes to update the parameters.
CMOS memory size mismatch	Run Setup to reset the amount of memory defined on the motherboard.

POST Error Messages

MESSAGE	WHAT TO DO
System CMOS Checksum failure – run Setup Press (F1) to resume.	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.
C: drive error or 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.
Hard 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 controller failure	Unplug external keyboard if attached and reboot the system. If it still fails, have the system repaired.  Repeated keystrokes during boot may produce an error message.
Keyboard Error	A timing problem exists with the keyboard. If the error message remains, the keyboard may have to be repaired.
KB\interface error	Error exists in keyboard connector. If the error message remains, the keyboard may have to be repaired.

Fatal errors that occur during POST are communicated through a series of beeps. All beep code errors, except beep code 8, are fatal errors and do not allow the system to continue to boot.

If beep codes occur during POST, check the items in the Problem Checklist (at the start of this chapter), verify that all the hardware is set up properly and securely connected, and try rebooting. If you still get a beep code, go to the section “If You Need Assistance” at the end of this chapter.

Beep Codes are listed in the table that follows.

Beep Codes

NUMBER OF BEEPS	ERROR	DESCRIPTION
1	Refresh Failure	The memory refresh circuitry on the motherboard is faulty.
2	Parity Error	Parity error in the first 64 KB of memory.
3	Base 64 KB Memory Failure	Memory failure in the first 64 KB.
4	Timer Not Operational	Memory failure in the first 64 KB of memory or Timer 1 on the motherboard is not functioning.
5	Processor Error	The CPU on the motherboard generated an error.
6	8042 – Gate A20 Failure	The keyboard controller (8042) may be bad. The BIOS cannot switch to protected mode.
7	Processor Exception Interrupt Error	The CPU generated an exception interrupt.
8	Display Memory Read/Write Error	The system video adapter is either missing or its memory is faulty. (This is not a fatal error.)
9	ROM Checksum Error	The ROM checksum value does not match the value encoded in the BIOS.
10	CMOS Shutdown Register Read/Write Error	The shutdown register for CMOS RAM failed.
11	Cache Error/External Cache Bad	The external cache is faulty.

USING THE RESTORE CD

If you are running the Windows 95 operating system, you can use the Windows 95 Restore CD that comes with your NEC Versa 6200MX to restore system software.



If you selected the Windows for Workgroups operating system and want to complete the Restore procedure, you need to exchange the Windows 95 CD that ships with your system for the appropriate Windows for Workgroups Restore CD. Call the NEC Diskette Fulfillment Center at 1-800-842-6446 for information on receiving the Windows for Workgroups Restore CD.

The Restore CD gives you the following options if you experience file corruption, loss of applications due to a system failure, or decide not to use the NEC provided hotload in a Windows for Workgroups system. (An Exit button is also available, in case you change your mind.)

■ File Restore

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.

File Restore allows you to restore NEC provided applications without losing data files that you created or other application files that you loaded on your system.

■ System Restore

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

- **CD-ROM Drivers**

This option is provided for Windows for Workgroups users who decide not to use the NEC-provided system software. The CD-ROM drivers on the Restore CD give you full CD-ROM reader functionality. If you do not use these drivers, your CD reader may not function at its full potential.

File Restore

The File Restore option lets you restore files from either the DOS or Windows. Both methods are described next.



To restore a Windows for Workgroups system, you must exchange the Windows 95 Restore CD that ships with your system for the appropriate Windows for Workgroups Restore CD. Call the NEC Diskette Fulfillment Center at 1-800-842-6446 for information on receiving the Windows for Workgroups Restore CD.

Restoring All Application Files in DOS

Restore all application files except the operating system to your hard disk as follows:

1. Insert the Restore CD into the CD-ROM reader and power on the system.
2. Select “File Restore” to restore all original files that were on the hard disk C from the Restore CD.
3. Read the on-screen File Restore explanation and press “Continue.”
4. In the Start File Restore confirmation box, press “Yes.”
5. Read the on-screen license agreement and select “I agree.” When recovery is complete, a System Refill status screen appears.
6. Press “OK.” The Restore CD menu reappears.
7. Select “Exit” and remove the Restore CD from the reader.

Restoring Individual Files in Windows

Restore individual files to your hard disk from Windows as follows:

1. With system power on, insert the Restore CD into the CD-ROM reader.
2. Proceed as follows:
 - For Windows 95 systems, double click the My Computer icon on the desktop.
 - For Windows for Workgroups systems, open the File Manager and select the CD-ROM reader (when the system ships, this is drive E:).
 - Double click the CD-ROM reader icon. The NEC System Restore screen appears.
 - 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.

3. In the System Restore screen, click “OK” to restore individual files. A license agreement appears.
4. Read the license agreement and click “I agree” to continue. The Restore Individual Files screen appears. The screen is divided into two parts:
 - Select files to restore — Use this area to select the specific files you want to restore.
 - Check list of files to be restored — Use this area to verify which files are 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-hand dialog box, highlight the directory that contains the files you want to restore.
2. From the right-hand dialog box, select files as follows:

-
- To restore some of the files listed, click the file or files to highlight the ones to restore.
 - To restore all of the files listed, click “Select all of the above” to highlight and select all the files listed.
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. To add files to the list, go back to the preceding section and repeat those steps.
3. Remove files from the list as follows.
 - To remove 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 to complete the restoration.

-
- Cancel — this option cancels the restoration and returns you to the 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 Restore

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



To complete the Restore procedure in Windows for Workgroups, you need to exchange the Windows 95 CD that ships with your system for the appropriate Windows for Workgroups Restore CD. Call the NEC Diskette Fulfillment Center at 1-800-842-6446 for information on receiving the Windows for Workgroups Restore CD.

System Restore *erases* the hard disk *completely* before reinstalling the files.



CAUTION

A Full System Restore deletes *ALL* files on the hard drive and replaces them with the original factory installed files.

Only use a Full System Recovery 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.

Restoring System Files in DOS

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

1. Insert the Restore CD into the system's CD-ROM reader.



If you have an unformatted hard disk or a hard disk formatted with an operating system other than MS-DOS or Windows 95 (i.e., UNIX, NTFS, OS/2) installed in your NEC Versa when you boot from the CD, hard disk reformatting begins immediately. You do not have the option of choosing a type of restore procedure.

2. Power on the NEC Versa 6200MX system.
3. Select "System Restore" to restore your system to its original shipping state.
4. Read the System Restore explanation screen and press the "Continue" button to proceed.

A license agreement appears.



CAUTION

Once you accept the license agreement, the restoration process begins. Restoration deletes *all* files from the hard disk drive.

5. Read the license agreement and click "I agree" to start the System Restore process.



CAUTION

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

The System Restore process automatically reformats the hard drive and reinstalls all system applications.

When the procedure is finished, a message similar to the following appears.

The hard disk drive has been successfully reloaded! Please remove the NECCSD Bootable System Recovery CD from the CD-ROM reader and restart your system NOW.

6. Select “OK” and remove the Restore CD.
7. Power on the system. Follow the on-screen 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

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

1. With system power on, insert the Restore CD into the CD-ROM reader.
2. Proceed as follows:
 - For Windows 95 systems,
 - If your system is set up to automatically run the CD, go to step 5.
 - If your system is not set to automatically run the CD, double click the My Computer icon on the desktop.
 - In Windows for Workgroups, open the File Manager and select the CD-ROM reader (when the system ships, this is drive E:).
3. Double click the CD-ROM reader icon. The NEC System Restore screen appears.
4. Select the “Tools” directory. Next, select “Safetycd.exe.”
5. Select “Refill Hard Drive.”
6. Select **Alt-I** 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.

CD-ROM Driver Installation

Only use this option if you are running Windows for Workgroups and are not using the software that NEC preinstalled on your NEC Versa system. (The preinstalled software includes these drivers.)

CD-ROM Driver Installation involves two procedures.

- Copying the driver installation files to a temporary directory on the C: drive.
- Installing the drivers from the temporary directory onto your system.

These procedures are described next.

Copying the Installation Files

Initiate the procedure to copy the installation files from the Restore CD to your system as follows:

1. Make sure the CD-ROM reader is installed in your system and power on.
2. Insert the Restore CD into the CD-ROM reader and reboot your system. The system will boot from the CD.
3. From the Restore CD menu, select “CD-ROM Drivers” and press **Enter**.
4. Read the explanation screen that appears and press the “Continue” button to proceed.
5. Press “Yes” when the confirmation screen appears.
6. Read the license agreement and select “I agree” to continue. The option copies the drivers to a temporary directory on your hard disk drive.
7. Once the drivers are copied, press “OK” and “Exit.”

Continue to the next section to complete driver installation.

Installing the Drivers

Once you load the installation files on the hard drive as described in the preceding section, install the CD-ROM drivers as follows:

8. Remove the CD from the reader and reboot the system and start Windows.
9. From the Program Manager File menu, select "Run" and enter the following in the Run field and press "OK."

C:\CD_SETUP\SETUP.EXE

10. Follow the on-screen instructions to load the drivers.
11. If prompted to do so, reboot the system.

Once the drivers are installed, you can access the CD-ROM reader from either DOS or Windows and with full CD-ROM reader functionality.

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.

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.

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

For assistance in resolving problems that arise while using your NEC Versa 6200MX notebook computer.

NEC Customer Service: (800) 632-4525

Fax: (508) 635-4666

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

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

International: (708) 860-9500, x2621

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 database 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 Online: nectech@aol.com
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.

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, get preinstalled software support 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, get system hardware support 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 message errors that occurred.



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

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.

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

The following specifications are standard except where noted.

System Processor

NEC Versa 6200MX — P55CLM/166 (Intel Pentium 166-MHz)

Architecture

64-bit Peripheral Component Interconnect (PCI)

Random Access Memory (RAM)

- Standard Main Memory — 32-MB EDO high-speed interleaved access
- Optional Expansion — 1 slot. Expandable in 16-MB, 32-MB or 64-MB increments. Maximum 128 MB total.
- Video RAM — 2 MB EDO DRAM
- Cache RAM
 - Level 1: 8 KB for code, 8 KB for data
 - Level 2: 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 (I/O) 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 of system; 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, for optional NEC Docking Station 6000 Plus, optional PortBar 6000, or optional FDD Connector Kit.
 - 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
 - TV Out — 1 port; RCA Jack
 - DC In — 1 port, for AC adapter cable

Main Battery

- Type — Lithium Ion (Li-Ion), eight-cell
- Output Voltage — 14.4 V
- Capacity — 2,600 mAh
- Battery Life — Approximately 2-4 hours depending on model, with and power management features enabled.
- Recharging Time — Approximately 2 hours when the system is on or off.

Speakers

2 built-in, 1.5 watts (W) each with a maximum 3W output

- 16-bit stereo, 44.1 KHz
- Sound BlasterPRO compatible
- MIDI Roland: MPU401, UART Mode compatible
- Sound Controller – ESS 1878+ESS938

Card Slots

Two 32-bit card slots for two Type I/Type II PCMCIA cards or one Type III PCMCIA card, 5 V or 3.3 V interface

LCD Display

13.3-inch high resolution active matrix Thin Film Transistor (TFT) Extended Graphics Array (XGA) color display

- Resolution — 1024 x 768
- Dot Pitch — 0.264 mm x 0.264 mm
- Colors — 256K

Keyboard

Membrane 85 keys (both U.S. and International) with standard QWERTY-key layout (International keyboards are country-specific)

- 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
- Stroke — 3 mm

Diskette Drive

Standard 1.44-MB drive

- Size — 3.5 inch
- Capacity — 1.44 MB (formatted), 2 MB (unformatted)
- Access Time (average) — 94 ms
- Transfer Rate — 250 to 500 K/bps
- Interleave 1:1
- Controller — NS PC87338VJG

Hard Disk Drive

Internal 2.1-GB, 2.5-inch, removable IDE hard disk drive

Formatted capacity — 2.1 GB

Track-to-track seek rate — 3 ms

Average seek time — 13 ms (read), 14 ms (write)

Revolutions per minute — 4200

Data transfer rate — 16.6 MB/sec

Media data rates — 69.8 Mbit/sec(Max)

Mean Time Between Errors (MTBF) — 300,000 hours

10X-speed CD-ROM Reader

External 5-inch CD-ROM Pack

Data Capacity — 2,048 bytes/block mode 2,336 bytes/block mode 2

Average Data Transfer Rates — 1500 KB/second (mode 1), 1710 KB/second (mode2)

Read Rate — 1650 KB/sec max, 1500 KB/sec avg

Burst Transfer Rate — 11.1 MB/sec (PIO mode 2); 13.3 MB/sec DMA mode; PIO Mode 3 compatible (with IORDY)

Average Access Time — 150 milliseconds (ms)

Memory Buffer — 128 KB

Interface — IDE (ATAPI)

Photo CD Compatibility — Multisession Photo CD, Video CD (CD-1, CD-I Ready, CD-G, CD-DA, CD-EXTRN, CD-ROM XA, and enhanced CD)

Power

AC Adapter

- Input Voltage — 100 to 240 volts (V) AC, 50 or 60 Hz, 1.0 A
- Output Voltage — 18.5 V DC, 2.45 A (45.5W)
- Australia, Europe and Asia use an AC power cable specific to each country's standards.

Battery Pack

- Type — eight-cell Lithium Ion (Li-Ion)
- Output Voltage — 14.4 V
- Capacity — 2,600 mAh
- Battery Life — Approximately 2–4 hours, under typical operating conditions.
- Recharging Time — Approximately 2 hours when the system is on or off.

Bridge Battery

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

Dimensions

System

- Width — 11.69 in. (297 mm)
- Depth — 9.88 in. (251 mm)
- Height — 2.3 in. (58.5 mm)

Battery Pack

- Width — 3.5 in. (89.5 mm)
- Depth — 5.2 in. (134.5 mm)
- Height — 0.81 in. (20.7mm)

Weight

NEC Versa 6200MX — 7.94 lb (3.61 kg)

Battery Pack — .85 lb (.38 kg)

Recommended Environment

Operation

- Temperature — 41°F to 95°F (5°C to 35°C)
- Relative Humidity — 20% to 80% (Noncondensing)

Storage

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

MEMORY MAP

The system supports system and video shadowing, both controlled through complementary metal oxide semiconductor (CMOS). The system supports BIOS as a cacheable area with write protection. The following table shows the system's memory map.

Memory Space	Size	Function
000000-0002FFh	768 bytes	BIOS Interrupt Vector Table
000300-0003FFh	256 bytes	BIOS Stack Area
000400-0004FFh	256 bytes	BIOS Data Area
000500-09FFFFh	640 KB	Applications Memory (used by the OS, device drivers, TSRs, and all DOS applications)
0A0000-0AFFFFh	64 KB	Video Buffer (EGA and VGA)
0B0000-0B7FFFh	32 KB	Video Buffer (monochrome, CGA color, VGA monochrome)
0B8000-0BFFFFh	32 KB	Video Buffer (CGA, EGA color, and VGA color)
0C0000-0CBFFFh	48 KB	Video ROM (EGA and VGA)
0CC000-0CFFFFh	16 KB	Unused. (Reserved for Adapter ROMs and other devices requiring ROMs)
0D0000-0DFFFFh	64 KB	Used by Adapter ROMs (i.e., network controllers, hard disk controllers, SCSI host adapters)
0E0000-0EFFFFh	64 KB	Used by System ROM adapters (i.e, network controllers with boot capability)

Memory Space	Size	Function
0F0000h-0FFFFFFh	64 KB	System AMIBIOS (includes Setup and hard disk drive utilities)
100000h-1FFFFFFF	32 MB	Built-in Extended Memory
2000000-5FFFFFFF	64 MB	Extended Memory

INTERRUPT CONTROLLERS

Using interrupts, hardware can request software services. If non-Plug and Play software is being used, the interrupt may need to be moved for software application or driver compatibility. Some interrupts cannot be moved. Fifteen interrupts can be used with a cascade connection of 8259INTC x 2. The table shows default interrupt level assignments 0 through 15, in order of decreasing priority.

Controller	Priority	Name	Device
Master/Slave			
Master	0	IRQ00	Counter 0/Timer 1
Master	1	IRQ01	Keyboard
Master	2	IRQ02	INT output from controller 2
Slave	3	IRQ08	Real-time Clock
Slave	4	IRQ09	Infrared Port
Slave	5	IRQ10	Reserved (CardBus Controllers)
Slave	6	IRQ11	Reserved (CardBus Controllers)
Slave	7	IRQ12	NEC VersaGlide Mouse
Slave	8	IRQ13	Math Coprocessor (built into CPU)
Slave	9	IRQ14	Hard Disk Controller 1
Slave	10	IRQ15	Reserved (2nd IDE on Docking Station or CardBus card)
Master	11	IRQ03	Modem

Controller			
Master/Slave	Priority	Name	Device
Master	12	IRQ04	Serial Port 1
Master	13	IRQ05	Sound
Master	14	IRQ06	Diskette Drive Controller
Master	15	IRQ07	Parallel Port 1

C Questions and Answers

EXTERNAL MOUSE



How can a PS/2 mouse and an external keyboard be connected to the notebook at the same time?



The NEC Versa 6200MX has only one PS/2 port that accommodates *either* a mouse or a keyboard. You can get around this by purchasing an optional Y adapter. The Y-adapter provides two PS/2-style ports.

See the online *Options Catalog* for ordering information.



Why won't a serial mouse work when connected to the PS/2 port with the appropriate adapter?



The NEC Versa 6200MX is designed to find a mouse connected to the PS/2 port only. The system does not recognize a serial mouse with an adapter.

DISPLAY



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



The maximum resolution in simultaneous mode is 1024 x 768 because this is the maximum resolution supported by the LCD panel. You can obtain higher resolutions if you connect a higher-resolution external monitor and switch to CRT-only mode.



How can I change my video drivers?



In Windows for Workgroups, click on the "Windows Setup" icon in the Main Program group, Select "Options," then "Change system settings." Select the new device from the list and click on OK.

In Windows 95, press Start, Settings, and Control Panel. In the Control Panel, double click the Display icon. Click the Settings tab. Next, click Advanced Properties and press "Change." Click show all devices from the Select Device screen. Find the video driver you need, or insert a diskette or CD into the appropriate drive. Click on "Have Disk."



How many bad pixels on a TFT display are acceptable?



NEC LCD panels meet exacting manufacturing standards. Of the 921,600 elements involved in creating the display on your screen, NEC accepts no TFT screen with more than 6 non-working elements. Although this may mean a pixel or two is non-functional, its impact on your display should prove minimal.

PCMCIA



Why can't I access my network with my NEC Ethernet card?



Network systems usually use drive F as the default drive if your hard drive has one partition. The PCMCIA drivers that are preloaded on the NEC Versa 6200MX reserve drive letters E, F, G, and H for use with PCMCIA storage devices.

Remark (rem) the following lines from your CONFIG.SYS file if you are using only a network card and a PCMCIA modem:

```
SRAMDRV.EXE  
ATADRV.EXE
```

Edit the LASTDRIVE= line to say LASTDRIVE=E

Save the changes and reboot the system. Continue with your network driver setup.



How do I access my network using a PCMCIA Token Ring network card?



First, check the card to see if Card and Socket Services and/or Windows 95 recognizes it. If not, refer to the manual that came with the card for information on using its Enabler drivers.

If, as is usual, the PC card was shipped with drivers, we recommend using those drivers.

PCMCIA Card and Socket Service drivers have extended support to a wide range of PCMCIA devices, however, not all cards are supported. Check the manual that came with the card.



What drivers do I use with non-NEC modems?



If the NEC-supplied PCMCIA Card and Socket Service drivers do not support the PC card, remove those drivers and use the Enablers that are supplied with the card.

See “Enablers” and “CONFIG.SYS” in Chapter 4.



In which slots do my PC cards go?



Your PCMCIA cards (PC cards) can go into either slot if they are NEC-approved cards and use NEC loaded CardWizard drivers. Other software may not support the use of both slots. Type III cards only fit in one slot (slot 0).



Is there any instance when a modem or network card is only supported in one slot?



This could be true in cases where the PC card firmware is being upgraded. Read the release notes that accompany the upgrade.

It may also apply when you are using Enabler software as opposed to Socket Services. Some Enablers only allow the use of Slot 0.



What precautions should be taken when running NEC PCMCIA drivers with MemMaker?



You may experience some difficulty when running with some PCMCIA drivers loaded in the upper memory. You may have to move these drivers back to lower memory.



How can I determine if non-NEC PC network or modem cards will work with NEC PCMCIA drivers?



If the PC card was not supplied by NEC, check for the following:

- If it is a modem card, the NEC Versa 6200MX beeps twice when you insert the card, letting you know that it works. (If you are not using CardWizard, you may not hear a beep.)
- If it's a network card (LAN, Ethernet), an NEC PCMCIA card is the only one that works directly. The CECFG.EXE file enables the beep tones. This file is on the diskette that comes with the NEC network card. Windows 95 will automatically recognize your card or prompt you for drivers.

Other cards can be made to work but require extensive PCMCIA and network knowledge. See the user's guide that comes with the network card.

NEC cannot comment on the suitability of non-NEC PC cards. NEC portable computers are preloaded with SystemSoft's CardWizard software. Refer to the manual that came with any non-NEC PC card for information on the drivers it provides.



Can I run two of the same type cards simultaneously?



Yes, in the Windows for Workgroups environment if you set them both up in CardWizard, or in Windows 95, if Windows 95 configures each card. If they are both modems, configure each for a different port and use different available interrupts under the ports icon in the Windows control panel or from Device Manager in Windows 95.



I put in a non-NEC Flash storage card and it won't work. What can I do?



At this time, NEC does not support storage cards other than SUNDISK 5-MB. (You need Flash File System from Microsoft to run a Flash storage file.)



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



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



If my NEC Versa 6200MX system is docked in the Docking Station 6000 Plus and I'm using a LAN card, the card does not work.



You probably have an address conflict between your PC LAN card and your Docking Station. Check the manual that came with your PC card for alternate addresses and use CardWizard or Windows 95 Device Manager to reset the address.



In Setup, I disabled or reconfigured peripheral devices (like the ports or sound), yet I am unable to use the freed IRQs or I/O address resources with my PC Cards?



One of the following may be the cause of the problem:

- The PCMCIA controller is configured in a manner that makes IRQ lines 3, 4, and 10 unavailable for PC card use. Choose another IRQ for use with the PC Card.
- To provide a stable platform free of conflicts, NEC excluded some resources from PCMCIA use. In Windows for Workgroups, this is done through the Irqexclude lines in the CSALLOC.INI file under the Cardwiz directory. If you cannot free up these resources through Setup, use a DOS editor and remove the IRQ number (including the comma) or the I/O address (including the comma) from the exclusion line in the CSALLOC.INI file.

DISKETTE DRIVE



Why can't I boot from the diskette drive?



To boot from the diskette drive, be sure that you have a diskette in drive A: containing operating system files. Also, be sure that you have the BootUp Sequence set to A:, C: in Advance CMOS Setup in the BIOS. See Chapter 3, "Using Setup." See your operating system documentation for information about creating system diskettes.



The system looks for the drive containing operating system files. If you have a diskette with operating system's files in drive A:, the system boots from the diskette drive. If you do not have a diskette in drive A:, the system boots from the hard disk.

Using a diskette without operating system files in drive A: prevents a system boot and displays the error message, "Non system disk or disk error. Replace and strike any key when ready."



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



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



How do I format a diskette?



To format high density 1.44-MB diskettes — In DOS, type **format a:** and press **Enter**. If you want a bootable diskette, type **format a:/s** and press **Enter**.

In Windows for Workgroups, select File Manager, Format Disk. Click **x** in the Make System Disk box if you want a bootable diskette. Then click **OK** to start the process.

In Windows 95, double click on the My Computer icon and then right click (click the right-hand mouse button) on the 3.5 Floppy (A:) icon. Select Format... and select the format process that best suits your needs.

To format low density 720-KB diskettes — In DOS, type **format a:/f720** and press **Enter**. If you want a bootable diskette, type **format a:/f720/s** and press **Enter**.

In Windows for Workgroups, select File Manager, Format Disk. Select 720K from the Capacity pull-down list. Click **x** in the Make System Disk box if you want a bootable diskette. Then click **OK** to start the process.

In Windows 95, double click on the My Computer icon and then right click (click the right-hand mouse button) on the 3.5 Floppy (A:) icon. Select 720 KB (3.5") from the Capacity pull-down list. Click in the check box for Copy system files only to make a bootable system diskette.



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



Your system ships with a 1.44-megabyte (MB) diskette drive. Use 3.5-inch high density (HD) diskettes. These diskettes are also called double-sided, high-density (DSHD) diskettes. You can store 1.44 MB of information on these diskettes.

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

BOOTING



What are all those messages on my screen when I start up my computer?



At power on, the system displays configuration messages as it performs diagnostic tests. The tests check major hardware components, such as memory and interface circuits. The system compares the hardware it finds with parameters last saved by the Setup program. This process is the Power-On Self-Test (POST).



You can bypass the POST memory test by pressing the space bar.



Why can't I boot from the diskette drive?



To boot from the diskette drive, be sure that you have a diskette in drive A: containing operating system files. Also, be sure that you have the BootUp Sequence set to A:, C: in Advance CMOS Setup in the BIOS. See Chapter 3, "Using Setup." Also see your operating system documentation for information about creating system diskettes.



The system looks for the drive containing operating system files. If you have a diskette with operating system's files in drive A:, the system boots from the diskette drive. If you do not have a diskette in drive A:, the system boots from the hard disk.

A diskette without operating system files in drive A prevents a system boot and displays the error message, "Non system disk or disk error. Replace and strike any key when ready."



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



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

To use a warm boot, press and hold **Ctrl**, **Alt**, and **Del**. When all three keys are pressed, the system resets.

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

Press the system unit power switch to perform a cold boot. If power is on, turn the power off using the system unit power switch, wait at least five seconds, and then turn the power on.



When possible, use a warm boot to restart your notebook.

POWER MANAGEMENT



Does my system come with power management features enabled?



Yes, your system comes with power management features enabled. If you do not use the keyboard, mouse, or drives for the preset length of inactive time, your screen goes blank and your system goes into a power saving mode of operation. This is known as Standby mode.

When your screen goes blank, before the system goes into Suspend mode, just press the space bar or move your mouse to reactivate your system.



What is the purpose of the Suspend button?



You can initiate full Suspend mode by pressing the Suspend/Resume button. This places the system in a deeper state of "sleep" and requires that you press the Suspend/Resume button again to bring it back to Active mode.

Pressing the Suspend button initiates the Suspend power-saving mode. Pressing the suspend button is a convenient way of conserving energy when you are going to be away from your system for short period of time.



What is the function of Suspend mode?



Suspend mode provides the greatest power savings by putting the system in a maximum power shutdown. When the system goes into Suspend mode, it saves data and system status and then shuts off power to all possible components. Suspend mode lets you save power without first saving your work.



How do I bring my system out of Standby mode?



Moving your VersaGlide pointer or using your keyboard brings the system out of Standby mode.



How do I bring my system out of Suspend mode?



Pressing the Suspend/Resume button brings the system out of Suspend mode.



What is a time-out?



A time-out is the amount of time your system or a particular component is inactive.



Can I disable my system's power management features?



Yes. Simply press the Power Management switch (**Fn+F7**) on the system keyboard.

In Windows 95, click on Start, Settings, Control Panel. In Control Panel, double click on the Power icon. In the Power Properties screen, uncheck "Allow Windows to manage power use on this computer."

MISCELLANEOUS



How do I set the time and date?



You can change the time and date in Windows for Workgroups as follows.

1. At the Main program window, double click the Control Panel icon.
2. Double click on the Date/Time icon.

-
3. Enter any necessary changes to the time and date. Click the up and down arrows or type the changes.
 4. Close the box by clicking on the OK button.
 5. Close the Control Panel window by double clicking the box in the upper left corner of the Control Panel window.

You can change the time and date in Windows 95 as follows.

1. Double click the time in the lower right corner of the screen.
2. Change the date and time as needed.



How do I speed up my application?



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

If this doesn't help, save your work, close the application, and exit Windows. Restart Windows and the application you want to run.

If your application still runs slow, you might consider installing additional memory (see “Memory Module Installation” in Chapter 4).



Why do I get a message "Insufficient memory" when I run some games? I have 32 MB of memory.



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

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



How do I find help in a Windows application?



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



How do I save a file?



You save a file by selecting **F**ile then **S**ave from the drop down menu. If the file was not previously named, you will be prompted for a file name. In Windows 3.11, use up to eight characters to name it. In Windows 95, you can use up to 255 characters to name a file.



I'm having a problem using the IR port. What can I do?



Check that both the sending and receiving system and device are using the same transmission software.

If you are transmitting underneath a fluorescent light, try repositioning the system and device so that they are not directly under the fluorescent light.

Glossary

A AC Adapter

A device that connects a NEC 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.

APM

(Advanced Power Management)

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 Card Bus

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

CD 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.

clock

Electronic timer used to synchronize computer operations.

CMOS

Complementary Metal Oxide Semiconductor. A chip that contains nonvolatile memory in the NEC 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.

DIMM

Double Inline Memory Module. Memory module that supplies system RAM and memory upgrades. (*See also* SO DIMM.)

E ECP

Enhanced Capabilities Port. A port that meets the enhanced capabilities standard and provides greater processing speed than conventional ports. (*See also* EPP.)

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.

EPP

Enhanced Parallel Port. A port that meets the enhanced parallel port transmission standards for speed and also supports bi-directional and uni-directional transmission. (*See also* ECP.)

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 Infrared

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

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. NEC 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, 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.

MMX

The latest design in multimedia processors for enhancing audio, video, and other multimedia applications. Intel's MMX is a set of 57 instructions added to the Pentium's original design. The internal cache of the MMX processor is doubled from 16 to 32 KB for enhanced performance. These improvements in microprocessor design ensure expert-quality 3D graphics, high-quality motion video, and stereo sound.

mode

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

modem

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

MPEG

A compression/decompression video standard developed by a professional video group called the Motion Picture Experts Group. MPEG produces full-screen, broadcast-quality digital video and allows you to play full-screen video on your system.

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 NEC 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.)

NTSC

The type of transmission mode used in the United States, Canada, Japan, and other countries for television signals. (*See also* PAL.)

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.

PAL

The type of transmission mode used in the most European countries for television signals. (*See also* NTSC.)

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 card

A credit card sized peripheral interface standard for portable devices. Types of PC cards currently offered by major vendors include fax/modems, LAN, storage cards, and wireless communications devices.

PCI Local Bus

The 32-bit industry-standard PCI bus is a highly integrated input/output (I/O) interface that offers the highest performance local bus available for the Pentium-based processor.

The PCI bus supports burst modes that send large chunks of data across the bus, allowing fast display of high-resolution images. The high-bandwidth PCI local bus eliminates data bottlenecks found in traditional systems, maintains maximum performance at high clock speeds, and provides a clear upgrade path to future technologies.

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.

plug-and-play

Hardware and software that combines to let you connect devices directly to a system without running special configuration routines. The computer hardware and operating system and the device hardware and software must be plug-and-play compliant.

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.

SVGA

Super VGA. A standard graphics resolution of 800 pixels x 600 lines.

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 NEC 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 NEC 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.

X XGA

A video standard that offers 1024 x 768 resolution.

Z Zoom Video

A direct high-speed connection between the video, audio, and graphics subsystems within the computer. Zoom video provides the high-quality path required for smooth video playback or TV tuner transmission.

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(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.



This is a Class B Digital Device. 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.

To meet FCC standards, shielded cables and power cords are required to connect this device to a personal computer or other Class B certified device.

Canadian Department of Communications Compliance Statement

This equipment does not exceed Class B limits per radio noise emissions or digital apparatus, set out in the Radio interference Regulation of the Canadian Department of Communications.

Avis de conformité aux normes du ministère des communications du Canada

Cet équipement ne dépasse pas les limites de Classe B d'émission de bruits radioélectriques pour les appareils numériques, telles que prescrites par le Règlement sur le brouillage radioélectrique émis par le ministère des Communications du Canada.

European Community Directive Conformance Statement

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

NEC Computer Systems Division, Packard Bell NEC, Inc.
1414 Massachusetts Avenue
Boxboro, Massachusetts 01719
1-800-632-4525

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. Have an authorized NEC service representative 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 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

The main battery is made of Lithium Ion (Li-Ion) and the CMOS clock battery is made of Lithium. Your bridge battery (not the main battery) is made of nickel-metal hydride (NiMH).

Contact your local waste management officials for other information regarding the environmentally sound collection, recycling, and disposal of the batteries. For additional information on the proper collection or disposal of rechargeable batteries, please call 1-800-8-BATTERY.