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

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.
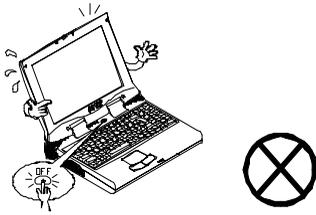
Do not place the computer on unstable surface.
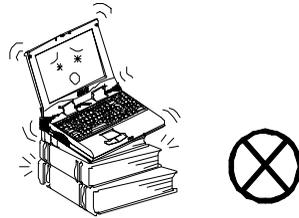
Do not turn off the periphera device when the light is on.
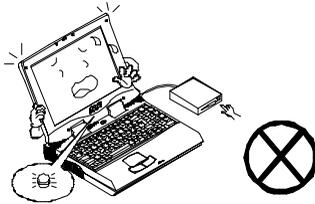
Do not touch the poisonous liquid when the LCD panel is broken.
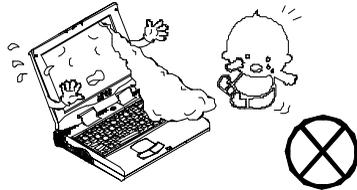
Do not touch the battery's contact plate with hands or metal objects.
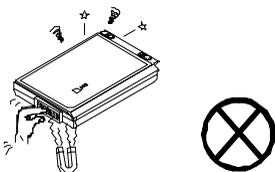
Do not put the computer on surfaces that can block the ventilation.
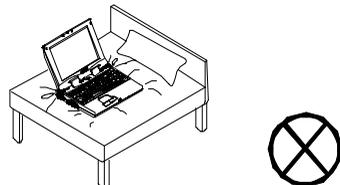
Do not disassemble the computer yourself.
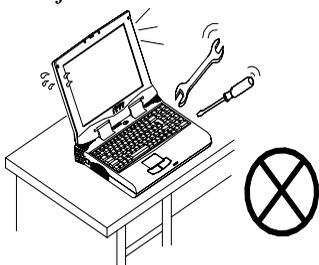
Do not place anything heavy on the computer.
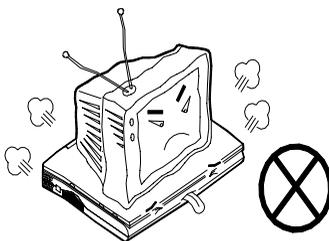
Do not touch power cord by wet hand.

Do not use broken power cord.
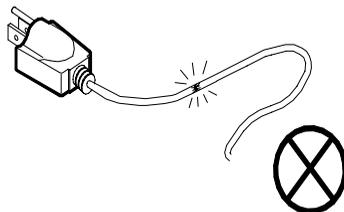
Keep the computer or accessories away from any metal appliance.
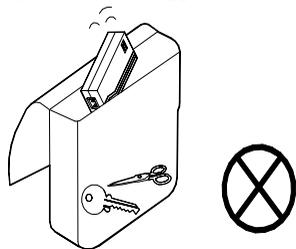
Do not throw the computer or accessories into fire.
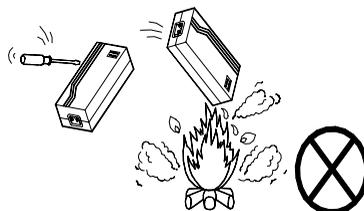
The following mentions the actions that are important for your computer. To keep your computer in the most excellent condition, please follow the instruction as much as possible.

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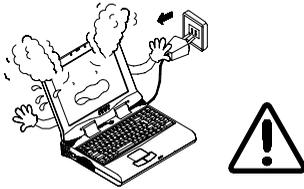
Plug out the power cord in attaching peripheral devices.
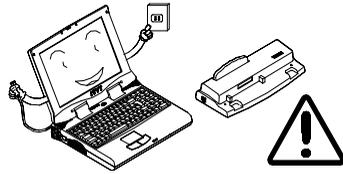
Follow the use instruction in taking airplane.
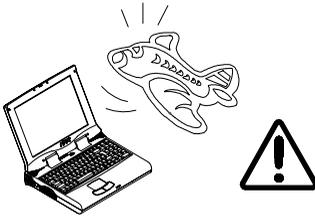
Use the same brand of peripheral devices.
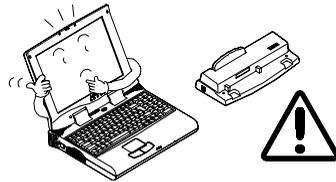
Maintain your computer regularly.

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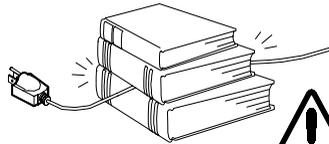
Affix tape to the contact plate while putting the battery into keeping
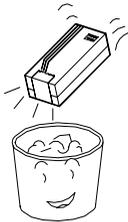
Take a rest after a long term of work.

The data is easy to lose in low power status.
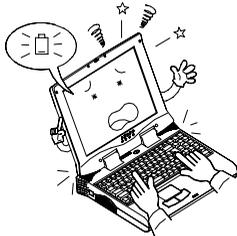
Please keep the computer away from humid environment.

Developing Good Work Habits

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 degree 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 short instruction of notebook computer system that will help you to get the basic understanding about the computer.

Checking the Items
Operating Environment
Providing Power
    By AC Power Adapter
    By Battery Pack
Opening the LCD Cover
Front View
Rear View
Left-Side View
Right-Side View
Bottom View

Checking the Items

Carefully remove everything from the shipping box and check the items one by one. If any item is missing or damaged, contact your dealer immediately.

1   Notebook Computer
2   Carring Bag
3   Power Adapter
4   Power Cord
5   User's Manual
6   PS/2 Transfer Cable
7   Battery Pack
8   Utilities Diskette(s)
9   CD-ROM
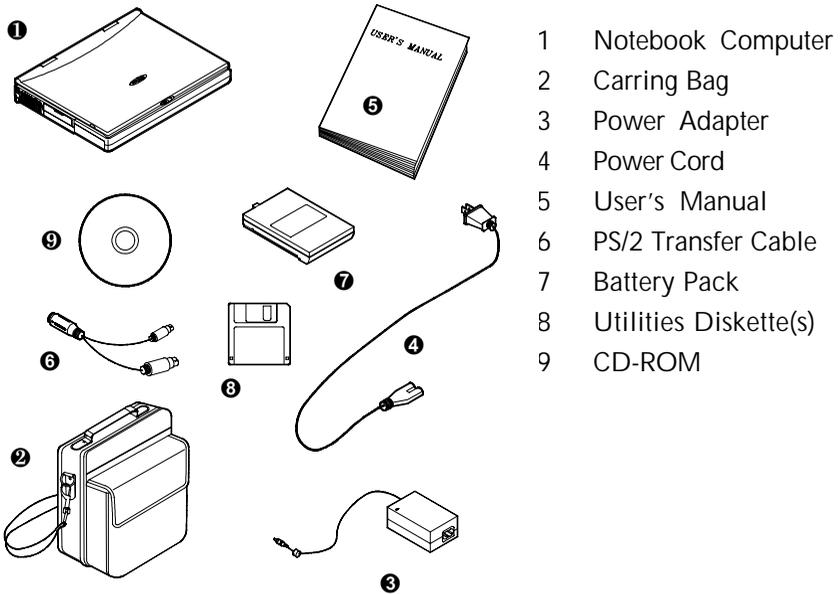
Operating Environment

As with any other precision 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 matter or moisture may affect the system.
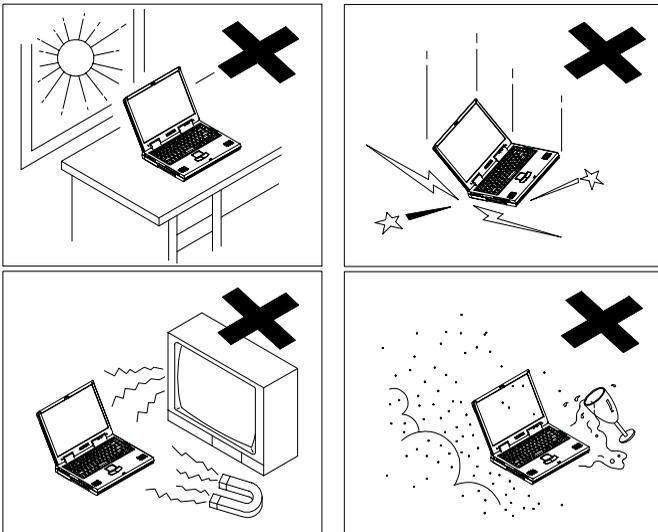
Providing Power

The notebook computer is convenient for you to use it anywhere: at home, in the office, or on the road. For different conditions you must use different power sources. The AC adapter is good for home or office whereas the battery pack is ideal for you to use the computer on the road.

By AC Power Adapter

Use only the power adapter that comes with your computer. An incorrect type of power adapter will cause damage to the computer and its components.

1.   Plug the power adapter cord into the power jack on the rear panel of the computer.
2.   Connect the power adapter with the power cord.
3.   Plug the power cord into a properly grounded outlet.
4.   Refer to Chapter 1, System Status Indicators for more information on system power status.
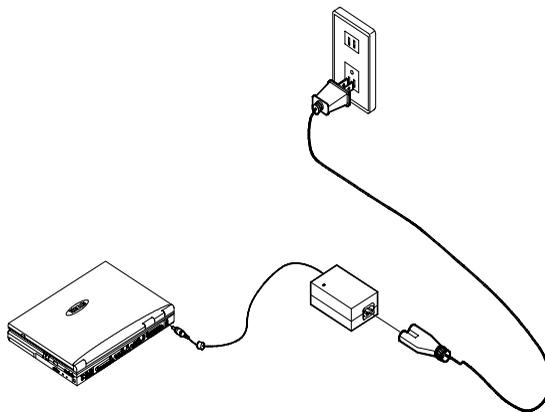
By Battery Pack

The battery pack provides power for continuous portable operation of the computer. When using the battery no external power source is required. The actual operation time is related to the application and the configuration you're using.

Inserting

1. Turn the computer over.
2. Insert the battery pack firmly into the computer.
3. The latch will click into the place when it is seated.

Removing

1. Turn the computer over.
2. Press the latch in the indicated direction to release the battery pack.
3. Carefully lift the battery pack from the computer.

Note: The battery has protection design to detect the temperature while recharging or discharging. To ensure the battery can be recharged, while discharging, wait until the battery returns to normal temperature, then recharge the battery.
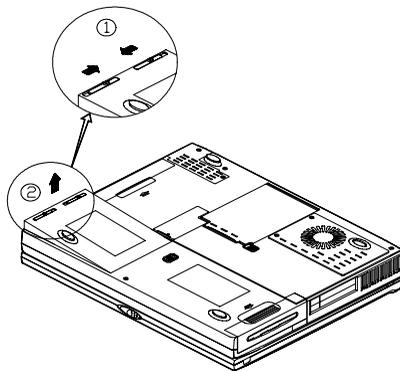
Opening the LCD Cover

1.   Move the latch to the right to release the cover.
2.   Lift the cover to reveal the LCD panel and keyboard.
3.   Adjust the LCD panel to a comfortable viewing angle.
4.   Press the power button to turn the system on or off (refer to Chapter1, Front View for more information on the power button).
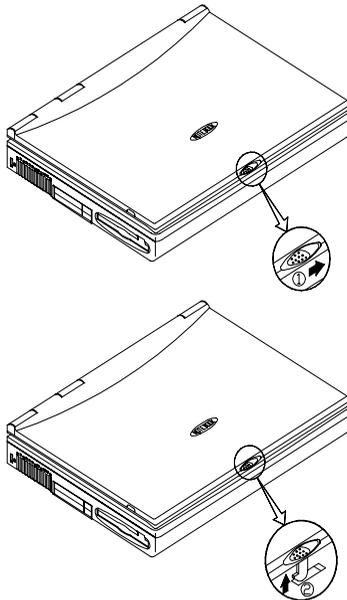
Front View

LCD Panel

The computer provides you with a XGA TFT LCD panel. Depending on the model you purchased, it can either be a 13.3″ or 14.1″ flat panel. The LCD panel is driven by a AGP bus video controller with 8MB video memory.

Microphone

The built-in microphone provides clear sound effect.

Trackpad and Buttons

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

Stereo Speakers

Two built-in speakers provides clear stereo sound.

Keyboard

The 88-key Windows 95 keyboard is integrated with the numeric keypad.

Ventilation

The ventilation is designed to dissipate the LCD's operation heat. Do not block or obstruct it during operation.
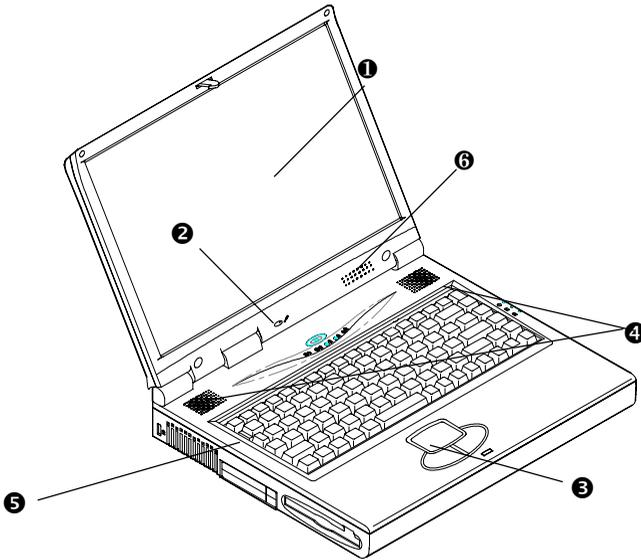
1	LCD Panel
2	Microphone
3	Trackpad and Button
4	Stereo Speakers
5	Keyboard
6	Ventilation

Power Button

	Use this button to turn the system on or off.
⓪	After proper configuration under SCU, this button can be used as suspend/resume hot button (refer to Chapter 3: BIOS Utilities, Power Menu for more information).

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

Power Button
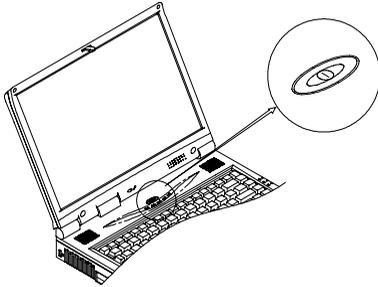
System Status Indicators
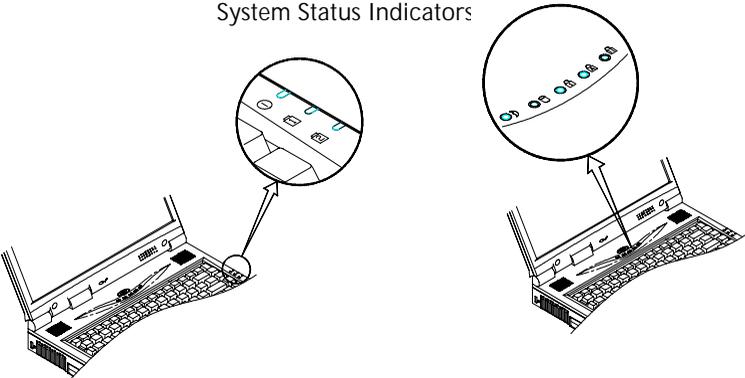
System Status Indicators

The system-status indicators on the computer show the current status of your computer. Each indicator is identified with a symbol. The following shows the meaning of each icon:

Icon	Color	Description
⏻	Green	Battery power is used with the system turning on.
	Red	AC power is used with the system turning on.
	Blinking Red	Battery power is critically low.
🔋1	Red	Battery is being charged.
🔋2	Green	Battery is fully charged.
🔒1	Green	The embedded number-lock feature is activated
🔒A	Green	The Caps Lock feature is activated.
🔒↑↓	Green	The Screen Lock feature is activated.
☽	Green	The system has entered the configured suspend mode.
🗄	Green	The hard disk is being accessed.

Rear Viiew

Power Jack

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

Parallel Port

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

S-Video Jack

Use this jack to transmit video signal to a TV set (only in Windows system). You may need to select the video standard (NTSC/PAL) for video display.

External Monitor (CRT) Port

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

Serial Port

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

Expansion Port

This port is used to connect the proprietary Port Replicator.

Dual USB Ports

This dual Universal Serial Bus (USB) ports simplify the expansion capability for peripheral devices.

1394 Port (option)

A newly developed port which connects with the digital camera.

PS/2 Type Port

The PS/2 Type Port is used for connecting an external PS/2 type mouse or keyboard.
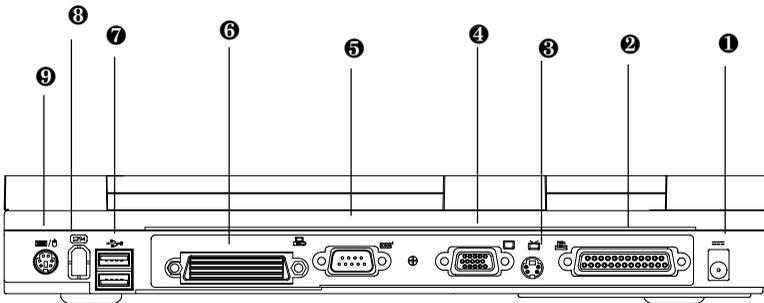
1 Power Jack

2 Parallel Port

3 S-Video Jack

4 External Monitor (CRT) Port

5 Serial Port

6 Expansion Port

7 Dual USB Port

8 1394 Port

9 PS/2 Type Port

Left-Side View

Removable 3.5″ Floppy Disk Drive

The Notebook comes standard with a removable 3,5″ 1.44MB floppy drive installed in a bay. The floppy disk drive module can be replaced with optional drive units, such as a 12.7mm high, 2.5″ hard disk drive or a 12.7mm high,120MB LS-120. (Please refer to Chapter 2: Operation for more information on using floppy disk drive.)

PC Card Sockets

The notebook provides two 3.3V/5V PCMCIA sockets. Two Type II or one Type III PC card can be used. Both sockets will expand the system capabilities when a PC card is inserted. To eject the PC card, press the appropriate eject button. (Please refer to Chapter 2: Operation for more information on Using PC Card socket.)

Ventilation

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

Security Connector 🔒

The Security Connector is used to protect your Notebook from being stolen. Wrap the steel cable around your desk. Next, insert the locking device into this security connector.
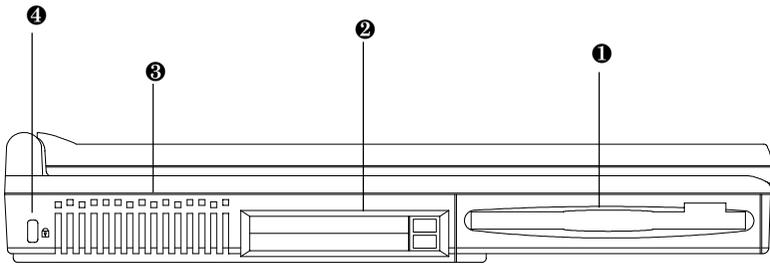
1 Removable 3.5¨ Floppy Disk Drive
2 PC Card Sockets
3 Ventilation
4 Security Connector

Right-Side View

Speaker-out Jack

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

Microphone-in Jack

You can use this jack to connect a microphone to the computer.

Line-in Jack

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

Infrared

The notebook is equipped with an infrared feature that allows the communication with an infrared-compatible device. The Infrared port supports IrDA (HPSIR) 1.1 mode, Amplitude Shifted Keyed IR (ASKIR) mode, and Fast IR

Removable 5.25″ CD-ROM Drive

The notebook comes standard with a 5.25″ CD-ROM drive. The removable CD-ROM drive module can be replaced with a 12.7mm high DVD-ROM drive. (Please refer to the Chapter 2: Operation for more information on using the CD-ROM.)

Phone Jack (option)

The phone jack is used to support modem or LAN. You can attach a phone line to the jack and insert a modem card (optional) into the modem socket on the mainboard.
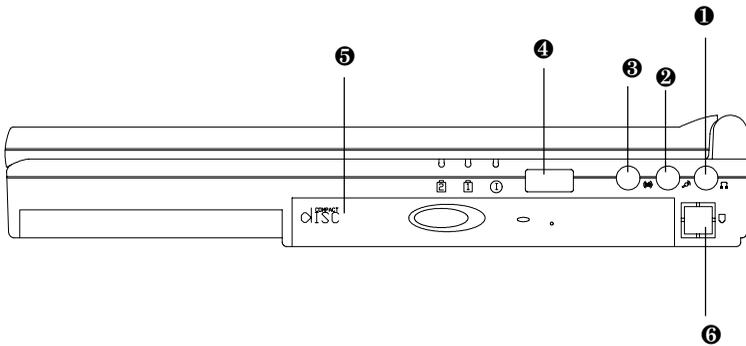
1 Speaker-out Jack

2 Microphone-in Jack

3 Line-in Jack

4 Infrared

5 Removable 5.25″ CD-ROM Drive

6 Phone Jack (option)

Bottom View

CPU Cover

Detaching the screws to remove the cover. The CPU module is under the heat sink and the cover. You may upgrade the CPU for higher system performance.

Hard Disk Drive

Push the latch to release the Hard Disk Drive module from its bay.

CD-ROM Drive

Push the latch to release the CD-ROM module from its bay.

Battery Pack

Push the latch to release the Battery Pack from its bay.

Floppy Disk Drive

Push the latch to release the Floppy Disk Drive module from its bay.

PC Card Sockets

Please refer to "Left-Side View" for more information.

Cover

The cover is used to fix the CD-ROM drive, Hard Disk Drive and PC Card Sockets.
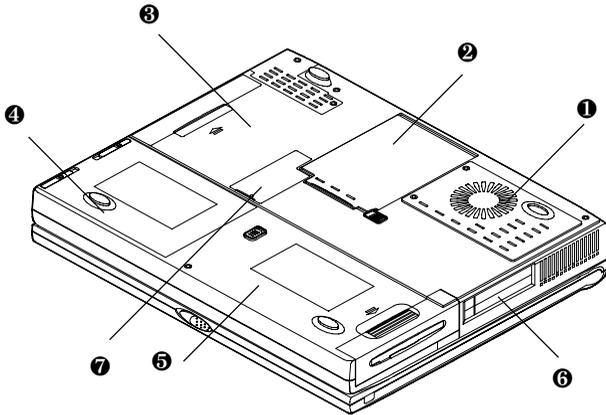
1 CPU Cover
2 Hard Disk Drive
3 CD-ROM Drive
4 Battery Pack
5 Floppy Disk Drive
6 PC Card Sockets
7 Cover

Chapter 2: Operation

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

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

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

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

Upgrading the Processor Module

The notebook supports Intel Pentium III processor at 450MH and 500MHz core frequencies.

Replacing the Processor

1. Remove all the power sources (AC power and battery).
2. Turn the computer over.
3. Remove the CPU cover.
4. Remove the screws that fasten the heat sink mounted on the processor.
5. Carefully detach the processor from the mainboard.

CPU Cover

Heat Sink

CPU Module
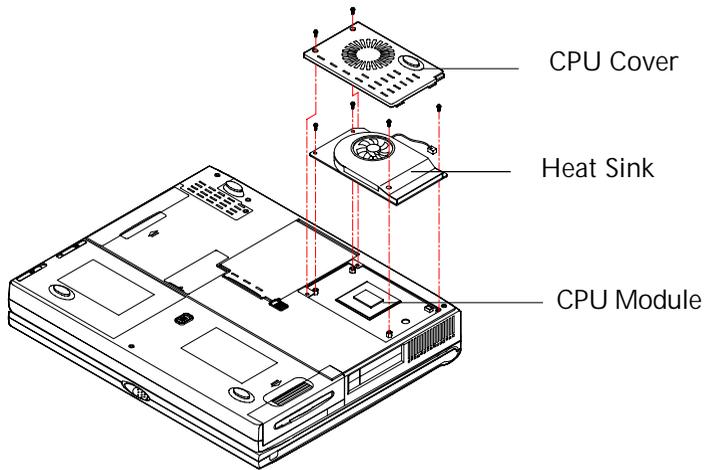
Note:
Wait for the CPU to cool down before replacing it.

Reinstalling the Heat Sink

Reinstall the CPU in the reverse order of removal. Make sure that the heat sink cable is properly installed.
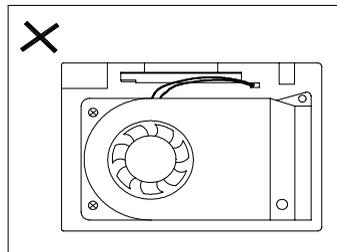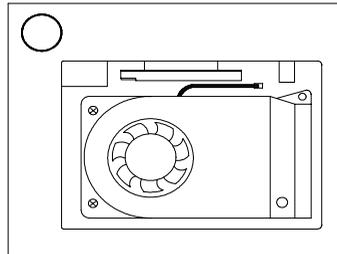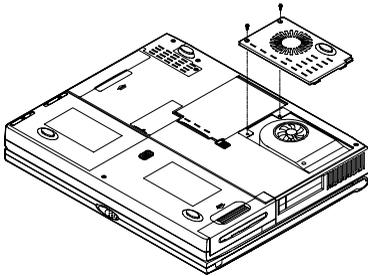
Expanding the Memory

The system has two memory sockets for PC100 RAM modules to expand the memory up to 256MB. The RAM modules should be a 144-pin SODIMM (Small Outline Dual In-line Memory Module) type. The total memory size is automatically detected by the POST routines. With the following different RAM combinations (for reference), the total memory size can be:

Bank 0 (64-bit)	Bank 1 (64-bit)	Power	Total Size
32MB	0MB		32MB
32MB	32MB		64MB
64MB	0MB		64MB
64MB	32MB		96MB
64MB	64MB	3.3V	128MB
128MB	0MB		128MB
128MB	32MB		160MB
128MB	64MB		192MB
128MB	128MB		256MB

Accessing the Memory Sockets

1   Turn the system power off.

2   Press the two keyboard latches to elevate the keyboard from it normal position.

3   Carefully lift the keyboard assembly out to expose the mainboard. Locate the memory sockets.

Note:

●   The memory socket Bank 0 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. It is recommended to use the RAM module that complies with Intel unbuffered SO-DIMM (67.6mmX31.75mm). Please consult your dealer for the detail.

67.6mm
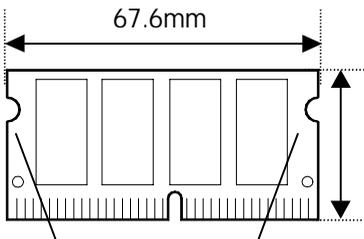
Non-component area
(The edges of the memory module are the non-component area.)

Bank 1

Bank 0
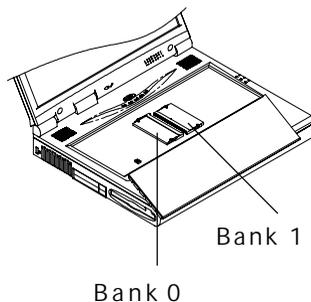
Installing the Memory Module

Follow the steps below to install the memory module:

1　　Turn the system power off.

2　　Press the two keyboard latches to elevate the keyboard from its normal position.

3　　Carefully lift the keyboard assembly out to expose the mainboard. Locate the memory sockets.

4　　Insert the memory module at a slight angle (45 degree) and fit its connectors into the socket firmly.

Note: Insert Banks 0 first, then Bank 1.

5　　Press the two edges of the memory module to make it locked into the place.

6　　Reinstall the keyboard assembly.
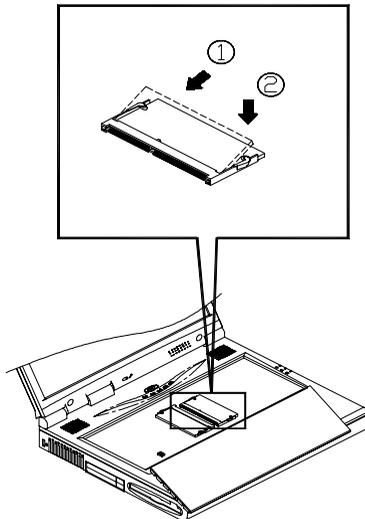
Removing the Memory Module

1   Turn the system power off.

2   Press the two keyboard latches to elevate the keyboard from its normal position.

3   Carefully lift the keyboard assembly out to expose the mainboard. Locate the memory sockets.

4   Gently pull the two latches outward on both ends of the module. The module will pop up.

5   Remove the memory module.

6   Reinstall the keyboard assembly.
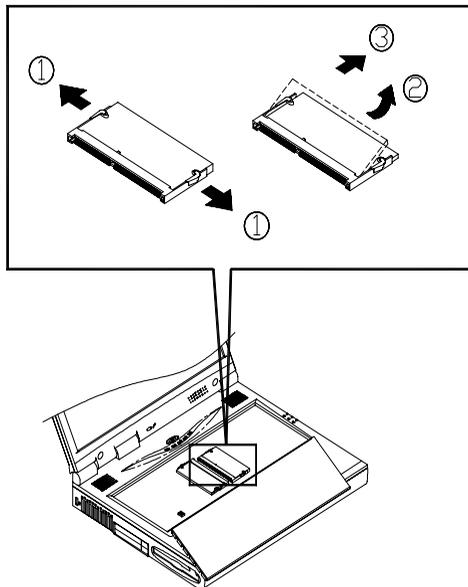
Using the Hard Disk Drive

The hard disk drive with 2.0GB storage capacity is mounted in a removable case and can be taken out to accommodate other 2.5″ hard disk drives with a height of 12.7mm. The system supports PIO mode 4, Master mode IDE, and provides a high performance data transfer rate at speeds up to 33 MBytes/ second (ATA-33).

Removing the Hard Disk Drive Module

1   Turn the system power off.

2   Turn the computer over.

3   Locate the Hard Disk Drive latch.

4   Press the latch in the direction as indicated. Then take the hard disk drive out of the bay.
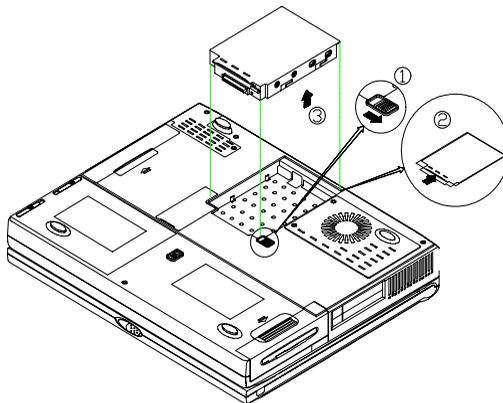
Replacing the Hard Disk Drive

1.   Remove the two screws on each side of the case.
2.   Gently disconnect the cable from the hard disk drive.
3.   Connect the replacement hard disk drive with the cable.
4.   Insert the replacement hard disk drive into the case.
5.   Fasten the screws of each side.
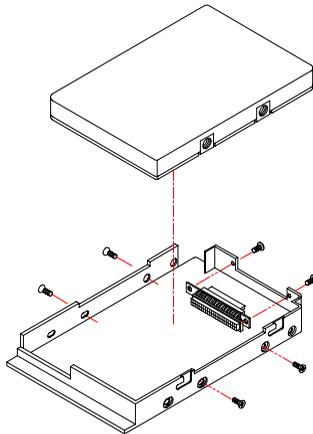
Inserting the Hard Disk Drive Module

1   Insert the hard disk drive module into the bay
2   Make sure you feel the drive click into the position when it is seated
     properly.

Using the Floppy Disk Drive

The computer is equipped with a removable 1.44MB, 3.5″ floppy disk drive module. It is usually designated as drive A: by default and can be used as a boot device if properly set in SCU (please refer to Chapter 3: BIOS Utilities). You may replace the floppy disk drive module with the following options: a 120MB LS-120 drive (of 12.7mm high), or a 2.5″ secondary IDE hard disk drive. Contact your dealer for the detail.

Inserting/Removing Diskettes

When using the floppy drive, always insert your floppy diskette label-side up. To remove your diskette, press the eject button on the top-right corner of the floppy drive.
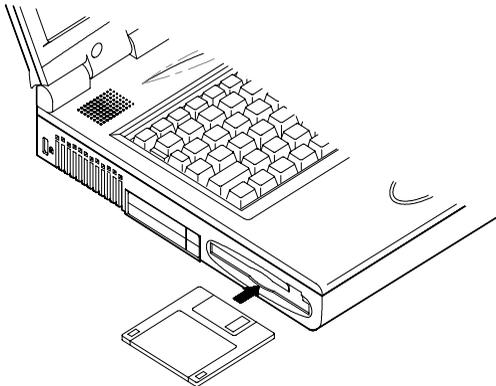
Removing/Inserting the Floppy Disk Drive

Removing

1.   Push the latch in the direction as indicated.

2.   Draw the floppy drive out of the bay.

Inserting

1.   Turn off the power. Turn the computer over.

2.   Insert the drive into the bay.

3.   Make sure it clicks into the bay.
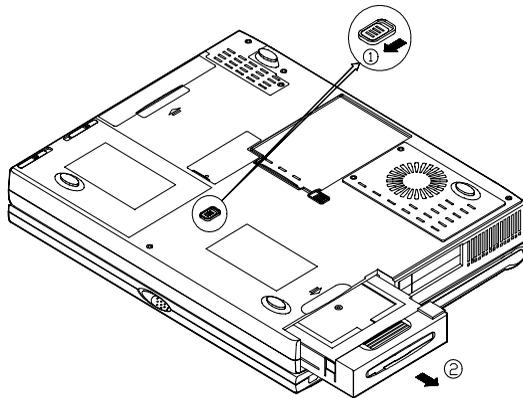
Using the CD-ROM

The Notebook is equipped with a removable CD-ROM drive module. It is usually designated as drive D by default and may be used as a boot device if properly set (please refer to Chapter 3, BIOS Utilities). You may replace CD-ROM drive module with a DVD-ROM drive (of 12.7mm).

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

Disk Tray

Emergency Eject Hole

Busy Indicator

Eject Button
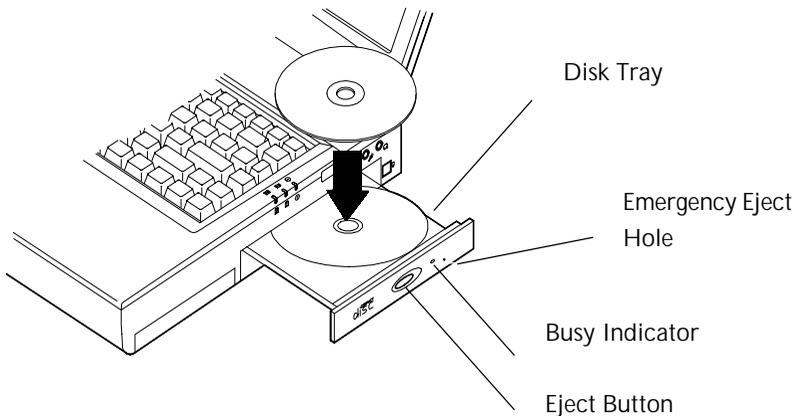
Removing the CD-ROM Module

1   Turn off the power. Turn the Notebook over.
2   Take the cover away as the figure.
3   Press the edge of the connector.
4   Draw the CD-ROM module out of the bay.
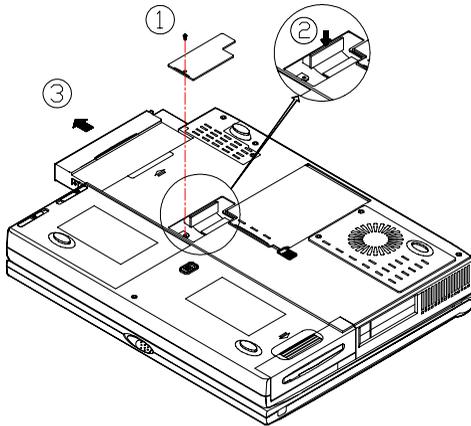
Inserting the CD-ROM Module

1   Turn off the power. Turn the Notebook over.
2   Take the cover away.
3   Insert the CD-ROM module into the bay.
4   Insert the cover to fix the placement.

Loading Compact Discs

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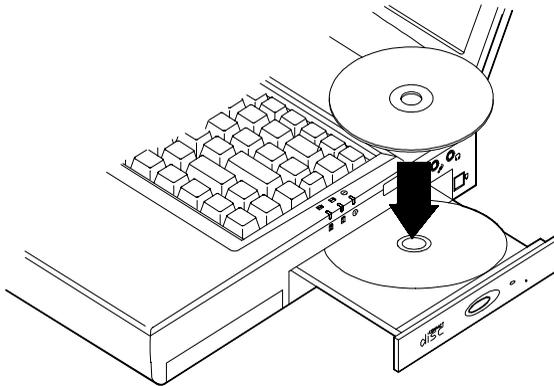
Handling Compact Discs

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

- 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 benzine, thinners, or other cleaners to clean the CD.
- Do not bend the compact disc.

Using the PC Card Sockets

The computer is equipped with two PC card sockets (previously referred to as PCMCIA). Both sockets support two 3.3V/5V Type II PC cards or one Type III PC card.

The upper socket named Socket A is capable of ZV (Zoomed Video), which allows a direct connection between a PC card and video devices that enables high quality video playback.

Inserting PC Cards

1. Open the access door
2. Align the PC card with the slot and push it in firmly until it locks into the place.
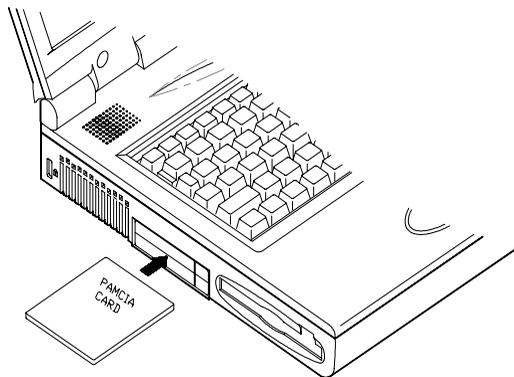
Removing PC Cards

The two eject buttons are located next to the two slots. Press the appropriate eject button to remove the PC card from its slot.

Socket A   Eject Button for Socket A

Socket B   Eject Button for Socket B
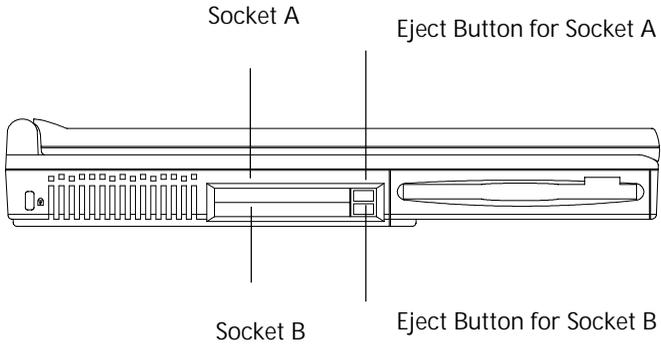
Using the Hot Keys

Located on the bottom-left edge of the keyboard layout is a colored Fn key. The Fn key function allows you to change operational features instantly. When you use the following functions, press and hold the Fn key; then press the appropriate function key.

Hot Key	System Features
Fn + F3	Expand LCD display
Fn + F6	Toggle CRT/LCD/LCD+CRT
Fn + F9	Decrease LCD brightness
Fn + F10	Increase LCD brightness
Fn + F11	Decrease audio volume
Fn + F12	Increase audio volume
Fn + Z	Turn audio mute on/off
Fn + Esc	Suspend/Resume
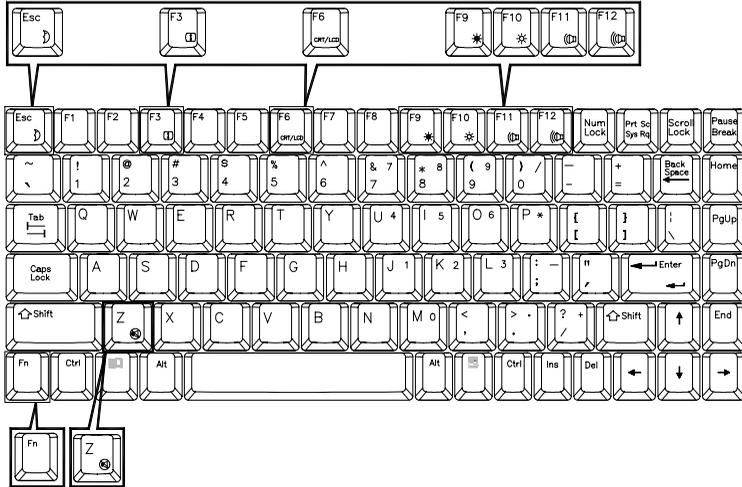
Using the Numeric Keypad

The Notebook features an 88-key keyboard with an embedded numeric keypad for easy numeric data input. The colored keys in the middle section of the keyboard will function as a Numeric Keypad. When the numeric keypad is engaged, the NumLock LED indicator shines green light.

Follow these steps to access the Numeric Keypad:

● Press the NumLock Key to activate the Numeric Keypad.

● Press the Fn key and colored keys together to activate the Numeric keypad.
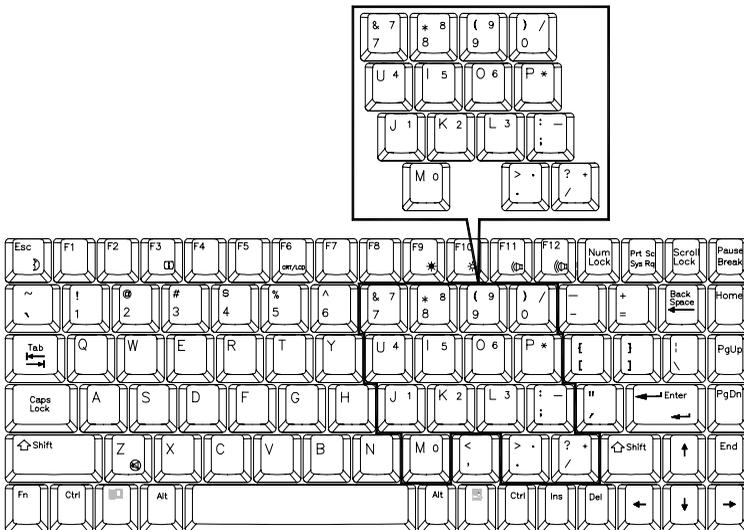
Using the Power Management

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)

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)

Suspend To RAM (STR)

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

Resume from STR Mode

The system will resume from Suspend-To RAM mode by:

●   Alarm resume (month/day/hour/minute)

●   Modem ring

●   Pressing the power button (if configured as Suspend/Resume function under SCU)

Attaching Peripheral Devices

To extend the computer's functions, you can attach the following peripheral devices to the computer through the ports or jacks on the rear panel of computer.

Attaching a Phone Line (option)

The notebook is equipped with a phone jack for connecting a phone line. To enable the function of a built-in modem, the users have to insert a modem card (Optional) into the socket on the mainboard and attach a phone cord to the jack.
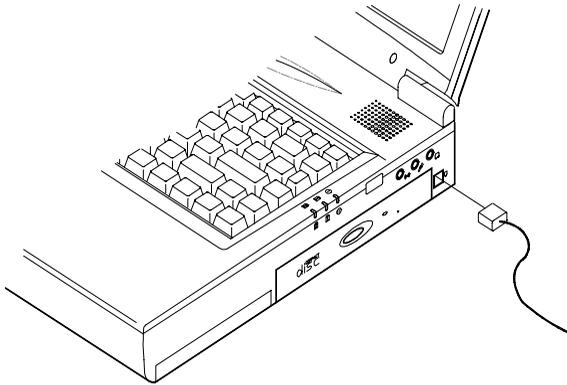
Attaching a Parallel Printer

You may connect any standard Centronics parallel printer to your computer through the parallel port.

1.   Turn the system power off.
2.   Connect the cable to the parallel port on the rear of the computer.
3.   Tighten the screws that fasten the cable to the parallel port.
4.   Insert the other end of the cable to the printer's connector. Fasten the cable's connector.
5.   Turn on the printer and computer.

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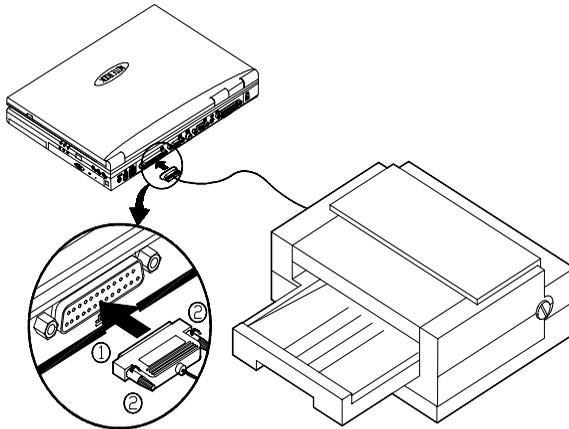
Attaching a TV Set

The S-Video jack on the rear panel of the computer is used for transmitting video signals to a TV set. You may need to select the video standard for video display.

Attach the TV set as shown below.
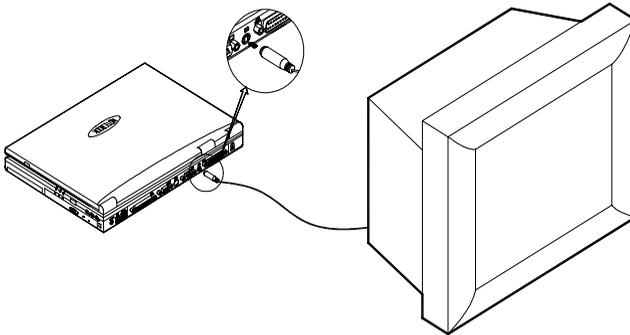
Note:
Different countries use different TV broadcast standards. A TV set must comply with the appropriate standard to properly receive broadcast signals. You should refer to your TV user guide to make sure which TV standard you are using.

Attaching a USB-compatible Device

The computer provides a USB port for the connection of a USB-compatible keyboard, mouse, or other devices. Attach the device as shown below.

Attaching a Serial Mouse

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

1. Turn the system power off.
2. Connect the cable to the serial port on the rear of the computer.
3. Tighten the screws that fasten the cable to the serial port.
4. Turn on the computer.

In addition, you may need to install the manufacturer-supplied driver for the serial mouse. Refer to the device's user's guide for more information.
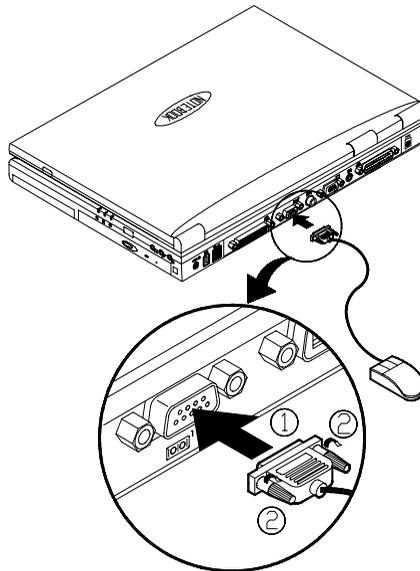
Attaching an External Monitor (CRT)

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

1. Turn the system power off.
2. Connect the cable to the CRT port on the rear of the computer.
3. Tighten the screws that fasten the cable to the CRT port.
4. Insert the other end of the cable to the external monitor.
5. Turn on the computer.
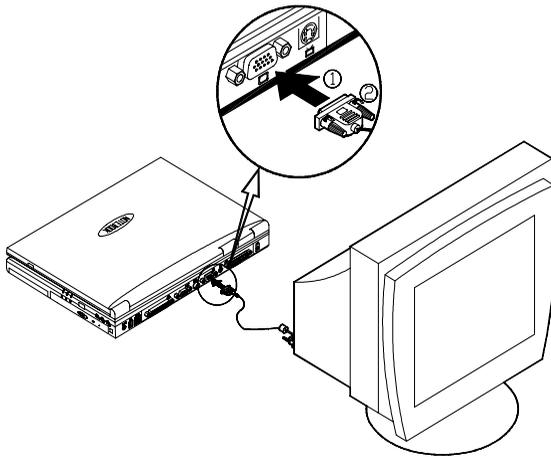
Attaching a PS/2 Keyboard or Mouse

The computer can be operated with an external PS/2 keyboard or mouse. For most types of keyboard or mouse, you must use a PS/2 transfer cable to connect the keyboard (or mouse) with the computer. Attach the external keyboard or mouse as shown below.
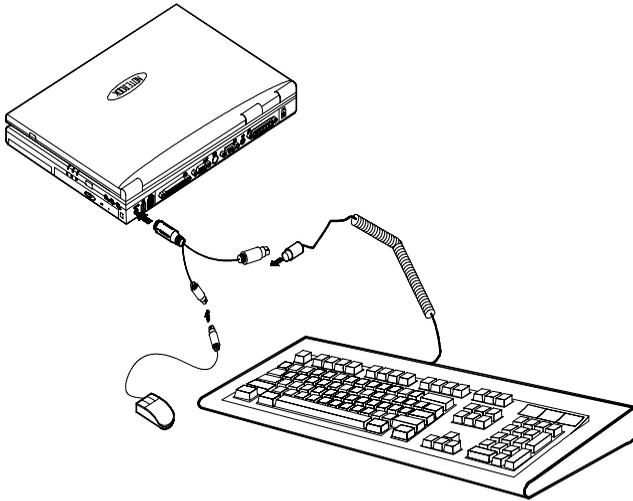
Chapter 3: BIOS Utilities

This chapter provides information regarding the Power On Self Test (POST) and shows you how to use the System Configure Utility (SCU) to configure the system parameters. The settings made in BIOS SCU will affect the performance of the notebook.

Power on Self Test (POST)
System Configuration Utilities
Features of the SCU
- Startup Menu
- Memory Menu
- Disks Menu
- Components Menu
- Power Menu
- Exit Menu

Power on Self Test (POST)

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

Post Message: Normal Operation

```
SystemSoft BIOS MobilePRO BIOS Version 1.01 (2482-00)-(R2.09)
Copyright 1983-1996 SystemSoft Corp. All Rights Reserved


450 MHz Pentium III with MMX CPU
L2 Cache: 256KB Installed
8 MB Video RAM
SystemSoft Plug-n-Play BIOS ver1.17.01


Base Memory              000640 Kb
Extended Memory          130048 Kb
Total Memory              131072 Kb


Auto Detecting IDE Devices[Done]
<CTRL-ALT-S> to enter System Configuration Utility
```

Note:

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

POST Message: Error Detected

If an error is detected, you will see the following WARNING message. You may press F1 key to continue, or press the Ctrl-Alt-S keys simultaneously to enter the System Configuration Utility.

```
SystemSoft BIOS MobilePRO BIOS Version 1.01 (2482-00)-(R2.09)
Copyright 1983-1996 SystemSoft Corp. All Rights Reserved

450 MHz Pentium III with MMX CPU
L2 Cache: 256KB Installed
8 MB Video RAM
SystemSoft Plug-n-Play BIOS ver1.17.01

Base Memory              000640 Kb
Extended Memory          130048 Kb
Total Memory              131072 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 configuration status and provides users with a tool to set their system parameters. The settings are stored in non-volatile battery-backed CMOS RAM which saves the information even when the power is turned off, and retains it when the system is turned back on.

Information in the System Configuration Utility

The following shows the main menu and its submenu that may be changed within the System Configuration Utility.

Menu Bar Items	Pull-down Menu Items
Startup	Date and Time, Fast Boot, Boot Device, Display, Enable Battery Low Beep, Enable LCD expand Mode, Enable Power On Beep, Enable PNP OS Support, Boot Password, SCU Password.
Memory	Cache Systems.
Disks	Diskette Drives, IDE Settings, Enable LS120 Drive.
Components	COM Ports, LPT Port, PS/2 Mouse Port, Keyboard Numlock, Keyboard Repeat
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.
Exit	Save and Exit, Exit (No Save), Default Settings, Restore Settings, Version Info.

Initiating the System Configuration Utility

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

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

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

```
SystemSoft  SCU  For  Intel  440BX/440ZX  chipset          Dec   2, 1999    5:39:51  pm
 Startup    Memory    Disks    Components    Power    Exit

  ┌─ Devices ──────────────────────────────┐      ┌─ System ──────────────┐
  │                                         │      │                       │
  │  Floppy  Drive A   = 1.44 MB            │      │  CPU  Clock     = 500  MHz
  │  Hard  Drive C     = 1359 MB            │      │                       │
  │  Hard  Drive D     = 0 MB               │      └───────────────────────┘
  │  Hard  Drive E     = 0 MB               │
  │  Hard  Drive F     = 0 MB               │      ┌─ Memory ──────────────┐
  │  Serial  Port 1    = COM 1, 3F8, IRQ 4  │      │  Base       =   640 KB
  │  Serial  Port 2    = COM 2, 2F8, IRQ 3  │      │  Extended   = 64512 KB
  │  Parallel  Port    = LPT1, Addr 378, IRQ 7     │  Shadow     =    64 KB
  │                                         │      │  Reserved   =   320 KB
  │                                         │      │  Total  RAM = 65536 KB
  │                                         │      │  Cache (Ext)=   256 KB
  └─────────────────────────────────────────┘      └───────────────────────┘

 Press <Alt> key to activate menus, and cursor keys to navigate.  Mouse left
 button, spacebar, and <Enter> keys accept menu item. Mouse right button and
 <Esc> key cancel current action.
```

Working with the Menu Bar

After entering the SCU, you may use the following keys to work with the menu bar (main menu).

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

Working with the Pull-down Menu (Submenu)

When the desired menu bar (main menu) item is highlighted, press the Enter key to enter the pull-down menu (submenu) for values setting. You may use the following keys to work with the pull-down menu.

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

Features of the SCU

Startup Menu

Item	Setting/Option		Function
Date and Time	Day/Month/Year Hour/Minute/Second		Set the current date and time.
Fast Boot	Enable		Initialize and quickly boot the system in a few seconds by skipping certain diagnostic tests.
	Disable		Disable the above.
Boot Device	1st Boot device	Hard Disk C	Select one of these drives as 1st choice for the BIOS for booting the system.
		CD-ROM Drive	
		Diskette A	
	2nd Boot Device	Hard Disk C	Select one of these drives as 2nd choice for the BIOS for booting the system.
		CD-ROM Drive	
		Diskette A	
	3rd Boot Device	Hard Disk C	Select one of these drives as 3rd choice for the BIOS for booting the system.
		CD-ROM Drive	
		Diskette A	
Display	LCD		Activate the system's LCD panel.
	CRT		Activate an external monitor
	LCD+CRT		Activate both the LCD and the CRT.
Enable Battery Low Beep	Enable		The system emits a series of warning beeps sound when the battery power becomes low.
	Disable		Disable the above.
Enable LCD Expand Mode	Enable		Stretch the display to fill the entire viewing area of the LCD panel.
	Disable		Disable the above.

Item	Setting/Option	Function
Enable PNP OS Support	Enable	Enable or disable PNP OS Support.
	Disable	
Enable power on Beep	Enable	The system emits a beep sound when the system power is on.
	Disable	Disable the above.
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	

| Startup | Memory | Disks | Components | Power | Exit |

```
Date  and  Time              ▶
√ Fast Boot
  Boot Device             ▶
  Display                 ▶
√ Enable Battery Low Beep
√ Enable LCD expand mode
√ Enable Power On Beep        3F8, IRQ 4
√ Enable PNP OS Support       2F8, IRQ 3
                          ddr 378, IRQ 7
  Boot Password           ▶
  SCU Password            ▶
```

System

CPU Clock   = 500 MHz

Memory

Base	=	640	KB
Extended	= 64512	KB
Shadow	=	64	KB
Reserved	=	320	KB
Total RAM	= 65536	KB
Cache (Ext)	=	256	KB

Set system date and time

Memory Menu

Item	Setting/Option		Function
Cache Systems	L1 Cache	Disabled	Disable the processor's internal cache.
		Write Back	Enable the write-back policy for L1 memory to access only when necessary to update the cache contents with changes for faster performance.
	L2 Cache	Disabled	Disable the L2 cache controller.
		Write Back	Enable the write-back policy for L2 memory to access only when necessary to update the cache contents with changes for faster performance.
	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.

```
Startup   Memory   Disks   Components   Power   Exit
          Cache Systems            ►

  Devi                                        System

 Floppy Drive A  = 1.44 MB                    CPU Clock      = 500 MHz
 Hard Drive C    = 1359 MB
 Hard Drive D    = 0 MB
 Hard Drive E    = 0 MB
 Hard Drive F    = 0 MB
 Serial Port 1   = COM 1, 3F8, IRQ 4
 Serial Port 2   = COM 2, 2F8, IRQ 3          Memory
 Parallel Port   = LPT1, Addr 378, IRQ 7
                                              Base       =   640  KB
                                              Extended   = 64512  KB
                                              Shadow     =    64  KB
                                              Reserved   =   320  KB
                                              Total RAM  = 65536  KB
                                              Cache (Ext) =   256  KB


 Internal and External cache settings
```
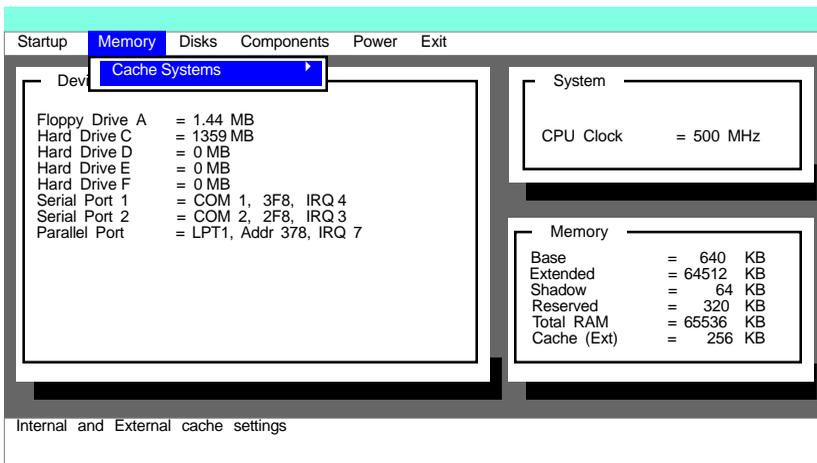
Disks Menu

Item	Setting/Option		Function
Enable LS120 Drive	Enable		Enable or disable LS120 support.
	Disable		
Diskette Drives	Drive A	None	Configure diskette drives A.
		1.44 MB	
		2.88 MB	
IDE Settings	Primary HDD	Drive Enabled	Enable enhanced IDE settings.
		PIO Mode	* This model does not support ZIP device.
	CD-ROM/DVD-ROM	Drive Enabled	
		PIO Mode	
	LS120/ZIP/2nd HDD	Drive Enabled	
		PIO Mode	
	HDD UDMA/MDMA Function	Enable ULTRA DMA-33/multiword DMA function.	
	HDD 32Bit I/O	Enable 32 Bit I/O Function	

```
SystemSoft  SCU  For  Intel  440BX/440ZX  chipset          Dec.  2, 1999    5:49:19  PM
Startup    Memory    Disks    Components    Power    Exit

┌─ Devices ─────────┐   ┌─ Enable LS120/ZIP100 Drive ─┐      ┌─ System ──────┐
│                   │   │ Diskette Drives          ▶  │      │                │
│ Floppy  Drive A   │   │ ───────────────────────────  │      │ CPU  Clock  = 500 MHz │
│ Hard  Drive C     │   │ IDE Settings             ▶  │      │                │
│ Hard  Drive D     = 0 MB                                  └───────────────┘
│ Hard  Drive E     = 0 MB
│ Hard  Drive F     = 0 MB
│ Serial  Port 1    = COM 1, 3F8, IRQ 4
│ Serial  Port 2    = COM 2, 2F8, IRQ 3         ┌─ Memory ──────────┐
│ Parallel  Port    = LPT1, Addr 378, IRQ 7     │ Base      =   640 KB
│                                                │ Extended  = 64512 KB
│                                                │ Shadow    =    64 KB
│                                                │ Reserved  =   320 KB
│                                                │ Total  RAM= 65536 KB
│                                                │ Cache (Ext)=   256 KB
└────────────────────────────────────────────────────────────────────┘
When selected, system will support LS-120/IOMEGA ZIP 100
```

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 & 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 & 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	Set the DMA channel for the Infrared port if FIR mode is used.
		DMA 1	
		DMA 3	
LPT Port	Port Address	None	Select parallel (printer) port I/O address and IRQ assignment.
		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	Set the DMA channel for the parallel port if the ECP mode is used.
		DMA 3	
	EPP Type	EPP 1.9	Set the current type for EPP.

Item	Setting/Option		Function
PS/2 Mouse Port	Enable		Enable Onboard PS/2 Mouse Port.
	Disable		Disable the PS/2 mouse if IRQ resource is not enough.
Keyboard Numlock	Enable		Specify whether Num Lock is on or off at system boot time.
	Disable		
Keyboard Repeat	Key Repeat Rate	2 cps	Define the rate (characters per second) at which the keyboard repeats while a key is depressed.
		6 cps	
		10 cps	
		15 cps	
		20 cps	
		30 cps	
	Key Delay	¼ sec	The repeat key feature will be delayed by the selected time value.
		½ sec	
		¾ sec	
		1 sec	

```
SystemSoft  SCU  For  Intel  440BX/440ZX  chipset          Dec.   2, 1999    5:50:31  PM
 Startup    Memory    Disks    Components    Power    Exit

  ┌─ Devices ──────────────┐    ┌─ COM  Ports ──────────▶ ┐        ┌─ System ─────────────┐
  │                        │    │                         │        │                      │
  │ Floppy  Drive  A = 1.44│    │ LPT  Port           ▶   │        │ CPU  Clock   = 500 MHz│
  │ Hard  Drive  C  = 1359 │    │                         │        │                      │
  │ Hard  Drive  D  = 0 MB │    │ √ PS/2  Mouse  Port     │        └──────────────────────┘
  │ Hard  Drive  E  = 0 MB │    │                         │
  │ Hard  Drive  F  = 0 MB │    │ √ Keyboard  Numlock     │        ┌─ Memory ─────────────┐
  │ Serial  Port  1 = COM  │    │   Keyboard  Repeat   ▶  │        │ Base      =    640  KB│
  │ Serial  Port  2 = COM  │    └─────────────────────────┘        │ Extended  =  64512  KB│
  │ Parallel  Port  = LPT1.│                                       │ Shadow    =     64  KB│
  │                        │                                       │ Reserved  =    320  KB│
  │                        │                                       │ Total RAM =  65536  KB│
  │                        │                                       │ Cache (Ext) =  256  KB│
  │                        │                                       └──────────────────────┘
  └────────────────────────┘

 Configure serial (COM) port I/O addresses
```

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

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

Item	Setting/Option	Function
Enable MODEM Ring Resume	Enable	Resume the system from suspend mode when a modem ring is detected.
	Disable	Disable the above.
Enable Battery Low Suspend	Enable	Enable suspend to disk on a low battery condition.
	Disable	Disable the above.

```
SystemSoft  SCU  For  Intel  440BX/440ZX  chipset                     Dec.   2, 1999   4:30:56 PM
Startup    Memory    Disks    Components    Power   Exit
                                           √ Enable Power Saving
    Devices
                                            _ Low      Power  Saving
  Floppy  Drive A   = 1.44 MB              _ Medium Power  Saving
  Hard  Drive C     = 1359 MB             _ High     Power  Saving           = 500  MHz
  Hard  Drive D     = 0 MB                  Customize                    ►
  Hard  Drive E     = 0 MB
  Hard  Drive F     = 0 MB                  Suspend Controls             ►
  Serial  Port 1    = COM  1,  3F8,  IRQ
  Serial  Port 2    = COM  2,  2F8,  IRQ    Resume Timer                 ►
  Parallel  Port    = LPT1, Addr 378,  IRQ _ Enable MODEM Ring Resume
                                            _ Enable Battery Low Suspend       =     640   KB
                                                            Extended         = 64512   KB
                                                            Shadow           =      64   KB
                                                            Reserved         =     320   KB
                                                            Total  RAM       = 65536   KB
                                                            Cache  (Ext)     =     256   KB


  Enable all power saving features
```

Exit Menu

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

```
SystemSoft  SCU  For  Intel  440BX/440ZX  chipset          Dec   2, 1999   4:30:56  PM
Startup    Memory    Disks    Components    Power      Exit
 ┌─ Devices ─────────────────────────┐      Save  and  Exit    ▶
 │                                    │      Exit  (No Save)    ▶
 │  Floppy  Drive A   = 1.44 MB       │     ┌──────────────────────┐
 │  Hard  Drive C     = 1359 MB       │      Default  Settings   ▶   ck    = 500  MHz
 │  Hard  Drive D     = 0 MB          │      Restore  Settings   ▶
 │  Hard  Drive E     = 0 MB          │     └──────────────────────┘
 │  Hard  Drive F     = 0 MB          │      Version  Info       ▶
 │  Serial  Port 1    = COM 1,  3F8,  IRQ 4 │
 │  Serial  Port 2    = COM 2,  2F8,  IRQ 3 │
 │  Parallel  Port    = LPT1, Addr 378, IRQ 7 │    ┌─ Memory ────────────────┐
 │                                    │    │  Base        =     640  KB   │
 │                                    │    │  Extended    = 64512  KB     │
 │                                    │    │  Shadow      =      64  KB   │
 │                                    │    │  Reserved    =     320  KB   │
 │                                    │    │  Total  RAM  = 65536   KB    │
 │                                    │    │  Cache  (Ext) =     256  KB  │
 └────────────────────────────────────┘    └──────────────────────────────┘

 Save current settings and return to previous work
```

Chapter 4: Troubleshooting

Should you have any problems with your computer, before consulting the computer vendor, you may want to solve the problem yourself. This chapter lists some common problems and their possible solutions.

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

Audio

Problem: The speaker cannot be heard.
Solution: The volume might be set too low, please check the volume control.

Problem: The volume is too high (or too low).
Solution: The volume is not correctly set, please check the volume control.

Problem: The headphone doesn't work.
Solution 1: The volume level is not correctly set, please check the volume control.
Solution 2: The headphone is plugged into the wrong jack.
Solution 3: There is no audio source

Battery

Problem: The battery pack will not charge.
Solution 1: The battery pack is exposed to an excessively hot or cold environment. Place the battery in a suitable environment and after it returns to normal temperature try again.
Solution 2:   The battery may be bad and may need to be replaced, call your vendor for more details.

Problem: The battery pack will not charge and the charge indicator light is off.
Solution 1: The battery is already fully charged and the indicator light is broken.
Solution 2: The battery pack is exposed to an excessively hot or cold environment. Place the battery in a suitable environment and after it returns to normal temperature try again.

Solution 3: The battery may be bad and may need to be replaced, call your vendor for more details.

Problem: A beeping sound is heard and the low-battery indicator is on.
Solution: The battery power is nearly used up. Connect the AC adapter to your computer or press the Fn + Esc key combination to enter suspend mode.

Problem: A beep isn't heard when the low-battery indicator turns on, or the gauge indicates power is less than 10%.
Solution: The battery power is nearly used up and the volume control may be turned down. Please adjust the volume control and connect the computer with the AC adapter.

Problem: Actual battery operating time is shorter than expected.
Solution 1:   The battery is exposed to excessively high or low temperatures. Suitable operating conditions are between 32°F and 113°F (0°C and 45°C) while the ideal temperature for battery operation is between 50°F and 95°F (10°C and 35°C).
Solution 2:   Make sure the battery is fully discharged and recharge it completely before reusing.
Solution 3:   Power management has been turned off, turn the power management back on.
Solution 4:   A peripheral device or PC card is consuming a lot of power. Turn off the unused device to save power.
Solution 5:   Previously the battery was given only a partial charge. Always fully charge the battery after it has been totally used up.

Note: Make sure the battery is totally used up before recharging and make sure you recharge the battery to full capacity each time you recharge it.

Boot Password

Problem: You forget the boot password.
Solution: If you forget the password, you may have to delete the memory and you could lose all of the data on your computer. Call your vendor for help.

CD

Problem: The compact disk tray will not open when there is a disk in the tray.
Solution: The compact disk is not correctly placed in the tray, gently try to remove the disk using the eject hole.

Problem: The compact disk cannot 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: A music compact disk can be read while a data disk can not.
Solution: There may be a problem with the disk hardware or software. Refer to your operating system manual for more information on the software and make sure you have the correct software installed for running video compact disks. If the proper software is properly installed and a problem still exists, contact your vendor about a

Problem: All compact disks cannot be read.
Solution 1: The Windows system does not recognize the CD-ROM drive or the CD-ROM drive is not compatible with other devices. Make sure you have the CD-ROM drive properly installed and configured.
Solution 2: The CD-ROM drive is dirty, please clean it with a CD-ROM cleaner kit.

Solution 3: There may be a problem with the disk hardware or software. Refer to your operating system manual for more information on the software and make sure you have the proper software installed for using compact disks. If the correct software is properly installed, contact your vendor about a hardware problem.

Floppy Disk Drive (FDD)

Problem: The floppy disk drive will not write data to disk.
Solution 1: The floppy disk is not formatted.
Solution 2: The floppy disk is write-protected. Undo the protection.
Solution 3: You specified an incorrect disk drive.
Solution 4: There is not enough unused space available on the disk. Please use a new disk or delete any unneeded data.

Problem: The disk drive will 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.

Hard Disk Drive (HDD)

Problem: The message "Non-system disk" appears.
Solution: The computer is trying to boot from an incorrect floppy disk. Please remove the floppy and insert a correct one before restarting the computer.

Problem: The computer takes longer during START UP.
Solution 1: Data saved on the hard disk drive may be lost or damaged. Please operate the disk scan or disk defragmenter to check for any lost or damaged data.
Solution 2:   As in low battery status, the computer is waking up from the suspend mode.

Hardware Installation

Problem: The computer will not recognize the device as part of the system.
Solution 1: The new device is not powered on, please power on the device, then restart the computer.
Solution 2: You did not properly configure the system for the new device or install the device. Try reconfiguring the device or reinstalling the device using the device manual and drivers.
Solution 3: The computer is not properly connected to the device. Please make sure the device is properly connected with the computer.
Solution 4: You did not properly configure the system for the new device. Please reconfigure the system according to the instructions which came with the new device.

LCD Panel

Problem: The screen is blank.
Solution 1: The panel may be set for an external monitor, please reset to normal display using the hot keys.
Solution 2: The screen saver is activated, please press any key or touch the trackpad to return to your display.
Solution 3: The brightness or contrast needs to be adjusted.
Solution 4: The system is in suspend mode. Please press any key to wake up the computer.

Problem: The LCD panel displays incorrect fonts or blinks when the computer is connected with an external monitor.

Solution: The external monitor resolution exceeds what the LCD panel can support. Please disconnect the external monitor and restart the computer.

Memory Module

Problem: The computer will not boot.

Solution: An incorrect type of memory module is installed. Make sure a correct module is installed.

Problem: The memory capacity is insufficient.

Solution: The memory is not correctly configured for the application. Maksure the memory is correctly configured for the application.

Problem: The detected memory capacity is not correct.

Solution: A 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 cannot be operated since all the memory is used up.

PC Card

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

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

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

Power

Problem: The computer will not boot when the battery pack is not inserted.
Solution 1: The power cord is not correctly connected with the AC adapter. Make sure the power cord is firmly plugged into a grounded outlet and the computer.
Solution 2: The outlet does not work, use another outlet.

Problem: The system has automatically entered suspend mode.
Solution 1: The system's temperature is too high, let it cool before using.
Solution 2: The system has entered suspend mode after a specified period of time. Press any key to wake up the computer.

Printer

Problem: The printer cannot be added to the system.

Solution: The printer power is off or the printer is not correctly connected to the computer.

Problem: The printer will not work.

Solution 1: The printer is not turned on, please turn on the printer.

Solution 2: The printer is not properly connected. Please make sure the printer is properly connected.

Solution 3: There is no paper in the printer. Please put more paper in the printer.

Solution 4: The printer driver is not installed or is configured incorrectly. Please check to see that the printer is properly installed and configured.

Solution 5: The printer is a network printer and it is not properly connected to the network.

Problem: The printer prints incorrect data.

Solution 1: The printer driver is not installed or configured correctly.

Solution 2: The printer connector is not correctly connected.

Chapter 5: Installing Drivers

This chapter provides users the step-by-step instructions of installing device drivers and utilities. This chapter is designed for notebook beginners as well as advanced users. Please follow the steps and suggestions below to start a new notebook computer work.

Use the CD for drivers in the package; prepare a DOS startup disk and DOS files before installing drivers for the first time.

For more details and operating help, please contact your service dealer.

Installing Windows 95
Installing Windows 98
Installing Drivers in Win95
Installing Drivers in Win98
Installing Drivers in WinNT

Preparation for a New Notebook:

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 detail.*
5. *Restart the system.*

Installing Windows 95
(For Reference)

● Start DOS.

● Insert the Windows 95 CD-ROM.

● Go to the "setup" directory, type "setup", then press [Enter].

● After the Windows 95 setup program performs a routine check on your system, press [enter] to continue.

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

● Click "Yes" on the "License Agreement" screen.

● Click "Next" to select "Collecting Information About your PC".

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

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

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

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

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

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

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

● Click "Next" to start copying Windows 95 files to your computer.

● Click "Finish" to restart Windows 95.

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

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

● Click "OK" to restart the computer.

Installing Windows 98
(For Reference)

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

Installing Drivers in Windows 95

Step 1: Running USB supplement path

● After finishing Win95 ORS2.1 installation, go to Win95

● Download the file <USB supplement path update file> from Microsoft Web Site to run the USB supplement path.

Step 2: Installing TXPATCH Driver

● Open the driver "[TXPATCH] Intel 82371xb.inf TX" from the path of CD-ROM drive.

● Run "setup.exe".

● Follow the instruction to finish the installation.

● Restart the system.

Step 3: Installing VGA Driver

Preparation:

Before ATI VGA installation, firstly insert the CD; click the directory [Directx]. Choose [Dxsetup]/[Reinstall Directx] and press [OK]. The program will automatically restart the system. The DirectX 6.0 will be already installed in your software.

● Click "Start".

● Select "Run".

● Open the path "D:\Video\WIN9X.

● Run "setup.exe" to finish installation.

Note: When ATI VGA driver has existed in the system, follow the steps below to uninstall the original VGA driver.
- Click "Sart"/"Setting"/"Control Panel"
- Select "Add/Remove Programs" and "ATI Display Driver".
- Click "Remove", then resart the system. The screen will go back to "Control Panel".
- Choose "Display"/"Setting"/"Advanced/Propertiess"/"Driver"/"Update Driver"
- Select "Display a list of the known drivers for this device so that I can choose a specific driver"/"Show compatible hardware"
- Choose "Standard PCI Graphic Adapter (VGA)"/"Standard display types"
- Click "Next"/"OK", then restart the system.

Step 4: Installing Audio Driver

●   Click "Start".

●   Select "Settings".

●   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 Mediamatic Driver (Option)

●   In the windows system, click [Start]; select [Setting], [Control Panel], and [System]. Open [Device Manager]; select [CDROM]. Click the item including the type of [DVD-ROM], and [Setting]; then enable [DMA] in Options.

●   Insert the CD-ROM. Click D:\Setup to install the driver.

Step 6: Using Infrared Wireless Communication

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

Installing Drivers in Windows 98

Step 1: Installing VGA Driver

Preparation:
Before ATI VGA installation, firstly insert the CD; click the directory [Directx].
Choose [Dxsetup]/[Reinstall Directx] and press [OK]. The program will auto-
matically restart the system. The DirectX 6.0 will be already installed in your
software.

● Click "Start".
● Select "Run".
● Open the path "D:\Video\WIN9X.
● Run "setup.exe" to finish installation.

Note: When ATI VGA driver has existed in the system, follow the steps below
to uninstall the original VGA driver.
- Click "Sart"/"Setting"/"Control Panel"
- Select "Add/Remove Programs" and "ATI Display Driver".
- Click "Remove", then resart the system. The screen will go back to "Control
Panel".
- Choose "Display"/"Setting"/"Advanced/Propertiess"/"Driver"/"Update Driver"
- Select "Display a list of the known drivers for this device so that I can choose
a specific driver"/"Show compatible hardware"
- Choose "Standard PCI Graphic Adapter (VGA)"/"Standard display types"
- Click "Next"/"OK", then restart the system.

Step 2: Installing Audio Driver

● Click "Start".

● Select "Settings".

● 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". Choose [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 PCMCIA Driver

● Click "PCMCIA\WIN98\TI.exe" from the CD-ROM.

● Click "Start"/"Settings"/"Control Panel"/"System".

● Remove PCMCIA.

● Delete the two sub-directories [Generic CardBus Controller].

● Restart Win98 system.

Step 4: Installing ATI DVD Play Driver (Option)

Note:
Firstly make sure that you has already successfully installed the VGA drivers, Audio Driver and DirectX6.

● Boot the system; press Ctrl-Alt-S to enter SCU system. Select [Power]. Enable [Low Power Saving], or Select [Advance CPU control] to set [Full Speed]. (If the clock of Intel Pentium III is above 450MHz/500MHz or if your DVD runs smoothly, you can skip the step).

● In the windows system, click [Start]; select [Setting], [Control Panel], and [System]. Open [Device Manager]; select [CDROM]. Click the item including the type of [DVD-ROM], and [Setting]; then enable [DMA] in Options.

● Insert the CD of Ati-DVD-Play application and the program will auto-matically run the installation until finished. Otherwise, click [Start] in the windows system. Select [Run]. Open the path [D:\Atiplay\setup.exe]. Run [setup.exe] to finish the installation.

Installing Drivers in Windows NT4.0

Note:

After installing Windows NT4.0, please install Service Pack3 to enhance the function. Download the latest Service Pack3 version from the Microsoft web site.

Step 1: Installing VGA Driver

- Click "Start".
- Select " "Settings".
- Click "Control Panel".
- Select "Display".
- Click "Settings".
- Select " Display Type", and then select "Change".
- Click "Have Disk".
- Select "Browse" to specify the location.
- Open the path "D:\Video\NT4.0".
- Click "OK". (All appropriate files are then copied to the hard disk.)
- Restart WinNT4.0 system.

Step 2: Installing Audio Driver

● Click "Start".

● Select "Settings".

● Click "Control Panel".

● Select "Multimedia", and then select "Devices".

● Click "Add" and "Unlisted or Updated Driver", "Ok".

● Select [Browse] to open the path [D:\audio\NT4.0]

● Select "OK".

● Restart NT 4.0 system.

Appendixs

A. Specifications

Processor
- Intel Mobile Pentium III 450/500MHz (with SpeedStep technology)

Memory
- Provide 64-bit data bus system memory
- Two PC 100, 144 pin SODIMM sockets, support 3.3V Sync DRAM SODIMM
- Expandable memory up to 256MB, depend on 32/64/128 MB SODIMM
  Module

BIOS
- Insyde BIOS
- One 256KB(29F020) Flash ROM

LCD
- XGA TFT flat panel 13.3″/14.1″

Display
- AGP 2X
- Complete 64-bit hardware 2D / 3D Accelerator Graphics Engine
- Motion Compensation
- High quality TV-out (6 Line buffer quality) with MacroVision®
  V7.01 anti-copy technology
- 8MB display memory SGRAM type (100MHz)
- Support TFT panel resolution up to 1024x768x16M

- CRT resolution up to 1280x1024x16M (non-interlaced)
- Two display devices, CRT and LCD
- Support Zoomed Video Port
- Support Software MPEG II

Storage

- One removable intelligent bay for 3.5" 3-mode FDD / 12.7 mm(h)
  LS-120/ 2.5″ 12.7mm(h) 2nd HDD
- One easy change bay for DVD-ROM(12.7mm) / CD-ROM(24X
  speed or up)
- Removable 2.5" 12.7mm (h) HDD
- Support Master mode IDE, PIO mode 4/ATA-33 (Ultra DMA)

Audio

- 3D stereo enhancement sound system
- Full duplex support
- Compatible with Sound-Blaster PRO version 3.01
- Built in microphone
- Built in 2 speakers
- FM music systhesizer 16 bits stereo sound system

PC Card Sockets

- Two PCMCIA 3.3V/5V sockets, type IIx2 or type III x1
- Support Zoom Video Port (Socket A)/CardBus

Input/Output

- Built in Trackpad (PS/2)
- Dual USB ports
- One IEEE 1394 port (option)
- One serial port
- One parallel port (LPT1)
- One Infrared (FIR)
- One external CRT monitor
- One External keyboard / Mouse (PS/2 type) port
- One line-in jack
- One headphone jack
- One microphone jack
- One RJ-11 or Rj-45 jack (option)
- One (120 pins) connector for Port Replicator
- DC-in jack

Communication

- Wireless Infrared: 4M bps data rate/ 1cm ~1M operating distance, and
  compliant with IrDA 1.1 or ASKIR (SHARP standard)

Power Management

- Support APM v1.2
- Support suspend to disk
- Battery low suspend
- Resume from alarm time/modem ring

Power

- Full Range AC adapter – AC in 100~240V,47~63Hz.

Size & Weight
- 316(w) x 256(d) x 39.5(h) mm^3
- 3.5 kg

Keypoard
- A4 size Win 95 keyboard

Option
- 300D DVD-ROM Drive (12.7mm)
- 3001S Lithium-Ion smart Battery Pack from Kapok
- 3002 Ni-MH Battery Pack from Kapok
- 3006 Port Replicator
- 2004 Car Adapter
- 3007 LS-120 120 MB Floppy Drive (12.7mm)

B. I/O Port Pin Assignments

Parallel Port

Pin	Description	Pin	Description
1	Strobe#	2	Data 0
3	Data 1	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 Feed#
15	Error#	16	Initialize#
17	Select In	18	Ground
19	Ground	20	Ground
21	Ground	22	Ground
23	Ground	24	Ground
25	Ground		

RS-232 C Serial Port

Pin	Description
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)

Monitor Port

Pin	Description	Pin	Description	Pin	Description
1	RED	6	GND	11	NC
2	GREEN	7	GND	12	DDCDA
3	BLUE	8	GND	13	HSYNC
4	NC	9	NC	14	VSYNC
5	GND	10	GND	15	DDCLK

PS/2 Type Port

Pin	Description
1	EKDA
2	EMDA
3	GND
4	VCC
5	EKCLK
6	EMCLK
7	GND
8	GND
9	GND

S-Video Jack

Pin	Description
1	GND
2	XCOMP
3	XLUMA
4	XCRMA

USB Port

Port A

Pin	Description
1	USB_VCCA
2	USBP1-
3	USBP1+
4	GND

Port B

Pin	Description
5	USB_VCCB
6	USBP0-
7	USBP0+
8	GND

PC Card Sockets/Socket A

Pin	Description		Pin	Description	
	CardBus	16Bit Card		CardBus	16Bit Card
A1	GND	GND	A40	A__VPP2	A__VPP2
A2	GND	GND	A41	A__CCLK	A__A16
A3	A__CAD0	A__D3	A42	GND	GND
A4	A__CCD1#	A__CD1#	A43	A__CTRDY#	A__A22
A5	A__CAD14	A__D4	A44	A__CIRDY#	A__A15
A6	A__CAD2	A__D11	A45	A__CFRAME#	A__A23
A7	A__CAD3	A__D5	A46	A__CC/BE2#	A__A12
A8	A__CAD4	A__D12	A47	A__CAD17	A__A24
A9	GND	GND	A48	A__CAD18	A__A7
A10	A__CAD5	A__D6	A49	GND	GND
A11	A__CAD6	A__D13	A50	A__CAD19	A__A25
A12	A__CAD7	A__D7	A51	A__CAD20	A__A6
A13	RFU	A__D14	A52	A__CVS2	A__VS2#
A14	A__CC/BE0#	A__CE1#	A53	A__CAD21	A__A5
A15	A__CAD8	A__D15	A54	A__CRST	A__RESET
A16	GND	GND	A55	A__CAD22	A__A4
A17	A__CAD9	A__A10	A56	A__CSERR#	A__WAIT#
A18	A__CAD10	A__CE2#	A57	GND	GND
A19	A__CAD11	A__OE#	A58	A__CAD23	A__A3
A20	A__CVS1	A__VS1#	A59	A__CREQ#	A__INPACK
A21	A__CAD12	A__A11	A60	A__CAD24	A__A2
A22	GND	GND	A61	A__CC/BE3#	A__REG#
A23	A__CAD13	A_IORD#	A62	A__CAD25	A__A1
A24	A__CAD14	A__A9	A63	A__CAUDIO#	A__BVD2
A25	A__CAD15	A__IOWR#	A64	A__CAD26	A__A0
A26	A__CC/BE1#	A__A8	A65	GND	GND
A27	A__CAD16	A__A17	A66	A__CSTSCHG	A__BVD1
A28	GND	GND	A67	A__CAD27	A__D0
A29	A__CPAR	A_A13	A68	A__CAD28	A__D8
A30	RFU	A__A18	A69	A__CAD29	A__D1
A31	A__CPERR#	A__A14	A70	A__CAD30	A__D9
A32	A__CBLOCK#	A__A19	A71	RFU	A__D2
A33	A__CGNT#	A__WE#	A72	A__CAD31	A__D10
A34	A_CSTOP#	A_A20	A73	GND	GND
A35	A__CINT#	A__READY	A74	A__CCLKRUN#	A__WP
A36	A__CDEVSEK#	A__21	A75	A__CCD2#	A__CD2#
A37	A__VCC	A__VCC	A76	GND	GND
A38	A__VCC	A__VCC	A77	GND	GND
A39	A__VPP1	A__VPP1			

PC Card Sockets/Socket B

Pin	Description		Pin	Description	
	CardBus	16Bit Card		CardBus	16Bit Card
B1	GND	GND	B40	B__VPP2	B__VPP2
B2	GND	GND	B41	B__CCLK	B__A16
B3	B__CAD0	B__D3	B42	GND	GND
B4	B__CCD1#	B__CD1#	B43	B__CTRDY#	B__A22
B5	B__CAD14	B__D4	B44	B__CIRDY#	B__A15
B6	B__CAD2	B__D11	B45	B__CFRAME#	B__A23
B7	B__CAD3	B__D5	B46	B__CC/BE2#	B__A12
B8	B__CAD4	B__D12	B47	B__CAD17	B__A24
B9	GND	GND	B48	B__CAD18	B__A7
B10	B__CAD5	B__D6	B49	GND	GND
B11	B__CAD6	B__D13	B50	B__CAD19	B__A25
B12	B__CAD7	B__D7	B51	B__CAD20	B__A6
B13	RFU	B__D14	B52	B__CVS2	B__VS2#
B14	B__CC/BE0#	B__CE1#	B53	B__CAD21	B__A5
B15	B__CAD8	B__D15	B54	B__CRST	B__RESET
B16	GND	GND	B55	B__CAD22	B__A4
B17	B__CAD9	B__A10	B56	B__CSERR#	B__WAIT#
B18	B__CAD10	B__CE2#	B57	GND	GND
B19	B__CAD11	B__OE#	B58	B__CAD23	B__A3
B20	B__CVS1	B__VS1#	B59	B__CREQ#	B__INPACK
B21	B__CAD12	B__A11	B60	B__CAD24	B__A2
B22	GND	GND	B61	B__CC/BE3#	B__REG#
B23	B__CAD13	B__IORD#	B62	B__CAD25	B__A1
B24	B__CAD14	B__A9	B63	B__CAUDIO#	B__BVD2
B25	B__CAD15	B__IOWR#	B64	B__CAD26	B__A0
B26	B__CC/BE1#	B__A8	B65	GND	GND
B27	B__CAD16	B_A17	B66	B__CSTSCHG	B__BVD1
B28	GND	GND	B67	B__CAD27	B__D0
B29	B__CPAR	B__A13	B68	B__CAD28	B__D8
B30	RFU	B__A18	B69	B__CAD29	B__D1
B31	B__CPERR#	B__A14	B70	B__CAD30	B__D9
B32	B__CBLOCK#	B__A19	B71	RFU	B__D2
B33	B__CGNT#	B__WE#	B72	B__CAD31	B__D10
B34	B_CSTOP#	B_A20	B73	GND	GND
B35	B__CINT#	B_READY	B74	B__CCLKRUN#	B__WP
B36	B__CDEVSEK#	B_A21	B75	B__CCD2#	B__CD2#
B37	B__VCC	B__VCC	B76	GND	GND
B38	B__VCC	B__VCC	B77	GND	GND
B39	B__VPP1	B__VPP1			

SW1-1	SW1-2	SW1-3	SW1-4	SW1-5	V_CORE
OFF	ON	ON	ON	ON	1.275V
OFF	ON	ON	ON	OFF	1.250V
OFF	ON	ON	OFF	ON	1.225V
OFF	ON	ON	OFF	OFF	1.200V
OFF	ON	OFF	ON	ON	1.175V
OFF	ON	OFF	ON	OFF	1.150V
OFF	ON	OFF	OFF	ON	1.125V
OFF	ON	OFF	OFF	OFF	1.100V
OFF	OFF	ON	ON	ON	1.075V
OFF	OFF	ON	ON	OFF	1.050V
OFF	OFF	ON	OFF	ON	1.025V
OFF	OFF	ON	OFF	OFF	1.000V
OFF	OFF	OFF	ON	ON	0.975V
OFF	OFF	OFF	ON	OFF	0.950V
OFF	OFF	OFF	OFF	ON	0.925V
OFF	OFF	OFF	OFF	OFF	N0 CPU