FCC ID: L4PK8500MX15

EUT: NOTEBOOK PERSONAL COMPUTER

KAPOK COMPUTER CO.,

USER'S MANUAL

FEDERAL COMMUNICATIONS COMMISSION

NOTE

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection. This equipment generates, uses and can radiated radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

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

Shielded interface cables (except headphone, mouse, line in, V-video, microphone data cable)must be used in order to comply with emission limits.

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

Table of Contents

Chapter 1: Getting Started

Chapter 2: Operation

Chapter 1: Getting Started

This chapter provides a short introduction and tutorial that will familiarize you with the Notebook system and get you up and running quickly.

Unpacking

Carefully unpack the Notebook Computer and the included accessories (Figure 1-1). If there is any discrepancy or problem, contact your dealer immediately. Be sure to save the packing materials in the event that the notebook needs to be shipped at some point in the future.

- Notebook Computer.
- Carrying Bag.
- Power Adapter.
- Power Cord.
- User Manual.
- PS/2 Transfer Cable.
- Battery Pack.
- Utilities Diskette(s).

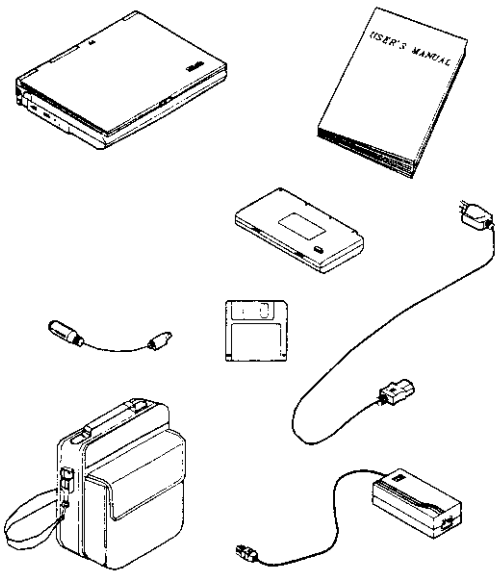


Figure 1-1

Operating Environment

As with any other precision electronic equipment, proper care and operation of your Notebook will provide long and reliable service. Be sure the computer system is not:

- Exposed to excessive heat or direct sunlight.
- Subjected to shock or vibration.
- Exposed to strong magnetic fields.
- Left in a place where foreign matter or moisture may enter the system.

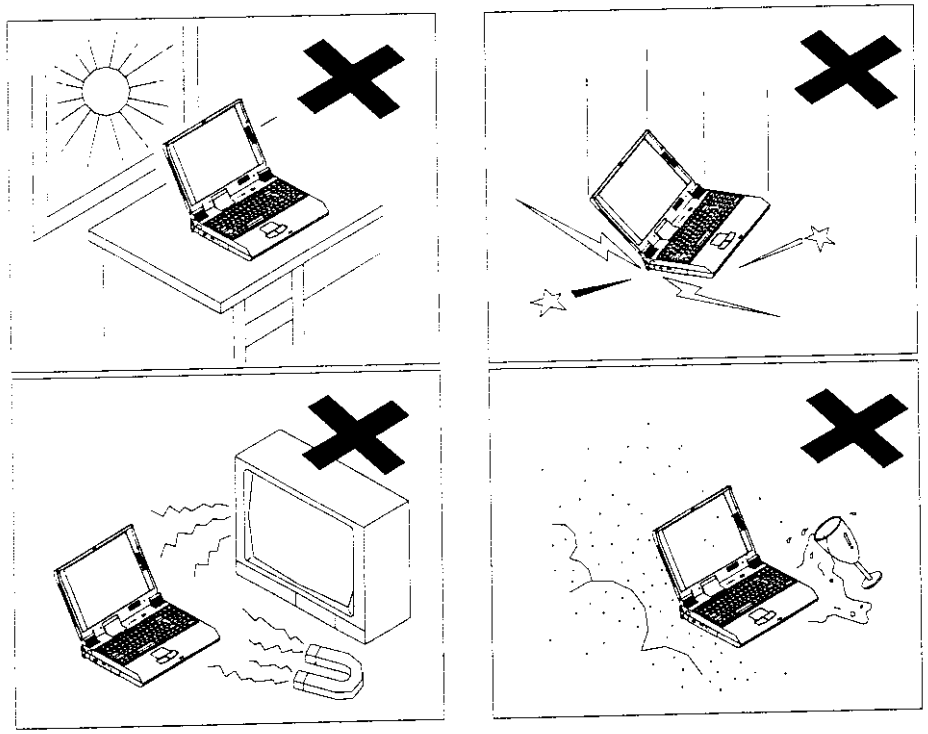


Figure 1-2

Quick Start-up

Powering the System

AC Power Adapter

Use only the power adapter that comes with your Notebook Computer. System operation with an incorrect power adapter will cause damage to the Notebook and its components.

1. Plug the power adapter to the AC-in socket on the rear panel of the Notebook.
2. Connect the power cord to the power adapter.
3. Plug the AC power cord into a properly grounded outlet (Figure 1-3).
4. Refer to Chapter 1, System Status Indication for more information on system power status.

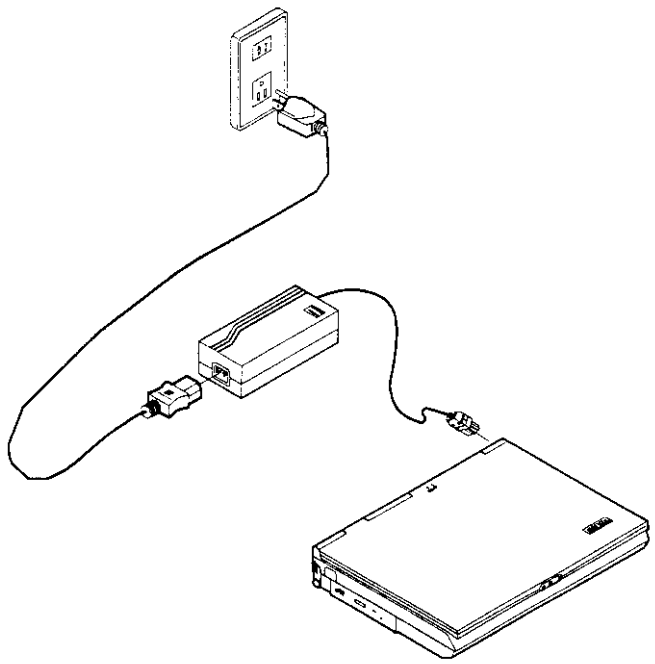


Figure 1-3

Battery Pack

Power for continuous portable operation of the Notebook is provided by a battery pack. When using the battery no external power source is required. However, the actual operating time will be determined by the application used and the configuration set.

Inserting

1. Turn the Notebook over.
2. Position the battery pack at a slight angle and firmly fit it into the Notebook.
3. Install the four screws that fasten the battery pack (Figure 1-4).

Removing

1. Turn the Notebook over.
2. Remove the four screws that fasten the battery pack.
3. Carefully lift the battery pack from the Notebook.

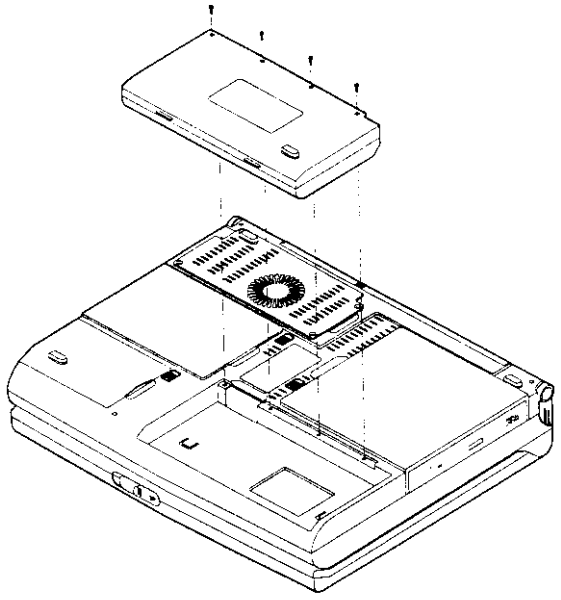


Figure 1-4

Recharging by AC Power

The system's battery pack will recharge whenever the system is plugged into the AC power supply, regardless of whether the system is being operated or not.

- You may connect the AC power adapter to the Notebook Computer at any time to begin recharging the system's battery pack. You do not need to turn off the system's power.
- Hours may be needed to recharge the battery pack.
- Please refer to Chapter 1, System Status Indication for more information concerning battery charge status.

Proper Handling of the Battery Pack

- Do not attempt to disassemble the battery under any circumstances.
- The battery may explode if exposed to fire or high temperatures.
- Avoid short circuiting the battery by preventing contact between the metal terminals (+, -).

Top-Front View

Refer to Figure 1-8 for their locations.

LCD Panel

The Notebook provides you with a large LCD panel. Depending upon the model you have purchased, it can either be a 15.1 XGA (1024x768 pixels) compatible, using TFT technology The LCD panel is driven by a PCI local bus video controller with 4MB video memory.

Stereo Speakers

Two built-in speakers provide clear stereo sound.

Trackpad and Buttons

The pointing device features a sensitive glide pad for precise movements. It functions like a two-button mouse does. The right trackpad button is equivalent to the right mouse button; the left trackpad button is equivalent to the left mouse button.

Keyboard

The Notebook utilizes a 102-key Windows 95 keyboard that is integrated with the numeric keypad. It is detachable for various language versions. You may refer to Chapter 2: Operation for more information.

Microphone

This is the built-in microphone.

System Status LED Indicators

The LED indicators display the system's operation status.

Icon	Color	Description
⏻	Green	Battery power is used with system turned on.
	Red	AC power is used with system turned on or off.
🔋/🔋	Green	Battery is fully charged.
	Red	Battery is being charged.
	Blinking Red	Battery power is critically low.
🖴	Green	The IDE device is being accessed.
☾	Green	The system has entered the configured suspend mode (either POS or STR mode).

Power Button

Icon	Description
⏻	Use this button to turn the system on or off.
	After proper configuration under SCU, this button can be used as suspend/resume hot button (refer to Chapter 3: BIOS Utilities, Power Menu for more information).

Note: After turning off the system, wait for a few seconds to power it on again.

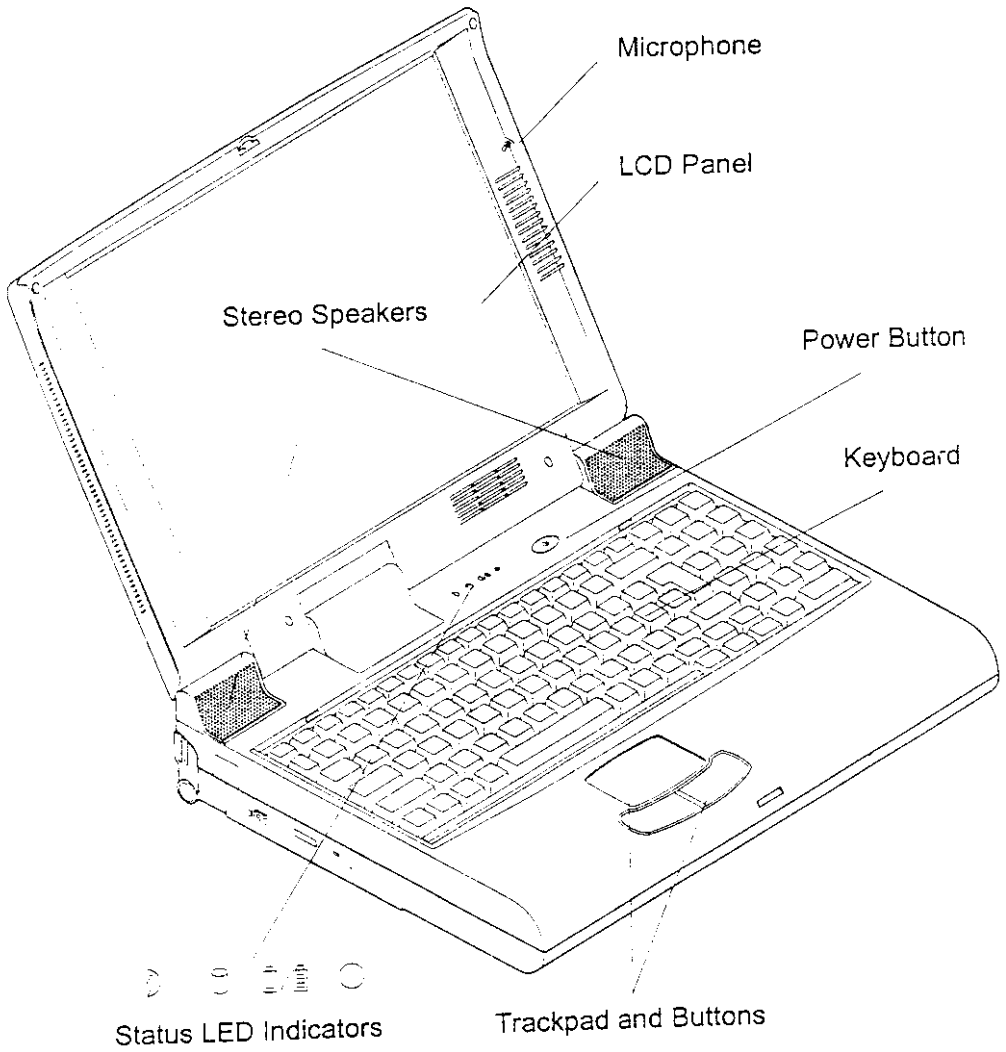

Microphone
LCD Panel
Stereo Speakers
Power Button
Keyboard
Status LED Indicators
Trackpad and Buttons

Figure 1-8

Rear View

AC-in Socket

Plug the AC adapter into this socket for power supply. To disconnect, pull the plug (not the cord) directly back.

Security Connector

The Security Connector is used to protect your Notebook from being stolen. Wrap the steel cable around your desk. Next, insert the locking device into this security connector.

Parallel Port

This parallel port supports EPP (Enhanced Parallel Port) and ECP (Extended Capabilities Port) modes.

S-video Jack

Use this jack to transmit video signal to a TV set. You may need to select the video standard (NTSC/PAL) for video display (please refer to Chapter 3, Components Menu for more information).

RCA Jack

This jack accepts analog composite signals from external video devices, e.g. camera, CCD.

Serial Port

This port is UART 16C550 compatible. It features a 9-pin connector for the addition of an external mouse for example.

External Monitor (CRT) Port

This port is used for transmission of the display to an external monitor. Simultaneous display with the LCD panel is available.

Dual PS/2 Type Ports

A PS/2 type mouse and keyboard may be connected to the system using these ports. However, you cannot connect the same type of PS/2 devices to both ports simultaneously.

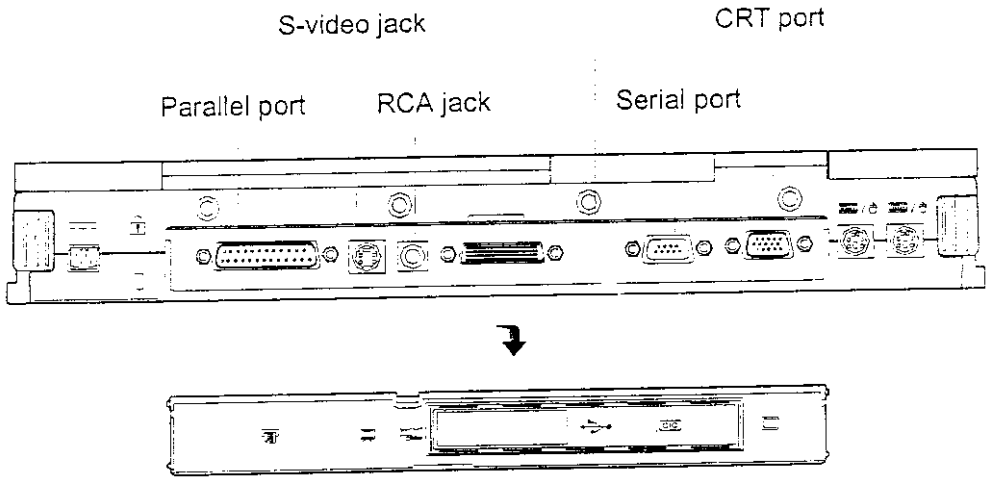


Figure 1-9

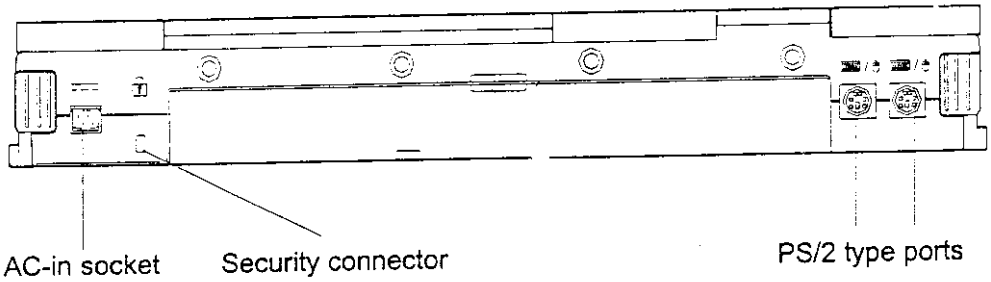


Figure 1-10

Right-side View

PC Card Sockets

One Type III or two Type II PC cards may be used. Both sockets will expand the system capabilities when a PC card is inserted. To eject the PC card, press the appropriate eject button (Figure 2-15).

2.5" Hard Disk Drive

The 2.5" hard disk drive is removable. It accepts any 2.5" IDE hard disk drive with a height of 12.7mm or less. Refer to Chapter 2: Operation, for more information.

3.5" Floppy Disk Drive

The Notebook comes standard with a 1.44MB floppy drive installed. Press the button on its top-right side to eject the diskette. The floppy disk module can be replaced with additional drive units, such as a secondary 2.5"/3.0" hard disk drive or Zip drive (Refer to Chapter 2: Operation, for more information).

Speaker-out Jack

Headphone and speakers can be attached to the system through this jack.

Line-in Jack

External audio source can be fed into the Notebook through this jack.

Microphone-in Jack

Use this jack to connect a microphone to the system.

Ventilation

The Notebook provides ventilation to dissipate the system's operating heat. Do not block or obstruct it during operation.

Right-side Stand

Move this stand (together with the left one) to adjust the typing angle. **If a high speed CPU is installed on the system, erecting the stands on both sides will be necessary for heat dissipation during operation** (Figure 1-12).

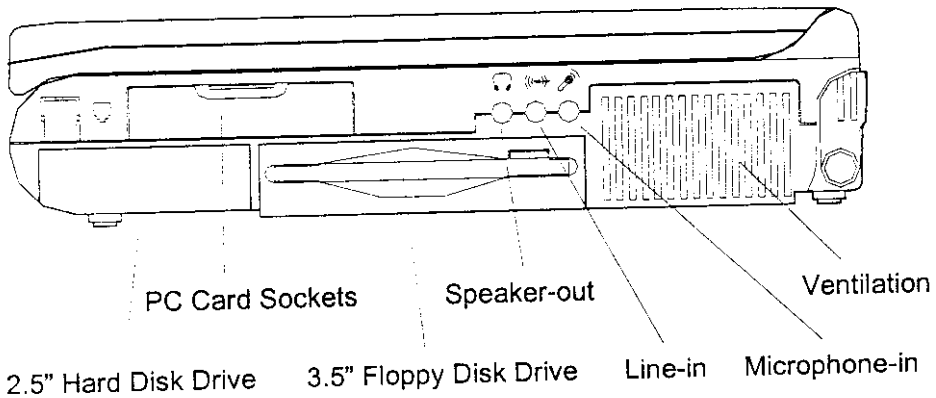


Figure 1-11

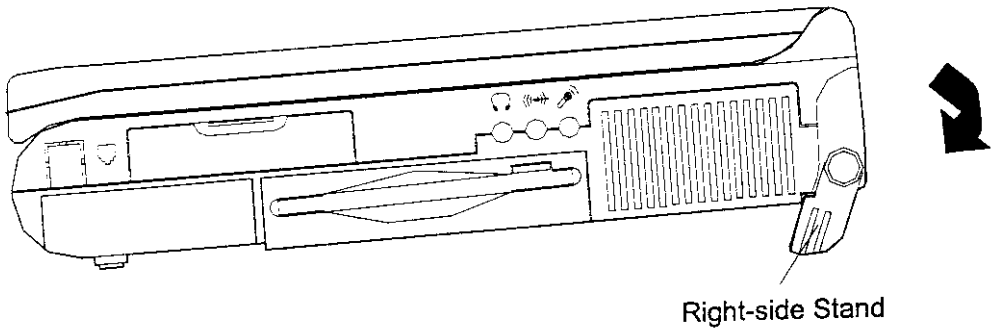


Figure 1-12

Left-side View

5.25" CD-ROM Drive

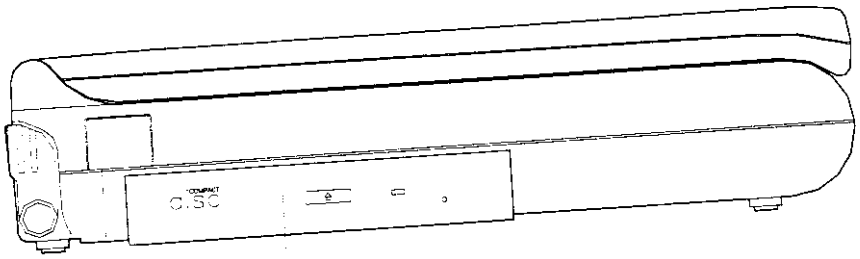
The 5.25" IDE CD-ROM module is designed to be removable. The eject button is located in the middle of the front cover of the CD-ROM drive. Pressing it will release the CD tray.

Infrared

The system adopts infrared technology as the interface for simple, fast and convenient data exchange from the Notebook to an infrared-compatible device. It implements IrDA (HPSIR), Amplitude Shifted Keyed IR (ASKIR), and Fast IR (FIR). No object should be blocking the line of sight between the Notebook and the infrared-equipped device. For further information refer to the manual of the wireless device you wish to connect on how to use the point-and-shoot operation.

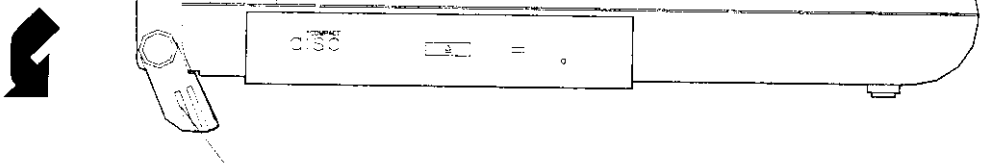
Left-side Stand

Move this stand (together with the right one) to adjust the typing angle. **If a high speed CPU is installed on the system, erecting the stands on both sides will be necessary for heat dissipation during operation** (Figure 1-14).



Infrared CD-ROM Drive

Figure 1-13



Left-side Stand

Figure 1-14

Chapter 2: Operation

The Notebook has many advanced features to help you with your computing work. This chapter describes each of the Notebook's hardware features and shows you how to use them.

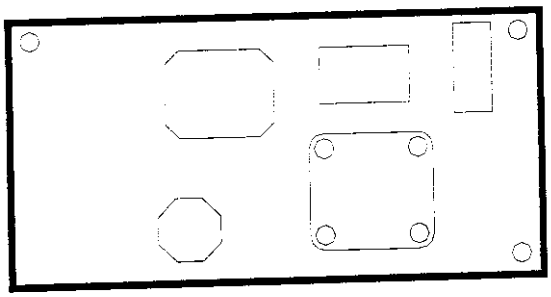
Before you begin working with any internal components of the Notebook, remove the battery and disconnect the AC power adapter.

Make sure that you wear an anti-static wrist strap to ground yourself before working with any internal components of the Notebook. Static electricity may damage components beyond repair.

Upgrading Processor Module

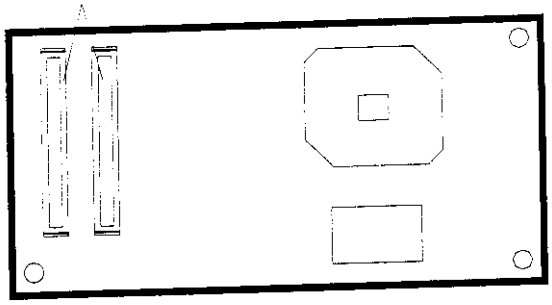
The Notebook Computer features the structure of Intel's Mobile Module (IMM). The Processor Module incorporates an Intel Pentium Mobile processor, secondary cache, and the Intel PCIset "Northbridge" system controller, voltage regulator, and thermal sensor on a single printed circuit board.

The Processor Module connects to the mainboard through two board-to-board connectors. This design facilitates users to easily upgrade their system by simply replacing the Processor Module.



View from Top

Two Connectors



View from Bottom

Figure 2-1

Replacing Processor Module

1. **Remove all power sources** (AC power and battery).
2. Turn the Notebook over.
3. Remove the CPU cover.
4. Remove the screws that fasten the heat sink mounted on the Processor Module.
5. Carefully detach the Processor Module from the mainboard (Figure 2-2).

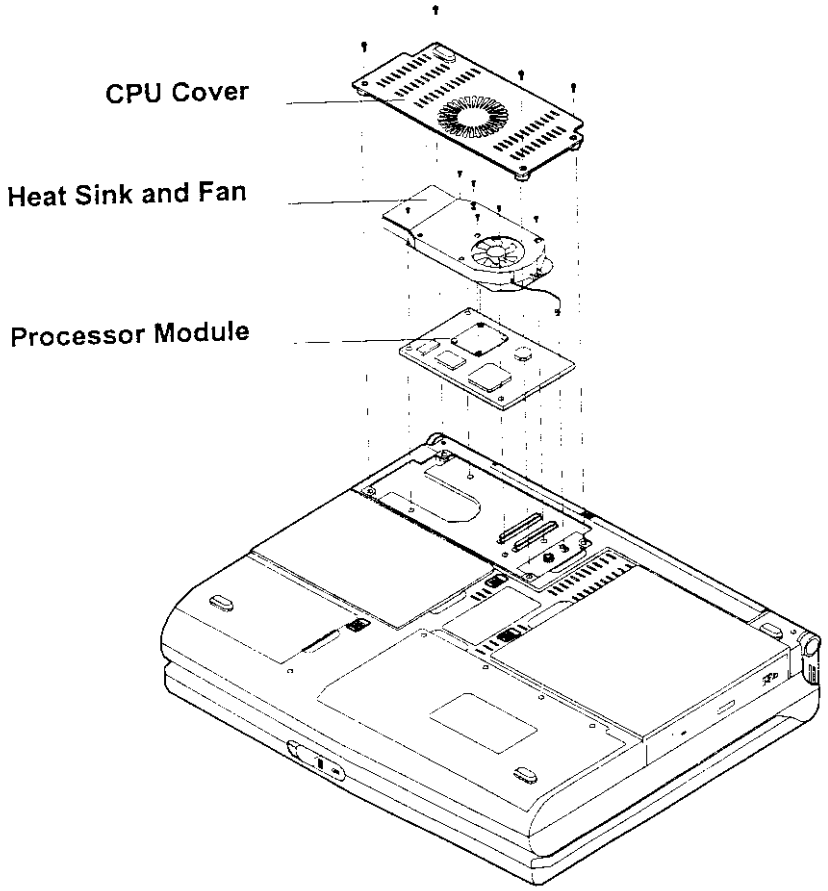


Figure 2-2

Setting DIP Switch

Remove the keyboard to reveal the system's mainboard. Locate the DIP Switch (SW1) to set the correct configuration for the following purpose:

- Flash ROM BIOS update

In order to keep up with the latest system BIOS, your Notebook may be upgraded. Consult your dealer for further information. The DIP Switch needed to be set in the **On** position when updating the existing system BIOS. The DIP Switches should be reset to the **Off** position after BIOS updating is complete.

DIP Switch (SW1)		Purpose
SW1-1	SW1-2	Flash ROM BIOS
Off	Off	Existing BIOS
On	On	Updating BIOS

Accessing DIP Switch (SW1)

1. Turn the system power off.
2. Press the two keyboard latches so that the keyboard can be elevated from its normal position (Figure 2-3).
3. Carefully lift the keyboard assembly out so that the mainboard is exposed. Locate the DIP Switch SW1 to set the configuration (Figure 2-4).

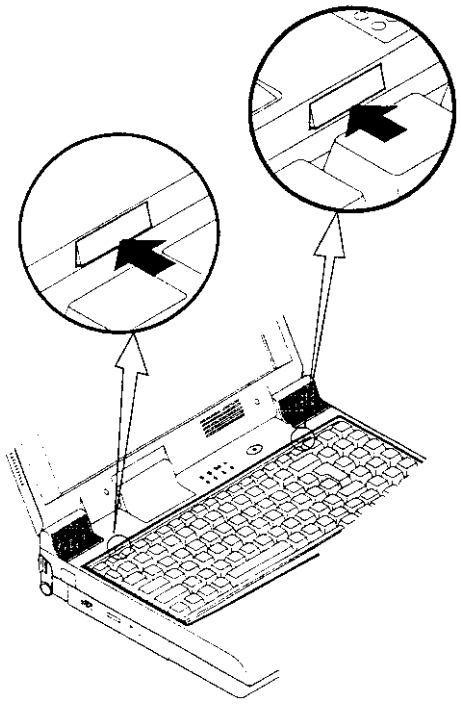


Figure 2-3

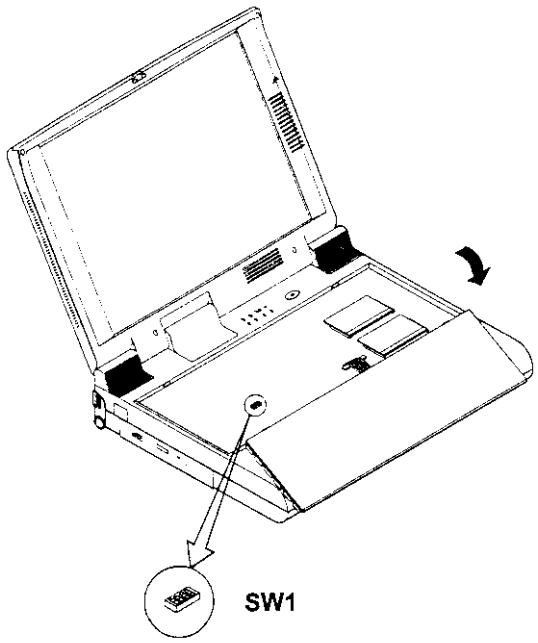


Figure 2-4

Expanding Memory

The system has two memory sockets for different RAM modules to expand the memory up to 128MB. These RAM modules are of a 144-pin SODIMM (Small Outline Dual In-line Memory Module) type. The Notebook supports Fast Page Mode, EDO, and SDRAM operation. With the following memory configurations the total memory size will be automatically detected by the POST routines:

Bank 0 (64-bit)	Bank 1 (64-bit)	Power	Speed	Total Size
(1Mx16)x4	None	3.3V	60ns	8MB
(1Mx16)x4	(1Mx16)x4			16MB
(1Mx16)x8	None			16MB
(2Mx8)x8	None			16MB
(1Mx16)x8	(1Mx16)x4			24MB
(4Mx16)x4	None			32MB
(2Mx8)x8	(2Mx8)x8			32MB
(1Mx16)x8	(1Mx16)x8			32MB
(4Mx16)x4	(4Mx16)x4			64MB
(4Mx16)x8	None			64MB
(8Mx8)x8	None			64MB
(4Mx16)x8	(4Mx16)x4			96MB
(4Mx16)x8	(4Mx16)x8			128MB
(8Mx8)x8	(8Mx8)x8			128MB

Accessing the Memory Sockets

1. Turn the system power off.
2. Press the two keyboard latches so that the keyboard can be elevated from its normal position (Figure 2-3).
3. Carefully lift the keyboard assembly out so that the mainboard is exposed. Locate the memory sockets (Figure 2-5).

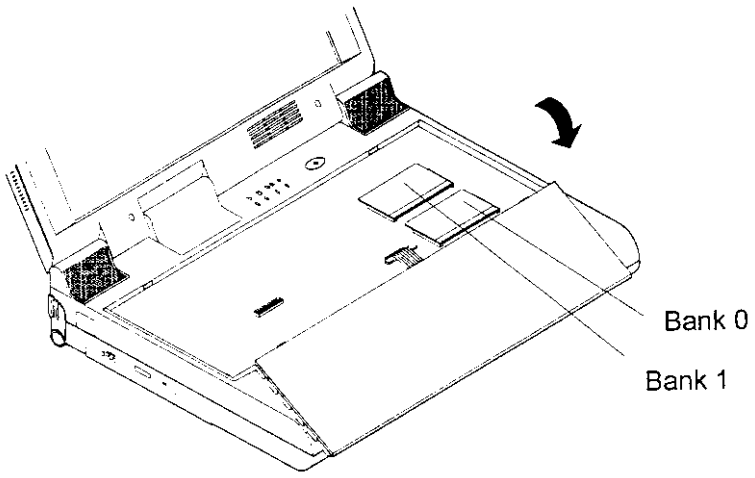


Figure 2-5

Installing Memory Module

Follow the steps below to install the memory module:

1. Turn the system power off.
2. Press the two keyboard latches so that the keyboard can be elevated from its normal position (Figure 2-3).
3. Carefully lift the keyboard assembly out so that the mainboard is exposed. Locate the memory sockets (Figure 2-5).
4. Position the memory module at a slight angle and fit its connectors into the socket firmly. Push the module down and ensure it locks into place (Figure 2-6).
5. Reinstall the keyboard assembly.

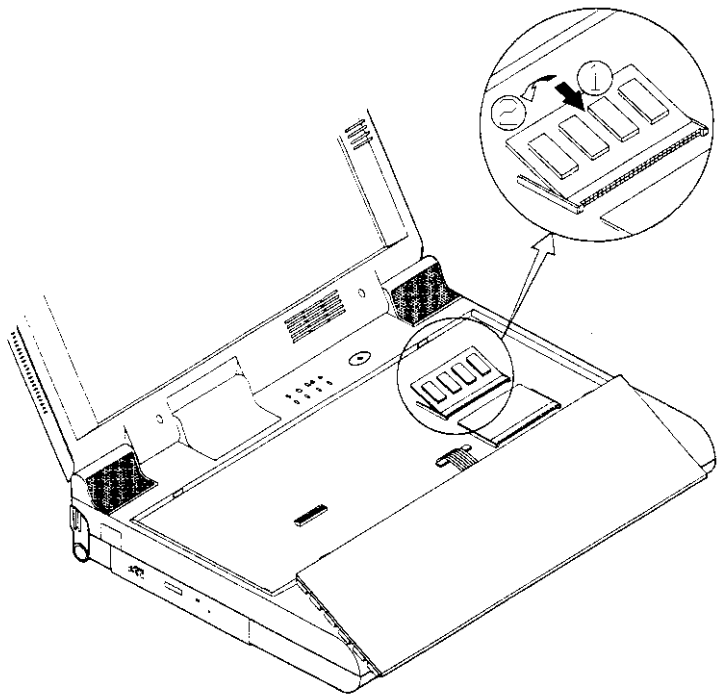


Figure 2-6

Removing Memory Module

1. Turn the system power off.
2. Press the two keyboard latches so that the keyboard can be elevated from its normal position (Figure 2-3).
3. Carefully lift the keyboard assembly out to expose the mainboard. Locate the memory sockets (Figure 2-5).
4. Gently pull the two latches on both ends of the module outward. The module will pop up (Figure 2-7).
5. Remove the memory module.
6. Reinstall the keyboard assembly.

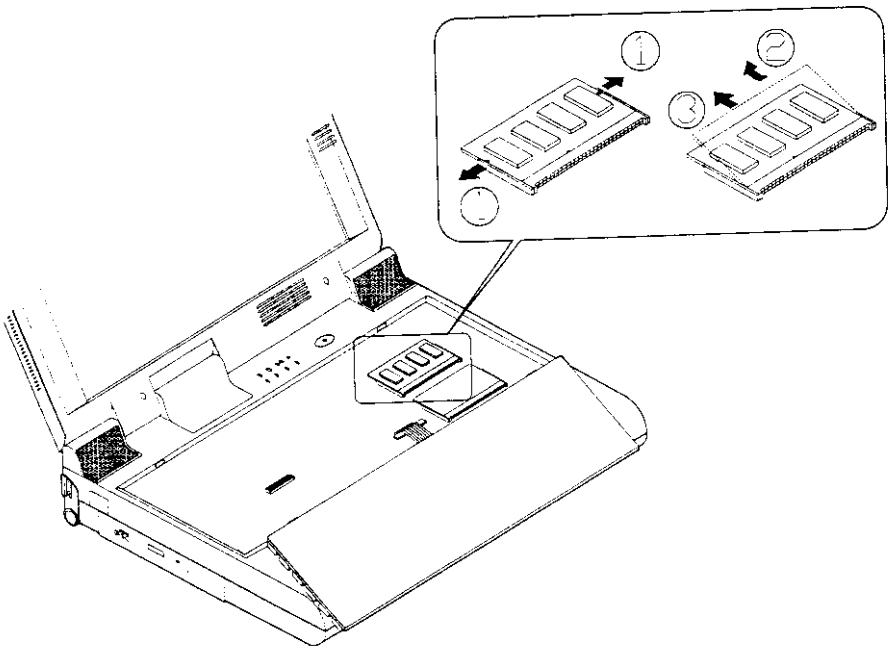


Figure 2-7

Using Hard Disk Drive

The hard disk drive is mounted in a removable case and may therefore be taken out to accommodate other 2.5" IDE hard disk drives with a height of 12.7mm. The system supports drives with capacities greater than 528MB through the Logical Block Addressing (LBA) mode. It also supports Programmed I/O (PIO) mode 4, Bus Master IDE and provides a high performance data transfer rate at speeds up to 33 MBytes/second (ATA-33).

Removing

1. Turn the system power off.
2. Turn the Notebook over.
3. Locate the Hard Disk Drive latch.
4. Press the latch in the direction indicated and slide the hard disk drive out of the Notebook (Figure 2-8).

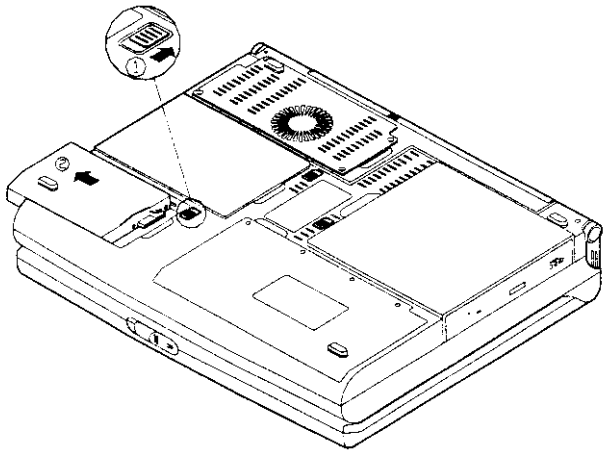


Figure 2-8

Inserting

When inserting the hard disk drive back into the Notebook, be sure to seat the hard disk drive firmly. You will feel the drive click into position when it is seated properly.

Replacing Hard Disk Drive

The hard disk drive is contained within a case. Two screws on each side of the case need to be removed so that the hard disk drive can be taken out of the case to replace with another one (Figure 2-9). **The location of the two screws may be varied depending on different hard disk models**. Gently disconnect the cable from the hard disk drive when taking it out of the case. Be careful not to bend any pins or crimp the cable.

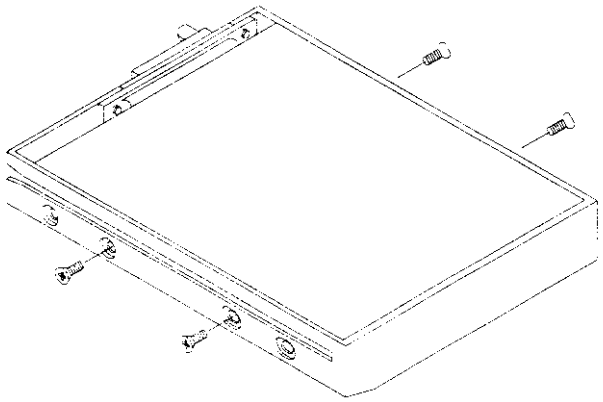


Figure 2-9

Using Floppy Disk Drive

The Notebook comes standard with a 1.44MB, 3.5" floppy disk drive module. It is labeled drive A: and may be used as a boot device if properly set.

You may replace the floppy disk module with the following options: a 2.5" secondary hard disk drive (of 12.7mm high or less), a 3.0" secondary hard disk drive (of 12.5mm high or less), or a 100MB Zip drive (of 15mm high). Contact your dealer for more details regarding these options.

Inserting/Removing Diskettes

When using the floppy drive, always insert your floppy diskette label-side up (Figure 2-10). To remove your diskette, press the eject button on the top-right corner of the floppy drive.

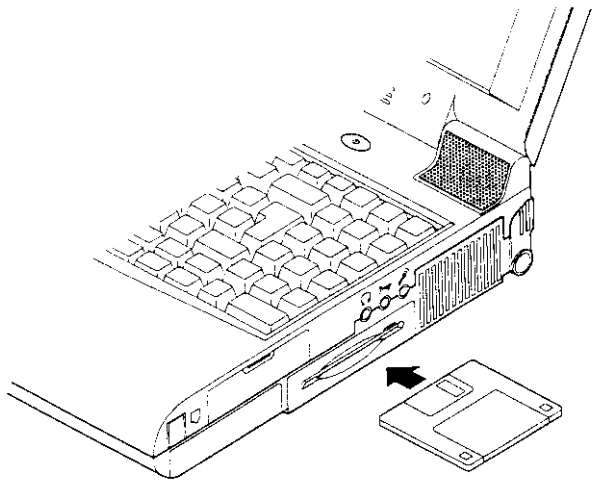


Figure 2-10

Replacing Floppy Disk Drive

1. Turn the system power off.
2. Turn the Notebook over.
3. Locate the Floppy Disk Drive latch.
4. Press the latch in the direction indicated and slide the floppy disk drive out of the Notebook (Figure 2-11).
5. Slide the replacement drive (2.5"/3.0" secondary HDD or 100MB Zip drive) firmly into the Notebook Computer.

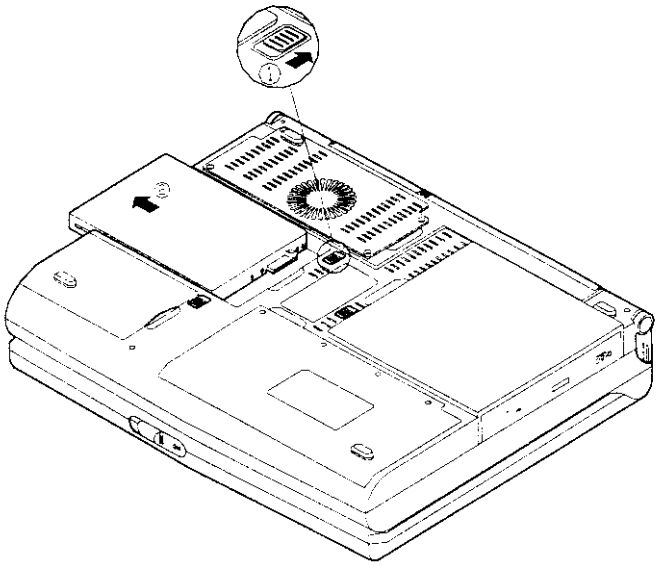


Figure 2-11

Using CD-ROM

The Notebook comes standard with a removable 5.25" CD-ROM module. It is labeled drive D: and may be used as a boot device if properly set.

Do not disassemble the CD-ROM module. Only certified technicians should perform repairs to the CD-ROM module.

To insert a CD, press the **Eject Button** and place the CD on the **Disc Tray** label-side facing up. Push the CD tray in and you are ready to start. The **Busy Indicator** will light up while data is being accessed or while an audio CD is playing. When power to the system is unexpectedly interrupted, insert an instrument such as a straightened paper clip into the **Emergency Eject Hole** to manually eject the tray (Figure 2-12).

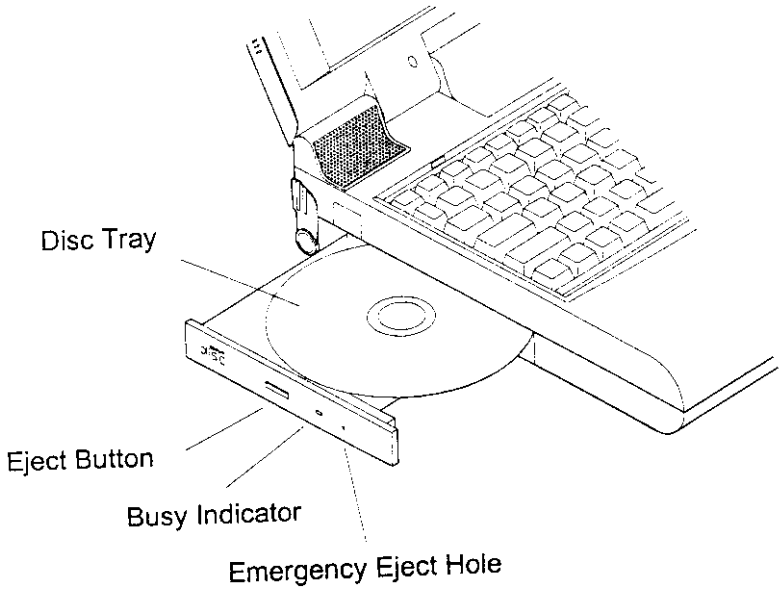


Figure 2-12

Removing CD-ROM Module

1. Turn the system power off.
2. Turn the Notebook over.
3. Locate the CD-ROM latch.
4. Press the latch in the direction indicated and slide the CD-ROM module out of the Notebook (Figure 2-13).

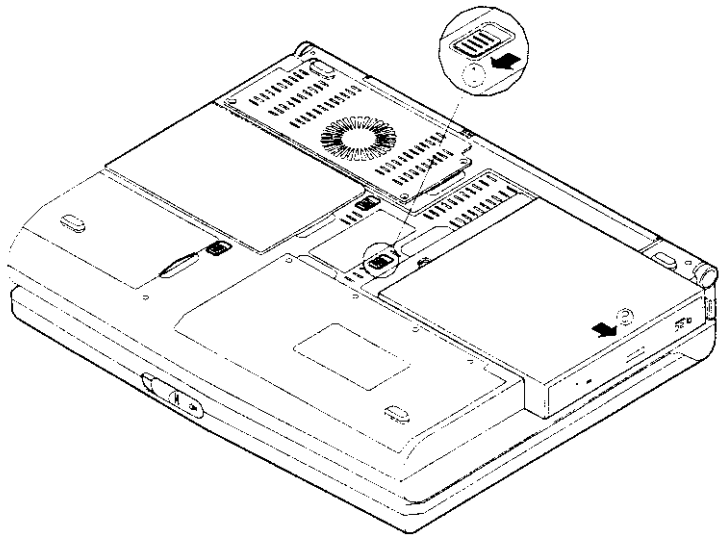


Figure 2-13

Loading Compact Discs

1. Turn on the power.
2. Press the CD-ROM eject button; the disc tray will pop out partially.
3. Pull the disc tray out.
4. Carefully load the CD on the disc tray with label-side facing up. Press it gently to ensure it fits into place (Figure 2-14).
5. Push the tray into the computer to close it.

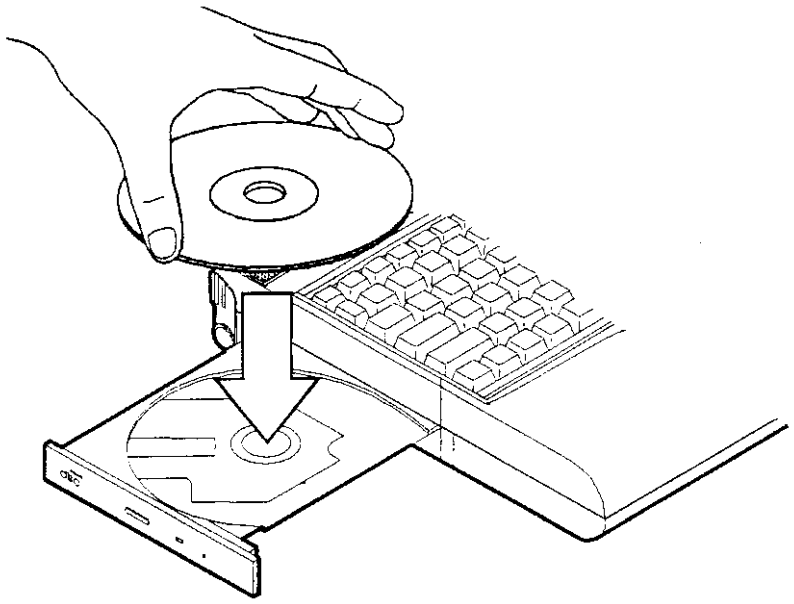


Figure 2-14

Handling of Compact Discs

Proper handling of your CDs will prevent them from being damaged and ensure the accessibility of data stored on them.

- Hold the CD by the edges; do not touch the surface of the disc.
- Use clean, soft, dry cloth to remove dust or fingerprints.
- Do not write on the surface using pen.
- Do not attach any paper or other materials to the surface of the disk.
- Do not store or place the CD in areas where it will be exposed to high temperatures.
- Do not use benzine, thinners, or other cleaners to clean the CD.
- Do not bend the Compact Disc.
- Do not drop or subject the CDs to shock.

Using PC Card Sockets

The Notebook provides system expansion capabilities with two PC card sockets (previously referred to as PCMCIA). PC cards to be inserted can be LAN, fax/modem, communication devices, or expanded memory. Both sockets support 5V/3.3V 16-bit PC cards and 3.3V 32-bit PC cards (referred to as **CardBus**). There are three types of PC cards. Type I measures 3.3mm thick; Type II 5.0mm; and Type III 10.5mm.

The PC card sockets on the right-side panel support one Type III card (equivalent to two Type II cards). The lower socket (socket A) is capable of **ZV (Zoomed Video)** (Figure 2-15).

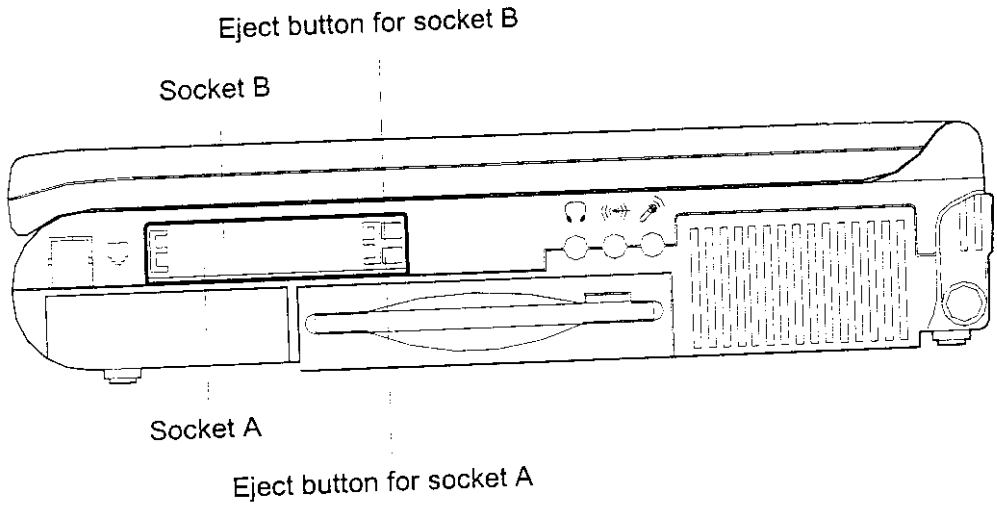


Figure 2-15

Inserting PC Cards

1. Open the access door (Figure 2-16).
2. Align the PC card with the slot and push it in firmly until it locks into place (Figure 2-17).

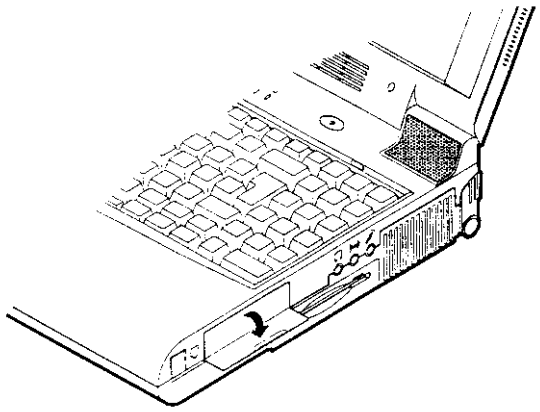


Figure 2-16

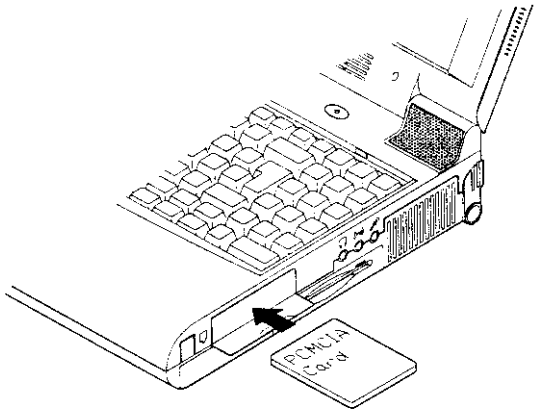


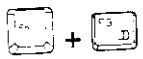
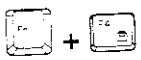
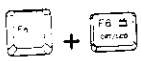
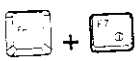
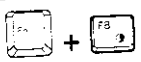
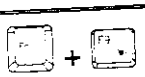
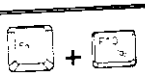
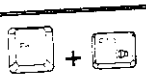
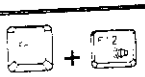
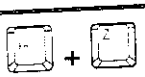
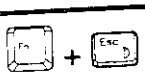
Figure 2-17

Removing PC Cards

To remove a PC card, press the appropriate eject button and the card will be ejected from its slot (please refer to Figure 2-15).

Using Hot Keys

Located on the bottom-left edge of the keyboard layout is a colored **Fn** key. It is a special feature found only on the Notebook that provides for key combinations with other keys for easy access to system features. Hold down the **Fn** key while pressing other key as below:

Hot Keys	System Features	Remark
	Expand LCD display	
	Control display top/center position	
	Toggle CRT/LCD/LCD+CRT/TV/ CRT+TV	
	Decrease LCD contrast	Dual scan LCD only
	Increase LCD contrast	Dual scan LCD only
	Decrease LCD brightness	
	Increase LCD brightness	
	Decrease audio volume	
	Increase audio volume	
	Turn audio mute on/off	
	Put the system in a suspend state for power management	

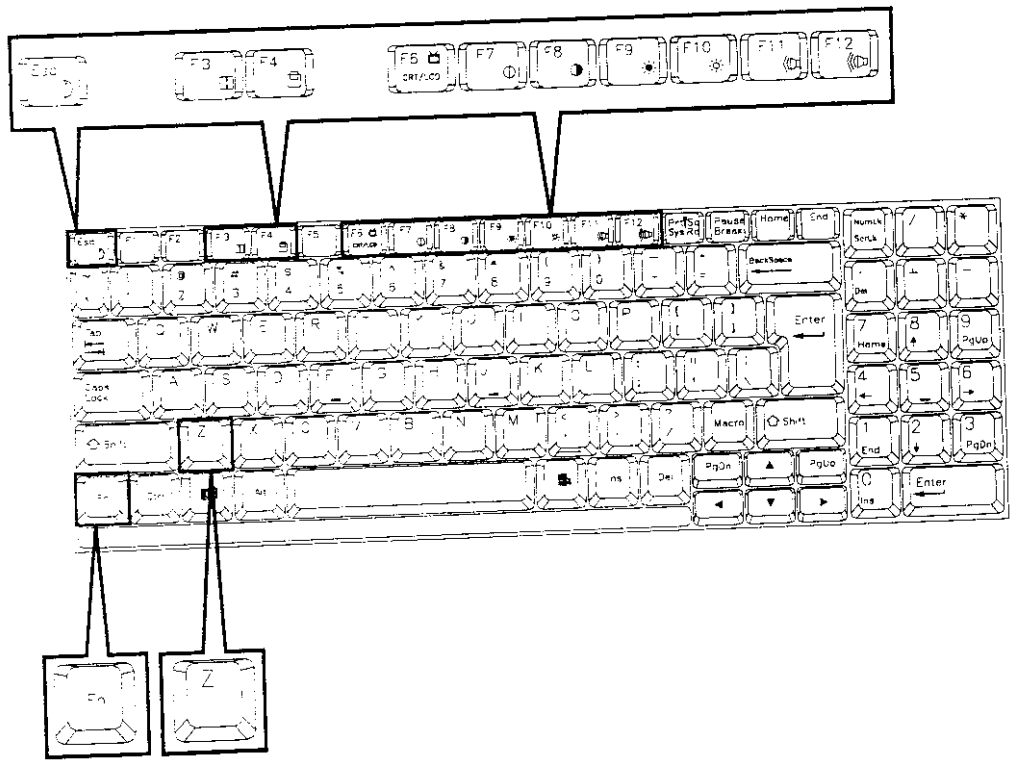


Figure 2-18

Using Numeric Keypad

The Notebook features a 102-key keyboard with an integrated numeric keypad for easy numeric data input (Figure 2-19).

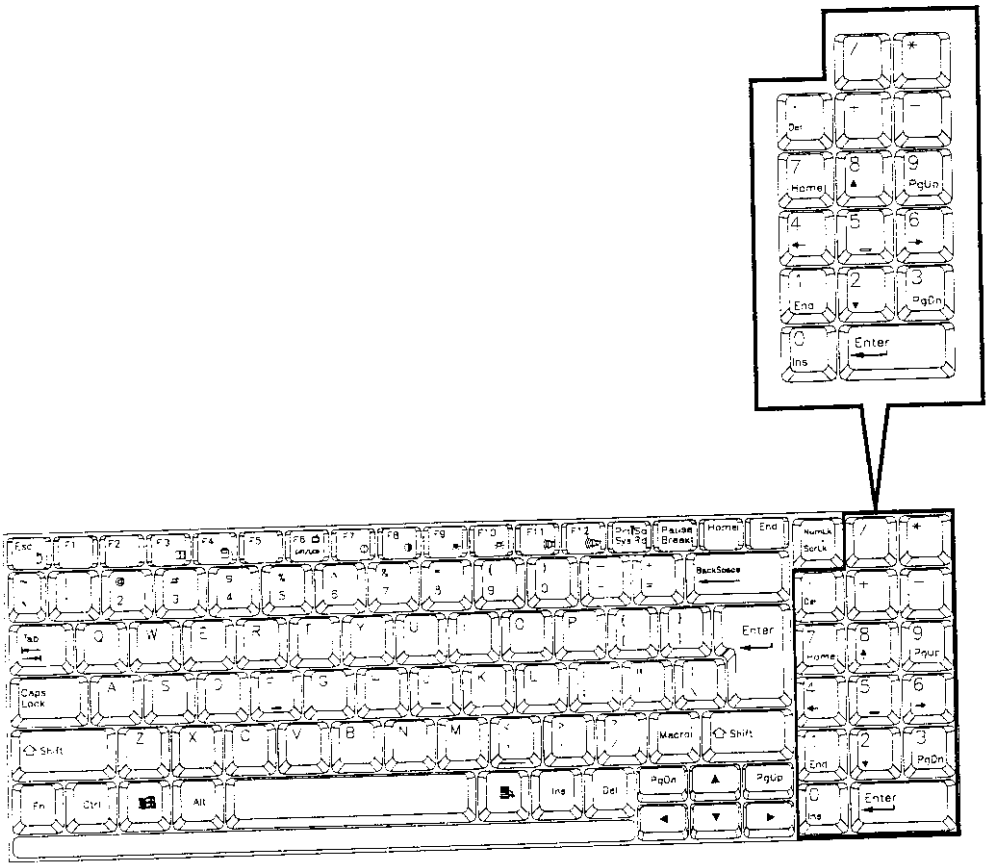


Figure 2-19

Windows 95 Special Keys

Application Key

When the user presses the unmodified Application key, the application brings up the Context menu (a pop-up menu) at the current selection, much as pressing the right mouse button does in some applications today. Pressing the Application key does not disturb the current cursor position.

For compatibility with 101-key keyboards, the function of the Application key should correspond to existing keys – for example, the key combination SHIFT+F10 could correspond to the Application key function.

Windows Key

When the user presses the Windows key, the Start menu appears. It can be used to modify other keys.

TV Output

The Notebook is equipped to send video signals to a TV set through the S-video jack. Different countries use different TV broadcast standards. A TV set must comply with the appropriate standard to properly receive broadcast signals. In the United States, TV sets are built to comply with the NTSC standard. Many countries in Europe and Asia use the PAL standard. You should refer to your TV user guide to make sure which TV standard you are using and enter the System Configuration Utility (SCU) to specify the proper TV mode (please refer to Chapter 3: BIOS Utilities, Components Menu for more information).

TV-output capabilities allow display of realistic game, video, and multimedia on a large-screen TV. The Notebook uses hardware filtering technologies to reduce flicker for better definition.

LCD Panel

The Notebook Computer features the LCD panel display with the following:

- PCI local bus controller.
- 4MB video RAM (SGRAM type).
- Capability to support 1024x768 (XGA) resolution TFT display.
- Ability to transmit video signals to other video display devices including:
  - VGA monitor (CRT).
  - TV set.
- A VPM (Video Port Manager) provider, the driver-level software used, to gain direct control of the display hardware for video input from:
  - ZV-capable PC card.

Using Power Management

The Notebook system provides you with various modes to manage its power consumption while maintaining system performance. Please refer to Chapter 3: BIOS Utilities, System Configuration Utility, Power Menu for more information.

Advanced Power Management (APM 1.2)

The Notebook provides built-in Advanced Power Management (APM 1.2) support to reduce power consumption. APM function varies depending on the operating system you are using. **Some operating systems do not support APM, such as Windows NT, and therefore, cannot take advantage of the system's capabilities in this area.**

Advanced Configuration and Power Interface (ACPI)

The ACPI interface gives the operating system (OS) direct control over the power management and Plug and Play functions of a computer. The operating system can perform the functions covered by the ACPI specification, such as system power management, device power management, and thermal management.

Powered On Suspend (POS)

Of the three suspend modes, Powered-On-Suspend saves the least amount of power. However, it takes the shortest time to return to full operation.

Resume from POS Mode

The system may be resumed from Powered-On-Suspend mode by:

- Alarm resume (month/day/hour/minute)
- Modem ring
- Any keyboard key pressed
- Depressing the power button (if configured as Suspend/Resume function under SCU)
- Opening the display lid (only if the suspend mode is initiated by closing the display lid)

Suspend To RAM (STR)

Suspend-To-RAM mode is the medium level of system power management.

Resume from STR Mode

The system may be resumed from Suspend-To RAM mode by:

- Alarm resume (month/day/hour/minute)
- Modem ring
- Depressing the power button (if configured as Suspend/Resume function under SCU)
- Opening the display lid (only if the suspend mode is initiated by closing the display lid)

Global Standby

In Global Standby mode, the CPU clock will be stopped and most controllable peripheral devices will be powered off. If the idle timer expires before any system activity is detected, the system will change from Standby mode into Suspend mode.

Suspend and Resume

When at extremely low power the system will halt operations yet retain all its programming. This is called **Suspend** Mode. The Suspend Mode features three levels: Powered-On-Suspend (POS) mode, Suspend-To-RAM (STR) mode, and Suspend-To-Disk (STD) mode.

Be sure not to initiate the Suspend Mode when any of the disk drives is accessed such as HDD, FDD and CD-ROM drive.

The system operation can be returned to exactly where it was suspended when wake-up event occur. This is called **Resume**.

Suspend To Disk (STD)

Suspend to Disk is a 0-volt suspend mode for system power management. STD mode saves the maximum power but takes the longest time to return to full operation.

1. Use your operating system's FDISK program to delete all partitions of the hard disk if any already exist on the target drive.

2. Boot the system from the A: drive and run the 0VMAKFIL.EXE Utility to create the Suspend to Disk partition on the hard disk of a size that will accommodate **the installed DRAM (n) plus 4MB integrated video RAM**.

   A:\>0VMAKFIL /Pn

   For example, if the system DRAM is 32MB, 0VMAKFIL will create a partiton size of approximately 36MB.

   A:\>0VMAKFIL /P32

   Note: Rewrite the sector signatures if you need to partition the hard disk again.

   C:\>0VMAKFIL /PW

3. Re-partition the hard disk using your operating system's FDISK program.

Resume from STD Mode

The system may be resumed from Suspend-To-Disk mode by:

- Power back on
- Alarm resume (month/day/hour/minute)
- Opening the display lid (only if the suspend mode is initiated by closing the display lid)

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Appendix A: Specifications

This appendix describes the features and specifications for the Notebook Computer.

Processor Module

- Intel Mobile Module (IMM) structure.
- 233 MHz Intel Pentium II Processor Module.

Memory

- 3.3V power supply.
- Supports Fast Page Mode/EDO/SDRAM.
- 256KB/512KB secondary cache pipeline burst synchronous SRAM (depending on IMM).
- 8MB expandable up to 128MB.
- *8/16/32/64MB 144-pin SODIMM RAM modules (optional).*
  **(The x4 bit DRAM chips are not supported.)*

System BIOS

- 256KB flash ROM.
- PCI 2.1.
- Plug and Play 1.0a.

Display

TFT XGA (1024x768 pixels) LCD panel available.

- 4MB Synchronous Graphics RAM (SGRAM).
- Video Port Manager (VPM 1.10) for Zoomed Video (ZV) port.
- Simultaneous display with an external monitor.

- Mass Storage
  - 3.5" floppy disk drive (interchangeable).
  - 2.5" hard disk drive (12.7mm high or less).
  - 5.25" CD-ROM.
  - *2.5" (12.7mm high or less) or 3.0" (12.5mm high or less) secondary hard disk drive (optional).*

- Audio
  - Sound Blaster Pro compatible.
  - 3D stereo sound effects.
  - Stereo full duplex support.
  - 1MB ROM wavetable.
  - Built-in microphone.
  - Built-in speakers.

- PC Card Sockets
  - CardBus support.
  - One ZV-capable socket (Socket A).
  - Two Type II PC cards or one Type III PC card.

- Input/Output
  - Built-in trackpad (PS/2).
  - S-video jack for TV output.
  - RCA jack for video input.
  - External monitor (CRT) port.
  - Serial port.
  - Parallel port.
  - Dual PS/2 type ports.
  - Speaker-out jack.
  - Line-in jack.
  - Microphone-in jack.

Infrared Wireless Communication
- IrDA (HPSIR).
- ASKIR.
- Fast IR.

Power Management
- APM 1.2.
- ACPI.
- Global standby.
- Suspend and resume.

AC Power Supply
- AC input: 100~240VAC, 47~63Hz.
- DC output: 20V.
- Total output: 50W.

Rechargeable Battery Pack
- Lithium-ion battery available.
- Battery low warning.

Size & Weight
- 357mm(w)x275mm(d)x50mm(h) (14"x10.8"x1.9").
- 4.5kg (9.9lbs).

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Appendix B: I/O Port Pin Assignments

Parallel Port

Pin	Signal	Pin	Signal
1	Strobe#	14	Auto Linefeed#
2	Data 0	15	Error#
3	Data 1	16	Initialize#
4	Data 2	17	Select In
5	Data 3	18	GND
6	Data 4	19	GND
7	Data 5	20	GND
8	Data 6	21	GND
9	Data 7	22	GND
10	ACK#	23	GND
11	Busy	24	GND
12	Paper Empty	25	GND
13	Select		

Serial Port

Pin	Signal
1	DCD (Data Carrier Detect)
2	RXD (Received Data)
3	TXD (Transmitted Data)
4	DTR (Data Terminal Ready)
5	GND (Signal Ground)
6	DSR (Data Set Ready)
7	RTS (Request To Send)
8	CTS (Clear To Send)
9	RI (Ring Indicator)

RCA Jack

Pin	Signal
1	Video-In
2	GND

Monitor Port

Pin	Signal	Pin	Signal	Pin	Signal
1	BRED	6	GND	11	N.C
2	BGREEN	7	GND	12	DDCDA
3	BBLUE	8	GND	13	DHSYNC
4	N.C	9	N.C	14	DVSYNC
5	GND	10	GND	15	DDCLK

Dual PS/2 Type Ports

Pin	Signal
1	EKDA
2	N.C
3	GND
4	VCC
5	EKCLK
6	N.C

Pin	Signal
1	EMDA
2	N.C
3	GND
4	VCC
5	EMCLK
6	N.C

S-video Jack

Pin	Signal
1	GND
2	GND
3	XLUMA
4	XCRMA

PC Card Sockets

Socket A:

Pin	Signal	Pin	Signal	Pin	Signal
1	GND	35	GND	69	GND
2	A - CD3	36	A - CA5	70	A - CA19
3	A - CD4	37	A - CA4	71	A - CA20
4	GND	38	GND	72	GND
5	A - CD5	39	A - CA3	73	A - CA21
6	A - CD6	40	A - CA2	74	A - VCC - C
7	GND	41	GND	75	GND
8	A - CD7	42	A - CA1	76	GND
9	A - CE1#	43	A - CA0	77	A - VPP
10	GND	44	GND	78	A - CA22
11	A - CA10	45	A - CD0	79	GND
12	A - OE#	46	A - CD1	80	A - CA23
13	GND	47	GND	81	A - CA24
14	A - CA11	48	A - CD2	82	GND
15	A - CA9	49	A - WP#	83	A - CA25
16	GND	50	GND	84	A - VS2
17	A - CA8	51	GND	85	GND
18	A - CA13	52	A - CD1#	86	A - RESET
19	GND	53	A - CD11	87	A - WAIT#
20	A - CA14	54	GND	88	GND
21	A - WE#	55	A - CD12	89	A - INPACK
22	GND	56	A - CD13	90	A - REG#
23	A - RDYBY#	57	GND	91	GND
24	A - VCC - C	58	A - CD14	92	A - BVD2#
25	GND	59	A - CD15	93	A - BVD1#
26	GND	60	GND	94	GND
27	A - VPP	61	A - CE2#	95	A - CD8
28	A - CA16	62	A - VS1	96	A - CD9
29	GND	63	GND	97	GND
30	A - CA15	64	A - IORD#	98	A - CD10
31	A - CA12	65	A - IOWR#	99	A - CD2#
32	GND	66	GND	100	GND
33	A - CA7	67	A - CA17		
34	A - CA6	68	A - CA18		

Socket B:

Pin	Signal	Pin	Signal	Pin	Signal
1	GND	35	GND	69	GND
2	B - CD3	36	B - CA5	70	B - CA19
3	B - CD4	37	B - CA4	71	B - CA20
4	GND	38	GND	72	GND
5	B - CD5	39	B - CA3	73	B - CA21
6	B - CD6	40	B - CA2	74	B - VCC - C
7	GND	41	GND	75	GND
8	B - CD7	42	B - CA1	76	GND
9	B - CE1#	43	B - CA0	77	B - VPP
10	GND	44	GND	78	B - CA22
11	B - CA10	45	B - CD0	79	GND
12	B - OE#	46	B - CD1	80	B - CA23
13	GND	47	GND	81	B - CA24
14	B - CA11	48	B - CD2	82	GND
15	B - CA9	49	B - WP#	83	B - CA25
16	GND	50	GND	84	B - VS2
17	B - CA8	51	GND	85	GND
18	B - CA13	52	B - CD1#	86	B - RESET
19	GND	53	B - CD11	87	B - WAIT#
20	B - CA14	54	GND	88	GND
21	B - WE#	55	B - CD12	89	B - INPACK
22	GND	56	B - CD13	90	B - REG#
23	B - RDYBY#	57	GND	91	GND
24	B - VCC - C	58	B - CD14	92	B - BVD2#
25	GND	59	B - CD15	93	B - BVD1#
26	GND	60	GND	94	GND
27	B - VPP	61	B - CE2#	95	B - CD8
28	B - CA16	62	B - VS1	96	B - CD9
29	GND	63	GND	97	GND
30	B - CA15	64	B - IORD#	98	B - CD10
31	B - CA12	65	B - IOWR#	99	B - CD2#
32	GND	66	GND	100	GND
33	B - CA7	67	B - CA17		
34	B - CA6	68	B - CA18		

Opening the LCD Cover

1. To release the top cover slide the latch to the right (Figure 1-5).
2. Lift the top cover to reveal the LCD panel and keyboard (Figure 1-6).
3. Adjust the LCD panel to a comfortable viewing angle.
4. Press the power button to turn the system on or off (refer to Chapter 1, Top-Front View for the information of the power button).

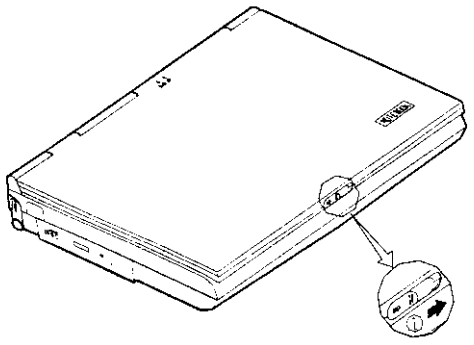

Figure 1-5

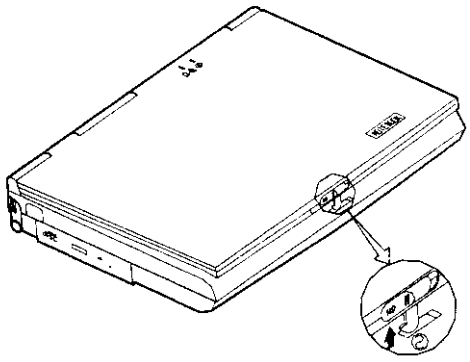

Figure 1-6

LED Indicators on the LCD Cover

Icon	Color	Description
⏻	Green	Battery power is used with system turned on.
	Red	AC power is used with system turned on or off.
🔋/🔋	Green	Battery is fully charged.
	Red	Battery is being charged.
	Blinking Red	Battery power is critically low.

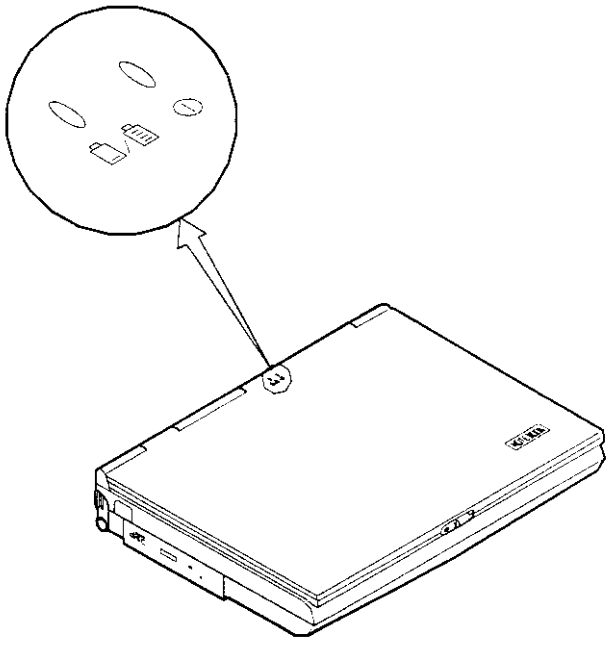

Figure 1-7