USER'S MANUAL

notebook

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Federal Communications Commission (FCC) Statement

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

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

Warning:

[A shielded-type power cord is required in order to meet FCC emission limits and also to prevent interference to the nearby radio and television reception. It is essential that only the supplied power cord be used.]

[Use only shielded cables to connect I/O devices to this equipment.]
You are cautioned that changes or modifications not expressly approved by the party responsible for compliance could void your authority to operate the equipment.

[ ]: depend on EUT condition.

IMPORTANT SAFETY INSTRUCTIONS

When using your telephone equipment, basic safety precautions should always be followed to reduce the risk of fire, electric shock and injury to persons, including the following:

1. Do not use this product near water, for example near a bath tub, wash bowl, kitchen sink or laundry tub, in a wet basement or near a swimming pool.
2. Avoid using a telephone (other than a cordless type) during an electrical storm. There may be a remote risk of electrical shock from lightning.
3. Do not use the telephone to report a gas leak in the vicinity of the leak.
4. Use only the power cord and batteries indicated in this manual. Do not dispose of batteries in a fire. They may explode. Check with local codes for possible special disposal instructions.

IMPORTANTES MESURES DE SÉCURITÉ

Certaines mesures de sécurité doivent être prises pendant l'utilisation de matérial téléphonique afin de réduire les risques d'incendie, de choc électrique et de blessures. En voici quelquesunes:

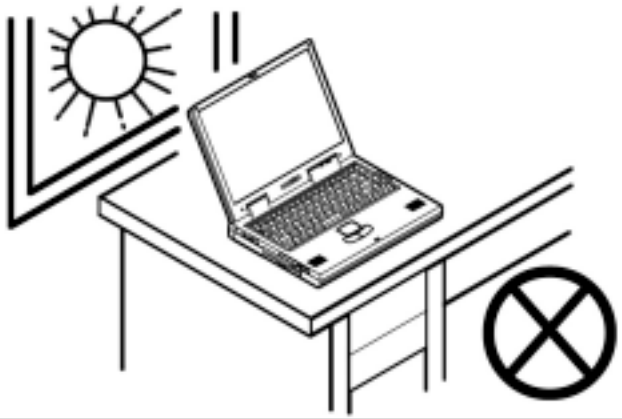
1. Ne pas utiliser l'appareil près de l'eau, p.ex., près d'une baignoire, d'un lavabo, d'un évier de cuisine, d'un bac à laver, dans un sous-sol humide ou près d'une piscine.
2. Éviter d'utiliser le téléphone (sauf s'il s'agit d'un appareil sans fil) pendant un orage électrique. Ceci peut présenter un risque de choc électrique causé par la foudre.
3. Ne pas utiliser l'appareil téléphonique pour signaler une fuite de gaz s'il est situé près de la fuite.
4. Utiliser seulement le cordon d'alimentation et le type de piles indiqués dans ce manuel. Ne pas jeter les piles dans le feu: elles peuvent exploser. Se conformer aux règlements pertinents quant à l'émination des piles.

Instructions for Care and Operation

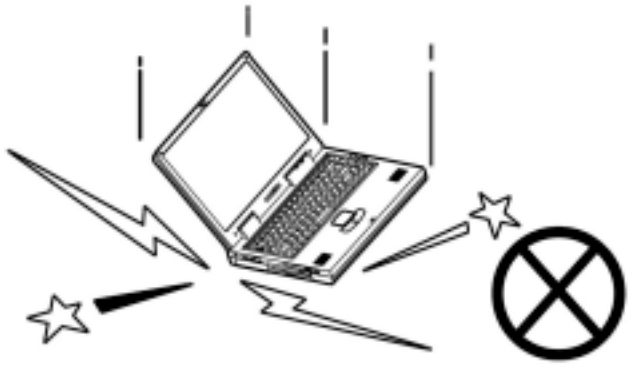
As with any other piece of precision electronic equipment, proper care and operation of your notebook computer will prolong its use. Help your notebook computer last longer by following the advice in this section:

Handling the Computer

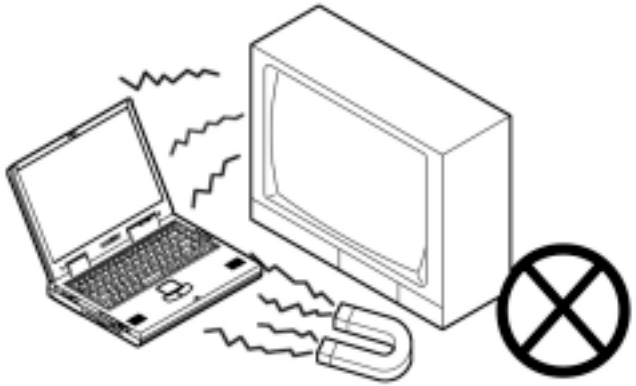
Do not expose it to excessive heat or direct sunlight.



Do not expose your notebook computer to any shock or vibration.



Do not expose it to strong magnetic fields.



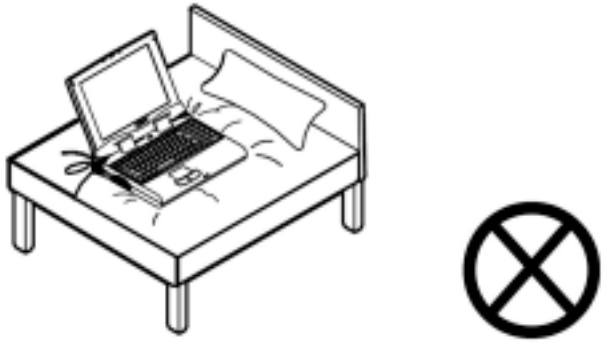
Do not leave it in a place where foreign matter or moisture may affect the system.

Do not turn off any peripheral devices when the computer is on.

Do not turn off the power until you properly shutdown all programs.

Do not place the computer on an unstable surface.

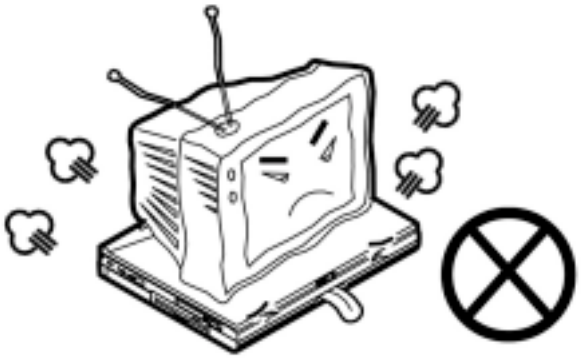
Do not place the computer on any surface which will block the vents.



Don't use or store the computer in a humid environment.

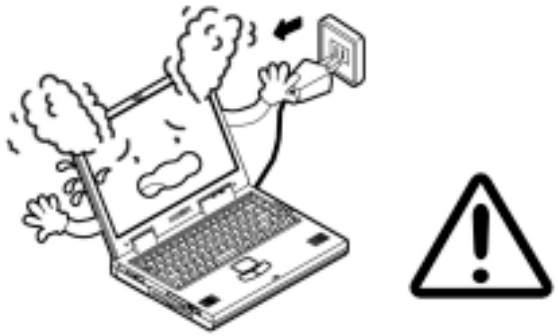
Do not disassemble the computer by yourself.

Do not place anything heavy on the computer.



When traveling by air, follow the airline's instructions for in-flight use.

If there is an unusual odor, heat or smoke coming from your computer, unplug the cord.

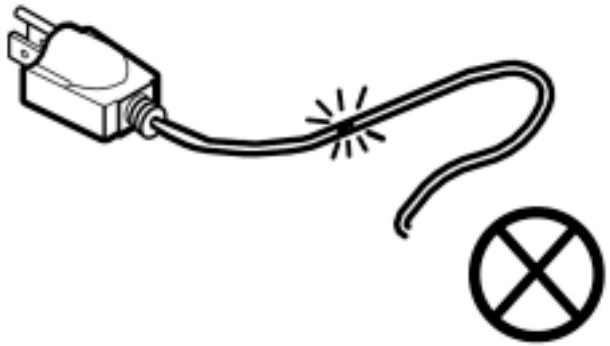


Perform routine maintenance on your computer.

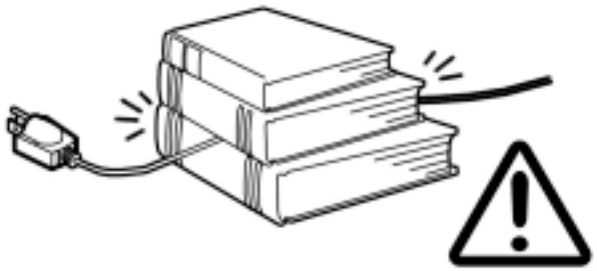
Handling of the Power Cord & Battery

Do not plug in the power cord if you are wet.

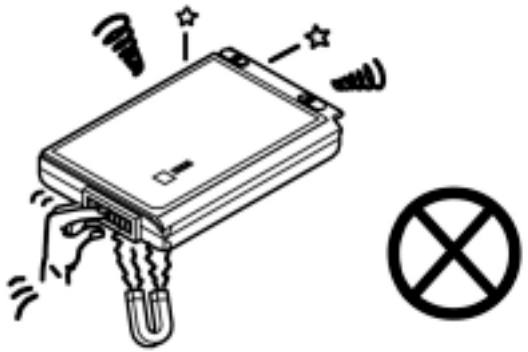
Do not use the power cord if it is broken.



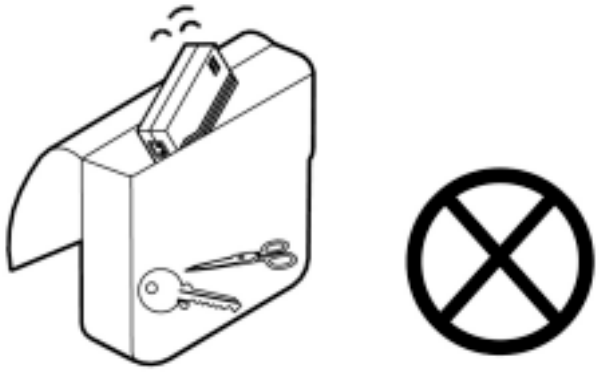
Do not place heavy objects on the power cord.



Do not touch the battery contacts with your hands or any metal objects.



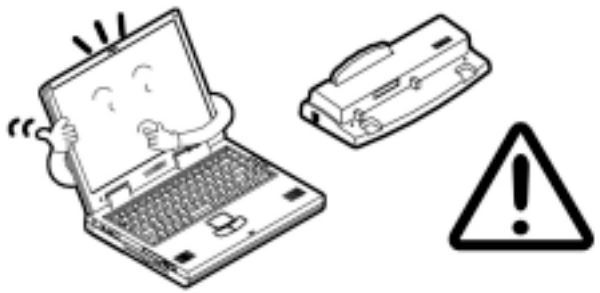
Keep the battery away from metal appliances.



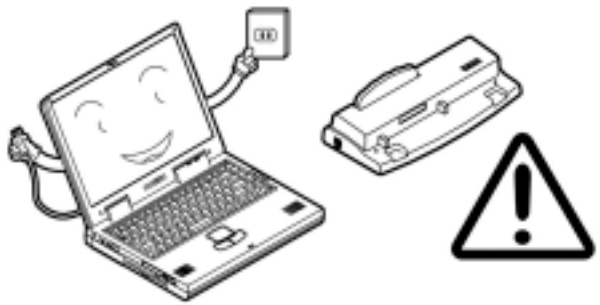
Affix tape to the battery contacts before diposing of the battery.

Handling Peripheral Devices

Use only approved brands of peripheral devices.



Unplug the power cord before attaching any peripheral devices.



Other Reminders

Do not throw the computer or accessories into a fire.

Do not touch the poisonous liquid if the LCD panel breaks.

Remember to periodically save your data. Data may be lost if the battery is depleted.

Take periodic breaks if you are using the computer for long periods of time.

Developing Good Work Habits

Developing good work habits is 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.

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 better 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.

Contents

Chapter 1. Getting to Know Your Computer

Chapter 2. Using the Computer

Chapter 3. Power and Battery Information

Chapter 4. Upgrading the Computer

Chapter 5. BIOS Utilities

Chapter 6. Driver Installation

Chapter 7. Troubleshooting

Appendix A. Specifications

Glossary

Chapter 1. Getting to Know Your Computer

In this chapter you will become familiar with the basic functions and components of your notebook computer and possibilities for expansion.

This chapter includes:

- Quick start guide
- Views

Model A

Model B

Note

This manual refers to the two notebook models pictured on this page. The models vary slightly in external design. Photos used throughout this manual are of Model A.

Note
Be sure to keep the packing materials in a safe place in case you need them for shipping or long-term storage.

Note
Devices which connect to the USB and IEEE 1394 ports can be connected after Windows *is up and running. All other devices must be connected before you turn on the system.*

Quick Start Guide

This quick start guide assumes that you're already familiar with notebook computers and can tell at a glance what and where all the key components are.
If you're not that comfortable with this sort of device, take a look at the following pages for an overview of the system.
In any case, you should review these steps, *before* you take any action. If you aren't sure about one of the procedures, check the relevant chapter before continuing.
Unless you have to install an operating system, your computer is ready to work right out of the box.
But, before you begin, follow the safety instructions in the *Preface*, especially the instruction on placement.

1. Remove all packing materials, CDs/DVDs, floppy disks and any PC Cards.
2. Securely attach any peripherals you want to use with the notebook (e.g. mouse and keyboard) to their ports.
3. Attach the AC adapter to the DC-in jack on the computer's rear, plug the AC power cord into an outlet and then connect the AC power cord to the AC adapter.
4. Raise the lid/LCD to a comfortable viewing angle (page 1-3).
5. Push the power button to turn "on".

Top View with LCD Display Closed

To open the LCD display:

1) Place the computer on a stable surface.
2) Move the cover latch to the right to release the top cover.
3) Lift the top cover to reveal the LCD panel and keyboard.
4) Adjust the LCD panel to a comfortable viewing angle.

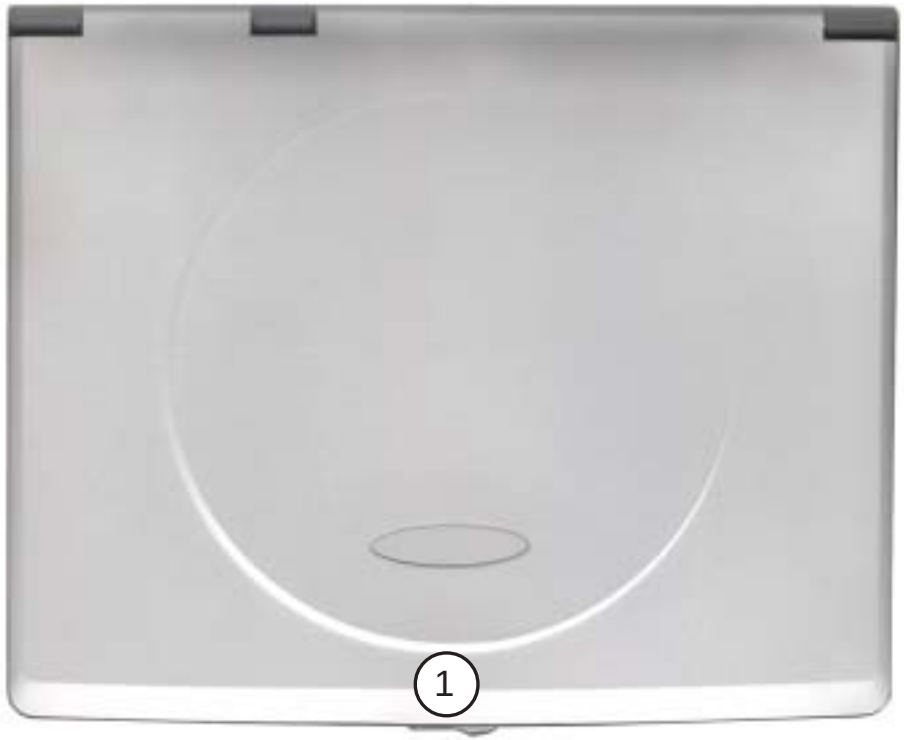


figure 1-1

1. Cover Latch

Top View with Display Open

1. LCD Display
2. Microphone (built-in)
3. LED Status Indicators
4. Three Hot-Key Buttons
5. Power Button
6. Keyboard
7. Stereo Speakers
8. TouchPad and Buttons
9. LED Power Indicators

figure 1-2

LCD Display

The Notebook comes with a TFT LCD (Liquid Crystal Display) display. Depending on the model and configuration you have purchased, the display can be either a 13.3” or 14.1” XGA TFT color panel.

> ***Note***
> *After turning the computer off wait at least 5 seconds before turning it on again.*

Microphone

Record on your notebook computer with this built-in microphone.

LED Status Indicators

Display the system's operational status. Refer to Chapter 2 for more information.

Three Hot-key Buttons

Three hot keys give you easy access to the Internet, e-mail and an application of your choice. To learn how to set the buttons refer to Chapter 2.

Power Button

Press this button to turn your notebook computer on or off. The Power Button can also be used as a Suspend/Resume button when pressed less than four seconds (if configured appropriately in the System Configuration Utility, refer to Chapter 5 for more details).

Keyboard

An A4-Size Win98 keyboard with an embedded numeric keypad. It has many of the same features as a full-sized desktop keyboard and can easily be replaced with a non-English keyboard should you desire.

Stereo Speakers

Two built-in speakers provide rich, stereo sound.

TouchPad and Buttons

The pointing device features a sensitive glide pad for precise movements. It functions the same way as a two-button mouse: the right TouchPad button is the same as the right mouse button; the left TouchPad button is the same as the left mouse button.

LED Power Indicators 

Display the current power source and power source status of the computer. For more information please refer to Chapter 2.

Right Side View

figure 1-3

1. 5.25” CD Device
2. Vent
3. Security Slot

5.25" CD Device

Depending on the configuration you purchased, your notebook may come with one of the following 12.7mm CD devices: 24X-speed CD-ROM drive, 8X-speed DVD-ROM drive, CD-RW drive (20X Read, 8X Write) or DVD-ROM+CD-RW combo drive.

Vent

Enables airflow to prevent the notebook from overheating.

Security Slot

To prevent possible theft a lock can be attached to this slot. Locks can be purchased at any computer store.

Warning
To prevent your computer from overheating, make sure nothing blocks the vent while the computer is in use.

Attaching a Security Lock

To install the security lock, wrap the cable around a desk or other immovable object, then insert the locking device into the slot located on the right side of the computer.

figure 1-4

Rear View

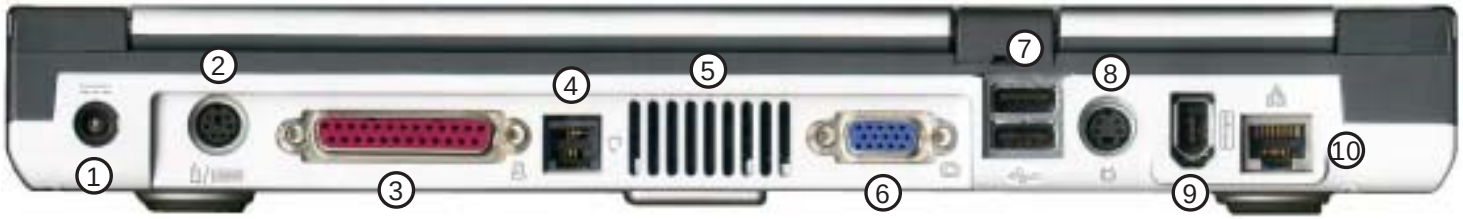


figure 1-5

1. DC-in Jack
2. PS/2 Type Port
3. Parallel Port
4. Phone Jack
5. Vent
6. External Monitor (CRT) Port
7. Dual USB Ports
8. S-Video Connector
9. IEEE 1394 Port
10. LAN Jack

DC-in Jack

Plug the supplied AC adapter into this jack to power your notebook.

PS/2 Type Port

To connect an external PS/2 type mouse or keyboard.

Parallel Port

This parallel port supports ECP (Extended Capabilities Port) and EPP (Enhanced Parallel Port) 1.7/1.9 modes.

Warning
To prevent your computer from overheating, make sure nothing blocks the vent while the computer is in use.

Phone Jack

Supports the optional modem module.

Vent

Enables airflow to prevent the notebook from overheating.

External Monitor (CRT) Port

Connect an external CRT monitor to this port to allow simultaneous display on the LCD display and external CRT monitor.

Dual USB Ports

A hardware interface for low-speed peripherals such as the keyboard, mouse, joystick, scanner, printer and telephony devices. It allows everything to be plugged in and unplugged without turning the system off

S-Video Connector

Connect your television to your computer and view DVD's, VCD's or anything else your computer can display. You will need an S-Video cable to make the connection which is easily found at any audio or computer store.

IEEE 1394 Port

Allows high speed connection to various peripheral devices, such as an external disk drive or a digital camera.

LAN Jack

Supports the integrated LAN function.

Note

Your notebook will only accept IEEE 1394 devices which have their own power source.

Left Side View

figure 1-6

1. Microphone-in Jack
2. Speaker-out Jack
3. Audio Volume Control
4. PC Card Slot
5. Infrared Port
6. 3.5" FDD (Floppy Disk Drive)

Note
The S/PDIF output feature is available only in Windows 98 and Windows Me.
Refer to Chapter 6 for installation instructions and settings.

Microphone-in Jack

A microphone can be connected to your notebook via this jack. You can also use this for S/PDIF (Sony/Philips Digital Interface Format) output, which allows you to connect your DVD-capable PC to a Dolby AC-3 compatible receiver giving you surround sound. To switch from microphone-in to S/PDIF output or S/PDIF output to microphone-in, you will need to use the SCU. Refer to the Startup Menu in Chapter 5 for information.

Speaker-out Jack

Headphones or speakers can be connected through this jack.

Audio Volume Control

Adjust the audio volume with this knob. Audio volume can also be adjusted in the operating system.

PC Card Slot

A Type-II PC card slot which also supports CardBus mode. Refer to Chapter 2 for more information on the PC Card slot.

Infrared Port

Allows wireless communications with an infrared-compatible device. The Infrared port supports IrDA (HPSIR) 1.1, FIR and ASKIR (Sharp standard) modes. For further information, please refer to the manual of the infrared device you wish to connect.

3.5" FDD (Floppy Disk Drive)

A 3.5”, 3-mode, 1.44 MB fixed floppy disk drive. For more information on using the floppy disk drive, please refer to Chapter 2.

Bottom View

figure 1-7

1. RAM Cover 2. Battery Cover

RAM Cover

The cover secures the installed RAM modules. For further information on removing or inserting the RAM modules, please refer to Chapter 4.

Battery Pack Cover

The cover secures the battery pack in its bay.

Chapter 2. Using the Computer

Your notebook computer can be used almost anywhere, in the home, office, or on the road. To learn more about your computer, please read this chapter.

This chapter includes:

- The Power Sources
- Turning on the Computer
- The Hard Disk Drive
- The Floppy Disk Drive
- The CD Device
- The PC Card Slot
- The Hot Keys
- The Numeric Keypad

The Power Sources

The computer can be powered by either an AC adapter or a battery pack depending on where you want to use it.

AC Adapter

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

1) Plug the AC adapter cord into the DC-in jack on the rear panel of the computer.
2) Plug the power cord into a properly grounded outlet.
3) Connect the AC adapter with the power cord.

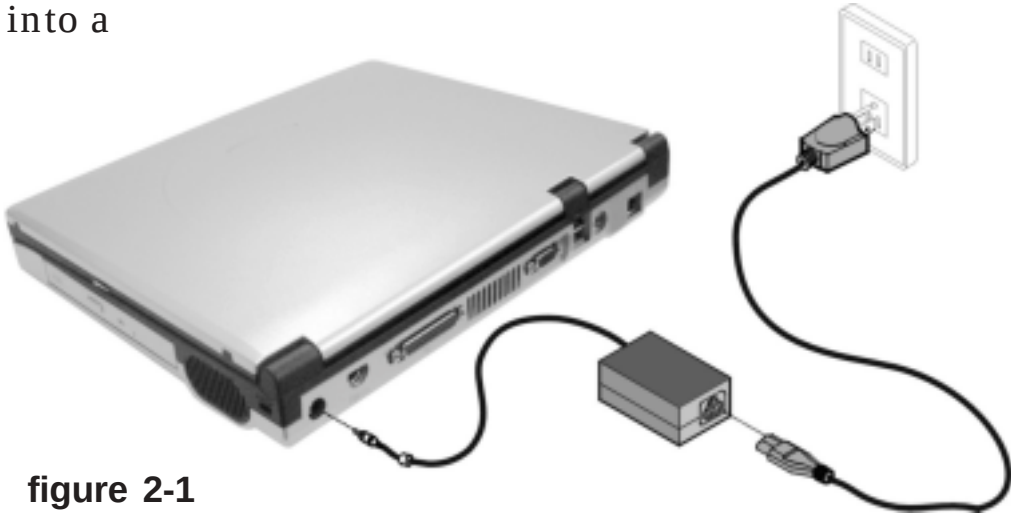


figure 2-1

Battery

The battery allows you to use your notebook computer while you are on the road or an electrical outlet is unavailable. Battery life varies depending on the applications and the configuration you're using. To increase battery life, let the battery discharge completely before recharging.

We recommend leaving the battery inside the notebook at all times. For more information on the battery, please refer to Chapter 3.

1. Battery Cover

figure 2-2

Note

Don't remove the battery pack from the computer unless it is damaged and needs to be replaced.

Recharging by AC Power

The battery pack automatically recharges when plugged into an electrical outlet. If the computer is powered on and in use it will take several hours to fully recharge the battery. When the computer is turned off but plugged into an electrical outlet, battery charge time is less. (Refer to LED Power Indicators in this chapter for information on the battery charge status.)

Proper Handling of the Battery Pack

- DO NOT disassemble the battery pack under any circumstances.
- DO NOT expose the battery to fire or high temperatures, it may explode.
- DO NOT connect the metal terminals (+, -) together. (For more information on how to maintain the battery pack, refer to Chapter 3.)

Turning on the Computer

Now you are ready to begin using your new notebook computer. To turn it on simply press the power button on the top right of the front panel (**figure 2-3**) .

The power button can also be used as a Suspend/Resume hot-key button if pressed less than four seconds and appropriately configured in the SCU. (Please refer to Chapter 5, BIOS Utilities, for more information.)

figure 2-3

LED Indicators

There are two sets of LED indicators (**LED Power Indicators** and **LED Status Indicators**) on your computer that will display helpful information about the current status of the computer.

LED Power Indicators

Note
When the battery is critically low, immediately connect the AC adapter to the computer or save your work; otherwise, the unsaved data will be lost when power is depleted.

figure 2-4 LED Power Indicators

Icon	Color	Description
	Green	The computer is turned on.
	Blinking Green	The system has entered the configured suspend mode.
	Yellow	AC power is plugged in or battery power is full.
	Blinking Yellow	The battery is being charged.
	No light	AC power is being used or battery power is normal.
	Blinking Yellow	Battery Power is critically low

table 2-1

LED Status Indicators

Once your computer is on and in use, the LED status indicators will display the system's operational status.

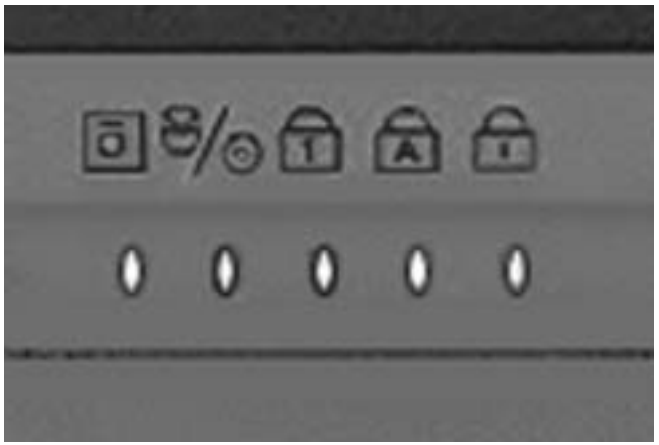


figure 2-5

> ***Note***
> *To enable/ disable the Scroll Lock feature, press the **Fn** and **Scr Lk** key simultaneously.*

Icon	Color	Description
	Green	Floppy disk drive is being accessed.
	Green	The hard disk/CD device is being accessed.
	Green	Num Lock is activated.
	Green	Caps Lock is activated.
	Green	Scroll Lock is activated.

table 2-2

The Hard Disk Drive (HDD)

The hard disk drive is used to store your data internally in the notebook computer. It is mounted in a removable case and can be taken out to accommodate other 2.5" IDE hard disk drives with a height of 9.5 mm or 12.7 mm. The system supports DMA mode 2, PIO mode 4, and ATA-33/ATA-66/ATA-100 IDE HDDs.

Warning
Before removing the HDD, please check with your dealer to find out if this will VOID your warranty.

Removing the HDD Module

1) Turn off the computer.
2) Press the four keyboard latches at the top of the keyboard to elevate the keyboard from its normal position **(figure 2-6)**

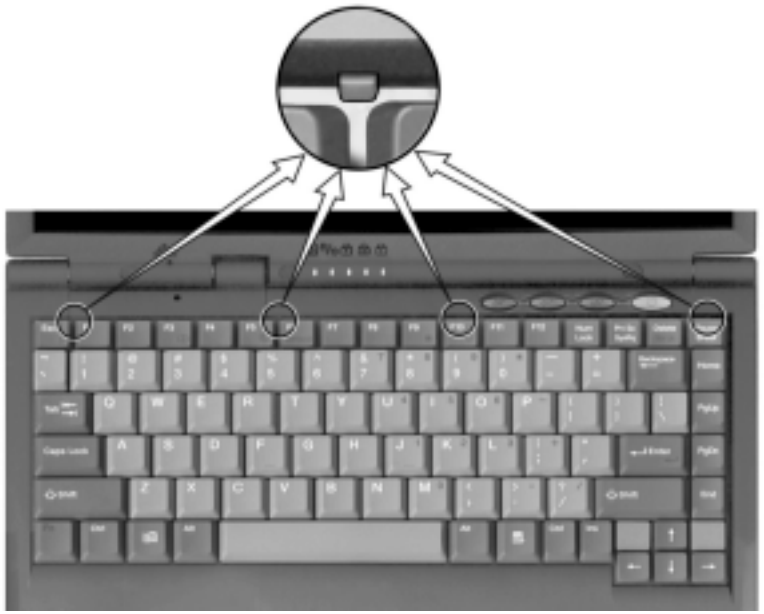


figure 2-6

3) Carefully raise and set the keyboard aside and locate the HDD module (**figure 2-7a**).
4) Unscrew the 3 screws (A, B, C) holding the HDD module on the mainboard (**figure 2-7b**) .
5) Lift the HDD module out of the computer by pulling on the HDD tab (**figure 2-8**).

figure 2-7a

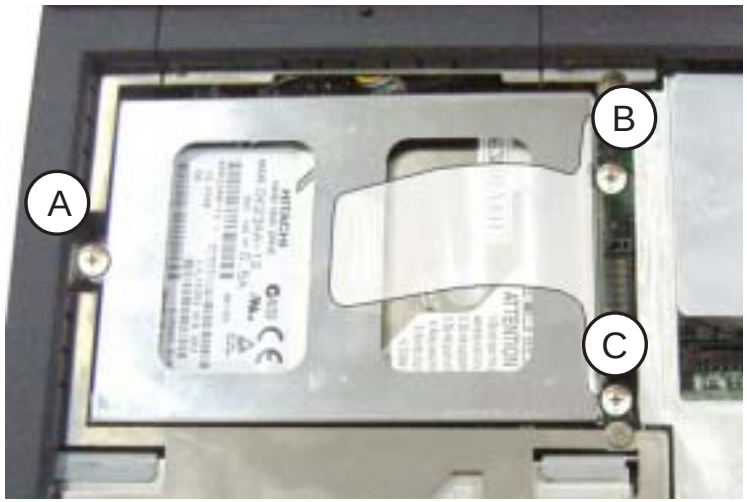
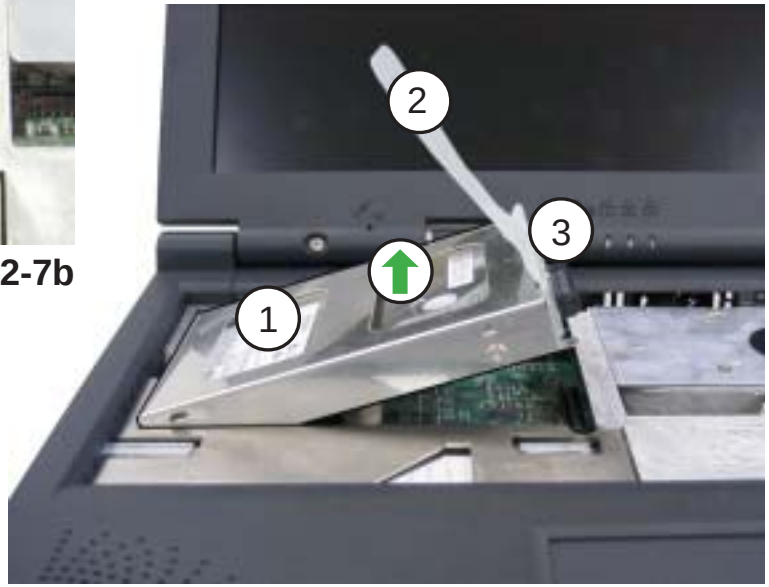


figure 2-7b



1. HDD
2. HDD Tab
3. HDD Connector

figure 2-8

Inserting the HDD Module

(with no HDD module currently installed)

1) Place the HDD module into the computer in its appropriate spot, making sure to align the HDD connector with the socket on the mainboard (**figure 2-9**).
2) Connect the HDD connector securely to the mainboard by gently pressing the HDD module on to the mainboard.
3) Insert and tighten the 3 screws which hold the HDD module on the mainboard.
4) Reinstall the keyboard.

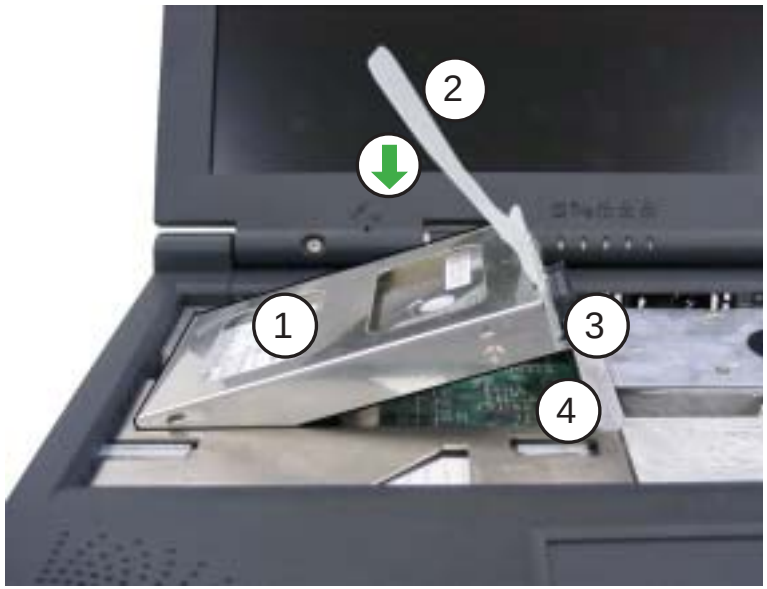


figure 2-9

1. HDD
2. HDD Tab
3. HDD Connector
4. HDD Socket on Mainboard.

Replacing the HDD

1) Remove the HDD module (refer to **Removing the HDD Module** on **pages 2-8** to **2-9** for details).
2) Remove the two screws on the HDD connector board.
3) Gently disconnect the HDD connector board from the HDD being careful not to bend any pins.
4) Remove the two screws on each side of the case.
5) Slowly remove the HDD from the case.
6) Place a new HDD into the case.
7) Hold the HDD firmly in place with two screws on each side.

figure 2-10

Warning
Before removing the HDD, please check with your dealer to find out if this will VOID your warranty.

8) Attach the HDD connector board to the HDD being careful not to bend any pins.
9) Screw the HDD connector board on to the HDD.
10) Place the HDD module into the computer (refer to **Inserting the HDD Module** on page **2-10** for details).

The Floppy Disk Drive (FDD)

The computer is equipped with a fixed 1.44 MB, 3.5” floppy disk drive module. It is usually designated drive A by default and can be used as a boot device if properly set in the SCU (please refer to Chapter 5, BIOS Utilities).

Inserting and Removing Diskettes

When using the floppy drive, always insert your floppy diskette with the label-side facing up. To remove the inserted diskette, press the eject button on the top-right corner of the floppy drive.

figure 2-11

Warning
When manually ejecting a CD/DVD, DO NOT use a sharpened pencil or similar object that may break and become lodged in the hole.

The CD Device

The CD device can be a CD-ROM, DVD-ROM, CD-RW or DVD-ROM+CD-RW combo module depending on the configuration you purchased. It is usually labeled drive D and may be used as a boot device if properly set in the SCU (please refer to Chapter 5, BIOS Utilities).

Loading CDs or DVDs

To insert a CD/DVD, press the open button and carefully place a disc onto the disc tray with label-side facing up (see below). Push the disc 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. If power is unexpectedly interrupted, insert an object such as a straightened paper clip into the emergency eject hole to open the tray.

DVD Tray

1. Disc Tray
2. Busy Indicator
3. Open Button
4. Emergency Eject Hole

CD Tray

figure 2-12

Handling CDs or DVDs

Proper handling of your CDs/DVDs will prevent them from being damaged. Please follow the advice listed below to make sure that the data stored on your CDs/DVDs can be accessed.

Remember to:

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

The PC Card Slot

The computer is equipped with one PC card slot (previously referred to as PCMCIA). The slot can support either one 3.3V/5V type II PC card or one 3.3V CardBus card (PC Card 95).

Inserting PC Cards

Align the PC card with the slot and push the card in until it locks into place.

Removing PC Cards

To remove a PC card, simply press the eject button next to the slot.

1. Eject Button
2. PC Card Partially Inserted in Slot

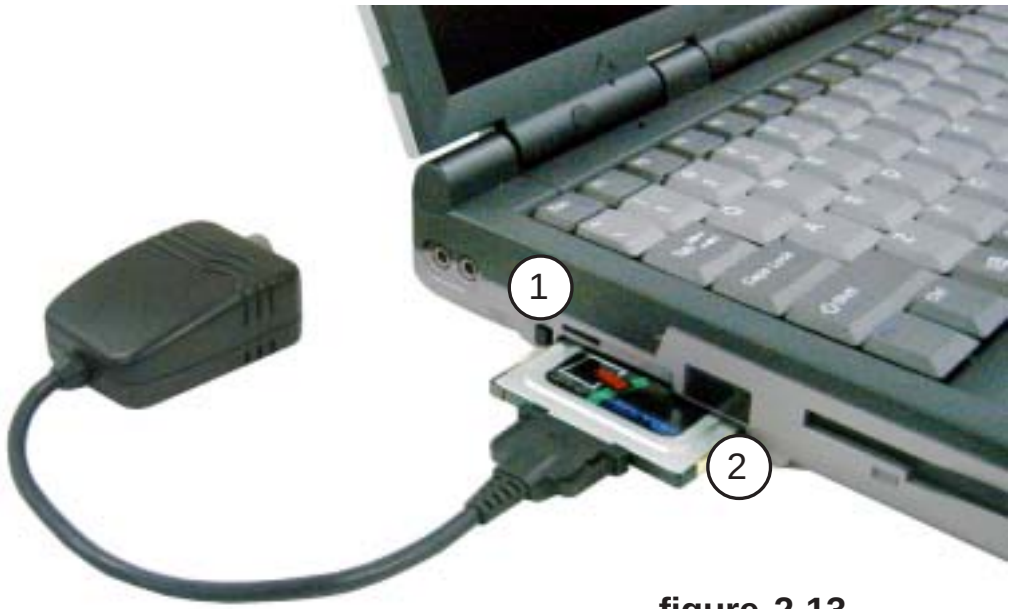


figure 2-13

PC Card Problem in Windows 98

After installation of Windows 98 or Windows 98 Second Edition, you may find that the PC cards are not working normally and you may have noticed one or more of the following:

- An exclamation mark appears in the PC card driver in **Device Manager**
- PC cards don't work at all
- PC card controllers are not enumerated
- PC card controllers are disabled on power-up
- PC card controllers are disabled when you resume the computer from Suspend mode

This is a problem caused by Microsoft Windows 98 (Second Edition). To resolve the problem, immediately after installing Windows 98SE install the program file **PCI.vxd** to update your system driver. The PCI.vxd driver is supplied by your computer dealer.

For more information on this, refer to the Microsoft article "CardBus Device Not Enumerated with TI 14xx or 44xx CardBus Controllers" (Article ID Q233017) which can be found on Microsoft's web site.

Hot Keys

The computer provides you with two sets of hot keys: three hot-key buttons on the computer and the function key combinations on the keyboard.

figure 2-14

Three Hot-Key Buttons

The computer offers three hot-key buttons for quick one button access to the Internet, e-mail or a user-defined application. To use the user-defined hot key, you need to install the Hot-Key driver. Refer to Chapter 6 for driver installation steps.

Hot Key	Function
	Activate the e-mail box.
	Activate the internet browser.
	Activate the user-specified application, for example, the Microsoft Word or Excel.

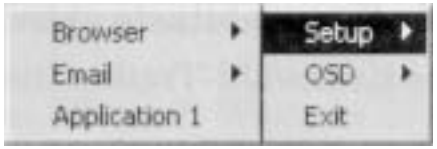
table 2-3

Programming the Hot Keys

After installing the hot key driver, you may have to configure or change the driver settings. To configure the driver, right click the Hot key driver icon on the task bar and the following menu will appear.

Hot-key Driver Menu

To program the user-defined hot key, you must configure "Application 1."



To configure and specify an application for Application 1, you must:

1) Select **Application 1** and press **Enter**. A dialog box will appear on the screen.
2) Go to the directory where the desirable application program exists
3) Click on the program file.
4) Choose **Open**.

The hot key is now set to execute that program.

Function Keys

On the bottom-left of the keyboard is the Fn key or Function key. The Fn key allows you to change operational features instantly. To use the following functions, press and hold the Fn key; then press the appropriate function key (Esc, F3, F5, etc....) located at the top of your keyboard.

Keys	Description
Fn + Esc	Toggle between suspend /resume state
Fn + F3	Expand LCD display
Fn + F5	Turn audio on/off
Fn + F6	Toggle between CRT/LCD/LCD and CRT
Fn + F9	Decrease LCD brightness
Fn + F10	Increase LCD brightness

table 2-4

figure 2-15

The Numeric Keypad

The keyboard has an embedded numerical keypad for easy numeric data input. The keypad stands out by its blue typeface.

To use the keypad simply:

- Activate the Num Lock feature by pressing the **Num Lock** key.
- Press Fn + the desired number keys.

figure 2-16

Notes:

Chapter 3. Power and Battery Information

Power Management

To conserve power, especially when using the battery, your notebook computer has two types of power management available; ACPI and APM.

Advanced Configuration and Power Interface (ACPI)

The ACPI interface provides the computer with enhanced power saving techniques and gives the operating system (OS) direct control over the power and thermal states of devices and processors. For example, it enables the OS to set devices into low-power states based on user settings and information from applications. ACPI is available in Windows 98, Windows 98SE, Windows Me and Windows 2000. ACPI is the more recent of the two power management types available and the one you use with a Windows operating system.

Advanced Power Management (APM 1.2)

APM is an older type of power management which is set in the system BIOS, currently APM is available on this machine for users who are interested in running DOS or Linux.

Power management conserves power by controlling individual components of the computer (the monitor and hard disk drive) or the whole system.

Note

Power management functions will vary slightly depending on your operating system. For more information it is best to refer to the user's manual of your operating system.

Note

Information on setting the APM options can be found in Chapter 5, Power Menu.

Note
Hard Disk Standby can be set in the SCU and the operating system you are using. The SCU settings will override the operating system settings.

Conserving Power through Individual Components:

Hard Disk Standby

The computer's hard disk drive motor will be turned off if the hard disk drive has not been accessed for a specified period of time. If the system reads or writes data, the hard disk motor will be turned back on. You can set this in the control panel of your OS or in the SCU.

Monitor Standby

To conserve power, you can set the monitor to turn off after a specified time. This is done in the operating system.

Note
To learn more about power management settings in the SCU, refer to Chapter 5, Power Menu.

Conserving Power throughout the Whole System:

Suspend and Resume

With this function you can stop the notebook's operation and restart where you left off. This system features two suspend mode levels:

A: Standby
B: Hibernate

A: Standby

Standby saves the least amount of power, but takes the shortest time to return

to full operation. During Standby the hard disk is turned off, and the CPU is made to idle at its slowest speed. All open applications are retained in memory. When you are not using your computer for a certain length of time, which you specify in the operating system, it will enter Standby mode to save power.

The system can resume from Standby mode by:

- Pressing any keyboard key
- Pressing the power button
- An incoming call to your modem
- Alarm resume is enabled and expires

B: Hibernate *

Hibernate uses no power and saves all of your information on a part of the HDD. It saves the maximum power but takes the longest time to return to full operation. You can set your notebook to automatically enter Hibernate mode when the battery power is almost depleted. This prevents losing any data due to loss of power.

The system will resume from Hibernate mode by:

- Pressing the power button
- Alarm resume (month/day/hour/minute)

*

If you are using Windows 98 or Windows 98SE you must first create a partition on your hard drive in order to use this power management function. Information is available in ***table 3-1*** *on* ***page 3-5****.*

Setting the Power Management Functions

You can set the power management functions either in the SCU (for APM and hard disk standby), or the operating system (for ACPI). To learn more about what power management settings are available and how to configure them it is best that you refer to your operating system's user guide.
For more information on setting the hard disk standby or any other power management functions in the SCU (for users of APM), please refer to the Power Menu in Chapter 5.

If both the Windows OS power management settings and the SCU power management settings are configured, **The Windows OS power management settings will override those set in the SCU *EXCEPT* for hard disk standby.**

Creating a Partition on Your Hard Drive

To use **Suspend to Disk** or **Hibernate** with Windows 98 or Windows 98SE , you must create a partition on your hard disk drive (HDD). The instructions are as follows:

Attention: You must partition your hard drive prior to installing the operating system.

While in DOS mode:

1) Use the FDISK program to delete all hard disk partitions if any already exist on the drive.
2) Go to Drive A: or the CD-ROM drive depending on the location of the **0VMAKFIL** file (the file comes with the enclosed utilities CD but you can copy it to a floppy disk if you prefer working with the floppy drive).
3) Execute the file as follows

   :\>**0VMAKFIL** -Pn

   n must be the amount of RAM you already have or intend to have.

table 3-1

Warning
If you increase the system memory to a value larger than your partition you must repartition the HDD.

Note
3rd Party software may be available which allows you to partition or increase the partition size of your HDD after the operating system has been installed. Check the documentation carefully.

Battery Information

Please follow these simple guidelines to get the best use out of your battery.

New Battery:

Always use a new battery before recharging it.

Battery Life:

Battery life may be shortened through improper maintenance. To optimize the life and improve the performance of your battery, fully discharge and recharge the battery at least once every 30 days.

Battery FAQ

How do I completely discharge the battery ?

Use the computer with battery power until it shuts down due to a low battery. Don't turn off the computer by yourself even when you see a message or hear beeps that indicate the battery is critically low, just let the computer use up all of the battery power and shut down on its own.

How do I fully charge the battery ?

When charging the battery, don't stop until the LED charging indicator light stops flashing.

How do I maintain the battery ?

Completely discharge and charge the battery at least once every 30 days or after about 20 partial discharges.

Conserving Battery Power

Display brightness

The LCD display consumes a lot of power, so setting the brightness level to low will save power.

Applications and external devices

Different applications and external devices consume battery power even when they are not being used.

To conserve battery power we recommend:

- Closing modem or communication applications when they are not being used.
- Removing any unused PC Cards from the computer. PC Cards quickly use up battery power even if the system enters Suspend mode.
- Removing any unnecessary external devices from the computer.

Caution
Danger of explosion if battery is incorrectly replaced. Replace only with the same or equivalent type recommended by the manufacturer. Dispose of used batteries according to the manufacturer's instructions.

Removing the Battery

We recommend that you don't remove the battery, but if it is necessary, please contact your service representative for assistance. The removal procedure is as follows:

1) Remove the two screws holding the battery lock in place.
2) Remove the battery cover.
3) Disconnect the battery from the main computer.
4) Slide the battery out.

figure 3-1

1. Screw Holes
2. Battery Cover
3. Battery Connector Socket
4. Battery Connector
5. Battery

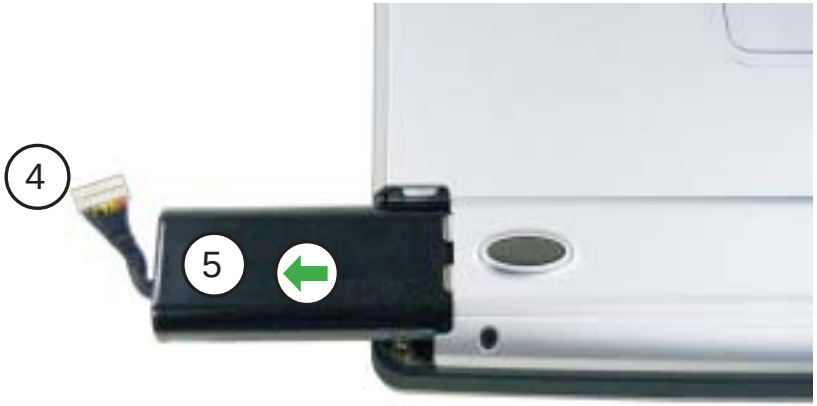


figure 3-2

Chapter 4. Upgrading the Computer

This chapter contains the information on upgrading the computer. Follow the steps outlined to make the desired upgrades. If you have any trouble or problems you can contact your dealer for further help. Before you begin you will need:

- A small crosshead or Philips screwdriver
- A small regular screw driver
- An antistatic wrist strap

Before working with or repairing the internal components you will need to wear an antistatic wrist strap to ground yourself because static electricity may damage the components.

The chapter includes:

– Upgrading the Memory
– Upgrading the Processor
– Upgrading the Hard Disk

Upgrading the Memory

The computer has two memory sockets for 144-pin Small Outline Dual In-line Memory Modules (SO-DIMM) and supports both PC-100/PC-133 SDRAM. The main memory can be expanded up to 1 GB with one or two memory modules using the different combinations listed below:

Bank 1 (64 bit)	Bank 2 (64 bit)	Power	Total Size
32MB	empty	3.3 V	32MB
32MB	32MB		64MB
64MB	empty		64MB
64MB	64MB		128MB
128MB	empty		128MB
128MB	128MB		256MB
256MB	empty		256MB
256MB	256MB		512MB
512MB	empty		512MB
512MB	512MB		1GB

table 4-1

The total memory size is automatically detected by the POST routine once you turn on your computer.

Note
If you are using two memory modules in your computer we strongly recommend using memory modules of the same size.

Note
If you are using 2 memory modules, they must be of the same type, either both must be PC-100 or both must be PC-133.

To upgrade the memory in your notebook please perform the following steps:

A: Removing a memory module (if present).

B: Inserting a new memory module.

C: Setting the SW6 jumper switch.

- Removing the keyboard.
- Locating and setting the SW6 jumper switch.
- Replacing the keyboard.

A: Removing a Memory Module

1) Turn off the computer.
2) Turn the computer over.
3) Unscrew and remove the RAM cover (**figure 4-1**).

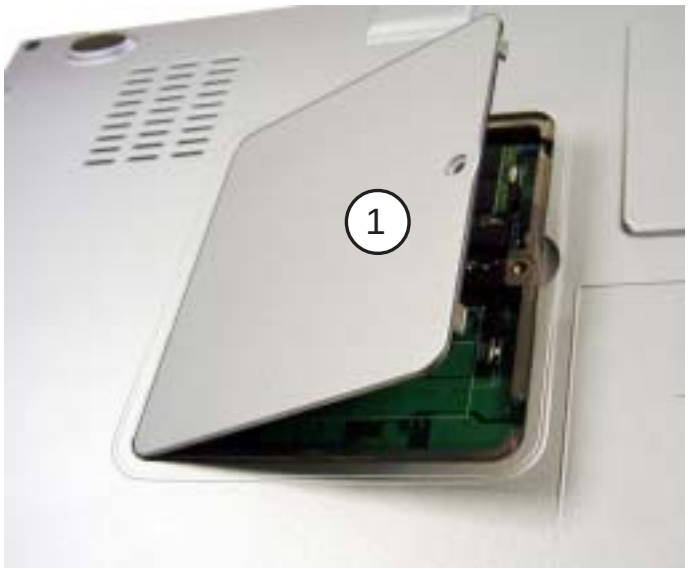


figure 4-1

1. RAM Cover

4) Locate the memory sockets.
5) Gently pull the two latches outward on the sides of the memory socket (**figure 4-2**).

1. Memory Module
2. Memory Socket
3. Latches

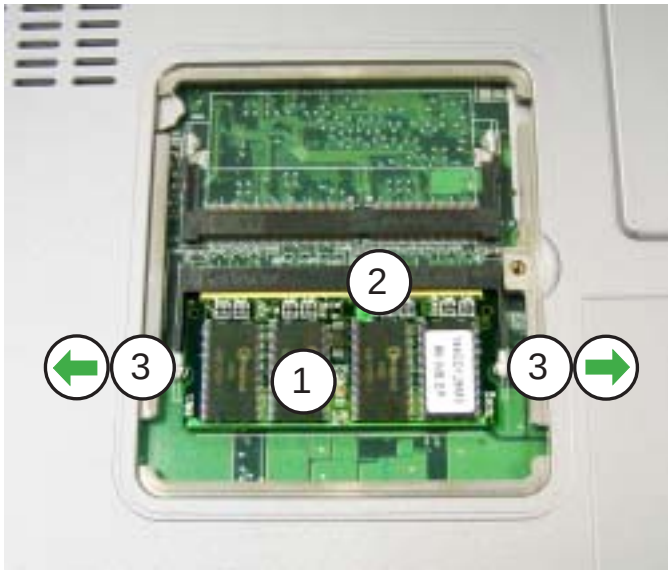


figure 4-2

6) The module will pop up.
7) Remove the memory module as shown (**figure 4-3).**.

figure 4-3

B: Installing a Memory Module

1) Turn off the computer.
2) Turn the computer over.
3) Unscrew and remove the RAM cover (**figure 4-1**).
4) Insert the memory module at a slight angle about 45° and fit its connectors firmly into the memory slot (**figure 4-5**).

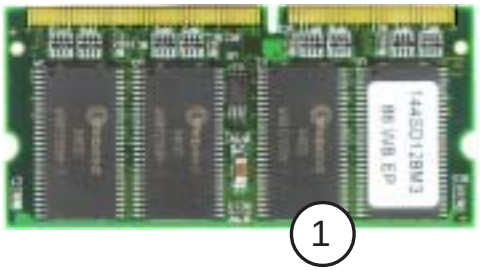


figure 4-4

1. Memory Connectors
2. Memory Socket

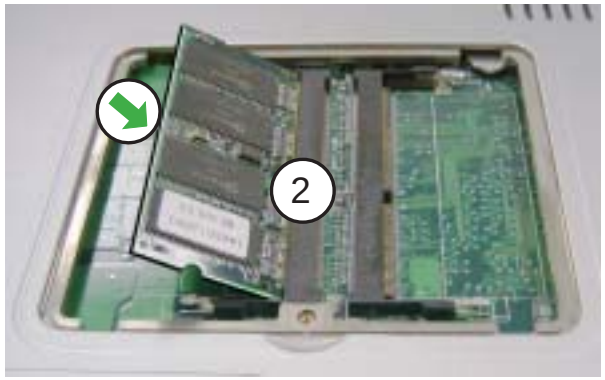


figure 4-5

5) Press down on the two edges of the memory module and lock it into place (**figure 4-6**).
6) Reinstall the RAM cover.

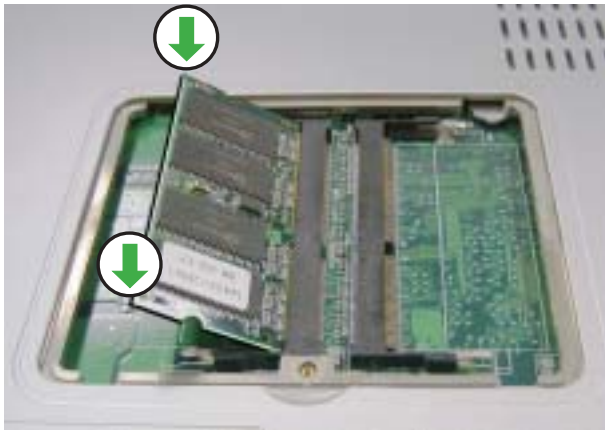


figure 4-6

> ***Note***
> *Make sure the memory connectors go into the memory socket when you are installing the memory modules.*

Note

Step C *is only necessary if your new memory module is a different type than your previous one.*

If the previous memory module was a PC-100 and the new module is a PC-133 or vice-versa, then you must proceed with ***Step C****. Otherwise skip this Step.*

C: Setting the SW6 Jumper Switch

1) Turn off the computer.
2) Remove the keyboard by pressing the 4 latches at the top (**figure 4-7)** and gently lifting it out of the notebook.
3) Place the keyboard as shown (**figure 4-8**).

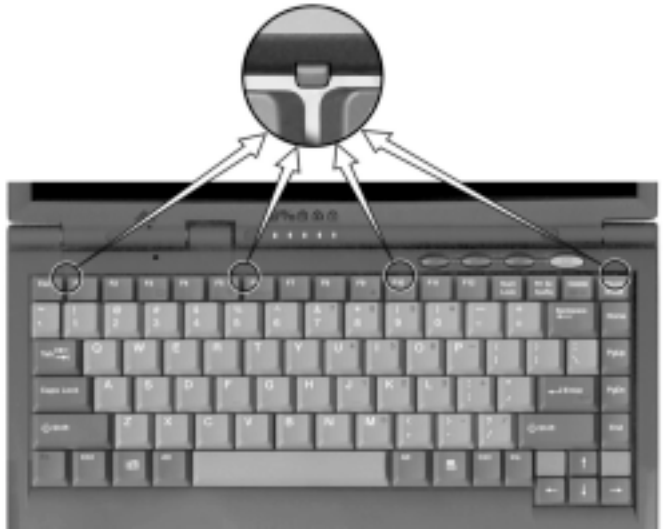
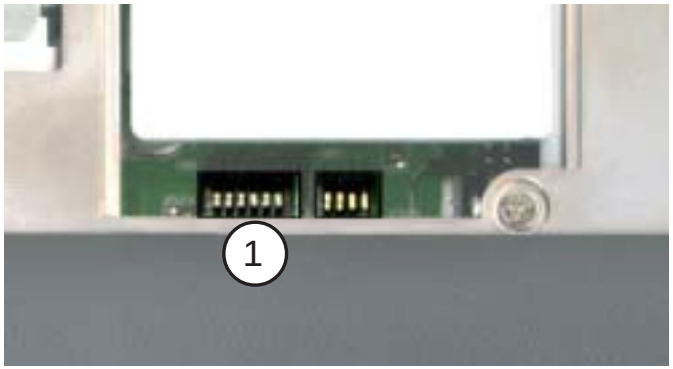


figure 4-7

figure 4-8

1. SW6 Jumper Switch

4) Locate the SW6 jumper switch (**figure 4-8**) or (**figure 4-9**).
5) Set the SW6 jumper switch according to **table 4-2**.



1. SW6 Jumper Switch

figure 4- 9

SW6 Jumper Switch Settings

CPU	SDRAM	SW6-1	SW6-2	SW6-3	SW6-4	SW6-5	SW6-6
66	PC-133	OFF	OFF	OFF	OFF	ON	ON
66	PC-100	OFF	OFF	OFF	OFF	ON	OFF
100	PC-100	ON	OFF	OFF	OFF	ON	OFF
100	PC-133	ON	OFF	ON	OFF	ON	OFF
133	PC-133	ON	ON	ON	OFF	ON	OFF

table 4-2

6) Reinstall the keyboard.

Upgrading the Processor

If you want to upgrade your computer by replacing the existing processor with a faster one you will need to contact your customer service representative. We recommend that you do not attempt to do this yourself since if done incorrectly you may damage the processor or mainboard.

Upgrading the Hard Disk

Please refer to pages **2-8 ~ 2-12** for instructions on upgrading the hard disk.

Chapter 5. BIOS Utilities

In this chapter you will learn about the Power On Self Test (POST) and how to configure the system parameters using the System Configuration Utility (SCU).

The chapter includes:

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

Power On Self Test (POST)

The system BIOS (Basic Input/Output System) performs a series of tests on the system memory and key computer components every time the computer is powered on. These tests are called the Power On Self Test (POST). Should an error exist, the POST routine may halt execution (depending on the problem). If no error exists, the POST will initialize the BIOS configuration, and boot (start) the operating system.

POST Message: Normal Operation

You will see the following screen if no error exists after the POST is performed:

```
SystemSoft MobilePRO BIOS Version 1.01
(2482-00)-(R1.XX.prXX)
Copyright 1983-1996 SystemSoft Corp. All
Rights Reserved

500 MHz Celeron with MMX CPU
CPU Microcode Update Rev 007h Complete
L2 Cache: 128 KB Installed
8 MB Video RAM
SystemSoft Plug-n-Play BIOS ver 1.17.01

Base Memory          000640 KB
Extended Memory      056320 KB
Total Memory         057344 KB
Shared Memory        008192 KB

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

INITIALIZING BOOT CD-ROM - CD-224E
INITIALIZING 2nd ATAPI - None
```

(Sample Screen)

POST Message: Error Detected

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

```
SystemSoft MobilePRO BIOS Version 1.01
(2482-00)-(R1.XX.prXX)
Copyright 1983-1996 SystemSoft Corp. All
Rights Reserved

500 MHz Celeron with MMX CPU
CPU Microcode Update Rev 007h Complete
L2 Cache: 128 KB Installed
8 MB Video RAM
SystemSoft Plug-n-Play BIOS ver 1.17.01

Base Memory          000640 KB
Extended Memory      056320 KB
Total Memory         057344 KB
Shared Memory        008192 KB

WARNING - FLOPPY DISK TRACK 0 FAILED
Auto Detecting IDE Devices[Done]

<CTRL-ALT-S> to enter System Configuration
Utility
INITIALIZING BOOT CD-ROM  -  CD-224E
INITIALIZING 2nd ATAPI  -  None

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

(Sample Screen)

System Configuration Utility

The System Configuration Utility (SCU) can be used to set your notebook's system parameters. The system date and time, power settings and other functions are set in the SCU. The settings are stored in a nonvolatile battery-backed CMOS RAM. This simply means that your settings are saved even when the notebook is turned off.

Information in the System Configuration Utility (SCU)

Here is a list of the system settings which may be changed within the SCU.

Menu	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, Display OEM logo, Enable S/PDIF digital output, Boot Password, SCU Password.
Memory	VGA Shared Memory.
Disks	Diskette Drives, IDE Settings.
Components	COM Ports, LPT Port, PS/2 Mouse Port, Keyboard Numlock, Keyboard Repeat, TV Mode
Power	Enable Power Saving, Low Power Saving, Medium Power Saving, High Power Saving, Customize, Suspend Controls, Resume Timer, Enable MODEM Ring Resume, Enable Battery Low Suspend.
Exit	Save and Exit, Exit (No Save), Default Settings, Restore Settings, Version Info.

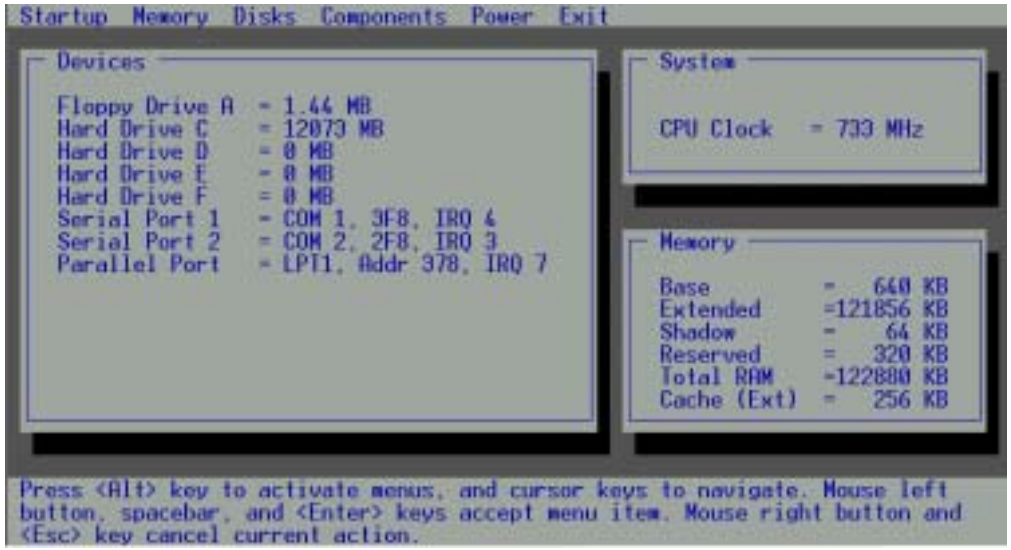
table 5-1

Initiating the System Configuration Utility

The System Configuration Utility (SCU) can be accessed by pressing the **Ctrl**, **Alt**, and **S** keys simultaneously when you turn on your computer and see this message:

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

This message lasts only a few seconds and if you don't respond in time, the computer will initiate the boot process. If you were unable to enter the SCU, you must reboot the system and try again.



Notebook screen as it appears when you enter the SCU.

Note
During startup, if your computer has a logo screen or picture appear instead of the POST screen, wait until a cursor appears in the top right corner before hitting <CTRL-ALT-S> to enter the SCU.

5

Working with the Menu Bar

Use these keys to begin working in the SCU.

Keys	Action
Alt	Highlights the menu bar.
Left arrow (🡐) Right arrow (🡒) Highlighted letters	Selects a menu bar option.
Left mouse button Down arrow (🡓) Spacebar Enter	Opens the menu bar option.
Right mouse button Esc	Cancels current action.

table 5-2

Working with the Pull-down Menu

Once your desired menu bar item is highlighted, press **Enter** or the down arrow (🡻) to see the pull-down menu items. You move about the pull-down menu with these keys:

Keys	Action
Tab	Moves from one record to another.
Down/Up arrows (🡻)(🡹)	Changes the value of a field.
Spacebar	Selects a field.
Enter	Allows you to choose: <OK> to save any changes. <Cancel> to ignore any changes.
Esc	Quits the current screen.

table 5-3

Some pull-down menu options have an arrow to the right of the entry. Choose these options by pressing **Enter** and another screen will be displayed. Navigate the new screen with the following keys:

Keys	Action
Down/Up arrows (🡻)(🡹) Highlighted letters	Selects a pull down menu item.
Enter	Enables/Disables the specified function. A (✓) indicates the function is enabled.
Esc	Closes the pull down menu and saves the changes.

table 5-4

System Configuration Utility Options

Startup Menu

Note
Sample screens of the various SCU options are shown on pages ***5-19*** *to* ***5-21****.*

Item	Setting / Option		Function
Date and Time	Day/Month/Year Hour/Minute/Second		Set the date and time.
Fast Boot	Enable		Initialize and quickly boot the system by skipping certain diagnostic tests.
	Disable		Disable the Fast Boot.
Boot Device	1st Boot Device	Hard Disk C	Specify the system's 1st choice for the boot drive.
		CD-ROM Drive	
		Diskette A	
	2nd Boot Device	Hard Disk C	Specify the system's 2nd choice for the boot drive.
		CD-ROM Drive	
		Diskette A	
	3rd Boot Device	Hard Disk C	Specify the system's 3rd choice for the boot drive.
		CD-ROM Drive	
		Diskette A	

table 5-5a

Startup Menu (continued)

Item	Setting / Option	Function
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	A series of warning beeps will sound when the battery power is low.
	Disable	Disable the above.
Enable LCD Expand Mode	Enable	Stretch the display to fill the entire screen of the LCD panel.
	Disable	Disable the above.
Enable Power On Beep	Enable	Enable Power On Beep
	Disable	Disable Power On Beep
Enable PNP OS Support	Enable	Enable PNP OS Support
	Disable	Disable PNP OS Support

table 5-5b

Warning
If you choose to set a boot password, NEVER forget your password, the consequences could be serious. If you cannot remember your boot password you must contact your vendor and you may lose all of the information on your HDD.

Startup Menu (continued)

Item	Setting / Option	Function
Display OEM logo	Enable	Enable the feature to display the OEM logo during system boot.
	Disable	Disable the feature to display the OEM logo during system boot.
Enable S/PDIF digital output	Enable	Enable S/PDIF digital output.
	Disable	Disable S/PDIF digital output.
Boot Password	Enter old Power-On Password	Set a password for booting the computer. Only users who enter a correct password can boot the system.
	Enter new Power-On Password	
	Verify new Power-On Password	
	Enable Password to Power-On	
SCU Password	Enter old Set-Up Password	Set a password for modifying the SCU. Only users who enter the correct password can change the SCU.
	Enter new Set-Up Password	
	Verify new Set-Up Password	
	Enable Password to Set-Up	

table 5-5c

Memory Menu

Item	Settings / Options	Function
VGA Shared Memory	8 MB	Select the VGA shared memory size
	16 MB	
	32 MB	
	64 MB	

table 5-6

Important: The value for VGA shared memory must be less than the amount of RAM in your computer!

In the SCU utility you are able to set the value for the VGA Shared Memory. The default is 8MB. *If you choose to set the* VGA Shared Memory *to the maximum of 64MB* ***YOU MUST*** *have more than 64MB of RAM in your computer.* If the VGA Shared Memory equals the amount of RAM you will be unable to boot your computer. The only way to correct this error and be able to boot your computer again would be to add more RAM.

Disks Menu

Item	Setting / Option		Function
Diskette Drives	Drive A	None	Specify the drive type for the diskette drive A.
		1.44 MB	
IDE Settings	Primary HDD	Drive Enabled	Enable enhanced IDE settings.
		Multiple Sector Mode	
		PIO Mode	
	CD-ROM / DVD-ROM	Drive Enabled	
		PIO Mode	
	IDE UDMA 33/66/100 Function	Enable	Enable or Disable IDE Ultra DMA-33/66/100 (ATA-33/66/100) function.
		Disable	
	IDE 32Bit I/O	Enable	Enable or Disable 32-bit communications between CPU and IDE controller.
		Disable	

table 5-7

Components Menu

Item	Setting / Option		Function
COM Ports	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	

table 5-8a

Components Menu (cont'd)

Item	Setting / Option		Function
LPT Port	Port Address	None	Specify the LPT port configuration.
		LPT1, Addr 378, IRQ7	
		LPT2, Addr 278, IRQ5	
		LPT3, Addr 3BC, IRQ7	
	Port Definition	Standard AT (Centronics)	
		Bi-directional (PS/2)	
		Enchanced Parallel (EPP)	
		Extended Capabilities (ECP)	
	DMA setting for ECP mode	DMA 1	Specify the ECP DMA configuration.
		DMA 3	
	EPP Type	EPP 1.7	Specify the EPP type.
		EPP 1.9	
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.

table 5-8b

Components Menu (cont'd)

Item	Setting / Option		Function
Keyboard Numlock	Enable		Specify whether Num Lock is on or off at system boot time.
	Disable		
Keyboard Repeat	Key Repeat Rate	2 cps	The rate (characters per second) at which a key repeats while pressed.
		6 cps	
		10 cps	
		15 cps	
		20 cps	
		30 cps	
	Key Delay	1/4 sec	The amount of time (seconds) that will pass after a pressed key starts to repeat.
		1/2 sec	
		3/4 sec	
		1 sec	
TV Mode	TV Modes Selection	NTSC	Select the television standard you intend to use with the TV-out port.
		PAL	

table 5-8c

Power Menu

Item	Setting / Option		Function
Enable Power Saving	Enable		Enable/Disable all power saving features.
	Disable		
Low Power Saving	Enable		This setting results in maximum performance and the shortest battery life.
	Disable		
Medium Power Saving	Enable		This setting results in moderate performance and battery life.
	Disable		
High Power Saving	Enable		This setting results in minimum performance and the longest battery life.
	Disable		
Customize	Disk Standby	5 Sec	The hard disk will enter standby mode if it is not accessed within the specified period. Hard disk power will be restored when the disk drive is accessed.
		10 Sec	
		20 Sec	
		30 Sec	
		1 Min	
		5 Min	
		10 Min	
		Always On	

table 5-9a

Power menu (cont'd)

Item	Setting / Option		Function
Suspend Controls	Power Button Function *	Power On/Off	The power button is used to turn the system on or off.
		Suspend / Resume	If you press the power button for more than four seconds the computer will enter the mechanical off ** state. If you press the power button for less than four seconds the computer will enter the suspend type you have specified in the SCU.
	Suspend Type	Suspend to Disk	Specify the suspend mode for power management.
		Powered on Suspend	
Resume Timer	Alarm Resume	Enable	System resumes from the configured suspend mode when the resume alarm timer expires.
		Disable	Disable the above.
	Resume Month/Day/Hour/Minute		The system will resume at the specified time (month, day, hour and minute).
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.

table 5-9b

*

The power button acts as a suspend/resume button for switching the system between a working state and the suspend mode.

**

In the mechanical-off state the system can only resume from suspend mode by pressing the power button.

5

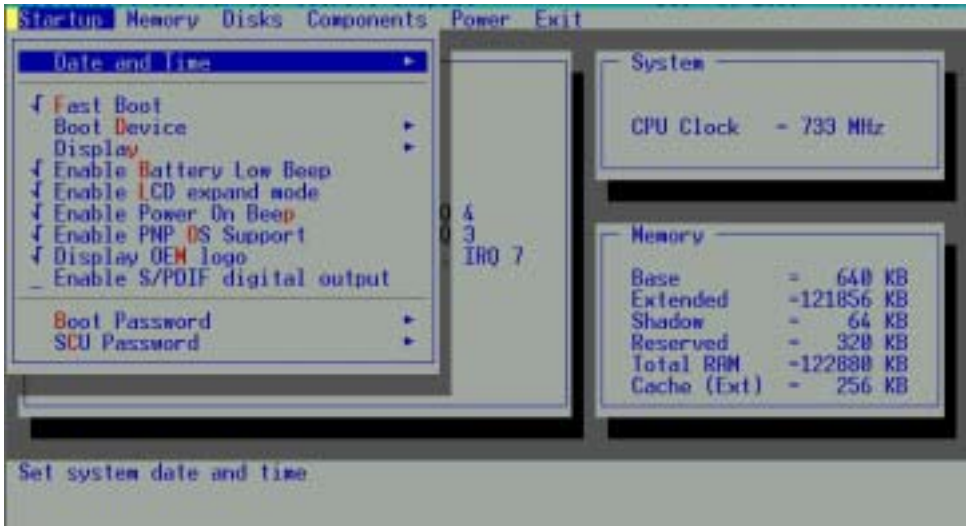
Exit Menu

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

table 5-10

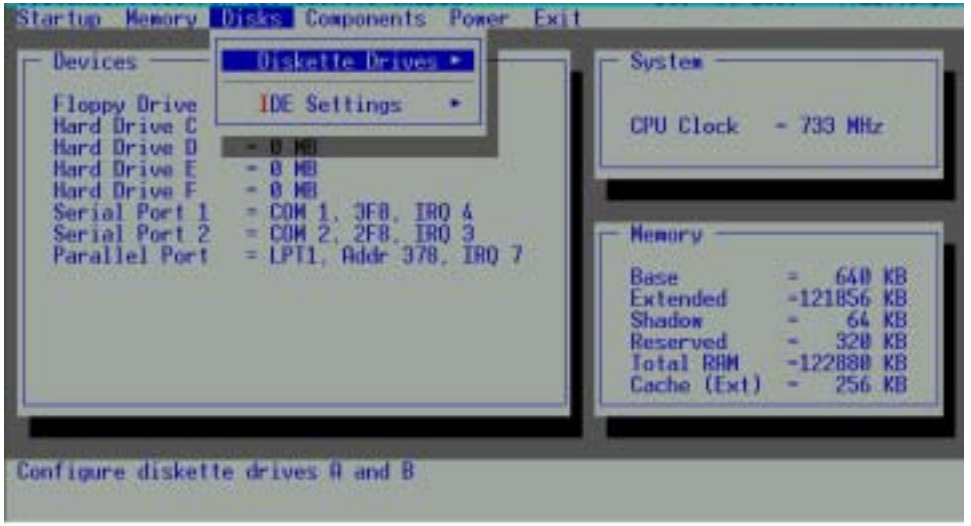
SCU Screen samples

Startup Screen

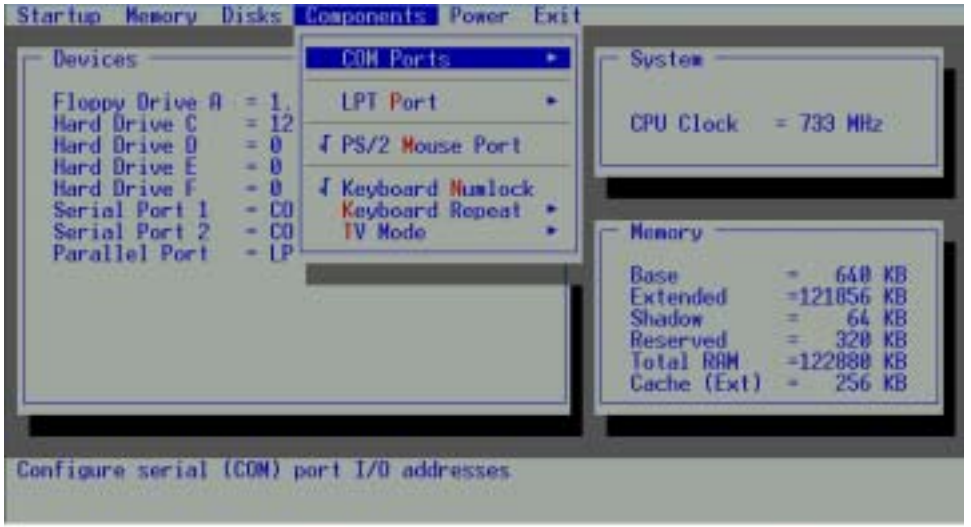


Memory Screen

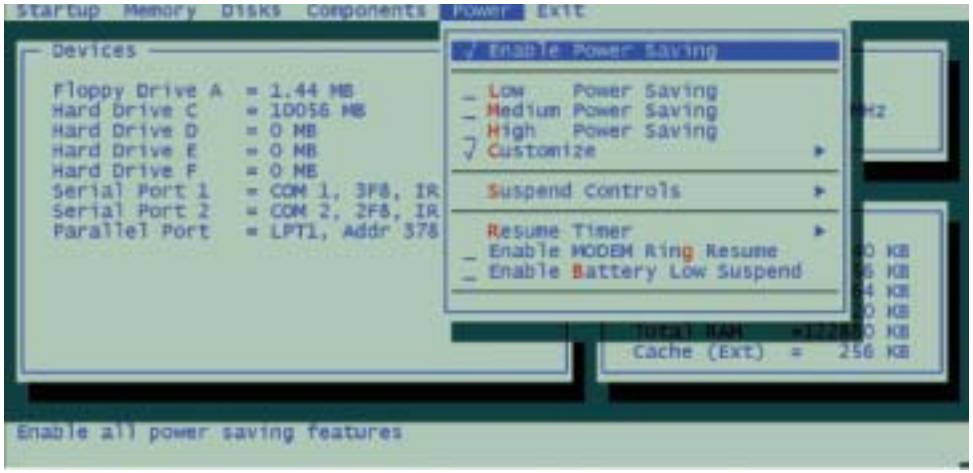
Disks Screen



Components Screen



Power Screen



Exit Screen

Notes:

Chapter 6. Driver Installation

This chapter deals with installing drivers and utilities essential to the operation or improvement of some of the notebook's subsystems. The system takes advantage of some newer hardware components for which the latest versions of most available operating systems haven't built in drivers and utilities. Thus, some of the system components won't be auto-configured with an appropriate driver or utility during operating system installation. Instead, you need to manually install some system-required drivers and utilities. The information here has been designed for users with basic computer knowledge though inexperienced users may also find this section helpful. This chapter includes:

– Before installing Windows
– Installing Windows 98 SE (For reference only)
– Installing Windows Me (For reference only)
– Installing Windows 2000 (For reference only)
– Installing Drivers in Windows 98 SE
– Installing Drivers in Windows Me
– Installing Drivers in Windows 2000
– Installing Drivers in Windows NT4.0

In this chapter, we assume that you will install all drivers and utilities from the CD device and it is assigned to Drive D:.

Before Installing Windows

Note
Before installing Windows 98SE or Windows Me you will need to partition and format your HDD (hard disk drive).

Partitioning the HDD

1. Insert the Windows Boot Disk in the FDD before you turn on the system.
2. Choose the "Start computer with CD-ROM support" option.
3. When the "A:\" prompt appears, type **fdisk** [Enter] and
   a. Type **Y** for large disk support.
   b. Choose **1** to "Create DOS partition...".
   c. Choose **1** (again) to "Create a Primary DOS partition".
   d. Confirm (**Y**) for "...maximum size..." and "...active...".
   e. When **fdisk** is finished, press **Esc**, shut-down and restart.
4. Turn off your computer.

Formatting the HDD

5. Restart your computer with the Boot Disk still in the FDD
6. When the "A:\" prompt appears, type **format c: /s** and proceed (**Y**).
   (When asked, you don't have to give it a label.)

   Now your HDD is partitioned and formatted and an operating system can be installed on it.

7. Go to the following pages depending on the system you are installing:
   Windows 98 - page 6-3
   Windows Me - page 6-4

Installing Windows 98 SE (for reference only)

1. Insert the Windows Boot Disk in the FDD and turn on your computer.
2. Choose option 1 "Start computer with CD-ROM support."
3. Place the Windows 98 CD into the CD-ROM drive.
4. Type D:setup. (this will start the setup process for Windows 98 CD)
5. Press **Enter** (your drives will be scanned for errors.)
6. Select Exit (the Windows 98 setup will now begin)
7. When the "Windows 98 Setup" program initializes, click Continue.
8. The "License Agreement" dialog box appears. Select "I accept the Agreement" and click Next.
9. For "Windows Product key", enter the product's ID number and press Next.
10. The "Select Directory" dialog box appears. Select the path of "C:\Windows", or type another path if you prefer. Then click Next.
11. When you see "Setup Options", select "Portable" and click Next.
12. Follow the on-screen instructions and choose the recommended options.
13. Restart your computer.

Windows is now installed on your computer.

Windows Setup Notes:

- During the setup process, the system will restart several times. **When it shuts down for the first time, remove the Boot Disk.**
- Allow *Windows* to install its default drivers.

Note

If your Windows CD-ROM is bootable, you can change the SCU to boot from the CD-ROM and install the OS accordingly.

Warning

*If you intend to use the **Suspend to Disk** power management function available with your computer you must also create an additional partition prior to installing Windows 98 or 98SE. (See **page 3-5**.)*

6

Installing Windows Me (for reference only)

1. Insert the Windows Boot Disk in the FDD and turn on your computer.
2. Choose option 1 "Start computer with CD-ROM support."
3. Place the Windows Me CD into the CD-ROM drive.
4. Type D:setup. (this will start the setup process for Windows Me CD)
5. Press **Enter** (your drives will be scanned for errors.)
6. Select Exit (the Windows Me setup will now begin)
7. When the "Windows Me Setup" program initializes, click Continue.
8. The "License Agreement" dialog box appears. Select "I accept the Agreement" and click Next.
9. For "Windows Product key", enter the product's ID number and press Next.
10. The "Select Directory" dialog box appears. Select the path of "C:\Windows", or type another path if you prefer. Then click Next.
11. When you see "Setup Options", select "Portable" and click Next.
12. Follow the on-screen instructions and choose the recommended options.
13. Restart your computer.

Windows is now installed on your computer.

Windows Setup Notes:

- During the setup process, the system will restart several times. **When it shuts down for the first time, remove the Boot Disk.**
- Allow *Windows* to install its default drivers.

Installing Windows 2000 (for reference only)

1. Insert the Windows 2000 Installation CD disk and start your computer.
2. Press any key to start the installation immediately after the message "Press any key to boot from CD." appears.
3. When "Windows 2000 Setup" appears, press **Enter** to continue.
4. "Windows 2000 Professional Setup" starts copying files to your HDD.
5. After copying, press **Enter** to restart your computer.
6. After entering "Windows 2000 Professional Setup", press **Enter** to "set up Windows 2000 now".
7. Press **F8** for "Windows 2000 Licensing Agreement".
8. Select the partition (drive) where you want to install Windows 2000, and press **Enter**.
9. Choose the file system you want and press **Enter**. (Usually choose the "FAT" file system.)
10. To format the drive (partition), press **F**. (Please note all data on the formatted drive will be lost.)
11. Setup will proceed with formatting, file-copying, and will reboot the system.
12. When the system enters Windows 2000, follow the on-screen instructions and press **Next**.
13. When Windows asks for Your Product Key, type the product's ID number and then press **Next**.

☑ ***Note***

To insert the disk:
1) open the CD drive using the emergency eject hole ***page2-14***
or
2) turn on the computer, open the drive, insert the CD, then restart the computer.

☑ ***Note***

The installation steps may be different depending on your system's status. For details, refer to your Windows 2000 manual.

14. Continue to press **Next** until Setup starts to install various components, and performs its final tasks.
15. Click **Finish** to complete Windows 2000 Setup Wizard.
16. The computer will restart Windows 2000 automatically.

Installing Drivers in Windows 98 SE

Step 1: Installing the Audio Driver

A: Installing the Audio Driver without S/PDIF output support

1: Click **Start**.
2: Select **Run**.
3: Specify the path to D:\Audio\Setup.exe
4: Run Setup.exe.
5: Follow the on-screen instructions, and continue to press **Next**.
6: Click **Finish** to restart your computer.

For more information on the driver, refer to the Readme file under the directory.

> ☑ ***Note***
> *S/PDIF can only be used with models or configurations which have a DVD drive.*

B: Installing the Audio Driver with S/PDIF output support

1: Remove the previous audio driver if already installed.
2: Reboot the computer and go to the SCU by pressing **Ctrl**+**Alt**+**S**.
3: Enable S/PDIF digital output feature (Startup menu) and exit SCU.
4: Start Windows, and insert the DVD utility disk to install the DVD driver and application. The installation program automatically runs when you insert the DVD disk into the DVD-ROM drive.
5: After completing installing DVD driver and player, click **Start** and select **Settings** and **Control Panel**.
6: Double click the **System** icon.

7: Click the **Device Manager** tab.
8: Select the DVD-ROM type device located under "CDROM.".
9: Click the **Properties** button.
10: Click the **Settings** tab, and enable DMA mode.
11: Restart the computer.
12: Click **Start** and select **Run**.
13: Type D:\Audio\Setup.exe -vxd and press **OK** to install the audio driver.
14: After the computer restarts, open the DVD application, and choose either **Properties** or **Configuration** option to enable S/PDIF output feature.

Step 2: Installing the Video Driver

1: Click **Start**.
2: Select **Run**.
3: Specify the path to D:\Video\Win9X\Setup.exe
4: Run Setup.exe.
5: Follow the on-screen instructions, and continue to press **Next**.
6: Click **Finish** to restart your computer.

For more information on the driver, refer to the Readme file.

Step 3: Installing the Hot Key Driver

1: Click **Start**.
2: Select **Run**.

3: Specify the path to D:\Ap-key\CNK001.exe

4: Run CNK001.exe.

5: Follow the on-screen instructions, and continue to press **Next**.

6: Click **Finish** to restart your computer.

Step 4: Installing the LAN Driver

1: Click **Start**.

2: Select **Run**.

3: Open the path to D:\Lan\Setup.exe.

4: Run Setup.exe.

5: Follow the on-screen instructions, and continue to press **Next**.

6: Click **Finish** to restart the computer now.

For more information on the driver, refer to the Readme file under the directory.

Step 5: Installing the PCMCIA Driver (Optional)

1: Click **Start**.

2: Select **Settings** and **Control Panel**.

3: Double click the **System** icon.

4: Click the **Device Manager** tab.

5: Locate the "**Generic Card Bus Controller**" under "PCMCIA socket".

6: Select "**Generic Card Bus Controller**."

7: Choose **Remove** and click **Refresh**.
8: The "Add New Hardware Wizard" dialog box appears. Press **Next**.
9: Select "Search for the better driver for your device" and press **Next**.
10: Select "Specify a location" and choose **Browse** to specify the location to D:\Pcmcia\PCMCIA.inf, then press **OK**.
11: Follow the on-screen instructions and press **Next**.
12: Click **Finish** to complete the setup.
13: Restart your computer.

Step 6: Installing the Modem Driver (Optional)

1: Click **Start**.
2: Select **Settings** and **Control Panel**.
3: Double click the **System** icon.
4: Click the **Device Manager** tab.
5: Locate the "**PCI Card**" under "Other devices".
6: Double click "**PCI Card**".
7: Click the **Driver** tab and choose **Update Driver**.
8: Press **Next**.
9: Select "Search for a better driver than the one your device is using now" and press **Next**.
10: Select "Specify a location", choose **Browse** to specify the location to D:\Mdc\Win9X and press **OK**.

11: Follow the on-screen instructions and press **Next**.

12: Click **Finish** to complete the setup.

13: Click **Close** to close the Properties window and restart your computer.

Installing Drivers in Windows Me

Step 1: Installing the Audio Driver

A: Installing the Audio Driver without S/PDIF output support

1: Click **Start**.
2: Select **Run**.
3: Specify the path to D:\Audio\Setup.exe
4: Run Setup.exe.
5: Follow the on-screen instructions, and continue to press **Next**.
6: Click **Finish** to restart your computer.

For more information on the driver, refer to the Readme file under the directory.

> ☑ ***Note***
> *S/PDIF can only be used with models or configurations which have a DVD drive.*

B: Installing the Audio Driver with S/PDIF output support

1: Remove the previous audio driver if already installed.
2: Reboot the computer and go to the SCU by pressing **Ctrl**+**Alt**+**S**.
3: Enable S/PDIF digital output feature (Startup menu) and exit SCU.
4: Start Windows, and insert the DVD utility disk to install the DVD driver and application. The installation program automatically runs when you insert the DVD disk into the DVD-ROM drive.
5: After completing installing DVD driver and player, click **Start** and select **Settings** and **Control Panel**.
6: Double click the **System** icon.

7: Click the **Device Manager** tab.
8: Select the DVD-ROM type device located under “CDROM.”.
9: Click the **Properties** button.
10: Click the **Settings** tab, and enable DMA mode.
11: Restart the computer.
12: Click **Start** and select **Run**.
13: Type D:\Audio\Setup.exe -vxd and press **OK** to install the audio driver.
14: After the computer restarts, open the DVD application, and choose either **Properties** or **Configuration** option to enable S/PDIF output feature.

Step 2: Installing the Video Driver

1: Click **Start**.
2: Select **Run**.
3: Specify the path to D:\Video\Win9X\Setup.exe
4: Run Setup.exe.
5: Follow the on-screen instructions, and continue to press **Next**.
6: Click **Finish** to restart your computer.

For more information on the driver, refer to the Readme file.

Step 3: Installing the Hot Key Driver

1: Click **Start**.
2: Select **Run**.

3: Specify the path to D:\Ap-key\CNK001.exe

4: Run CNK001.exe.

5: Follow the on-screen instructions, and continue to press **Next**.

6: Click **Finish** to restart your computer.

Step 4: Installing the LAN Driver

1: Click **Start**.

2: Select **Run**.

3: Open the path to D:\Lan\Setup.exe.

4: Run Setup.exe.

5: Follow the on-screen instructions, and continue to press **Next**.

6: Click **Finish** to restart the computer now.

For more information on the driver, refer to the Readme file under the directory.

Step 5: Installing the Modem Driver (Optional)

1: Click **Start**.

2: Select **Settings** and **Control Panel**.

3: Double click the **System** icon.

4: Click the **Device Manager** tab.

5: Locate the "**PCI Card**" under "Other devices".

6: Double click "**PCI Card**".

7: Click the **Driver** tab and choose **Update Driver**.
8: When the Update Device Driver Wizard appears, select “Specify the location of the driver” and click **Next**.
9: Deselect “”Removable Media”, select “Specify a location”, choose **Browse** to specify the location to D:\Mdc\WinMe and click **OK**. Then, click **Next**.
10: When the Add New Hardware Wizard appears, click **Next**.
11: Click **Finish** to complete the setup.
12: Click **Close** to close the Properties window and restart your computer.

Installing Drivers in Windows 2000

Step 1: Installing the SiSIDE Utility

1: Click **Start**.

2: Select **Run**.

3: Open the path to D:\SiSIDE\Win2000\SISIDE.EXE

4: Run Siside.exe and then restart Windows.

For more information on this, refer to the Readme file under the directory.

Step 2: Installing the Audio Driver

1: Click **Start**.

2: Select **Run**.

3: Specify the path to D:\Audio\Setup.exe

4: Run Setup.exe.

5: Follow the on-screen instructions, and continue to press **Next**.

6: Click **Finish** to restart your computer.

For more information on the driver, refer to the Readme file under the directory.

Step 3: Installing the Video Driver

1: Click **Start**.

2: Select **Run**.

3: Open the path to D:\Video\Win2000\Setup.exe.

4: Run Setup.exe.
5: Follow the on-screen instructions, and continue to press **Next**.
6: Click **Finish** to restart the computer now.
7: Click **Start**.
8: Select **Run**.
9: Open the path to D:\Video\Win2000\AGP\Setup.exe
10: Run Setup.exe
11: Follow the on-screen instructions and continue to press **Next**.
12: Click **Finish** to restart the computer.

For more information on the driver, refer to the Readme file.

Step 4: Installing the Hot Key Driver

1: Click **Start**.
2: Select **Run**.
3: Specify the path to D:\Ap-key\CNK001.exe
4: Run CNK001.exe.
5: Follow the on-screen instructions, and continue to press **Next**.
6: Click **Finish** to restart your computer.

Step 5: Installing the LAN Driver

1: Click **Start**.
2: Select **Run**.

3: Open the path to D:\Lan\Setup.exe.

4: Run Setup.exe.

5: Follow the on-screen instructions, and continue to press **Next**.

6: Click **Finish** to restart the computer now.

For more information on the driver, refer to the Readme file under the directory.

Step 6: Installing the Modem Driver (Optional)

1: Click **Start**.

2: Select **Settings** and **Control Panel**.

3: Double click the **System** icon.

4: Click the **Hardware** tab and choose **Device Manager**.

5: Locate "**PCI Device**" under "Other devices".

6: Click "**PCI Device**" with the right button.

7: Choose **Properties**.

8: Click the **Driver** tab and choose **Update Driver**.

9: Press **Next** to continue the installation.

10: Select "Search for a suitable driver for my device" and press **Next**.

11: Select "Specify a location" and press **Next**.

12: Choose **Browse** to specify the path to D:\Mdc\Win2000. Press **Open**.

13: Click **OK**.

14: Click **Next** to install the driver.

15: Click **Finish** to complete the setup.

16: Close the Properties window and restart your computer.

For more information on the driver, refer to the Readme file under the directory.

Note
After installing Windows NT4.0 please install Service Pack 6 or above to enhance NT 4's functions. Download the latest Service Pack version from the Microsoft web site.

Installing Drivers in Windows NT4.0

Step 1: Installing the Audio Driver

1: Click **Start**.
2: Select **Run**.
3: Specify the path to D:\Audio\Setup.exe
4: Run Setup.exe.
5: Follow the on-screen instructions, and continue to press **Next**.
6: Click **Finish** to restart your computer.

For more information on the driver, refer to the Readme file under the directory.

Step 2: Installing the Video Driver

1: Click **Start**.
2: Select **Settings** and **Control Panel**.
3: Double click the **Display** icon.
4: Click the **Settings** tab.
5: Click **Display Type**.
6: Click **Change**.
7: Click **Have Disk**.
8: Choose **Browse** and specify the path to D:\Video\Nt40. Press **Open**.
9: Choose **OK**.
10: Press **OK** again.

11: If a “Third-party Drivers” dialog box asking if you want to install the driver appears, click **Yes**.

12: Close the Properties window and restart your computer.

For more information on the driver, refer to the Readme file.

Step 3: Installing the Hot Key Driver

1: Click **Start**.

2: Select **Run**.

3: Specify the path to D:\Ap-key\CNK001.exe

4: Run CNK001.exe.

5: Follow the on-screen instructions, and continue to press **Next**.

6: Click **Finish** to restart your computer.

Step 4: Installing the LAN Driver

1: Click **Start**.

2: Select **Settings** and **Control Panel**.

3: Double click the **Network** icon.

4: Click **Yes** when asked if you want to install Networking.

5: Choose either **Wired to the network** or **Remote access to the network**, depending on how you will connect to the network and click **Next**.

6: Click **Select from list**.

7: Click **Have Disk**.

Note

Before installing the LAN driver, go to the SCU by pressing ***CTRL+ALT+S*** *on boot, and disable PNP OS Support (Startup menu) and set COM B to “None” (Components menu).*

8: Specify the path to D:\Lan\Nt40. Press **OK**.

9: Click **OK** again to accept the driver "SiS 900 PCI Fast Ethernet Adapter".

10:Click **Next**.

11: Choose the appropriate Network Services. You may want to contact your system adminstrator for the correct protocols.

12:Choose the appropriate Network Services. You may want to contact your system adminstrator for the correct services.

- If you are prompted for Windows NT Setup, insert the Windows NT CD disk and specify the CD-ROM drive.
- Follow the on-screen instructions, and continue to press **Continue**.
- When prompted whether you wish to use DHCP, choose **No**.
- When the "Microsoft TCP/IP Properties" window appears, configure the setting according to your PC's status and click **OK**.
- Follow the on-screen instructions and continue to press **Next**.

13:Click **Finish** and restart the computer.

For more information on the driver, refer to the Readme file under the directory.

☑ ***Note***

Before installing the Modem driver, go to SCU by pressing ***CTRL+ALT+S*** *on boot, and disable PNP OS Support (Startup menu) and set COM B to "None" (Components menu).*

Step 5: Installing the Modem Driver (Optional)

1: Click **Start**.

2: Select **Run**.

3: Specify the path to D:\Mdc\Nt40\Setup.exe.

4: Run Setup.exe.

5: Press **Next**.

6: Select an appropriate Com Port for the modem and click **Next**.

7: Press **Next**.

8: Select “Don’t detect my modem; I will select it from a list”, and press **Next**.

9: Click **Have Disk**.

10: Choose **Browse** and specify the path to D:\Mdc\Nt40. Press **Open**.

11: Choose **OK**.

12: Press **Next**.

13: Select the same port you choose in the earlier step, and click **Next**.

14: Follow the on-screen instructions, and press **Next**.

15: Click **Finish** to complete the setup.

16: Close the Properties window and click **Finish** to restart your computer.

For more information on the driver, refer to the Readme file under the directory.

Notes:

Chapter 7. 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.

The chapter includes:

- Audio
- Battery
- Boot Password
- CD
- Floppy Disk Drive
- Hard Disk Drive
- Hardware Installation
- LCD Panel
- Microphone-in Jack
- Memory Module
- PC Card
- Power
- 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.

> ☑
>
> ***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.*

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.

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.

Boot Password

Problem: You forget the boot password.

Solution: If you forget the password, you may have to discharge the battery of the CMOS. 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 possible hardware problem.

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. Format the disk.
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.

Problem: ***The message "Invalid-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.

Hard Disk Drive (HDD)

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 fonts are too dark.

Solution: The brightness is not correctly set. Use Fn + F9 or Fn + F10 to adjust the brightness.

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 needs to be adjusted.

Solution 4: The system is in suspend mode. Please press any key or touch the trackpad to wake up the computer.

Microphone-in Jack

Problem: The microphone-in jack is not working.

Solution: The microphone-in jack may be set for S/PDIF output, therefore it cannot be used as a microphone-in jack. To configure the jack to be used as a microphone-in jack you must disable the S/PDIF function in the SCU.

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. Make sure 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.

Appendix A. Specifications

Processor

- Intel Pentium III 1.13/1.26 GHz
- CPU Package: FC-PGA2 (Socket 370)

Memory

- Two 144-pin SO-DIMM sockets
- Supports PC-100/PC-133 SDRAM (3.3V)
- Expandable up to 1GB, depending on 32/64/128/256/512 MB SO-DIMM modules

BIOS

- Insyde BIOS with Smart Battery
- One 256KB Flash ROM
- Supports ACPI 1.0B compliant
- Plug & Play 1.0a

LCD

- 13.3"/14.1" XGA TFT color panel

Video

- UMA Architecture with 8/16/32/64 System Memory sharable as Display Memory
- Ultra AGP (equivalent to AGP 4X Performance)
- 128-bit 2D / 3D Graphics Engine
- Motion Compensation and IDCT for DVD Content Playback Accelerator
- Fully DirectX 6 Compliant Graphics Engine

Storage

- One fixed 3.5" 3-mode FDD
- One easy-change bay for one of the following 12.7mm CD devices: 24X-speed CD-ROM/8X-speed DVD-ROM/CD-RW (20X Read, 8X Write)/DVD-ROM+CD-RW combo
- One easy-change 2.5" 9.5mm/12.7mm (height) IDE HDD (Supports DMA mode 2/ PIO mode 4/ ATA-33/ ATA-66/ ATA-100)

Audio

- AC'97 2.1 Compliant
- Compatible with Sound Blaster PRO/16
- Advanced Wavetable Synthesizer
- DirectSound 3D Accelerator
- Full-duplex
- S/PDIF Output
- Virtual AC3
- Built in microphone
- Built in 2 speakers

PC Card Sockets

- One Type II PCMCIA 3.3V/5V socket
- Supports CardBus (PC Card 95)

Pointing Device

- Built in TouchPad (PS/2)

Input/Output

- One IEEE 1394 port
- One parallel port, supports ECP/EPP 1.7 and 1.9
- One PS/2 port for external keyboard/mouse
- One external CRT monitor port
- One infrared port, supports IrDA 1.1, ASKIR (SHARP standard) and FIR modes
- One jack for microphone or S/PDIF output
- One speaker-out jack
- Dual USB ports
- One RJ-45 jack for 100M/10M LAN
- One RJ-11 jack for 56K MDC modem*
- DC-in jack

* The modem module is optional.

Communications

- Wireless Infrared transfer
- 56K V.90 compliant MDC modem module (Optional)
- `on-board 100M/10M LAN

Keyboard

- A4-Size Win 98 keyboard includes numeric keypad and application hot keys for E-mail, www browser and API

Power Management

- Supports APM 1.2
- Supports ACPI 1.0B
- Soft Off by system power button
- Supports suspend to disk
- Battery low suspend
- Resume from alarm time
- Resume from modem ring

Power

- Full Range AC adapter
  Input: 100 ~ 240VAC, 50/60Hz, 1.5A (max)
  Output: 20VDC, 3.25A, 65W (max)
- Supports Smart Lithium-Ion Battery

Size & Weight

- 308mm(w) x 254mm(d) x 37.5mm(h)
- 3.25 kg with Lithium-Ion battery

Environment

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

Optional

- 12.7mm DVD-ROM module
- 12.7mm CD-RW module
- 12.7mm DVD-ROM+CD-RW combo module
- DVD utility
- Smart Lithium-Ion battery pack
- Car adapter
- 56K MDC modem module

Glossary

A

AC (**A**lternating **C**urrent) - The power from a standard household electrical outlet.

adapter - A device that allows compatibility between different equipment. An AC adapter converts AC current to DC current which is needed to operate a computer.

AGP (**A**ccelerated **G**raphics **P**ort) - A high-speed graphics port that provides a direct connection between the display adapter and memory

application - A program such as a word processor, database or image editor.

B

BIOS (**B**asic **I**nput **O**utput **S**ystem) - An essential set of routines in a PC, which is stored on a chip and provides an interface between the operating system and the hardware.

bit (**b**inary **d**igit) - The smallest unit of information on a machine. If a computer is a 32-bit machine it may mean that its data registers are 32 bits wide or that it uses 32 bits to identify each address in memory.

boot - The loading of the operating system and other basic software which occurs when you start-up the computer.

bus - A collection of wires through which data is transmitted from one part of a

computer to another.

byte (**b**inar**y te**rm) - A unit of storage capable of holding a single character. On almost all modern computers, a byte is equal to 8 bits.

C

cache - When you cache something you improve the speed of access to it by moving it one stage closer to the CPU.

CardBus - A 32-bit version of the PCMCIA PC Card standard.

CD-ROM (**C**ompact **D**isc **R**ead **O**nly **M**emory) - A format used to store data such as text, graphics or stereo sound. Also refers to the drive which can read this format.

configuration - The makeup of a system. To “configure” is to choose options in order to create a custom system

CPU (**C**entral **P**rocessing **U**nit) - The computing part of the computer. It controls the interpretation and execution of instructions.

D

DC (**D**irect **C**urrent) - Power which a computer requires for operation.

DIP switch - A series of tiny switches built into circuit boards which enable you to configure a circuit board for a particular type of computer or application.

DOS (**D**isk **O**perating **S**ystem) - Developed by Microsoft, it was the standard

operating system for IBM-compatible personal computers.

DRAM - The most common type of computer RAM, called D-RAM or DRAM.

driver - A program that controls a device. Every device, whether it be a printer, disk drive, or keyboard, must have a driver program.

DVD - Originally called Digital Video Disc since it was used mostly for video, now called Digital Versatile Disc, similar to a CD only with greater storage capacity.

F

flash BIOS - BIOS which can be updated.

flash memory - A memory chip that keeps its information even when the computer is powered off. Used in BIOS which can be updated, like the system in your computer.

flash ROM BIOS - see flash BIOS.

function key - The keys F1, F2, ... which have specific functions assigned to them. By pressing one of the function keys you can execute certain commands depending on the computer and operating system you are using.

G

GB (**G**iga**b**yte) - A unit of storage, one gigabyte is equal to 1,024 megabytes.

H

Hot key - see **function keys**.

I

interface - Something that connects two separate things. Hardware interface connects the computer to attached hardware such as a printer.
I/O (**I**nput/**O**uput) - Term used when your computer needs data entered (input) or has data to go to another source such as a printer or floppy disk (output).
IrDA (**I**nfra**r**ed **D**ata **A**ssociation) - IrDA ports allow a laptop to exchange data or use a printer without a cable connection.

J

jack - A connector used primarily to connect external devices to your computer such as a microphone, video source, phone line, etc..
jumper - A metal bridge that closes an electrical circuit. They are sometimes used to configure expansion boards.

K

KB (Kilobyte) - A unit of storage, one kilobyte is equal to 1024 bytes.

L

LAN (**L**ocal **A**rea **N**etwork) - A communications network within a confined

physical area. It is made up of servers, workstations, a network operating system and a communications link.

LCD (**L**iquid **C**rystal **D**isplay) - A display technology that uses rod-shaped molecules (liquid crystals) that flow like liquid and bend light.

LED (**L**ight **E**mitting **D**iode) - an electronic device that lights up when electricity is passed through it. The indicator lights on the computer are LEDs.

load - To copy a program from some source, such as a disk or tape, into memory for execution.

Lithium-Ion battery - A type of battery which is ideal for notebook computers because of its light weight and high energy density. Also, lithium-ion batteries do not use poisonous metals, such as lead, mercury or cadmium.

M

MB (Megabyte) - 1,048,576 bytes or 1024 KB

memory - Area in the computer where information is stored on chips, an example is RAM.

MHz - One MHz represents one million cycles per second. The speed of microprocessors, called the clock speed, is measured in megahertz.

MMX - A type of microprocessor that can handle many common multimedia operations that are normally handled by a separate sound or video card.

mode - An operational state that a system has been switched to.

modem (**mo**dulate-**dem**odulate) - A device that adapts a computer to a telephone line by converting the computer's digital pulses into audio frequencies for the telephone when sending. And the reverse when receiving a signal from the telephone line.
module - Referring to hardware, a module is a self-contained component.
mouse - The most popular pointing device. It was called a mouse because it more or less resembled one, with the cord being the mouse's tail.

N

NiMH battery - Batteries which are common in notebook computers and contain Nickel-Metal Hydride.

P

parallel port - A socket on a computer used to connect a printer or other parallel device via the computer's parallel interface.
parallel printer - A printer that receives information from a computer one character (letter, number, etc.) at a time.
partition - A reserved part of disk or memory that is set aside for some purpose. New hard disks must be partitioned before they can be formatted for the operating system, this is done with the FDISK utility.

PC Card - See **PCMCIA Card**.

PCMCIA Card - A credit-card sized, removable module for portable computers standardized by PCMCIA. Also known as PC Cards, they are 16-bit devices that are used to attach modems, network adapters, sound cards, radio transceivers, solid state disks and hard disks to a portable computer. The PC Card is a “plug and play” device, which is configured automatically by the Card Services software

PCMCIA is an acronym for **P**ersonal **C**omputer **M**emory **C**ard **I**nternational **A**ssociation which is an international standards body and trade association that was founded to establish a standard for connecting peripherals to portable computers.

peripheral - Any external device attached to a computer, such as a printer, disk drive, display monitor, etc..

Plug and Play - The ability to add a new component and have it work without having to perform any technical analysis or procedure.

PnP - see Plug and Play

POST (**P**ower **O**n **S**elf **T**est) - A series of built-in diagnostics that are performed when the computer is booted.

R

RAM (**R**andom **A**ccess **M**emory) - The memory available to programs, different

programs will need more or less RAM depending on what they are doing. RAM is the most common type of memory found in computers.

reboot - To restart a computer.

resume - To restart your computer from suspend mode.

ROM (**R**ead **O**nly **M**emory) - A memory chip that permanently stores instructions and data. Its contents are created at the time of manufacture and cannot be altered. ROM chips are used to store control routines in personal computers (ROM BIOS), peripheral controllers and other electronic equipment.

S

SDRAM (**S**ynchronous **DRAM**) - A type of DRAM that can run at much higher clock speeds than conventional memory.

serial port - A socket on a computer used to connect a modem, mouse, scanner or other serial device to the computer.

setup - (1) A utility program which modifies the BIOS.
(2) Assembly and adjustment of a computer's components.
(3) The preparation of the system for normal operation.

S/PDIF - (Sony/Philips Digital Interface Format) output, which allows you to connect your DVD-capable PC to a Dolby AC-3 compatible receiver producing high quality sound.

suspend - To stop an operation with the hard disk turned off and the CPU idling at its slowest speed. This is done to save power when you are not using

your computer for long periods of time.

T

TFT (**T**hin **F**ilm **T**ransistor) - The term typically refers to active matrix screens on laptop computers. Active matrix LCD provides a sharper screen display and broader viewing angle compared to passive matrix.

U

USB (**U**niversal **S**erial **B**us) - A hardware interface for low-speed peripherals such as the keyboard, mouse, joystick, scanner, printer and telephony devices. Devices are plugged directly into a four-pin socket on the PC.

utility - A program that provides file management capabilities, such as sorting, copying, comparing, listing and searching, as well as diagnostic and measurement routines that check the health and performance of the system.

V

VGA (**V**ideo **G**raphics **A**rray) - The minimum standard for PC video display.

Z

Zoomed Video (ZV) Port - An extension to the PC Card (PCMCIA) standard that provides a high transfer rate for video applications on portable computers.

The ZV Port is built into the notebook computer and activated by plugging in an MPEG PC Card that is ZV Port-compliant.