Notice

The company reserves the right to make any updating, revisions or changes to the information contained herein as and when deemed necessary.   The company is under no obligation to notify any purchaser or end-user of such actions in advance or afterwards.

2000

Trademarks

Copyright

Warranty Provisions

Keep the product's bar code legible to protect your right for warranty services.

Warranty service will be furnished on an exchange basis. The manufacturer may repair or replace your product with a new or reconditioned one. Any replaced components or parts become the property of the manufacturer.

No warranty is expressed or implied for products damaged by accident, abuse, misuse, acts of god, or unauthorized modification. No warranties apply after the one-year warranty period.

To obtain warranty service described herein, deliver the product along with proof of purchase date, to any of the manufacturer's authorized distributors during the warranty period. The owner agrees to insure the product and assume the risk of damage or loss in transit, to pay in advance all shipping charges, and to use the original shipping container (or the equivalent).

The manufacturer is not liable to any purchaser or end-user for any damages including, but not limited to, lost revenue, lost wages, lost savings, or any other incidental or consequential damages arising from the purchase, use, or inability to use this product.

Safety Notice

The following mentions the incorrect handling that is seriously inhibited.   To keep the computer from being damaged, please keep these precautions in your mind.

Do not turn off power in operation.
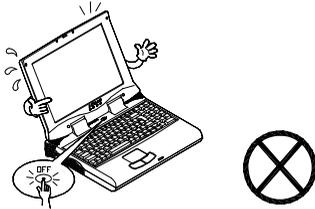
Do not place the computer on unstable surface.
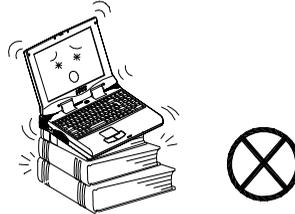
Do not turn off the peripheral device when the light is on.

Do not touch the poisonous liquid when the LCD panel is broken.
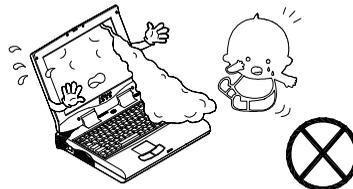
Do not touch the battery's contact plate with hands or metal objects.
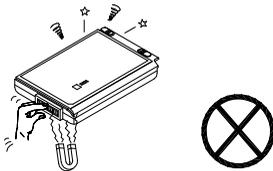
Do not put the computer on surfaces that can block the ventilation.
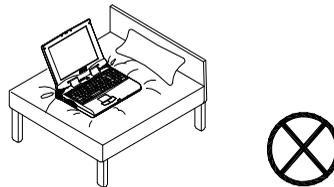
Do not disassemble the computer yourself.
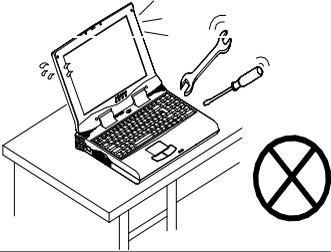
Do not place anything heavy on the computer.
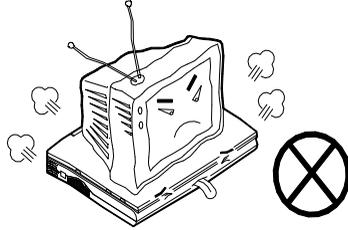
Do not touch power cord by wet hand.
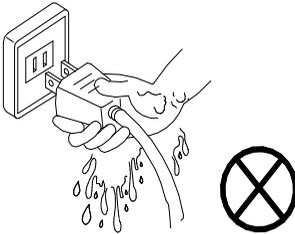
Do not use broken power cord.
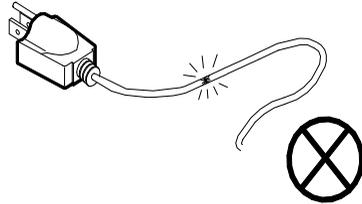
Keep the computer away from any metal appliance.
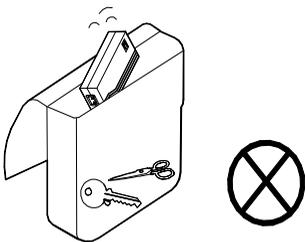
Do not throw the computer or accessories into fire.
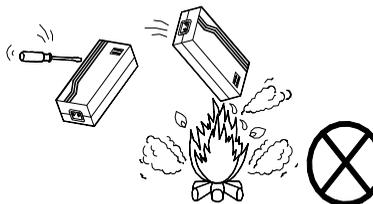
The following mentions the actions that are important for your computer.   To keep your computer in the most excellent condition, please follow the instruction as much as possible.

If there is unusual odor, heat or smoke, plug out the power cord.	**Plug out the power cord in attaching peripheral devices.**
Follow the use instruction in taking airplane.	**Use the same brand of peripheral devices.**
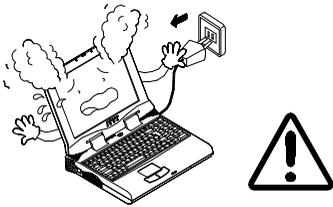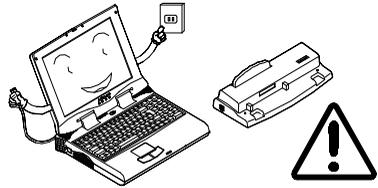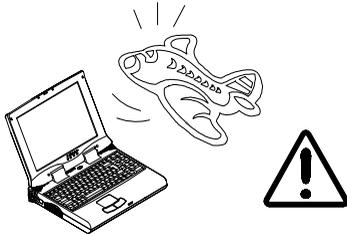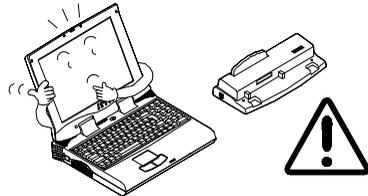
Maintain your computer regularly.

Do not place heavy thing on the power cord.
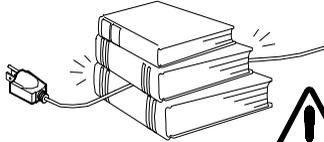
Affix tape to the contact plate while putting the battery into keeping box.
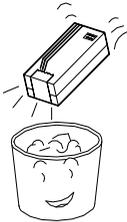
Take a rest after a long term of work.

The data is easy to lose in low power status.

Please keep the computer away from humid environment.
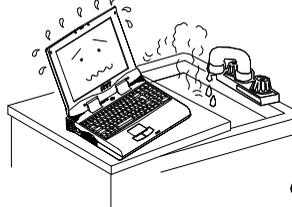
Ergonomics

Developing good work habits are important if you need to work in front of the computer for long periods of time. Improper work habits can result in discomfort or serious injury from repetitive strain to your hands, wrists or other joints. The following are some tips to reduce the strain:

☞ Adjust the height of the chair and/or desk so that the keyboard is at or slightly below the level of your elbow. Keep your forearms, wrists, and hands in a relaxed position.

☞ Your knees should be slightly higher than your hips. Place your feet flat on the floor or on a footrest if necessary.

☞ Use a chair with a back and adjust it to support your lower back comfortably.

☞ Sit straight so that your knees, hips and elbows form approximately 90° angles when you are working.
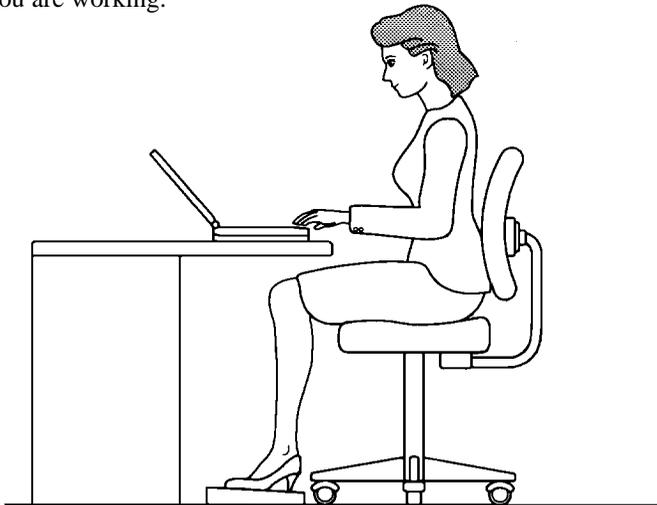
In addition, continuous concentration on computing work can result in discomfort and injury. Remember to:

☞ Alter your posture frequently.

☞ Stretch and exercise your body several times a day.

☞ Take periodic breaks when you work at the computer for long periods of time. Frequent and short breaks are of greater benefit than fewer and longer breaks.

Lighting

Proper lighting and comfortable display viewing angle can reduce eye strain and muscle fatigue in your neck and shoulders.

☞ Position the display to avoid glare or reflections from overhead lighting or outside sources of light.
☞ Keep the display screen clean and set the brightness and contrast to levels that allow you to see the screen clearly.
☞ Position the display directly in front of you at a comfortable viewing distance.
☞ Adjust the display viewing angle to find the best position.

Table of Contents

Chapter 1.   Getting Started

This chapter provides you with the information of notebook computer system that will help you to get the basic understanding of the computer.

- Unpacking
- Operating Environment
- Providing Power
    - Using the AC Adapter
    - Using the Battery Pack
- Opening the LCD Cover
- Top Front View
- Rear View
- Left Side View
- Right Side View

Unpacking

Remove everything from the shipping box and check the items one by one.   If any item is missing or damaged, contact your local dealer immediately.
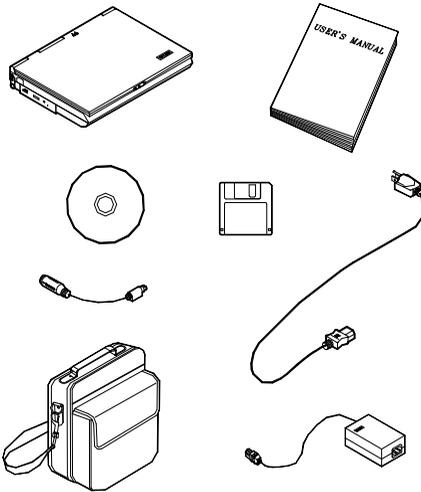
‣   Notebook Computer.
‣   Carrying Bag.
‣   Power Adapter.
‣   Power Cord.
‣   User's Manual.
‣   PS/2 Transfer Cable.
‣   Battery Pack.
‣   Utilities Diskette(s).

Figure 1-1

Operating Environment

Like any electronic equipment, proper care and operation of your computer will prolong the use period.   Make sure that the computer IS NOT:

- EXPOSED TO EXCESSIVELY HEAT OR DIRECT SUNLIGHT.
- SHOCKED OR VIBRATED.
- EXPOSED TO STRONG MAGNETIC FIELDS.
- LEFT IN A PLACE WHERE FOREIGN MATERIALS OR MOISTURE MAY AFFECT THE SYSTEM.
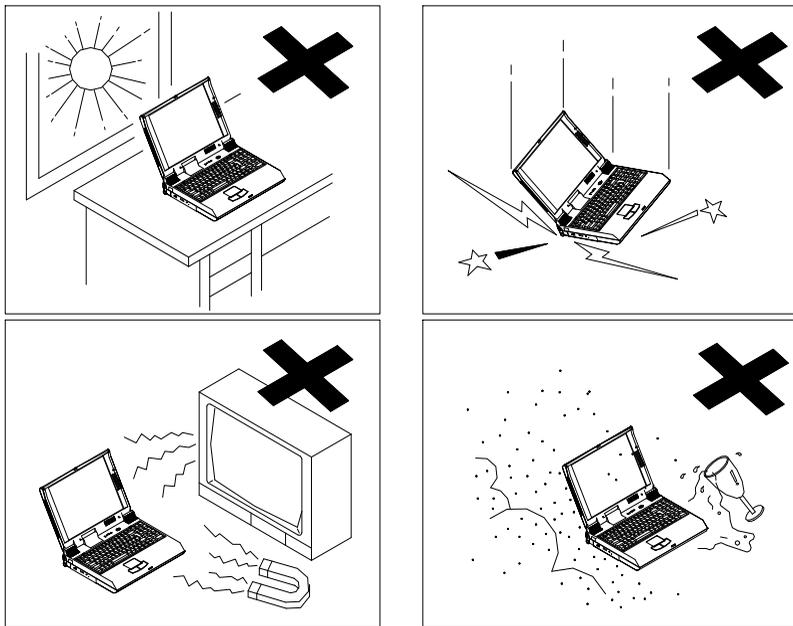
Figure 1-2

Providing Power

The notebook computer is convenient for you to use it anywhere: at home, in the office, or on the road.   For different situations you should use different power sources for the computer.   With using the computer at home or in the office, the AC adapter is a better choice than battery pack, while using it on the road, the battery pack will be helpful since no electrical outlet is available.

Using the AC Adapter

Use the AC power adapter alone that is provided with your computer.   An incorrect power adapter will cause possible damage to the computer and the internal components.

1   Connect the AC adapter to the power jack on the computer.

2   Connect the AC adapter to the power cord.

3   Connect the power cord to an electrical outlet (Figure 1-3).
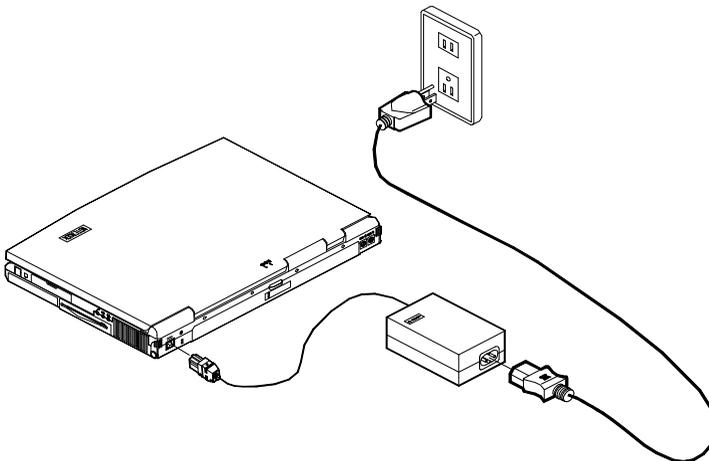
Figure 1-3

Using the Battery Pack

The battery pack supplies power to the computer when you are travelling on the road and the ac power is not available.   With the battery pack, no external power source is additionally required.   However, the length of use with battery power varies depending on the applications and the configurations you're operating with your computer.

Installing the Battery pack

1 Turn the computer upside down.

2 Firmly fit the battery pack into place at a slight angle.

3 Install the four screws that fasten the battery pack on the computer.

Removing the Battery Pack

1 Turn the computer upside down.

2 Remove the four screws that hold the battery pack on the computer.

3 Carefully lift the battery pack out of the computer (Figure 1-4).
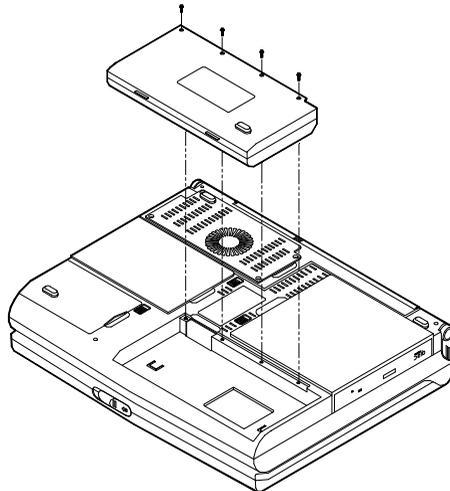
Figure 1-4

Recharging by AC Power Adapter

No matter the computer power is on or off, the battery pack is recharged whenever the computer is connected to the AC power adapter with the battery pack installed.

− Connect the AC power adapter to the computer to begin recharging the installed battery pack.   You do not need to turn off the computer.
− Hours may be needed to fully charge the battery pack.
− Refer to "System Status Indicators" in Chapter 1 for more information on battery power status.

Proper Handling of the Battery Pack

Please keep the following precautions in mind when you handle the battery pack.

● Do not attempt to disassemble the battery under any situation.
● The battery pack can explode if exposed to fire or high temperatures.
● Avoid battery short-circuit by preventing any simultaneous contact of metal objects to the battery's terminals (+/-) on both ends.

Opening the LCD Cover

1 Press the latch to release the top cover. (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 on the computer. (Refer to "Top Front View" described later in Chapter 1 for more information on the power button)
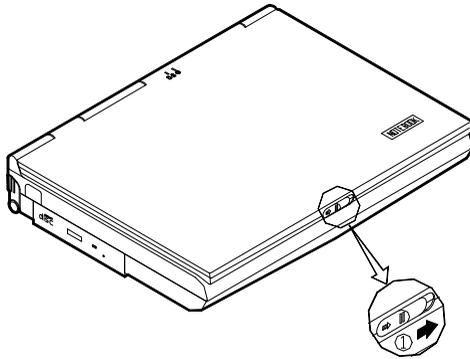
Figure 1-5

Press the latch to the right.
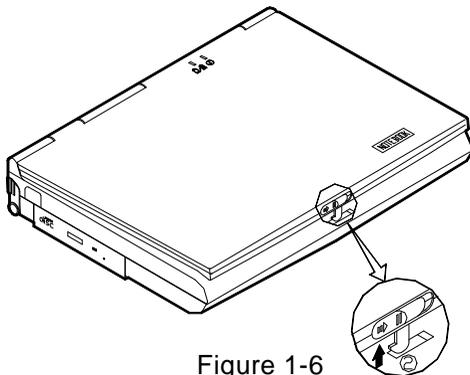
Figure 1-6

LED Indicators on the Top Cover

There are two indicators located on the top cover (see Figure 1-7). For their meaning and other information, please refer to "System Status LED Indicators" in Chapter 1.
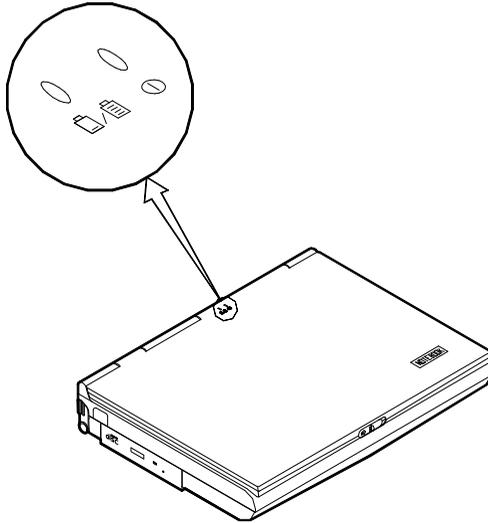
Figure 1-7

Top Front View

LCD Panel

The computer provides a TFT color LCD panel.   Depending on the model of computer you purchased, the TFT LCD can either be *15.1"* or *15.0"* XGA display.   The LCD panel is driven by a AGP 2X bus video controller with 8MB video memory.

Stereo Speakers

The computer comes with two built-in speakers that can provide clear stereo sound system for the computer's audio playing activity.

Trackpad and Buttons

The pointing device features a sensitive glide pad for precise movements. It functions like a two-button mouse.   The right trackpad button functions the same way as the right button of mouse; and the left trackpad button as the left button of mouse.

Keyboard

The 102-key Windows 95 keyboard is provided with an embedded standard numeric keypad and the **Fn** function and is detachable for various language versions.   You may refer to "Operation" in Chapter 2 for more information.

Microphone

The computer has one microphone built in that allows you to proceed any audio recording task with an appropriate audio application program.
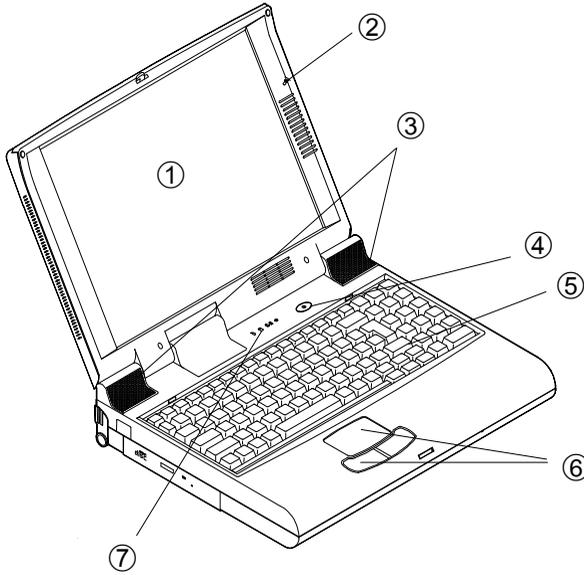
Figure 1-8

1	LCD Panel	5	Keyboard
2	Microphone (built-in)	6	TrackPad & Buttons
3	Stereo Speakers (built-in)	7	LED Indicators
4	Power Button		

System Status LED Indicators

The LED indicators on the computer indicate the system's operation status.

Icon	Color	Description
⏻	Green	Battery supplies power to the computer.
	Red	AC power adapter is connected to the computer and supplies ac power to it.
🔋/🔋	Green	Battery is fully charged.
	Red	Battery is being recharged with the AC adapter connected to the computer.
	Blinking Red	Battery power is critically low.
☽	Green	The system enters the suspend mode (either POS or STR mode according to the setting in System Configuration Utility). Refer to Chapter 3 for more information on the suspend mode.
🗄	Green	The hard disk is being accessed.

Power Button

⏻	Press the button to turn the power on or off.
	With setting in the System Configuration Utility, the button also functions as the Suspend/Resume key. For more information, refer to "Power Menu" in Chapter 3.

Note: After turning off the computer, wait for a few seconds before you turn it on again.

Rear View

--- Power Jack

Plug the AC adapter into this jack for power supply.   To disconnect, pull the adapter away from the jack.

🔒 Locking Device Connector

This is where you connect a security locking device to protect the computer from being carried away without your permission.

🖥 Port Replicator Port

This port allows you to connect a port replicator to promote the computer's capability.   For example, a port replicator may come with a TV-out port, an external diskette drive connector, etc.

⌨\🖰 Dual PS/2 Type Ports

This is where you can connect an external mouse or keyboard with a PS/2-type connector.   However, you cannot connect the same type of PS/2 devices to both ports simultaneously.

🖨 Parallel Port

This parallel port supports both Enhanced Parallel Port (EPP) and Extended Capabilities Port (ECP) modes and enables you to connect a standard parallel printer.

📺 S-Video Jack

This jack is used to transmit video signal to a TV set.   You may have to select the video standard (NTSC/PAL) for video display on the TV set in the System Configuration Utility. (Refer to "Components Menu" in Chapter 3 for more information.)

📹 RCA Jack

This jack allows the computer to receive analog composite signals from

external video devices, e.g. camera, CD.

•⇌ **Dual USB Ports**

This is where you attach an external USB peripheral device, such as a USB external mouse, keyboard or monitor.

▣¹ **Serial Port**

The serial port, UART 16C550 compatible, is used to connect a 9-pin external serial device such as a serial mouse or an external high-speed modem.

▢ **External Monitor (CRT) Port**

This port is used to transmit the displayed information from the computer to an attached external monitor.   This way, simultaneous display on both of LCD screen and the external monitor is available.

⌷1394⌷ **1394 Port**

A newly developed port which connects with the digital camera.
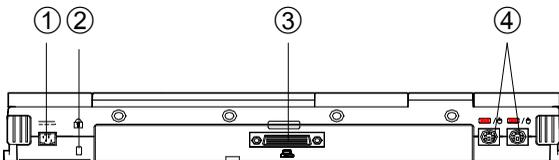
Open the back cover to reveal the ports shown below.
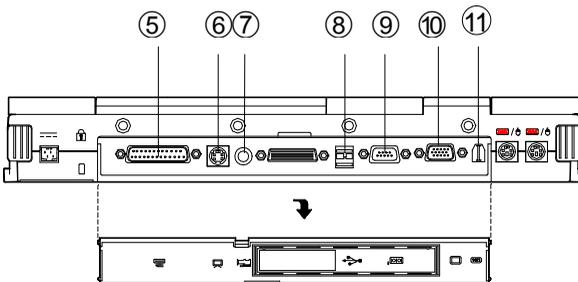
1	Power Jack
2	Locking Device Connector
3	Port Replicator Port
4	Dual PS/2 Ports
5	Parallel Port
6	S-video Port
7	RCA Jack
8	USB Port
9	Serial Port
10	External Monitor Port
11	1394 Port

Figure 1-9

Right Side View

⌷ Phone Jack

The computer provides one phone jack (RJ-11) for you to install an optional 56Kbps DSVD ISA modem module and accordingly connect a phone cable to this jack.

Hard Disk Drive

The computer accepts any 2.5" hard disk drive with a maximum 12.7mm height.   The hard disk drive is removable and can be replaced.   Refer to "Operation" in Chapter 2 for more information.

PC Card Slot

There are two PC card slots (PCMCIA) located on the computer, which accepts two Type II PC cards or one Type III PC card to expand the computer's capability.   To remove the PC card, press the PC-Card eject button.

Floppy Disk Drive

The computer comes standard with a 1.44MB floppy disk drive installed. The floppy-disk-drive module can be replaced with other disk-drive units, such as a secondary 2.5"/3.0" hard disk drive or Zip drive. (Refer to "Operation" in Chapter 2 for more information.)

∩ Headphone Jack

You can connect either the headphone or external speakers to the jack.

(((•))) Audio Line-in Jack

This is where you connect an external audio device.

🎤 Microphone Jack

This jack is to connect an external microphone.

Ventilation

This is where the fan heatsink located.   The ventilation is built to enable airflow to help cooling down the system temperature.   Do not put any object around the cooling ventilation to block it.

Right Side Stand

Position the stand (along with the left one) to adjust the angle of the computer.   If a high speed CPU is installed, erecting the stands on both sides is necessary for heat dissipation during operation.

1 Phone (RJ-11) Jack
2 Hard Disk Drive
3 PC Card Slot
4 Floppy Disk Drive
5 Headphone Jack
6 Audio Line-in Jack
7 Microphone Jack
8 Ventilation
9 Right Side Stand
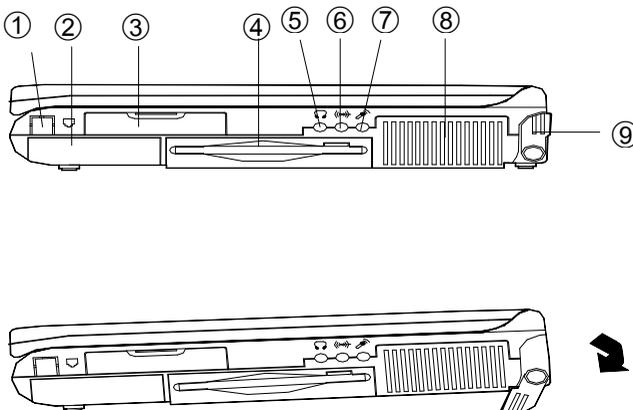
Pull down the stand when operating with your computer.

Figure 1-10

Left Side View

CD-ROM Drive

The 5.25" IDE CD-ROM module is designed to be removable. Therefore, you can replace the CD-ROM drive with a new one.

Infrared Port

The system adopts infrared technology as a simple, fast and convenient way to exchange data between the computer and another infrared computer or device.   The infrared port supports IrDA (HPSIR) 1.1, fast infrared (FIR) and Amplitude Shifted Keyed IR (ASKIR) modes.   Its operating distance can be from 1cm to 1M.   For detailed information, refer to the instructions in the documentation that came with the infrared device.

Left Side Stand

Position the stand (along with the right one) to adjust the angle of the computer.   If a high speed CPU is installed in the computer, erect the stands on both sides to help heat dissipation during operation.

1 CD-ROM Drive
2 Infrared Port
3 Left Side Stand

Pull down the stand when
operating with your computer.
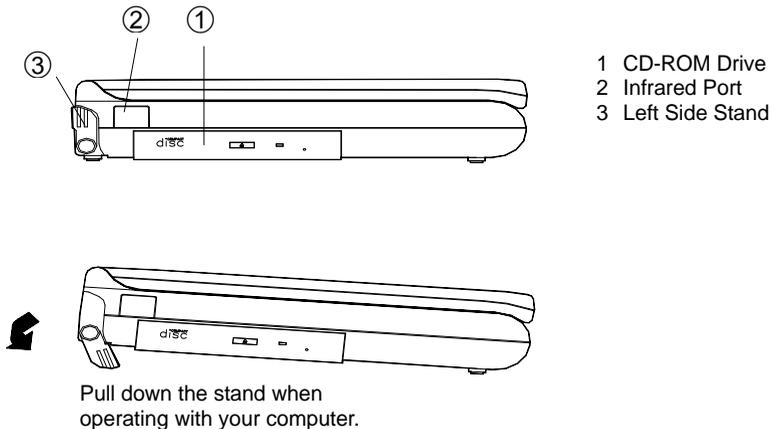
Figure 1-11

Chapter 2.   Operation

The computer provides many advanced features to help you with your computing work.   This chapter describes the features of the computer and how to install and remove the internal & external devices.

Note:

Remove the battery pack and disconnect the AC power adapter from the computer before the removal or installation of the internal devices. Besides, make sure you wear an anti-static wrist strap to ground yourself when working with or repairing the internal components.   Static electricity may damage the components.

- ■ Upgrading the Processor Module
- ■ Setting DIP Switch
- ■ Expanding Memory
- ■ Using the Hard Disk Drive
- ■ Using the Floppy Disk Drive
- ■ Using the CD-ROM
- ■ Using the PC Card Slot
- ■ Using Hot Keys
- ■ Using the Numeric Keypad
- ■ Using Power Management
- ■ Attaching Peripheral Devices

Upgrading the Processor Module

The notebook computer features the structure of Intel Mobile Module Connector II (MMC2). Its processor module is connected to the motherboard via a connector (see the figure below), which allows users to easily upgrade their system by simply replacing the module.

The design of the module incorporates an Intel Pentium Mobile processor, secondary cache, the Intel PCIset "Northbridge" system controller, voltage regulator, and thermal sensor on a single printed circuit board.

This computer is designed to support Intel Mobile Pentium® II processor at 233, 266, 300, 333, 366 and 400MHz, and Mobile Pentium® III at 450, 500, 550, 600 and 650MHz core frequencies.   Moreover, it also supports Mobile Pentium® III processors at 600/650 MHz with Intel *SpeedStep*® technology.

Top View

Connector
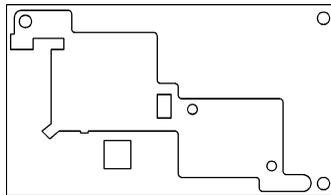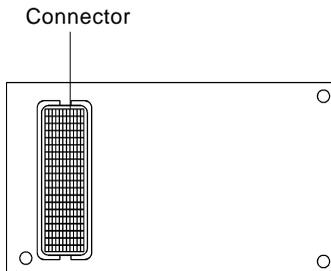
Bottom View

Mobile Processor Module

Replacing the Processor

1 Remove all the power supplies (the AC adapter and battery) from the computer.

2 Turn the computer upside down.

3 Remove the four screws that hold the CPU cover on the computer and the CPU cover (①).

4 Remove the screws that fasten the heat sink and fan on the processor module and thus remove the heat sink and fan (②).

5 Carefully lift the processor module (③) from the computer (Figure 2-1).
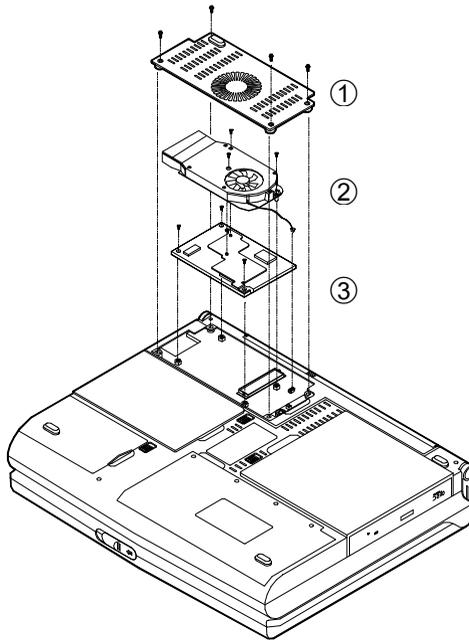
Figure 2-1

Setting DIP Switch

The DIP swithces are located on the motherboard under the keyboard.   You need to go to set the DIP switches (SW1) in correct configuration to proceed **Flash ROM BIOS update** in your computer.

To upgrade your computer system, you should keep up with the latest system BIOS.   Consult your dealer or service representative for further information on this.   Before your start to update the system BIOS, set the DIP switches to **On**, and reset to **Off** again after you complete the updating.

The configuration is listed as below:

DIP Switch (SW1)		Flash ROM BIOS
SW1-1	**SW1-2**	**Situation**
Off	Off	Normal operation with the existing BIOS in the computer.
On	On	While updating BIOS in the computer.

Accessing DIP Switch

1 Turn the power off.

2 Press the two keyboard latches that hold down the keyboard to release it (Figure 2-2). Use a pointed device (for example, a pin) to press the latches.

3 Carefully raise the keyboard assembly and set it aside.

4 Locate the DIP switches and configure it according to the above list (Figure 2-3).
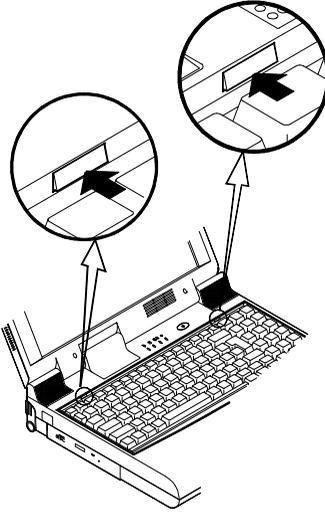
Figure 2-2
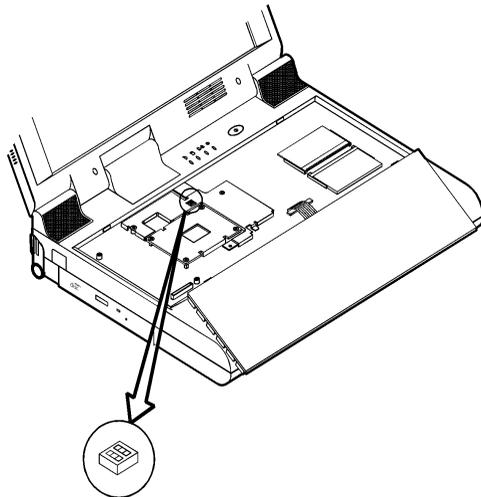
Figure 2-3

Expanding Memory

The computer comes standard with two RAM memory sockets that supports SDRAM, and allows you to expand the memory up to maximum 256MB.   Use only 144-pin Small Outline Dual In-line Memory Module (SODIMM) for the RAM. If you update the processor to Intel Pentium® III, only **PC-100 SDRAM** can be installed in the computer.   To expand the memory, you have the following choices with different DRAM combinations.

Bank 1 (64 Bits)	Bank 2 (64 Bits)	Power	Total Size
0	32		32
0	64		64
0	128		128
32	0		32
32	32		64
32	64		96
32	128		160
64	0	3.3V	64
64	32		96
64	64		128
64	128		192
128	0		128
128	32		160
128	64		192
128	128		256

Before you install any RAM modules into the computer, keep the following precautions in mind:

- Install *the same brand* of RAM modules for the two sockets.
- **For Intel Pentium II**: Install the RAM modules either *both with* or *both without* SPD EPROM.   Do not install the RAM modules that one of them is with SPD on the module, and the other without.
- **For Intel Pentium III**: Install the RAM modules (PC-100 SDRAM) both with SPD EPROM (see the figure below).
- Do *not* use the RAM modules whose position of SPD EPROM is not appropriate and cause the RAM modules not able to be installed in the memory sockets.

PC-100 SDRAM
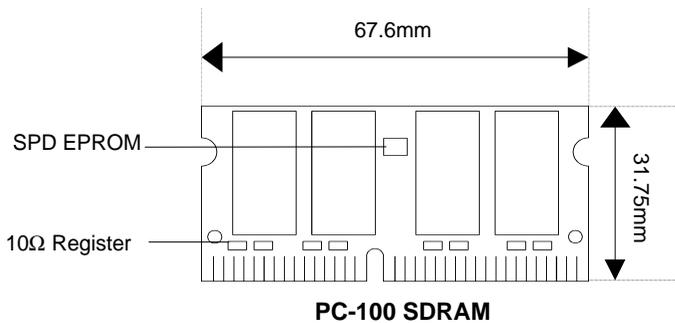
Accessing the Memory Sockets

1 Turn the power off.

2 Turn the computer upside down.

3 Press the two keyboard latches that hold down the keyboard.

4 Carefully raise the keyboard assembly and set it aside.

5 Locate the memory sockets in the motherboard (Figure 2-4).

Bank 2
Bank 1
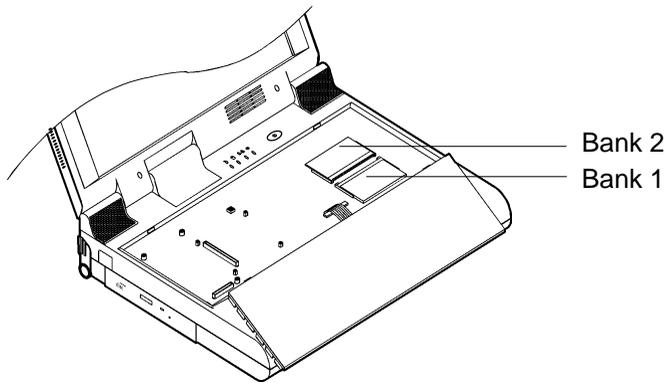
Figure 2-4

Note:
- The memory socket Bank 1 is a reverse type, make sure you install the memory module with reverse side to fit its connector.
- Please ensure that each edge of the memory module (SDRAM) has no component mounted on (see Figure 2-5). It is recommended to use the RAM module that complies with Intel unbuffered SO-DIMM (67.6mmX31.75mm).   Consult your dealer or service representative for detailed information.

67.6mm

31.75mm
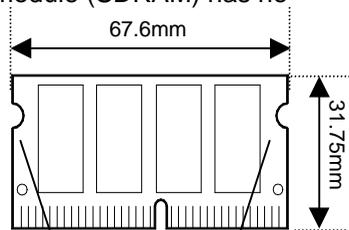
Non-component area
(The edges of the memory module
are the non-component area.)
Figure 2-5

Installing the Memory Module

1 Follow the procedures of "Accessing the Memory Sockets" on previous page.

2 Insert the memory module at a slight angle (around 45°) (do ①); and then press it down until it locks into place with a click (do ②)(Figure 2-6).

3 Reinstall the keyboard.
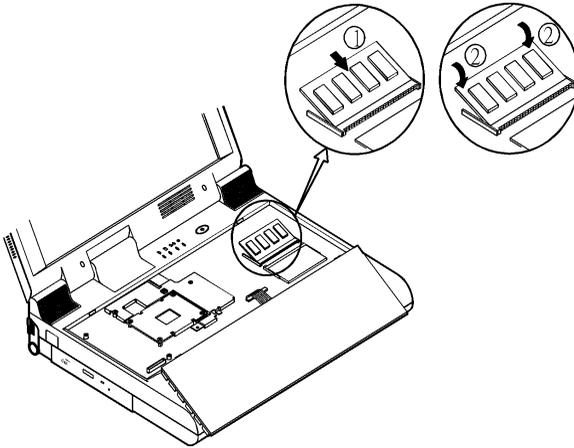
Figure 2-

Removing the Memory Module

1 Follow the procedures of "Accessing the Memory Sockets" on previous page.

2 Gently pull the two latches on both ends of the module (do ①).　The module will pop up (Figure 2-7).

3 Take the memory module away.

4 Reinstall the keyboard.
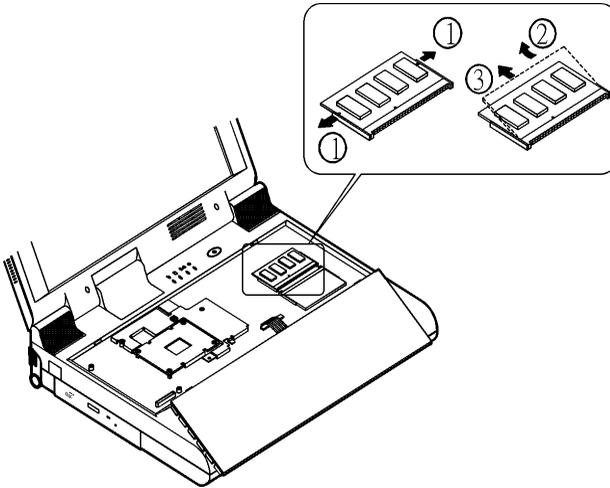
Figure 2-

Using the Hard Disk Drive

The hard disk drive is mounted in a removable case and can be removed to accommodate other 2.5" IDE hard disk drives with a height of 12.7mm.   The system supports hard disk drives with 2.0 GB capacities 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 the Hard Disk Drive

1   Turn the power off.

2   Turn the computer upside down.

3   Press the hard-disk-drive latch to release it (do ①) and pull the hard disk drive out of the computer (do ②).
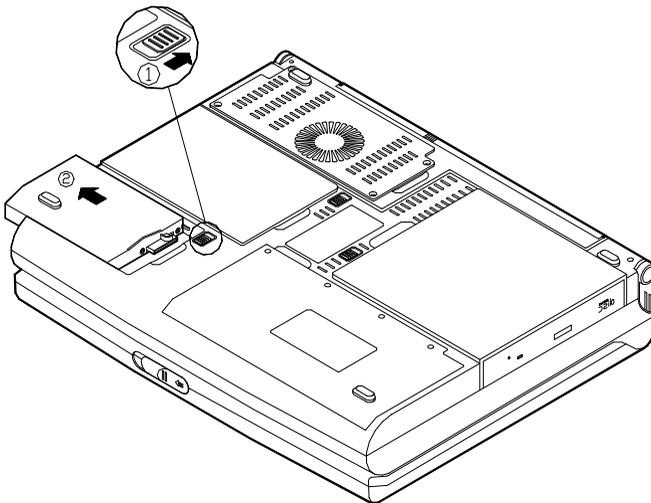
Figure 2-8

Note:
When inserting the hard disk drive, Insert it firmly into the computer.   Make sure you feel the drive click into the position when it is seated properly.

Replacing Hard Disk Drive

The hard disk drive is contained in a case.   To replace the hard disk drive with another one, you need to remove the two screws on sides of the case first (Figure 2-9).   The location of the two screws may vary depending on different types of hard disk drives.   Gently disconnect the cable from the hard disk drive when separating it from the case.   Be careful not to bend any pins or crimp the cable.
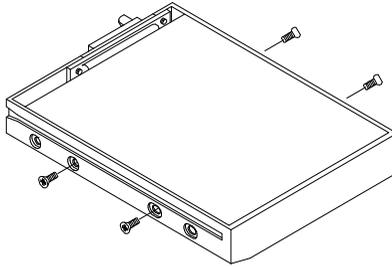
Figure 2-9

Using the Floppy Disk Drive

The computer comes with a 1.44MB, 3.5" floppy disk drive module.   It is usually labeled as drive A: by default and can be set as a boot device in BIOS setup utility.   Refer to Chapter 3 for more information on the setting.

You can choose to replace the floppy disk drive with other storage-device options: 2.5" *secondary* hard-disk drive (with 12.7 or 17mm height), 3.0" *secondary* hard-disk drive (with 12.5mm height), 100MB ZIP drive (with 15mm height), or LS-120 device (with 12.7mm height).   Contact your dealer for details of these options.

Inserting/Removing a Diskette

- To insert a diskette, insert it with the label-side facing up (Figure 2-10).
- To remove the diskette, press the eject button on the top-right corner of the floppy disk drive.
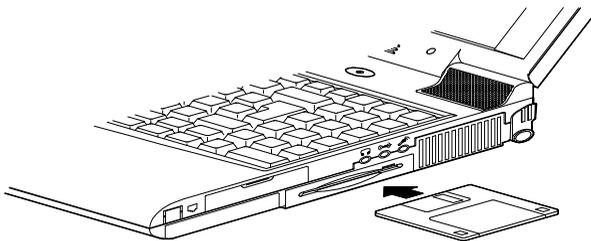
Figure 2-10

Replacing Floppy Disk Drive

1 Turn off the computer.

2 Turn the computer upside down.

3 Press the floppy-disk-drive latch (do ①) and pull the floppy disk drive out of the computer (do ②) (Figure 2-11).

4 Insert the replacement drive (2.5"/3.0" secondary HDD or 100MB Zip drive) firmly into the computer.
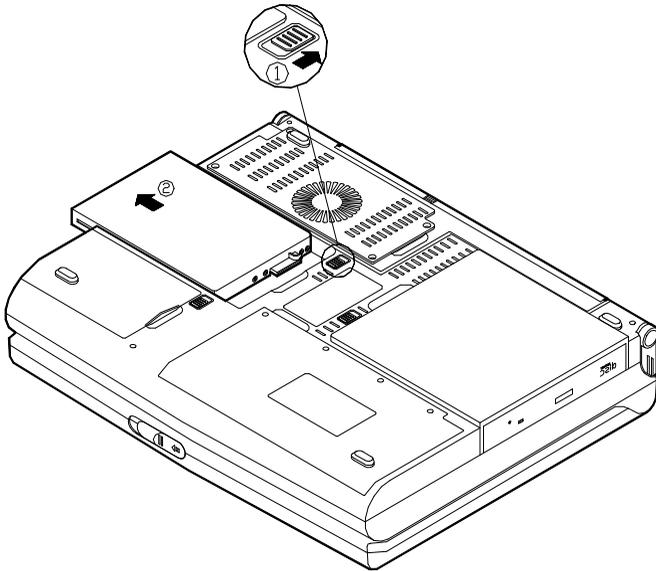
Figure 2-11

Using the CD-ROM

The computer is equiped with a removable 5.25" CD-ROM module, which is usually labeled as drive D: and can be configured as a boot device in BIOS setup utility.   Refer to Chapter 3 for more information on the setting.

To insert a CD, press the CD-ROM eject button and place the CD onto the disc tray with label-side facing up.   Push the CD tray into the computer and you are ready to work with the CD.   The busy indicator on the CD-ROM will turn on when data is being accessed or while an audio CD is playing.   If an unexpected power failure occurs, insert a pointed device such as a pin into the emergency eject hole to manually eject the disc tray and take out the CD.
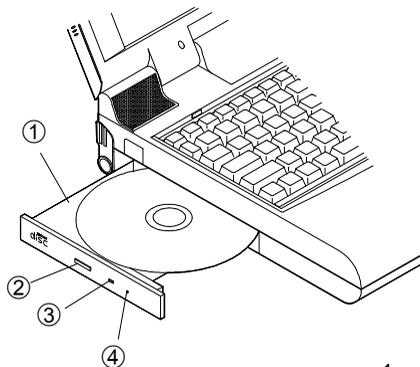
Figure 2-

1	Disc Tray
2	CD-ROM Eject Button
3	Busy Indicator
4	Emergency Eject Hole

Removing the CD-ROM Module

1 Turn off the power.

2 Turn the computer upside down.

3 Press the CD-ROM-drive latch (do ①) and pull the CD-ROM module out of the computer (do ②) (Figure 2-13).
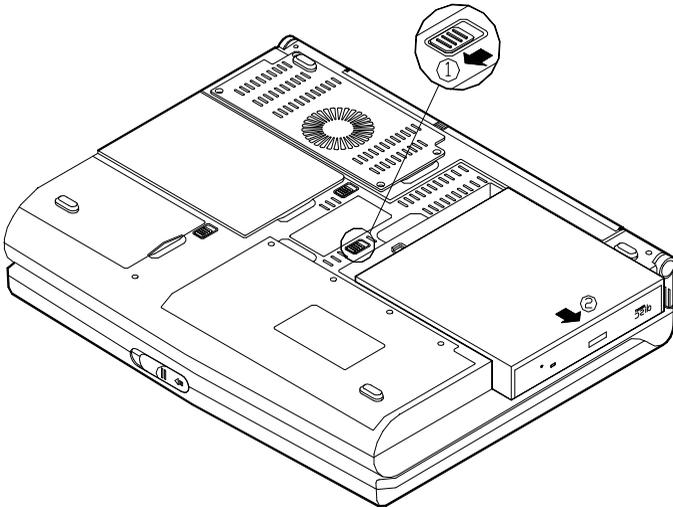
Figure 2-13

Loading a Compact Disc

1 Turn the power off.

2 Press the CD-ROM eject button; the disc tray will pop out partially.

3 Pull the disc tray completely out.

4 Carefully place the CD onto the disc tray with label-side facing up. Some pressure may be needed to press the CD to firmly fit onto the disc tray (Figure 2-14).

5 Push the tray until it closes.
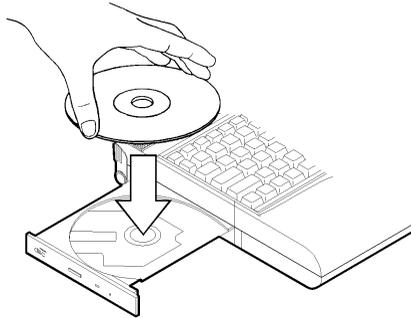
Figure 2-14

Handling Compact Discs

Proper handling of your CDs will avoid any possible damage or injury to the CDs and ensure the accessibility of data.

- Hold the CD by the edges; do not touch the surface of the disc.
- Use clean, soft, and dry cloth to remove dust or fingerprints.
- Do not use pen to write on the surface.
- Do not attach any paper or other materials to the surface of the disk.
- Do not store or place the CD in the high-temperature areas.
- Do not use benzene, thinners, or other cleaners to clean the CD.
- Do not bend the compact disc.
- Do not drop or subject the CDs to shock.

Using the PC Card Slot

The computer is provided with two PC card slots (PCMCIA) which can accept two Type II or one Type III PC card.   PC cards to be used can be LAN, fax/modem, communication devices, or expanded memory.

Both slots support 5V/3.3V 16-bit PC cards and 3.3V 32-bit PC cards (referred to as CardBus).   But only the lower slot (slot A) is compatible with Zoomed Video (ZV) mode (Figure 2-15).
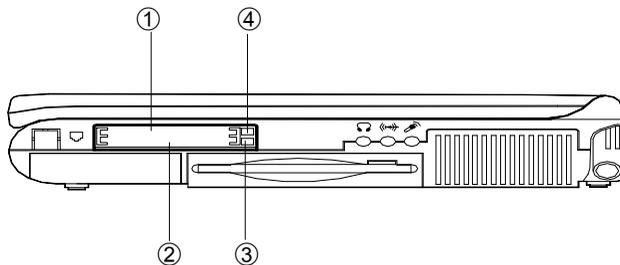
1. Slot B
2. Slot A
3. Eject Button for Slot A
4. Eject Button for Slot B

Figure 2-15

Note:
There are three types of PC cards: Type I, II and III.   Type I measures 3.3 mm thick, Type II 5.0 mm and Type III 10.5 mm.

Inserting a PC Card

1 Open the access door (Figure 2-16).

2 Push the PC card into the slot with a click (Figure 2-17).
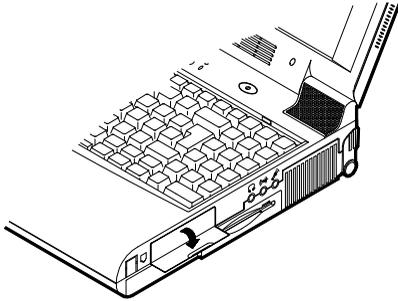
Figure 2-16
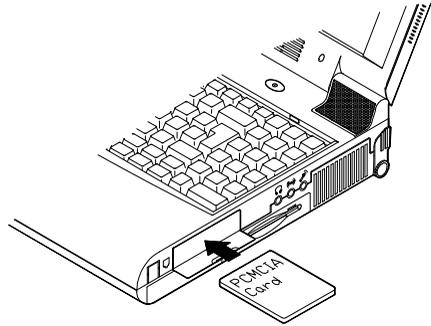
Figure 2-17

Removing a PC Card

To remove a PC card, press the PC-Card eject button (see Figure 2-15).

Using Hot Keys

The **Fn** key is a blue-colored key located on the bottom-left corner of the keyboard (Figure 2-18).   The key combinations of the **Fn** key and blue-colored function keys (the top row of the keyboard) function as hot keys and offer an easy way for you to quickly change the display output type, adjust the speaker volume, LCD brightness and to activate the suspend mode.   To use any of the following **Fn** key functions, press and hold the **Fn** key and then press the assigned function key.

Hot Keys	System Features
Fn + F3	Expand LCD display.
Fn + F6	Toggle between CRT/LCD/LCD+CRT.
Fn + F9	Decreases LCD brightness.
Fn + F10	Increases LCD brightness.
Fn + F11	Decreases audio volume.
Fn + F12	Increases audio volume.
Fn + Esc	Put the system in a suspend state for power management.

Windows 95/98 Special Keys

The keyboard provides two keys that have special functions in Windows 95/98:

This key has the same functions as the secondary mouse does.

This key activates the Windows 95/98 Start menu.
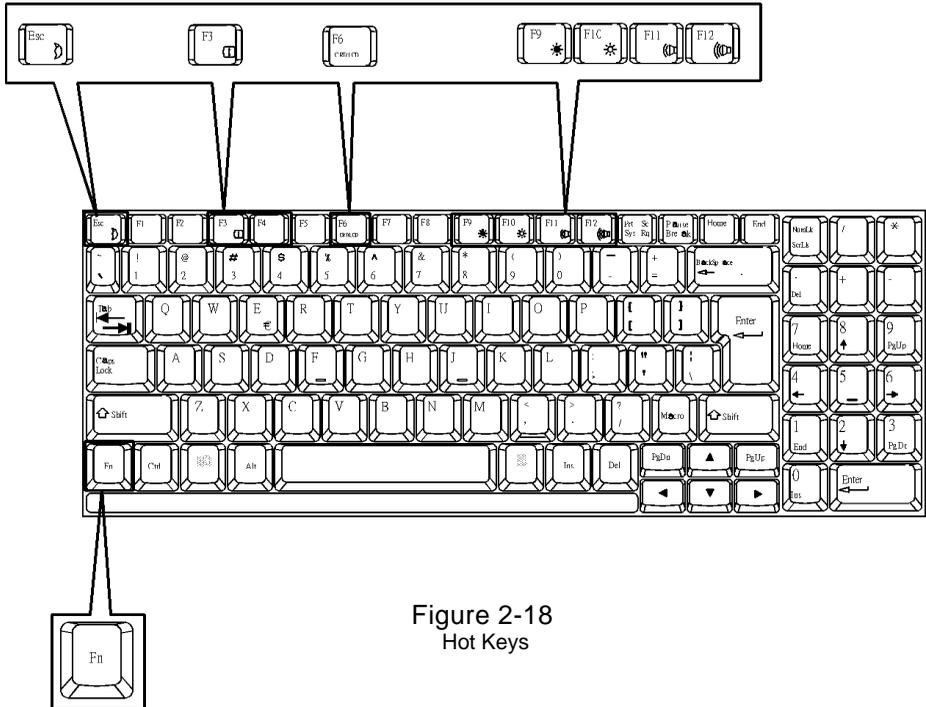
Figure 2-18
Hot Keys

Using the Numeric Keypad

The computer provides a 102-key keyboard.   The keyboard comes standard with an integrated numeric keypad for quick input of numeric data (Figure 2-19). To activate the numeric keypad, press the **NumLock** key.   Refer to "LED indicators" in Chapter 1 for more information.
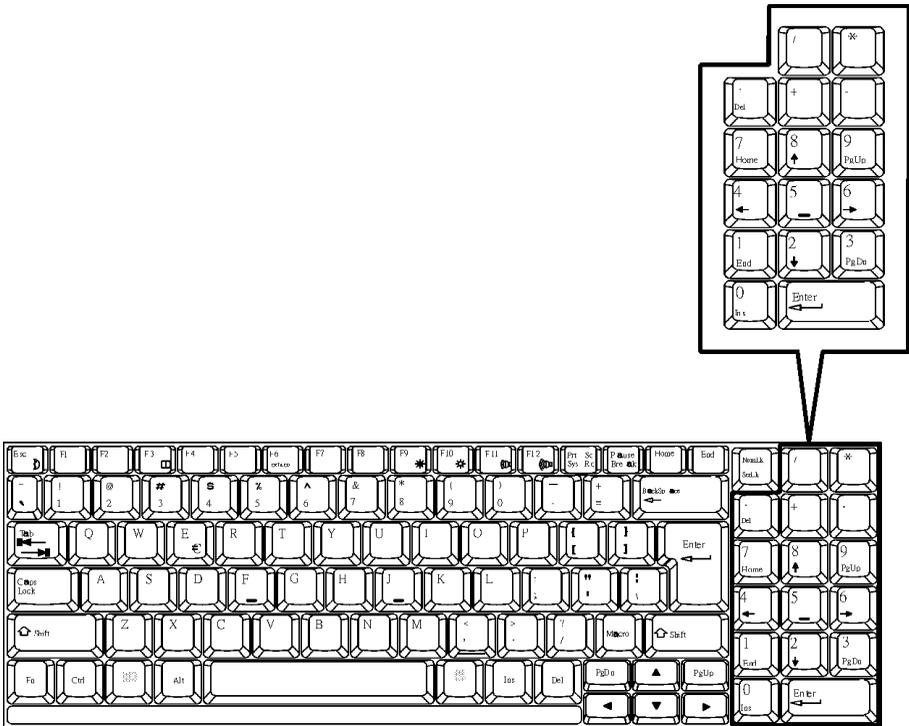
Figure 2-19
Numeric Keypad

Using Power Management

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

Global Standby

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

Hard Disk Standby

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

Suspend and Resume

When at extremely low power, you can enter suspend mode to save power.   In suspend mode, all tasks are stopped and stored in memory to save power. The system features two levels of suspend mode: Powered-On-Suspend (POS) mode and Suspend-To-Disk (STD) mode.

Another useful feature is resume mode.   This feature allows you to turn the computer's power off without exiting your software application.   When you turn the power on again, you can resume work where you left off, because the screen display is restored as you left it.   This saves time and battery power.

Caution: Do not enter suspend mode when you are

1. Accessing any of the disk drives, such as HDD, FDD or CD-ROM drives.
2. Using the audio features or playing back video.
3. Playing a DOS game.

Powered On Suspend (POS)

Of the 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 can resume from Powered-On-Suspend mode by:

➢ Alarm resume (month/day/hour/minute)
➢ Modem ring
➢ Pressing any keyboard key.
➢ Pressing 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 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 operation system's FDISK program to delete all partitions of the hard disk if any already exist on the target drive.

2. Boot the system and run the 0VMAKFIL.EXE Utility to create the Suspend to Disk partition on the hard disk. The size of Suspend to Disk partition will be the installed DRAM (n) plus 8MB integrated video RAM.

:\>0VMAKFIL –Pn

For example, if the system DRAM is 32MB, 0VMAKFIL will create a partiton size of approximately 40MB.

:\>0VMAKFIL –P32

Resume from STD Mode

The system will resume 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)

Attaching Peripheral Devices

You can attach external peripherals to the computer to meet different needs.

Attaching a Security Lock

The security lock is a locking device that can protect your computer from being stolen.   To attach the security lock to the computer, first, wrap the cable of the security lock around a desk or other immovable object, and then insert the security lock to the locking device connector on the computer (Figure 2-20).
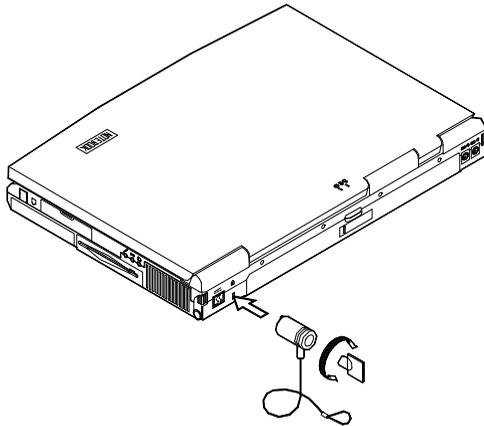
Figure 2-20

Attaching a Parallel Printer

To print the data in your computer, attach a standard parallel printer to your computer.

1 Turn off the computer and printer.

2 Connect the signal cable of a printer to the parallel port on the computer (do ①) and tighten the screws of the connector (do ②) (Figure 2-21).

3 Connect the other end of the signal cable to the printer.

4 Turn on the printer and computer.

Now install the device driver that came with the attached printer in the computer.   Refer to the instructions in the documentation that is provided with the printer for detailed information.   If the attached printer supports Enhanced Parallel Port (EPP) or Extended Capabilities Port (ECP) mode, please set the correct mode in System Configuration Utility (SCU).
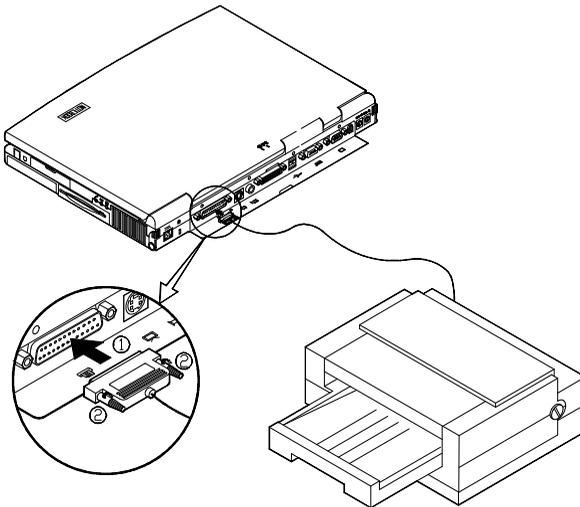
Figure 2-21

Attaching a TV Set

The S-Video jack on the rear panel of the computer is used for transmitting video signals to a TV set.   Simultaneous display on external monitor (CRT) and TV is available.   You can select the appropriate parameters through the driver setting in Windows 95/98.

Attach the TV set as shown below (Figure 2-22).
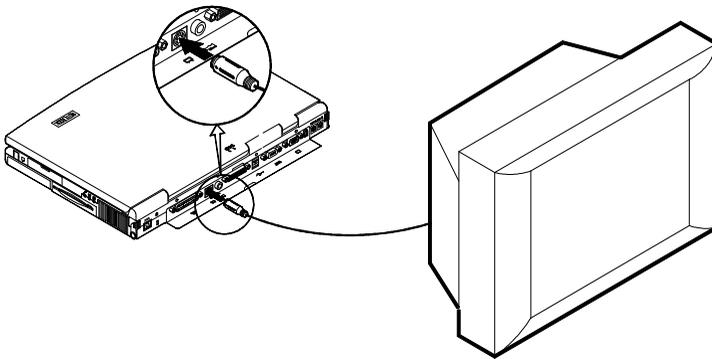
Figure 2-22

Attaching a Video Input Device

The RCA jack on the rear panel of the computer allows analog composite
signal input from external video devices.   Attach the device as shown below
(Figure 2-23).
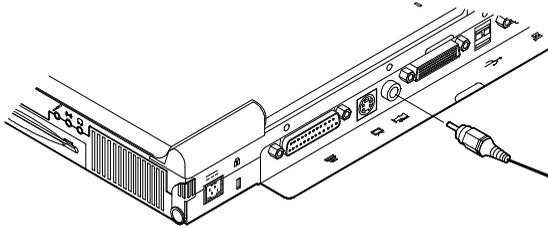
Figure 2-23

Attaching a USB Device

The computer provides dual USB ports for connection of a USB-compatible keyboard, mouse, or other devices.

Attach the USB device as shown below (Figure 2-24).
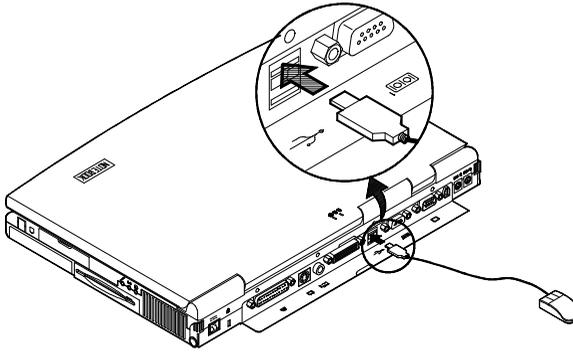
Figure 2-24

Attaching a Serial Mouse

You can connect any 9-pin serial device such as an external modem or a serial mouse to the computer.

To attach a serial mouse:

1 Turn off the computer.

2 Connect the signal cable to the serial port on the computer (do ①) and tighten the screws of the connector (do ②) (Figure 2-25).

3 Turn on the computer.

Now install the mouse driver shipped with the serial mouse in the computer. Refer to the documentation provided with the serial mouse for more information.
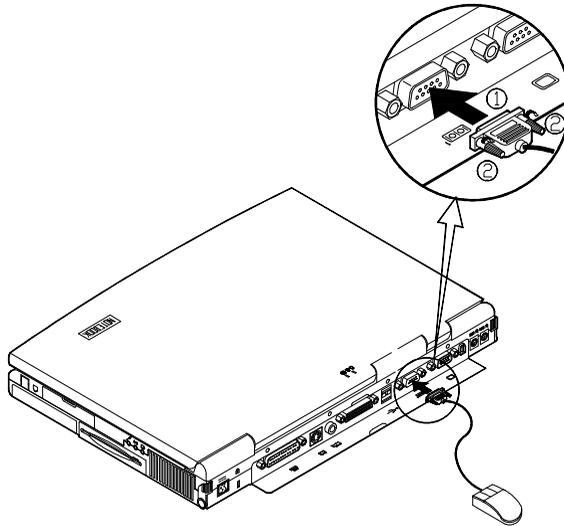
Figure 2-25

Attaching an External Monitor (CRT)

The computer can display information not only on its LCD, but also on an external XGA-compatible monitor attached to the computer.   This way, you may choose to show information on both displays (LCD & external monitor) simultaneously whenever you need.   Enter the System Configuration Utility to select the appropriate setting or press the **Fn** + **F6** key combination to set the display mode.   Refer to Chapter 3 and "Using Hot Keys" in Chapter 2 for more information.

1   Turn off the computer.

2   Connect the signal cable of an external monitor to the CRT port on the computer (do ①) and tighten the screws of the connector (do ②) (Figure 2-26).

3   Connect the other end of the signal cable to the external monitor.

4   Turn on the computer.
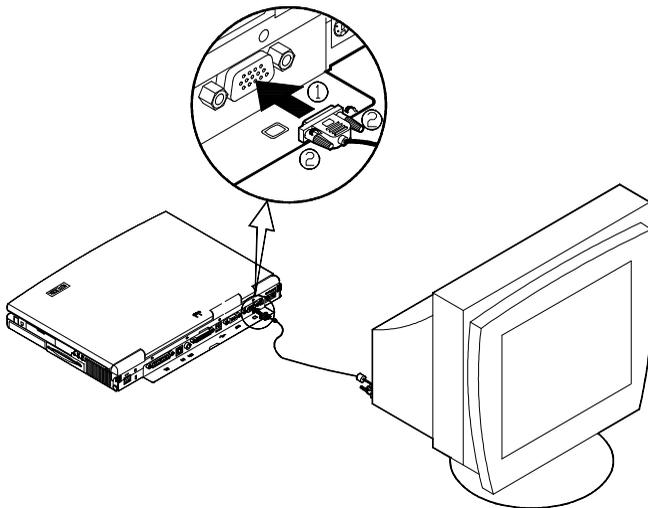
Figure 2-26

Attaching a PS/2 Keyboard or Mouse

The computer 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 2-27).

Both PS/2 type ports on the rear panel of the computer can be used for the connection of a PS/2 keyboard and mouse.
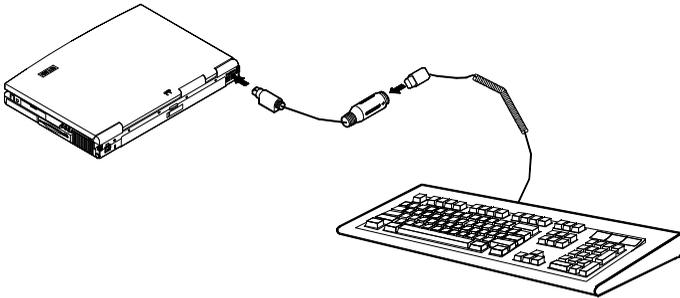
Figure 2-27

Attaching a Digital Camera

A digital camera can be connected to the computer through the 1394 port. However, not every type or brand of digital camera can be connected to the computer.   Choose the camera that comes with a specially designed plug for 1394 port (Figure 2-28).
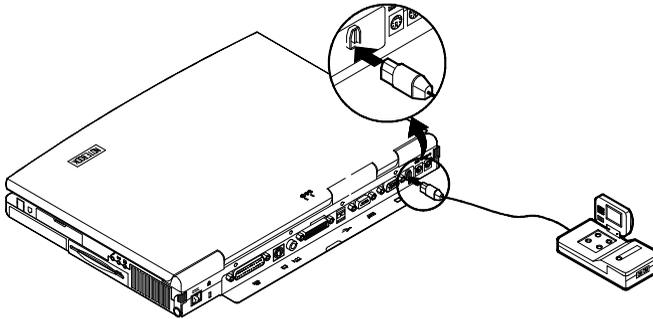
Figure 2-28

Attaching a Phone Cable (Option)

If your computer is installed with an optional V.90 DSVD ISA modem module, you can attach a phone cable to the phone (RJ-11) jack of the computer and accordingly connect your computer to network.   You can attach the phone cable as shown below (Figure 2-29).
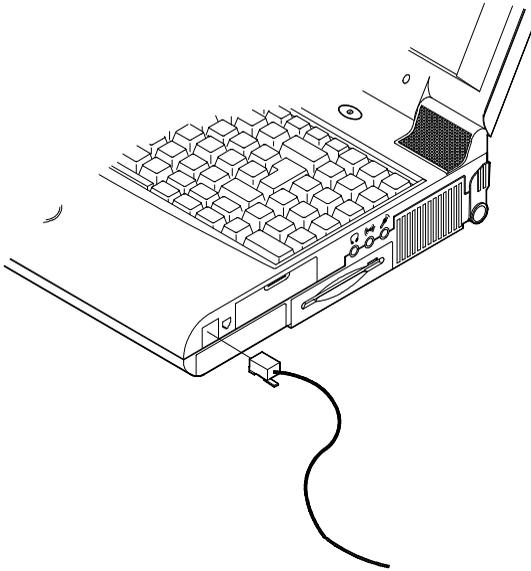
Figure 2-29

Chapter 3.   BIOS Utilities

This chapter includes the information for Power On Self Test (POST) and describes how to configure the system using the System Configuration Utility.

- ■ Power On Self Test (POST)
  - – POST Message: Normal Operation
  - – POST Message: Error Detected
- ■ System Configuration Utility
  - – Information in the System Configuration Utility
  - – Initiating the System Configuration Utility
  - – Moving between the Menu Bar
  - – Moving between the Pull-down Menu Items
  - – Features of the System Configuration Utility
    - • Startup Menu
    - • Memory Menu
    - • Disks Menu
    - • Components Menu
    - • Power Menu
    - • Exit Menu

Power On Self Test (POST)

Basic Input/Output System (BIOS) automatically performs a series of Power On Self Test (POST) on the system memory and key components of the computer each time when the computer is turned on.   If no error exists, the POST will initialize BIOS configuration, then boots the operating system.   If an error exists, the POST routine may halt execution (depending on the type of problem).

POST Message: Normal Operation

You will see a screen similar to the following if no error exists after the POST is performed.

```
SystemSoft MobilePRO BIOS Version 1.01 (2482-00)-(R2.06R)
Copyright 1983-1996 SystemSoft Corp. All Rights Reserved

500 MHz Pentium III with MMX CPU
CPU Microcode Update Rev 003h Complete
L2 Cache: 256K installed
8 MB Video RAM
SystemSoft Plug-n-Play BIOS Ver.1.17.01

Base Memory          000640 Kb
Extended Memory      064512 Kb
Total Memory         065536 Kb

Auto Detecting IDE Devices[Done]

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

INITIALIZING BOOT CD-ROM
INITIALIZING 2nd ATAPI -- None
```

Note:
Press the **Spacebar** key if you intend to skip the memory test.

POST Message: Error Detected

If an error is detected, you will see a WARNING message appear on the screen as the illustration shown below. Press **F1** if you decide to continue the boot process, or press **Ctrl**-**Alt**-**S** key combination to enter the SCU.

SystemSoft MobilePRO BIOS Version 1.01 (2482-00)-(R2.06R)
Copyright 1983-1996 SystemSoft Corp. All Rights Reserved

500 MHz Pentium III with MMX CPU
CPU Microcode Update Rev 003h Complete
L2 Cache: 256K installed
8 MB Video RAM
SystemSoft Plug-n-Play BIOS Ver.1.17.01

Base Memory   000640 Kb
Extended Memory   064512 Kb
Total Memory   065536 Kb

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

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

System Configuration Utility

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

Information in the System Configuration Utility

The list below indicates all the items that you may configure in the System Configuration Utility.

Menu	Pull-down Menu Items
Startup	Date and Time, Fast Boot, Boot Device, Display, Enable Battery Low Beep, Enable LCD Expand Mode, Enable Power On Beep, Boot Password, SCU Password.
Memory	Cache Systems.
Disks	Enable LS120/ZIP 100 Drive, Diskette Drives, IDE Settings.
Components	COM Ports, MODEM Port, LPT Port, PS/2 Mouse Port, Keyboard Numlock, Keyboard Repeat, TV Mode, Video in Mode, ZV Port Enabled
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.

Initiating the System Configuration Utility

The System Configuration Utility can be entered with the key combination of
Ctrl, **Alt** and **S**. During the POST, the following sentence will appear on the
bottom of the screen.

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

This message only stays for few seconds.   If you do not press the **<CTRL-
ALT-S>** key quickly enough, the message will disappear and the system will
start the boot process.   Then you have to restart the computer and press the
<CTRL-ALT-S> key to enter the System Configuration Utility again.   After
entering the utility, you will see a screen similar to the following.
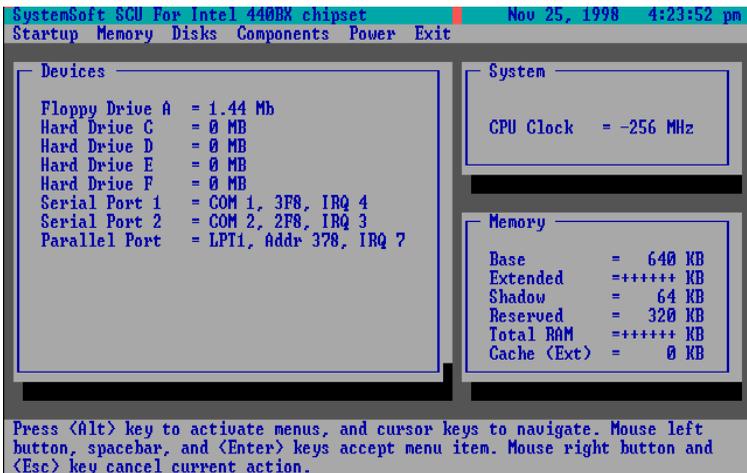
Figure 3-1
System Configuration Utility

Moving between the Menu Bar

Use these keys to move to the menu you want to enter in SCU.

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

Moving between the Pull-down Menu Items

With the desired menu selected (highlighted), press Enter and all items of the pull-down menu will appear on the screen.   Use the following keys to go to the menu item of which you plan to change the current setting.

Keys	Action	Description
Down arrow (↓)	Select and highlight a pull-down menu item.	Move to the next pull-down menu item.
Up arrow (↑)		Move to the previous pull-down menu item.
The highlighted letter key		Move to the corresponding pull-down menu item.
Tab	Select a control	Move between the options.
Down/Up arrows (↓)(↑)	Change values	Modify the settings.
Spacebar	Accept entries	Enable/disable the specified function. When a check mark (√) appears, the function is on.
Enter		Choose <OK> from a list of options.
Esc	Reject entries	Undo the current setting.
Enter		Choose <Cancel> from a list of options.
Alt	Activate accelerators	Initiate all the highlighted letters corresponding to their respective options.
Esc	Quit	Press the Esc key to close the pull-down 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 function.
Boot Device	Diskette A	Specify where the system boots from.
	Hard Disk C	
	CD-ROM Drive	
Display	LCD	Activate the system's LCD panel.
	CRT	Activate an external monitor.
	LCD + CRT	Activate both the LCD and the CRT.
	TV	Activate an external TV.
	LCD + TV	Activate both the LCD and the TV.
	CRT + TV	Activate both the CRT and the TV.
	LCD + CRT + TV	Activate the LCD, CRT and the TV.
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.

Item	Setting/Option	Function
Enable Power On Beep	Enable	Enable or Disable Power On Beep.
	Disable	
Enable PNP OS Support	Enable	Enable or Disable PNP OS Support.
	Disable	
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	
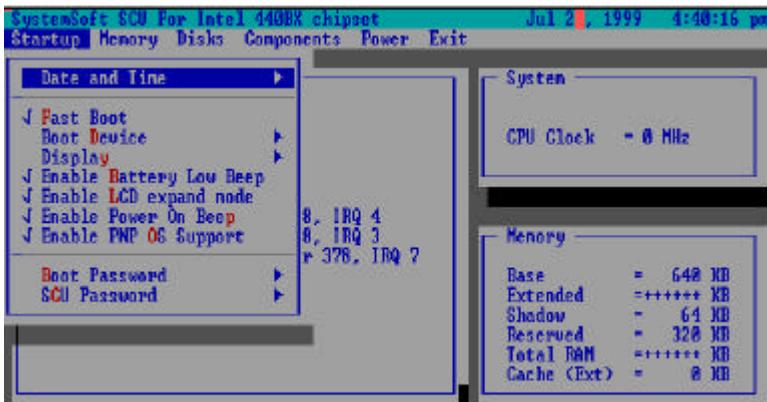
Figure 3-2
Startup Menu

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 LS write-back cache.
	BIOS Shadow	Cached	The process of shadowing copies instructions from system BIOS into RAM to improve system performance.
		Not Cached	Disable the above.
	Video Shadow	Cached	The process of shadowing copies instructions from video BIOS into RAM to improve system performance.
		Not Cached	Disable the above.
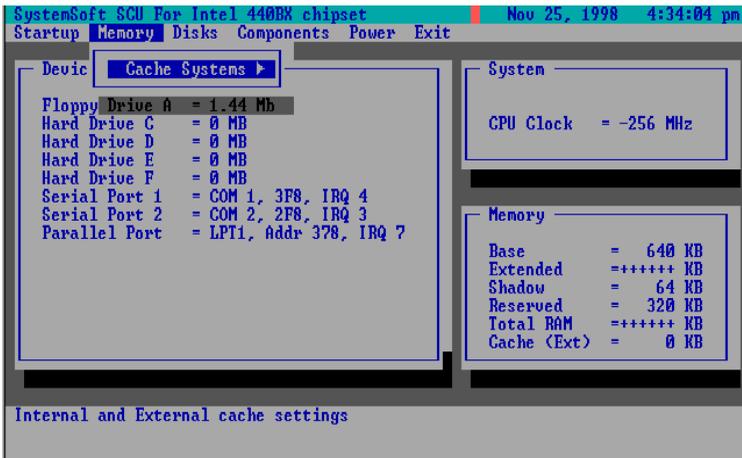
Figure 3-3
Memory Menu

Disks Menu

Item	Setting/Option		Function
Diskette Drives	Drive A	None	Specify the drive types for the diskette drive A.
		1.44 Mb	
		2.88 Mb	
IDE Settings	Primary HDD	Drive Enabled	Enable enhanced IDE settings.
		PIO Mode	
	CD-ROM / DVD-ROM / 3th HDD	Drive Enabled	
		PIO Mode	
	LS120 /ZIP/ 2nd HDD	Drive Enabled	
		PIO Mode	
Enable LS120/ZIP Drive	Enable		Enable the LS120 or ZIP drive.
	Disable		Disable the LS 120 or ZIP drive.
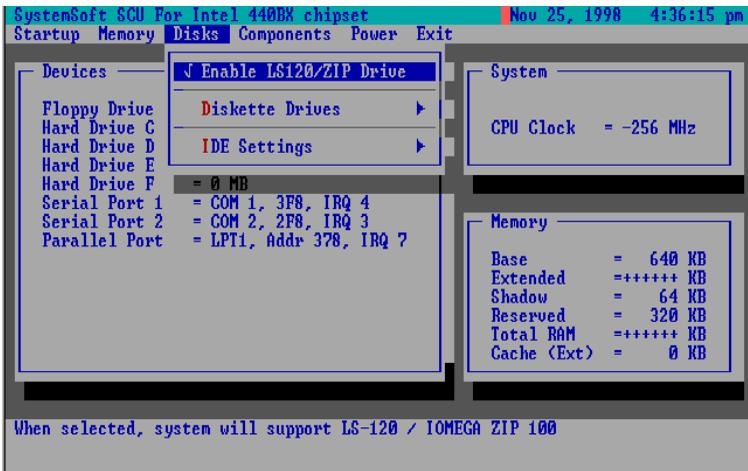
Figure 3-4
Disks Menu

Components Menu

Item	Setting/Option		Function
COM Ports	COM A I/O Settings	None	Specify the COM A configuration. (COM3 & COM4 Only for DOS mode and Non-PnP OS.)
		COM1, 3F8, IRQ4	
		COM2, 2F8, IRQ3	
		COM3, 3E8, IRQ10	
		COM4, 2E8, IRQ11	
	COM B I/O Settings	None	Specify the COM B configuration. (COM3 & COM4 Only for DOS mode and Non-PnP OS.)
		COM1, 3F8, IRQ4	
		COM2, 2F8, IRQ3	
		COM3, 3E8, IRQ10	
		COM4, 2E8, IRQ11	
	Mode Setting for COM B	Normal (16550)	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 378, IRQ7	
		LPT2, Addr 278, IRQ5	
		LPT3, Addr 3BC, 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	

Item	Setting/Option		Function
	EPP Type	EPP 1.7	Specify the EPP type.
		EPP 1.9	
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	1/4 sec	Specify the amount of time (second) that will pass after a key is depressed before the key starts to repeat.
		1/2 sec	
		3/4 sec	
		1 sec	
TV Mode	NTSC		Specify the TV mode selection.
	PAL		
Video in Mode	Disabled		Disable or enable the video in mode.
	Enabled		
ZV Port Enabled	Enable		Enable or disable the ZV port.
	Disable		

Item	Setting/Option	Function
Modem Port	None	Specify the Modem Port settings.
	Port 3E8, IRQ 11	
	Port 2E8, IRQ 11	
	Port 3F8, IRQ 11	
	Port 3E8, IRQ 9	
	Port 2E8, IRQ 9	
	Port 3F8, IRQ 9	
	Port 2F8, IRQ 9	
	Port 2F8, IRQ 11	
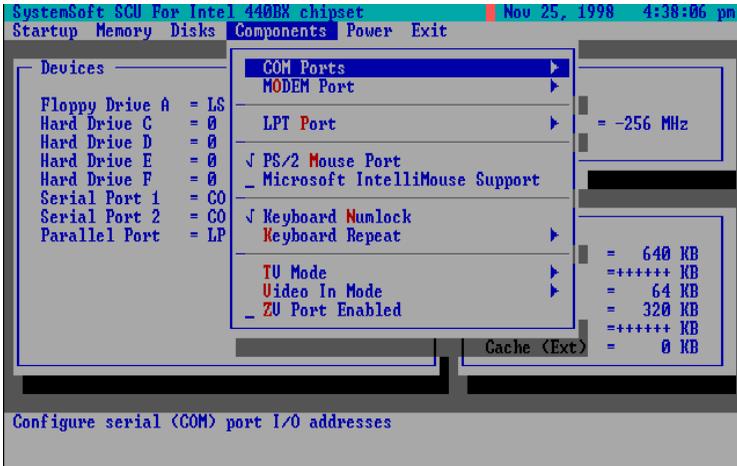
Figure 3-5
Components Menu

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	5 sec	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.
		10 sec	
		15 sec	
		20 sec	
		30 sec	
		Always on	
	Global Timeout	1 min	The system power will be reduced if the system has been idle over the specified period. System power will be restored when any system activity is detected.
		2 min	
		4 min	
		6 min	
		8 min	
		12 min	
		16 min	
		Always on	
Suspend Controls	Power Button Function	Power On/Off	The power button is switched to turn the system on or off.

Item	Setting/Option		Function
		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 resuem by closing or opening the display lid.
		LCD Panel Off/On	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.
		Powered on Suspend	
	Suspend Timeout	1 min	If the system has been idle for the specified period, the system will enter user-defined suspend.
		5 min	
		10 min	
		20 min	
		30 min	
		Never	
Resume Timer	Alarm	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).

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 Mode	Specify the type of Processor Clock Control.
		Doze Mode	
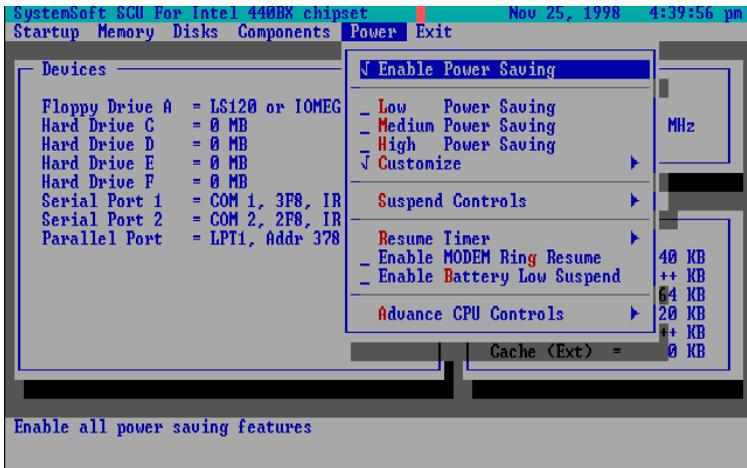
Figure 3-6
Power Menu

Exit Menu

Item	Function
Save and Exit	Exits the utility and saves all changes to CMOS ;then reboot the system.
Exit (No Save)	Exit without saving any current changes.
Default Settings	Loads the default (factory) settings for all items.
Restore Settings	Restore the current setup settings to the original custom ones.
Version Info	Show current BIOS version information.
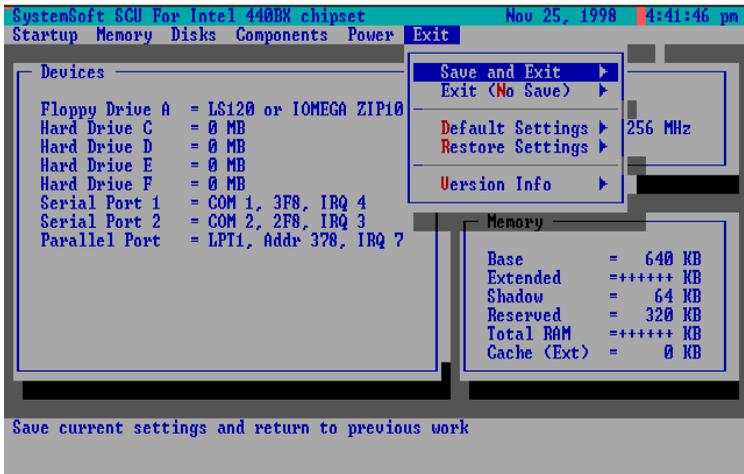
Figure 3-7
Exit Menu

Chapter 4. Troubleshooting

When your computer displays messages of problems on the screen, try to solve the problems yourself before consulting the computer vendor.   This chapter lists some of the most common problems and their possible solutions.

- ■ Battery
- ■ Power
- ■ Hard Disk Drive
- ■ Floppy Disk Drive
- ■ Hardware Installation
- ■ LCD Panel
- ■ Memory Module
- ■ PC Card
- ■ Boot Password
- ■ Audio
- ■ CD
- ■ Printer

Battery

Problem: **The battery pack can not be charged.**
Solution 1:   The battery pack is exposed to excessively hot and cold environment.   Let it restore to normal condition before you use it.
Solution 2:   The power might be used up.

Problem: **The battery pack can not be charged and the charge indicator turns off.**
Solution 1:   The battery has been fully charged.
Solution 2:   The battery pack is exposed to excessively hot or cold environment.   Let it restore to normal condition before you use it.
Solution 3:   The power is used up.

Problem: **The beep sound is heard and the low-battery indicator turns on.**
Solution: The computer is in low-battery status.   Please connect your computer with AC adapter, or press Fn + Esc key combination to enter suspend mode.

Problem: **The beep sound isn't heard whereas the low-battery indicator turns on, or the gauge indicates power is less than 10%.**
Solution: The computer is in low battery status. Please adjust the volume control and connect the computer with AC adapter.

Problem: **The actual battery operation time is shorter than expected.**
Solution1:   The battery is exposed to excessively high or low temperature. The ideal temperature for battery operation is between $50°F$ and $95°F$ ($10°C$ and $35°C$) whereas keeping is between $32°F$ and $113°F$ ($0°C$ and $45°C$).
Solution 2:   The battery has released some power.   Please recharge it.
Solution 3:   The power management has been turned off.
Solution 4:   Some peripheral device or PC card is consuming power. Turn off the unused device to save power.
Solution 5:   The battery has been given a partial charge.   When charging, always fully charge after fully discharge.

Power

Problem:	**The computer can not boot when the battery pack is not inserted.**
Solution 1:	The power cord is not correctly connected with AC adapter. Make sure the power cord is firmly plugged into grounded outlet and computer.
Solution 2:	The grounded outlet is not in normal operation. Check the outlet's function or use other outlet.

Problem:	**The system has automatically entered suspend mode**.
Solution 1:	The system's temperature is too high. Let it cool before you use it.
Solution 2:	The system has entered suspend mode after a specified period of time. Please press any key or touch the trackpad to wake up the computer.

Hard Disk Drive

Problem:	**The message "Nonsystem disk" appears.**
Solution:	The computer is trying to boot from the floppy including no software. Please take the floppy out and restart the computer.

Problem:	**It needs a longer time to read the hard disk drive after restarting the computer**.
Solution 1:	The data saved on hard disk drive may be lost. Please operate the "disk defragmenter" to check the lost unit.
Solution 2:	As in low battery status, the computer is waking up from the suspend mode.

Floppy Disk Drive

Problem: **The floppy disk drive can not write data to disk.**
Solution 1:   The floppy is not formatted.
Solution 2:   The floppy is write-protected.   Please cancel the protection.
Solution 3:   The data is written to incorrect disk drive.
Solution 4:   The space left on disk is not enough.   Please use a new disk or delete the unneeded data.

Problem: **The disk drive can not read the disk.**
Solution 1:   The disk is not formatted.
Solution 2:   The disk is damaged.
Solution 3:   An incorrect disk type is used.

Hardware Installation

Problem: **The computer can not recognize the device as part of the system.**
Solution 1:   The power switch of new device is not turned on.   Please turn on the power switch, then restart the computer.
Solution 2:   You do not rearrange the computer after the device is installed.
Solution 3:   The power cord or the connector between device and computer is plugged out.   Please make sure the device is firmly connected with the computer.
Solution 4:   You do not follow the system configuration as the computer suggested.   Please follow the suggestion.

LCD Panel

Problem: **The font is too dark.**
Solution: The brightness or contrast is not correctly set.   Please press Fn+F7 or Fn+F8 key combination (only limited to DSTN panel) to adjust the contrast control, and use Fn+F9 or Fn+F10 to adjust the brightness control.

Problem: **The screen is blank.**
Solution 1:   The panel blank application might be set.
Solution 2:   The system operates the screen saver after a specified period of time.   Please press any key or touch the trackpad.
Solution 3:   The brightness or contrast needs to be adjusted. Please press Fn+F7 or Fn+F8 key combination (only limited to DSTN panel) to adjust the contrast control, and use Fn+F9 or Fn+F10 to adjust the brightness control.
Solution 4:   The system has entered suspend mode.   Please press any key or touch the trackpad to wake up the computer.

Problem: **The LCD panel displays incorrect font or blinks when the computer is connected with an external monitor.**
Solution: The resolution you use for the monitor exceeds that the LCD panel can support whereas you have switched to the LCD panel.   Please restart the computer.

Memory Module

Problem: **The computer can not boot.**
Solution: The incorrect type of memory module is installed.

Problem: **The memory capacity is not enough.**
Solution: The memory is not correctly configurated for the application.

Problem: **The detected memory capacity is not correct.**
Solution: Some memory module is not correctly installed or not compatible with your computer.

Problem: **The message "out of memory" is displayed.**
Solution: The memory configuration is not correctly set or the memory is not enough to run the application.

Problem: **The message "insufficient memory" is displayed.**
Solution: The application can not be operated as the memory is used up.

PC Card

Problem: **The PC card can not be configured.**
Solution: The PC card is not supported.

Problem: **The system can not recognize the PC card.**
Solution 1:   The PC card is not inserted into the socket or reversely inserted.
Solution 2:   The PC card driver is not installed.
Solution 3:   The PC card or card driver is not compatible with the computer.

Problem: **The beep sound is not heard while the PC card is inserted.**
Solution: The beep sound control is closed.

Boot Password

Problem: **You forget the boot password.**
Solution: While forgetting the password, you must unpack the computer
                     and delete the memory.   Please ask the vendor for help

Audio

Problem: **The audio speaker can not be heard.**
Solution: The volume might be set too low.   Please check your volume
                     control.

Problem: **The volume is too high (or too low).**
Solution: The volume is not correctly set.   Please check your volume
                     control.

Problem: **The headphone can not be heard.**
Solution 1:   The volume is not correctly set.   Please check the volume
                     control.
Solution 2:   The volume source is not chosen.
Solution 3:   The headphone is plugged into the wrong jack.

CD

Problem: **The compact disk can not be exited.**
Solution: The compact disk is not correctly placed in the tray.

Problem: **The compact disk can not be read**.
Solution 1:   The compact disk is not correctly placed in the tray.
Solution 2:   The compact disk is dirty.   Please clean it with a CD-ROM cleaner kit.

Problem: **The musical compact disk can be read while the data disk can not.**
Solution: The compact disk hardware for reading data needs to be checked.

Problem: **All compact disks can not be read.**
Solution 1:   The Windows system can not recognize the CD-ROM drive or the CD-ROM drive is not compatible with other devices.
Solution 2:   The compact disk is dirty. Please clean it with a CD-ROM cleaner kit.
Solution 3:   The compact disk hardware for reading data needs to be checked.

Printer

Problem: **The printer can not be set up**.
Solution: The printer power cord is not plugged into or the connector is not correctly connected.

Problem: **The printer can not work.**
Solution 1:   The printer is not powered on.   Please turn on the printer.
Solution 2:   The printer is not in "connected" status.   Please set the printer in "connected" status.
Solution 3:   The printer paper is used up.   Please add the paper.
Solution 4:   The printer driver is not installed or correctly chosen.   Please check the system.
Solution 5:   The printer for network is not connected with the network.

Problem: **The printer prints incorrect data.**
Solution 1:   The printer driver is not installed or correctly chosen.
Solution 2:   The printer power cord is not plugged into or the connector is not correctly connected.

ATI DVD Play (option)

Problem: **When the DVD station is playing, pressing (Fn) hot keys quickly at the same time, the DVD station will stop running in the normal Windows system.**
Solution: Please avoid pressing the Hot keys quickly and continuously. For example, when use the Fn key, stopping seconds each time before pressing again. Or go to Windows 95/98, click the icon of volume at the right-bottom corner the voice volume.

Chapter 5. Installing Drivers

This chapter provides users the step-by-step instructions of installing device drivers and utilities.   Information herein is designed for the users who already have basic computer knowledge.   However, beginners without basic computer knowledge can also receive some help from the instructions supplied.

- ■ Installing Windows 95
- ■ Installing Windows 98
- ■ Installing Drivers in Windows 95
- ■ Installing Drivers in Windows NT4.0
- ■ Installing Drivers in Windows 98

Installing Windows 95

Preparation for installing Windows 95

1. Use a bootable floppy disk to start the system.
2. Run FDISK utility from DOS to create a bootable partition.
   (See DOS manual for the operation detail.)
3. Format hard disk. Follow the command "Format C:/S" to create a bootable
   hard disk and make the boot system file.
   (C:/S copies system files to the formatted disk)
4. Run CDINST.COM program from the "CD-ROM Drive Installation
   Diskette" that will help you to install CD-ROM driver device automatically.
   See the driver manual for details.
5. Restart the system.

1. Start DOS.

2. Insert the Windows 95 CD-ROM.

3. Go to the "setup" directory, type "setup", then press **Enter**.

4. After the Windows 95 setup program performs a routine check on your
   system, press **Enter** to continue.

5. When the "Welcome to Windows 95 Setup" screen appears, click
   Continue.

6. Click **Yes** on the "License Agreement" screen.

7. Click **Next** to select "Collecting Information About your PC".

8. Click **Next** to select the default of "C:\Windows", or enter a different
   directory.

9. On the screen of "Setup Options", select "Typical", then click **Next**.

10. On the screen of "Certificate of Authenticity", enter the Product
    Identification Number, then click **Next**.

11. On the screen of "User Information", enter your name and company,
    then click **Next**.

12. Select "Install The Most Common Components (recommended)", then click
    Next.

13. On the screen of "Startup Disk", insert a blank diskette into the A drive to
    create a startup diskette.

14. The Setup Wizard is now copying files.   After the copying is finished,
    remove the disk, then click **OK**.

15. Click **Next** to start copying Windows 95 files to your computer.

16. Click **Finish** to restart Windows 95.

17. On the screen of "Set Up a Printer", click **Cancel**.

    Note:
    Do not install a printer at this time because the Windows 95 Installation
    CD will not be able to be accessed until you reboot.

18. Click **OK** to restart the computer.

Installing Windows 98

1. Start DOS.
2. Insert the Windows 98 CD-ROM.
3. Type "setup", then press **Enter**.
4. Follow the instructions on the screen and choose the recommended option.
5. The Windows 98 setup program will check the hard disk drive automatically.
6. When the setup initializes, click **Continue**.
7. Choose "License Agreement" to agree the contrast.
8. Click **Next** to type the product ID number.
9. Click **Next**.   The program will automatically check the system.
10. Choose the directory for your computer.   Select the path of "C:\Windows", or type another path.
11. For reinstallation, choose **Yes** (recommended) to keep the files.
12. Select your location.
13. To create a Win98 Startup disk, insert a floppy disk into drive A.   To create the startup disk later, choose **Cancel**.
14. Press **Next**.   The program will copy files to your computer's hard disk.
15. At the same time, the screen will show the Win98 concerned information and the setup items one by one.
16. After the automotive setup stops, restart the computer.

Installing Drivers in Windows 95

Step 1: Installing the USB Driver

- Download "USB supplement path update file" from Microsoft and Intel web site.
- Run "USB supplement path" to install the driver.

Step 2: Installing the TXPATCH Driver

- Locate the driver "[TXPATCH] Intel 82371xb.inf TX" from the CD-ROM.
- Run "setup.exe".
- Follow the instruction to finish the installation.
- Restart the system.

Step 3: Installing the VGA Driver

- Double click **Start**.
- Select **Run**.
- Open the path "D:\WIN9X\setup.exe.
- Run "setup.exe" to finish the installation.

Note:
If ATI VGA driver has existed in WIN95 system, click **Start**, select **Run**, open the path "atiuinst-clean", and then double-click **OK** to finish installation.

Step 4: Installing the Audio Driver (1978S M2E)

- Double click **Start**.
- Select **Setting**.
- Click **Control Panel**/**System**/**Device Manager**.
- Select "Other devices".
- Remove "Unknown Device".
- Click **OK**, then restart the system.
- After entering into WIN95 system, the program will automatically go to the "Add New Hardware Wizard" (PCI Multimedia Audio Device).
- Click **Next**/**Other locations**.
- Click **Browse** to locate the audio driver from the CD-ROM. (The path is :\Audio\WIN95.)

- Click **Ok**.
- Click **Finish** to set up the first audio driver.

Step 5: Installing the Video-in Driver

- Boot the system, press **Ctrl** + **Alt** + **S** to enter SCU system.
- Select "Components".
- Enable "Video In Mode".
- Under Windows 95, double click **Start**.
- Select **Run**.
- Open the path "D:\video-in\setup.exe.
- Run "setup.exe" to finish the installation.

Note:
To have the function of video conference, for example, you can use Microsoft Netmeeting after installing Video-in driver.

Step 6: Installing the ATI DVD Play Driver (Option)

Note:
Make sure that you have already successfully installed the VGA Driver, Audio Driver and DirectX5 or DirectX6 beforehand.

- Boot the system; press **Ctrl+Alt+S** keys to enter SCU. Select "Power" menu. Enable "Low Power Saving", or select "Advance CPU control" to set "Full Speed". **(If the clock speed of the Intel Pentium II is above 366MHz/400MHz or if your DVD runs smoothly, you can skip this step.)**
- From the Windows 95/98 taskbar, click **Start** button; select **Settings**, **Control Panel**, and then click **System**. Click the tap **Device Manager**; select "CD-ROM", and click the item including the type of "DVD-ROM", Click the tap "Setting"; and then enable "DMA" check box.
- Insert the CD of ATI DVD Play application and the program will automatically run the installation until finished. Otherwise, click **Start** button from the Windows 95/98 taskbar. Select **Run**. Type [D:\Atiplay\setup.exe] and click **OK** to finish the installation.

Step 7: Using Infrared Wireless Communication

- Please refer to the readme file under the FIR directory.

Installing Drivers in Windows NT 4.0

> **Note:**
>
> After installing Windows NT4.0, please download Service Pack3 or later from Microsoft web to update the NT4.0 features. If not, some drivers cannot be installed into the system, or functions of the installed drivers will not work properly.

Step 1: Installing the VGA Driver

● Double click **Start**.
● Select **Setting**.
● Click **Control Panel**.
● Select **Display**.
● Click **Setting**.
● Select "Display Type", and then select **Change**.
● Click **Have Disk**.
● Select **Browse** to specify the location.
● Open the path "D:\VGA\NT4.0".
● Click **OK**.   (All appropriate files are then copied to the hard disk.)
● Restart NT4.0 system.

Step 2: Installing the Audio Driver (1978S M2E)

● Double click **Start**.
● Select **Setting**.
● Click **Control Panel**.
● Select **Multimedia**, and then select "Devices".
● Click **Add**.
● Select **OK**.
● Restart NT 4.0 system.

Installing Drivers in Windows 98

Step 1: Installing the VGA Driver

- Double click **Start**.
- Select **Run**.
- Open the path "D:\WIN9X\setup.exe.
- Run "setup.exe" to finish installation.

Note:
When ATI VGA driver has existed in WIN95 system, click **Start**, select **Run**, open the path "atiuinst-clean", and then double-click **OK** to finish installation.

Step 2: Installing the Audio Driver (1978S M2E)

- Double click **Start**.
- Select **Setting**.
- Click **Control Panel**.
- Select **System**.
- Click **Device Manager**.
- Select "Other devices".
- Remove "PCI Multimedia Audio Device".
- Click **OK**, then restart the system.
- After entering into WIN98 system.   The program will automatically go to the "Add New Hardware Wizard" (PCI Multimedia Audio Device).
- Click **Next**.
- Click **Browse** to specify the location.
- Open the path "D:\audio\Win95".
- Click **Next**, and then click **Finish** to set up the first audio driver.

Step 3: Installing the PCMCIA Driver

- Click "PCMCIA\WIN98\TI.exe" from CD-ROM.
- Click **Start**/**Settings**/**Control Panel**/**System**.
- Remove PCMCIA.
- Delete the two sub-directories "Generic CardBus Controller".
- Restart Win98 system.

Step 4: Installing the Video-in Driver

- Boot the system.   Press **Ctrl+Alt+S** to enter the SCU system.

- Select "Components", and enable "Video In Mode".
- Go to WIN98 system, double click **Start**.
- Select **Run**.   Open the path "D:\video-in\setup.exe".
- Run "Setup.exe" to finish the installation.

Note:
To have the function of video conference, for example, you can use Microsoft Netmeeting after installing Video-in driver.

Step 5: Installing the ATI DVD Play Driver (Option)

Note:
Make sure that you have already successfully installed the VGA Driver, Audio Driver and DirectX5 or DirectX6 beforehand.

- Boot the system; press **Ctrl+Alt+S** keys to enter SCU. Select "Power" menu. Enable "Low Power Saving", or select "Advance CPU control" to set "Full Speed". **(If the clock speed of the Intel Pentium II is above 366MHz/400MHz or if your DVD runs smoothly, you can skip this step.)**
- From the Windows 95/98 taskbar, click **Start** button; select **Settings**, **Control Panel**, and then click **System**. Click the tap **Device Manager**; select "CD-ROM", and click the item including the type of "DVD-ROM", Click the tap **Setting**; and then enable the "DMA" check box.
- Insert the CD of ATI DVD Play application and the program will automatically run the installation until finished. Otherwise, click **Start** button from the Windows 95/98 taskbar. Select **Run**. Type [D:\Atiplay\setup.exe] and click **OK** to finish the installation.

Appendix A.   Specifications

The appendix describes the features and specifications for the model of the notebook computer alone.

Microprocessor
- Intel® Mobile Pentium® II processor module 233/266/300/333/366/400 MHz
- Intel® Mobile Pentium® III processor module 450/500/550/600/650 MHz
- Intel® Mobile Pentium® III processor module 600/650 MHz with Intel® SpeedStep® technology
- Intel Mobile Module Connector II Structure (MMC2)
- 66/100 MHz CPU Bus Clock

Memory
- Two RAM sockets
- 3.3V power supply
- Supports Sync DRAM SODIMM
- expandable up to 256MB
- *8/16/32/64/128MB 144-pin SODIMM RAM modules (optional)*

BIOS
- 256KB Flash ROM
- Plug and Play 1.0a
- Systemsoft BIOS with Smart Battery
- ACPI

Display
- 15.1"/15.0" TFT XGA LCD panel
- 8MB display memory SGRAM type (100MHz)
- Support VPM 1.10 (Zoomed Video Port)
- DVD S-Video TV out
- Tri-view ™for a triple, TV, CRT & LCD
- Up to 1280x1024 resolution on CRT
- Up to 1024x768 resolution on TV

Storage Devices
- 3.5" FDD
- 12.7mm(h) LS-120MB floppy drive
- 15mm(h) IO Mega 100MB ZIP drive

- − 2.5" hard disk drive (12.7 or 17mm high)
- − *2.5" (12.7mm high) or 3.0" (12.5mm high) or 2.5" (17mm high) secondary hard disk drive*
- − DVD-ROM/CD-ROM (24X speed)

Audio
- − Sound-Blaster Pro ™version 3.01 compatible
- − 3D stereo sound system
- − Stereo full duplex support
- − MPEG-2 module
- − Built-in microphone
- − Built-in 2 watts speakers x 2

PC Card Sockets
- − Support CardBus (PC Card95)
- − Support Zoom Video Port (Slot A only)
- − Two Type II PC cards or one Type III PC card

Interface
- − Built-in trackpad (PS/2)
- − Dual USB ports
- − S-video jack for TV output
- − 120-pin expansion port
- − 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
- − IEEE1394 Port
- − RJ-11 Jack for optional ISA Plug & Play Modem Module

Communication
- − Wireless Infrared transfer IrDA 1.1
- − 56K DSVD ISA Plug & Play Modem (option)

Power Management
- − APM v1.2
- − ACPI v1.0

II

- Soft Off
- CPU over-temperature protection
- Suspend and resume

Power
- AC input: 100~240V, 47~63Hz
- Lithium-Ion Battery/Lithium-Ion Smart Battery

Size & Weight
- 358mm(w)x280mm(d)x50mm(h)
- 4.2kg (with Lithium-Ion battery)

Keyboard
- 102-key Win95 keyboard including numeric keypad

Environment
- Temperature: Operating   5°C~35°C
                    Non-operating   -20°C~60°C
- Relative Humidity: Operating   20%~80%
                    Non-operating   10%~90%

Optional
- 3001 Lithium-Ion battery pack from Kapok (75.6W)
- 3002 Lithium-Ion smart battery pack from Kapok
- 8006 Port Replicator
- 8007 IO Mega 100 MB ZIP Drive
- 8008 Software MPEG
- 8008P MPEG-2 Module
- 800A LS-120 120MB Floppy Drive
- 800B 56K DSVD Fax/Data/Voice Module
- 800C DVD-ROM Driver Module 17mm (h) (2x)
- 800D DVD-ROM Driver Module 12.7mm (h)(2X, 4X)

Appendix B.   I/0 Port Pin Assignments

Parallel Port

Pin	Signal	Pin	Signal
1	Strobe#	2	Data 0
3	Data1	4	Data 2
5	Data 3	6	Data 4
7	Data 5	8	Data 6
9	Data 7	10	ACK #
11	Busy	12	Paper Empty
13	Select	14	Auto Linefeed#
15	Error#	16	Initialize#
17	Select In	18	Ground
19	Ground	20	Ground
21	Ground	22	Ground
23	Ground	24	Ground
25	Ground		

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	NC
3	GND
4	VCC
5	EKCLK
6	NC

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

Dual USB Ports

Pin	Signal
1	USB VCCA
2	USBPO-
3	USBPO+
4	GND

Pin	Signal
1	USB VCCB
2	USBP1 -
3	USBP1 +
4	GND

S-Video Jack

Pin	Signal
1	GND
2	COMP
3	XLUMA
4	XCRMA

1394 Port

Pin	Signal	Pin	Signal
1	**B +**	4	**TPB1 +**
2	**GND**	5	**TPA1 -**
3	TPB1 -	6	**TPA1 +**

PC Card Slots / Slot 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

Pin	Signal	Pin	Signal	Pin	Signal
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		

PC Card Slots / Slot 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

Pin	Signal	Pin	Signal	Pin	Signal
33	B-CA7	67	B-CA17		
34	B-CA6	68	B-CA18		

Appendix C.   2nd HDD Jumper Setting

Please make sure you have already adjusted the jumper of the secondary Hard disk drive to be in a **Salve** mode before installing it. However, It is recommended to adjust the jumper in a **CSEL** (Cable Select) mode which may be suitable for both 2nd HDD and 3rd HDD. Contact your dealer for more detailed information.
The hard disk drive of different brands have different jumper settings, please adjust the jumper according to the table below:

JUMPER SETTING					
MODE	**IBM/HITACH**	**TOSHIBA**	**FUJITSU**	**SEAGATE**	**MAXTOR**
Master	All open	All open	All open	All open	All open
Slave	A-B	C-D	B-D	A-B	C-D
CSET	B-D	B-D	A-C	A-B, C-D	B-D

43   3 1   C A

●   ●● ●●

●   ○   ●● ●●

44   20   4 2   D B
                        key
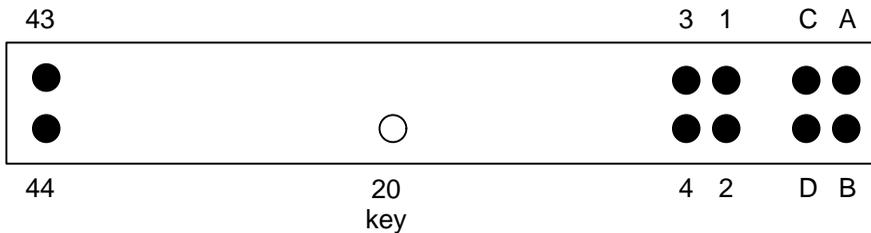
Pin Placement of HDD Connector