

AcerNote Light

User's Manual

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IMPORTANT SAFETY INSTRUCTIONS

1. Read these instructions carefully. Save these instructions for future reference.
2. Follow all warnings and instructions marked on the product.
3. Unplug this product from the wall outlet before cleaning. Do not use liquid cleaners or aerosol cleaners. Use a damp cloth for cleaning.
4. Do not use this product near water.
5. Do not place this product on an unstable cart, stand, or table. The product may fall, causing serious damage to the product.
6. Slots and openings in the cabinet and the back or bottom are provided for ventilation; to ensure reliable operation of the product and to protect it from overheating, these openings must not be blocked or covered. The openings should never be blocked by placing the product on a bed, sofa, rug, or other similar surface. This product should never be placed near or over a radiator or heat register, or in a built-in installation unless proper ventilation is provided.
7. This product should be operated from the type of power indicated on the marking label. If you are not sure of the type of power available, consult your dealer or local power company.
8. Do not allow anything to rest on the power cord. Do not locate this product where persons will walk on the cord.
9. If an extension cord is used with this product, make sure that the total ampere rating of the equipment plugged into the extension cord does not exceed the extension cord ampere rating. Also, make sure that the total rating of all products plugged into the wall outlet does not exceed the fuse rating.
10. Never push objects of any kind into this product through cabinet slots as they may touch dangerous voltage points or short out parts that could result in a fire or electric shock. Never spill liquid of any kind on the product.

11. Do not attempt to service this product yourself, as opening or removing covers may expose you to dangerous voltage points or other risks. Refer all servicing to qualified service personnel.
12. Unplug this product from the wall outlet and refer servicing to qualified service personnel under the following conditions:
 - a. When the power cord or plug is damaged or frayed
 - b. If liquid has been spilled into the product
 - c. If the product has been exposed to rain or water
 - d. If the product does not operate normally when the operating instructions are followed. Adjust only those controls that are covered by the operating instructions since improper adjustment of other controls may result in damage and will often require extensive work by a qualified technician to restore the product to normal condition.
 - e. If the product has been dropped or the cabinet has been damaged
 - f. If the product exhibits a distinct change in performance, indicating a need for service
13. Replace battery with the same type as the product's battery we recommend. Use of another battery may present a risk of fire or explosion. Refer battery replacement to a qualified serviceman.
14. Warning! Battery may explode if not handled properly. Do not recharge, disassemble or dispose of in fire. Keep away from children and dispose of used battery promptly.
15. Use only the proper type of power supply cord set (provided in your accessories box) for this unit. It should be a detachable type: UL listed/CSA certified, type SPT-2, rated 7A 125V minimum, VDE approved or its equivalent. Maximum length is 15 feet (4.6 meters).

Concerning Lithium Batteries

ADVARSEL!

Lithiumbatteri - Eksplosionsfare ved fejlagtig håndtering.
Udskiftning må kun ske med batteri
af samme fabrikat og type.
Lever det brugte batteri tilbage til leverandøren.

A D V A R S E L

Eksplosjonsfare ved feilaktig skifte av batteri
Benytt samme batteritype eller en tilsvarende
type anbefalt av apparatfabrikanten.
Brukte batterier kasseres i henhold til fabrikantens
instruksjoner.

VARNING

Explosionsfara vid felaktigt batteribyte
Använd samma batterityp eller en ekvivalent
typ som rekommenderas av apparattillverkaren.
Kassera använt batteri enligt fabrikantens
instruktion

Canadian Department of Communications

Regulatory Statement

This digital apparatus does not exceed Class B limits for radio noise emissions from digital apparatus set out in the Radio Interference Regulations of the Canadian Department of Communications.

Le présent appareil numérique n'émet pas de bruits radio-électriques dépassant les limites applicables aux appareils numériques de la classe B prescrites dans le Règlement sur le brouillage radioélectrique édicté par le ministère des Communications du Canada.

FCC Class B Radio Frequency Interference Statement

Note:

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of 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:

1. Reorient or relocate the receiving antenna.
2. Increase the separation between the equipment and receiver.
3. Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
4. Consult the dealer or an experienced radio/television technician for help.

Notice 1:

The changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

Notice 2:

Shielded interface cables, if any, must be used in order to comply with the emission limits.

About This Manual

Purpose

This manual discusses the features of the notebook and tells how to use and configure it. This manual, along with the online help, should familiarize you with all aspects of the notebook computer.

Manual Structure

This manual consists of eight chapters and two appendices:

Chapter 1, *Getting Started*, tells you how to get started with the notebook.

Chapter 2, *System Tour*, gives a guided and in-depth “tour” of the notebook and its features.

Chapter 3, *Power*, discusses issues on battery use and includes information on the unique power management system.

Chapter 4, *Options*, tells how to connect and install hardware options.

Chapter 5, *Software*, describes how to use certain system applications.

Chapter 6, *Setup*, explains how to configure the system using the BIOS Setup utility.

Chapter 7, *Traveling with the Notebook*, includes informative and useful tips on travel.

Chapter 8, *Troubleshooting*, lists the steps you can take to resolve problems in an easy Q&A format.

Appendix A, *Specifications*, lists the specifications of the notebook.

Appendix B, *Address and Interrupt Tables*, shows the address and interrupt tables.

Conventions

The following conventions are used in this manual:

C:\setup,
[Enabled], etc.

Represent text input by the user, default settings and recommended selections

message displayed

Denotes actual messages that appear on screen

CTRL, ENTER, F7, etc

Represent the actual keys that you have to press on the keyboard



NOTE

Gives bits and pieces of additional information related to the current topic



WARNING

Alerts you if damage may result from doing or not doing specific actions



CAUTION

Gives precautionary measures to avoid possible hardware or software problems



IMPORTANT

Reminds you to take action relevant to the accomplishment of the procedure at hand



TIP

Tells how to complete a procedure with minimum steps through little shortcuts

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Getting Started

Congratulations on your purchase of the AcerNote Light notebook computer. Guaranteed and backed by Acer's world-class support, you can be sure of top-notch performance with your new AcerNote. This chapter guides you through the first few steps on setting up your notebook computer.

1.1 Item Checklist

Carefully unpack the carton and remove the contents. If any of the following items are missing or damaged, contact your dealer immediately.

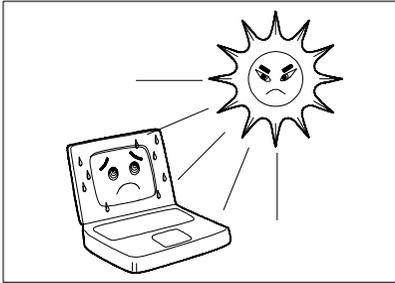
- Notebook computer
- Accessory box
 - AC adapter
 - Battery pack
 - External microphone
 - User's manual
 - Other user documentation
 - System utilities
 - Third-party software and/or documentation

Check for optional items, if any.

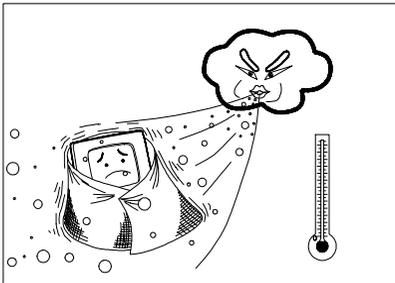
1.2 Taking Care of Your Computer

Your computer will serve you well if you take care of it. This section tells you how to care for the notebook. Also, re-read the important safety instructions at the beginning of this manual.

1.2.1 Notebook

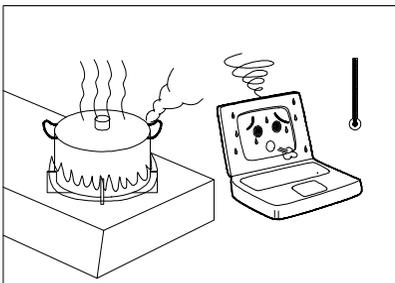


- Do not expose the notebook to direct sunlight. Do not place near sources of heat, such as a radiator.

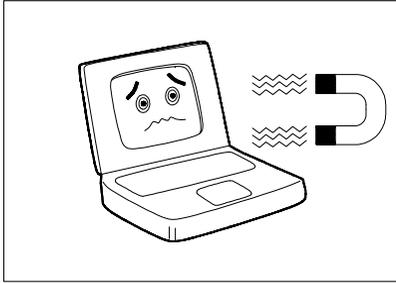


- Do not expose to temperatures below 0°C (32°F)

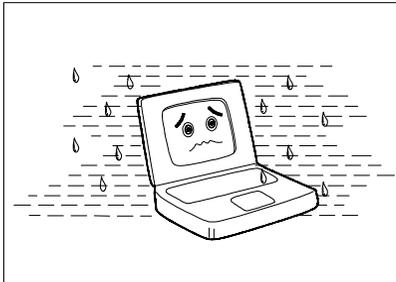
or



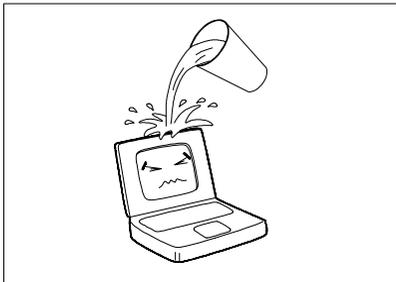
above 50°C (122°F).



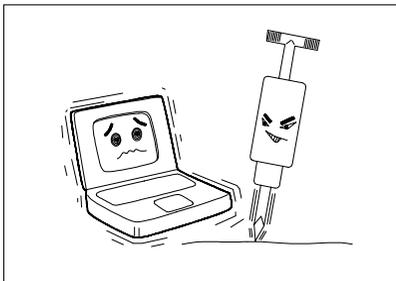
- Do not subject the notebook to magnetic fields.



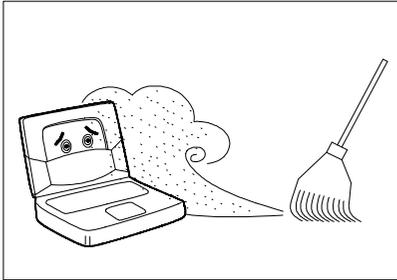
- Do not expose the notebook to rain or moisture.



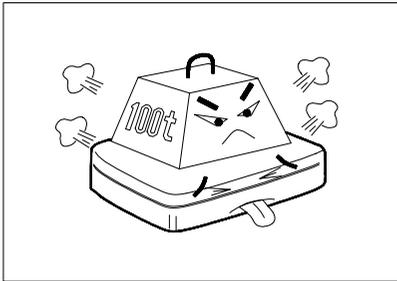
- Do not spill water on the notebook.



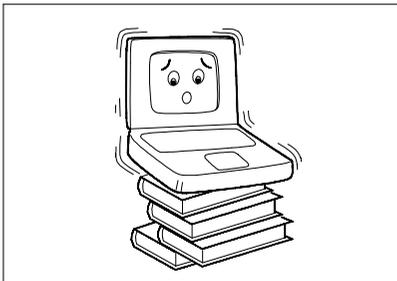
- Do not subject the computer to heavy shock and vibration.



- Do not expose the notebook to dust and dirt.



- Never place objects on top of the notebook to avoid damaging the notebook.



- Never place the notebook on uneven surfaces.

1.2.2 AC Adapter

Here are some ways of taking care of your AC adapter.

- Do not connect the adapter to any other device.
- Do not step on the power cord or place heavy objects on top of it. Carefully route the power cord and any cables away from personal traffic.
- When unplugging the power cord, do not pull on the cord itself but pull on the plug.
- The total ampere ratings of the equipment plugged in should not exceed the ampere rating of the cord if you are using an extension cord. Also, the total current rating of all equipment plugged into a single wall outlet should not exceed the fuse rating.

1.2.3 Battery Pack

Here are some ways of taking care of your battery pack.

- Use only batteries of the same kind as replacements. Turn the power off before removing or replacing batteries.
- Do not tamper with batteries. Keep them away from children.
- Dispose of used batteries according to local regulations. Recycle if at all possible.

1.2.4 Cleaning and Servicing

When cleaning the notebook, follow these steps:

1. Power off the notebook and remove the battery pack.
2. Disconnect the AC adapter.
3. Use a soft cloth moistened with water. Do not use liquid or aerosol cleaners.

Contact your dealer or see your service technician if any of the following occurs:

- Notebook has been dropped or the body has been damaged.
- Liquid has been spilled into the product.
- The notebook does not operate normally.

See section 7.3 for contact information.

1.2.5 Diskettes

Following are some tips on diskette management:

- Always make backup copies of diskettes that contain important data or program files.
- Keep diskettes away from magnetic fields and sources of heat.
- Avoid removing a diskette from a drive when the floppy drive activity light is on.

- Write-protect your diskettes to prevent accidental erasure. To do this, slide the write-protect tab to the write-protect position.

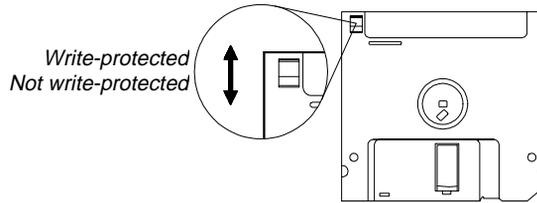
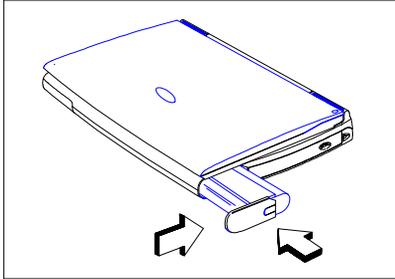


Figure 1-1 Write-protecting a 3.5-inch Diskette

- When you put a label on a 3.5-inch diskette, make sure that the label is properly attached (flat on the surface) and within the labelling area (area with slight surface depression) on the diskette. An improperly attached label may cause a diskette to get stuck in the drive when you are inserting or removing it.

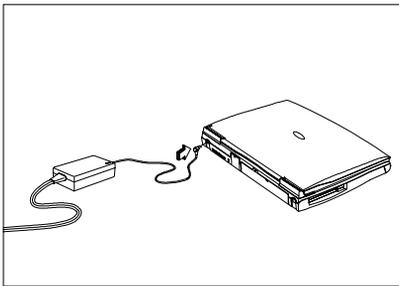
1.3 Connecting the Notebook

After reading through the previous section, you are now ready to experience your new notebook. Connecting the notebook is as easy as 1-2-3.



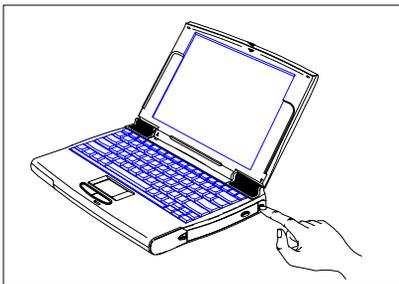
Inserting the Battery Pack

Insert the battery pack into the battery compartment and slide the battery compartment cover in place.



Connecting the AC Adapter

Connect one end of the AC adapter to the DC-in port on the notebook's rear panel and the other end to a properly grounded power outlet.



Turning on the Power

Press the power switch to turn on the power.

The POST (Power On Self-Test) routine executes and Windows 95 begins loading.

1.4 Creating Backup and Startup Diskettes

Entering User Information

When Windows 95 loads for the first time, enter your user information. Have your Windows 95 serial number ready, found in the Windows 95 documentation package.

Creating Backup and Startup Diskettes



If your Windows 95 package contains a Windows 95 CD-ROM, you do not need to create Windows 95 backup diskettes.

Notebook accessories and preloaded software may differ from region to region. Some areas may not offer the notebook backup kit and/or online help — in such cases sections 1.4 and 1.5 may not apply to you.

Windows 95 prompts you to create backup and startup diskettes. Prepare approximately thirty (30) 3½-inch 1.44MB diskettes for backing up Windows 95 and label them accordingly. Labels are included with the Windows 95 documentation package. After you are through labelling the disks, begin the backup process.

Besides these disks, you need to create the notebook backup disk which allows you to boot-up your notebook from the floppy drive and access the CD-ROM drive for Windows 95 and driver re-installation in case of a hard disk crash (when the hard disk is not functioning properly and cannot be accessed) or when your system cannot startup Windows 95. See the backup kit for details.

If you do not wish to perform the backup at this time, you can skip through this step during Windows 95 setup. Access the Create System Disk tool when you wish to do so. However, we suggest you create these disks as soon as possible.

Now may be the perfect time to read through the user's manual and get familiar with the notebook.

1.5 Getting Help Online

This user's manual provides clear and concise information about the notebook, so read it thoroughly. To provide you with help when traveling, the notebook has a comprehensive online help.

Accessing Online Help

Follow these steps to access the online documentation:

1. Press the Windows logo button or Click on the Start button.
2. Select Programs.
3. Click on AcerNote Light.
4. Select Online Help.

The online help is easy to navigate with hypertext and hypergraphics. Clear illustrations help describe notebook operation as well.

Getting Online

If you are connected to the Internet and have World Wide Web access, visit our home page (<http://www.acer.com/>) and get the latest information about our products.

System Tour

This notebook combines high-performance, versatility, power management features and multimedia capabilities in a unique and stylish design case. Work with unmatched productivity and reliability with your new power computing partner.

This chapter gives an in-depth “tour” of the notebook’s many features.

2.1 Features

The notebook was designed with the user in mind. Here are just a few of the notebook's many features:

Performance

- High-end Pentium microprocessor
- 64-bit main memory
- Large LCD display and PCI local bus video with graphics acceleration
- Internal 3.5-inch floppy drive or CD-ROM drive
- High-capacity, Enhanced-IDE hard disk
- Lithium-Ion or Nickel Metal-Hydride smart battery pack
- Power management system with zero-volt suspend-to-disk functionality

Multimedia

- 16-bit stereo audio
- Built-in dual speakers
- Ultra-slim, high-speed CD-ROM drive¹

¹ Some areas or regions may not offer models with a built-in CD-ROM drive.

Human-centric Design and Ergonomics

- Lightweight and slim
- Sleek, smooth and stylish design
- Full-sized keyboard
- Wide and curved palm rest
- Centrally-located touchpad pointing device

Expansion

- PC card (formerly PCMCIA) slots (two type II/I or one type III) with ZV (Zoomed Video) port support
- Upgradeable memory, hard disk and CPU

2.2 Display

The large graphics display offers excellent viewing, display quality and desktop performance graphics. The notebook supports two different display configurations — DualScan STN and TFT active matrix.

Video Performance

PCI local bus video with graphics accelerator and 1MB video RAM boost video performance.

Simultaneous Display

The notebook's large display and multimedia capabilities are great for giving presentations. If you prefer, you can also connect an external monitor when giving presentations. This notebook supports simultaneous LCD and CRT display. Simultaneous display allows you to control the presentation from your notebook and at the same time face your audience. You can even connect an LCD projection panel for large-audience presentations.

Power Management

The power management system incorporates an “automatic LCD dim” feature that automatically decides the best settings for your display and at the same time conserve power. See section 3.2 for more information on power management.

Opening and Closing the Display

To open the display, slide the display lid latch to the left and lift up the lid. Then tilt it to a comfortable viewing position.

The notebook employs a microswitch that turns off the display to conserve power when you close the lid, and turns it back on when you open the lid.

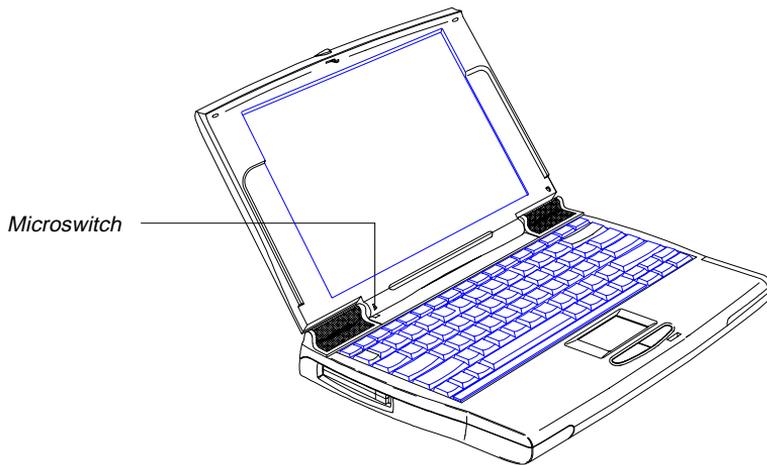


Figure 2-1 Display

To close the lid, fold it down gently until the display lid latch clicks into place.



To avoid damaging the display, do not slam it when closing. Do not place any object on top of the notebook when the display is closed.

2.3 Indicator Light

A two-way indicator light is found on the inside and outside of the display. See figure below.

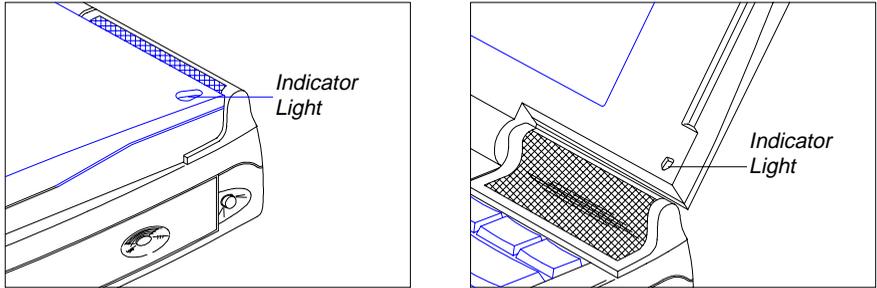


Figure 2-2 Indicator Light

This two-way indicator light allows you to see the notebook status when the display is open or closed. The indicator serves both as a power and battery-charging indicator. See Table 2-1.

Table 2-1 Indicator Status Descriptions

Indicator Status	Power	Condition
Green	On	Charged battery is installed or a power AC adapter is connected to the notebook.
Red	Off	Battery is installed and a powered AC adapter is connected to the notebook and charging the battery (rapid charge mode).
Orange	On	Battery is installed and a powered AC adapter is connected to the notebook and charging the battery (charge-in-use mode).
Flashing	On	Battery is running low on power and no AC adapter is connected to the notebook.

To find out more about batteries, see Chapter 3.

2.4 Keyboard

The keyboard has full-sized keys that includes an embedded keypad, separate cursor keys, two Windows 95 keys and twelve function keys.

2.4.1 Keyboard Layout

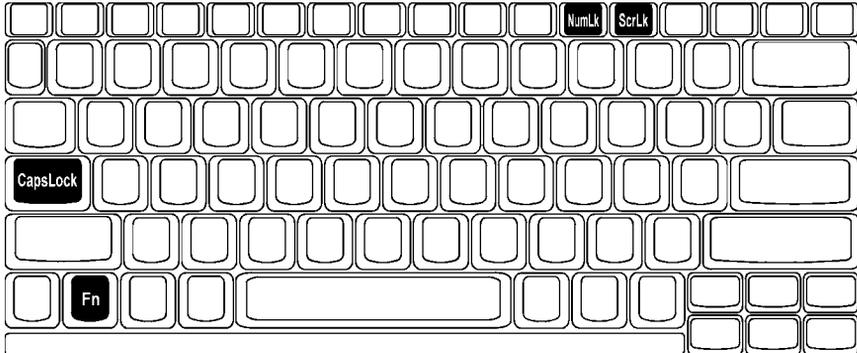
US

UK

Figure 2-3 Keyboard Layout

2.4.2 Special Keys

Lock Keys

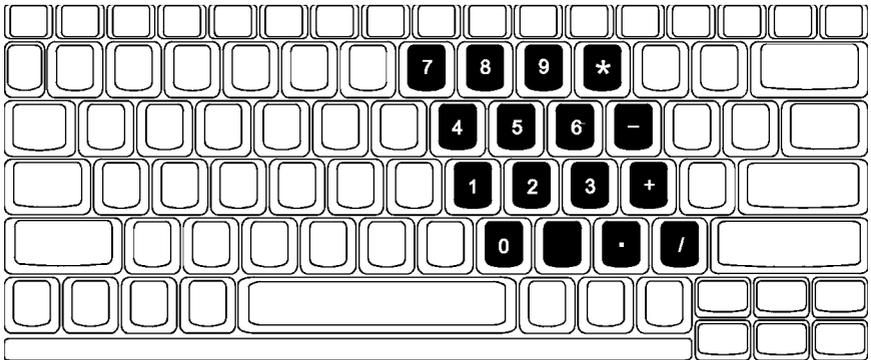


The keyboard has three lock keys which you can toggle on and off. See Table 2-2 for the lock key descriptions.

Table 2-2 Lock Key Descriptions

Lock Key	Description
	When Caps Lock is on, all alphabetic characters typed are in uppercase.
	When Num Lock is on, the embedded keypad is in numeric mode. The keys function as a calculator (complete with arithmetic operators +, -, *, and /). Use this mode when you need to do a lot of numeric data entry. A better solution would be to connect an external keypad.
	When Scroll Lock is on, the screen moves one line up or down when you press  or  respectively. Scroll lock does not work with some applications.

Embedded Keypad



The embedded keypad functions like a desktop numeric keypad. It is indicated by small, encircled characters located on the upper right corner of the keycaps. To simplify the keyboard legend, the cursor-control key symbols are not printed on the keys. Table 2-3 tells how to use the embedded keypad.

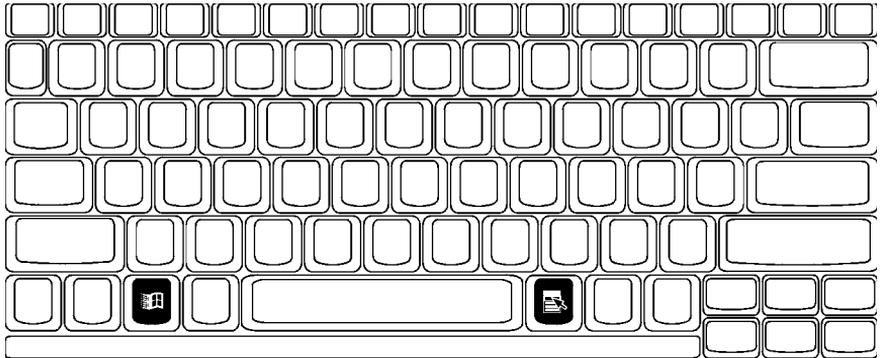
Table 2-3 Using the Embedded Keypad

Desired Access	Num Lock On	Num Lock Off
Number keys on embedded keypad	Type numbers in a normal manner.	Hold Fn while using the number keys.
Cursor-control keys on embedded keypad	Hold SHIFT while using cursor-control keys.	Hold Fn and SHIFT while using cursor-control keys.
Main keyboard keys	Hold Fn while typing letters on embedded keypad.	Type the letters in a normal manner.



If an external keyboard or keypad is connected to the notebook, the numlock function only works on the external keyboard or keypad.

Windows 95 Keys

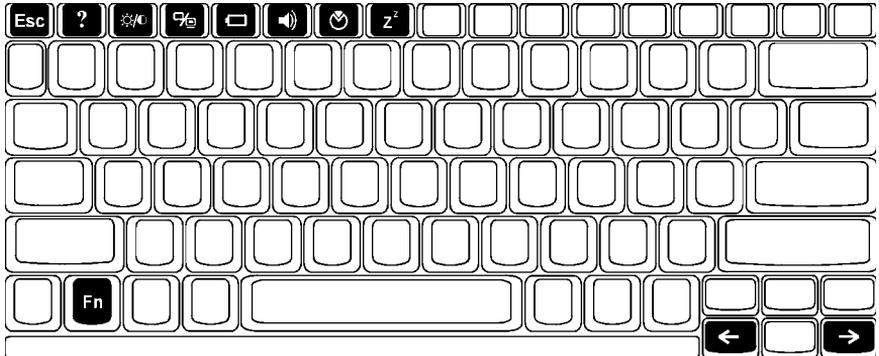


The keyboard has two keys that perform Windows 95-specific functions. See Table 2-4.

Table 2-4 Windows 95 Key Descriptions

Key	Description
Windows logo key	Start button. Combinations with this key performs special functions. Below are a few examples: <ul style="list-style-type: none">• <i>Windows + Tab</i> Activate next Taskbar button• <i>Windows + E</i> Explore My Computer• <i>Windows + F</i> Find Document• <i>Windows + M</i> Minimize All• <i>Shift + Windows + M</i> Undo Minimize All• <i>Windows + R</i> Display Run dialog box
Application key	Opens the application's context menu (same as right-click).

Hot Keys



The notebook employs hot keys or key combinations to access most of the notebook's controls like screen contrast and brightness, volume output and the BIOS setup utility.

Table 2-5 Hot Key List

Hot Key	Icon	Function	Description
		Hotkey Escape	Exits the hotkey control.
	?	Hotkey Help	Displays the hotkey list and help.
		Brightness Control Contrast Control 	Toggles between brightness control and contrast control. Press the scale hotkeys (and) to increase and decrease the brightness or contrast level. Notebooks with TFT displays do not show the brightness control icon.
		Display Toggle	Switches display from LCD to CRT to both LCD and CRT.
		Battery Gauge 	Displays the battery gauge.

Table 2-5 Hot Key List (continued)

Hot Key	Icon	Function	Description
		Volume Control 	Press the scale hotkeys ( and ) to increase and decrease the output level.
		Setup	Gains access to BIOS Setup's Advanced System Configuration parameters. See section 6.4.
		Suspend/Standby	Enters suspend mode if the 0-volt suspend function is installed and enabled; otherwise, the notebook enters standby mode.
		Scale Increase	Increases the setting of the current icon.
		Scale Decrease	Decreases the setting of the current icon.

Activating and Using Hot Keys

When activating hot keys, press and hold the first key  before pressing the other keys in the hot key combination.

Some hot keys pop-up an onscreen icon as shown in Table 2-5. For hot keys with pop-up icons, press the scale hot keys ( and ) to increase and decrease the setting of the current icon.

Exiting Pop-up Icons and Screens

Press hot key escape () to exit a pop-up icon resulting from a hot key. Press  to exit a screen resulting from a hot key.

2.4.3 Keyboard Ergonomics

Located below the keyboard, the wide and curved palm rest gives you a place to rest your hands while you type.

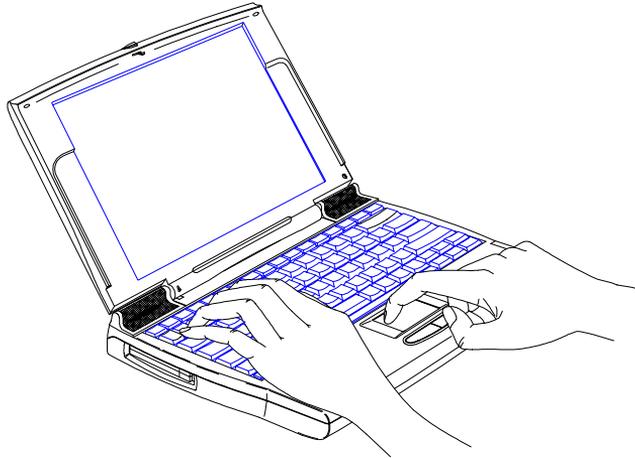


Figure 2-4 Palm Rest

2.5 Touchpad

The built-in touchpad is an PS/2-compatible pointing device that senses movement on its surface. This means the cursor responds as you move your finger on the surface of the touchpad. The central location on the palm rest provides ample comfort and support.

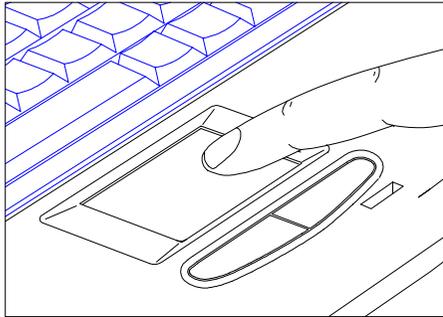


Figure 2-5 Touchpad



The touchpad works with most mouse drivers, but the bundled touchpad driver supports special functions that work uniquely with the touchpad. See section 5.3 for details.

Touchpad Basics

The following items teach you how to use the touchpad:

- Move your finger across the touchpad to move the cursor.
- Press the left and right buttons located on the edge of the touchpad to do selection and execution functions. These two buttons are similar to the left and right buttons on a mouse. Tapping on the touchpad produces similar results. See Table 2-6.

Table 2-6 Touchpad Functions

Function	Left Button	Right Button	Tap
Execution	Click twice quickly		Tap twice (at the same speed as double-clicking the mouse button)
Selection	Click once		Tap once
Drag	Click and hold to drag the cursor		Tap twice (at the same speed as double-clicking the mouse button) and hold finger to the touchpad on the second tap to drag the cursor
Access Context Menu		Click once	When Corner Taps is enabled, tap on the upper right corner of the touchpad. See section 5.3 on how to configure the touchpad.



Keep your fingers dry and clean when using the touchpad. Also keep the touchpad dry and clean.

The touchpad is sensitive to finger movements. Hence, the lighter the touch, the better the response. Tapping too hard will not increase the touchpad's responsiveness.

2.6 Storage

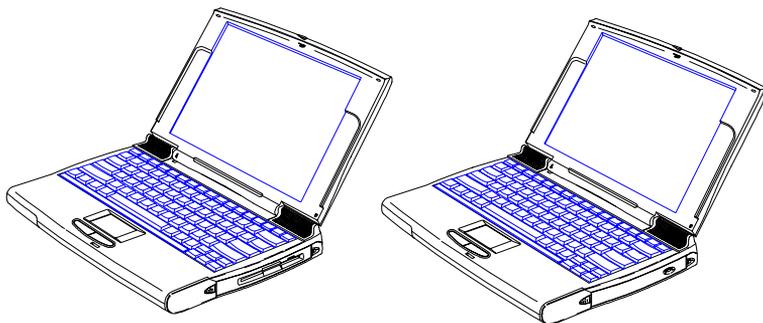
High-capacity storage comes in the form of a 2.5-inch Enhanced-IDE hard disk. The notebook also has either an internal 3.5-inch, 1.44MB floppy drive or an internal high-speed CD-ROM drive.

2.6.1 Hard Disk

The hard disk module can be upgraded when you need more storage space. See section 4.9.2 for details.

2.6.2 Internal Drive

The notebook comes with either a floppy drive or CD-ROM drive installed.



Internal Floppy Drive Model

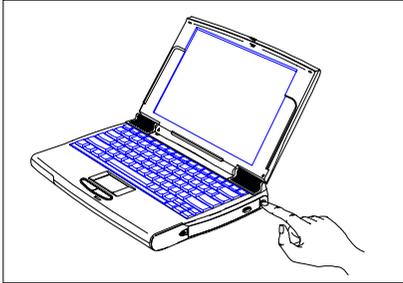
Internal CD-ROM Drive Model

Figure 2-6 Internal Drive

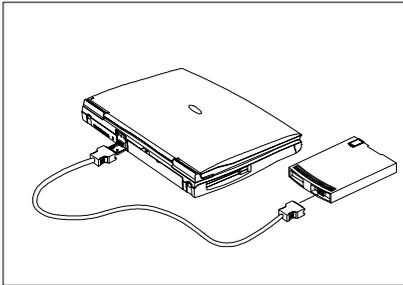
The CD-ROM drive gives you portable multimedia access. An external floppy drive is available for models with built-in CD-ROM drives.

External Floppy Drive

Follow these steps to use the external floppy drive:



1. Press the power switch to turn off the power.



2. Connect one end of the FDD cable to the floppy drive port and the other end to the external floppy drive connector.

After turning on the power, the notebook automatically senses the external floppy drive.

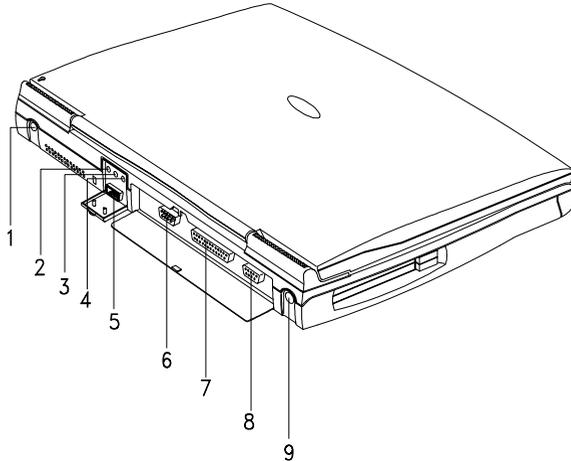
2.7 Ports

Ports allow you to connect peripheral devices to your notebook computer as you would with a desktop PC. The ports are found on the rear panel; PC card slots are found on the left panel of the notebook.



See Chapter 4 on how to connect external devices to the notebook.

2.7.1 Rear Ports



- | | | | |
|---|---------------------------------|---|-------------------|
| 1 | DC-in Port | 6 | Serial Port |
| 2 | Microphone-in Port | 7 | Parallel Port |
| 3 | Line-in Port | 8 | External CRT Port |
| 4 | Line-out Port | 9 | PS/2 Port |
| 5 | External Floppy Drive Connector | | |

Figure 2-7 Ports and Connectors

Table 2-7 describes these ports.

Table 2-7 Port Descriptions

#	Icon	Port	Connects to...
1		DC-in Port	AC adapter and power outlet
2		Microphone-in Port	External 3.5mm minijack condenser microphone
3		Line-in Port	Line-in device (e.g., audio CD player, stereo walkman)
4		Line-out Port	Line-out device (e.g., speakers, headphones)
5		External Floppy Drive Connector	External floppy drive
6		Serial Port (UART16650-compatible)	Serial device (e.g., serial mouse)
7		Parallel Port (EPP/ECP-compliant)	Parallel device (e.g., parallel printer)
8		External CRT port	Monitor (up to 1024x768, 256-colors)
9		PS/2 Port	PS/2-compatible device (e.g., PS/2 keyboard, keypad, mouse)

2.7.2 PC Card Slots

There are two type II/I or one type III PC Card slots found on the left panel of the notebook. These slots accept credit-card-sized cards that enhances the usability and expandability of the notebook.

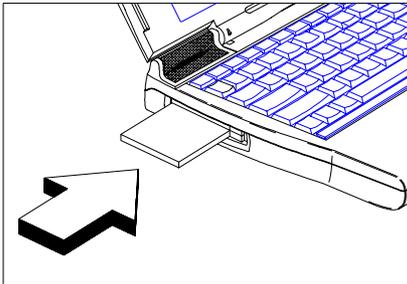
PC Cards (formerly PCMCIA) are add-on cards for portable computers, giving you expansion possibilities long afforded by desktop PCs. Popular type II cards include flash memory, SRAM, fax/data modem, LAN and SCSI cards. Common type III cards are 1.8-inch ATA drives and cellular modems.

ZV (Zoomed Video) port support allows your system to support hardware MPEG in the form of a ZV PC card.



Refer to your card's user's manual for details on how to install and use the card and its functions.

Inserting a Card

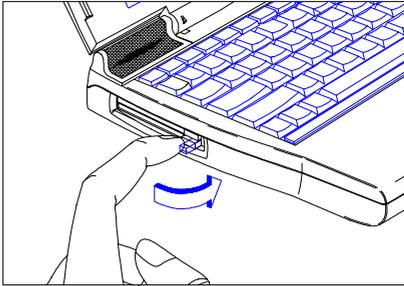


Insert the card into the desired slot and make the proper connections (e.g., network cable), if necessary. See your card manual for details.

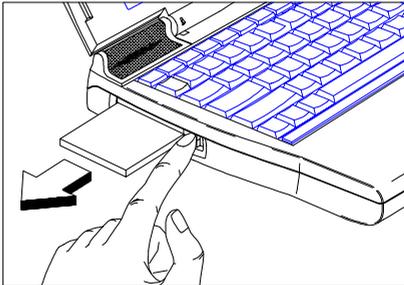
For type III and ZV cards, insert card into the lower slot.

Ejecting a Card

Exit the application using the card, then follow these steps:



Pull out the slot eject button of the slot where the card is inserted.



Press the slot eject button to eject the card.

2.8 Audio

Standard notebook configuration includes 16-bit stereo audio and built-in dual speakers. The dual speakers found on both sides of the display hinge direct sound towards you which allows for excellent sound output.

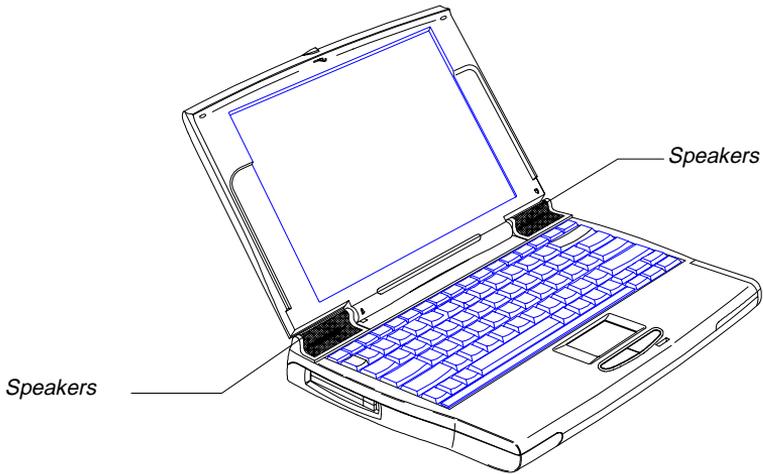


Figure 2-8 Built-in Speakers

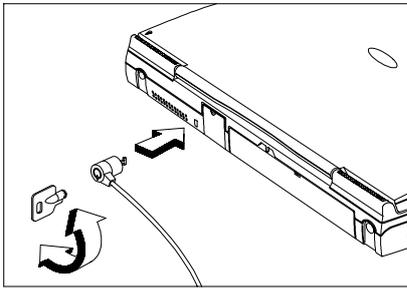
Besides the built-in speakers, there are audio ports on the rear panel of the notebook. See section 4.6 for more information.

2.9 Securing your Notebook

Security features include hardware and software locks — a security notch and a two-level password scheme.

2.9.1 Security Notch

A security notch located on the rear panel of the notebook lets you connect a standard key-based computer security lock.



Circle or wrap a computer security lock cable around an immovable object such as a table or locked drawer handle. Insert the lock into the notch and turn the key to secure the lock.

2.9.2 Passwords

A two-level password scheme protects your notebook from unauthorized access. When set, no one can access the notebook without entering the correct password. For information on how to set passwords, see section 6.5.8.

Power

The notebook operates on AC or battery power. This chapter contains the information you need to know to operate the notebook on battery power. It also includes information about the power management system.

3.1 Battery Pack

The notebook uses a battery pack that gives you longer use between charges.

3.1.1 Battery Pack Characteristics

The battery pack has the following characteristics:

- *Employs Current Battery Technology Standards* The notebook uses either a Lithium-Ion or Nickel Metal-Hydride (NiMH) battery pack. These battery types do not have the memory effect problem of Nickel Cadmium (NiCd). NiMH and especially Li-Ion batteries consistently provide the longest battery life, best-suited for road warriors.
- *Onscreen Battery Gauge* An onscreen battery gauge allows you to check the battery charge level.
- *Battery-low Warning* When the battery charge level becomes low, the notebook gives off warning beeps and the status indicator flashes at regular intervals. This tells the user that the battery power is critically low. You can correct this situation by recharging the battery pack.

Whenever possible, use the AC adapter. The battery will come in handy when you travel or during a power failure. It is advisable to have an extra fully-charged battery pack available for backup.

Currently, there is no defined standard for measuring battery life. Several factors have made it almost impossible to compare the battery life of different notebooks based on specifications alone. These factors include different implementations of power saving/management systems, applications in use, the user's "usage pattern", hard disk capacity and access frequency, LCD size and brightness, system form factor and weight.



If the system is to be stored for more than two weeks, we suggest that you remove the battery pack. Battery power (from a fully charged battery pack) depletes in roughly ten days with the notebook in standby mode. When power is off, battery power depletes in one month.



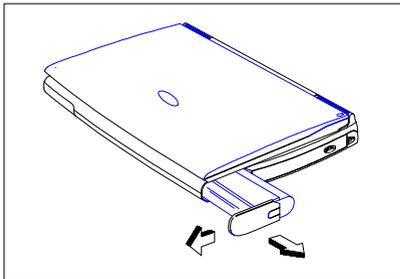
Do not expose battery packs to temperatures below 0°C (32°F) or above 60°C (140°F). This may adversely affect the battery pack.

3.1.2 Removing and Installing the Battery Pack

Removing the Battery Pack

Before removing the battery pack, make sure that you have an AC adapter connected to the notebook; otherwise turn off the notebook.

The following figure illustrates how to remove the battery pack.

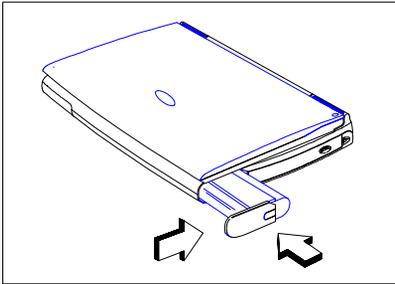


Press the battery compartment cover release button and slide out the cover.

Then pull out the battery pack.

Installing the Battery Pack

The following figure shows how to install the battery pack.



Insert the battery pack into the battery compartment and slide in the battery compartment cover.

3.1.3 Charging the Battery

To charge the battery, place the battery pack inside the battery compartment and plug the AC adapter into the notebook and an electrical outlet. You can also purchase an optional external battery charger to charge the battery pack (see section 4.8.3 for details).

Charging Modes

The adapter has three charging modes:

- Rapid mode

The notebook uses rapid charging when power is turned off and a powered AC adapter is connected to it. In rapid mode, a fully depleted battery gets fully charged in approximately two hours.

- Charge-in-use mode

When the notebook is in use with the AC adapter plugged in, the notebook also charges the battery pack if installed. This mode will take longer to fully charge a battery than rapid mode. In charge-in-use mode, a fully depleted battery gets fully charged in approximately six to eight hours.

- Trickle mode

When the battery is fully charged, the adapter changes to trickle mode to maintain the battery charge level. This prevents the battery from draining while the notebook is in use.



We suggest that you charge the battery pack before retiring, letting it charge overnight before traveling. This ensures a fully charged battery for use the next day.

3.1.4 Checking the Battery Level

The notebook features battery-low warning signals that are both audible and visible. When the battery pack is low, the notebook emits warning beeps and the battery indicator flashes at regular intervals. Also, you can check the battery charge level using the onscreen battery gauge.

Using the Onscreen Battery Gauge



To access the onscreen battery gauge, press  . The battery level icon displays onscreen.

The onscreen battery gauge indicates the present battery level.

3.1.5 Optimizing Battery Life

This section helps you get the most out of battery operation. Optimizing battery life prolongs the charge/recharge cycle and improves recharge efficiency. Follow these suggestions to optimize and maximize battery power:

- Purchase an extra battery pack.
- Use the Sleep Manager utility to reserve hard disk space for the suspend function. See section 5.2.
- Use the AC adapter whenever possible so that the battery is reserved for on-the-go computing.
- Keep the battery pack in the notebook powered by the AC adapter. The constant trickle charge maintains the battery level to eliminate the battery self-discharge effect. The charge-in-use function also charges the battery pack.
- Disable the parallel and serial ports if no devices are connected to these ports. You can do this through Setup. See sections 6.5.5. and 6.5.6.
- Eject the PCMCIA card from the card slot when not in use, since the PCMCIA card draws extra power.
- Store the battery pack in a cool, dry place. The recommended storage temperature for battery packs ranges from 10 to 30 degrees C. The higher the storage temperature, the faster the battery pack self-discharges.
- The batteries can be recharged about 500 times when used as directed. Excess recharging decreases battery life.
- Take care of your battery pack and AC adapter. See sections 1.2.2 and 1.2.3 for details.

3.1.6 Battery-low Warning

You never have to worry about battery power as long as you are using the AC adapter. However, when you operate the notebook on battery power, pay extra attention to the warning beeps and the indicator light on the display panel. The indicator flashes when the battery power is low.

The following signals indicate a battery-low condition:

- The buzzer generates four short beeps every minute, if you enabled the Battery-low Warning Beep parameter in Setup
- The status indicator flashes at regular intervals until battery power is depleted

When you receive a battery-low warning, you have around three minutes to save your work. If you do not connect the AC adapter within this period, the notebook enters suspend mode if the Suspend upon Battery-low parameter in Setup is enabled and the following conditions exist:

- There is enough battery power left to save system information onto the hard disk.
- The reserved disk space for saving these data is larger than the combined system and video memory size.

Otherwise, the notebook enters standby mode.



Connect the AC adapter or insert a charged battery pack into the notebook as soon as possible. Data is lost when notebook power is cut off during standby mode.

Table 3-1 lists the recommended course of action when you encounter a battery-low condition.

Table 3-1 Course of Action for Battery-low Condition

Situation	Recommended Action
AC adapter and power outlet available	<ol style="list-style-type: none">1. Connect the AC adapter to the system.2. Save all necessary files.3. Resume work.4. Power off the notebook if you wish to recharge the battery rapidly.
An extra fully-charged battery pack available	<ol style="list-style-type: none">1. Save all necessary files.2. Exit the application.3. Power off the notebook.4. Replace the battery pack.5. Power on the notebook and resume work. or <ol style="list-style-type: none">1. Save all necessary files.2. Enter suspend mode.3. Install the extra battery pack.4. Resume from suspend mode.
AC adapter or power outlet not available	<ol style="list-style-type: none">1. Save all necessary files.2. Exit the application.3. Power off the notebook. or <ol style="list-style-type: none">1. Save all necessary files.2. Enter suspend mode.

3.2 Power Management

This notebook has a built-in power management unit that monitors system activity. System activity refers to any activity involving one or more of the following devices: keyboard, mouse, floppy drive, hard disk, peripherals connected to the serial and parallel ports, and video memory. If no activity is detected for a specified period of time (called an inactivity time-out), the system switches to one of the power-saving modes to conserve energy. These power-saving modes are display standby mode, fixed disk standby, and standby/suspend mode.



The Setup utility allows you to specify the inactivity time-out.

The power management function may not work when the cursor is emulated by software such as Chinese system (ETv3.1), Japanese system (DOS/V), Word for Windows, etc.

3.2.1 Power Management Modes

Display Standby Mode

Screen activity is determined by the keyboard, the built-in touchpad, and an external PS/2 pointing device. If these devices are idle for the period specified by the Display Standby Timer, the display shuts off until you press a key or move the touchpad or external mouse.



We strongly recommend you to enable the Display Standby Timer with a shorter time interval to prolong your battery life.

“Automatic Dim” Feature

The notebook has a unique “automatic dim” power saving feature. When the notebook is using AC power and you disconnect the AC adapter from the notebook, the system “decides” whether or not to automatically dim the LCD backlight to save power.

If the LCD backlight is too bright, the system automatically adjusts it to a manageable level; otherwise, the level stays the same. If you want a brighter picture, you can then adjust the brightness and contrast level using hotkeys (Fn - F2¹).

If you reconnect AC power to the system, the system automatically adjusts the LCD backlight to its original level — the brightness and contrast level before disconnecting the AC adapter. If you adjusted the brightness and contrast level after disconnecting AC power, the level stays the same after you reconnect the AC adapter.

Hard Disk Standby Mode

The hard disk enters standby mode when there are no disk read/write operations within the period of time specified by the Hard Disk Standby Timer. In the standby state, the power supplied to the hard disk is reduced to a minimum. The hard disk returns to normal once the system accesses it.

Suspend Mode

In suspend mode (also known as zero-volt suspend-to-disk mode), power shuts off. The notebook saves all system information onto the hard disk before it enters suspend mode. Once you turn on the power, the notebook restores this information and resumes where you left off upon leaving suspend mode.

A necessary condition for the notebook to enter suspend mode is that the reserved space for saving system information on the hard disk must be larger than the combined system and video memory size. Under such conditions, the standby/suspend hot key acts as the suspend hot key. See section 5.2 for information on the Sleep Manager utility.

¹ After pressing this key combination, press Fn-→ and Fn-← to increase and decrease the current setting. Press Fn - Esc to close the pop-up.

In this situation, there are four ways to enter suspend mode:

- Press the standby/suspend hot key  -  (**Z**)



If the notebook beeps but does not enter suspend mode after pressing the standby/suspend hot key, it means the operating system does not allow the notebook to enter the power saving mode.

- Set a value for the System Standby/Suspend Timer in Setup. If the waiting time specified by this time elapses without any system activity, the system goes into suspend mode
- Enable the Suspend upon Battery-low parameter in Setup. If a battery-low condition takes place, the notebook enters suspend mode in about five minutes. See section 3.1.6.
- Invoked by the operating system power saving modes

When the notebook enters suspend mode, the whole system does not consume any power. This is why suspend mode is also called zero-volt suspend.

To exit suspend mode, press the power switch ().



Do not change any system devices when the notebook is in suspend mode.



If the notebook is connected to a LAN environment or has a current PCMCIA modem connection, it does not resume connection even after the notebook returns to normal operating mode.

Standby Mode

The notebook consumes very low power in standby mode. Data remain intact in the system memory until battery is drained.

The necessary condition for the notebook to enter standby mode is that the reserved disk space size for saving system and video memory is insufficient so the notebook is unable to enter suspend mode.

In this situation, there are three ways to enter standby mode:

- Press the standby/suspend hot key  -  (**Z²**)



If the notebook beeps but does not enter standby mode after pressing the standby/suspend hot key, it means the operating system does not allow the notebook to enter the power saving mode.

- Set a value for the System Standby/Suspend Timer in Setup. If the waiting time specified by this timer elapses without any system activity, the notebook goes into standby mode.
- Invoked by the operating system power saving modes

The following signals indicate that the notebook is in standby mode:

- The buzzer beeps (when you press the standby/suspend hot key)
- The indicator light flashes



Unstored data is lost when you turn off the notebook power in standby mode or when the battery is drained.

To leave standby mode and return to normal mode, press the any key. If an incoming PCMCIA modem event occurs and the Modem Ring Wake Up From Standby is enabled, the system returns to normal mode.



If the notebook is connected to a LAN environment or has a current PCMCIA modem connection, it does not resume connection even after the notebook returns to normal operating mode.

3.2.2 Advanced Power Management (APM)

This notebook supports the APM standard designed to further reduce system power consumption. APM is a power-management approach defined jointly by Microsoft and Intel. An increasing number of software supports APM to take advantage of power saving features and allows greater system availability without degrading performance.

DOS

You can use the APM feature under the DOS environment by including the POWER.EXE command in the CONFIG.SYS file. See the MS-DOS manual for instructions on how to edit the CONFIG.SYS file. For more information about APM, type the following at the DOS prompt:

```
HELP POWER.EXE 
```

Refer to the DOS user's guide for details.

Windows 3.x

To enable APM under the Windows environment, run Windows Setup and select MS-DOS System with APM as your computer type in the System Information menu. Refer to the Windows user's guide for details.

Windows 95

To enable APM under Windows 95, follow these steps:

1. Select the Start button and click on Settings....
2. Select the Control Panel item.
3. Double-click on the System icon in the Control Panel window.
4. Select the Device Manager tab and double-click on System devices.
5. Double-click on Advanced Power Management support.

If the device is not working properly, select the Settings tab and verify if the check box for enabling power management support is selected.

Refer to the Windows 95 user's guide for details.



1. *If you enable the Power Management Mode parameter in Setup without installing the APM under DOS, Windows or Windows 95, the system time and date do not display the correct settings after the notebook returns to normal operation from standby or suspend mode. To update the time and date, reboot the notebook. Enable APM to avoid this problem.*
2. *You can not change any power management parameter in the Setup screen after APM is enabled because it is controlled by APM.*



Advanced Power Management greatly prolongs battery life. Use APM whenever possible.

Options

Your notebook offers excellent expansion capabilities with its built-in ports and connectors. This chapter describes how to connect peripherals and hardware options that help you use your notebook computer with ease. When connecting peripherals, read the manual included with the peripheral for operating instructions.

This chapter also includes sections on how to upgrade key components. Key component upgradeability guards your notebook from becoming obsolete.

4.1 External Monitor

To show graphical effects on a larger display, open the port cover and connect an external monitor to the CRT port (). Read the monitor manual for additional instructions.

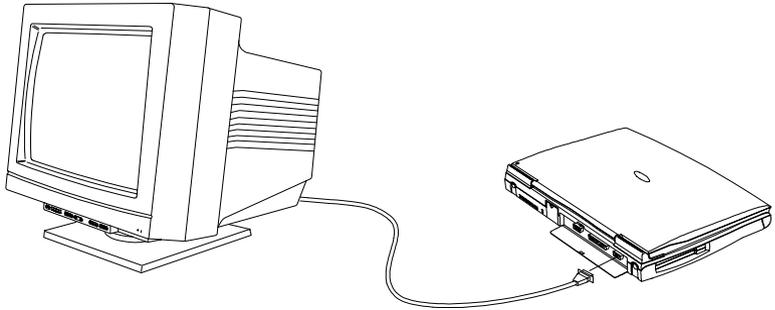


Figure 4-1 Connecting an External Monitor

4.2 External Keyboard

This notebook has a keyboard with full-sized keys and an embedded keypad. If you feel more comfortable using a desktop keyboard, you can install a PS/2-compatible external keyboard.

To connect an external keyboard, plug the external keyboard into the PS/2 connector ().

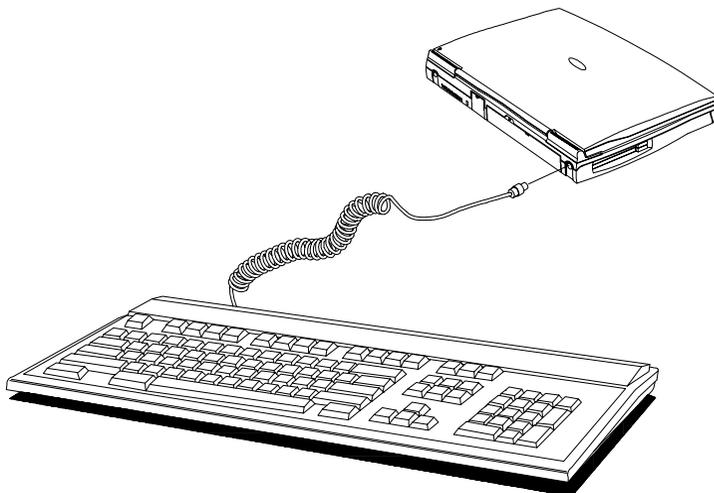


Figure 4-2 Connecting an External Keyboard

4.3 External Keypad

You can also use a 17-key numeric keypad for number-sensitive data entry applications. To connect the keypad, plug in the keypad connector to the PS/2 port () at the rear of the notebook.

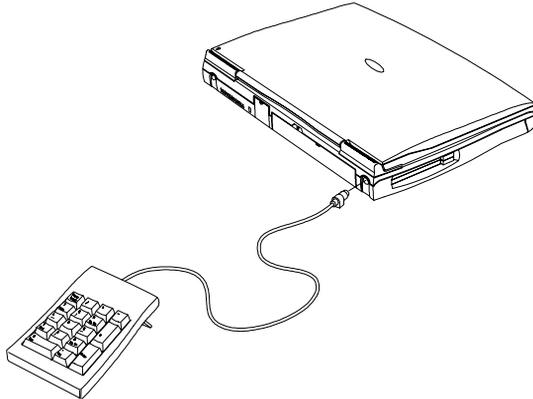
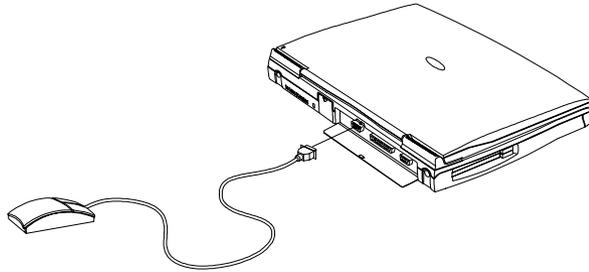


Figure 4-3 Connecting an External Keypad

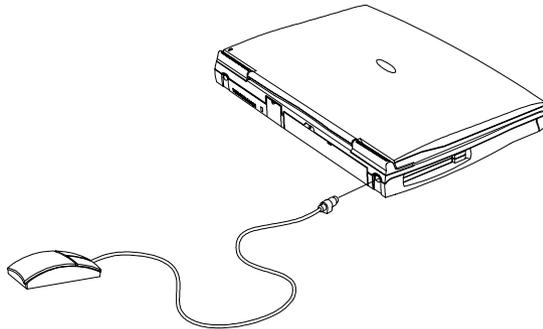
4.4 External Pointing Device

This notebook accepts either a serial mouse or PS/2-compatible mouse or similar pointing device. The built-in touchpad works simultaneously with an external PS/2 mouse.

If you use a serial mouse, open the port cover and plug it into the serial port (ⓂⓂⓂⓂ). If you use a PS/2-compatible mouse, plug it into the PS/2 port (ⓂⓂⓂⓂ).



(a) Serial Mouse



(b) PS/2 Mouse

Figure 4-4 Connecting an External Pointing Device

4.5 Printer

This notebook supports both serial and parallel printers. For a serial printer, plug the printer cable into a serial port () . For a parallel printer, open the port cover and plug the printer cable into the parallel port (). See your printer manual for operating instructions.



If the printer does not function, enter Setup and see to it that the parallel port is enabled. Refer to section 6.5.5 for assistance.

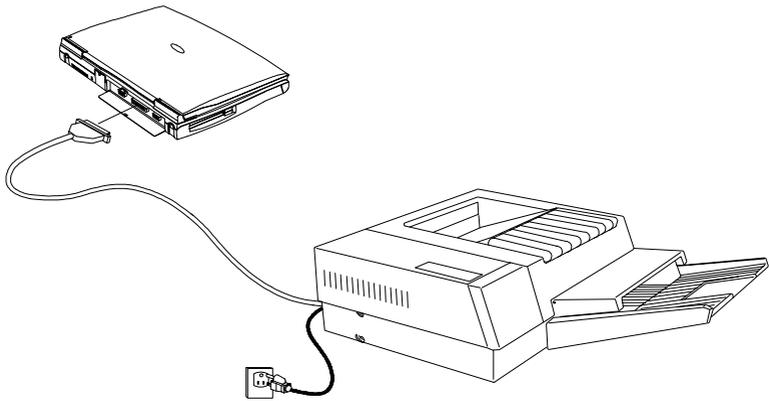


Figure 4-5 Connecting a Parallel Printer

4.6 Audio Devices

To connect audio devices, open the mini port cover and plug in an external microphone, a line-in device and amplified speakers or headphones to the microphone-in, line-in and line-out ports, respectively.

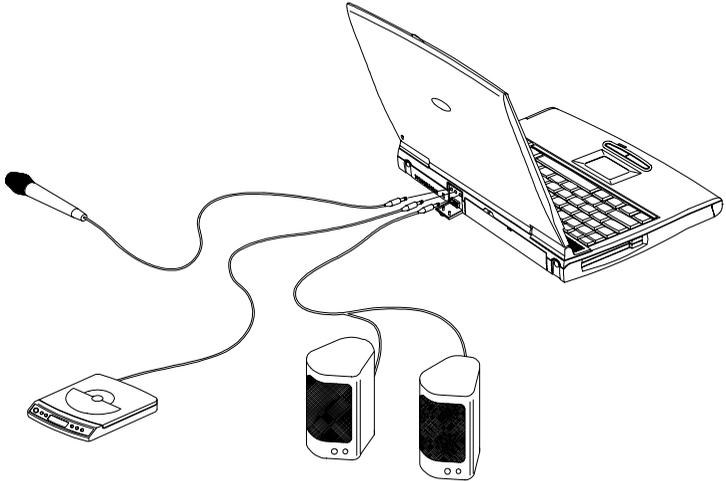


Figure 4-6 Connecting Audio Devices

4.7 PC Cards

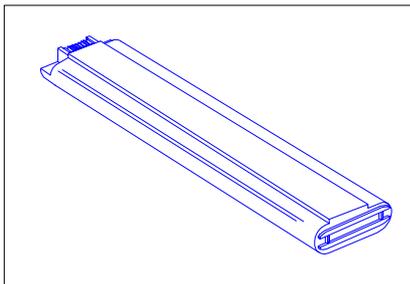
The notebook has two PC card slots that accommodate two type I/II or one type III PC card(s). Please consult your dealer for PC card options available that you can purchase for your notebook.

4.8 Miscellaneous Options

4.8.1 Additional Power Packs

You can order spare batteries, AC adapter, and an external battery charger.

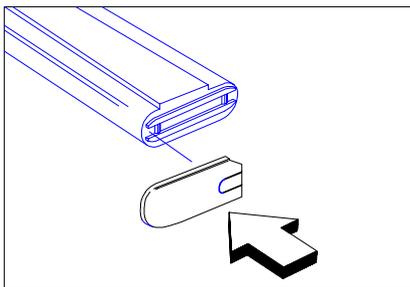
Battery Pack



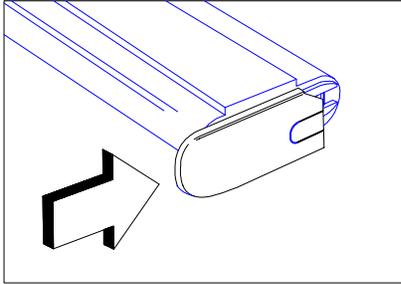
It is good practice to have a spare battery around, especially when you travel. The NiMH and Li-Ion smart batteries, coupled with power management features, supply you with more power on-the-go.

Attaching the Battery Compartment Cover

Each battery pack comes attached with a battery compartment cover. In case the cover gets detached, follow these steps to re-attach the cover to the battery.

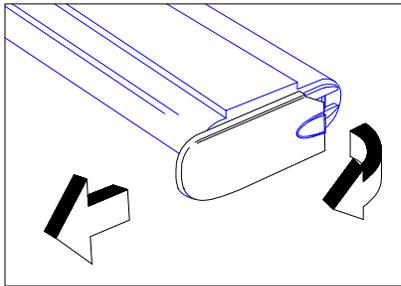


1. Position the battery compartment cover over the battery pack.



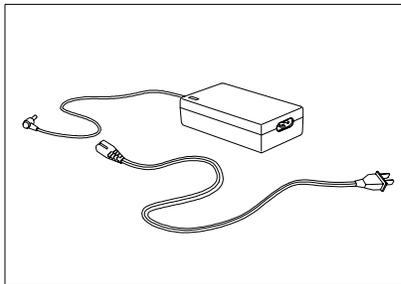
2. Using a little force, slide the battery compartment cover over the battery until both the cover and the battery are firmly attached. See figure on the left.

Detaching the Battery Compartment Cover



Slightly pull up the battery compartment cover release latch and slide out the cover.

AC Adapter



The compact AC adapter charges your battery pack and supplies power to your notebook.

External Battery Charger

The external battery charger allows you to fully recharge your NiMH and/or Li-Ion battery packs in a shorter period of time. It also automatically discharges the battery pack before charging for optimum recharge efficiency.

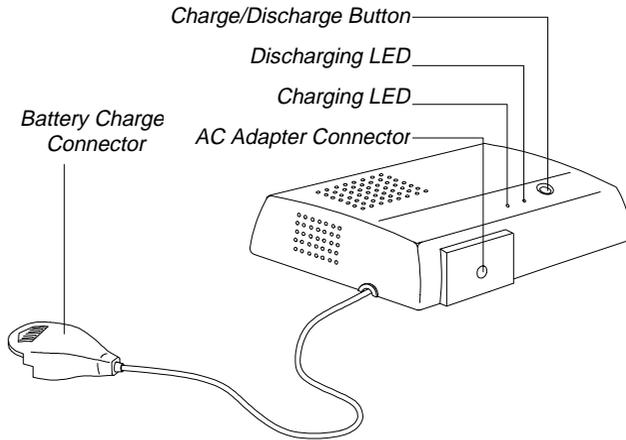
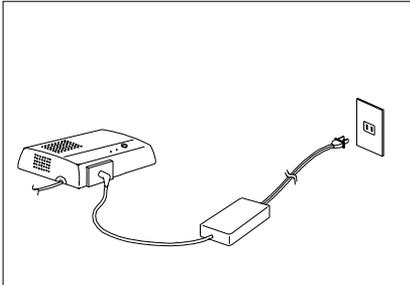


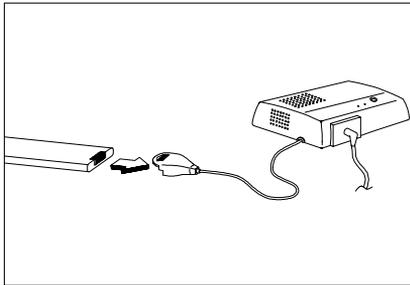
Figure 4-7 External Battery Charger

Using the External Battery Charger

Follow these steps:



1. Plug the AC adapter into a power outlet.
2. Connect the AC adapter to the external battery charger.



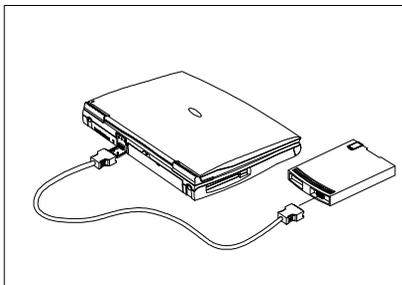
3. Attach the battery pack to the battery charge connector.

The charging LED lights up. The external battery charger automatically turns off after fully recharging the battery pack.

4.8.2 Cables

Floppy Drive Cable

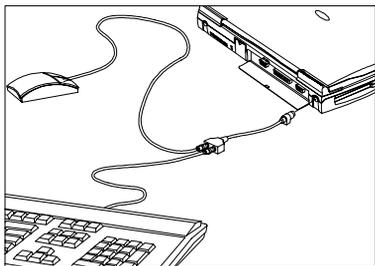
The floppy drive cable allows you to use your floppy drive module externally. This cable is supplied along with a floppy drive module.



Open the mini port cover of the notebook and connect one end of the floppy drive cable to the floppy drive port and the other end to the external floppy drive connector.

PS/2 Y-Bridge Cable

The PS/2 Y-bridge cable allows you to connect two PS/2 devices, mouse and keyboard, to your notebook simultaneously.



Connect the single connector end of the Y-bridge cable to the notebook's PS/2 port and the double connector ends to the two PS/2 devices.

Take note of the icons on the double connector before connecting the devices.

File Transfer Cable

You can use a file transfer cable to transfer data between the notebook and other computers. Connect the file transfer cable between the two computers and use your file transfer utility to perform the transfer.

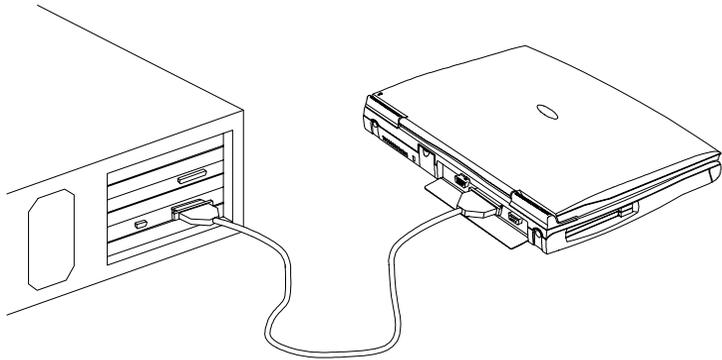


Figure 4-8 Using the File Transfer Cable

4.9 Key Component Upgrades

The notebook delivers superior power and performance. However, some users and the applications they use may demand more. This notebook allows you to upgrade your key components when you need increased performance.



Contact your authorized dealer if you decide to perform a key component upgrade.

4.9.1 Memory Upgrade

Memory is upgradeable from 8 to 64 MB, employing 8-/16-/32-MB¹ 64-bit soDIMMs (Small Outline Dual Inline Memory Modules). The following table lists all possible memory configurations.

Table 4-1 Memory Configurations

Slot 1	Slot 2	Total Memory
8 MB	0 MB	8 MB
0 MB	8 MB	8 MB
8 MB	8 MB	16 MB
16 MB	0 MB	16 MB
0 MB	16 MB	16 MB
16 MB	8 MB	24 MB
8 MB	16 MB	24 MB
16 MB	16 MB	32 MB
32 MB	0 MB	32 MB
0 MB	32 MB	32 MB
32 MB	8 MB	40 MB

¹ You can upgrade memory using 32-MB DIMMs when these become available. Consult your dealer.

Table 4-1 Memory Configurations (continued)

Slot 1	Slot 2	Total Memory
8 MB	32 MB	40 MB
32 MB	16 MB	48 MB
16 MB	32 MB	48 MB
32 MB	32 MB	64 MB

After installing the memory modules, the system automatically detects and reconfigures the total memory size during the POST routines.

4.9.2 Hard Disk Upgrade

You can upgrade your hard disk with a higher capacity drive when you need more storage space. The notebook uses a 12.5mm, 2.5-inch Enhanced-IDE hard disk that is auto-detected or user-defined. The following table shows the available, supported hard disks.

Table 4-2 Hard Disk List

Vendor	Model	Capacity
Hitachi	DK223A-81	810 MB
Seagate	ST9810AG	810 MB
Toshiba	MK1301MAV	1.3 GB

Use the blank spaces to record additional hard disks that will be available in the future.

4.9.3 CPU Upgrade

The CPU (central processing unit) of the notebook is upgradeable, allowing you to take advantage of supported, higher-performance CPUs.

Software

The notebook comes pre-loaded with software and system utilities. This chapter discusses these system utilities¹, their features and functions.

¹ System utilities may differ according to system configuration.

5.1 System Software

The notebook comes preloaded with the following software:

- Windows 95¹
- System utilities and application software²
 - Suspend-to-disk utility
 - Touchpad driver
 - Display drivers
 - Audio drivers
 - PC Card slot drivers and applications
 - Other third-party application software

Accessing the Applications

To access most of the software applications, click on the Start button and select the application folder. Then click on the application icon to run the selected application.

To know about the software and utility, make use of the online help provided by the software.

¹ In some areas, a different operating system may be pre-loaded instead of Windows 95.

² The system utilities and application software list may vary.

5.2 Sleep Manager

Notebooks usually feature built-in power-saving functions. In addition to the normal standby mode for power-saving, this notebook is also capable of a power management feature called 0-volt suspend to hard disk. When a suspend event occurs, this built-in function saves all the system's current status onto your hard disk in the form of a file. The system then shuts off the power. When the user resumes (pressing the power switch), the system will restore the data from the hard disk and resume from where you left off upon leaving suspend mode.

Sleep Manager is a utility that reserves hard disk space needed to successfully perform the suspend-to-disk feature. The user can use this utility to create a contiguous area that resides on the hard disk. Once the reserved space is created, the notebook will be capable of the "0-Volt Suspend to Hard Disk" feature. User can also use this utility to remove the reserved space from the disk. In this case, the machine will not be able to enter 0-volt suspend mode.

Sleep Manager is functionally-connected with the Advanced Power Management (APM) system of Microsoft Windows. Sleep Manager uses many advanced APM functions. Sleep Manager is capable of auto-create and auto-recover features. If the system memory size was changed or the reserved space on the hard disk was corrupted, Sleep Manager will reallocate the hard disk space for you automatically.

5.2.1 Accessing the Sleep Manager

There are two ways to bring up the Sleep Manager:

- Taskbar. Double-click on the Sleep Manager status icon if enabled.
- Start menu
 1. Click on the Start button.
 2. Select Programs.
 3. Select 0V Suspend Utilities.
 4. Select Sleep Manager.

The Sleep Manager displays below:

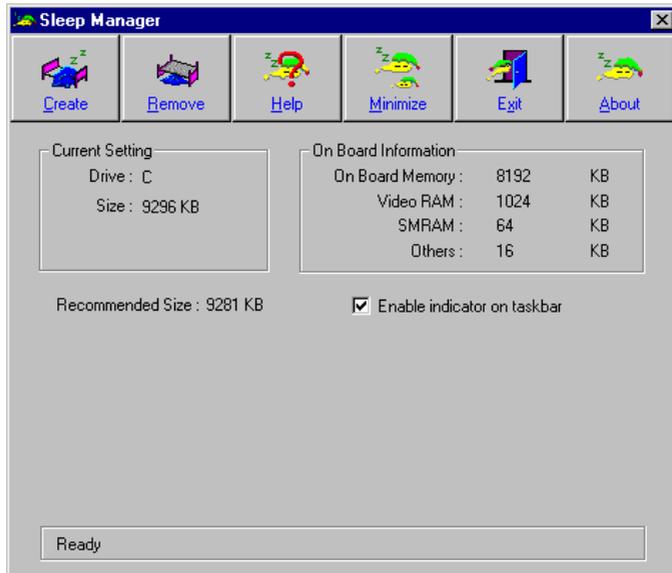


Table 5-1 Sleep Manager Window Items

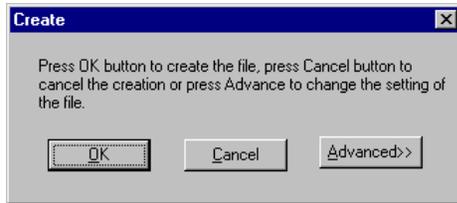
Item	Description
Buttons	Click to access the Sleep Manager functions
Current Setting	Displays the drive and size of the current reserved space created by Sleep Manager.
On Board Information	<p>Displays the different areas of system memory and their respective sizes. These system resources need to be stored before the system can enter 0-volt suspend mode, so the system can resume to the previous state successfully.</p> <p>These system resources are the contents of:</p> <ul style="list-style-type: none"> • Onboard memory (DRAM or dynamic memory) • Video RAM (VRAM or video memory) • SMRAM (static memory) • Others <p>The total size of these system resources shows as the recommended size in the dialog box.</p>
Recommended Size	Displays the minimum size of the contiguous space you need for the 0-volt suspend-to-disk feature. The actual size may be a little bit more due to file system alignment.
Enable Indicator on the Taskbar	<p>When this checkbox is checked, the Sleep Manager status appears on the taskbar.</p> <p>Double-click on the Sleep Manager status icon on the taskbar to bring up the main program, or simply rest your mouse pointer on the icon to display the current status.</p>

5.2.2 Sleep Manager Functions

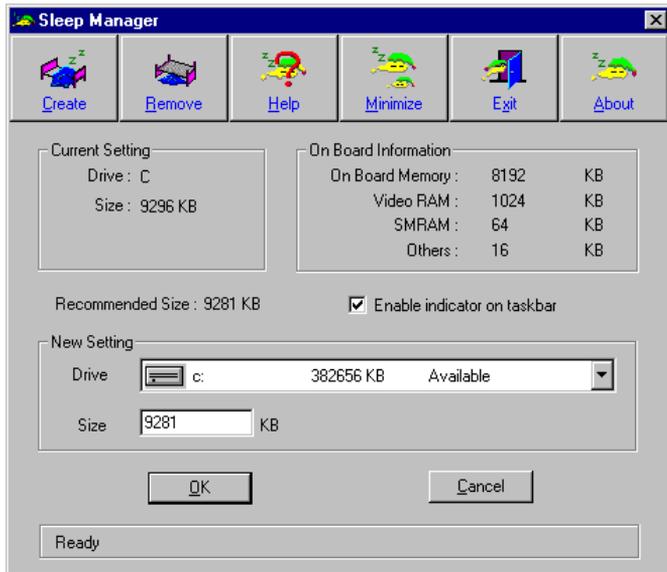
Create

The main purpose of Sleep Manager is to find and reserve a contiguous area on the hard disk. The user can allocate the space themselves by using the 'Create' function on the Sleep Manager utility. Once a suspend event occurs, the system will enter the suspend mode. If the user did not create the space or the system DRAM size been changed, Sleep Manager is invoked and begins the process of creating a space for the system.

When you click on the **Create** button, a dialog box pops up:



You can select **OK** to automatically create space for the 0-volt suspend feature. Sleep Manager displays the recommend size based on onboard system information. You can also choose **Advance>>>** to manually set the space settings and size. The advanced screen shows below.



Sleep Manager automatically checks the system configuration and displays the recommended size. The drive where the space will be created is defined by the system and will be the first available logical drive which has the requested contiguous free disk space on it. The recommended size is the minimum size needed to save the current system status.

If the program cannot find the required space on the hard disk during the space creation process, it shows a message box to inform the user.

Not Enough Space for Allocation

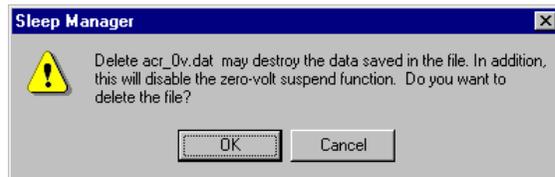
This is a common error message that appears when Sleep Manager is creating the space on the hard disk. There are several different reasons that may cause this error. One of the reasons is that the size of the free disk space on the specific drive is less than the required size. For example, if the onboard memory is 4MB and the VGA memory is 512KB, the total free disk space required will be 4608KB. If the total free disk space is less than 4608KB, the user has to delete some unnecessary files from his hard disk.

Another possible reason is that the hard disk has enough free space, but this free space exists as small fragments. The free disk space that Sleep Manager requires needs to be contiguous. To solve this problem, the user can use tools such as SpeedDisk (Norton Utilities) or Disk Defragmenter (Windows 95) to compact these free disk spaces. The user can then run Sleep Manager utility again to reserve the space.

Another factor that causes the error is when the user employs disk compression utilities. Sleep Manager can work with most compression software. However, Sleep Manager can only create the space on a host drive. A host drive stores original file information and will not be compressed. The free space on the host drive is usually very small, so the user should use the command provide by these compression software to enlarge the size of the host (uncompressed) drive for Sleep Manager.

Remove

If the user wants to use or take back the reserved space, he or she can use the delete function of Sleep Manager by clicking on the Remove button. The deletion will result in the system not being able to enter 0-volt suspend mode. Instead, the system will only be able to enter standby mode.

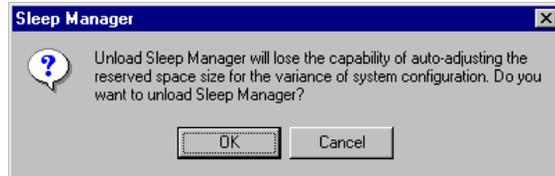


Minimize

The user can minimize Sleep Manager by selecting the Minimize button. If the Enable indicator on taskbar box is checked, Sleep Manager will then switch to background by locating itself on the taskbar. You can pop-up the main program of Sleep Manager again by double-clicking whenever needed. If the Enable indicator on taskbar icon is not checked, you have to select the Sleep Manager item from 0-Volt Suspend Utilities menu of Start button.

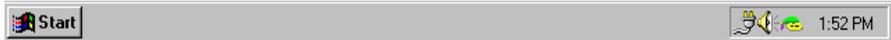
Exit

The user can exit Sleep Manager by selecting the Exit button. Sleep Manager will then quit and disable the for capability of auto-adjusting the reserved space size. Disconnecting this feature is NOT recommended.



5.2.3 Running Sleep Manager

Once Sleep Manager is installed on the disk, the system automatically loads this utility every time you start Windows 95. Sleep Manager resides in the background by appearing on the taskbar.



To change the settings of Sleep Manager, simply double-click on the Sleep Manager icon () on the taskbar, or run the Sleep Manager program from the 0-Volt Suspend to Disk Utilities in the Programs menu.

The Sleep Manager icon may or may not appear on the taskbar. A checkbox in the Sleep Manager main screen determines whether to enable or disable the icon on the taskbar. When Sleep Manager has not created the space to be used for 0-volt suspend or if APM is not enabled, the exclamation mark icon  will appear. If both Sleep Manager has not created the space to be used for 0-volt suspend and APM is not enabled, the icon appears with a red crossed circle .

5.2.4 Sleep Manager Troubleshooting Tips

The following are the error messages with their corresponding solutions:

1. BIOS not compliant with Sleep Manager.

Sleep Manager can only run on notebooks with a BIOS compatible with this computer.

2. This machine does not have a power management unit. You cannot run Sleep Manager without PMU.

Sleep Manager can only work on notebooks installed with a PMU.

3. The APM driver for Windows is not installed. Use Windows Setup to install the APM driver before you run Sleep Manager.

Run Windows Setup and redefine your system as MS-DOS System with APM model. Windows will then install the APM driver for you.

4. Requested disk space is not enough./The created file is not contiguous.

If the free space is actually greater than the requested free space but not contiguous, use the Windows 95 defragment utility Disk Defragmenter to compact the hard disk drive space. Then run Sleep Manager again. If you run Sleep Manager under a DoubleSpace environment, make sure the free space on the host drive is larger than the required size for Sleep Manager.

5. The [directory name] directory cannot be created. Enter another directory or try another drive.

The directory name that the user specified is not valid. Note that the user can create only one subdirectory at a time.

6. The software has not been successfully installed. You must run Setup again.

Sleep Manager is not completely installed. Try to install again.

5.2.5 Uninstalling Sleep Manager

Uninstalling Sleep Manager will delete all files and all system information for Sleep Manager, it loses the capability of auto-adjusting the reserved space size for the system configuration changes or modifications, though the 0-volt suspend feature still functions

To uninstall Sleep Manager from the Windows, follow these steps:

1. Quit the Sleep Manager if it is still running.
2. Click on the Start button and select the Control Panel folder from Settings.
3. Open the Add/Remove Programs Icon.



4. Select Sleep Manager for Windows 95 and click the Add/Remove... button.

5. Follow the screen instructions to complete the uninstallation program.



Do not deactivate or uninstall Sleep Manager and do not remove or delete the zero-volt suspend/resume file. Otherwise, the function will not work — the notebook will only enter standby mode and not suspend-to-disk mode.

5.3 Touchpad Driver

The touchpad works with most mouse drivers, but the touchpad driver supports special functions that work uniquely with the touchpad. The touchpad driver enhances the Mouse dialog box to include these special features.

5.3.1 Configuring the Touchpad

Follow these steps to configure the touchpad:

1. Click on the Start button, then select Settings...
2. Select Control Panel to display the Control Panel Window.
3. Double-click on the Mouse icon and select TouchPad.

You can configure different aspects of the touchpad. Refer to the online help for details.

5.4 Re-installing System Drivers and Applications

The notebook is already configured for optimum performance. Should you need to re-install drivers and applications, these are found in the system utility pack CD in the backup kit, or in system utility diskettes.¹

To re-install drivers under Windows 95, click on Start, Settings, then Control Panel. You can either use the Add New Hardware wizard, or update the driver using the Device Manager (accessing the System icon in Control Panel). Then based on the driver location, update the driver. The following table lists the drivers and their locations:

Table 5-2 Location of Drivers

Device Category	Function	Location
PCMCIA socket	PC Card slots	ENGLISH\WIN95\PCMCIA\
Sound, video and game controllers	Audio	ENGLISH\WIN95\AUDIO\
Mouse	Mouse	ENGLISH\WIN95\MOUSE\
Display adapters	Video	ENGLISH\WIN95\VIDEO\

To re-install applications under Windows 95, click on Start, then Run.... Based on the location of the application, run the setup program to install the application. The following table lists the applications and their locations:

Table 5-3 Location of Applications

Name	Function	Location
Sleep Manager	0V Suspend utility	ENGLISH\WIN95\SLEEPMGR\
CardWorks	PCMCIA application	ENGLISH\WIN95\PCMCIA\
Audio Rack	Audio application	ENGLISH\WIN95\ARACK\

Drivers for Windows 3.x, Windows NT and OS/2 are also found in the System Utility Pack if you should need them.

¹ CD-ROM drive model: System utility pack CD (backup kit).
Floppy drive model: System utility diskettes.

Setup

The notebook has a BIOS setup utility that allows you to configure the notebook and its hardware settings. This chapter tells how to use the Setup utility and describes each parameter item in the setup screens.

6.1 When to Use Setup

The notebook is already correctly configured for you and you do not need to run Setup. If you make any changes to the notebook or you receive an Equipment Configuration Error message after you turn on the notebook, you need to run Setup. Run Setup also if you want to do any of the following:

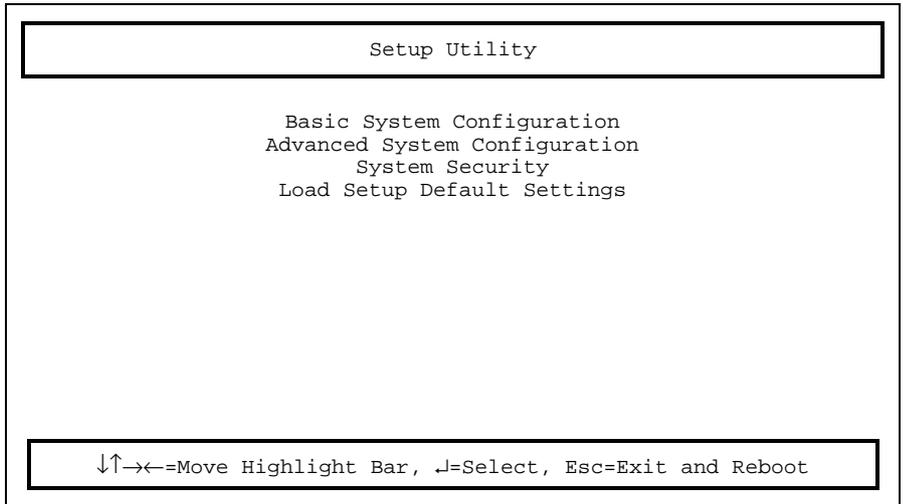
- Change the system date, time or speed
- Add or remove serial and parallel devices
- Change the system boot drive or display device
- Set the video display features
- Set the power-saving modes
- Set, change, or remove a system password



The system configuration values reside in the battery-powered CMOS RAM.

6.2 Entering Setup

Press **F2** during POST to enter Setup. The BIOS Utility main screen displays.



There are four main menu items:

- Basic System Configuration
- Advanced System Configuration
- System Security
- Load Setup Default Settings

Read through the Setup Screen Notes before navigating the Setup screens.

Setup Screen Notes

- From the main menu, press , ,  or  to move from one menu item to another and press  to enter the selected menu.
- When accessing multi-page sections, press  and  to go through the pages.
- Parameters displayed in low brightness (grayed-out) are not user-configurable. The system detects and sets the values for these parameters.
- Press  or  to move from one parameter to another. Press  or  to change parameter settings. You have to change some settings when you add a component to the notebook.
- Most of the Setup parameters are self-explanatory. Press  for help on individual parameters.
- When you press  to exit the Setup utility, the following prompt appears:

```
Do you want to save CMOS data?  
  
[Yes]                [No]
```

Select [Yes] to save the changes you made to the configuration values or [No] to abandon the changes and retain the current values.

6.3 Basic System Configuration

Basic System Configuration has a one-page screen display illustrated below.

Basic System Configuration		Page 1/1		
Date -----	[MM/DD/YY]			
Time -----	[HH:MM:SS]			
Diskette Drive A -----	[1.44 MB 3.5-inch]			
Diskette Drive B -----	[None]			
IDE Drive 0 (775 MB) -----	[Auto]	Cylinder	Head	Sector
		1575	16	63
Enhanced IDE Features				
Large Hard Disk Capacity -	[Enabled]			
Num Lock After Boot -----	[Disabled]			
Memory Test -----	[Enabled]			
↓↑=Move Highlight Bar, →←=Change Setting, F1=Help, Esc=Exit				

6.3.1 Date and Time

The notebook displays the current date in MM/DD/YY format and the current time in HH:MM:SS format. It uses a 24-hour clock; for example, 6:25 PM displays as 18:25:00.

6.3.2 Diskette Drives

The default setting for Diskette Drive A is [1.44 MB 3.5-inch] and this setting applies to both an internal and external floppy drive configuration. Diskette Drive B, by default, is set to [None]. Enable this parameter if two floppy drives are connected to the notebook.

6.3.3 IDE Drive 0

The default setting for IDE Drive 0 is [Auto]. With this setting, the BIOS automatically detects your drive parameters. You can also opt to key in your drive parameters by setting this parameter to [User]. To determine your drive parameters, look at the data on the label pasted on your hard disk drive (or supplied in vendor documentation) and type in the parameters. Be sure to set the correct drive parameters; otherwise an error message appears when you boot up the notebook. We suggest you set this parameter to [Auto].

6.3.4 Enhanced IDE Features

The default setting for Large Hard Disk Capacity is [Enabled]. Set this parameter to [Disabled] if you use the UNIX operating system on this computer.

6.3.5 Num Lock After Boot

When the Num Lock After Boot parameter is set to [Enabled], the embedded keypad acts as a numeric keypad upon initial power-on or reboot. The default setting is [Disabled].

6.3.6 Memory Test

The notebook always tests main memory for errors each time you turn it on. Select [Disabled] to bypass the memory test and speed up the self-test procedure. The default setting is [Enabled].

6.4 Advanced System Configuration

The Advanced System Configuration section has a two-page screen display. Besides accessing this screen from POST using **F2**, you can also press **F6** - **F6** to access this section of Setup.

Advanced System Configuration		Page 1/2
Power Management Mode -----	[Enabled]	
Display Standby Timer -----	[1] Minute(s)	
Hard Disk Standby Timer -----	[1] Minute(s)	
System Standby/Suspend Timer ---	[3] Minute(s)	
Display Device -----	[Auto]	
Battery-low Warning Beep -----	[Enabled]	
Suspend Upon Battery-low -----	[Enabled]	
Modem Ring Wake Up From Standby ---	[Enabled]	
Password Check during Resume -----	[Disabled]	

↓↑=Move Highlight Bar, →←=Change Setting PgDn/PgUp=Move Screen, F1=Help, Esc=Exit
--

6.4.1 Power Management Mode

With enabled, all the timers in Setup take effect unless specifically disabled by the user. Select [Disabled] to turn off all the timers. The default setting is [Enabled].



You cannot disable this parameter in Setup if APM is installed under DOS, Windows or Windows 95. To disable APM, type Power Off under DOS, or disable the Power icon in the Windows Control Panel.

Power Management Timers

- Display Standby Timer

The notebook shuts off the LCD backlight and turns off the CRT video as well, if there is no activity from the keyboard or external PS/2 mouse within the period specified by this timer. To turn the display back on, press a key or move the mouse.

The valid values for this timer range from 1 to 15 minutes. Select [Off] to disable the timer.

- Hard Disk Standby Timer

The hard disk drive enters standby mode if there are no disk read/write operations within the period specified by this timer. The hard disk returns to normal mode once the notebook accesses it.

The valid values for this timer range from 1 to 15 minutes. Select [Off] to disable the timer.

- System Standby/Suspend Timer

This parameter enables you to set a timeout period for the notebook to enter either system standby or suspend mode. If the reserved disk space for saving the screen data is larger than the combined system and video memory size, the notebook enters suspend mode. Otherwise, it enters system standby mode.

The valid values for this timer range from 1 to 15 minutes. Select [Off] to disable the timer.

6.4.2 Display Device

If you install an external VGA display, you can switch display between the LCD and external display (CRT). This parameter determines which display device the notebook uses. Table 6-1 describes the different settings.



If notebook resolution is set at 640x480, the image on the notebook and CRT will not be full-screen. For full-screen image, set-up notebook at 800x600 resolution.

Table 6-1 *Display Device Settings*

Setting	Description
Auto (default)	If an external display is present, the notebook uses the external display; otherwise, the LCD is the display device.
Both	The notebook uses the external display and LCD simultaneously.

6.4.3 **Battery-low Warning Beep**

This parameter allows you to enable or disable the warning beep generated by the system when a battery-low condition occurs. The default setting is [Enabled].

6.4.4 **Suspend Upon Battery-low**

This parameter enables the system to enter standby or suspend mode when a battery-low condition takes place. The default setting is [Enabled].

6.4.5 **Modem Ring Wake Up From Standby**

When enabled, the notebook wakes up from standby mode and returns to normal mode when a PCMCIA modem detects a ringing tone. The default setting is [Enabled].

6.4.6 **Password Check During Resume**

This parameter allows you to prevent unauthorized resumption from the suspend mode to normal mode. After setting a power-on password, the notebook automatically sets this parameter to [Enabled]. When you exit suspend mode and return to normal mode, the notebook requires you to enter the password.

The following is page 2 of the Advanced System Configuration screens. This page lists a summary of the system settings currently configured.

Advanced System Configuration		Page 2/2
CPU/CLK	: Pentium/100	Internal Cache : 16KB, Enabled
Base Memory	: 640KB	External Cache : None
Extended Memory	: 7168KB	Pointing Device : Detected
Shadow RAM	: 256KB	Internal KB : 84/85 Key
SMRAM	: 128KB	
IDE Drive 0	: 775MB	
Security	: Normal	
Diskette Drive A	: 1.44MB 3.5-inch	
Security	: Normal	
Boot Device	: Drive A Then C	
Serial Port	: 3F8h, IRQ4	
Parallel Port	: 378h, IRQ7	
Operation Mode	: Standard Parallel Port(SPP)	
↓↑=Move Highlight Bar, →←=Change Setting PgDn/PgUp=Move Screen, F1=Help, Esc=Exit		

Page two of the advanced system configuration display the current status of the system and its peripherals. The items in this screen are not user-configurable. See table below.

Table 6-2 System Status Descriptions

Item	Description
CPU/CLK	Shows the processor type and speed
Base memory	Shows the total base memory
Extended memory	Shows the total extended memory
Shadow RAM	Shows the shadow RAM size
SMRAM	Shows the SMRAM size

Table 6-2 System Status Descriptions (continued)

Item	Description
IDE Drive 0	Shows the IDE drive type and size and its security setting
Security	Shows hard disk drive security setting
Diskette Drive A	Shows the floppy drive A type and security setting
Security	Shows floppy drive security setting
Boot Device	Shows the boot sequence setting
Serial Port	Shows the serial port base address and IRQ
Parallel Port	Shows the parallel port base address and IRQ
Operation Mode	Shows the parallel port operation mode
Internal Cache	Shows the internal cache size and setting
External Cache	Shows the external cache size
Pointing Device	Shows the presence of a pointing device
Internal KB	Shows the internal keyboard type

6.5 System Security

System Security is a single page display.

System Security		Page 1/1
Disk Drive Control		
Floppy Disk Drive -----	[Normal]	
Hard Disk Drive -----	[Normal]	
System Boot Drive -----	[Drive A Then C]	
Boot from CD-ROM -----	[Enabled]	
On Board Communication Ports		
Serial Port Base Address -----	[3F8h(IRQ 4)]	
Parallel Port Base Address ----	[378h(IRQ 7)]	
Parallel Port Operation Mode --	[Standard]	
Setup Password -----	[None]	
Power On Password -----	[None]	
↓↑=Move Highlight Bar, →←=Change Setting PgDn/PgUp=Move Screen, F1=Help, Esc=Exit		

6.5.1 Floppy Disk Drive Control

This parameter allows you to enable or disable the read/write functions of the floppy drive. The following table summarizes the available options.

Table 6-3 Floppy Disk Drive Control Settings

Setting	Description
Normal (default)	Floppy drive functions normally
Write Protect All Sectors	Disables any floppy drive write function. This option is for operating systems that access the floppy drive 100 percent via BIOS only.
Write Protect Boot Sector	Disables the floppy drive write function on a diskette's boot sector. This option is for operating systems that access the floppy drive 100 percent via BIOS only.
Disabled	Disables the floppy drive

6.5.2 Hard Disk Drive Control

This parameter allows you to enable or disable the read/write functions of the hard disk drive. The following table summarizes the available options.

Table 6-4 Hard Disk Drive Control Settings

Setting	Description
Normal (default)	Hard disk drive functions normally
Write Protect All Sectors	Disables any hard disk write function. This option is for operating systems that access the hard disk 100 percent via BIOS only.
Write Protect Boot Sector	Disables the hard disk drive write function on the hard disk's boot sector. This option is for operating systems that access the hard disk 100 percent via BIOS only.
Disabled	Disables the hard disk drive

6.5.3 System Boot Drive Control¹

This parameter determines which drive the notebook boots from when you turn it on. The following table lists the three possible settings.

Table 6-5 System Boot Drive Control Settings

Setting	Description
Drive A Then C (default)	Notebook boots from floppy drive A. If there is no system disk in drive A, the notebook boots from hard disk C. If the hard disk is a non-system disk, an error message appears.
Drive C Then A	Notebook boots from hard disk C. If hard disk C is not a system disk, the notebook boots from floppy drive A. If no diskette is present or if the diskette in floppy drive A is a non-system disk, an error message appears.
Drive C	Notebook boots from hard disk C. If hard disk C is not a system disk, an error message appears.
Drive A	Notebook boots from floppy drive A. If no diskette is present or if the diskette in floppy drive A is a non-system disk, an error message appears.

¹ An installed PCMCIA bootable card overrides this setting. The notebook supports SRAM card boot.

6.5.4 Boot From CD-ROM

When enabled the notebook checks the CD-ROM drive first and boots from there, if possible, before checking the System Boot Drive Control settings.

There are two image types/formats for CD-ROMs - floppy drive and hard disk. See Table 6-6 for a description.

Table 6-6 CD-ROM Image Descriptions

Image Type	Upon Boot-up...
Floppy Drive	CD-ROM drive becomes drive A and the floppy drive becomes drive B. The hard disk drive remains drive C.
Hard Disk	CD-ROM drive becomes drive C and the hard disk drive becomes drive D. The floppy drive remains drive A.

6.5.5 Serial Port Base Address

The serial port can accommodate a modem, serial mouse, serial printer, or other serial devices. The default setting for the serial port base address is [3F8h (IRQ 4)]¹.

Other options include:

- 2F8h (IRQ 3)
- Disabled

Make sure the serial port base address does not conflict with the address used by a PCMCIA card, if one is installed.

¹ The parameter value is the base address expressed in hexadecimal.

6.5.6 Parallel Port Base Address

The parallel port can accommodate a parallel printer or other parallel devices. The default setting for the parallel port base address is [378h(IRQ 7)]¹. The other options for this parameter are:

- 278h(IRQ 5)
- 3BCh (IRQ 7)
- Disabled

6.5.7 Parallel Port Operation Mode

The parallel port supports four operation modes:

- Standard
- Bi-Directional
- EPP
- ECP

EPP or Enhanced Parallel Port is a parallel port interface that greatly improves performance for bi-directional block-mode data transfers. EPP provides greater throughput by supporting faster transfer times and a mechanism that allows the host to address peripheral device registers directly. ECP or Extended Capabilities Port supports a 16-byte FIFO (first in, first out) which can be accessed by host DMA cycles and PIO cycles. ECP boosts I/O bandwidth to meet the demands of high-performance peripherals.

The default setting is [Standard].



If you set EPP as the parallel port operation mode, do not use 3BCh as the parallel port base address; otherwise, I/O conflicts

¹ The parameter value is the base address expressed in hexadecimal.

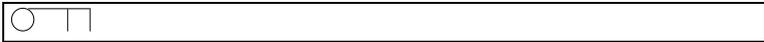
may occur.

6.5.8 Passwords

Two passwords are implemented in this notebook. The Setup Password prevents unauthorized access to the Setup utility, while the Power On Password prevents unauthorized access to the notebook during boot-up or resume from suspend.

Setting a Password

To set a password, select the desired password (Setup and Power On) to set or edit, and press  or . The password prompt (a key) appears:



A message below the menu prompts you to enter a password. The password may consist of up to seven characters which do not appear on the screen when you type them. After typing your password, press Enter. Another prompt appears asking you to retype your password to verify your first entry.

After setting a password, the notebook sets this parameter to [Present]. The next time you boot the notebook, resume from suspend mode or run the Setup utility, the password prompt appears. Key in the appropriate password (Power On or Setup). If the password you entered is incorrect, an "X" appears. You have three chances to type in the correct password. After three tries, the following message appears:

```
Incorrect password specified. System disabled.
```

The notebook freezes up and disables all devices. You must turn off the notebook and turn it on again to retry. If you forget your password, you must reset the configuration values stored in CMOS to defaults. Resetting CMOS requires opening up the system unit, so contact your dealer for assistance.

Removing a Password

To remove a password, select the desired password (Setup and Power On) to remove and press  or  to set it to [None].

6.6 Load Setup Default Settings

Selecting this option allows you to load all the default settings. The default settings are the values initially stored in CMOS RAM intended to provide high performance. If in the future, you change these settings, you can load the default settings again by selecting this option.

When you select this option, the following prompt appears:

```
Load Setup Default Settings
Are you sure?

[Yes]                [No]
```

Select [Yes] to load the default settings or [No] to abort the operation.

Traveling with the Notebook

This chapter tells you what to do when traveling with the notebook. This chapter also includes a list of Acer's worldwide offices and contact information.

7.1 Traveling Preparations

Follow these steps to prepare the notebook for travel:

1. Make diskette copies of important files on the hard disk.
2. Turn off the notebook and all peripherals.
3. Make sure the display lid is properly closed. The display lid latch must be secure.
4. Disconnect the AC adapter and all peripherals.
5. Place the notebook, AC adapter, extra battery pack and user documentation in a carrying bag.
6. Hand-carry the notebook. **Do not check it in as luggage!**



The notebook can pass through airport X-ray equipment, but metal detectors may damage the notebook (i.e., hard disk drive).

7. Check with your airline if you plan to use the notebook on the aircraft.
8. When traveling in another country, check that the local AC voltage and the AC adapter power cord specifications are compatible. If not, purchase a power cord that is compatible with the local AC voltage. Do not use converter kits sold for appliances to power the notebook.
9. Check also if the PC card modem and connector used with your notebook is compatible with the telecom system of the country you are traveling in.

7.2 International Traveler's Warranty

Your notebook is backed by an international warranty that gives you security and peace of mind when traveling. Our worldwide network of certified service centers are there to give you a helping hand. Refer to the ITW information hand-out.

7.3 Worldwide Support

With your purchase of an AcerNote comes the guarantee of support from our offices worldwide. Have your ITW (international traveler's warranty) card number ready when you call.

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Facsimile: 27-11-315-1032

You can also contact the local dealer or distributor in the country you are traveling for assistance.



If you are connected to the Internet and have World Wide Web access, visit our home page (<http://www.acer.com/>) and get an updated list of our worldwide offices, as well as information about our products.

Troubleshooting

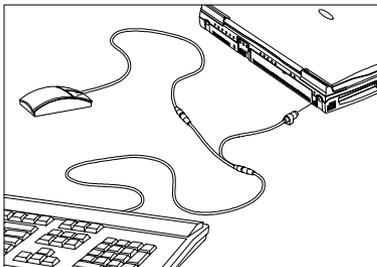
This chapter tells how to deal with common system problems. Read it before calling a technician if a problem occurs. Solutions to more serious problems require opening up the system. Do not attempt to open the system by yourself. Contact your dealer or an authorized service center for assistance.

8.1 Q & A

Q & A lists possible situations that may arise during the use of your notebook, and gives easy answers and solutions to these questions.

Q: *I prefer using an external keyboard and mouse, but both have PS/2 connectors and there is only one PS/2 port on the notebook. How do I connect them to the notebook at the same time?*

A: To connect two PS/2-type devices to the notebook, you need to use a PS/2 Y-bridge connector.



Connect the single connector end of the Y-bridge connector to the PS/2 port on the notebook and the double connector ends to the two PS/2 devices.

Q: *I pressed the power switch opened the display but the notebook does not start or boot-up.*

A: Look at the status indicator on the display panel.

If the indicator is not lit, no power is being applied to the notebook. Check the following:

- If you are running on battery power, it may be low and unable to power the notebook. Connect the AC adapter to recharge the battery pack.
- Make sure the AC adapter is plugged in properly to the notebook and to the power outlet.

If the indicator is lit, check the following:

- If the indicator flashes, the notebook is in standby mode. Press any key or tap on the touchpad to resume.
- Is a non-bootable (non-system) diskette in the floppy drive? Remove or replace it with a system diskette and press **CTRL**-**ALT**-**DEL** to restart the system.
- The operating system files may be damaged or missing. Insert the startup disk you created during Windows 95 setup (see section 1.4) into the floppy drive and press **CTRL**-**ALT**-**DEL** to restart the system. This will diagnose your system and make necessary fixes.

Q: *Nothing appears on the screen.*

A: The notebook's power management system automatically blanks the screen to save power. Just press any key to turn the display back on.

If pressing a key does not turn the display back on, two things might be the cause:

- The contrast and/or brightness level might be too low. Press **Fn**-**F2** (☉ / ☿) to bring up the contrast/brightness pop-up icon. Then press the scale increase hot keys (**Fn**-**→**) to increase the contrast/brightness level.
- The display device might be set to an external monitor. Press the display toggle hot key **Fn**-**F3** (☐/☑) to toggle the display back to the notebook.

Q: *The keyboard does not respond.*

A: Try attaching an external keyboard to the PS/2 connector on the notebook's rear. If it works, contact your dealer or an authorized service center as the internal keyboard cable may be loose.

Q: *The serial mouse does not work.*

A: Do the following:

- Make sure that the serial cable is plugged securely into the serial port.
- Press **Fn** - **F6** (🔒) to enter Setup and go to page 2 of the Advanced System Configuration screens. Check if the serial port is enabled.

If the serial port is disabled, you need to reboot the machine and press **F2** during POST, then access the System Security screen from the main menu. Move the cursor to the serial port base address parameter and change the setting. See section 6.5.5 for details.

Q: *The printer does not work.*

A: Do the following:

- Make sure that the printer is connected to a power outlet and it is turned on.
- Make sure the printer cable is connected securely to the notebook's parallel port and the corresponding port on the printer.
- Press **Fn** - **F6** (🔒) to enter Setup and go to page 2 of the Advanced System Configuration screens. Check if the parallel port is enabled.

If the parallel port is disabled, you need to reboot the machine and press **F2** during POST, then access the System Security screen from the main menu. Move the cursor to the parallel port base address parameter and change the setting. See section 6.5.6 for details.

Q: *No audio comes out from the notebook.*

A: Check the following:

- The volume may be muted. In Windows 95, look at the volume control icon on the taskbar. If it is crossed-out, click on the icon and de-select the Mute option.
- The volume level may be too low. Press **Fn** - **F5** to bring up the volume control pop-up icon. Press **Fn** - **→** to increase the volume.
- If headphones, earphones or external speakers are connected to the line-out port on the notebook's rear panel, the internal speakers automatically turn off.

Q: *Image is not full-screen.*

A: Check the following:

Make sure the resolution is set to 800x600. Right-click on your Windows 95 desktop and select Properties to bring up the Display Properties dialog box. Then click on the Settings tab to make sure the resolution is set to 800x600.

640x480 resolution is not full-screen on notebook or on an external monitor.

8.2 Error Messages

If you receive an error message, note the message and take corrective action. Table 8-1 lists the error messages in alphabetical order together with the recommended course of action.

Table 8-1 POST Error Messages

Error Message	Corrective Action
CMOS Battery Bad	Contact your dealer or an authorized service center.
CMOS Checksum Error	Contact your dealer or an authorized service center.
Disk Boot Failure	Insert a system disk in drive A, then press  .
Diskette Drive Controller Error or No Controller Present	Contact your dealer or an authorized service center.
Diskette Drive Error	Contact your dealer or an authorized service center.
Diskette Drive Type Mismatch	Press  -  (during POST) to reconfigure the notebook.
Equipment Configuration Error	Press  -  (during POST) to reconfigure the notebook.
Hard Disk 0 Error	Contact your dealer or an authorized service center.
Hard Disk 0 Extended Type Error	Contact your dealer or an authorized service center.
I/O Parity Error	Contact your dealer or an authorized service center.
Insert system diskette and press <Enter> key to reboot	Insert a system disk in drive A, then press  .
Keyboard Error or No Keyboard Connected	Contact your dealer or an authorized service center.
Keyboard Interface Error	Contact your dealer or an authorized service center.

Table 8-1 POST Error Messages (continued)

Error Message	Corrective Action
Memory Size Mismatch	Enter and then exit the System Configuration Setup in the Setup utility (pressing Fn - F2) during POST).
Missing operating system	Correct the HDD type and reboot. See the specification label pasted on the back side of the notebook or attached to hard disk drive. We suggest you set the HDD type to [Auto] for hard disk drive auto-detection.
Non-system disk or disk error. Replace and strike any key when ready	Insert a system disk in drive A, then press ENTER .
Pointing Device Error	Contact your dealer or an authorized service center.
Pointing Device Interface Error	Contact your dealer or an authorized service center.
Protected Mode Test Fail	Contact your dealer or an authorized service center.
RAM BIOS Bad	Contact your dealer or an authorized service center.
RAM Parity Error	Contact your dealer or an authorized service center.
Real-Time Clock Error	Press Fn - F2 (during POST) to reconfigure the notebook.
Video RAM BIOS Bad	Contact your dealer or an authorized service center.

If you still encounter problems after going through the corrective measures, please contact your dealer or an authorized service center for assistance. See section 7.3.

Specifications

Item	Standard	Optional
Microprocessor	Intel Pentium™ processor (100/120/133 MHz)	
System memory	8MB / 16MB Dual 64-bit memory banks	Expandable to 64MB using 8, 16 and 32MB ¹ SO DIMMs
Flash ROM BIOS	256KB	
Data storage devices	Removable 12.5mm, 2.5-inch, 810MB Enhanced-IDE hard disk drive	1*GB Enhanced-IDE hard disk drive
CD-ROM model	Internal 17mm, 5.25-inch high-speed CD-ROM drive	External 3.5-inch, 1.44MB diskette drive
FDD model	Internal 3.5-inch, 1.44MB diskette drive	
Display	DualScan STN or TFT active matrix, 800x600, 256 colors (SVGA)	Up to 1024x768, 256-color ultra-VGA monitor LCD projection panel
Video	PCI local bus video with graphics accelerator 1MB video RAM	

¹ You can upgrade memory using 32MB SO DIMMs when they become available. Consult your dealer for details.

Item	Standard	Optional
Audio	16-bit stereo audio; Built-in dual speakers; separate audio ports	
Keyboard and pointing device	84-/85-/88-key with Windows 95 keys Touchpad (centrally-located on palmrest)	101-/102-key, PS/2- compatible keyboard or 17-key numeric keypad External serial or PS/2 mouse or similar pointing device
I/O ports	One 9-pin RS-232 serial port (16550-compatible) One 25-pin parallel port (EPP/ECP-compliant) One 15-pin CRT port One 6-pin PS/2 keypad/ keyboard/mouse connector One type III or two type II slot(s) with ZV port support One external FDD port One 3.5mm minijack audio port for mic-in One 3.5mm minijack audio port for line-in One 3.5mm minijack audio port for line-out	Serial mouse, printer or other serial devices Parallel printer or other parallel devices Up to a 1024x768, 256-color ultra-VGA monitor 17-key numeric keypad, PS/2 keyboard or mouse LAN card or other PC cards External diskette drive Microphone Audio CD player or other line- in devices Speakers or headphones

Item	Standard	Optional
Operating system	Windows 95	Windows NT, OS/2 Warp
Weight FDD model CD-ROM model	(includes battery) 2.6 kg. (5.7 lbs.) 2.8 kg. (6.2 lbs.)	
Dimensions (main footprint)	W x D x H 306mm x 228mm x 46mm (12.05" x 8.98" x 1.81")	
Temperature Operating Non-operating	10°C ~ 35°C -20°C ~ 60°C	
Humidity Operating Non-operating	(non-condensing) 20% ~ 80% 20% ~ 80%	
AC adapter	100~240 Vac, 50~60 Hz autosensing AC adapter	Extra AC adapter
Battery pack Charge time	Lithium-Ion or Nickel Metal-Hydride smart battery 2-hr. (rapid-charge) 6~8-hr. (charge-in-use)	Extra battery pack External battery charger/discharger

Address and Interrupt Tables

B.1 System Memory Map

Address Range	Definition	Function
000000 - 09FFFF	640 KB memory	Base memory
0A0000 - 0BFFFF	128 KB video RAM	Reserved for graphics display buffer
0C0000 - 0CBFFF	Video BIOS	Video BIOS
0E0000 - 0EFFFF	128 KB system BIOS	System BIOS
0F0000 - 0FFFFFFF		System BIOS
10000 - 7FFFF	Extended memory	Onboard memory
80000 - 27FFF		SIMM memory
FE0000 - FFFFFFFF	256 KB system ROM	Duplicate of code assignment at 0E0000-0FFFFFFF

B.2 I/O Address Map

Address Range	Device
000 - 00F	DMA controller-1
020 - 021	Interrupt controller-1
022 - 023	M1523 registers
040 - 043	Timer 1
048 - 04B	Timer 2
060 - 06E	Keyboard controller 8742 chip select
070 - 071	Real-time clock and NMI mask
080 - 08F	DMA page register
0A0 - 0A1	Interrupt controller-2
0C0 - 0DF	DMA controller-2
178, 17A	6377 registers
1F0 - 1F7	Hard disk select
3F6, 3F7	
220 - 22F	Audio (option)
240 - 24F	Audio (option) - default
260 - 26F	Audio (option)
280 - 28F	Audio (option)
278 - 27F	Parallel port 3
2E8 - 2EF	COM 4
2F8 - 2FF	COM 2
34C-34F	Docking station
378, 37A	Parallel port 2
3BC - 3BE	Parallel port 1
3B4, 3B5, 3BA	Video subsystem
3C0 - 3C5	
3C6 - 3C9	Video DAC
3C0 - 3CF	Enhanced graphics display
3D0 - 3DF	Color graphics adapter
3E0 - 3E1	PCMCIA controller
3E8 - 3EF	COM3
3F0 - 3F7	Floppy disk controller
3F8 - 3FF	COM 1
CF8 - CFF	PCI configuration register

B.3 Interrupt Levels

Priority	Interrupt Number	Interrupt Source
1	SMI	Power management unit
2	NMI	Parity error detected, I/O channel error
3	IRQ 0	Interval timer, counter 0 output
4	IRQ 1	Keyboard
	IRQ 2	Interrupt from controller 2 (cascade)
5	IRQ 8	Real-time clock
6	IRQ 9	Cascaded to INT 0AH (IRQ 2)
7	IRQ 10	Audio (option) / PCMCIA
8	IRQ 11	Audio (option) / PCMCIA
9	IRQ 12	PS/2 mouse
10	IRQ 13	INT from coprocessor
11	IRQ 14	Hard disk controller / CD-ROM controller
12	IRQ 15	Docking
13	IRQ 3	Serial communication port 2
14	IRQ 4	Serial communication port 1
15	IRQ 5	Parallel port (option)
16	IRQ 6	Diskette controller
17	IRQ 7	Parallel port (option)



A PCMCIA card can use IRQ 3, 4, 5, 7, 9 and 11 as long as it does not conflict with the interrupt address of any other device.

B.4 DMA Channels

Controller	Channel	Address	Function
1	0	0087	Spare
1	1	0083	Audio (option)
1	2	0081	Diskette
1	3	0082	Audio (option)
2	4	Cascade	Cascade
2	5	008B	Audio (option)
2	6	0089	Spare
2	7	008A	Audio (option)