FCC ID: L4PK1100MX13

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, microphone data cable)and power adapter 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.

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. This Chapter will discuss:

- Unpacking
- Operating Environment
- Powering the System by AC Power Adapter
- Powering the System by Battery Pack
- Charging the Battery Pack
- Opening the LCD Cover
- Identifying all Devices and Ports
- Identifying all LED Indicators

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.

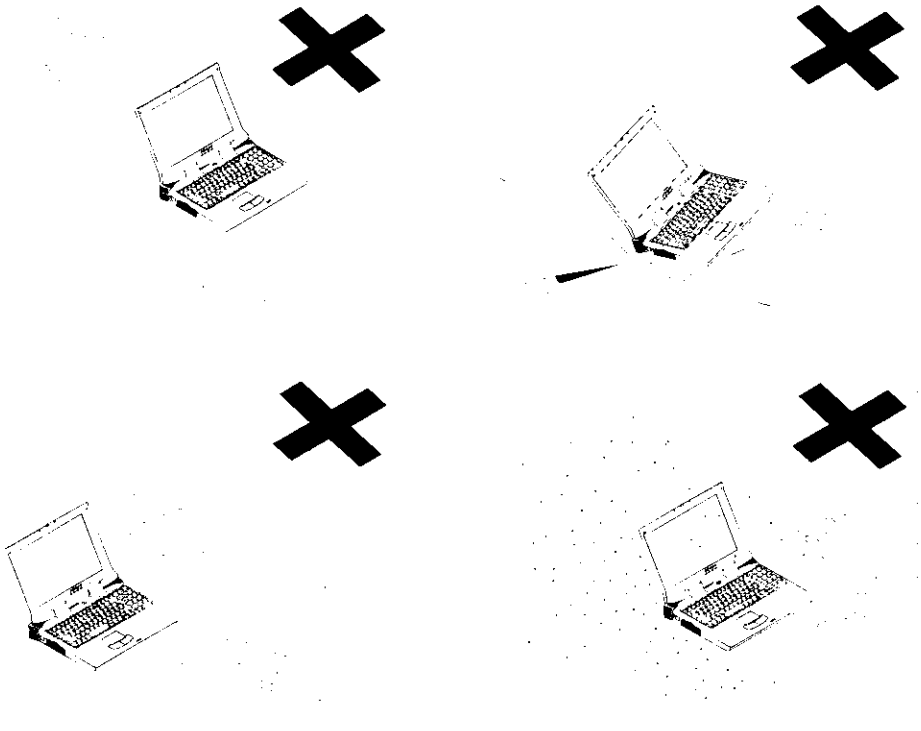


Figure 1-2

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 and firmly fit it into the Notebook (Figure 1-4).
3. The two latches will click into place when it is seated.

Removing

1. Turn the Notebook over.
2. Press the two latches in the direction indicated to release the battery pack. (Figure 1-5)
3. Carefully lift the battery pack from the Notebook.

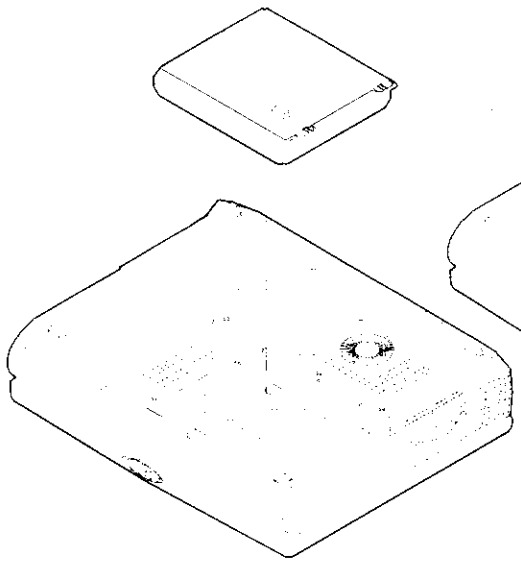


Figure 1-4

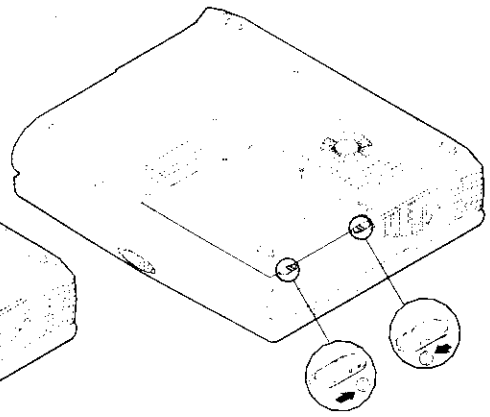


Figure 1-5

Opening the LCD Cover

1. To release the top cover slide the latch to the right (Figure 1-6).
2. Lift the top cover to reveal the LCD panel and keyboard (Figure 1-7).
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).

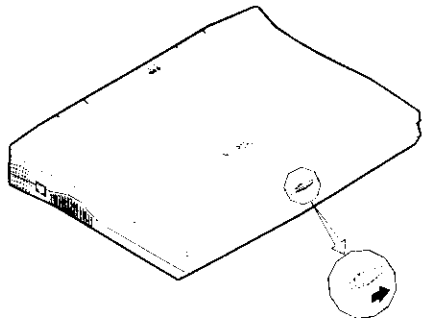


Figure 1-6

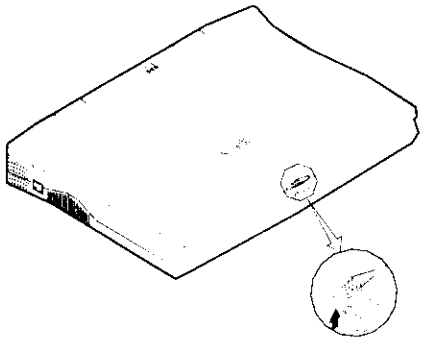


Figure 1-7

Top-Front View

LCD Panel

The Notebook provides you with a large LCD panel. Depending upon the model you have purchased, it can either be a 13.3" XGA (1024x768 pixels) compatible, using TFT technology, or a 12.1" SVGA (800x600 pixels) compatible, using DSTN or TFT technology. The LCD panel is driven by a PCI local bus video controller with 2MB 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 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 for recording sound into your applications.

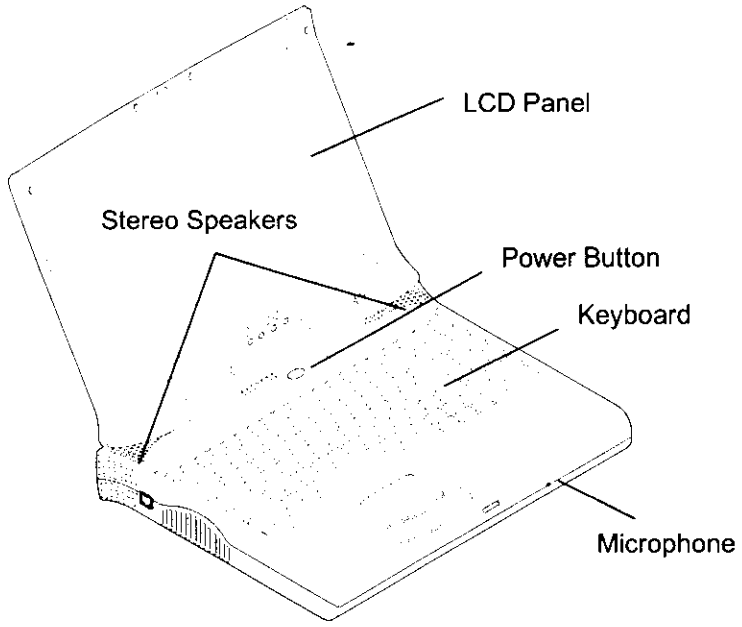


Figure 1-9

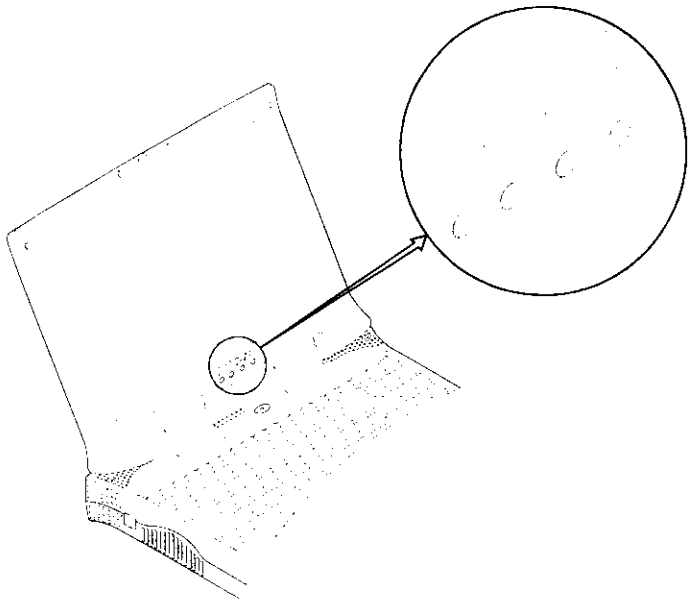


Figure 1-10

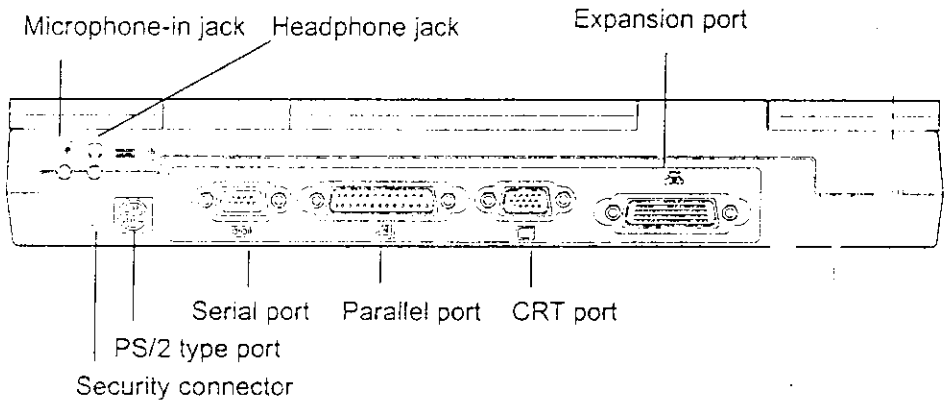

Microphone-in jack
Headphone jack
Expansion port
Serial port
Parallel port
CRT port
PS/2 type port
Security connector

Figure 1-11

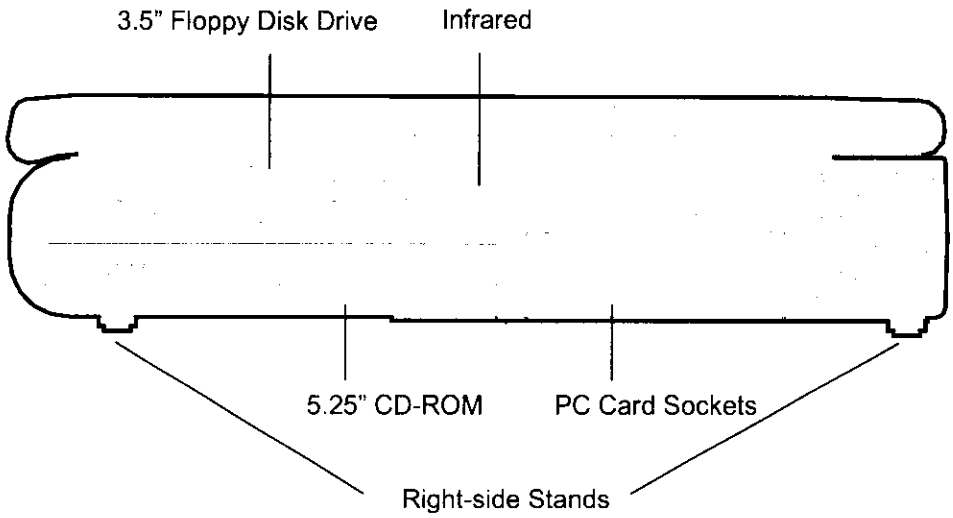

3.5" Floppy Disk Drive
Infrared
5.25" CD-ROM
PC Card Sockets
Right-side Stands

Figure 1-12

Bottom View

2.5" Hard Disk Drive

The 2.5" hard disk drive accepts any 2.5" IDE hard disk drive with a height of 12.7mm or less. Accessing the corresponding screws will allow you to install or to remove this hard disk drive. Refer to *Chapter 2: Operation,* for more information.

CPU Cover

Detaching the screws to remove the cover will reveal the microprocessor. You may upgrade the CPU for higher system performance.

Battery Pack

This compartment houses a rechargeable battery pack of either Ni-MH or Li-Ion. To recall detailed information turn back to the section *Battery Pack.*

CD-ROM Cover

The CD-ROM cover functions for easy installation and easy removal of the CD-ROM, in case you need maintenance service during warranty period.

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
- Setting DIP Switch
- Expanding Memory
- Using Hard Disk Drive
- Using Floppy Disk Drive
- Using CD-ROM
- Using PC Card Sockets
- Using Hot Keys
- Using Numeric Keypad
- Getting Familiar with LCD Panel
- Using Power Management
- Attaching Peripheral Devices

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).

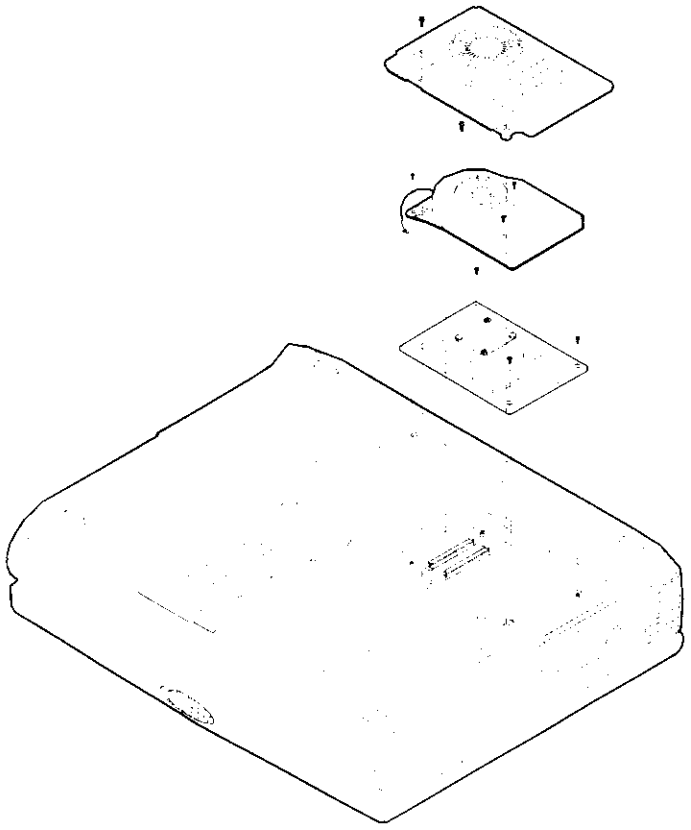


Figure 2-2

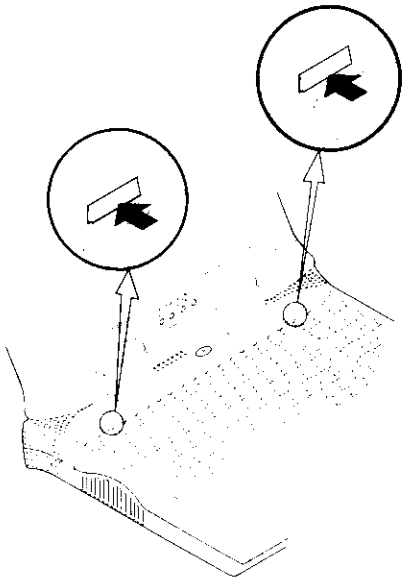


Figure 2-3

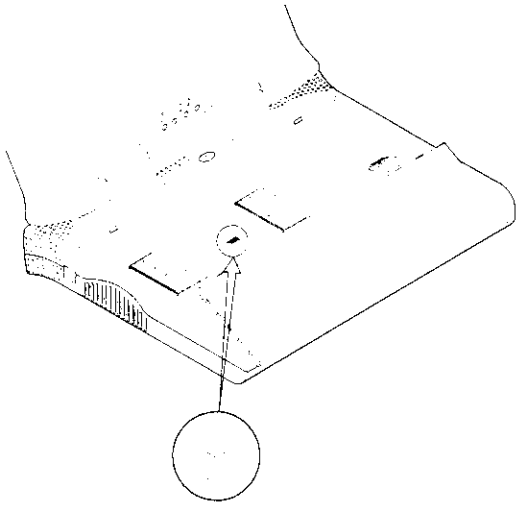


Figure 2-4

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).

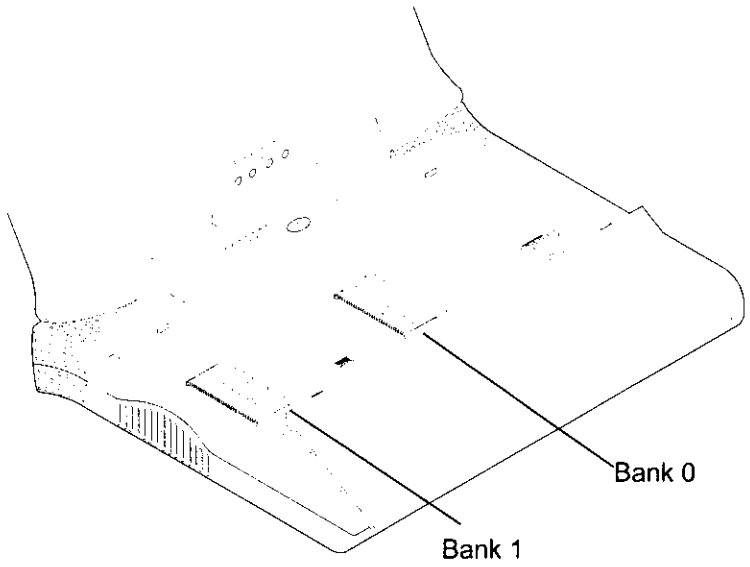


Figure 2-5

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.

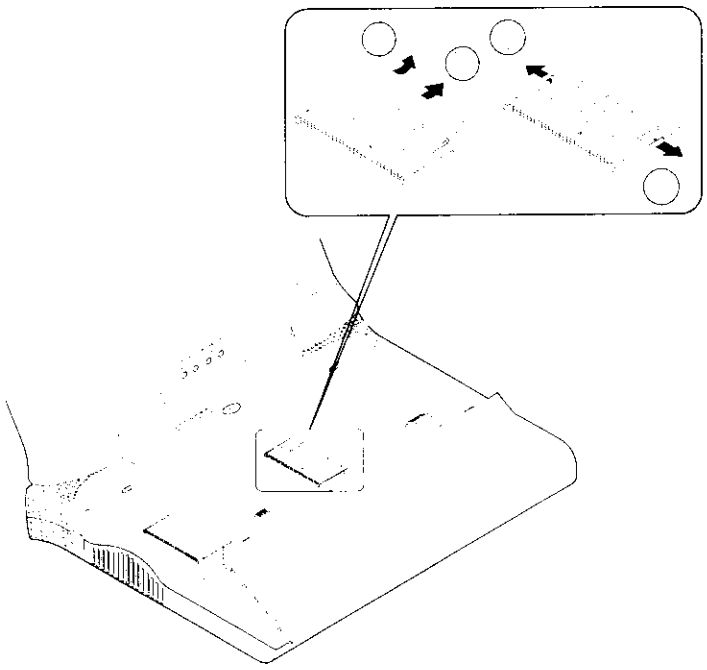


Figure 2-7

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.

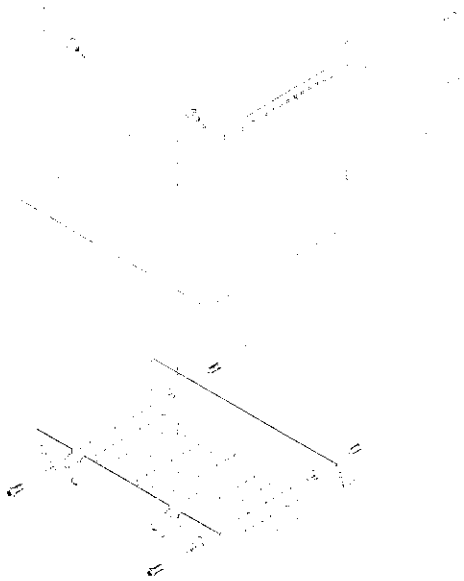


Figure 2-9

Write-Protecting Diskettes

Diskettes can be write-protected to prevent files from being accidentally erased or destroyed. To write-protect a 3.5" floppy diskette, move the built-in write-protect tab to the write-protect position, ("*up*" so that you can see through the "*hole*" in the upper, right-hand corner of the diskeet). Putting the write protect tab back "*down*" will enable you to write data on the disk again.

Do's and Don'ts

- Always make backup copies of your software and data diskettes.
- Keep diskettes away from magnetic fields.
- Do not remove diskettes from the drive while the diskette "in-use" light in on.
- Do not open or remove the protective shutter which covers the diskette's media.
- Do not allow dust or moisture to collect on diskettes.
- Do not bend or throw diskettes.
- Do not clean diskettes with liquids or solvents.

Removing CD-ROM Module

1. Turn the system power off.
2. Turn the Notebook over.
3. Remove the CD-ROM cover (Step 1 in Figure 2-12).
4. Remove the securing screw to release the CD-ROM module. (Step 2 in Figure 2-12).
5. Slide the CD-ROM module slightly out to disconnect the cable (Step 3 and Step 4 in Figure 2-12).
6. Pull gently and firmly the CD-ROM module away from the compartment (Step 5 in Figure 2-12).

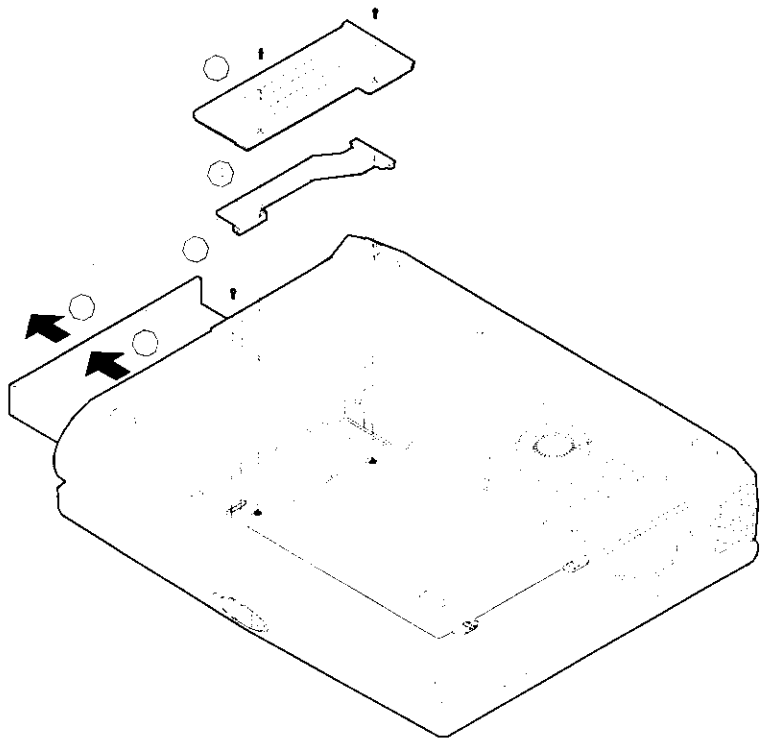


Figure 2-12

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.

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 2-16).

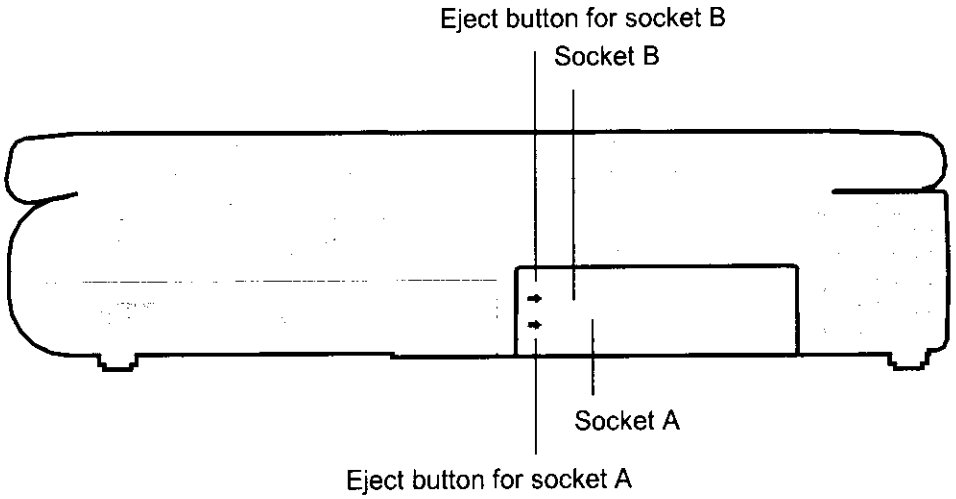


Figure 2-16

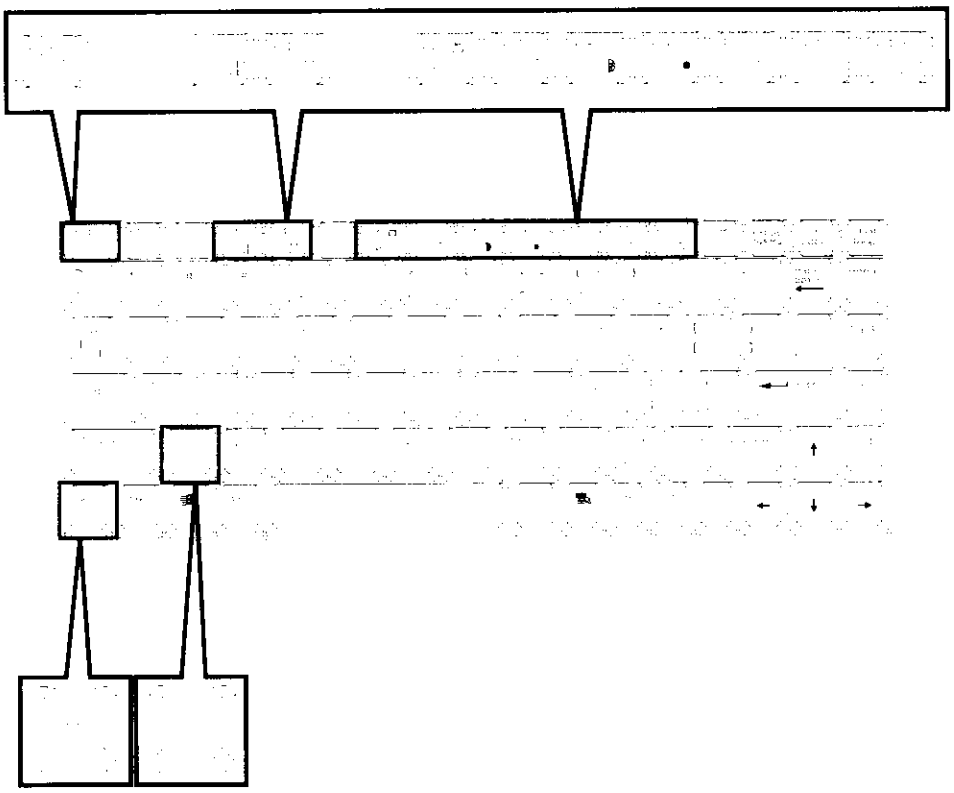
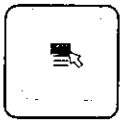


Figure 2-17

Windows 95 Special Keys

Application Key



The **Application key** has the same function as the secondary mouse button.

Windows Key

The **Window key** activates the ***Start*** menu.

LCD Panel

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

- PCI local bus controller.
- 2MB video RAM (SGRAM type).
- Capability to support 1024x768 (XGA) resolution TFT display.
- Capability to support 800x600 (SVGA) resolution TFT display.
- Ability to transmit video signals to a VGA monitor (CRT).
- Capable of simultaneous display on LCD and CRT.
- Video Port Manager (VPM) for video input from ZV-capable PC card.

Remark:
Two technologies of LCD display:

- Passive technology (DSTN = Dual-scan Super Twisted Nematic).
- Active technology (TFT = Thin Film Transistor).

Attaching Peripheral Devices

The herein mentioned shows you how to attach peripheral devices to the ports or jacks on the rear panel of the Notebook Computer.

Attaching a Security Lock

To protect your Notebook from being stolen, the computer is equipped with a security connector. To install the security lock, wrap the cable around a desk or other immovable object, then insert the locking device into the connector (Figure 2-19).

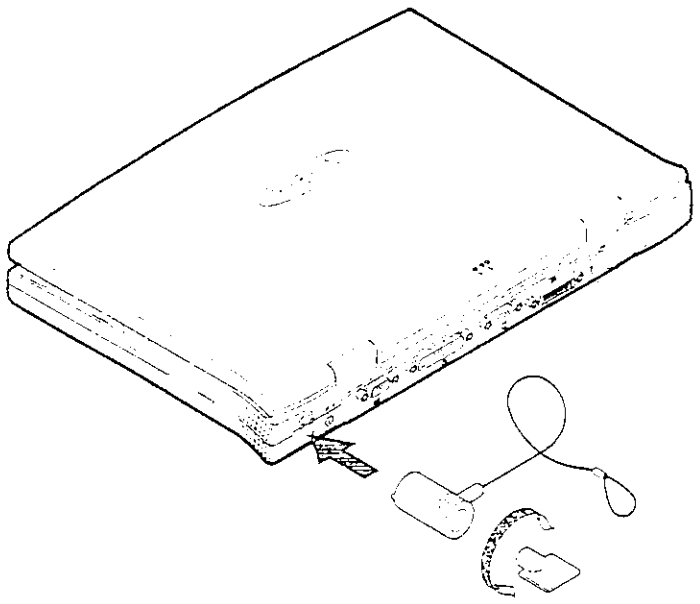


Figure 2-19

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)

Attaching a PS/2 Keyboard or Mouse

The Notebook can be operated with a PS/2 keyboard or mouse attached by means of the PS/2 transfer cable. Attach the external keyboard or mouse as shown below (Figure 2-20).

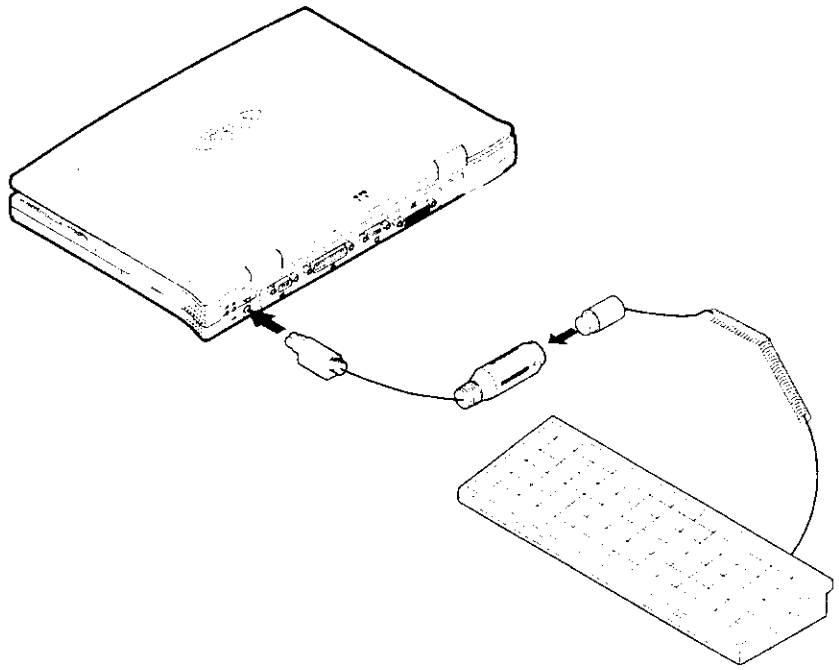


Figure 2-20

Attaching a Parallel Printer

You may connect any standard Centronics parallel printer to your Notebook using the parallel port.

1. Turn the system power off.
2. Connect the cable to the parallel port on the rear of the Notebook Computer (Step 1 in Figure 2-22).
3. Tighten the screws that fasten the cable to the parallel port (Step 2 in Figure 2-22).
4. Insert the other end of the cable to the printer's connector. Fasten the cable's connector.
5. Turn on the printer and Notebook Computer.

In addition, you will need to install the manufacturer-supplied driver for the printer. Refer to the device's user's guide for more information. If the connected printer supports EPP (Enhanced Parallel Port) or ECP (Extended Capabilities Port) mode, please enter System Configuration Utility (SCU) to configure the required setting.

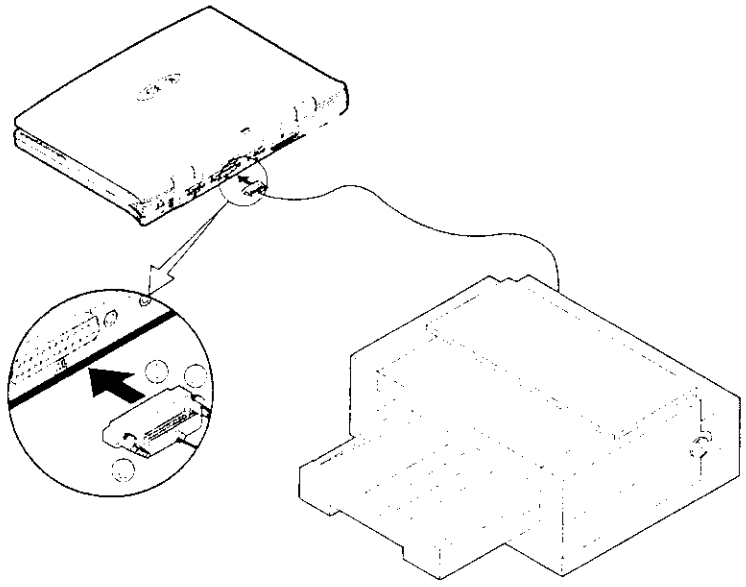


Figure 2-22

Attaching a Proprietary Port Replicator

The proprietary Port Replicator, providing interfaces for those found on the Notebook system, frees you from fumbling with multiple cables every time you leave the office. Please contact your dealer for detailed information.

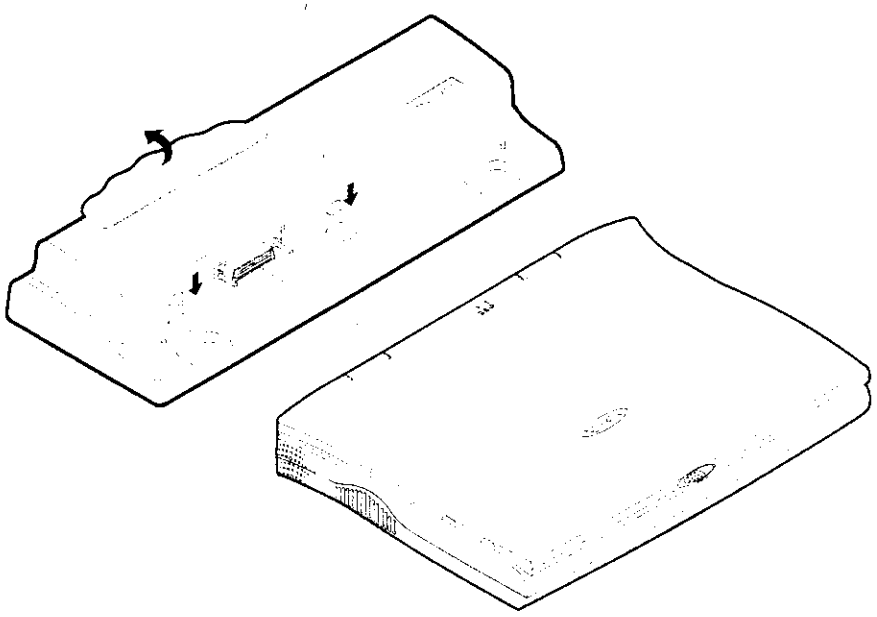


Figure 2-24

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Chapter 3: BIOS Utilities

This chapter provides information regarding the Power On Self Test (POST) and shows you how to configure the system parameters using the System Configuration Utility (SCU).

- Power On Self Test (POST)
- Initiating the System Configuration Utility (SCU)
- Specifying in the System Configuration Utility (SCU)

POST Message: Error Detected

If an error is detected, a WARNING message will be displayed. You should either press **F1** key to continue, or press the **Ctrl-Alt-S** keys simultaneously to enter the System Configuration Utility.

SystemSoft BIOS for Intel 430TX Version 1.01 (2482-00)

166 MHz Pentium CPU
External Cache: 256KB Enabled
2 MB Video RAM

Base Memory	000640 Kb
Extended Memory	031744 Kb
Total Memory	032768 Kb

WARNING – HARD DISK CONTROLLER 1 FAILURE
Auto Detecting IDE Devices[Done]

<CTRL-ALT-S> to enter System Configuration Utility
Press F1 to Continue

Initiating the System Configuration Utility

The System Configuration Utility (SCU) will be accessed when simultaneously pressing the **Ctrl**, **Alt**, and **S** keys.

<CTRL-ALT-S> to enter System Configuration Utility

The above message only lasts seconds. If you miss it, the computer will initiate the boot process. You must reboot the system and try again within the time limit if you want to enter the System Configuration Utility.

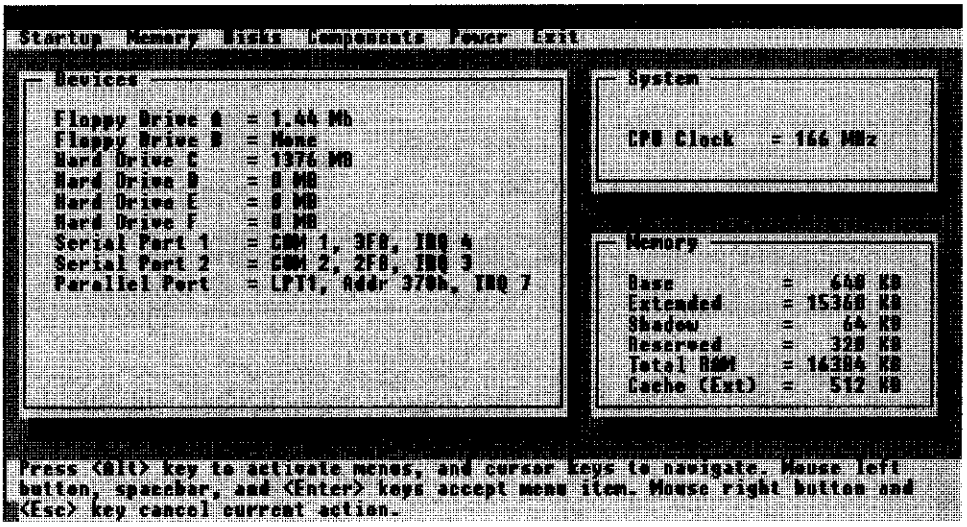

Figure 3-1
System Configuration Utility (SCU)

Working with the Pull-down Menu of the System Configuration Utility

When the desired menu bar item is highlighted, press the **Enter** key to enter the pull-down menu for values setting.

Action	Keys Used	Description
Select pull-down menu item	Down arrow (↓) Up arrow (↑)	Move to the next pull-down menu item. Move to the previous pull-down menu item.
	The highlighted letter key	Move to the corresponding pull-down menu item.
Select a control	Tab	Move between the options.
Change values	Down/Up arrows (↓)(↑)	Modify the settings.
Accept entries	Spacebar	Enable/disable the specified function. When a check mark (√) appears, the function is on.
	Enter	Choose <OK> from a list of options.
Reject entries	Esc	Undo the current setting.
	Enter	Choose <Cancel> from a list of options.
Activate accelerators	Alt	Initiate all the highlighted letters corresponding to their respective options.
Quit	Esc	Press the Esc key to close the pull-down menu.

Item	Setting/Option	Function
Boot Password	Enter old Power-On Password	Set password for booting computer. Users are authorized to start the system after entering correct password.
	Enter new Power-On Password	
	Verify new Power-On Password	
	Enable Password to Power-On	
SCU Password	Enter old Setup Password	Set password for modifying SCU. Users are authorized to change the SCU setting after entering correct password.
	Enter new Setup Password	
	Verify new Setup Password	
	Enable Setup Password	

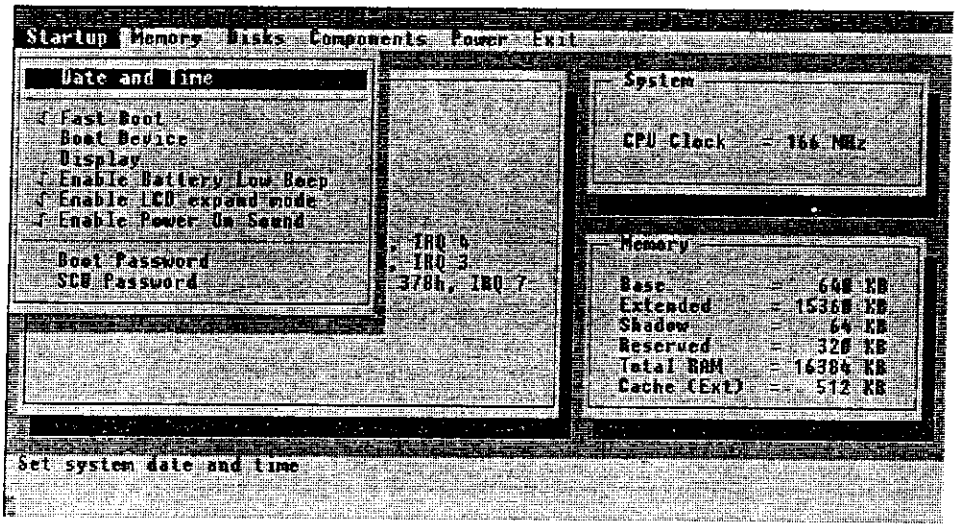

Figure 3-2
Startup Menu

Disks Menu

Item	Setting/Option		Function
Diskette Drives	Drive A	None	Specify the drive types for the diskette drive A and B.
		1.2 MB	
		1.44 MB	
	Drive B	None	
		1.2 MB	
		1.44 MB	
IDE Settings	Drive 0	Drive Enabled	Enable enhanced IDE settings.
		PIO Mode	
	Drive 1	Drive Enabled	
		PIO Mode	

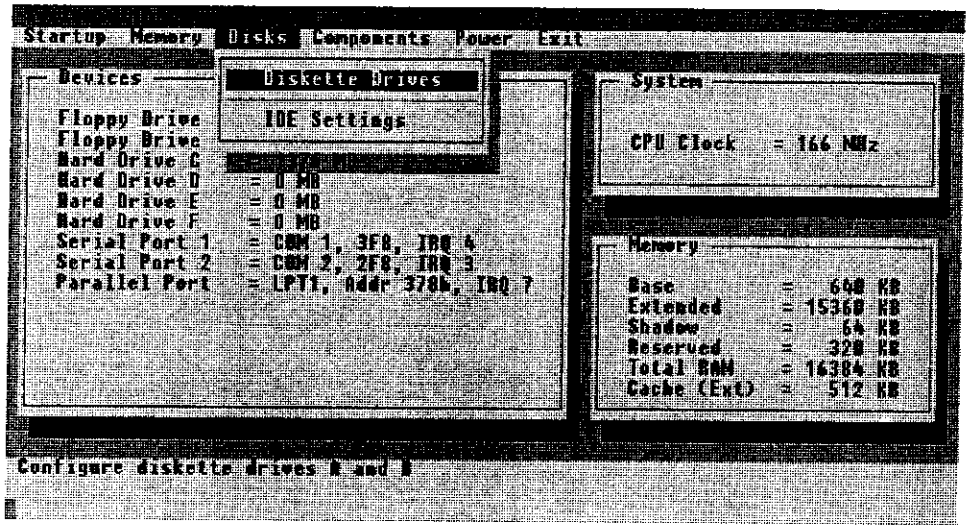

Figure 3-4
Disks Menu

Item	Setting/Option		Function
PS/2 Mouse Port	Enable		Enable the system's trackpad or an external PS/2 mouse.
	Disable		Disable the trackpad or PS/2 mouse if an external mouse is connected to COM A port.
Keyboard Numlock	Enable		Specify whether Num Lock is on or off at system boot time.
	Disable		
Keyboard Repeat	Key Repeat Rate	2 cps	Define the rate (characters per second) at which the keyboard repeats while a key is depressed.
		6 cps	
		10 cps	
		15 cps	
		20 cps	
		30 cps	
	Key Delay	¼ sec	Specify the amount of time (second) that will pass after a key is depressed before the key starts to repeat.
		½ sec	
		¾ sec	
		1 sec	
		DMA 3	

Power Menu

Item	Setting/Option		Function
Enable Power Saving	Enable		Enable/Disable all power saving features.
	Disable		
Low Power Saving	Enable		Enable/Disable the power saving to its lowest which results in max. performance but shortest battery life.
	Disable		
Medium Power Saving	Enable		Enable/Disable the power saving to its medium which results in both moderate performance and battery life.
	Disable		
High Power Saving	Enable		Enable/Disable the power saving to its highest which results in min. performance but longest battery life.
	Disable		
Customize	Disk Standby	Always on	The hard disk will be put on standby if it is not accessed within the specified period. Hard disk power will be restored when the disk drive is accessed again.
		30 sec	
		1 min	
		3 min	
		10 min	
	Global Standby	Always on	The system power will be reduced if the system has been idle for the specified period. System power will be restored when any system activity is detected.
		1 min	
		2 min	
		4 min	
		6 min	
		8 min	
		12 min	
		16 min	

Item	Setting/Option		Function
Enable MODEM Ring Resume	Enable		Resume the system from STR or POS mode when a modem ring is detected (which modem should be connected to the serial port).
	Disable		Disable the above.
Enable Battery Low Suspend	Enable		Automatically suspend the system to **disk** upon a low battery condition.
	Disable		Disable the above.
Advance CPU Controls	Clock Control Mechanism	Full Speed	Specify the type of Processor Clock Control.
		Doze Mode	

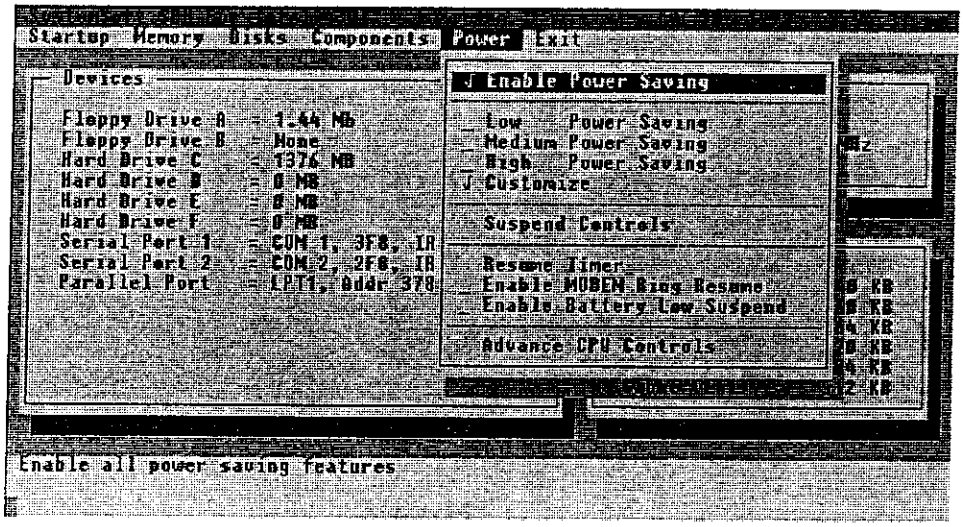

Figure 3-6
Power Menu

Appendix A: Specifications

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

- **Processor in Intel Mobile Module (IMM) Package**
  - Mobile Pentium processors with MMX technology at 266/233/200/166/ 133 MHz.
  - Mobile Pentium II processors at 266/233 MHz.

- **Memory**
  - 3.3V power supply.
  - Supports Fast Page Mode/EDO/SDRAM.
  - 8MB expandable up to 128MB.
  - 144-pin SODIMM package.

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

- **Display**
  - 13.3" TFT XGA (1024x768 pixels) LCD panel available.
  - 2MB display memory (SGRAM).
  - Video Port Manager (VPM 1.10) for Zoomed Video (ZV) port.
  - Simultaneous display with an external monitor.

- **Mass Storage**
  - 3.5" floppy diskette drive.
  - 2.5" hard disk drive (12.7mm high or less).
  - 5.25" CD-ROM.

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

Rechargeable Battery Pack
- Ni-MH battery available.
- Li-Ion battery available.
- Battery low warning.
- Auto-switching with AC power adapter.

Size & Weight
- 302mm(w)x249mm(d)x46mm(h).
- 3kg.

Temperature Environment
- Operating 5°C~35°C
- Storage -20°C~60°C

Humidity Environment
- Operating 20%~80%, non-condensing
- Storage 10%~90%, non-condensing

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)

PC Card Sockets

Socket A:

Pin	Signal	Pin	Signal
1	GND	35	GND
2	A-CD3	36	A-CD1#
3	A-CD4	37	A-CD11
4	A-CD5	38	A-CD12
5	A-CD6	39	A-CD13
6	A-CD7	40	A-CD14
7	A-CE1#	41	A-CD15
8	A-CA10	42	A-CE2#
9	A-0E#	43	A-VS1
10	A-CA11	44	A-IORD#
11	A-CA9	45	A-IOWR#
12	A-CA8	46	A-CA17
13	A-CA13	47	A-CA18
14	A-CA14	48	A-CA19
15	A-WE#	49	A-CA20
16	A-RDYBY#	50	A-CA21
17	A-VCC-C	51	A-VCC-C
18	A-VPP	52	A-VPP
19	A-CA16	53	A-CA22
20	A-CA15	54	A-CA23
21	A-CA12	55	A-CA24
22	A-CA7	56	A-CA25
23	A-CA6	57	A-VS2
24	A-CA5	58	A-RESET
25	A-CA4	59	A-WAIT#
26	A-CA3	60	A-INPACK
27	A-CA2	61	A-REG#
28	A-CA1	62	A-BVD2#
29	A-CA0	63	A-BVD1#
30	A-CD0	64	A-CD8
31	A-CD1	65	A-CD9
32	A-CD2	66	A-CD10
33	A-WP#	67	A-CD2#
34	GND	68	GND

Index

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Socket B:

Pin	Signal	Pin	Signal
1	GND	35	GND
2	A-CD3	36	A-CD1#
3	A-CD4	37	A-CD11
4	A-CD5	38	A-CD12
5	A-CD6	39	A-CD13
6	A-CD7	40	A-CD14
7	A-CE1#	41	A-CD15
8	A-CA10	42	A-CE2#
9	A-0E#	43	A-VS1
10	A-CA11	44	A-IORD#
11	A-CA9	45	A-IOWR#
12	A-CA8	46	A-CA17
13	A-CA13	47	A-CA18
14	A-CA14	48	A-CA19
15	A-WE#	49	A-CA20
16	A-RDYBY#	50	A-CA21
17	A-VCC-C	51	A-VCC-C
18	A-VPP	52	A-VPP
19	A-CA16	53	A-CA22
20	A-CA15	54	A-CA23
21	A-CA12	55	A-CA24
22	A-CA7	56	A-CA25
23	A-CA6	57	A-VS2
24	A-CA5	58	A-RESET
25	A-CA4	59	A-WAIT#
26	A-CA3	60	A-INPACK
27	A-CA2	61	A-REG#
28	A-CA1	62	A-BVD2#
29	A-CA0	63	A-BVD1#
30	A-CD0	64	A-CD8
31	A-CD1	65	A-CD9
32	A-CD2	66	A-CD10
33	A-WP#	67	A-CD2#
34	GND	68	GND

Monitor Port

Pin	Signal	Pin	Signal	Pin	Signal
1	RED	6	GND	11	N.C
2	GREEN	7	GND	12	DDCDATA
3	BLUE	8	GND	13	HSYNC
4	N.C	9	N.C	14	VSYNC
5	GND	10	GND	15	DDCCLK

PS/2 Type Port

Pin	Signal
1	EKDA
2	EMDA
3	GND
4	VCC
5	EKCLK
6	EMCLK

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- Audio
  - Sound Blaster Pro compatible.
  - Full duplex operation.
  - 3D stereo sound effects.
  - Built-in microphone.
  - Built-in speakers.

- PC Card Sockets
  - One Type III PC card or two Type II PC cards.
  - CardBus support.
  - One socket ZV-capable.

- Input/Output
  - Built-in trackpad (PS/2).

  - Expansion port.
  - External monitor (CRT) port.
  - Parallel port.
  - Serial port.
  - PS/2 type port.
  - Microphone-in jack.
  - Headphone jack.

- Infrared Wireless Communication
  - IrDA (HPSIR).
  - ASKIR.
  - FIR.

- Keyboard
  - Windows 95.
  - Detachable for various language versions.

Exit Menu

Item	Function
Save and Exit	Save the current settings and reboot the system.
Exit (No Save)	Exit without saving any current changes.
Default Settings	Restore the default settings (the original ones found in ROM).
Restore Settings	Restore the current setup settings to the original custom ones.
Version Info	Show current BIOS version information.

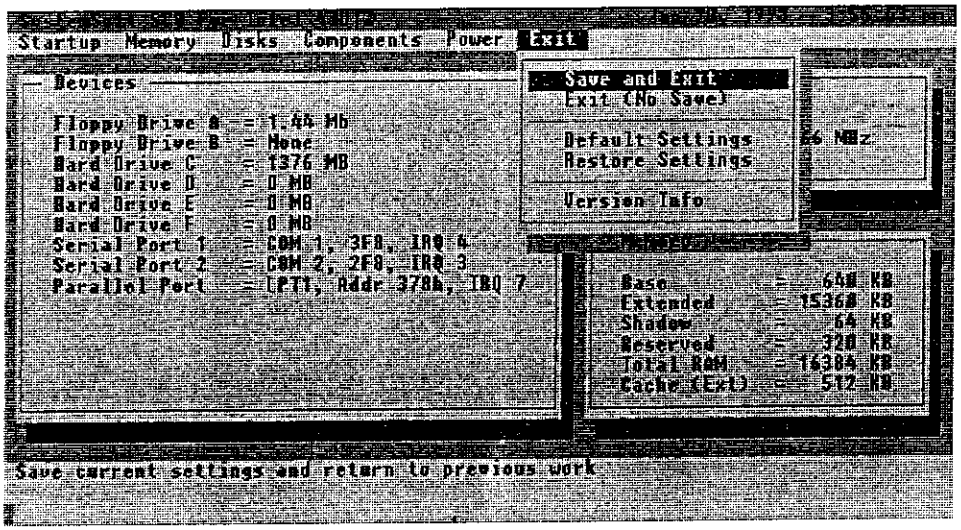

Figure 3-7
Exit Menu

Item	Setting/Option		Function
Suspend Controls	Power Button Function	Power On/Off	The power button is switched to turn the system on or off.
		Suspend/Resume	The power button acts as a **suspend/resume button** for switching the system between a working state and the suspend mode.
			Pressing the power button for more than four seconds will generate a **power button over-ride event** to switch the system from a working state to the Soft-Off state.
	Lid Switch Function	Suspend/Resume	Enter suspend mode or resume by closing or opening the display lid.
		LCD On/Off	Turn the panel power on or off by opening or closing the display lid.
	Suspend Type	Suspend To Disk	Specify the suspend mode for power management.
		Suspend To RAM	
		Powered On Suspend	
	Suspend Timeout	Never	If the system has been idle for the specified period, the system will enter user-defined suspend.
		1 min	
		5 min	
		10 min	
		20 min	
		30 min	
Resume Timer	Alarm Resume	Enable	Resume the system from the configured suspend mode when resume alarm timer expires.
		Disable	
	Resume Month/Day/Hour/Minute		The system will resume at the specified time (month, day, hour and minute).

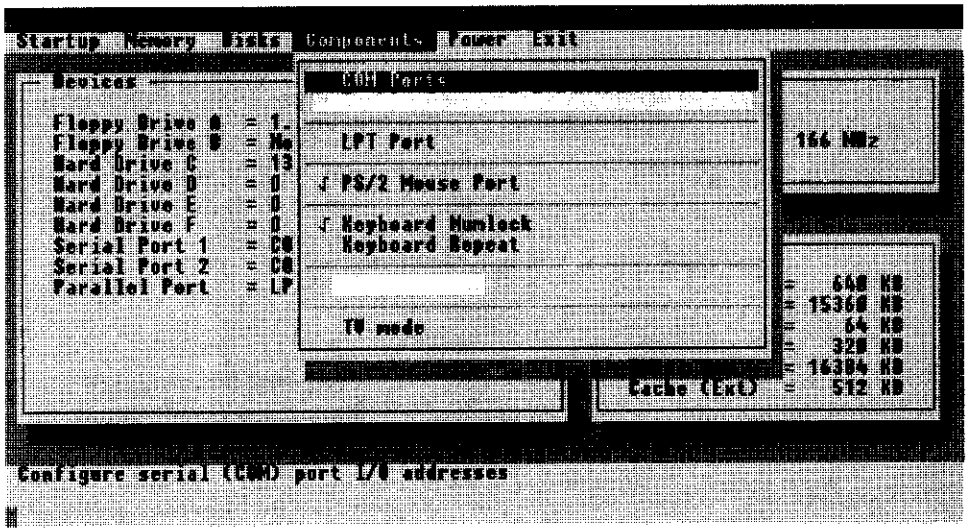

Figure 3-5
Components Menu

Components Menu

Item	Setting/Option		Function
COM Ports	COM A I/O Settings	None	Specify the COM A configuration.
		COM1, 3F8, IRQ4	
		COM2, 2F8, IRQ3	
		COM3, 3E8, IRQ4	
		COM4, 2E8, IRQ3	
	COM B I/O Settings	None	Specify the COM B configuration.
		COM1, 3F8, IRQ4	
		COM2, 2F8, IRQ3	
		COM3, 3E8, IRQ4	
		COM4, 2E8, IRQ3	
	Mode Setting For COM B	Normal (16550A)	Define the COM B hardware.
		IrDA (HPSIR)	
		ASK IR	
		FAST IR	
	DMA Setting For Fast IR	DMA 0	Specify the Fast IR DMA configuration.
		DMA 1	
		DMA 3	
LPT Port	Port Address	None	Specify the LPT port and IRQ configuration.
		LPT1, Addr 378h, IRQ7	
		LPT2, Addr 278h, IRQ5	
		LPT3, Addr 3BCh, IRQ7	
	Port Definition	Standard AT (Centronics)	
		Bidirectional (PS-2)	
		Enhanced Parallel (EPP)	
		Extended Capabilities (ECP)	
	DMA Setting For ECP Mode	DMA 1	Specify the ECP DMA configuration.
		DMA 3	
	EPP Type	EPP 1.7	Specify the EPP type.
		EPP 1.9	

Memory Menu

Item	Setting/Option		Function
Cache Systems	L1 Cache	Disabled	Disable the processor's internal cache.
		Write Back	Enable the processor's internal write-back cache.
	L2 Cache	Disabled	Disable the L2 cache controller.
		Write Back	Enable the L2 write-back cache.

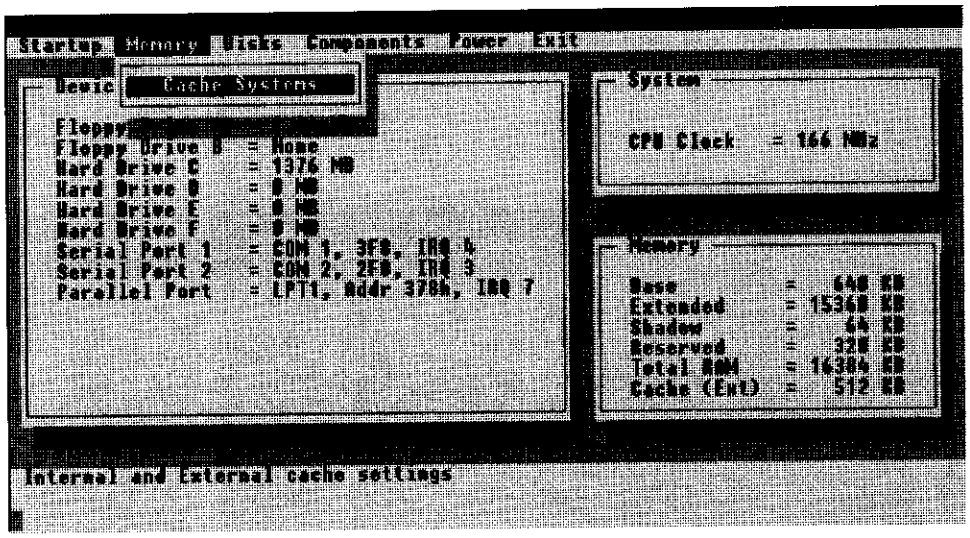

Figure 3-3
Memory Menu

Features of the System Configuration Utility

Startup Menu

Item	Setting/Option	Function
Date and Time	Day/Month/Year Hour/Minute/Second	Set the current date and time.
Fast Boot	Enable	Initialize and quickly boot the system in a few seconds by skipping certain diagnostic tests.
	Disable	Disable the above.
Boot Device	Diskette A	Specify where the system boots from.
	Hard Disk C	
	CD-ROM Drive	
Display	CRT	Activate an external monitor.
	LCD	Activate the system's LCD panel.
	LCD+CRT	Activate both the LCD and the CRT.
Enable Battery Low Beep	Enable	The system emits a series of warning beeps sound when the battery power becomes low.
	Disable	Disable the above.
Enable LCD Expand Mode	Enable	Stretch the display to fill the entire viewing area of the LCD panel.
	Disable	Disable the above.
Enable Power On Sound	Enable	Enable/Disable power on sound playback.
	Disable	

Working with the Menu Bar of the System Configuration Utility

Press **Ctrl-Alt-S** keys simultaneously to enter the menu bar of the System Configuration Utility.

Action	Keys Used	Description
Activate menus	Alt	Activate the System Configuration Utility.
Select menu bar item	Left arrow (←) Right arrow (→)	Move to a menu bar item on the left. Move to a menu bar item on the right.
	The highlighted letter key	Move to the corresponding menu bar item.
Accept menu bar item	Mouse left button Spacebar Enter	Enter the selected menu bar item to configure settings.
Cancel current action	Mouse right button Esc	Undo the current command.

System Configuration Utility

The System Configuration Utility (SCU) is a ROM-based configuration utility that displays the system's configuration status and provides users with a tool to set their system parameters. The settings are stored in non-volatile battery-backed CMOS RAM which saves the information even when the power is turned off, and retains it when the system is turned back on.

Information in the System Configuration Utility

The following shows the system settings that may be changed within the System Configuration Utility.

Menu Bar Items	Pull-down Menu Items
Startup	Date and Time, Fast Boot, Boot Device, Display, Enable Battery Low Beep, Enable LCD Expand Mode, Enable Power On Sound, Boot Password, SCU Password.
Memory	Cache Systems.
Disks	Diskette Drives, IDE Settings.
Components	COM Ports, LPT Port, PS/2 Mouse Port, Keyboard Numlock, Keyboard Repeat, TV Mode.
Power	Enable Power Saving, Low Power Saving, Medium Power Saving, High Power Saving, Customize, Suspend Controls, Resume Timer, Enable MODEM Ring Resume, Enable Battery Low Suspend, Advance CPU Controls.
Exit	Save and Exit, Exit (No Save), Default Settings, Restore Settings, Version Info.

Power On Self Test (POST)

The system BIOS (Basic Input/Output System) performs a series of Power On Self Test (POST) on system memory and key computer components every time the computer is turned on. If an error exists, the POST routine may halt execution (depending on the severity of the problem). The POST also initializes BIOS configuration then boots the operating system.

POST Message: Normal Operation

If no error occurs, the system will be operating after the POST process is completed.

You may press the **Spacebar** key to skip the memory test.

SystemSoft BIOS for Intel 430TX Version 1.01 (2482-00)
Copyright 1983-1996 SystemSoft Corp. All Rights Reserved

166 MHz Pentium CPU
External Cache: 256KB Enabled
2 MB Video RAM

Base Memory	000640 Kb
Extended Memory	031744 Kb
Total Memory	032768 Kb

Auto Detecting IDE Devices[Done]

<CTRL-ALT-S> to enter System Configuration Utility

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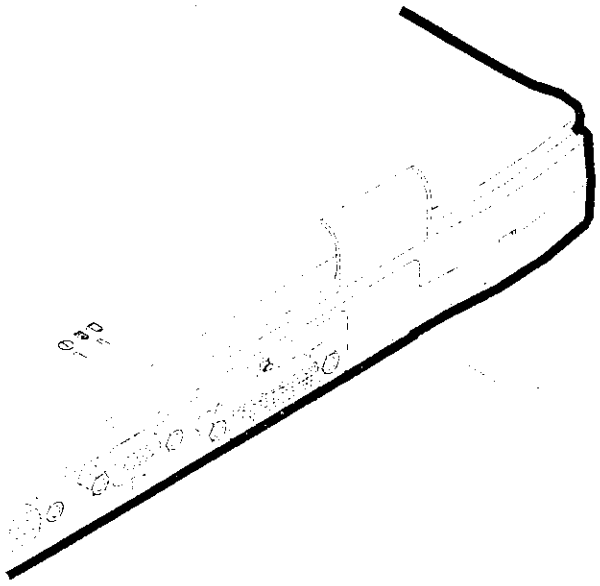

Figure 2-25

Attaching an External Monitor (CRT)

The computer is capable of displaying information not only on the LCD, but also on SVGA compatible displays attached to the computer. Information can be displayed on both the LCD and the external monitor simultaneously. Enter the System Configuration Utility (SCU) to select the appropriate parameters or use the **Fn** + **F6** keys (refer to *Chapter 2, Using Hot Keys*).

1. Turn the system power off.
2. Connect the cable to the CRT port on the rear of the Notebook Computer (Step 1 in Figure 2-23).
3. Tighten the screws that fasten the cable to the CRT port (Step 2 in Figure 2-23).
4. Insert the other end of the cable to the external monitor.
5. Turn on the Notebook Computer.

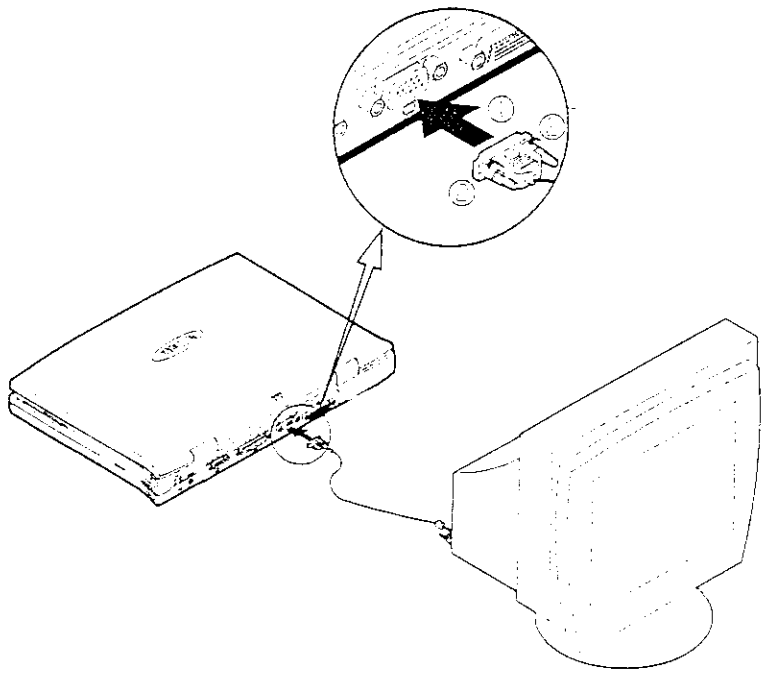

Figure 2-23

Attaching a Serial Mouse

The serial port features a 9-pin connector. You can connect any serial device such as a mouse to this port.

1. Turn the system power off.
2. Connect the cable to the serial port on the rear of the Notebook Computer (Step 1 in Figure 2-21).
3. Tighten the screws that fasten the cable to the serial port (Step 2 in Figure 2-21).
4. Turn on the Notebook Computer.

In addition, you may need to install the manufacturer-supplied driver for the serial mouse. Refer to the device's user's guide for more information.

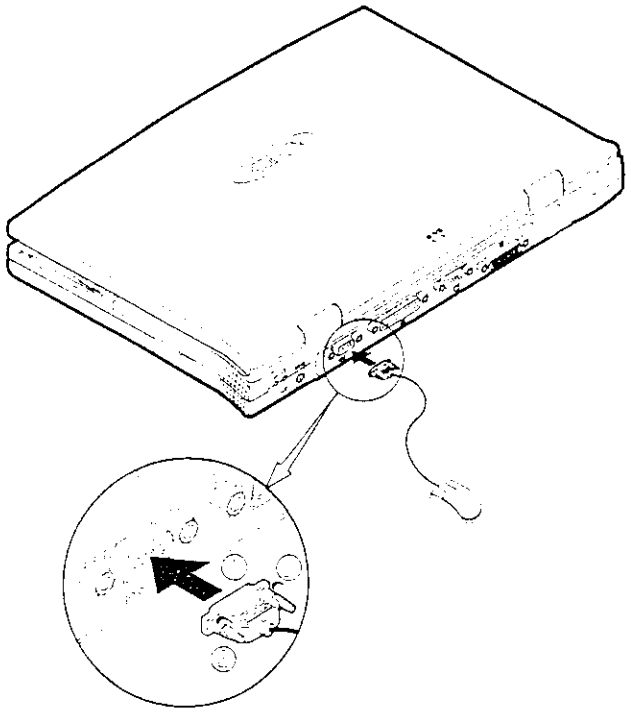

Figure 2-21

Hard Disk Standby

The system will turn off the Notebook's hard disk drive motor if it has not been accessed after a specified period of time. The motor will be turned back on once the system attempts to read or write data to it.

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)/Soft Off (SOFF)

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 2MB integrated video RAM.**

   A:\>0VMAKFIL /Pn

   For example, if the system DRAM is 32MB, 0VMAKFIL will create a partiton size of approximately 34MB.

   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)

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.

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Using Numeric Keypad

The colored keys in the middle section of the keyboard will function as a Numeric Keypad (Figure 2-18). The numeric keypad overlay can be used for numeric data input. Follow these steps to access the Numeric Keypad:

1. Press the **NumLock** key to lock the Numeric Keypad.
2. Press the **Fn** key along with the colored keys to operate the Numeric Keypad.

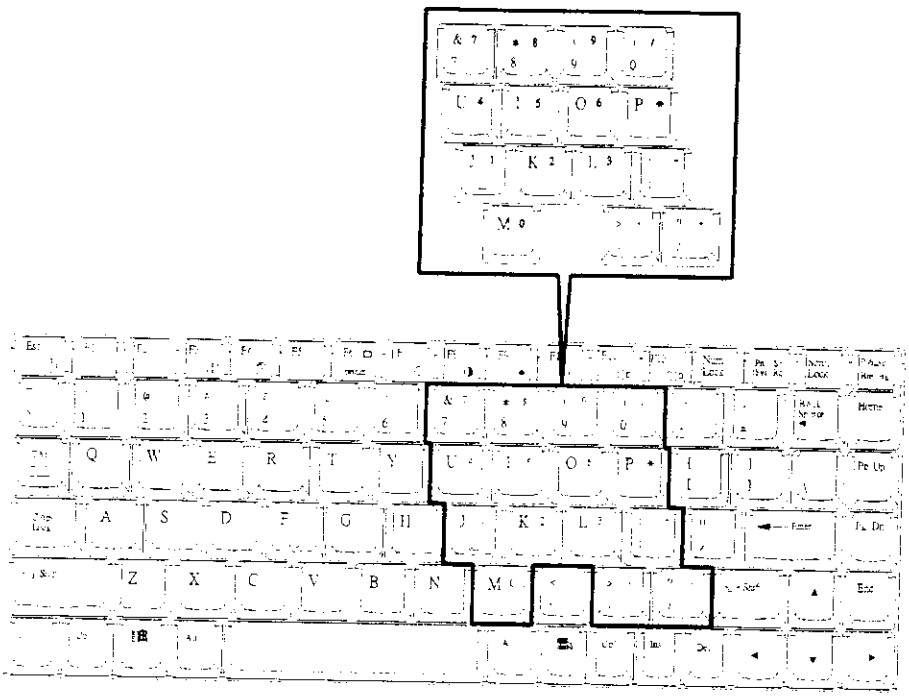
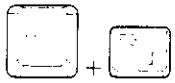
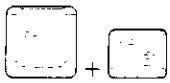
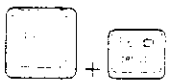
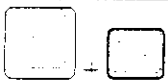
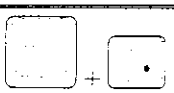
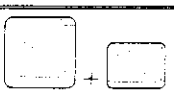
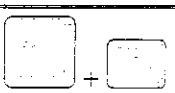
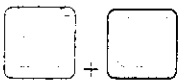
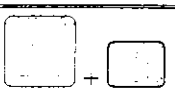


Figure 2-18

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 only
	Increase LCD contrast	Dual scan only
	Decrease LCD brightness	
	Increase LCD brightness	
	Decrease audio volume	
	Increase audio volume	
	Toggle audio mute on/off	
	Put the system in a suspend state for power management	

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 3.3V 32-bit PC cards, referred to as **CardBus**. The CardBus sockets are backward compatible with 5V 16-bit PC cards. 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 accommodate one Type III card or two Type II cards and **the lower socket named Socket A is capable of ZV (Zoomed Video)**, which allows a direct connection between a PC card and video devices that enables high quality video playback.

Inserting PC Cards

1. Open the access door (Figure 2-14).
2. Align the PC card with the slot and push it in firmly until it locks into place (Figure 2-15).

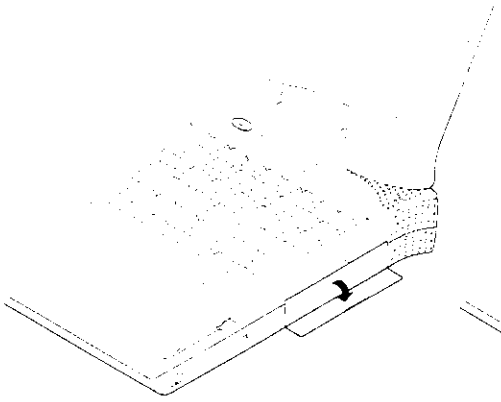


Figure 2-14

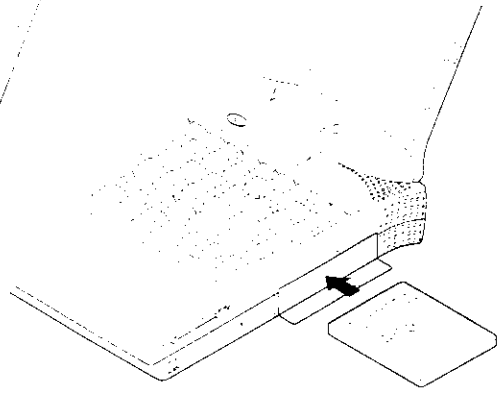


Figure 2-15

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 2-13).
5. Push the tray into the computer to close it.

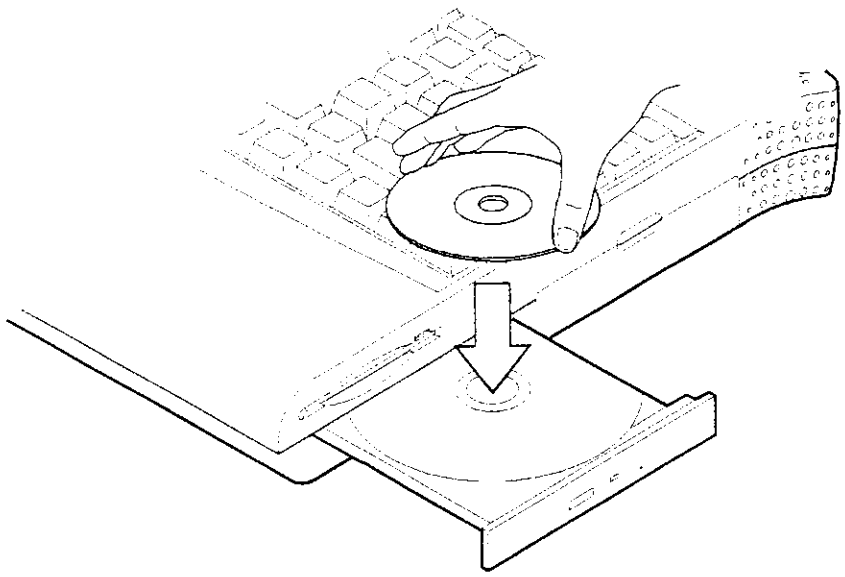


Figure 2-13

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 2-11).

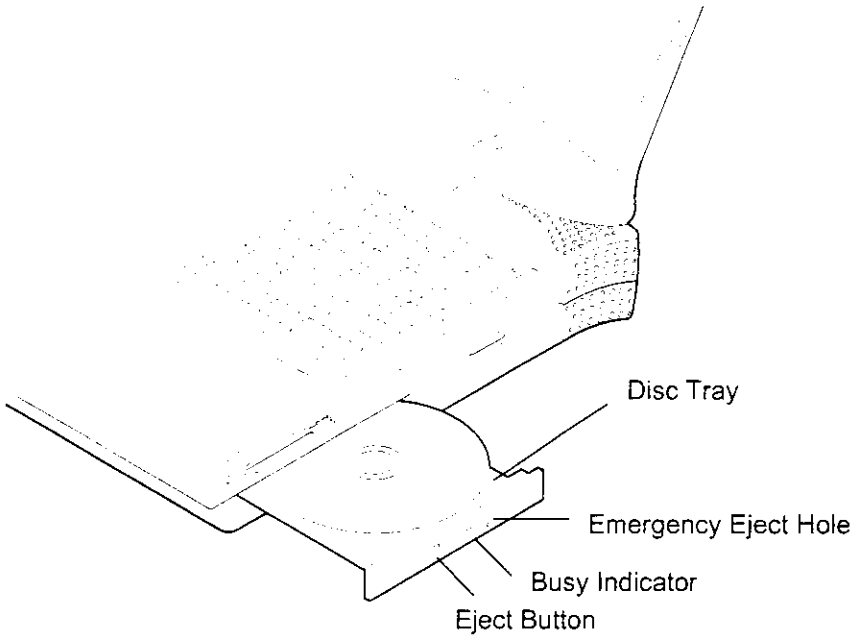


Figure 2-11

Using Floppy Disk Drive

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

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.

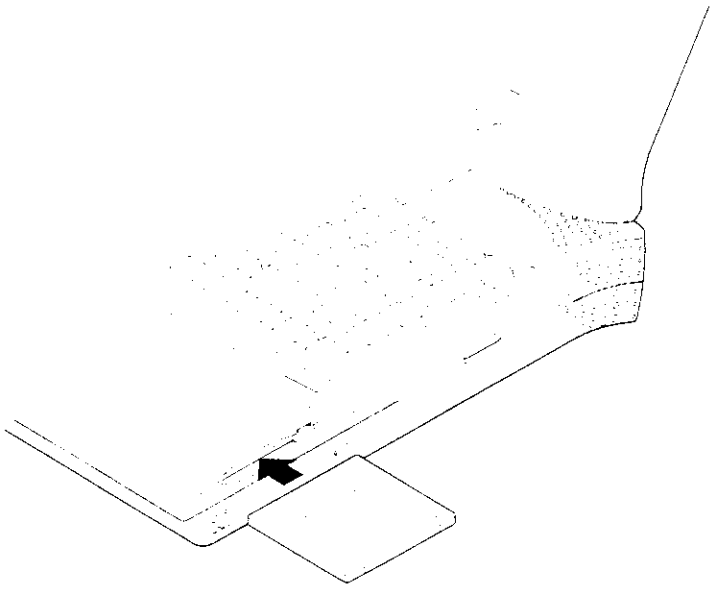


Figure 2-10

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 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. Remove the HDD cover (Figure 2-8).
4. Disconnect the cable (Figure 2-8).
5. Detach the HDD case from the Notebook (Figure 2-8).

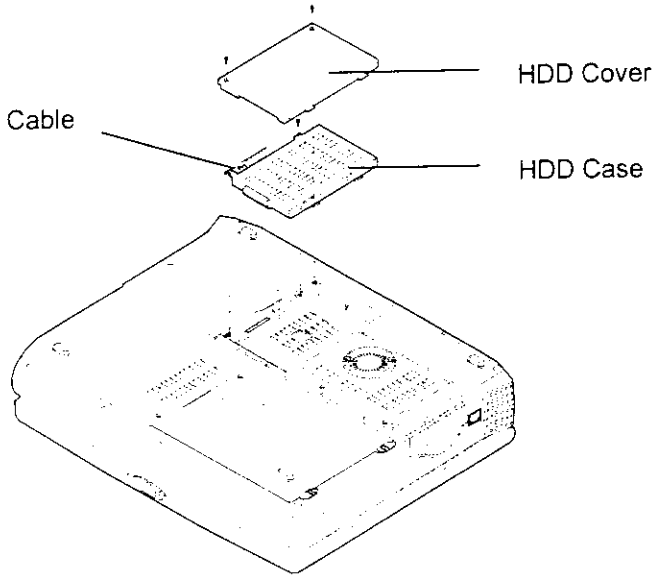


Figure 2-8

Inserting

Reinstall the Hard Disk Drive in the reverse order of removal.

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.

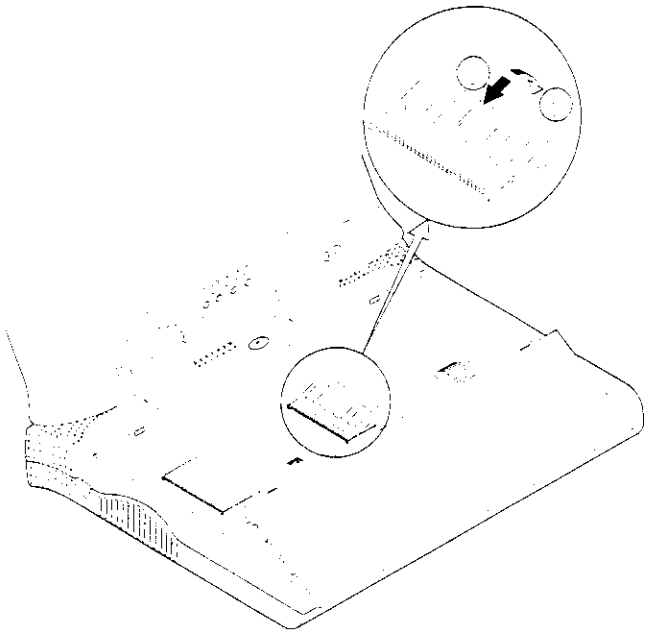


Figure 2-6

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 (Extended Data Out), 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	Minimum Speed	Total Size
(1Mx16)x4	None	3.3V	FPG: 60ns EDO: 60ns SDRAM:75MHz	8MB
(1Mx16)x4	(1Mx16)x4			16MB
(1Mx16)x8	None			16MB
(1Mx16)x8	(1Mx16)x4			24MB
(4Mx16)x4	None			32MB
(1Mx16)x8	(1Mx16)x8			32MB
(4Mx16)x4	(4Mx16)x4			64MB
(4Mx16)x8	None			64MB
(8Mx8)x8	None			64MB
(4Mx16)x8	(1Mx16)x4			72MB
(4Mx16)x8	(1Mx16)x8			80MB
(4Mx16)x8	(4Mx16)x4			96MB
(4Mx16)x8	(4Mx16)x8			128MB
(8Mx8)x8	(8Mx8)x8			128MB

Setting DIP Switch

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.

Flash ROM BIOS	1	2	3	4
Existing BIOS	Off	Off	X	X
Updating BIOS	On	On	X	X

* X = Not Applied.

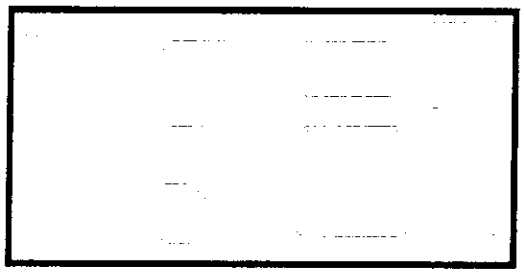
Accessing the 4-Pole DIP Switch

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. Employ the 4-pole DIP Switch to set the configuration (Figure 2-4).

Upgrading Processor Module

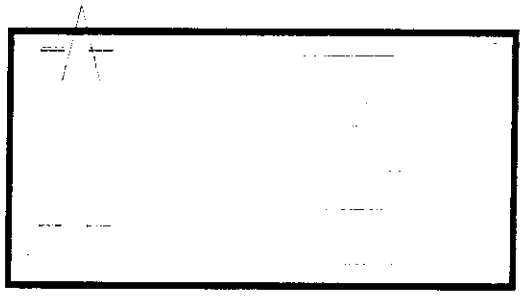
The Notebook Computer features the structure of Intel's Mobile Module (IMM). The Processor Module incorporates an Intel Pentium Mobile processor, secondary cache, and the Intel PCIset "Northbridge" system controller, voltage regulator, and thermal sensor on a single printed circuit board.

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

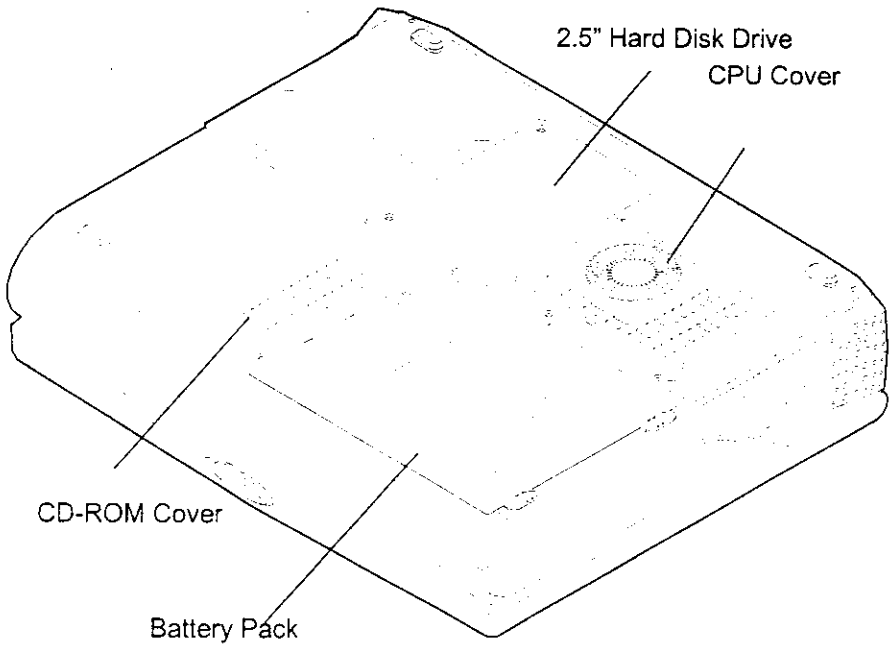


Figure 1-14

Left-side View

⎓ DC-in Socket

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

Ventilation

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

Left-side Stands

When a high speed CPU is installed, the erecting stands on both sides will help heat dissipation during operation.

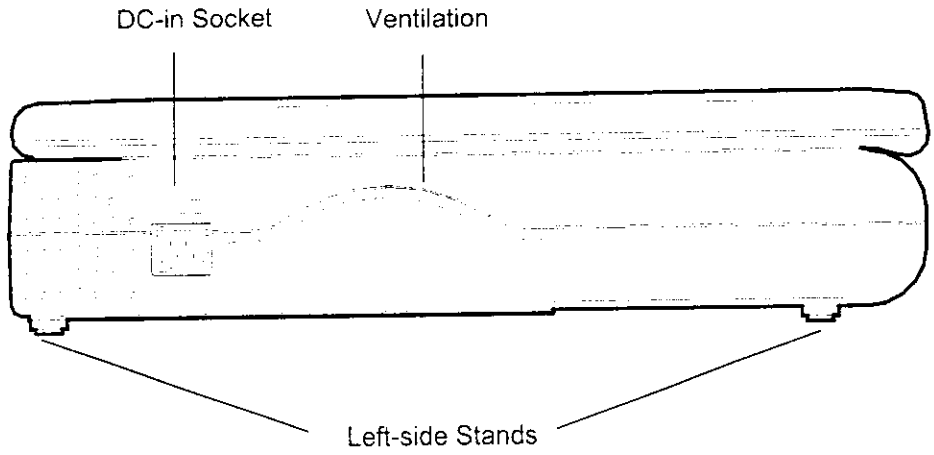


Figure 1-13

Right-side View

3.5" Floppy Diskette Drive

The Notebook comes standard with a 1.44MB floppy drive installed. Press the button on its top-right side to eject the diskette.

5.25" CD-ROM Drive

The 5.25" IDE CD-ROM module is designed to be changeable installing or removing the two screws that fasten the CD-ROM drive. The eject button is located in the middle of the front cover of the CD-ROM drive. Pressing it will release the CD tray. Refer to *Chapter 2: Operation,* for more information.

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 2-17).

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.

Right-side Stands

When a high speed CPU is installed, the erecting stands on both sides will help heat dissipation during operation.

Rear View

Microphone-in Jack

Use this jack to connect a microphone to the system for audio input.

Headphone Jack

Headphone can be attached to the system through this jack for audio output, so can external speakers that have built-in output power amplifier.

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.

PS/2 Type Port

A PS/2 type mouse and keyboard may be connected to the system using this port.

Serial Port

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

Parallel Port

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

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.

Expansion Port

This port is used to connect the proprietary Port Replicator.

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.
🔋/🔋	Green	Battery is fully charged.
	Red	Battery is being charged.
	Blinking Red	Battery power is critically low.
🖴	Green	The hard disk 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 when you need to.

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.
🔋/🔋	Green	Battery is fully charged.
	Red	Battery is being charged.
	Blinking Red	Battery power is critically low.

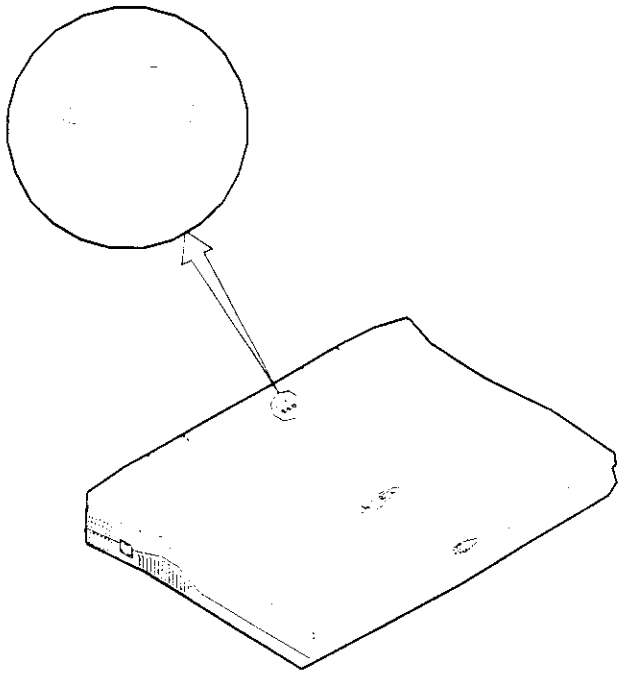


Figure 1-8

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. Please refer to *Chapter 1, System Status LED Indicators* for more information concerning battery charge status.

Off-Line Charge The Notebook system is powered off. Connect the AC adapter to the unit. Its DC output will be used solely to charge the battery. It will take hours to bring a completely discharged battery to its full charge state.

Trickle Charge The Notebook system is powered on. Again, make sure the AC adapter is connected to the unit. Its DC output will both power the system and charge the battery. It may take more hours than off-line charge to charge the battery.

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 (+, –).

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 DC-in socket on the left 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 LED Indicators* for more information on system power status.

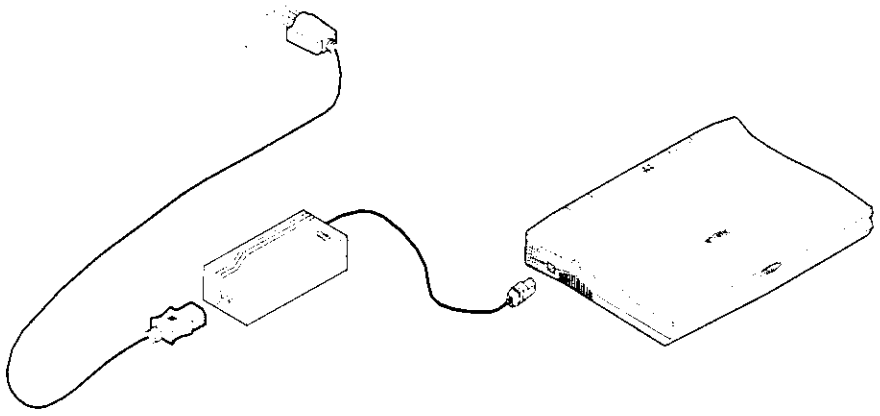


Figure 1-3

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 Diskettes.

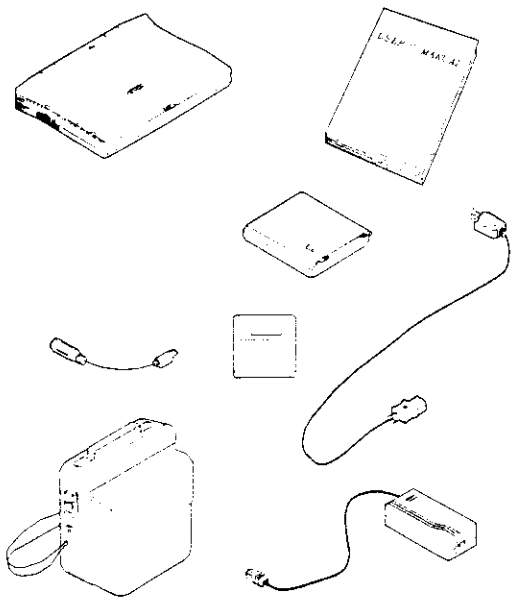


Figure 1-1

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Chapter 3: BIOS Utilities

Table of Contents

Chapter 1: Getting Started