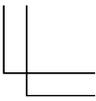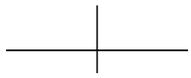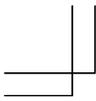# *Preface*

Notice for All Users

- Consult the operation manual (this document) for proper use of your computer.

- The product and the accessories are subject to change without prior notice.

- SHARP assumes no responsibility for results arising from use of pre-installed and third party software. Consult the software vendor for resolution of problems. (Read the service condition of the software before use.)

- SHARP assumes no responsibility for problems caused by incorrect handling, repairs, defects, battery replacement or any other cause.

Notice for Users in the USA

FCC Statement

WARNING - FCC Regulations state that any unauthorized changes or modifications to this equipment not expressly approved by the manufacturer could void the user's authority to operate this equipment.

Note: This equipment has been tested and found to comply with the limits for a Class B digital device pursuant to Part 15 of the FCC Rules.

These limits are designed to provide reasonable protection 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 equipments 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 distance 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.

A shielded I/F cable is required to insure compliance with FCC regulation for Class B computing equipment.

* As an ENERGY STAR® Partner, SHARP has determined that this product meets the ENERGY STAR® guidelines for energy efficiency.

Declaration of Conformity

SHARP PERSONAL COMPUTER, PC-M4000 Series
This device complies with part 15 of the FCC rules. Operation is subject to the following conditions:(1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

Responsible Party: SHARP ELECTRONICS CORPORATION
Sharp Plaza, Mahwah, New Jersey 07430-2135
TEL: 1-800-BE-SHARP

This device complies with the FCC RF exposure requirements.

About the Modem

This equipment complies with Part 68 of the FCC rules and the requirements adopted by the ACTA. On the bottom of this equipment is a label that contains, among other information, a product identifier in the format US:AAAEQ##TXXXX. If requested, this number must be provided to the telephone company.

A plug and jack used to connect this equipment to the premises wiring and telephone network must comply with the applicable FCC Part 68 rules and requirements adopted by the ACTA. See installation instructions for details.

The type of Connector is USOC RJ11C

The REN is used to determine the number of devices that may be connected to a telephone line. Excessive RENs on a telephone line may result in the devices not ringing in response to an incoming call. In most but not all areas, the sum of RENs should not exceed five (5.0). To be certain of the number of devices that may be connected to a line, as determined by the total RENs, contact the local telephone company. For products approved after July 23, 2001, the REN for this product is part of the product identifier that has the format US:AAAEQ##TXXXX. The digits represented by ## are the REN without a decimal point (*e.g.*, 03 is a REN of 0.3). For earlier products, the REN is separately shown on the label.

If this equipment causes harm to the telephone network, the telephone company will notify you in advance that temporary discontinuance of service may be required. But if advance notice isn't practical, the telephone company will notify the customer as soon as possible. Also, you will be advised of your right to file a complaint with the FCC if you believe it is necessary.

The telephone company may make changes in its facilities, equipment, operations or procedures that could affect the operation of the equipment. If this happens the telephone company will provide advance notice in order for you to make necessary modifications to maintain uninterrupted service.

If trouble is experienced with this equipment, for repair or warranty information, please refer to the provided Consumer Limited Warranty sheet. If the equipment is causing harm to the telephone network, the telephone company may request that you disconnect the equipment until the problem is resolved.

Connection to party line service is subject to state tariffs. Contact the state public utility commission, public service commission or corporation commission for information.

The Telephone Consumer Protection Act of 1991 makes it unlawful for any person to use a computer or other electronic device, including FAX machines, to send any message unless such message clearly contains in a margin at the top or bottom of each transmitted page or on the first page of the transmission, the date and time it is sent and an identification of the business or other entity, or other individual sending the message and the telephone number of the sending machine or such business, other entity, or individual. (The telephone number provided may not be a 900 number or any other number for which charges exceed local or long-distance transmission charges.)

To program this information, refer to the manual of the communication software.

Copyright

It is the intent of Sharp that this product be used in full compliance with the copyright laws of the United States and that prior permission be obtained from copyright owners whenever necessary.

Product Information and Customer Assistance

For Product Information and Customer Assistance:

Call: 1-800-BE-SHARP (237-4277)

Sharp Systems of America

5901 Bolsa Avenue, Huntington Beach, CA 92647

Home Page: http://www.sharpsystems.com

E-mail address: ssa-support@sharpsystems.com

Notice for Users in Canada

This class B digital apparatus complies with Canadian ICES-003.

About the Wireless LAN

Operation is subject to the following conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.
The installer of this radio equipment must ensure that the antenna is located or pointed such that it does not emit RF field in excess of Health Canada limits for the general population; consult Safety Code 6, obtainable from Health Canada's website www.hc-sc.gc.ca/rbp.

About the Modem

This product meets the applicable Industry Canada technical specifications. The Ringer Equivalence Number is an indication of the maximum number of devices allowed to be connected to a telephone interface. The termination on an interface may consist of any combination of devices subject only to the requirement that the sum of the RENs of all the devices does not exceed five (REN:0.2).

This product contains IC: 4005B-ATHENS

CAUTION:

TO PREVENT ELECTRICAL SHOCK, DISCONNECT THE AC CORD AND REMOVE THE BATTERY BEFORE SERVICING.
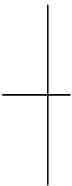
CAUTION:

FOR A COMPLETE ELECTRICAL DISCONNECTION, PULL OUT THE MAINS PLUG AND THE BATTERY.

VORSICHT:

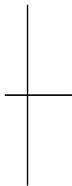UM DIE STROMZUFUHR VOLLSTÄNDIG ZU UNTERBRECHEN, DEN NETZSTECKER HERAUSZIEHEN UND DIE BATTERIE ÈNTFERNEN.

ATTENTION:

POUR UN ARRET TOTAL DU SYSTEME, DECONNECTEZ LA PRISE DE COURANT SECTEUR ET LA BATTERIE.

VARNING:

FÖR TOTAL ELEKTRISK URKOPPLING, KOPPLA UR KONTAKTEN OCH TA UR BATTERIET.

PRECAUCION:

PARA UNA COMPLETA DESCONEXION ELECTRICA DESENCHUFE LA CLAVIJA DE LA RED Y LA BATERIA.

Safety Precautions

General

- Follow all cautions and instructions marked on your computer.

- Except as described elsewhere in this manual, refer all servicing to qualified personnel. Immediately shut off your computer and seek servicing under the following conditions.

  - The power cord or plug is damaged or frayed.

  - Liquid is spilled on your computer.

  - Your computer has been dropped or the cabinet has been damaged.

Location

- Do not expose your computer to direct sunlight.

- Try to avoid dusty environments.

- Keep your computer away from any magnetic devices and TVs.

- Keep your computer away from heat sources such as radiator, heaters, stove, and other heat-generating products.

- Keep your computer away from excessive humidity or fluids such as rain, snow, water spray, juice, coffee, steam, etc.

- Keep your computer away from extremely high or low temperature.

- Do not move your computer from an extremely cold place to an extremely warm place. A temperature difference of more than 18°F (10°C) will cause condensation inside the unit, which may cause damage. (In this case, turn off your computer and leave it for about an hour to completely dry the unit.)

- Do not block or cover the slots or openings on the cabinet. They protect your computer from overheating.

- Do not place your computer on an unstable or uneven work surface.

- Care should be exercised when using on heat sensitive surfaces or your lap as the base of your computer will get hot.

- Do not use your computer on your lap or any part of your body for an extended period of time during operation or while charging to avoid injury from heat exposure. The bottom of the computer may become hot and it could cause a low temperature burn.

Usage

- Never push any objects into the cabinet openings. They may touch the dangerous voltage points or short parts that could result in fire or electrical shock.

- Do not press or place heavy objects on your computer. Strong pressure can damage the cabinet or make your computer fail.

- If your computer or the AC power cord experiences an abnormal situation such as heat generation or smoking, or produces an abnormal odor, turn off your computer, unplug the AC power cord, and remove the battery pack immediately.

- Turn off your computer before installing or removing any peripheral devices except USB devices, a PC card, or an SD card.

- Never subject your computer to sudden shocks or extreme vibration.

- Do not drop your computer or hit it with other equipment.

- Do not scratch the surface of the LCD screen.

- Before cleaning your computer, turn it off and disconnect the AC power cord.

- When carrying your computer:

  - Turn off your computer.

  - Do not subject your computer to shocks.

  - Remove external media such as a PC card from the slot.

  - Disconnect the external peripherals, cables and cords if connected.

  - Do not hold your computer by the display unit.

  Otherwise, your computer may be damaged or the stored data might be lost.
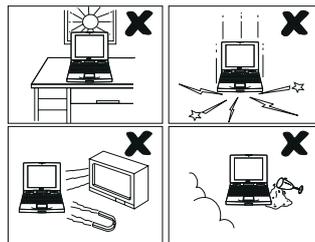
- When carrying your computer, hold it carefully not to drop it onto your feet or toes.

Battery Pack Precautions

CAUTION

DANGER OF EXPLOSION IF BATTERY IS INCORRECTLY REPLACED. REPLACE ONLY WITH THE SAME OR EQUIVALENT TYPE RECOMMENDED BY THE MANUFACTURER. DISCARD USED BATTERIES ACCORDING TO THE INSTRUCTIONS.

Handling

- Do not put the battery pack in a fire. It could explode and cause injury.
- Do not attempt to open or alter the battery pack.
- Do not place the battery pack where it might get hotter than 140°F (60°C).
- The battery pack must be kept from metal objects such as keys. They might trigger a short circuit and consequently cause the battery pack to heat up and explode.
- Do not allow liquids to come in contact with the battery pack.
- Care must be taken not to drop the battery pack. A violent shock damages the pack.
- Do not solder anything to the battery terminals.

Charging

- Charge the battery pack only with the AC adapter and AC power cord included with your computer.

Discharging

- Use the battery pack only for powering your computer. Do not use it for any other purpose.

Storage

- Store the battery pack in a cool and dry place. Do not store it in a place having temperatures of above 140°F (60°C).
- Recharge the stored battery pack before using it.

AC Power Precautions

- Plug the AC power cord directly in a wall jack. Plugging too many leads into a single socket may result in fire.

- Never plug in or remove the AC power cord or AC adapter with wet hands for prevention of electric shock.

- The included AC power cord must be appropriate for the voltage used in your area. Using an inappropriate cord can cause a fire.

- Unplug the AC power cord when your computer is not used for a long period.

- Never disassemble, repair, or modify the AC adapter.

- Never modify, twist, forcibly bend or pull, or place heavy objects on top of the AC cord to avoid damaging it. Using a damaged cord can cause a fire or electric shock.

- The AC power cord must be appropriate for the voltage used in your area. Using an inappropriate cord can cause a fire.

- Never plug in the AC adapter and AC power cord with dust on the plugs. This could cause damage to the insulation that may result in fire, electric shock, and/or injury.

- When unplugging the AC adapter from a wall outlet, hold it by the plug. Do not pull it out by the cord. Damage to the cord may result in the fire and/or electric shock.

- Check the AC power cord and power connectors periodically for damage. If damage is found, change the power cord immediately.
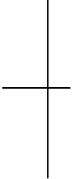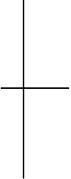
Modem Precautions

IMPORTANT SAFETY INSTRUCTIONS

When you use 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:

- 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.

- During a lightning or thunder storm,

  - Never install a telephone wire.

  - Avoid using any telephones other than a cordless type. There may be a remote risk of electric shock from lightning.

  - You should turn off your computer, unplug the AC power cord and remove the modem cable from your computer.

- Do not use the telephones to report a gas leak in the vicinity of the leak.
- Never use telephone jacks in wet locations unless they are specifically designed for wet locations.
- Never touch uninsulated telephone wires or terminals while they are connected to a network interface.
- Use caution when you install or modify telephone lines.
- Save these instructions.

Wireless LAN Precautions
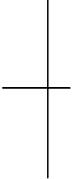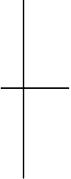
- Disable the integrated antenna and do not communicate with the wireless LAN in specific environments where radio-susceptible equipment is nearby, on airplanes, in hospitals, for example.
- Disable the integrated antenna and do not communicate with the wireless LAN in crowded places for prevention of cardiac pacemaker interference.
- Keep the distance at least 8.7" (22 cm) between a cardiac pacemaker and an active wireless LAN antenna.
- This equipment complies with FCC radiation exposure limits set forth for uncontrolled equipment and meets the FCC radio frequency (RF) Exposure Guidelines in Supplement C to OET65. This equipment should be installed and operated with at least 20 cm and more between the radiator and person's body (excluding extremities: hands, wrists, feet and legs).
- This transmitter must not be co-located or operated in conjunction with any other antenna or transmitter.
- Never disassemble or alter the wireless LAN unit.
- Do not remove the certification label on the wireless LAN unit.

Product Conformance

The wireless LAN device pre-installed in your computer is in conformance with federal requirements. No license is required for use of this device.

Notice of Radio Interference

The wireless LAN device pre-installed in your computer operates in the 2.4GHz frequency range that is shared by Industrial, Science, Medical (ISM) devices such as microwave ovens and portable telephones. These devices may interfere with the operation of the wireless LAN device. It is recommended that these interfering devices be powered off or no activated interfering devices be nearby to ensure the proper operation of the wireless LAN device.

PC Disposal or Transfer

Warning

This product utilizes tin-lead solder, and a fluorescent lamp containing a small amount of mercury. Disposal of this product may be regulated due to environmental considerations. For disposal or recycling information, please contact your local authorities or the Electronics Industries Alliance: www.eiae.org.

Data Erasing

Before you dispose or transfer your computer, you should erase the data from hard disks.
To remove the data from the hard disk drive of your computer, you will need to:

- "Delete" the data by placing it in the Recycle Bin.
- Empty the Recycle Bin.
- Format the hard disk drives.
- Recover the system.

The above procedures do not completely delete all data from the hard disk drives. When a file is deleted, the disk location where it was stored is marked as unallocated space available for new data. It means that the old data is still there and can be recovered. It allows for malicious persons to recover the "deleted" data and misuse it. To avoid this, you must thoroughly erase all the data from the hard disks.

For permanent data deletion, it is recommended to:

- Use special software or paid services to thoroughly erase the data, or
- Hammer or strongly magnetize the hard disk to destroy the stored data.

Transferring your computer without deleting software including operating system(s) or applications on the computer may be in conflict with the software agreement(s).

Other Precautions

- Periodic back-up copies of your important data should be made to protect your data in the event of hard disk failure or loss of the data on the hard disks. Use other storage devices for the backup.

- Your computer is integrated with a magnet on the left side of the display. Be sure to keep magnetic sensitive cards and floppy disks away from the left part of your computer to prevent the data on the cards or floppy disks from being erased.

- Your computer has a sensor on the left side of the keyboard that responds to the magnet. If the magnet gets close to the sensor:

  - The backlight will be turned off.

  - The system may enter the standby or hibernation mode according to the setting. (See Chapter 2.)
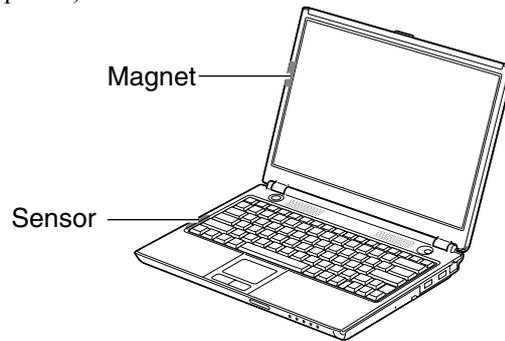
For Your Health

- Take regular breaks of ten to fifteen minutes after every hour of continuously viewing the screen to relieve your eyes.

- Adjust the brightness for comfortable viewing. (Brightness level of about 500 lux is recommended.)

- Avoid using your computer in an environment where sunlight or indoor lighting reflects off the screen.

- Position the display slightly below eye level and give a space of 15.8" (40cm) through 23.7" (60cm) between you and the display.

- Adjust the volume for comfortable sound when using a headphone. Too much volume may damage your ears.

- Do not power on or off when using a headphone. The produced noise may damage your ears.

Notice of Computer Security

The Windows operating system on this computer provides the Security Center, which manages the security features of your computer. It provides the status of the following security functions and enables you to change their settings: Firewall, Automatic Updates, and Virus Protection.

By default, the three functions are enabled in the *Security Center* to ensure the safety of the computer. If one of them or more are disabled, Windows alerts you by displaying the message "Your computer might be at risk." in the notification area located above the taskbar.
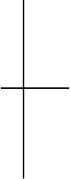To open the *Security Center*, click *start – Control Panel – Security Center*.

Firewall

The firewall function blocks unauthorized connection to this computer through the Internet or a network.
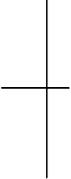
Automatic Updates

The automatic updates function periodically detects new security programs to be installed and automatically installs them.

Virus Protection

The Norton AntiVirus software, which automatically checks the virus infection, is preinstalled in this computer. To protect the computer against new viruses and other security threats, the virus definition file of the software must be updated. The virus protection function monitors whether the definition file is latest.

When the Windows setup is finished, be sure to complete the Norton AntiVirus wizard and LiveUpdate to update the definition file. (You must establish the connection to the Internet for the update.)

After completing the Norton AntiVirus wizard and LiveUpdate;

* The *Windows Security Center* always displays as *ON* regardless of the definition file status. Since the preinstalled Norton Antivirus software manages virus check on your computer, be sure to perform the LiveUpdate.
* You can enable the LiveUpdate automatically to run and update the file if any updates are detected. (Refer to the *Virus Protection* section on page A-7.)

Notice of Security with Wireless Devices

Wireless LAN provides data transfer by means of electric waves instead of LAN cables between communicating devices such as personal computers and a wireless LAN station. Wireless LAN has an advantage of simple and ubiquitous LAN connection in the ranges where electric waves are available. Since electric waves can penetrate through walls and reach everywhere, wireless LAN without proper security settings includes some security threats and can produce the situations mentioned below.

- Eavesdropping

  Malicious third parties can intercept the transmission and monitor your mail to steal personal information such as an identification number, password, and credit card number.

- Intruding

  Malicious third parties can connect to a personal or office network without authorization and illegally perform the following:

  - Obtaining access to confidential customer records or sensitive corporate information (Information leakage)
  - Faking the original information (Spoofing)
  - Altering the original data and transmitting (Falsification)
  - Spreading computer viruses resulting in the destruction of data or systems (Destruction)

Although wireless LAN cards and wireless LAN stations (Access Points) have security measures against the threats above, no security settings may have been configured at the time of your purchase.
All security features must be configured according to reference manuals of the wireless LAN devices, which results in reducing vulnerability to the attacks described above.
Use the wireless devices with a clear understanding that wireless LAN includes vulnerabilities that could allow attackers to simply bypass security features. Security measures are important for all users to understand for the safe use of wireless LAN. SHARP encourages all users to configure the security settings with their own judgment and responsibility.

About This Manual

Notice

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SHARP strongly recommends that separate permanent written records be kept of all important data. Data may be lost or altered in virtually any electronic memory product under certain circumstances. Therefore, SHARP assumes no responsibility for data lost or otherwise rendered unusable whether as a result of improper use, repairs, defects, battery replacement, use after the specified battery life has expired, or any other causes.

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Recording Important Information

For future reference, please record the following information in the spaces provided below.

Model Number:

Serial Number:

Date of purchase:

Dealer's Name:

Place of purchase:

Password:

The serial number is printed on a sticker located on the bottom of the computer.

Manual Conventions

This manual uses a set of style conventions described below.

Notes and Cautions are italicized with icons:

A note icon informs you of a special technique or information that may help you perform a task or better understand a process.

A caution icon alerts you to something that may cause a problem or damage to hardware, software or data.

Key Labels on the Keyboard, when referred to in the instructions, are shown in boldface:

Press **Enter** to continue.

When two or more keys are separated by a plus (+) sign, press and hold down the first key (or first two keys), and then, press the last key:

Run *Task Manager* by pressing **Ctrl**+**Alt**+**Delete**.

Sample Entries are shown in lower cases of different typeface.

`c:\windows\system`

Words/Texts on Screen, such as window titles or possible parameters, are italicized:

Double-click this icon to display the *Power Options Properties* dialog box.
Set the item to *Enabled*.

Screens reproduced in this manual may differ slightly from the screens you see on your computer.

Section Titles in other parts of this manual are italicized:

Refer to *Connecting to AC Power Source* section of Chapter 1.

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Power Indicator
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Hard Disk Indicator

Battery Indicator
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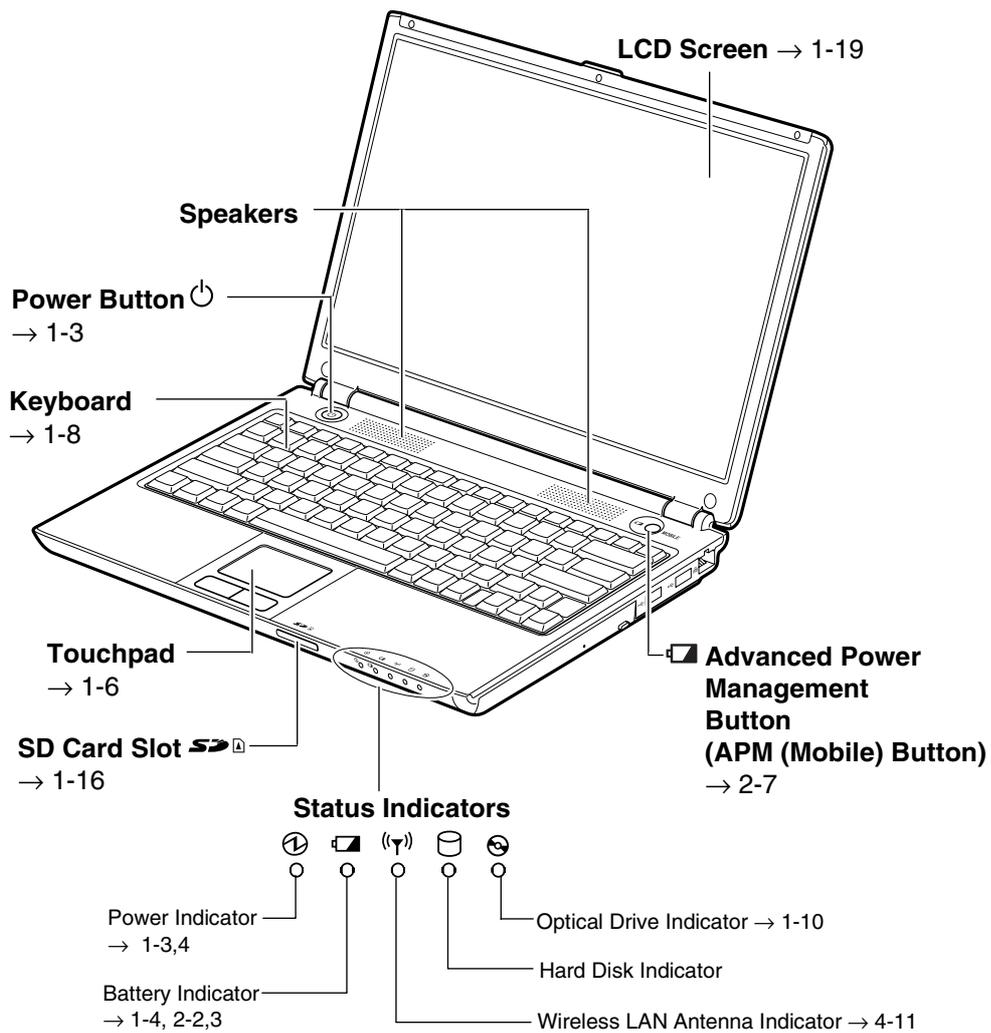
Never turn off the computer when the hard disk indicator or the optical drive indicator is on. This may damage the data on the hard disk.

Right

LAN Jack 品
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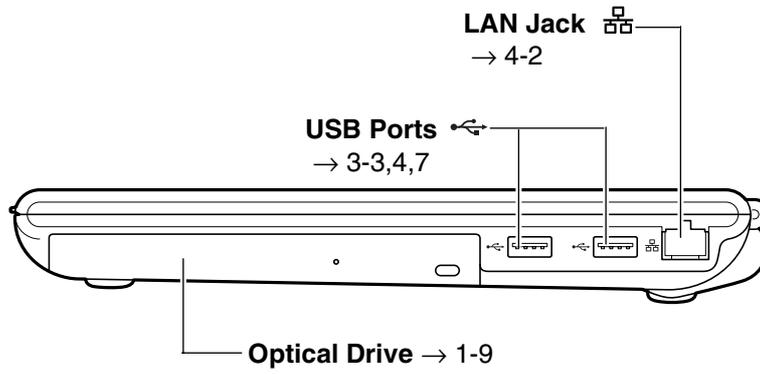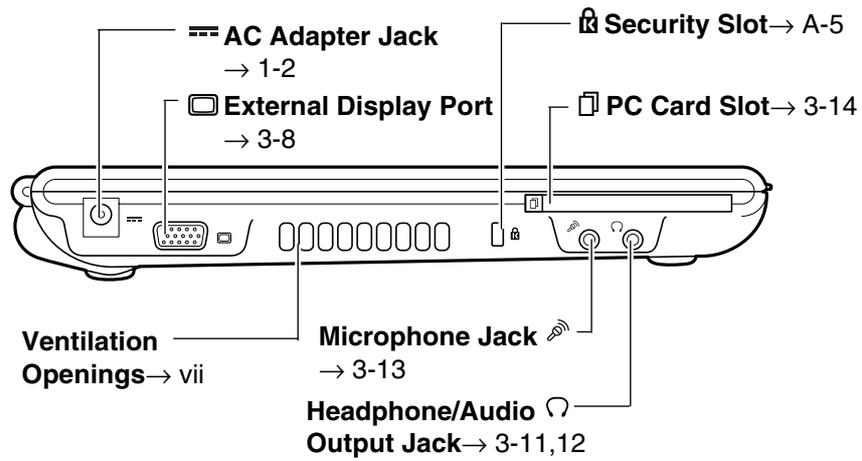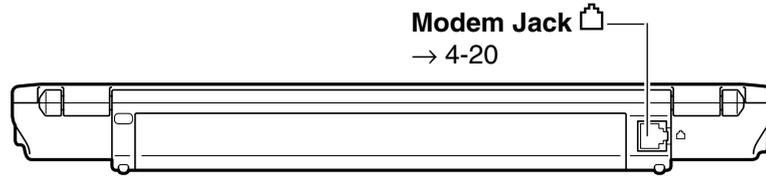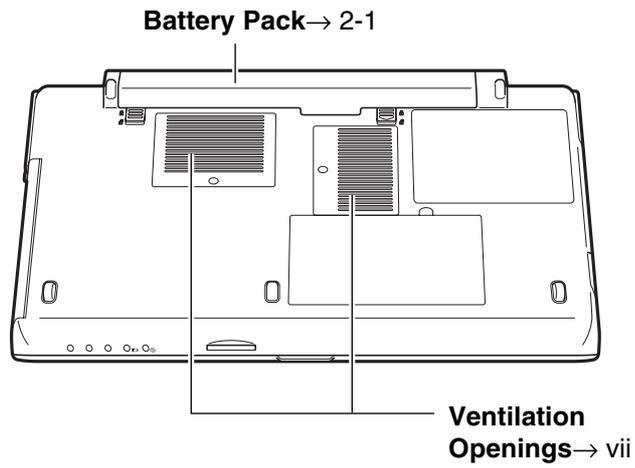
CHAPTER 1

1

Basic Operations

This chapter describes the basic operations of the computer.

> ✓ ***Properties Dialog Box on Windows***
> *In this manual, you will often see the expression "XXX Properties dialog box." A dialog box is a window containing text boxes, check boxes, buttons, etc, with which you can send commands to Windows or other application programs. To open the properties dialog boxes, click* start - Control Panel. *The Control Panel has two types of views: Category view and Classic view. The Category view allows you to choose the category that may be related to what you want to do, then, choose the task by clicking it. The Classic view gives you the icons representing their components or features. Double-click one of the icons to open their dialog boxes or windows. Some of the dialog boxes you will use often are:*
> - *Display*
> - *Phone and Modem Options*
> - *Mouse*
> - *Power Options*
> - *System*
>
> *Clicking* Switch to XXX View *string appearing at the upper left of the* Control Panel *window allows you to toggle between the two views.*

Connecting to AC Power Source

> ⚠ - *Always use the AC adapter (EA-MW1V) and the AC power cord included with the computer or optional ones. Using others may damage the computer.*
> - *Always hold the AC power cord by the plug when removing it from the wall outlet. Never pull on the cord.*
> - *Never plug in and out the AC power cord with wet hands.*

Basic Operations

1. Plug the AC power cord into the AC adapter.
2. Plug the AC adapter cable into the AC adapter jack on the computer.
3. Plug the AC power cord into a wall outlet.

1

AC Adapter Cable ②

AC Adapter Jack

AC Power Cord ①

③ AC Adapter

To Wall
Outlet
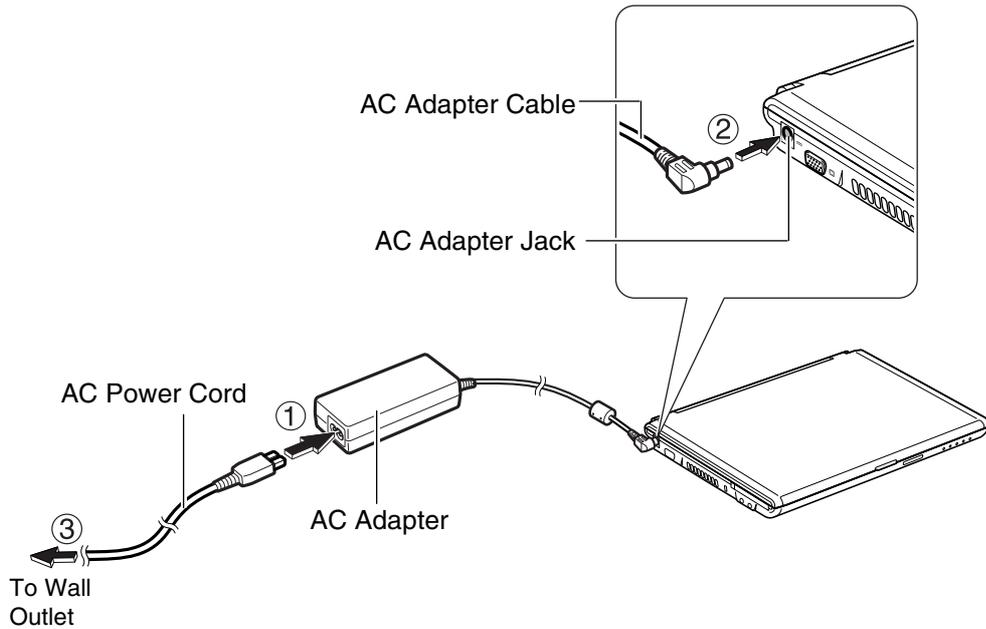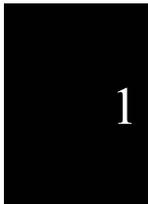
4. Steady the base cabinet of the computer with one hand and hold the jutted part
   with your thumb or finger of the other hand, and then raise the cover.

Jutted Part
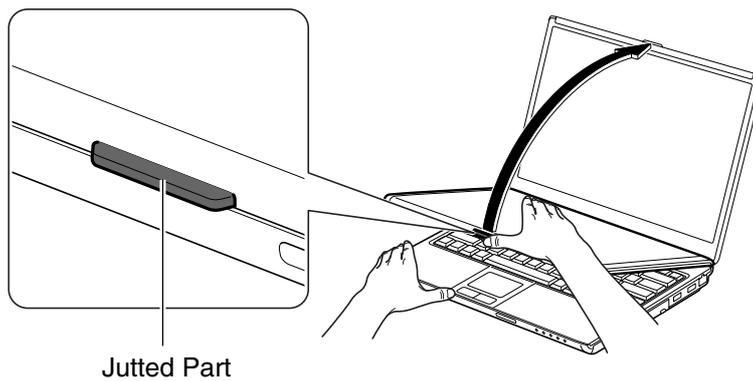
5.   Press the power button to turn on the computer.
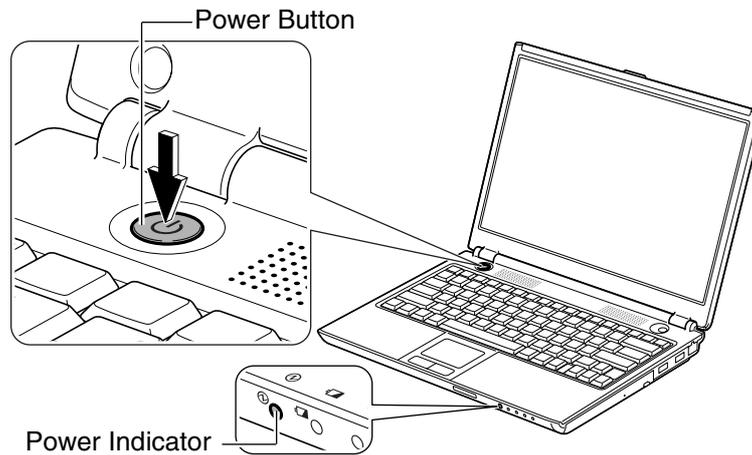
Power Button

Power Indicator

✓ *When you turn on the computer, the power indicator (⏻) lights green, the computer goes through a self test to detect any problems, and the Windows setup process starts.*

⚠ *Do not touch or operate the keyboard and touchpad until Windows completely activates unless you are prompted to do so. Otherwise, Windows may not start properly.*

Turning Off Your Computer

When you've finished using the computer, turn it off by following these steps.

1.   Click *start – Turn Off Computer.*

2.   In the *Turn off computer* dialog box, click *Turn Off.*

Close the cover to keep the screen and keyboard clean and protected.

✓
- *When* Shut down *is assigned to the power button in the* Power Options Properties *dialog box, pressing the power button also turns off the computer. You can change the assignment in the* Advanced *tab of the* Power Options Properties *dialog box.*
- *If you have not saved a file, a dialog box will appear asking whether you want to save it.*
- *If the message "Other people are logged on to the computer…," click* No *and finish the task(s) performed by other users.*

⚠️
- *Do not turn off, reset or move the computer while the hard disk indicator, the optical drive indicator or the indicator on an optional external floppy disk drive unit is lit. Doing so may damage or even wipe out the data.*
- *Before turning it back on, wait at least ten seconds after the computer is turned off. Turning the power off and on in rapid succession can damage the computer's electrical circuitry.*

Choosing Power Source

You can use the computer with one of the following power sources:

- AC power from a wall outlet
  Use AC power whenever possible; rely on the battery only when AC power is not available.

- Rechargeable battery
  The computer is equipped with a standard battery pack. See Chapter 2 for the battery information.

About Power Indicators

The following indicators show the power status of the computer.

Indicator	Light		Meaning
Power ⏻	On (green)		Operating
	Blinking (green)		In System Standby
	Off		Powered off or in System Hibernate
Battery 🔋	Connected to AC Power Source	On (green)	Fully charged
		On (orange)	Being charged
		Blinking (orange)	In abnormal state (See page 2-2.)
	Powered by Battery	Off	Has power
		Blinking (red)	Almost completely discharged (The warning beep sounds.)

The battery indicator is always off when the computer is turned off and not connected to AC power source.

✅
- *When the battery is hot, the battery indicator may turn off and stay off until the battery becomes cool.*
- *For more information on System standby/hibernate, see Chapter 2.*

Using the AC Adapter

When connected to a wall outlet, the AC adapter provides power for operation and charges the battery. The AC input voltage can range from 100 to 240 volts so that you can use the computer with the appropriate plug adapter.

The AC power cord included with the computer is appropriate for the voltage used in the area in which you purchased the computer. If you attempt to connect the computer to a wall outlet other than in this area, check the voltage of the outlet and use an AC power cord appropriate for the outlet. Consult the local service staff if you are not sure.
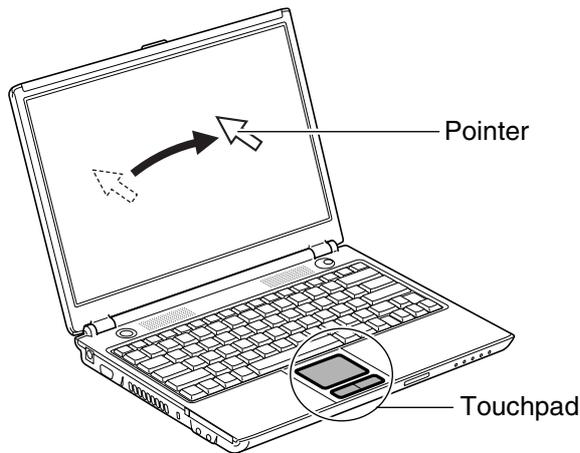
1
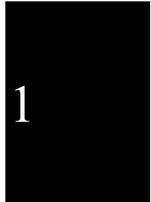
Using the Touchpad

The computer is equipped with an integrated touchpad pointing device. Using the touchpad, you can move the pointer, select an item from a menu, and perform other tasks in the same way you would with a mouse.

Pointer

Touchpad

> ⚠ • *Do not hit or scratch the surface of the touchpad with pointed objects (such as a ballpoint pen). It may damage the surface of the touchpad.*
> • *Do not operate the touchpad with a moist finger. This may cause the touchpad to operate incorrectly and to be damaged.*

Using the Touchpad

Take a moment to become familiar with how the touchpad works.

Place Your Fingertip

Place your left or right hand next to the touchpad, resting your wrist naturally in a relaxed manner. Place your thumb or finger on the touchpad.

Move Your Fingertip

The rectangular pad of the touchpad is used to move the pointer around the display. As you slide your fingertip across the pad, the pointer on the screen moves in the same direction across the screen. The touchpad is very sensitive, so you do not have to exert much pressure on the pad. The touchpad will respond to a light touch from your fingertip.

Click, Double-click, and Right-click

To click or double-click, you can use the left button just like that of a mouse. Instead of clicking the left button, you can also just tap gently anywhere on the rectangular pad. For right-clicking, you must use the right button.

 If the interval between clicks is too long, the double-clicking will not work.

1
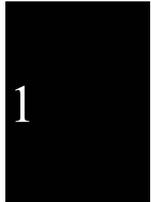
Drag and Drop

You can move items by using the "drag and drop" method described below:

1. Position the pointer over the item you wish to move.

2. Press the left button; do not release it.

3. Move the pointer while holding the left button. The item moves together with the pointer.

4. Release the button when the item reaches its destination.

Or you can tap the pad twice and hold it instead of pressing the left button in the step 2.

Scroll

You can scroll through information in a list or in a document by using the touchpad. To view information vertically, place your finger on the most right part of the touchpad and slide your finger up and down. To view horizontally, place your finger on the bottom part of the touchpad and slide your finger to the left or the right. This procedure works only in limited applications.

Changing the Configuration

In the *Mouse Properties* dialog box, you can change the configuration of the touchpad, such as swapping left and right buttons, changing the pointer size, etc. Double-click the ▗▖ icon on the taskbar.

Using the Keyboard

The computer, equipped with the Windows Enhanced Keyboard, provides all the functionality of a full-sized desktop keyboard.

1

Special Keys

| 🪟 | Windows Key | Opens the Windows start menu. This key works in the same way as the *start* button on the screen. |

| 🗒 | Application Key | Opens short-cut menus for the specific items. This key works in the same way as the right mouse button. |

System Function Keys

The keyboard contains the function keys labeled **F1** through **F12** for special actions. Use them in conjunction with the **Fn** key.

> *When the **Fn** key and one of the function keys (except **F11** and **F12** keys) are pressed together, an indicating icon(s) related to the selected function will appear on the screen.*

Fn + F1 (〔ᵀ〕)*   Turns the wireless LAN antenna on and off.

Fn + F3 (▼◁))   Decreases the audio volume.

Fn + F4 (▲◁))   Increases the audio volume.

Fn + F5 (⬚)   Rotates display mode among LCD only, an external monitor only, and both (when an external monitor is connected).

Fn + F6 (▼☼)*   Decreases the LCD screen brightness.

Fn + F7 (▲☼)*   Increases the LCD screen brightness.

Fn + F10 (✖)*   Mutes the sound. To resume, press them again.

Fn + F11 (⬚)   Turns the LCD screen and an external monitor screen (when it is connected) on and off.

Fn + F12 (❚❚)   Forces the computer to enter a standby mode or a hibernation mode, or to power off.

(See the *Power Saving* section on page 2-7 for more information.)

* The APM button provides the same functions. If you press the APM button, the settings of the currently selected APM button mode will be applied. (For more information, refer to the *Using the Advanced Power Management Button* section on page 2-9.)

Using the Optical Drive

The computer is equipped with an optical drive allowing you to read from DVD and CD, and write onto CD-R/RW disks. Refer to the table below for the appropriate disks.

> ⚠️ **CAUTION FOR LASER**
> *Use of controls or adjustments or performance of procedures other than those specified herein may result in hazardous radiation exposure.*
>
> CLASS 1 LASER PRODUCT
> LASER KLASSE 1

✓ *Some disks are not available for the computer in reading or writing.*

("−" not supported by disks, "No" not supported by the drive.)

Disk Type		CD-R/RW & DVD-ROM Drive		
		Reading	**Writing**	**Rewriting**
CD-ROM[1] Audio CD		**Yes**	**−**	**−**
CD-R		**Yes**	**Yes**	**−**
CD-RW High Speed CD-RW Ultra Speed CD-RW		**Yes**	**Yes**	**Yes**
DVD-ROM DVD-VIDEO		**Yes**	**−**	**−**
DVD-R	single layer	**Yes**[2]	**No**	**−**
	double layer	**No**	**No**	**−**
DVD-RW		**Yes**[2]	**No**	**No**
DVD+R	single layer	**Yes**[2]	**No**	**−**
	double layer	**Yes**[2]	**No**	**−**
DVD+RW		**Yes**[2]	**No**	**No**
DVD-RAM[3]		**Yes**	**No**	**No**

*1 Including Video CD and Photo CD.
*2 To play a disk that is created by a commercial DVD authoring software or recorded by a commercial DVD recorder, it must have been finalized by the authoring software or recorder.
*3 The computer supports non-cartridge disks or Type2/Type4 removable cartridge disks. Before inserting a removable disk, remove the cartridge from the disk.

1

☑ • *The Sharp Systems website at http://www.sharpsystems.com may provide a list of recommended media.*
  • *To play back the created disk, be sure to use a compatible computer or device.*

Handling Disks

• Do not write on either side of the disk, particularly the non-label side. Data is read from/written onto the non-label side. Do not mark this surface.

• Keep your disks away from direct sunlight, heat and excessive moisture.

• Always hold the disks by the edges. Fingerprints, dirt or water on the disks can cause noise or mistracking. If a disk is dirty or does not play properly, clean it with a soft, dry cloth, wiping straight out from the center, along the radius.

Inserting Disks

1. Make sure the optical drive indicator light is not on; then press the eject button. The drive tray will pop out.
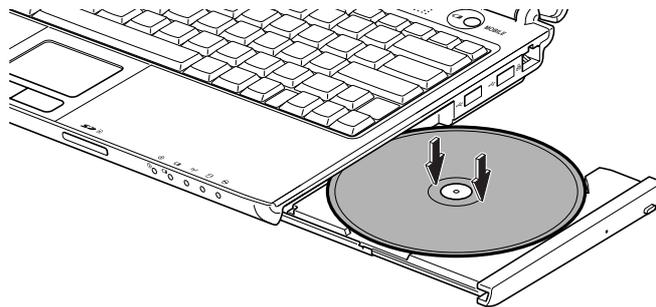

Eject Button

Optical Drive

Optical Drive Indicator
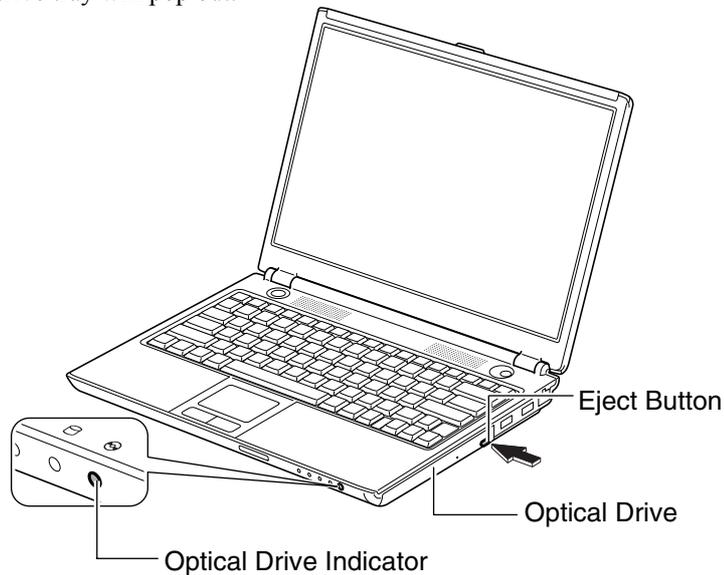
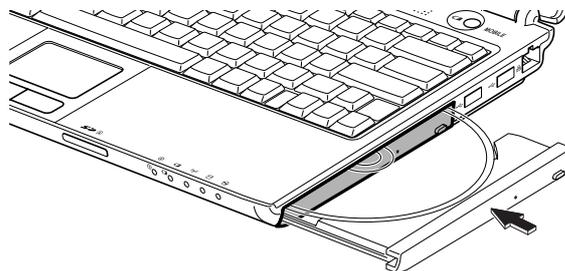2. Gently pull out the tray.
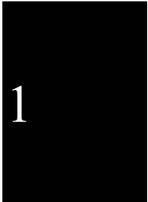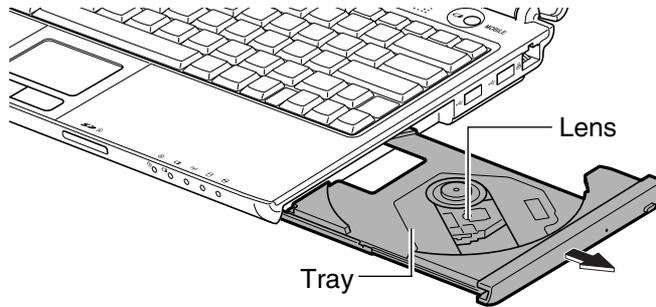
Lens

Tray

! *Do not touch the lens in the tray. If the lens becomes dirty, the drive may malfunction.*

3. Place your disk with label face up onto the tray and slightly press the center of the disk until it locks into place.

4. Gently push the tray back into the computer.
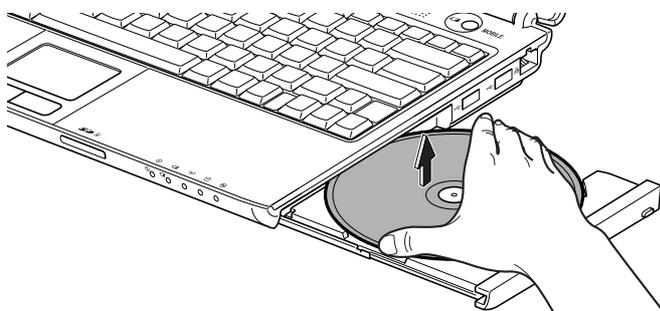
1

Removing Disks

1.   Make sure the optical drive indicator is not lit and press the eject button. The optical drive tray will pop out.

> ⚠️ *Make sure the optical drive indicator is not lit before pressing the eject button.*

2.   Gently pull out the tray.

3.   Holding its edge, remove the disk from the tray.

4.   Gently push the tray back into the computer.

> ⚠️ *Do not leave the tray pulled out.*

Writing Data to the Disk

You can use CD-R or CD-RW disks to write data. A CD-RW is an erasable disk onto which you can write data and from which you can erase data. A CD-R is a non-erasable disk onto which you can write data only once. If free space remains, you can add data until the disk is full.

> ✓
> - *Before writing to disks, follow the instructions below.*
>   - *Connect the AC adapter. If the battery is fully discharged, the writing process will stop and fail.*
>   - *Set the APM button mode to* Max Power *and set the* CPU performance *level to 100%. (See the* Using the Advanced Power Management Button *section on page 2-9.)*
>   - *Disable system standby and system hibernate. (See the* Power Saving

section on page 2-7.)
- *Close all unnecessary and automatic start-up applications.*
- *Disable the screen saver. (Refer to the* Wallpaper and Screen Saver *section on page 1-20.)*

- *Some disks restrict the writing or rewriting speed to ensure recording quality.*
- *When you copy data using the* Backup *utility of the preinstalled application, Drag'n Drop CD+DVD4, the backup destination should be the same disk type as the backup source.*
- *After creating an audio CD, you cannot add data into it even if it is not full.*

1
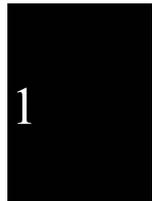
To write data, use the preinstalled application, Drag'n Drop CD+DVD4.
To run the Drag'n Drop CD+DVD4, click *start – All Programs – Drag'n Drop CD+DVD4 – Drag'n Drop CD+DVD4.*

- *See the online help of the Drag'n Drop CD+DVD4 for details and other features.*
- *You can also write data by the Windows CD writing feature. Refer to the Windows* Help and Support *for more information.*

Watching DVD Videos

You can watch DVD videos using the application called InterVideo WinDVD. See online help of the InterVideo WinDVD for more details.
To run the application, click *start – All Programs – InterVideo WinDVD – InterVideo WinDVD.*

- *Before watching DVD videos, follow the instructions below.*
  - *Connect the AC adapter. If the battery is discharged, the operation will stop.*
  - *Close all unnecessary and automatic start-up applications.*
  - *Disable the screen saver. (Refer to the* Wallpaper and Screen Saver *section on page 1-20.)*
  - *Set the output monitor either of the LCD and an external monitor. Outputting to more than one monitor may display the images improperly.*
- *For details on InterVideo WinDVD, refer to its* Help*. To open the* Help*, run InterVideo WinDVD, right-click somewhere in the* InterVideo WinDVD *window, and then, click* Help….

Changing the yRegion Code

A DVD video has a region code which prevents playback of the disk in certain regions. The region code is labeled on the top of the disk. When shipped from the factory, your optical drive is set to a region code applicable to your area.

1

⚠️ *Your optical drive region code can be changed. Code change is limited.*
Once the limit is reached, it cannot be changed any more.
To confirm the limit,
    1. Click start – My Computer – View system information.
    2. In the System Properties *dialog box, select the* Hardware *tab and click the* Device Manager *button.*
    3. In the Device Manager *dialog box, double-click the* DVD/CD-ROM drives *string and* MATSHITA xxxxxx. *(xxxxxx is your optical drive name.)*
    4. Select the DVD Region *tab.*
        The limit number is shown in the Changing remaining *field.*
    5. Click the Cancel *button.*
    6. Close the dialog boxes.

✓ *Make sure to log on the computer as a member of the Computer administrators group. Otherwise you cannot change the region code.*

Available region codes are:

Region Codes	Area
1	U.S.A, Canada
2	West Europe, Japan, South Africa
3	South East Asia
4	Australia, Spanish America
5	Russia, East Europe, Africa
6	China

To change the region code:

1.   Insert the DVD video that you want to play back into the optical drive.

    If the region code of the DVD video is different from that of your drive, the *Confirm Region* dialog box appears.

2. The region code currently selected is marked in the left box. The region code of your DVD video is marked in the right box. If you want to change the drive code and play the DVD video, click *OK*.

On some DVD videos, plural region codes are selectable in the right box of the Confirm Region *dialog box. Carefully choose an appropriate one.*

If the Confirm Region *dialog box does not appear:*
   1. *Follow the steps 1 to 4 in the instructions for confirming the limit of region code change on the previous page.*
   2. *Choose one of the listed distribution areas of the DVD video, then, confirm the region code shown in the* New Region *field is correct and click* OK.
   3. *Read the message on the screen, then, click* OK.

Using Parental Control

The InterVideo WinDVD offers the parental control feature to prevent your children from watching an inappropriate DVD.

1. Run the *InterVideo WinDVD*.
2. Right-click somewhere in the *InterVideo WinDVD 5* window and click *Setup….* The *Setup* dialog box will appear.
3. In the *Preferences* tab, click the *Set Password* button in the *Parental Playback Control* section.
4. Type a password twice and click *OK*.
5. Click *OK* in the confirmation window.
6. Click the *Set Rating* button and enter the password.
7. Click *OK*.
8. Select a control level and click *Set*.
9. Click *OK*. See online help of the *WinDVD* for more details.

Using the SD Card Slot

The computer is equipped with an SD card slot. You can insert/eject an SD memory card without turning off the computer. Before inserting an SD memory card into the slot, refer to its manual.

1

☑ • *You can use an SD memory card and a miniSD card (requiring a commercial adapter) on this computer. Note that copyright protection technology and high-speed transfer cannot be utilized.*
• *The computer does not support SD I/O cards.*
• *The SD card slot does not support multimedia cards.*
• *Be sure to use an SD memory card formatted by the device with which you intend to use the card.*
• *During data transfer, refrain from performing other tasks. Otherwise, the transfer speed becomes low as the CPU is utilized by other programs.*
• *Make sure to log on the computer as a member of the Computer administrators group. Otherwise you cannot eject the card safely and correctly.*
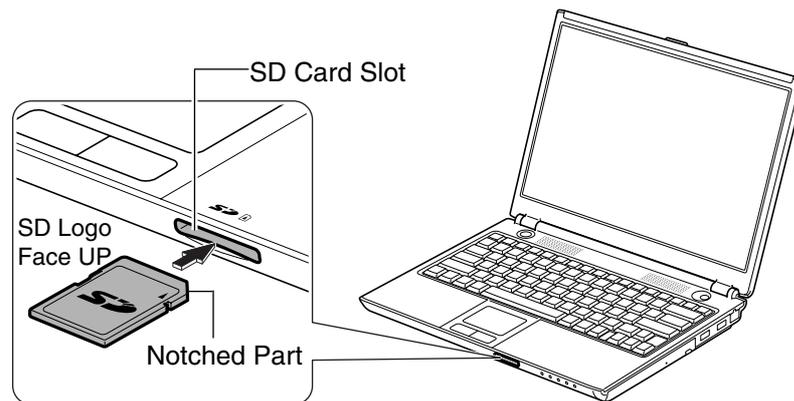
Inserting the SD Memory Card

☑ *You can insert an SD memory card without turning off the computer.*

1. When writing data onto an SD memory card, confirm it is not write-protected. If it is write-protected, unlock the write-protected switch of the SD memory card.

☑ • *You can read data from an SD memory card even if it is write-protected.*
• *For details on the write-protected switch, refer to the instructions of the SD memory card.*

2. Hold an SD memory card with the SD logo face up and the notched part toward the right and then insert it into the SD card slot.

1

SD Card Slot

SD Logo
Face UP

Notched Part

⚠ *Make sure to insert the card with the SD logo face up and the notched part toward the right. Otherwise, the SD memory card and the computer may be damaged.*

If the dialog box asking you *What do you want Windows to do?* appears, select the task you want.

## Ejecting the SD Memory Card

⚠ *Be sure to follow the instructions below when ejecting the SD memory card. Otherwise, the system may not work properly.*

1. Click the *Safely Remove Hardware* icon ( ) on the taskbar. If you cannot find the icon, click to show all kinds of icons.
2. Click *Safely remove Secure Digital Storage Device – Drive (X:)*; then, the *Safe To Remove Hardware* dialog appears.

3. Push the card into the computer and release it. The card will pop out slightly.

SD Memory Card

1
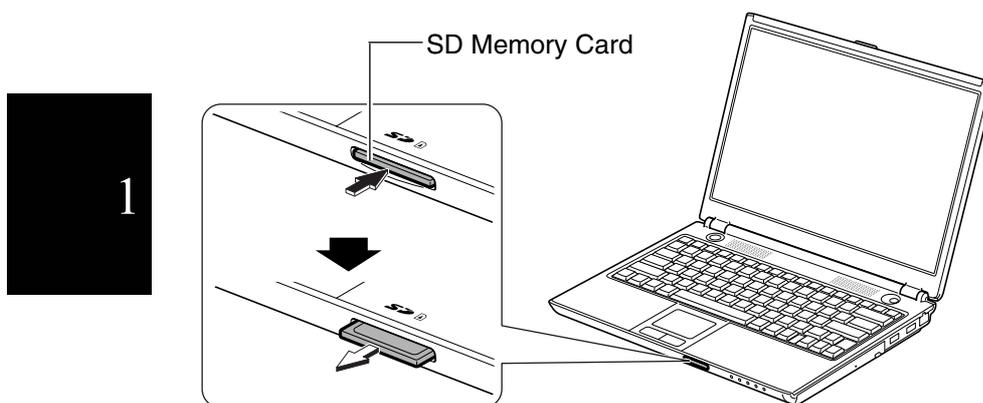
4. Gently pull out the card.

Controlling the Volume

You can adjust the output volume of the computer with the following volume controls that interact with each other.

- *If you mute the sound, a warning beep for critical or low battery power will not sound.*
- *If you press the APM button after setting the audio volume by the function keys or on Windows, the* Audio *setting of the currently selected APM button mode will be applied. (For more information, refer to the* Using the Advanced Power Management Button *section on page 2-9.)*

With Keyboard

Press **Fn+F3** (▼◁) keys to decrease the output volume.
Press **Fn+F4** (▲◁) keys to increase the output volume.
Press **Fn+F10** (✕) keys to mute the sound. To resume, press them again.

On Windows

1. Click *start - Control Panel*.

2. Click *Sounds, Speech, and Audio Devices*; then, *Sounds and Audio Devices*. If Classic view is selected, double-click the *Sounds and Audio Devices* icon.

3. In the *Sounds and Audio Devices Properties* dialog box, slide the lever to control the output volume.

4. Click *OK* and close the dialog box; then the *Control Panel* window.

1

> ✓ *You can also easily adjust the volume in the window that will open when clicking the speaker symbol on the taskbar. When the symbol is not on the taskbar, check the box of* Place volume icon on the taskbar *in the step 3.*
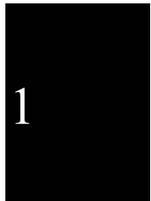
Adjusting the Display

You can adjust the brightness, resolution, and number of colors on the internal LCD display for more comfortable viewing.

Changing Brightness of Display

Press **Fn+F6** (▼☼) keys to decrease the brightness of the internal LCD display.
Press **Fn+F7** (▲☼) keys to increase the brightness of the internal LCD display.

> ✓ *If you press the APM button after changing the brightness by the function keys or on Windows, the* Brightness *setting of the currently selected APM button mode will be applied. (For more information, refer to the* Using the Advanced Power Management Button *section on page 2-9.)*

Changing Resolution and Number of Colors

When shipped, the computer is set to the default resolution and color. The default resolution is 1280 x 800 at 16M colors. To change the resolution and the number of colors, follow the instructions below:

1. In the *Display Properties* dialog box, select the *Settings* tab.

2. Select the number of colors in the *Color quality* field, and select the resolution in the *Screen resolution* field.

3. Click *OK*; then, *Yes*.

Available Resolutions and Colors

Resolution [*1]   : 800 x 600, 1024 x 768, 1280 x 768, 1280 x 800
Number of Colors [*2]: 64K, 16M

1

[*1] When displaying on your external display only, you can set any of the available resolutions for the external monitor. Note that some of the resolutions may not allow the monitor to work properly. Please check your monitor's specifications or with your monitor manufacturer.

[*2] The internal LCD screen supports 16,770,000 (16M) colors by using a Dithering algorithm.

- *You cannot switch to display resolutions and number of colors that are not available.*
- *In the* Color quality, Medium (16 bit) *means 65,536 (64K) colors, and* High (32 bit) *means 16,770,000 (16M) colors*.

Wallpaper and Screen Saver

Changing Wallpaper

1. In the *Display Properties* dialog box, select the *Desktop* tab.
2. Select desired wallpaper in the *Background* pull-down menu.
3. Click *OK*.

Setting Screen Saver

1. In the *Display Properties* dialog box, select the *Screen Saver* tab.
2. Select a desired screen saver in the *Screen saver* pull-down menu and set time when screen saver starts.
3. Click *OK*.

To disable the screen saver, select [None] *from the* Screen saver *pull-down menu.*

Sharing Your Computer

If you are sharing the computer with your colleagues or family members, set a user account for each person. Every user can choose their favorite desktop setting, web site lists, or make their own *My Documents* folder etc., and save them to their user accounts. When you turn on the computer, select your user account.

1

Setting a New User Account

1. Click *start - Control Panel*.

2. Click *User Accounts*. If the *Classic view* is selected, double-click the *User Accounts* icon.

3. Click the *Create a new account* string.

4. Type a name for the new account and click *Next*.

5. Select the account type; then, click *Create Account*. If you create a *Limited* account, your account has limits for using the computer. See the *Help and Support Center* in the *start* menu for more details.

6. Close the *User Accounts* dialog box; then, the *Control Panel* window.

If more than one user account is set to the computer, you must select which user account you will log in when you turn on the computer.

Log Off Your Computer

"Log off" is useful because you do not have to turn off the computer when you finish your task and pass the computer to another person. There are two ways to log off the computer, *Switch User* or *Log Off*.

If you select *Switch User*, you can pass the computer to another person without closing your current applications. For example, if you are viewing a Web site, and your colleague needs to open a program on the computer, use *Switch User*. You can then view the same Web site by just switching users after your colleague finishes with the computer.

If you select *Log Off*, the system will close all your session and you need to save your files before logging off the computer.

1. Click *start - Log Off*.

2. Select *Switch User* or *Log Off*. If you select *Log Off*, the dialog box asking you to save the data may appear.

3. Select a new account to start Windows again.

☑ *If you cannot see the* Switch User *in the* Log Off Windows *dialog box, click the* Change the way users log on or off *string in the* User Accounts *dialog box, and check* Use Fast User Switching *and click* Apply Options.

1 Setting the Password to User Account

You can set a password to each user account to avoid unauthorized use of the computer. Once you set the password, you need to enter it when you log on to its account. You cannot start the computer with the user account if its password is not correct, so unnecessary password setting can cause trouble in starting the system.

Setting the Password

1. Click *start - Control Panel*.
2. Click *User Accounts*. If the *Classic view* is selected, double-click the *User Accounts* icon.
3. Select the account you want to set a password to. You will only have this option if you log onto the computer as a member of the Computer administrators group. If you log on the computer with a limited user account, go to the next step. (You cannot set a password to another user account.)
4. Select the *Create a password* string.

☑ • *If the password has been already set, the* Create a password *will not appear.*
   • *Only the members of the Computer administrators group can set a password to another user account.*

5. Type a new password.
6. Type the new password again to confirm it.
7. If necessary, type a password hints word to remember the password you set.
8. Click *Create Password*.
9. If you are asked weather you want to make your files and folders private, click one of the *Yes, Make Private* and *No* buttons.
10. Close the *User Accounts* dialog box; then, the *Control Panel* window.

Changing the Password

1. Follow the steps 1-2 in the *Setting Password* section on the previous page.

2. Select the account you want to change, if you log on to the computer as a member of the Computer administrators group. If you log on the computer with a limited account, go to the next step. (You cannot change the password of another user account.)

3. Select the *Change the password* string or *Change my password* string.

1

> • *If the password has not been set yet, the* Change the password *or* Change my password *will not appear.*
> • *Only the members of the Computer administrators group can change the password of another user account.*

4. Type the current password. If you are changing another user's password, skip this step.

5. Type a new password.

6. Type the new password again to confirm it.

7. If necessary, type a password hints word to remember the password you set.

8. Click *Change Password*.

9. Close the *User Accounts* dialog box; then, the *Control Panel* window.

Deleting the Password

1. Follow the steps 1-2 in the *Setting Password* section on the previous page.

2. Select the account you want to delete its password, if you log on to the computer as a member of the Computer administrators group. If you log on the computer with a limited account, go to the next step. (You cannot delete the password of another user account.)

3. Select the *Remove the password* string or *Remove my password* string.

4. Type your password and click *Remove Password*. If you want to delete the password of another user account, just click *Remove Password.*

5. Close the *User Accounts* dialog box; then, the *Control Panel* window.
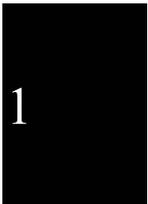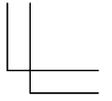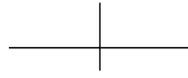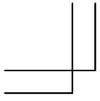
<u>Basic Operations</u>
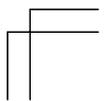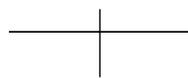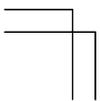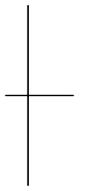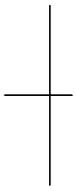
CHAPTER 2

Battery and Power Management

This chapter explains how to manage the computer's power effectively and how to use the battery pack.

> ☑ *In this section, you often see the expression "*Power Options Properties *dialog box." To open the dialog box:*
> 1. *Click* start – Control Panel.
> 2. *Click* Performance and Maintenance – Power Options *in the Category view or double-click the* Power Options *icon in the Classic view.*

The Battery Pack

When not connected to an external power source, the computer operates with the rechargeable battery pack. The duration of the battery life may be longer if the computer's power management is active. See the *Power Saving* section on page 2-7 for details on the power management.

To keep the battery life longer,

- Condition the battery pack if the actual remaining power in the battery is less than what the Windows *Power Meter* indicates. (See the *Conditioning the Battery Pack* section on page 2-4.)
- Turn off the computer while you are not using it.

> ☑ • *The duration of the battery depends on the computer usage. Using applications, which heavily use external peripherals, will result in shorter battery life.*
> • *When the battery has not been charged, the computer may not operate properly. Connect the AC power source to charge the battery.*

Charging the Battery Pack

Connect the AC adapter to the computer and leave it until the battery is fully charged.

2

To Wall
Outlet
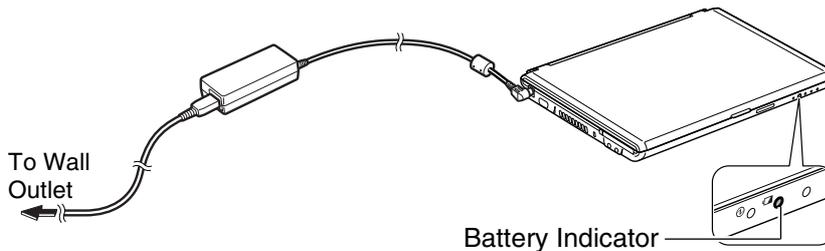
Battery Indicator

When the battery indicator (▭◢) lights orange, the battery is being charged. When the light turns green, the battery has been fully charged.

> ☑
> - *Charging time may vary depending on the status of the computer.*
> - *The battery indicator may turn off even while the battery is being charged. This is because the battery pack is hot and the charging stops temporarily. When the battery becomes cool, the charging will restart and the battery indicator will turn on again.*
> - *If the battery indicator blinks orange, the battery pack may not be installed correctly. In this case, turn off the computer, remove the AC adapter and the battery pack; then re-install the battery pack and connect the AC adapter again. If the battery indicator still blinks orange, consult your local dealer.*

Checking Battery Level

On Windows

You can check the battery level by placing the pointer on the battery icon (▯ : powered on battery) or the AC plug icon (▯ : powered on AC power and charging the battery pack) on the taskbar, or double-clicking one of these icons (▯, ▯, or ▯ : powered on AC power) to open the *Power Meter* dialog box. If the battery is fully charged, remaining capacity level will not appear even if you point to the icon.

If you cannot see the battery or AC plug icon, follow these instructions:

1. In the *Power Options Properties* dialog box, select the *Advanced* tab.
2. Check the box of *Always show icon on the taskbar* and click *OK*.
3. Close the *Control Panel* window.

- *The remaining operating time depends on the amount of the power the computer is consuming. If you are using the audio system, PC card slot, SD card slot, hard disk drive, or peripheral devices with the computer, it will consume more battery power.*
- *The* Power Meter *may not indicate correctly for a short period after the computer has resumed from a standby or hibernation mode.*
- *If the actual remaining power in your battery is less than what the* Power Meter *indicates, you should condition the battery pack as per the procedure on the* Conditioning the Battery Pack *section on page 2-4.*

2

Low Battery Indication

On Windows, you can set the battery level for sounding an alarm and letting the computer go into System standby, System hibernate or shut down.

When the battery power level becomes significantly low, the battery indicator (▭) blinks red and the warning beep sounds. Save your data and turn off the computer, or connect the AC power source immediately. Otherwise, the computer will be shut down and any unsaved data may be lost.

Battery Indicator
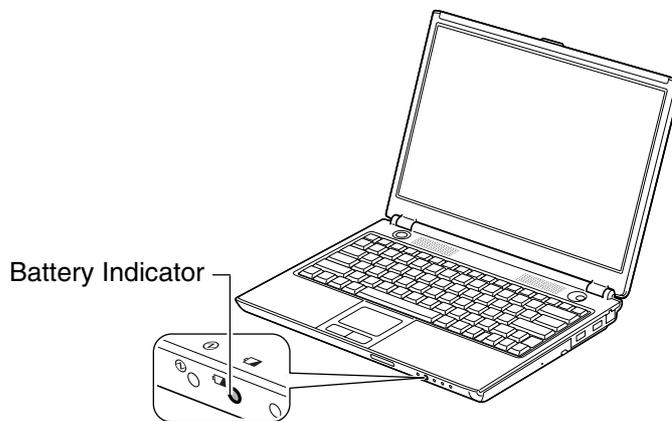
1. In the *Power Options Properties* dialog box, select the *Alarms* tab.
2. Set the battery level at which the alarms are activated. The recommended values of the *Critical battery alarm* are 5% or more and the *Low battery alarm* more than the value of the *Critical battery alarm*.
3. Set the *Alarm Action…* to the appropriate settings.
4. Click *OK* twice.
5. Close the *Control Panel* window.

2

Conditioning the Battery Pack

Condition the battery pack when the actual remaining power in your battery is less than what the Windows *Power Meter* indicates, or you may need to buy a new battery pack.

1. Connect the AC adapter and turn on the computer.
2. When the message *Press F2 for System Utilities* appears, press the **F2** to open the Setup Utility.
3. Press **Fn+F7** (▲☼) several times to maximize the LCD screen brightness.
4. Select the *Battery Menu* by using an arrow key (→) and then, press **Enter**.
5. Confirm that *Yes* is selected and then, press **Enter**.

   The conditioning process will start. The process includes charging, discharging, powering off the computer, and recharging in this order.

   The amount of time before the conditioning process is complete will be approximately 12.5 hours (max.).

   Do not turn on the computer until the battery is fully charged and the battery indicator turns to green.

   Repeated charging and discharging or long-term storage of the battery pack will cause battery deterioration. In this case, replace the battery pack with a new one.

Changing the Battery Pack

Repeated use of the battery pack gradually decreases its capacity and its deterioration rate depends on the operating environment. If the battery life becomes extremely short even after conditioning the battery pack, you should buy a new battery pack. Consult your local dealer for a new battery pack.

When you replace the battery pack with a new one:

1. Turn off the computer and disconnect the AC adapter from the computer.

2. Close the display cover and turn over the computer on a stable surface.

3. Slide the battery lever to the unlocked position ( ).
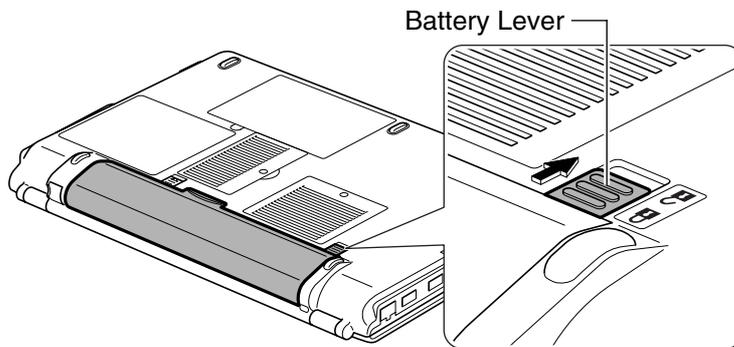
Battery Lever

4. Slide the spring release battery lever to the unlocked position ( ) and hold it; then hold the jutted part with your thumb or fingers and pull the battery pack out of the socket.
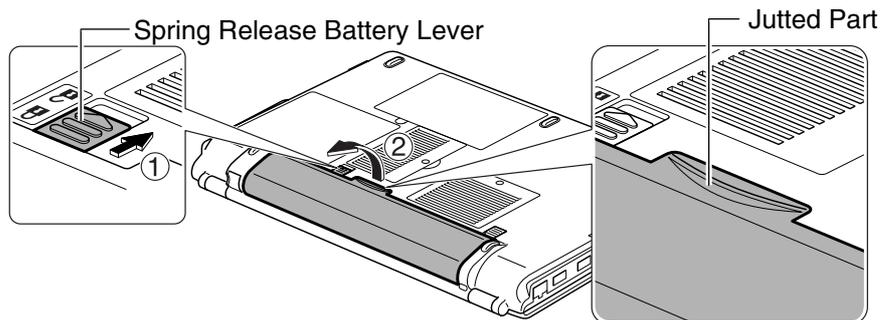
Spring Release Battery Lever   Jutted Part

5. Align the projecting parts of the new battery pack to the notched parts of the computer.

Projecting Parts
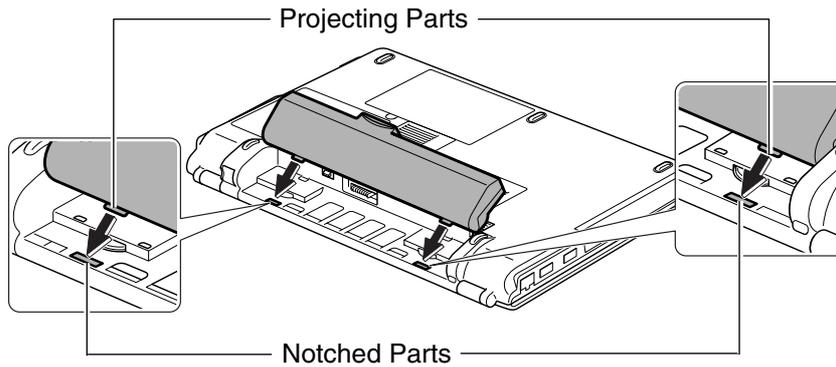
Notched Parts

> ⚠ *Be sure to completely match the projecting parts of the battery pack with the notched parts of the computer. Otherwise, the battery pack may drop out of the socket, and damage itself or cause injury.*

6. Keeping the projecting parts and notched parts matched, gently push down on the battery pack until you hear it click into place.
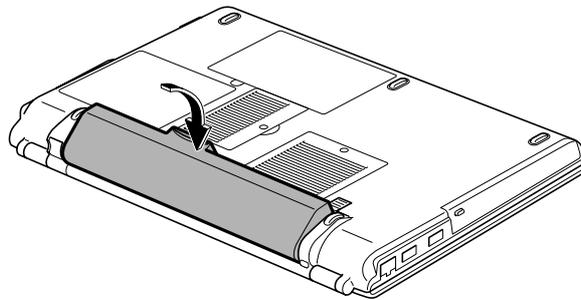
7. Confim that the spring release battery lever is in the locked position (🔒) and then slide the battery lever back to the locked position (🔒).

Spring Release Battery Lever   Battery Lever

2
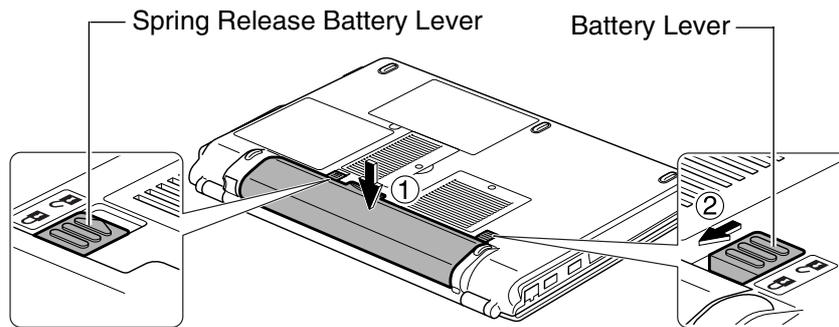
Power Saving

The computer is equipped with Advanced Power Management software that is activated by the APM button. This software can change the power management setting levels on up to eleven subsystems on the computer, such as CPU performance, screen brightness, and time to enter system standby or hibernation mode. The APM button provides three modes that you can use depending on operation and activity: Max Power mode, Mobile mode, and Max Mobile mode. You can also separately change the values on each mode to your favorite one.
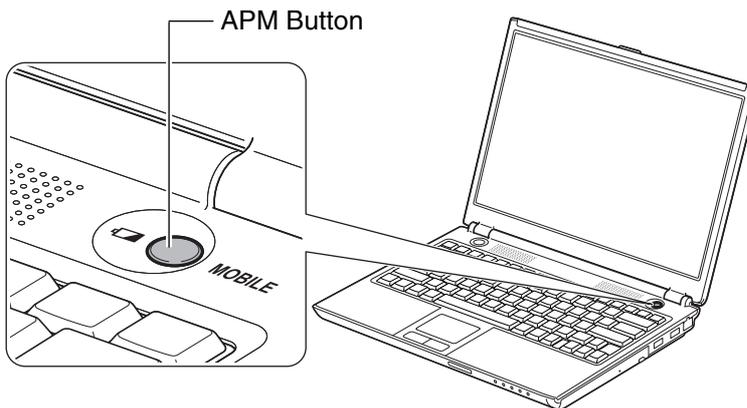
APM Button

About the APM Button Modes

- Max Power mode: Provides maximum system and subsystem performance.
- Mobile mode: Provides controlled CPU performance and screen brightness.
- Max Mobile mode: Provides more controlled CPU performance and most components are in low power mode.

2

> *These three modes are defined here according to their default values. (Refer to the table in the* Setting Items and Default Values *section on page 2-9 for the default values.)*

About the APM Button Setting Items

The APM button provides the following items of which the setting levels are changeable: CPU performance, screen brightness, wireless LAN, optical drive, time before turning off monitor, time before turning off hard disk, time before entering system standby mode, time before entering system hibernation mode, wallpaper, LCD refresh rate, and audio sound.

> *Refer to the table of the* Available APM Button Setting Levels *on page 2-12 for details of the setting items and their available setting levels.*

About System Standby/Hibernate

System standby/hibernate is a very useful power management tool. For example, after the computer has entered a system standby mode, you can restart the computer more quickly when compared to restarting after a normal shutdown operation. When the computer resumes from a system standby or hibernation mode, the system restores the exact last state of the computer. In Windows, the *System standby* and *System hibernate* are defined as following:

- *System standby* stores the current condition of the computer in RAM and stops power supply to all but a few essential components. In a standby mode, the power indicator blinks green. To resume from the standby, press any key.
- *System hibernate* saves the current condition of the computer in part of the hard disk and turns off the computer. In a hibernation mode, the power indicator is off. To resume from the hibernation, press the power button.

> - *Before the computer enters a standby or hibernation mode, finish communications, printing, and playing music or video.*
> - *Do not operate the computer or peripheral devices and connect or disconnect peripheral devices, while the computer is entering or*

> *resuming from a standby or hibernation mode.*
> - *Save your data before the computer enters a standby mode. If the power supply to the computer is stopped, the RAM contents will be lost.*

✓ *Select your user account if Windows requires when the computer resumes from the standby or hibernation mode.*

2

Using the Advanced Power Management Button

The APM button provides three modes that you can select depending on operation and activity: Max Power mode, Mobile mode, and Max Mobile mode.

Setting Items and Default Values

The following are the APM button setting items and their default values.

Modes / Items	Max Power	Mobile	Max Mobile
CPU performance	100%	75%	50%
Brightness	100%	69%	38%
Wireless LAN	ON	Do nothing	Do nothing
Optical drive	Do nothing	Do nothing	Do nothing
Turn off monitor	After 20 mins	After 10 mins	After 3 mins
Turn off harddisk	After 20 mins	After 10 mins	After 3 mins
System standby	After 25 mins	After 15 mins	After 10 mins
System hibernate	After 1 hour	After 20 mins	After 15 mins
Wallpaper	Your background	Your background	Your background
LCD refresh rate	60Hz (high quality)	60Hz (high quality)	40Hz (power saving)
Audio	Do nothing	Do nothing	Do nothing

✓ - *You can change the value separately depending on operation and activity.*
- *For more information on the setting items and available setting levels, refer to the* Changing the APM Button Setting Levels *section on page 2-11.*
- *The item with "Do nothing" selected cannot be turned on or off by pressing the APM button. To turn them on or off using the APM button,* ON *or* OFF *(or* Mute*) must be selected. (Refer to the* Changing the APM Button Setting Levels *section on page 2-11.)*

- *Controlled CPU performance levels (that are other than 100%) may cause some applications such as DVD playback to perform improperly. Change the CPU performance level back to 100%.*
- *When you press the APM button, the current setting levels of the selected mode is applied. In this case, the values you have applied in the* Power Options Properties *dialog box or by the keyboard are replaced with those of the selected mode of the APM button.*

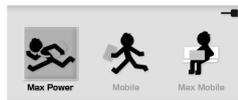**2**

Changing the APM Button Mode

Pressing the APM button will display which APM button mode is operational. Additional presses of the button will change the mode.

1. Press the APM button.
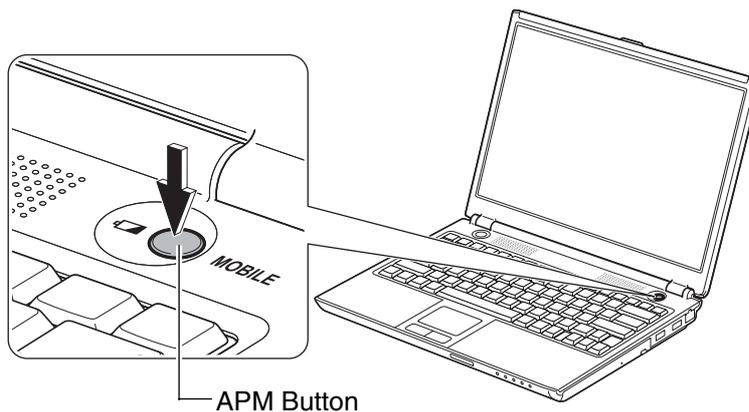
APM Button

One of the following windows will appear and the highlighted mode will be operational.
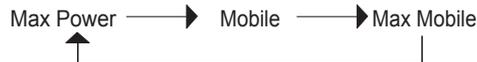
Max Power mode   *Mobile mode*   *Max Mobile mode*

2. While one of the windows is on the screen, press the APM button to change to the desired mode.

☑ *Pressing the APM button rotates the mode in this order.*

Max Power ⟶ Mobile ⟶ Max Mobile

Changing the APM Button Setting Levels

The setting levels of each mode can be separately determined from the provided lists. To change the values, follow theses steps.

1. Click *start – All Programs – SHARP Advanced Power Management Utility – Advanced Power Management Button Settings*.

☑
- *The APM button settings window will appear.*
- *Clicking the* SHARP Advanced Power Management Utility *icon ( )* *on the taskbar also allows the APM button settings window to appear.*

2. Click on the value to be changed.

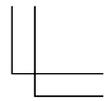☑ *The selected field will have a pull-down button ( ).*

3. Click the pull-down button ( ) to display the list and then select your desired value.

☑
- *You can change the setting level to any values in the provided list of any mode.*
- *The selected value will be applied immediately after it is selected. If the value is not applied, press the APM button. To immediately apply the change, the* SHARP APM Button *must be selected in the* Power schemes *field in the* Power Options Properties *dialog box in the Control Panel.*

4. Click the close button ( ) to close the settings window.

Available APM Button Setting Levels

|		
CPU performance	Four options are provided: *100%, 75%, 50%,* and *25%.* [*1]	
Brightness	Thirteen options are provided: *100%, 92%, 85%, 76%, 69%, 62%, 54%, 46%, 38%, 31%, 23%, 15%,* and *8%.* [*2]	
Wireless LAN	ON	Enables the wireless LAN antenna.
	OFF	Disables the wireless LAN antenna.
	Do nothing	Makes no changes to the setting. When *Do nothing* is selected, use the **Fn+F1** (($_Y$)) keys to enable or disable the wireless LAN antenna. (See page 4-11.)
Optical drive	ON	Turns on the optical drive.
	OFF	Turns off the optical drive.
	Do nothing	Makes no changes to the setting. When *Do nothing* is selected, follow the steps on page 2-15 or 2-16 to turn on or off the drive.
Turn off monitor	Specifies an elapsed time before the monitor turns off.[*3] Sixteen options are provided: *1 min, 2 mins, 3 mins, 5 mins, 10 mins, 15 mins, 20 mins, 25 mins, 30 mins, 45 mins, 1 hour, 2 hours, 3 hours, 4 hours, 5 hours,* and *Never*.	
Turn off hard disk	Specifies an elapsed time before the hard disks turn off.[*4] Fourteen options are provided: *3 mins, 5 mins, 10 mins, 15 mins, 20 mins, 25 mins, 30 mins, 45 mins, 1 hour, 2 hours, 3 hours, 4 hours, 5 hours,* and *Never*.	
System standby	Specifies an elapsed time before the computer enters system standby mode.[*3] Sixteen options are provided: *1 min, 2 mins, 3 mins, 5 mins, 10 mins, 15 mins, 20 mins, 25 mins, 30 mins, 45 mins, 1 hour, 2 hours, 3 hours, 4 hours, 5 hours,* and *Never*.	
System hibernate	Specifies an elapsed time before the computer enters system hibernation mode.[*3] Sixteen options are provided: *1 min, 2 mins, 3 mins, 5 mins, 10 mins, 15 mins, 20 mins, 25 mins, 30 mins, 45 mins, 1 hour, 2 hours, 3 hours, 4 hours, 5 hours,* and *Never*.	
Wallpaper	Your background	Sets the wallpaper selected in the *Background* field in the *Display Properties* dialog box.
	White[*5]	Sets the white wallpaper to save power.
LCD refresh rate	Adjusts the LCD refresh rate between 60 Hz and 40 Hz.[*6]	
Audio	ON	Turns on the output sounds.
	Mute[*7]	Turns off the output sounds.
	Do nothing	Makes no changes to the setting. Use the **Fn+F10** ($\boxtimes$) keys to turn on or off the sounds. (See page 1-18.)

[*1] Smaller value saves more power. Before writing, playing animation, or communicating, select 100% to maximize the CPU performance.
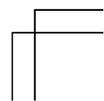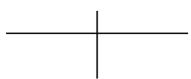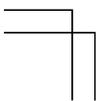
[2] Smaller value saves more power.
[3] The process will start after the specified time with no activity.
[4] The process will start after the specified time with no access to the hard disks.
[5] The *White* wallpaper covers the screen with white. Increasing the amount of white area on the screen will reduce power consumption.
[6] 60 Hz of the LCD refresh rate provides highest quality pictures and 40 Hz saves power.
[7] If *Mute* is selected, a warning beep for critical or low battery power will not sound.

> ☑ • *Care should be taken when pressing the APM button while using the optical drive or wireless LAN. Applying the mode where the* Optical drive *or* Wireless LAN *is set to* OFF *will stop the current reading/writing process or communication.*
> • *To reset to the default setting values of the APM button, click* start – All Programs – SHARP Advanced Power Management Utility – Reset to default.

2

Disabling System Standby/Hibernate

Before writing data onto a CD or communicating through the built-in modem, prevent the computer from entering a system standby or system hibernation mode so that the writing process or transferring will not be disturbed.

1. Click *start – Control Panel*.

2. Click *Performance and Maintenance – Power Options*. If the *Classic* view is selected, double-click the *Power Options* icon.

3. In the *Power Schemes* tab, select *Always On* in the *Power schemes* pull-down menu.

4. Confirm the *System standby* and *System hibernates* fields have *Never*.

5. Click *OK*.

6. Close the window.

> ☑ *Pressing the APM button after disabling system standby/hibernate through the above process will apply the* System standby *or* System hibernate *settings of the currently selected APM button mode.*

Entering a Standby/Hibernation Mode Immediately

You can allow the computer to enter a system standby or system hibernation mode in each of the following cases:

- You select *Stand By* or *Hibernate* (which will replace *Stand By* if you press **Shift** key) in the *Turn off computer* dialog box. To open the dialog box, click *start – Turn Off Computer*.

- The screen cover is closed.
  The above functions after you perform the following:

1. In the *Power Options Properties* dialog box, select the *Advanced* tab.
2. Select *Hibernate* or *Stand by* in the *When I close the lid of my portable computer* field.
3. Click *OK*.
4. Close the *Control Panel* window.

- You press the power button.
  The above functions after you perform the following:

1. In the *Power Options Properties* dialog box, select the *Advanced* tab.
2. Select *Hibernate* or *Stand by* in the *When I press the power button on my computer* field.
3. Click *OK*.
4. Close the *Control Panel* window.

- You press the **Fn+F12** (▮▮).
  The above functions after you perform the following:

1. In the *Power Options Properties* dialog box, select the *Advanced* tab.
2. Select *Hibernate* or *Stand by* in the *When I press the sleep button on my computer* field.
3. Click *OK*.
4. Close the *Control Panel* window.

✓ *If* Ask me what to do *is selected in the step 2 of* You press the power button *or* You press **Fn+F12** *(*▮*)*, *the Turn off computer dialog box will appear when you press the power button or the **Fn+F12** (*▮*) key combination. You can select System standby or System hibernate at that timing.*

• The battery level is low.
  The above functions after you set the alarm in Windows. See the *Low Battery Indication* section on page 2-3.

2

Powering Off the Optical Drive

Powering off the optical drive also reduces power consumption. When you do not use the optical drive, disconnect the connection between the optical drive and the computer to turn off the drive.

✓ • *While the optical drive is powered off, the* DVD/CD-RW Drive (E:) *icon does not appear in the* My Computer *window.*
  • *Depending on what the* Optical drive *is set to in each of the APM button modes -* ON *or* OFF- *will determine what the setting is when the APM button is pressed.*

Disconnecting the Optical Drive

1. Click the *Safely Remove Hardware* icon ( ) on the taskbar. If you cannot find the icon, click   to show all kinds of icons.

2. Click on the *Safely remove MATSHITA xxxxxx*. (xxxxxx is your optical drive name.)

✓ • *The optical drive will be disconnected from the computer and powered off.*
 • *The optical drive bay cannot be removed from the computer.*

Reconnecting the Optical Drive

To power on the optical drive and resume the connection, use one of the following instructions. It will take some time for the optical drive to be recognized by the computer after you complete one of the following:

- Press the **Fn** key and hold it, then, press the **F2** key.
- Press the eject button of the optical drive.
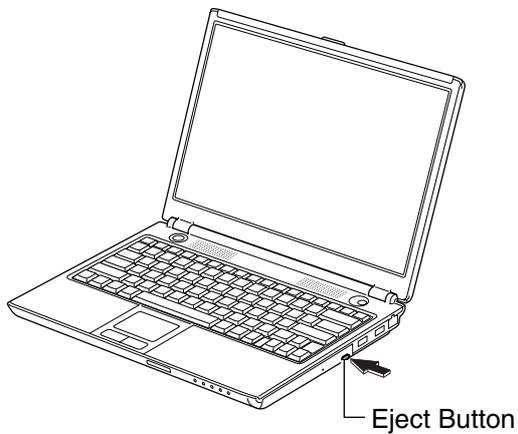
Eject Button

> *The eject button does not work for reconnecting immediately after you turn on the computer. Wait until Windows has booted up, and then, press the eject button.*

CHAPTER 3

Peripherals

This chapter describes how to use peripheral devices with the computer. You can connect an optional floppy disk drive unit, a printer, an external monitor, a PC card, or other devices to the computer. To ensure the proper use, be sure to read the instructions for each peripheral device before connecting it to the computer.

Peripheral Device Ports

3

The computer has connection ports for the peripheral devices shown on the next page. For the connection, refer to the section explaining each device, or contact your dealer.

- *Be sure to turn off the computer and the peripheral devices before connecting them (except when connecting/inserting a USB device or a PC card).*
- *Confirm the peripheral devices you will connect are Windows XP compatible.*
- *When you connect some of the devices, you may have to turn on the computer before powering on the devices.*
- *Some devices require that you install the appropriate drivers before use.*

Connection Ports for Peripherals

3

Ω Headphone
 /Audio Output Jack

🎤 Microphone Jack

⬜ External Display Port
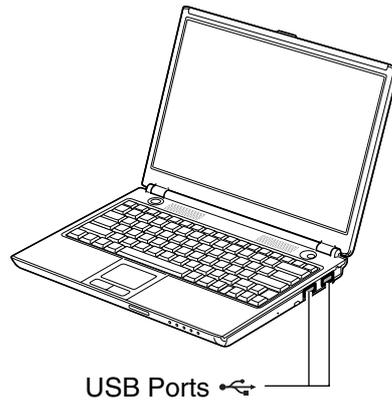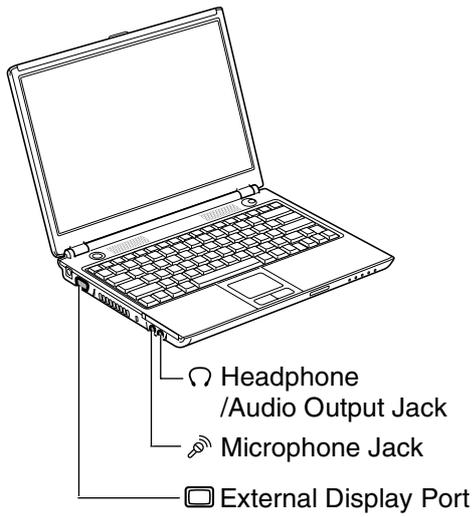
USB Ports ⟷

Port Design

Port name	Port Design
USB Port	▭
External Display Port	⬭
Headphone / Audio Output Jack	◎
Microphone Jack	◎

USB Devices

The computer has an interface called Universal Serial Bus (USB). Its two USB ports support USB1.1 and USB2.0. With a USB connection, you can connect/disconnect peripherals without turning off the computer. Generally, when you connect a device to the computer, the necessary driver will be installed automatically. See also the manuals of peripheral devices supporting USB.

> ⚠ *When connecting the cable to one of the USB ports, be sure to keep the USB mark (⟜) side up.*

> ✓ *When a new device is correctly connected to the computer, the appropriate driver is automatically installed. If the driver is not installed correctly, you will see a message on the screen. In this case, install the driver by following the instructions on the screen.*

USB Port

With the USB Mark facing UP
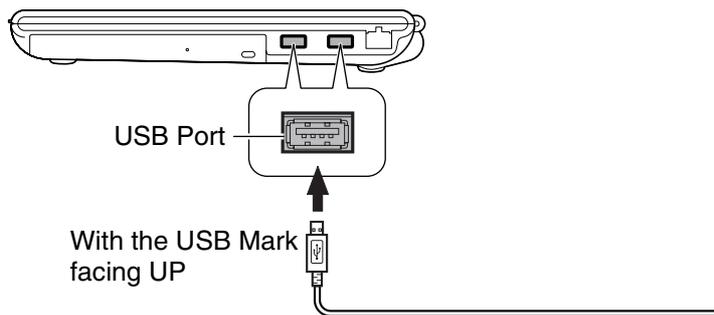
To remove the USB devices, you may need to perform the following instructions.

1. Click the *Safely Remove Hardware* icon (🖭) on the taskbar. If you cannot find the icon, click ◄ to show all kinds of icons. If the icon does not appear, go to the step 3.

2. Click *Safely remove xxxx* (xxxx is the name of your USB device); then, the *Safe To Remove Hardware* dialog appears.

3. Remove the device from the computer.

Optional External Floppy Disk Drive Unit

You can use high-density (2HD) 1.44MB or double-density (2DD) 720KB floppy disks with the optional SHARP external floppy disk drive unit (CE-FD05).

- *1.44MB (2HD) disks are appropriate for the drive unit.*
- *There are some restrictions in using 720KB (2DD) disks. Refer to the* Trouble with Floppy Disks *section on page T-5.*

Connecting Optional External Floppy Disk Drive Unit

- *Do not place the floppy disk drive unit on its side or upside down.*
- *Do not press on the floppy disk drive unit. It may damage the drive or cause its malfunction.*
- *Do not place the AC adapter on the floppy disk drive unit. It may cause the drive to malfunction.*

Connect the floppy disk drive unit cable to one of the USB ports on the computer.

When connecting the cable, be sure to let the USB mark (⟵⟶) face up.

USB Port

With the USB Mark facing UP

Optional External
Floppy Disk Drive Unit
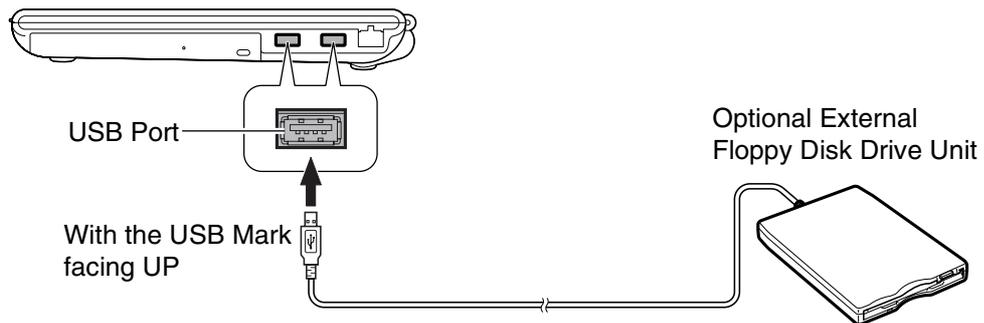
Handling the Floppy Disk

- Do not open the shutter and touch the disk inside; otherwise, you will not be able to read or write data to the disk.

- Do not place floppy disks near magnets or heat source, in direct sunlight or in a dusty place, etc.

- Never subject a disk to sudden shocks or extreme vibration. Do not drop, bend, or place heavy objects on a disk.

- Do not spill liquid onto a disk.

Inserting the Floppy Disk

Hold the floppy disk with the arrow facing up, toward the drive. Slide the disk into the drive until it locks into place.

3

With the Arrow
Mark facing UP

Indicator
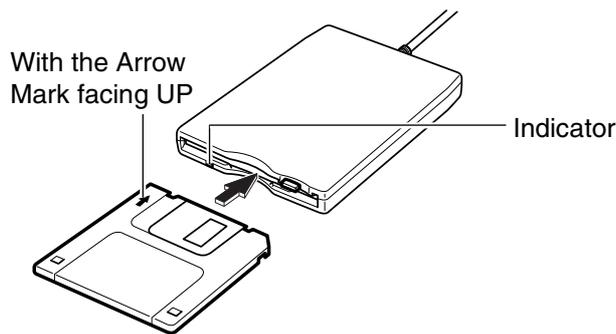
- *Always insert a floppy disk straight into the floppy disk drive.*
- *When inserting the disk, make sure it is not upside down.*
- *Do not use excessive force when inserting the floppy disk. If you have difficulty inserting or removing disks, consult an authorized service technician.*
- *Do not touch the disk while the computer is reading/writing data. It may cause malfunction of the computer and the drive.*

Ejecting the Floppy Disk

⚠️ *Before ejecting the floppy disk, make sure the indicator of the floppy disk drive unit is not lit.*

1. Press the eject button firmly so that the disk pops out slightly.
2. Eject and store the disk properly.

3

Eject Button
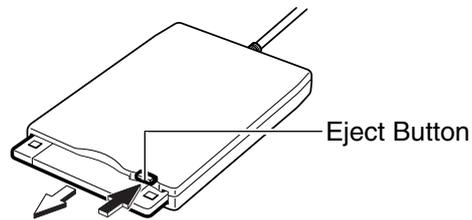
Removing Optional External Floppy Disk Drive Unit

To remove the unit, follow these instructions.

1. Click the *Safely Remove Hardware* icon ( ) on the taskbar.
2. Click *Safely remove Mitsumi USB Floppy – Drive(A:)*; then, the *Safe To Remove Hardware* dialog appears.
3. Remove the unit from the computer.

Printers

You can use a USB printer by connecting it to one of the USB ports on the computer.

✓ *Before using a printer, read the printer manual and install the printer driver to the computer.*

Connecting the Printer

⚠ *When connecting the cable to one of the USB ports, be sure to keep the USB mark (⟻) side up.*

✓ *Be sure to read the printer manual before connecting a USB printer to the computer. Some printer may not use the* Found New Hardware *wizard to install the printer driver.*

3

You can connect the USB printer to the computer without turning off the computer.

Printer

USB Port

With the USB Mark facing UP

USB Cable
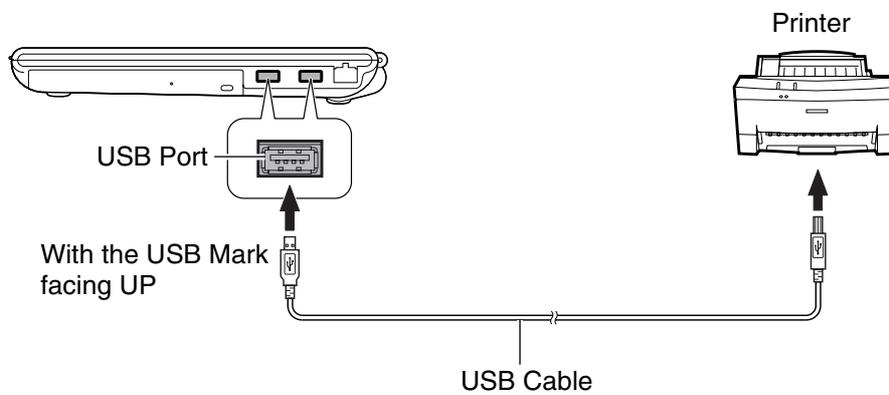
To remove the printer from the computer, refer to the steps in the *USB Devices* section on page 3-3.

External Monitors

You can connect an external monitor to the computer to display images on it.

- *Some external monitors, which are not compatible with the computer, may not display correctly.*
- *In this section, you often see the expression "Display Properties dialog box." To open the dialog box, right-click somewhere on the Windows desktop and select* Properties *from the pop-up menu.*
- *To display the image on an external monitor, you may need to install its driver. Before using the external monitor, refer to the manual included with it.*

Connecting the External Monitor

1. Turn off the computer and the external monitor.
2. Connect one end of the display cable to the external display port, then, the other end of the display cable to your external monitor.

External Display Port

Display Cable
(supplied with the monitor
or in the market)
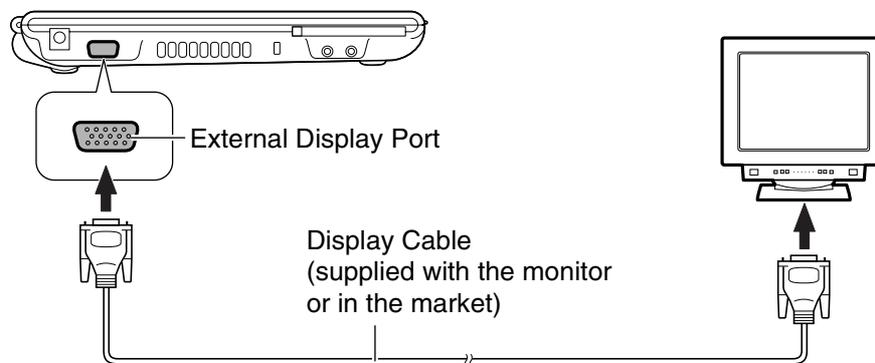
3. Turn on the external monitor.
4. Turn on the computer.

Switching the Display

You can switch the output display by the **Fn+F5** (🖳) keys or the specified performance on Windows.

✓
- *When displaying on both the LCD monitor and an external monitor simultaneously, the external monitor must be capable of a 1280 x 800 resolution. Otherwise, the external monitor may not display images properly.*
- *While playing a video or animation, you may not be able to switch the display.*
- *Refer to the* Changing Resolution and Number of Colors *section on page 1-19.*

Switching the Display by Fn+F5 Keys

1. Press the **Fn+F5** (🖳) keys.

   The following output display icons appear on the screen.

   When you press the **Fn+F5** keys, the icon of the current selected output display is highlighted.

   LCD display only   External display only   LCD and External displays

2. While the output display icons are on the screen, press the **Fn** key and hold it; then press **F5** key once or more to select your desired output display(s).

3. Move your fingers away from the keyboard.

   The output display icons will disappear and then, the selected output display(s) will be available.

✓
*While the image is being extended, the **Fn+F5** (🖳) keys cannot work.*

Switching the Display on Windows

1. Click the *Display Properties* icon ( ) on the taskbar.

☑️   *If you cannot find the icon, click ○ to show all kinds of icons.*

2. Point to *Graphics Options* and *Output To*.
3. Select your favorite output display.

3

☑️   *Refer to the following to select the appropriate output display.*
      LCD display only: select "Notebook."
      External display only: select "Monitor."
      Both displays: select "Intel(R) Dual Display Clone" –
      "Notebook+Monitor."

Extending an Image onto an External Monitor

To extend the image on the LCD onto the external monitor, follow these steps.

1. Click the *Display Properties* icon ( ) on the taskbar.
2. Point to *Graphics Options* and *Output To.*
3. Click *Extended Desktop*.

☑️
- *When you wish to change the primary monitor, refer to the* Changing Primary Monitor *section below.*
- *To stop extending the image, select* Monitor *or* Notebook *in the step 3.*

Changing the Primary Monitor

1. Click the *Display Properties* icon ( ) on the taskbar.
2. Click *Graphics Properties*.
3. Select your favorite display in the *Primary Device* pull-down menu.

☑️   *The* Secondary Device *will be automatically determined when you have selected the* Primary Device.

4. Click *OK*.

5. Click *OK* in the *Confirm the Desktop Changes* dialog box.

Disconnecting the External Monitor

1. Turn off the computer and the external monitor.

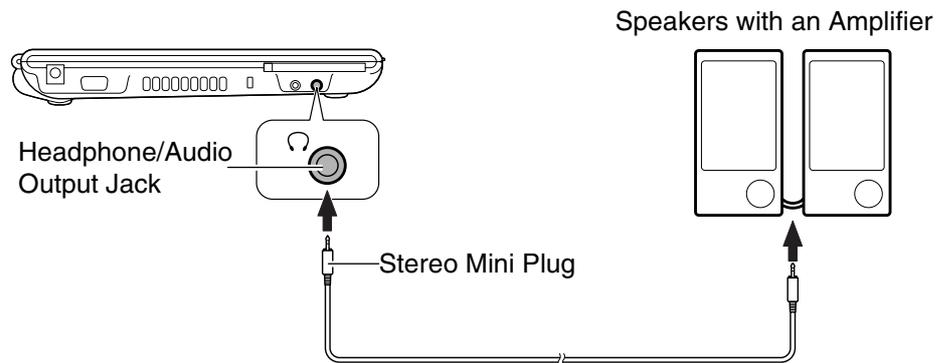2. Remove the display cable from the computer.

Audio System

You can output sound to speakers, audio equipment, or a headphone and also input it through a microphone.
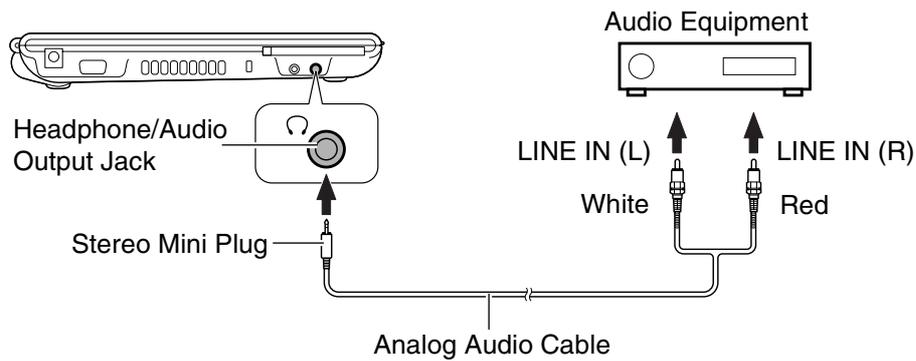
Connecting Speakers

You can connect stereo speakers with an amplifier to the audio output jack on the computer.

Speakers with an Amplifier

Headphone/Audio Output Jack

Stereo Mini Plug

Connecting Audio Equipment

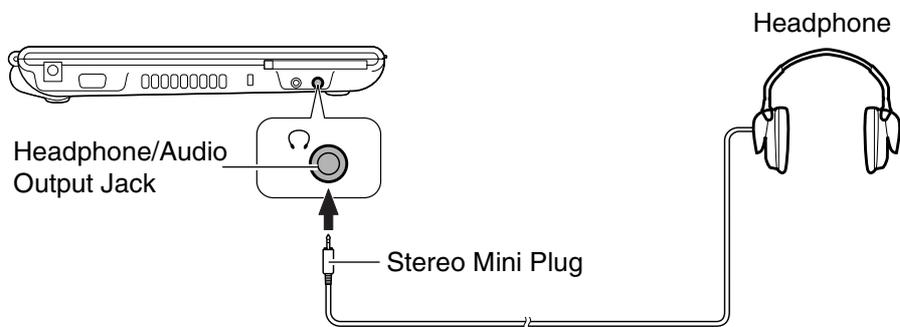You can connect analog audio equipment to the audio output jack on the computer.

✓ *You can adjust the output volume on Windows by clicking the speaker symbol on the taskbar or use the **Fn**+**F3** (▼◁) or **F4** (▲◁) keys.*

Connecting the Headphone

Use a headphone with an impedance of 8 Ω or more. (32 Ω is recommended.)

Connecting the Microphone

You can input sound using an external microphone connected to the microphone jack. Use an electric condenser microphone with an impedance of 1.5k Ω through 2.4k Ω and an allowable voltage of 2.5 V.
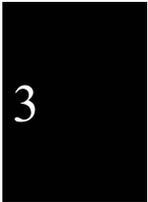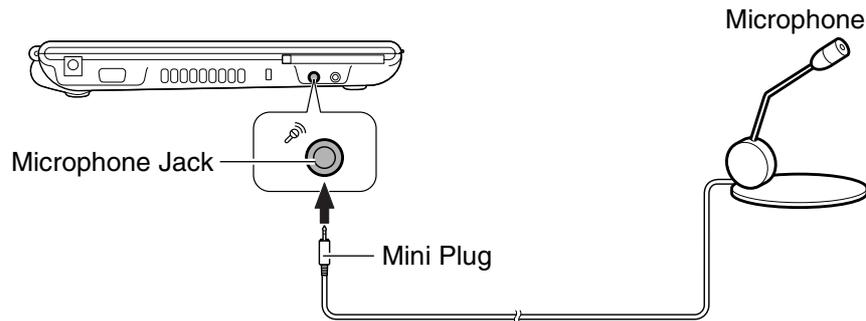
To input sound,

1. Click *start – All Programs – Accessories – Entertainment – Sound Recorder*.

2. In the *Sound Recorder* dialog box, click ⬤ button to start input.

3. Click ■ button to stop the input.

PC Cards

The computer is equipped with a PC card (supporting PC Card Standard, CardBus compliant) slot, which can accommodate a Type II card. You can insert/eject the card without turning off the computer. Before inserting a PC card into the slot, refer to its manual.

Inserting the PC Card

3

- *When a new card is correctly inserted, the appropriate driver is automatically installed. If the driver is not installed correctly, you will see a message on the screen. In this case, install the PC card driver by following the instructions on the screen.*
- *When you insert a card that protrudes out of the slot such as a wireless networking card:*
  - *Do not give force to the card. Otherwise the computer may be damaged.*
  - *Do not carry the computer.*

1. Confirm the PC card eject button is inside the computer cabinet. If not, push it back into the cabinet.

PC Card Slot

PC Card Eject Button
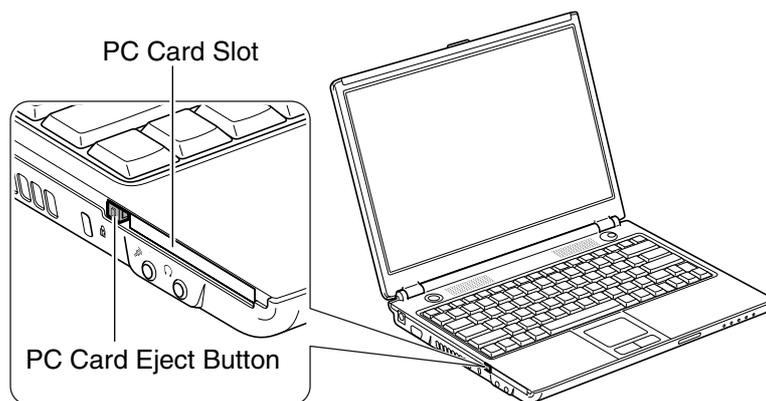
2.   Insert a PC card into the slot with the label face up until it locks into place.
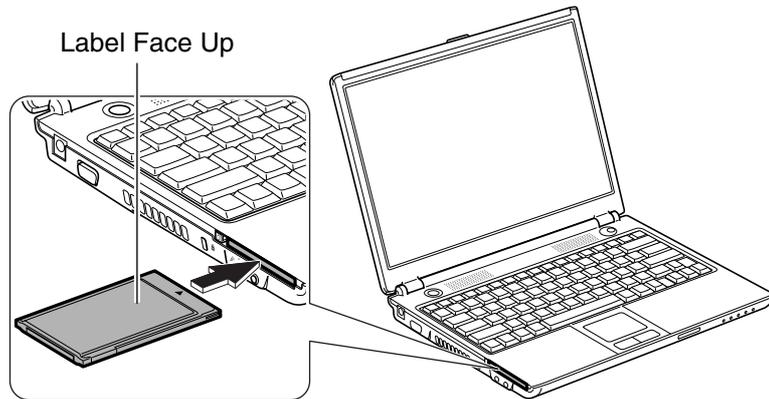
Label Face Up

3

If the dialog box asking you *What do you want Windows to do?* appears, select the task you want.

Ejecting the PC Card

> ⚠ • *Some PC cards may become hot after long use. Be careful when you remove the card from the PC card slot.*
> • *Be sure to use the procedure below when ejecting the PC card. Otherwise, the data on the PC card may be cleared or the system may not work properly.*

1.   Click the *Safely Remove Hardware* icon (🔌) on the taskbar. If you cannot find the icon, click ◯ to show all kinds of icons.

2.   Click *Safely remove xxxx* (xxxx is the name of your PC card); then, the *Safe To Remove Hardware* dialog appears.

3. Push the PC card eject button so that it will pop out from the side of the computer.

PC Card Eject Button
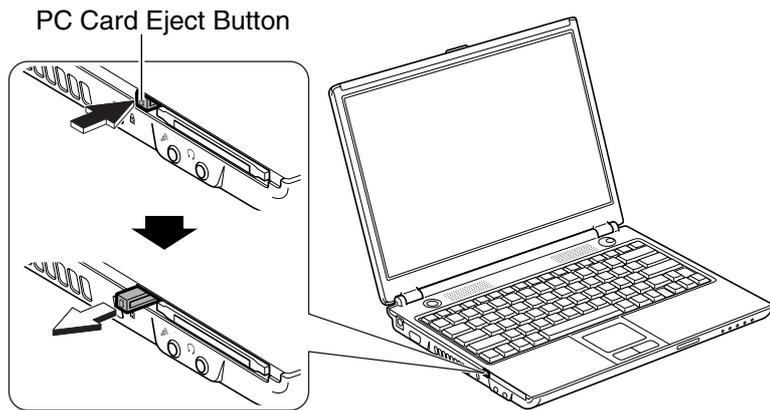
3

4. Push the PC card eject button until the inserted PC card pops out; then, remove it.

5. Push the PC card eject button all the way inside the cabinet for safekeeping.

CHAPTER 4

Communication Functions

This chapter explains how to use the LAN, wireless LAN, and built-in modem functions.

> - *When you use communication software:*
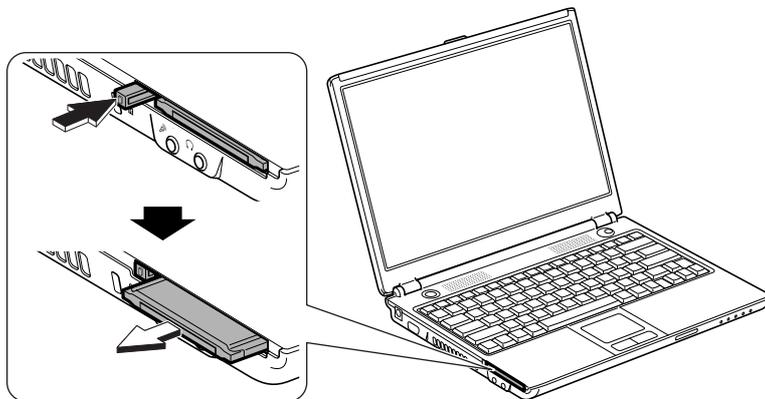>   - *Connect the computer to the AC power source.*
>   - *Do not allow the computer enter a system standby or system hibernation mode. (See the* Power Saving *section on page 2-7.)*
>   - *See also the manual or online help of the software you are using.*
> - *The communication speed may vary depending on the traffic, local telecommunications infrastructure, and ISP (Internet Service Provider) infrastructure.*

4

Local Area Network (LAN)

You can connect to a LAN with the 100 Base-TX or 10 Base-T connector on the computer. To activate the LAN, perform the following steps.

> *Never insert any other cables, but a LAN cable, which may have different electric characteristics from those of the LAN cable. Otherwise, the LAN and the cables may be damaged.*

> *Use the appropriate cable for each LAN standard.*
> *100 Base-TX : Category 5 or higher*
> *10 Base-T   : Category 3 or higher*

Connecting Your Computer to the LAN

1. Turn off the computer.
2. Connect a LAN cable to the LAN jack and the network hub.

LAN Jack

To Network Hub

LAN Cable (Straight Cable)
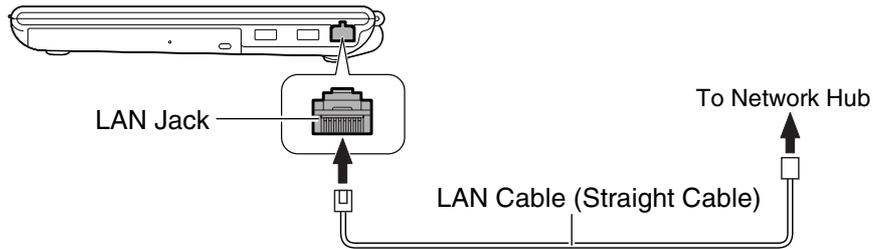
> ⚠️ *Do not insert a modem cable into the LAN jack. It may damage the modem cable and the LAN jack.*

> ✓ *You can also directly communicate with another computer using a cross LAN cable.*

3. Turn on the computer.

Removing the LAN cable

> ⚠️ *Before pulling the LAN cable out of the LAN jack, be sure to release the connector of the LAN cable by pressing the connector tab. Excessive force may damage the tab.*

1. Turn off the computer.
2. Press and hold the connector tab of the LAN cable and then, pull out the cable.

Connector Tab

Configuring the LAN

1. Click *start* - *Control Panel*.

2. Click *Network and Internet Connections*; then, *Network Connections*. If the Classic view is selected, double-click the *Network Connections* icon.
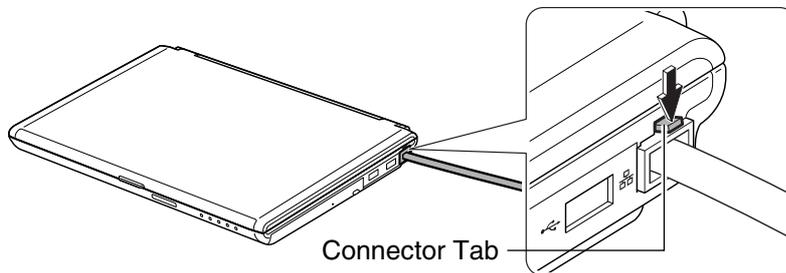
3. Right-click *Local Area Connection*.

4. From the pop-up menu, click *Properties*.

5. In the *Local Area Connection Properties* dialog box, set the network setting according to the instruction of your network administrator.

> ✔ *Make sure to log on the computer as a member of the Computer administrators group. Otherwise, you cannot set or change some settings for the LAN unit.*

If you cannot access the network,

1. Click *start* - *Control Panel*.

2. Click *Performance and Maintenance*; then, *System*. If the Classic view is selected, double-click the *System* icon.

3. Click the *Hardware* tab; then, the *Device Manager* button.

4. Double-click *Network adapters*, then, *Realtek RTL8139/810x Family Fast Ethernet NIC*.

5. Click the *Advanced* tab, and select *Link Speed/Duplex Mode* in the *Property* list and select an appropriate value in the *Value* pull-down menu.

6. Click *OK* and close the *Device Manager* window.

7. Click *OK* and close the *Control Panel* window.

Configuring Network Settings

You can configure your network settings in various manners depending on the network environment. This section provides one of them with the following conditions.

● Two computers, which do not have Internet connections, are connected directly to each other with a cross LAN cable.

● The two computers are running on Windows XP.

● The *Network Setup Wizard* is used for network configuration.

Configuring Network Settings of the Computer

☑︎
- *Before configuring the network settings, be sure to connect the two computers with a cross LAN cable and turn them on.*
- *You need to perform the following process on the both computers.*

1. Click *start – Control Panel – Network and Internet Connections – Network Setup Wizard*. The *Network Setup Wizard* dialog box will open.
2. Click *Next*.
3. Click *Next* again.

☑︎
When a message "The wizard found disconnected network hardware." appears:
- *With the* Local Area Connection *string displayed in the* Connections *field, click* Cancel *to quit the wizard and confirm the other computer is powered on or the both computers are connected correctly with a cross cable.*
- *Otherwise, check the box of* Ignore disconnected network hardware *and then, click* Next.

4. Select *Other* and click *Next*.
5. Select the third option, *This computer belongs to a network that does not have an Internet connection*, and click *Next*.
6. Select the second choice, *Let me choose the connections to my network*, and click *Next*.

☑︎
When the message Give this computer a description and name *appears, go to the step 9.*

7. Clear all boxes except that of *Local Area Connection*.

☑︎
Confirm only the box of Local Area Connection *is checked.*

8. Click *Next*.
9. Input *Computer description* if necessary and *Computer name*, then, click *Next*.

☑ *The* Computer name *should be unique. Type a name that is different from that of the other computer.*

10. Type a *Workgroup name* and click *Next*.

☑ *The* Workgroup name *should be same as that of the other computer.*

11. Select *Turn on file and printer sharing* and then, click *Next*.
12. Click *Next*. The network configuration will start.
13. Select the forth option, *Just finish the wizard; I don't need to run the wizard on other computers*, and click *Next*.
14. Click *Finish*, then, *Yes*. The computer will restart.

Changing Your Computer Name or Workgroup Name

When you need to change the computer name or workgroup name, follow these instructions.

1. Click *start – My Computer*.
2. Click *View system information* in the *System Tasks* field. The *System Properties* dialog box will open.
3. Click the *Computer Name* tab and the *Change…* button. The *Computer Name Changes* dialog box will appear.
4. Type the *Computer name* and the *Workgroup* and then, click *OK*.
5. Click *OK* twice and *Yes*. The computer will restart.

4

Sharing Files and Folders

You can share files and folders stored on the computer when they are permitted to share. With the function you can copy the documents stored on your desktop computer to your notebook computer or display from one computer on your computer.

Sharing Files and Folders

This section provides how to share a folder on the network. With these steps you can also share a drive.

1. Right-click on a folder to be shared and click *Sharing and Security....* The *XXX Properties* dialog box will open. (XXX is the folder's name.)

2. Check the box of *Share this folder on the network*. Confirm the name typed in the *Share name* field is the folder name to be shared.

> *When you have not used the* Network Setup Wizard *or shared any folders or drives before, follow these instructions to enable file sharing.*
>
> 1. *Click* If you understand the security risks but want to share files without running the wizard, click here *in the* Network Sharing and Security *section. The* Enable File Sharing *dialog box will appear.*
> 2. *Select* Just enable file sharing *and click* OK.
> 3. *Check the box of* Share this folder on the network *and type the folder name to be shared in the* Share name *field.*

3. Click the *View your Windows Firewall settings* string.

> *When the string is not shown in the dialog box, go to the step 6.*

4. Click the *Exceptions* tab and check the box of *File and Printer Sharing*.
5. Click *OK*.
6. Click *OK*.

> *A sharing symbol ( ) will be added to the icon of the shared folder.*

Copying Shared Files

1.   Click *start – Control Panel.*

2.   Click *Network and Internet Connections*; then, *Network Connections.* If the Classic view is selected, double-click the *Network Connections* icon.

3.   Click *My Network Places* in the *Other Places* field located on the left.

4.   Click *View workgroup computers* in the *Network Tasks* field. All the icons of computers belonging to the same workgroup will appear.

5.   Double-click the icon of the other computer. The shared folder(s) will appear.

6.   Double-click the shared folder. When a password is required, type it.

7.   Drag and drop the desired file to the desktop of your computer.

   The file will be copied on your computer.

8.   Close the window.

4

Wireless LAN

The computer has an integrated wireless LAN compliant with the IEEE802.11b and IEEE802.11g standards.

- *The computer can communicate with wireless devices supporting IEEE802.11b or IEEE802.11g. Note that there are some devices the computer cannot communicate with even if they support IEEE802.11b or IEEE802.11g.*
- *The computer cannot communicate with wireless devices only supporting IEEE802.11a.*
- *The range for reliable performance and the quality of connection varies depending on the environment you are in.*

Wireless LAN Modes

There are two kinds of wireless LAN modes: Infrastructure mode and Ad Hoc mode.

Access Point (Infrastructure) Mode

Infrastructure mode refers to a wireless network in which wireless devices communicate with each other through an access point (AP). Wireless devices can communicate with each other or can communicate with a wired network through AP.

Access Point

To Internet

ADSL modem,
cable modem,
or similar
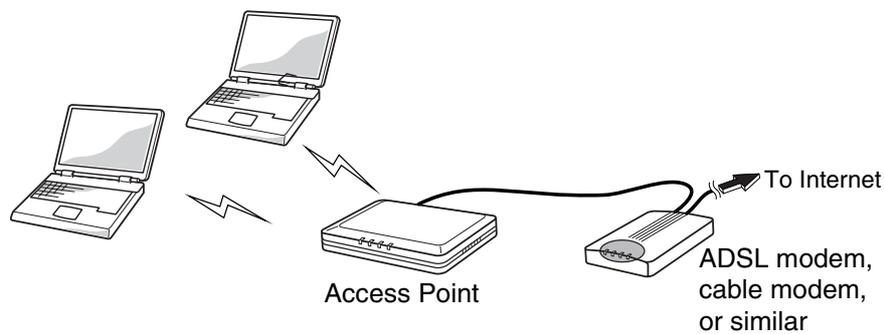
Ad Hoc Mode

Ad Hoc mode refers to a type of network that consists of multiple computers each equipped with a wireless networking interface. Each computer can communicate directly with other wireless enabled computers.
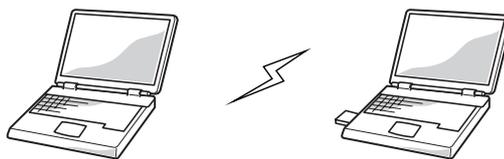
Security Measures

Since wireless LANs provide data transfer using electric waves instead of LAN cables between communicating devices, a third party can illegally access to and monitor the transmitted information. The following security measures reduce opportunities to receive the threats. Use a combination of the following measures for more secure communications.

See the Notice of Security with Wireless Devices *section on page xv.*

Authentication

The following may help you to protect your important data from illegal access.

- **SSID (Service Set Identifier)**

  "SSID" is a common network name. An SSID acts as a password that is shared with all connecting wireless devices, resulting in preventing access by any device that does not have the SSID. Set a same SSID on the computer and an access point which you are using. To enhance the security, rely on a combination of the SSID and WEP or WPA security. (For details on configuration of the access point, refer to its manual.)

- **MAC (Media Access Control) address filtering**

  MAC addresses are unique addresses on the network, which are assigned to the computer's network interface cards. An access point allows access by only devices if their MAC addresses match the addresses in an authentication list used by the access point. Register your MAC address with the access point which you are using. (For more information, refer to the manual of the access point.)

  To confirm the MAC address of the computer;
  1. *Click* start – All Programs – Accessories – Command Prompt.
  2. *Type* ipconfig/all *and press* **Enter**.
  3. *Confirm the numbers of* Physical Address *in the* Ethernet adapter Wireless Network Connection *field.*
  4. *Type* exit *and press* **Enter**.

- **WPA (Wi-Fi Protected Access)**

  The computer supports WPA, a wireless LAN security standard increasing the level of data protection and access control compared to WEP (Wired Equivalent Privacy) encryption. To use the WPA security, a WPA-enabled access point is required. To implement user authentication, one of the security enhancements of WPA, an authentication server is needed. For details on WPA features, consult your network administrator or the manual of the access point which you are using.

Encryption

The computer provides the following encryption mechanisms including: TKIP, AES, and WEP. The three techniques allow you to encrypt data to be transmitted, which will make illegal interception more difficult.

> * *To use the WEP functions, your communication partner must support the functions.*
> * *To utilize TKIP, the access point which you are using must support TKIP.*
> * *To utilize AES, the access point which you are using must support AES.*

* **WEP (Wired Equivalent Privacy)**

  WEP relies on an encryption key that is shared between a wireless device and an access point. The key is used to encrypt data and decrypt the transmitted data.

  > * *The computer supports 128-bit and 64-bit WEP keys.*
  > * *For enhancement of security, the encryption keys should be periodically changed.*

* **TKIP (Temporal Key Integrity Protocol)**

  TKIP provides an improved data encryption, which was weak in WEP. The TKIP encryption automatically generates a new unique encryption key periodically for each device to avoid the same key staying in use for weeks as they do with WEP.

* **AES (Advanced Encryption Standard)**

  AES is a stronger form of encryption than is found in the WPA protocol and is the security standard approved by US Government organizations.

Activating the Wireless LAN Antenna

To communicate using the wireless LAN, the integrated antenna must be activated. You can enable/disable the antenna by pressing the **Fn+F1** (〔ㄥ〕) key combination. When the antenna indicator (⁽⁽ㄥ⁾⁾) lights green, the antenna is enabled. When the indicator light is off, it is disabled.

Wireless LAN Antenna (Invisible)

Wireless LAN Antenna Indicator
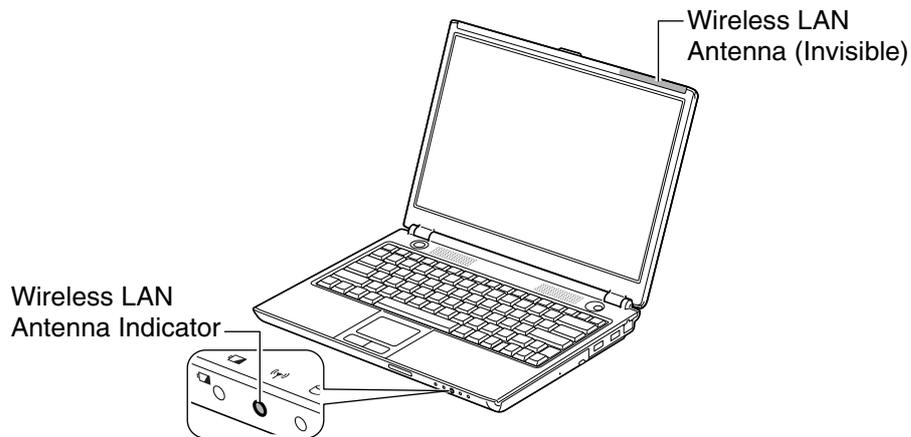
Disable the antenna on airplanes and in specific places where radio-susceptible equipment is nearby such as medical and electrical equipment. Electric waves generated from the antenna may affect the performance of the devices and cause malfunction of the devices.

When the Wireless LAN *of the APM button is set to* ON *or* OFF*, pressing the APM button will turn on or off the wireless LAN antenna according to the APM button setting. (For more information, refer to the* Using the Advanced Power Management Button *section on page 2-9.)*

Connecting to a Network via an Access Point

You can connect the computer to the Internet or a wired network via an access point supporting IEEE802.11b or IEEE802.11g. For details on the access point, refer to its manual or consult your network administrator.

This section describes how to communicate or access to the Internet through the access point.

Configuring the Wireless LAN Setting

The following steps lead you to configure the wireless LAN setting by automatically obtaining the IP address, DNS server, etc. from an access point. By default, no configuration is needed. Skip these steps and go to the *Connecting to Network* section on the next page.

- *There are some access points requiring the specific IP address, subnet mask, default gateway and DNS server on the computer. Refer to the manual of the access point or consult your network administrator.*
- *You can store the configured settings using Network Setup Utility, which allows you to easily access one of the stored networks appropriate to the current environment. (For the Network Setup Utility, refer to the* Network Setup Utility *section later in this chapter.)*

1. Confirm the antenna indicator (((ף))) is on.
2. Right-click the *Wireless Network Connection* icon (, or) on the taskbar. If you cannot find the icon click to show all kinds of icons.
3. Select *View Available Wireless Networks*.
4. Click *Change advanced settings* of the *Related Tasks* field.
5. Double-click *Internet Protocol (TCP/IP)* in *This connection uses the following items*.
6. Confirm the radio buttons of *Obtain an IP address automatically* and *Obtain DNS server address automatically* are selected. If not, select them.

This step will remove the existing IP address, subnet mask, default gateway and DNS server if they have been already assigned. Write down the information before you perform this step.

7. Click the *Advanced* button.
8. Confirm the *Default gateways* section is emptied. If not, remove the gateway address.
9. Click *OK* each time you close the dialog boxes.
10. Close the *Network Connections* window.

Connecting to a Network

This section describes how to connect to a WEP enabled access point or WPA-PSK/TKIP capable access point. (WPA-PSK/TKIP refers to WPA with pre-shared key (PSK) with Temporal Key Integrity Protocol (TKIP) encryption.) For access points with user authentication, consult your network administrator.

> *WPA-PSK is a special mode allowing only devices with a matching network key to access the WPA-PSK capable access point.*

Before connecting to wireless network, confirm the access point which you are using is powered on and ready to use. (Refer to its manual.)

1. Confirm the antenna indicator ( ) is on.

2. Right-click the *Wireless Network Connection* icon ( ) on the taskbar. If you cannot find the icon click to show all kinds of icons.

3. Select *View Available Wireless Networks*.

4. Select a network to be connected from the list and then, click *Connect*.

5. Type the correct network key in the fields of *Network key* and *Confirm network key*.

   Network keys are generated from ASCII or hexadecimal entries. Refer to the following table for available letters and digits.

|	WEP Access Point	WPA-PSK/TKIP or AES Access Point
ASCII format[*1]	5 or 13 characters	8 to 63 characters
Hexadecimal format[*2]	10 or 26 digits	64 digits

[*1] 0 to 9, a to z, and A to Z (The uppercase and lowercase letters are distinguished.)

[*2] 0 to 9, a to f, and A to F (The uppercase and lowercase letters are not distinguished.)

> *When you select a network that is not configured for encryption settings, the caution message appears. Read the message carefully. Although you can connect to the network by clicking* Connect Anyway*, security is not ensured. Select a security configured network.*

6. Click *Connect*.
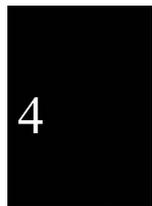
- *When the computer successfully connects to the selected access point, the* Connected *signage will appear in the connected network name field and the* Wireless Network Connection *icon ( ) on the taskbar will change to ( ).*
- *Entering an incorrect network key or selecting an inappropriate key index will show the* Limited or no connectivity *signage in the network name field and the icon on the taskbar will change to ( ). Reenter the correct network key and/or change the key index referring to the* Changing the Security Mode *section on page 4-17.*
- *To establish a new connection with another access point, first disconnect the current connection and then, perform the steps 3 and 4. (To disconnect the current connection, select the connected access point in the* Wireless Network Connection *dialog box and then, click the* Disconnect.*)*

Confirming the Status of Wireless Connection

The *Wireless Network Connection* icon on the taskbar shows the current wireless connection status.

Icon	Connection status
	Disconnected
	Trying to connect
	Connected
	Failed to connect

To check the connection speed and quality:

1. Click the *Wireless Network Connection* icon ( ) on the taskbar. If you cannot find the icon, click   to show all kinds of icon.

2. In the *Wireless Network Connection Status* dialog box, confirm your connection status.

- *The number of the green signals ( ) shows the connection quality. The more signals light on, the better quality is given to the computer.*
- *When the connection quality is poor, adjust the distance between the computer and other devices or the access point you are communicating with and/or the facing direction of the computer.*

3. Click *Close*.

Communicating with Other Computers

This section describes how to communicate between wireless computers with built-in wireless LAN or a wireless LAN card installed.

To enable wireless communication between the computers;

- Assign IP address and subnet mask for each computer.

- Set the communication mode to ad hoc.

- Give the same network name (SSID) to each computer.

- Set the encryption key (WEP key).

> *TKIP and AES cannot be utilized in ad-hoc mode.*

1. Confirm the antenna indicator (^{((T))}) is on.

2. Right-click the *Wireless Network Connection* icon (📶, 📶, or 📶) on the taskbar. If you cannot find the icon click ⊙ to show all kinds of icons.

3. Select *View Available Wireless Networks*.

4. Click *Change advanced settings* of the *Related Tasks* field.

5. Select *Wireless Network Connection*; then, click *Change settings of this connection* of *Network Tasks*.

6. Double-click *Internet Protocol (TCP/IP)* in *This connection uses the following items*.

7. In the *Internet Protocol (TCP/IP) Properties* dialog box, select *Use the following IP address* and set the *IP address* to *192.168.1.2* through *192.168.1.254* and the *Subnet mask* to *255.255.255.0*; then, click *OK*.

> - *The IP address of each computer should be unique.*
> - *The same subnet mask should be set to all computers.*
> - *The* Default gateway *can be blank.*

8. Click the *Wireless Networks* tab; then, the *Advanced* button in the lower right of the dialog box. The *Advanced* dialog box appears.

9. Select *Computer-to-computer (ad hoc) networks only*; then, click the *Close* button.

10. Click the *Add…* button in *Preferred networks* of the *Wireless Network Connection Properties* dialog box.

11. Type a name of the network in the *Network name (SSID)* field of the *Wireless Network Properties* dialog box.

✓ *Confirm the computer and other computers are assigned the same Network name.*

12. Confirm *Open* is selected in the *Network Authentication* pull-down menu and *WEP* in the *Data encryption* pull-down menu.

13. Clear the box of *The key is provided for me automatically*.

14. Type the same network key as that of the partner in the *Network key* and *Confirm network key* fields.

    Network keys are generated from ASCII or hexadecimal entries. Refer to the following table for available letters and digits.

ASCII format[*1]	5 or 13 characters
Hexadecimal format[*2]	10 or 26 digits

[*1] 0 to 9, a to z, and A to Z (The uppercase and lowercase letters are distinguished.)

[*2] 0 to 9, a to f, and A to F (The uppercase and lowercase letters are not distinguished.)

✓ • *The network key to be typed must be equal to that of the partner(s).*
   • *Be sure to match the key index between your computer and the other computer(s). Note some computers have the key index options 0 through 3. Refer to the* Key index matching table *on page 4-18.*

15. Click *OK* twice; then, close the *Control Panel* window.

16. Configure the network by setting the name of the computer and workgroup.

✓ • *To communicate with other wireless enabled computers, set the computer name and the workgroup name. The computer name should be unique and the workgroup name should be same as others. (Refer to the* Changing Your Computer Name or Workgroup Name *section on page 4-5.)*
   • *To share the folder(s) on the computer with other computers, refer to the* Sharing Files and Folders *section on page 4-5.*

Changing the Security Mode

This section describes how to change the security mode to WEP or WPA-PSK with TKIP or AES.

☑ *When using the user authentication security technology, consult your network administrator for the mode changes.*

WEP

1. Right-click the *Wireless Network Connection* icon (📶, 📶, or 📶) on the taskbar.

2. Select *View Available Wireless Networks*.

3. In the *Related Tasks* field, click *Change the order of preferred networks*.

☑ *The* Wireless Network Connection Properties *dialog box will appear.*

4. In the *Preferred networks* field, select the network to be given the security change and then, click *Properties*.

5. Select *Open* in the *Network Authentication* pull-down menu and *WEP* in the *Data encryption* pull-down menu.

☑ *Some access points require that you select* shared *for the* Network Authentication. *Refer to the manual of your access point.*

6. Clear the box of *The key is provided for me automatically*.

7. Type the same network key as the other device to be communicated with in the *Network key* and *Confirm network key* fields.
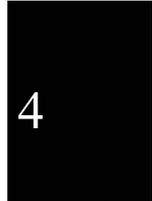
☑ *Available letters and digits are following;*

ASCII format[*1]	5 or 13 characters
Hexadecimal format[*2]	10 or 26 digits

[*1] *0 to 9, a to z, and A to Z (The uppercase and lowercase letters are distinguished.)*
[*2] *0 to 9, a to f, and A to F (The uppercase and lowercase letters are not distinguished.)*

4

8. If necessary, change the key index in the *key index* fields.

- *The key index options of the computer are 1 through 4.*
- *Some access points and computers have the options 0 through 3. Refer to the table below for matching.*

Key index matching table

Access Point 1 /Computer 1	Access Point 2 /Computer 2	Your computer
1	0	1
2	1	2
3	2	3
4	3	4

(ex. When your access point type is "Access Point 2" and its key index is set to 0, set 1 to the key index of your computer.)

9. Click *OK* twice and close the *Wireless Network Connection Properties* dialog box.

WPA-PSK with TKIP or AES

1. Follow the steps 1 to 4 in the *WEP* section above.

2. Select *WPA-PSK* in the *Network Authentication* pull-down menu and *TKIP* or *AES* in the *Data encryption* pull-down menu.

3. Type the same network key as the other device to be communicated with in the *Network key* and *Confirm network key* fields.

Available letters and digits are following;

ASCII format[*1]	8 through 63 characters
Hexadecimal format[*2]	64 digits

[*1] *0 to 9, a to z, and A to Z (The uppercase and lowercase letters are distinguished.)*

[*2] *0 to 9, a to f, and A to F (The uppercase and lowercase letters are not distinguished.)*

4. Click *OK* twice and close the *Wireless Network Connection Properties* dialog box.

Built-in Modem

You can use the built-in modem for data transfer and fax communication.

> ⚠️
> - *The built-in modem on the computer is designed only for regular analog telephone lines. The modem may be damaged when connected to a digital ISDN terminal or a digital PBX.*
> - *Use TA (terminal adapter) to connect the built-in modem to a digital telephone line.*
> - *If an unusual device is attached to the line you are connecting to, the modem may not function properly. Remove the device or contact the dealer of the device.*
> - *Before connecting to a PBX, consult the PBX maintenance staff or its service company. If the electric characteristics of your PBX are different from those of a regular analog line, the modem will not function properly. If you connect the modem to a digital PBX, both the modem and the PBX may be damaged.*

> ✓
> - *Within the communication software you are using, set the COM port of the built-in modem to* COM 3 *and modem name to* Agere System HDA Modem *if required.*
> - *Before commencing with fax communication, it is recommended that you exit other application programs.*
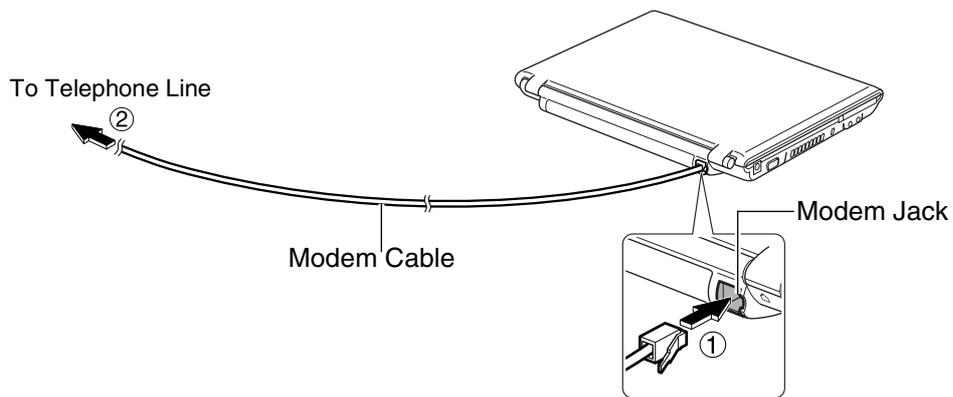
Connecting the Modem to Telephone Line

> ✓
> *To reduce the risk of fire, use only No. 26 AWG or larger UL Listed or CSA Certified Telecommunication Line Cord.*

1. Turn off the computer.

2.   Connect a modem cable to the modem jack and the telephone line.

To Telephone Line

Modem Jack

Modem Cable

4

⚠️ *Be sure not to insert a modem cable into the LAN jack on the rear side of the computer. It may damage the LAN jack and the modem cable.*

✓ *Connect the modem to the telephone line directly. Do not use a distributor or allotter.*

3.   Turn on the computer.

Configuring the Modem

You may have already configured your modem during the Windows setup process. Otherwise, make the necessary adjustments as shown below.

Modem Configuration

When you use the modem first time, you must type your location's information.

1.   Click *start – Control Panel – Printers and Other Hardware*; then, *Phone and Modem Options*. If the Classic view is selected, double-click the *Phone and Modem Options* icon.

2.   In the *Location Information* dialog box, select your country, type your area code, etc. and select your dial type; then, click *OK*.

After the configuration, click or double-click the *Phone and Modem Options (*icon*)* to open the *Phone and Modem Options* dialog box and double-click the location name in the *Locations* field of the *Dialing Rules* tab for the information you set above. Clicking *Edit…* or *New…* allows you to make a new location or change the settings.

Internet Connection

Windows XP has a special Internet connection wizard to help you to connect to the Internet with ease.

- *If you plan to connect into the Internet and dial an Internet Service Provider (ISP) through the modem, have your account information and dial-up number ready before you begin the wizard.*
- *Once you set your connection, you can see or edit the connection status by double-clicking the icon appearing on the* Dial-up *field of the* Network Connections *dialog box.*

1. Click *start – Control Panel – Network and Internet Connections – Network Connections*. If the Classic view is selected, double-click the *Network Connections* icon.

2. In the *Network Connections* dialog box, click *Create a new connection* of the *Network Tasks* section. The *New Connection Wizard* dialog box will appear.

3. Follow the instructions on the screen.

Removing the Modem Cable

Before pulling the modem cable out of the modem jack, be sure to release the connector of the modem cable by pressing the connector tab. Excessive force may damage the tab.

1. Turn off the computer.

Communication Functions

2. Press and hold the connector tab of the modem cable and then, pull out the cable.

Connector Tab
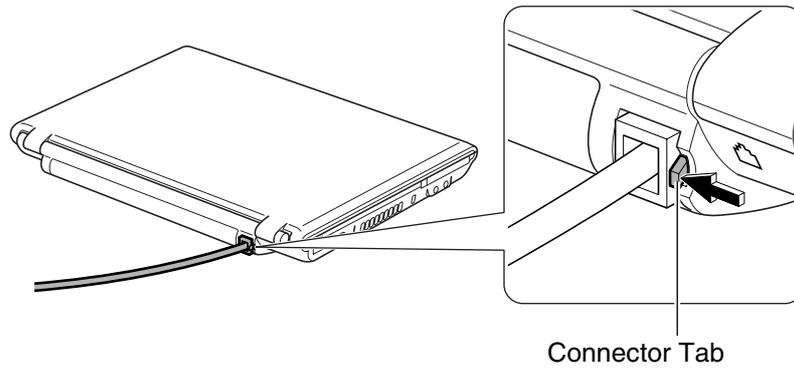
Network Setup Utility

With the Network Setup Utility, you can define specific network settings based on your network environments such as work, home, etc. You can also allow for the computer automatically to switch to the appropriate network.

> ✓
> - *Not every setting item can be stored*.
> - *The Network Setup Utility may not be compliant with all network environments.*
> - *The* Help *of the Network Setup Utility will give you more information.*

Running the Network Setup Utility

For the first use;

1.   Click *start – All Programs – Network Setup Utility – Network Setup Utility*.

> ✓   *The Network Setup Utility icon (⬤) will appear on the taskbar.*

2.   Click the *Network Setup Utility* icon (⬤) on the taskbar.

3.   Read the message and then, click *Yes* or *No*.

For the second use and later;

- When *Yes* is chosen in the step 3 above, the *Network Setup Utility* will automatically run on Windows start-up.

- When *No* is chosen in the step 3 above, click *start – All Programs - Network Setup Utility –Network Setup Utility.*

Loading the Network Settings

To set your specific network setting, confirm that the computer is connected into the network and has the proper settings for your current environment and follow the instructions below.

1.   Confirm the current network setting is to be loaded.

2.   Run the *Network Setup Utility* to display the *Network Setup Utility* window.

3.   Click the (⚙) icon.

4.   Click *OK* in the confirmation window.

5. In the *Register an icon and network name* dialog box, select the *SHARP icon* or *Windows icon*, then, click the *Select icon* button.

6. Select an icon and click *OK*.

7. Type a network name, then, click *OK*. The selected icon appears on the main screen of the *Network Setup Utility* window.

> ☑ *It takes a moment to load and register the network settings.*

Using or Switching to a Network

Using or Switching to a Loaded Network

To use or switch the loaded network, confirm the computer is ready to connect into the network and follow these steps.

1. Run the *Network Setup Utility* to display the *Network Setup Utility* window.

2. Select the appropriate network icon in the *Network Setup Utility* window.

3. Click *OK*.

> ☑ • *Make sure the computer is connected to the proper environment.*
> • *If your hardware or software configuration has been changed, you may not be able to switch to the network properly. In this case, you may need to reconfigure the network settings.*

Automatically Switching to an Available Network

The computer supports the auto-switching function, "Auto Pilot," automatically to detect one of the available networks registered and switch to it.

1. Run the *Network Setup Utility* to display the *Network Setup Utility* window.

2. Click the *Auto Pilot* icon (🌐).

3. Read the message in the confirmation window and click *OK*.

> ☑ • *It will take a moment to switch to the auto pilot mode.*
> • *To exit from the auto pilot mode, click the icon (🌐) again.*

CHAPTER 5

Setup Utility

This chapter describes how to run the Setup Utility to change settings on the computer.

Running the Setup Utility

With the Setup Utility, you can customize the system configuration information, such as time and date, or passwords. The information you have specified is saved in a special area called CMOS RAM, which the system reads every time you turn on the computer. The computer is shipped from the factory with the appropriate setting of the Setup Utility. Leave it as default in normal use.

Contents of Setup Utility

The Setup Utility consists of six menu pages, as follows:

- Main: Configures basic setting.

- Advanced: Configures device interface.

- Security: Sets Passwords.

- Boot: Sets where the system boots from.

- Battery: Conditions the battery pack.

- Exit: Exits the Setup Utility or retrieves the default values.

Entering and Exiting the Setup Utility

1. Turn on the computer.
2. When *Press F2 for System Utilities* appears, press **F2**.
3. Change to the desired settings. (Refer to the next section.)
4. Select *Exit* menu; then, press **Enter**.
5. Select one of the exit methods, and press **Enter**.
6. Confirm the message and press **Enter** again. The system restarts.

> ✓ *When the Setup Utility is opened, power management does not work. Do not close the display cover.*

Changing the Settings of the Setup Utility

> ✓ *The touchpad and mouse are disabled in the Setup Utility. Use the keyboard.*

To change the settings:

1. Use → or ← key to select the menu.
2. Use ↑ or ↓ key to select the item.

   Minus key or **Space** bar: Changes the value.
   In the item with ▶ mark, press **Enter** to open a sub menu. Press **Esc** to close the sub menu and return to the previous menu.
   For date and time, press **Enter** on the item to select the value to be changed; then, use the minus key or space bar to change the value.

3. Close the Setup Utility referring to the steps in the *Entering and Exiting Setup Utility* section.

Main Menu

System Time defines the system time, using the format *hour:minute:second* (24-hour format). Use the **Enter** key to move the cursor, and the minus key or space bar to change numerals.

System Date defines the system date, using the format *month/day/year*. Use the **Enter** key to move the cursor, and the minus key or space bar to change numerals.

Hard Disk Drive Type defines the hard disk type of the computer. To display more information, press **Enter**. Normally use as default.

Optical Disk Drive Type defines the optical drive type of the computer. To display more information, press **Enter**. Normally use as default.

Internal NumLock defines whether the numlock keys of the built-in keyboard are always enabled or disabled.

Quiet Boot defines whether SHARP logo appears on the screen while booting.

5

CPU Information shows the information of the CPU.

System Memory shows the volume of the conventional memory.

Extended Memory shows the volume of the extended memory more than 1MB.

BIOS Version shows the BIOS version of the system.

EC/KBC Version shows the EC/keyboard controller version of the system.

Advanced Menu

Resolution Expansion defines whether the screen is expanded when it is in a low resolution. (The setting is not used on Windows.)

Plug&Play O/S normally has to be set to default as "Yes."

Max ACPI C-State determines the amount of power management while the system is idling. Normally set to default as "C4 State."

Security Menu

Set Supervisor Password defines the supervisor password (up to eight letters, figures, or the combinations). See the next section about the supervisor password.

Set User Password defines the user password (up to eight letters, figures, or the combinations). You can set the user password only when the supervisor password has been set.

> ⚠ *If you lose your password, you will be unable to access the computer or change the configuration. Make sure to select a password you will never forget, or write it down and protect it in a secure place. Otherwise, you will have to contact your dealer for assistance.*

Password On Boot defines whether the system requires the password entry to boot up.

Hard Disk Boot Sector defines whether the boot sector of the hard disk is write-protected. When formatting the hard disk or reinstalling software, set it to *Normal*.

Passwords

Setting a password will protect the computer against unauthorized access. Once a password is set, the system requires the password when entering to the Setup Utility. If the *Password on boot* is enabled, the system will require the created password when the computer is turned on.

> • *If you enter a wrong password three times, the message "System Disabled" appears. Press the power button to shut down the computer, and after 10 seconds, press the power button to turn it on again.*
> • *If the* Password On Boot *is disabled, the password entry will be needed to enter the Setup Utility.*

Your computer supports two different levels of password security: a supervisor password and a user password. A user password is available to be set with a supervisor password set. If you share the computer with others we recommend that you set both supervisor and user passwords, and let others know the user password only.

Setting the Password

> *If not necessary, do not set the supervisor password or user password. If you forget the password, you cannot boot the computer.*

> *The user password can change the following items:*
> • *System Time*
> • *System Date*
> • *Resolution Expansion*
> • *Set User Password*
> • *Battery Calibration*
> • *Exit Saving Changes*
> • *Exit Discarding Changes*
> • *Save Changes*

1. In the *Security* menu of the Setup Utility, select *Set Supervisor Password* or *Set User Password* and press **Enter**.

2. Type your password (up to eight letters, figures, or the combinations), and press **Enter**.

3. Type the same password again, and press **Enter**.

4. Press **Enter**.

5. Select *Exit* menu and confirm *Exit Saving Changes* is highlighted; then press **Enter**.

6. Confirm *Yes* is highlighted and press **Enter**. The system restarts.

☑
- *To enable the supervisor password or the user password when booting up the computer, enable the* Password On Boot.
- *When entering the Setup Utility, the password will be required.*

Changing the Password

1. In the *Security* menu of the Setup Utility, select *Set Supervisor password* or *Set User password* and press **Enter**.

2. Type your current password, and press **Enter**.

3. Type your new password, and press **Enter**.

4. Type your new password again, and press **Enter** twice.

5. Select *Exit* menu and confirm *Exit Saving Changes* is highlighted; then press **Enter**.

6. Confirm *Yes* is highlighted and press **Enter**. The system restarts.

Deleting the Password

☑ *A deletion of the supervisor password will delete the user password.*

1. In the *Security* menu of the Setup Utility, select *Set Supervisor password* or *Set User password* and press **Enter**.

2. Type your current password, and press **Enter**.

3. Without typing any characters, press **Enter**.

4. Without typing any characters, press **Enter** twice.

5. Select *Exit* menu and confirm *Exit Saving Changes* is highlighted; then press **Enter**.

6. Confirm *Yes* is highlighted and press **Enter**. The system restarts.

Boot Menu

Boot Sequence specifies where the system boots from. Press **Enter** to open the sub menu. The system boots from the drive at the top of the list. If the system cannot find the drive, it will boot from the second one; then, third one; then forth one. Use arrow keys to select the drive you want to move and then, use the space bar or minus key to move it up or down.

USB Boot enables or disables the boot from the USB floppy disk drive.

LAN Boot defines whether the system boots from other server via the LAN unit of the computer.

Battery Menu

Battery Calibration conditions the battery pack. (Refer to the *Conditioning the Battery Pack* on page 2-4.)

Exit Menu

Exit Saving Changes saves the settings you have changed and exits the Setup Utility.

Exit Discarding Changes exits the Setup Utility without saving the settings you have changed.

Load Setup Defaults returns the values of all items to the default. To exit, select one of the first two items.

Discard Changes returns the values of all items to the values you last saved. To exit, select one of the first two items.

Save Changes saves the settings you have changed.

5
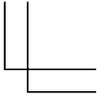
Setup Utility
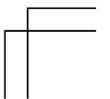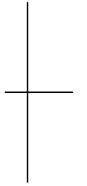
Appendixes

The appendixes contain additional information on the use and care of the computer.

Memory Module

You can upgrade the memory amount of the computer by installing an expansion memory module. See the specification on the separate specification sheet for the default and maximum memory size. For available memory modules, contact your local dealer or visit http://www.sharpsystems.com.

Installing the Memory Module

> ⚠ • *Do not handle the memory module in a location where static electricity is easily generated such as on the carpet.*
> • *Before installing the memory module, carefully discharge static electricity from your body by touching an unpainted metal area.*
> • *Avoid touching the integrated circuits on the memory module. Handle all components by their edges.*
> • *Keep the memory module in the anti-static wrapping until you are ready to install it.*

1. Turn off the computer.
2. Disconnect the AC adapter and remove the peripheral devices.
3. Put the computer on a stable surface and remove the battery pack. (See Chapter 2 for removing the battery pack.)

> ⚠ • *Make sure to turn off the computer and remove the AC adapter and the battery pack. Otherwise you may get an electrical shock.*
> • *After long use of the computer, the temperature inside the computer may have gone up. Leave it alone until it becomes cool before going on to the next step.*

Appendixes

A-1

4. Loosen the screw and remove the cover.

Screw

Cover
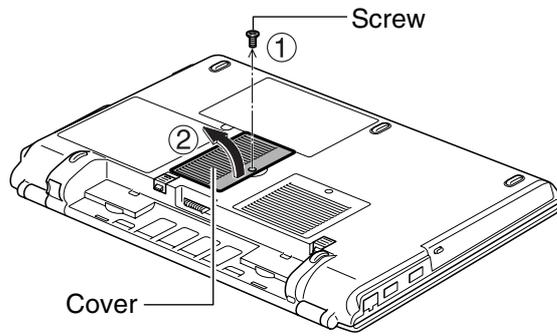
5. Turn over the sheet.

Sheet
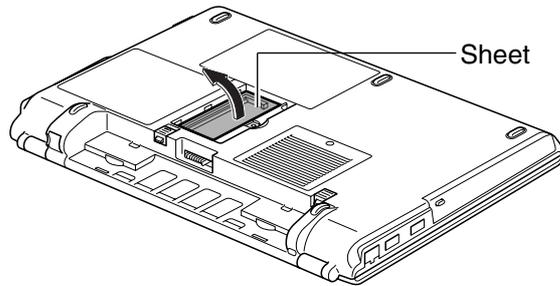
6. Align the notched part of a memory module to the projecting part of the memory socket and then, put the module into the socket until it is seated.

Projecting Part

Memory Module

20°

Notched Part

Memory Socket
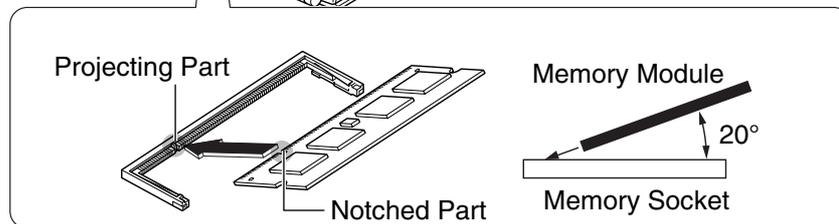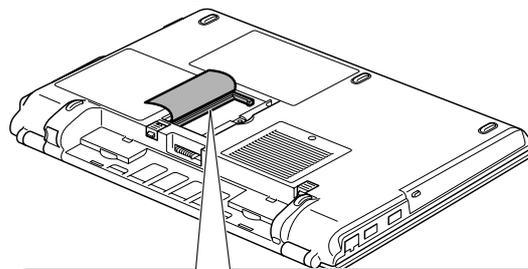
7. Gently press the module to place it into the socket, matching the notched parts of the module with the projecting parts of the socket.

Notched Parts

Projecting Parts
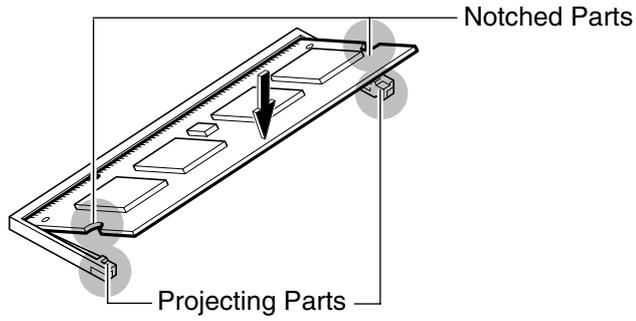
8. Match the tabs of the cover with the notched parts of the computer, and then, put down the cover so that it is placed in the original position.
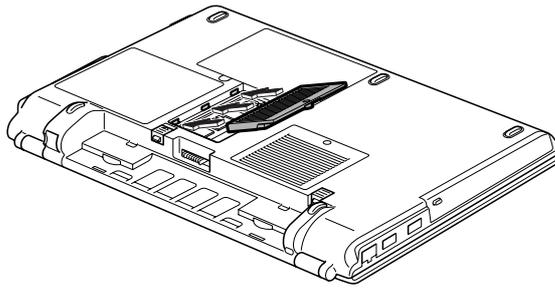
9. Tighten the screw.

Screw
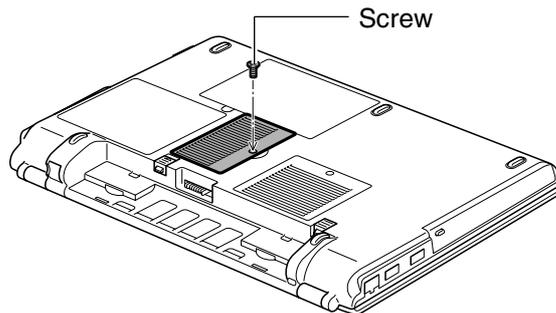
10. Reinstall the battery pack, turn over the computer and connect the AC adapter.

Appendixes

A-3

Finding the Memory Size

1. Turn on the computer. When the message *Press F2 for System Utilities* appears, press **F2** to open the Setup Utility.

2. Find the memory size shown in the *Extended Memory* field in the *Main* menu.

> ✓
> - *The available memory size will appear, minus the total amount of shared video memory size and other factors.*
> - *If you find the memory size shown incorrectly, it is considered that the memory module has been installed improperly. Press the power button to turn off the computer and reinstall the memory module correctly.*

3. Press **Esc** key. The *Exit* menu will appear.

4. Confirm *Exit Saving Changes* is selected and then, press **Enter**.

5. Confirm *Yes* is selected and then, press **Enter**.

   The computer will restart.

> ✓
> *You can find the memory size on Windows.*
> *Click* start – My Computer – View system information *of* System Tasks.
> *The memory size will appear, minus the amount of shared video memory size, at the bottom of the sentence in* General *tab.*

Removing the Memory Module

1. Follow the steps 1 to 5 of the *Installing the Memory Module* section.

2. Slightly bend both latches outwards until the memory module is released.
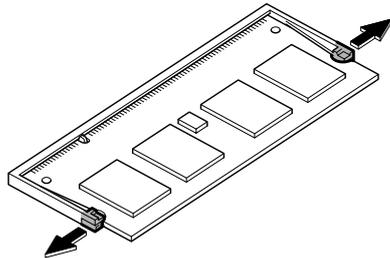
3. Remove the memory module and close the cover.

Maintenance and Care

This section provides you with information on how to maintain your computer in excellent working condition.

Using a Security Cable

You can connect a security cable to the security slot on the computer to prevent theft.

Security Slot

Security Cable

Connect the cable to a fixed object to ensure that the computer stays in the intended area.

Appendixes
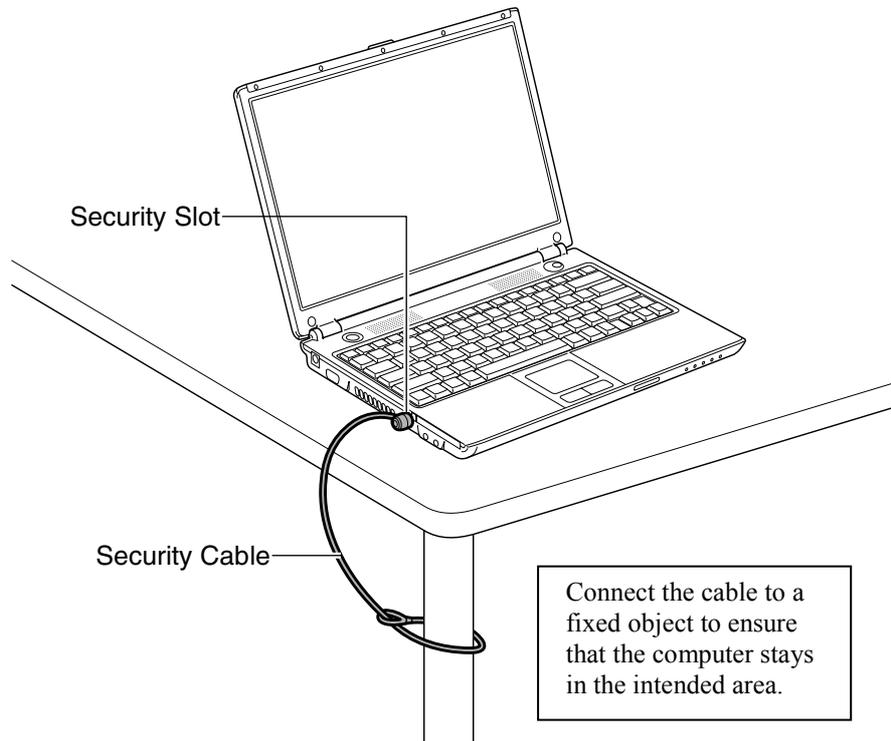
Cleaning the Computer

Cabinet

Apply a small amount of mild cleaning solution to a dry, lint-free cloth and wipe the cabinet with the cloth.

> • *Never clean the computer while it is powered on.*
> • *Do not use alcohol, benzene, thinner, or other strong chemical agents that may damage the cabinet.*

A-5
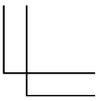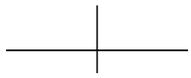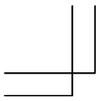
Appendixes

Screen

The surface of the screen may become smeared and accumulate dust during use.
Avoid touching the screen with your fingers when using the system. Gently wipe the
surface of the screen with a soft cloth that has been dipped in a mild detergent solution
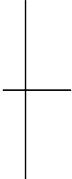and squeezed dry.

Touchpad

Wipe the touchpad with a soft, dry cloth.

Ventilation Openings

Dust on the ventilation openings may cause overheating of the computer. Wipe the
ventilation openings with a soft, dry cloth.

Traveling with Your Computer

The computer is designed for portability. For safety and convenience when traveling,
please follow these guidelines.

- Before traveling, back up your data on external media.

- Do not travel with a protruding PC card inserted in the PC card slot of the
  computer.

- Do not carry the computer with the power on. This may result in loss of data and/or
  damage to the hard disk drive.

- Make sure the display cover is completely closed before traveling. Otherwise the
  cover may be opened unexpectedly, and the display and/or the keyboard may be
  damaged.

- If you carry the computer in a bag, avoid unnecessary pressure to the computer by
  the other items in the bag.

- Disconnect the AC adapter and any other cables and any peripherals from the
  computer.

- Fully charge the battery pack and remember to bring the AC adapter and the AC
  power cord with the computer.

- Avoid sudden shocks or extreme vibration.

Appendixes

Virus Protection

Computer viruses are referred to as a kind of malignant program intentionally engineered. When the computer is infected, several damages would be generated; data in the hard disk may be destructed; the computer may be provided external operation by unauthorized users; you may inadvertently attach infected files to your e-mails resulting in spreading the viruses, for example.

To avert virus infection,

● Use the latest virus protection/cleaner software,

● Apply the latest virus definition file for prevention of new virus attack,

● Before opening incoming files such as attached files or downloaded files, detect the virus infecting them,

● Do not open e-mails originating from an unknown place,

● Enable the security functions of your application to be used (i.e. disabling macros when handling Word or Excel files,) and

● Regularly update Windows or the applications/software on your computer.

> *Be sure to back up your important data regularly. If the data has been damaged by a virus, you may not be able to recover it.*

When virus infections occur

Eliminate the virus by using the latest anti-virus software or virus cleaner software. When it fails, repair all the hard disks. (For repairing the hard disks, refer to the *Re-installation Instructions* section on page A-13.)

Updating Windows

Enabling Automatic Updates

If the *Automatic Updates* is turned off on the computer, follow these steps.

> ● *You can check the current Automatic Updates status by following these steps. If it is turned off, turn it on.*
>   *1. Click* start – Control Panel – Security Center.
>   *2. See the* Automatic Updates *field in the* Security Center *window. When the* Automatic Updates *is* ON*, the function is enabled.*
> ● *When the* Automatic Updates *is turned on, the computer will*

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> *automatically detect the important programs to be updated and install them if any.*

1. Click *start – Control Panel – Security Center*.

2. In the *Security Center* window, click the *Turn on Automatic Updates* button.

3. Close the window.

Updating Windows

You can update Windows by clicking the *Windows Update* icon on the taskbar or accessing to the Microsoft site.
For more information, visit the Windows *Help and Support Center*.

Protecting Your Computer against Viruses

The *Norton AntiVirus* software is preinstalled on the computer for detecting and eliminating viruses. Since the software downloads the latest information or data through the Internet, the computer needs to be connected to the Internet. Some of the software features are below:

- Regularly updates itself to maintain the latest program and virus definition file against new virus threats. (LiveUpdate)

- Automatically scans all incoming messages and attachments so that viruses can be identified and blocked. Also detects viruses intruded into the computer. (Auto-Protect)

- Manually detects infected programs or files. (Virus Scan)

    Refer to *Help* of the *Norton AntiVirus* for more information.

> - *By default, the Norton AntiVirus software :*
>   - *Enables the* Auto Protect *function.*
>   - *Scans the computer for virus weekly.*
> - *Refer to the* Help and Support *of the Norton AntiVirus software for details.*

Enabling Norton Antivirus Software

To use the preinstalled Norton Antivirus software for the first time, you must complete the *Norton Antivirus* wizard to enable it and update the definition file.

1. Connect the computer to the Internet.

2. Click *start – All Programs – Norton AntiVirus – Norton Antivirus 2005*.

3. Follow the on-screen instructions to complete the *Norton Antivirus* wizard and the *LiveUpdate*.

Running LiveUpdate Automatically

The *Automatic LiveUpdate* function automatically updates the definition file.

> *Be sure to complete the Norton AntiVirus wizard before going on these steps.*

1. Click *start – All Programs – Norton AntiVirus – Norton AntiVirus 2005*.
2. Click *Automatic LiveUpdate* in the *Subscription Service* field.
3. Click the *Turn On* button and close the *Norton AntiVirus* window.

Norton AntiVirus Update Service

Norton AntiVirus software scans for virus by means of a virus definition file allowing the software to identify and block a particular virus. To protect the computer against new viruses, the virus definitions and application need to be kept current. The software automatically checks the web and updates the definition file when needed. Free update service will be provided within ninety days after the software is installed. After the free service is over, one-year paid update service can be available. Refer to *http://www.symantec.com* for the application.

Scanning Viruses

By default settings, the Norton AntiVirus software automatically scans the computer once a week. To manually detect viruses infecting the computer, follow the instructions below.

> *Be sure to complete the Norton AntiVirus wizard before going on these steps.*

1. Click *start – All Programs – Norton AntiVirus – Norton AntiVirus 2005*.
2. Click *Scan for Viruses* in the *Norton AntiVirus* menu.
3. Click an option you want to perform and then, follow the on-screen instructions.

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Data Execution Prevention

The computer is mounted with the CPU supporting Data Execution Prevention (DEP) technology (or a memory protection feature) built into the Windows operating system. With the DEP technology, the operating system marks some memory regions as non-executable and prevents execution of malicious program code there, which will result in protecting the computer from virus infection.

- *Only the members of the Computer administrators group can change the settings of DEP or the Security Center.*
- *With the computer connected to LAN, the settings may not be changed. Consult your network administrator.*

Changing DEP Settings

By default, the DEP technology is enabled only for essential Windows programs and services. To turn on the DEP for all programs and services;

1. Click *start – My Computer*.
2. Click *View system information* in the *System Tasks* field.
3. Click the *Advanced* tab.
4. In the *Performance* field, click the *Settings* button.
5. Click the *Data Execution Prevention* tab and select *Turn on DEP for all programs and services except those I select*.
6. Click *OK*.
7. Click *OK* in the confirmation window.
8. Click *OK* to close the dialog box.
9. Close the *My Computer* window.
10. Restart the computer.

Checking Safety of Programs

As the DEP always functions on the computer against the security threats, some programs may be blocked and cannot execute. If you have the message "To help protect your computer, Windows has closed this program," close the message window and check out the safety of the program and computer by following theses steps.

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1.   Open the *Security Center* and confirm all of the *Firewall*, *Automatic Updates* and *Virus Protection* are *ON*.

✓
- *Be sure to enable all of these three functions.*
- *For details on the* Security Center*, refer to the* Notice of Computer Security *on page xiv.*

2.   Scan the system for viruses.

✓
- *If some viruses are detected, eliminate them according to the instructions of the virus protection/cleaner software.*
- *If no viruses are detected and the three functions are enabled, consult the program publisher for an updated version.*

Disabling DEP for Specific Programs

After ensuring the safety of the program, disable the DEP function to enable the program execution.

✓
To protect the computer, try to update the program and enable the DEP function.

1.   Follow the steps 1 to 5 of the *Changing DEP Settings* section on the previous page.
2.   Check the box of the program in the list to be run and then, click *OK*.

✓
If the program is not on the list, click Add… *and select the program to be run.*

3.   Click *OK*.

✓
If the confirmation window appears, click OK.

4.   Click *OK*.
5.   Restart the computer if prompted in the step 3.

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Data Backup and Restore

Your important data such as e-mails or files is stored on the hard disk of the computer. Backing up the data in another place is one of the ways that can protect your data against any disaster, data corruption or data erase, for example.

Backing Up Data and Settings

Backing Up Data
You can back up your data on the D drive, external hard disk, or CD-R/RW disks.

> ⚠️ *The D drive is not perfectly safe place for backup. If the hard disk is damaged, you cannot access the backup data.*

> ✓ *The* Auto-Grabber *function of Drag'n Drop CD+DVD4 helps you back up your data onto your media. Refer to* Auto-Grabber Help *for more information.*

Backing Up Settings
The *File and Settings Transfer Wizard* can help you to back up several settings at one time. To open the wizard, follow the instructions below.

> ⚠️ *You cannot back up the details on the network settings such as an IP address and subnet mask by using the* File and Settings Transfer Wizard. *Note down the details on the settings and keep it in a safe place.*

1. Connect the backup device or media to the computer.
2. Click *start – All Programs – Accessories – System Tools – Files and Settings Transfer Wizard*.
3. Follow the on-screen instructions.

Restoring Data and Settings

You can also use the *File and Settings Transfer Wizard* to restore your data or settings from the backup media to the hard disk.

> ✓ *Confirm that the backup data to be restored is the one you want before overwriting the existing file.*

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Re-installation Instructions

Refer to this section to re-install the system of the computer.

>
>
> - *The reinstallation process will overwrite all information in the C and D drives of the hard disk and restore the hard disk drive to its factory configuration.*
> - *The necessary reinstallation data is on the hard disk of the computer. Never modify or delete this data. Without the correct data, you cannot restore the computer to its factory configuration.*
> - *Do not change the setting of the hard disk partition. The change may result in deleting the reinstallation data. Without the data, you cannot restore the computer.*
> - *If you have installed commercial data recovery software on the computer, never perform the reinstall process until you uninstall the recovery software, which may rewrite the MBR[*] of the hard disk. If the MBR is rewritten, you may not be able to reinstall the system.*
>   *([*]Master Boot Record: a sector on the beginning of a hard disk drive that contains a sequence of commands necessary for booting an operating system)*

To recover your hard disk, you will use the PowerQuest EasyRestore software which comes pre-installed on your computer. Before starting re-installation, read the following End User License Agreement first.

PowerQuest® EasyRestore[TM] End User License Agreement

IMPORTANT: Read this before using your copy of PowerQuest software.

This document is a legal agreement between you, the "end user," and PowerQuest Corporation. Use of the software indicates your acceptance of these terms. As used in this License Agreement, the term "Software" means the EasyRestore software included on the CD provided with this License Agreement.

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Recovery Options

You can format the hard disk and re-install the preinstalled software and set the status of the computer to the same configuration as you used for the first time. There are two options to recover the hard disk drive(s) of the computer: via hard disk and via recovery CD. The former saves your time, while the latter secures the re-installation data from potential loss or corruption. The later sections describe the specific steps for each option.

Before you recover via recovery CDs, you need to write the preinstalled recovery data on the computer onto blank CD-R disks. (Refer to the related section later in this chapter.) You are allowed to create only one copy of the recovery data.

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Preparation for Reinstallation

The following items are necessary for reinstallation.

Via Hard Disk

● Operation Manual

Via Recovery CD

When you recover first time:

● Operation Manual

● Four blank 650MB or 700MB CD-R disks for creating recovery CDs

When you recover after preparing the recovery CDs:

● Operation Manual

● The created recovery CDs

Backing Up Data

Before you format the hard disk, back up your data. For details on how to back up your data, refer to *Data Backup and Restore* section on page A-12.

Selecting Way to Recover Your System

The computer has partitioned the hard disk into two drives (C: and D:) when it was shipped from the factory. You can select one of the following options to recover your system.

- *Recovers C: drive only. (Recommended)*
  This process will format the C drive only and recover the C drive to the same status as shipped from the factory. Nothing will be performed to the D drive. The volume of the drives will not be changed and will keep the current one.

- *Recovers both C: and D: drive.*

  This process will format both the C and D drives, and contents of the hard disk will be restored to its original state in the C and D drives. The volume of the drives will be back to the same as you used for the first time. This process will delete any new data stored in the hard disk.

- *Formats hard disk and creates new partition.*

  This process will format the whole hard disk drive and create new drive partitions. You can select the specified volume of the C and D drives. The contents of the hard disk will be restored to its original state. This process will delete any new data stored in the hard disk.

> ⚠ *While you are recovering with the created recovery CDs, "Recover both C: and D: drive" and "Formats hard disk and creates new partition" will eliminate the reinstallation data stored in the hard disk. If it is eliminated, you cannot recover your system via hard disk.*

Formatting Drives and Re-installing Windows

> ⚠ *The formatting and re-installing process will restore the hard disk drive to its factory configuration. To ensure the computer's safety, enable the virus protection/cleaner software and update the virus definition file to the latest one. Also, the Windows Update should be run for virus prevention. (Refer to the* Virus Protection *section on page A-7.)*

Via Hard Disk

With this way, recovery will come from data already installed on the computer rather than from external media such as CDs.

> ⚠ *Note that if there is any possibility of the data being lost or corrupted, you may not format the hard disk drive(s) and reinstall Windows.*

1. Make sure the computer is turned off.
2. If any peripheral devices are connected to the computer, disconnect them.
3. Connect the AC adapter.

> ⚠ *Be sure to connect the AC adapter. If the battery power becomes significantly low, the reinstallation process will be canceled.*

4. Turn on the computer. When the message *Press F2 for System Utilities* appears on the bottom left of the screen, press **F2**. Then, the Setup Utility will open.
5. In the *Exit* menu, select *Load Setup Defaults*; then, press **Enter** twice.
6. In the *Exit* menu, confirm *Exit Saving Changes* is highlighted and press **Enter** twice.
7. The system will restart. When the message *Press F10 to Recover* appears on the upper left of the screen, press **F10**.

> ✓ *The message stays there for two seconds.*

8. Read the message on the screen, and select the way to recover your system; then, press **Enter**. If you selected *Formats hard disk and creates new partition*, go to the next step. Otherwise, go to the step 10.

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9. Select the volume of C drive and press **Enter**.

10. Read the message and select *Continue*; then, press **Enter**. The formatting and re-installation will start.

> ⚠ *Although the pointer may be shown on the screen, never touch the keyboard or the mouse during recovery except when the message prompts you to. If you touch them, the reinstallation process may be canceled.*

11. When the hard disk has been recovered successfully, the system will restart automatically.

12. Set up Windows XP by following the on-screen instructions. After you complete the Windows setup, be sure to set date and time.

Via Recovery CD

Recovery CDs do not come with the computer. First, you need to copy the recovery data onto CD-R disks and then, recover the system with them.

> ⚠
> - *You will only have the ability to create one set of recovery CDs.*
> - *Even if you cancel the CD burning process, you can create the recovery CDs by starting at the first step.*
> - *You can recover your system via hard disk even after succeeding in creating the recovery CDs.*

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Creating Recovery CD

To create the recovery CDs, you will use the *Bootable CD Creator* software. Read the
following End User License Agreement first.

Enterprise Corporation International Software License Agreement

This End-User License Agreement ("the Agreement") is a legal agreement between you, the "end user," and
Enterprise Corporation International ("ECI") for the ECI product, which includes a computer program
(Bootable CD Creator), data, and manuals ("SOFTWARE PRODUCT"). Ownership of the SOFTWARE
PRODUCT shall at all times remain with ECI. The SOFTWARE PRODUCT and accompanying
documentation are licensed to you, which means you have the non-transferable and non-proprietary right to
use the SOFTWARE PRODUCT in accordance with this Agreement. The SOFTWARE PRODUCT and
any accompanying documentation are proprietary products of ECI or its licensors and are protected by
United States copyright laws and international copyright treaties. Use of the enclosed software indicates
your acceptance of these terms.

Intended Purpose:
The SOFTWARE PRODUCT is installed on and shipped with a computer manufactured by Sharp. You
may use the SOFTWARE PRODUCT only for making a Bootable CD from the recovery image file that is
pre-installed on the hard disk. You may use the SOFTWARE PRODUCT only on the computer with which
this SOFTWARE PRODUCT is provided.

You may not:
1. Copy the SOFTWARE PRODUCT, in whole or in part, to another media except for installation.
2. Share the license for the SOFTWARE PRODUCT or use it concurrently on different computers.
3. Alter, transfer or sell (including e-sales through the Internet) the SOFTWARE PRODUCT and/or its
   copy to a third party, in whole or in part.
4. Delete or change the notice of copyright contained in the SOFTWARE PRODUCT.
5. Reverse engineer, disassemble, or decompile the SOFTWARE PRODUCT.
6. Create source code for the SOFTWARE PRODUCT from the object code.
7. Use any portion of the SOFTWARE PRODUCT within any other program.
8. Install or run the SOFTWARE PRODUCT over the Internet for use by multiple users.

Term: This Agreement is effective from your date of purchase or the date you opened the package and shall
remain in force until terminated. Upon termination of this Agreement, you must destroy all copies of the
SOFTWARE PRODUCT and all accompanying documents. ECI may terminate this Agreement if you fail
to comply with its terms and conditions.

Limited Warranty: ECI warrants that the SOFTWARE PRODUCT will perform substantially in
accordance with the accompanying documentation. The warranties set out in this agreement are in lieu of
and exclude all other warranties not expressly set forth herein, whether express or implied, including but not

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Before creating the recovery CDs, follow the instructions below:
- *Prepare four blank 650MB or 700MB CD-R disks.*
- *Connect the AC adapter. If the battery is discharged, the operation will stop and fail.*
- *Set the APM button mode to* Max Power *and set the CPU performance level to 100%. (See the* Using the Advanced Power Management Button *section on page 2-9.)*
- *Disable system standby and system hibernate. (See* Power Saving *section on page 2-7.)*
- *Close all of the unnecessary or the automatic start-up applications.*
- *Disable the screen saver. (See the* Wallpaper and Screen Saver *section on page 1-20.)*

Disabling Auto Protect of Norton AntiVirus

Before creating the recovery CDs, disable the *Auto Protect* function of the Norton AntiVirus.

1. Right-click the *Norton Antivirus* icon ( ) on the taskbar.
2. Click *Norton AntiVirus Options.*
3. Clear the boxes of *Enable Auto-Protect* and *Start Auto-Protect when Windows starts up* in the *How to stay protected* field.
4. Click *OK*.
5. Select the duration for the *Auto Protect* to be disabled.

It is recommended that you select Until system restart *when you create the recovery CDs.*

6. Click *OK*.
7. If a message appears, read it and click *OK*.

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The icon ( ) will change to ( ).

Creating Recovery CDs

1. Connect the AC adapter to the computer.

Be sure to connect the AC adapter. If the battery is completely discharged, the burning CD process will be stopped.

2. Insert a blank CD-R into the optical drive.

If a dialog box or window appears, close it.

3. Click *start – All Programs – Create Product Recovery CD*.
4. In the *Bootable CD Creator SE1.1* window, select the appropriate speed from the *Speed* pull-down menu, then, click the *Create Recovery Disc* button.
5. Read the message on the screen and then, click *Yes*, then, *OK*. The burning process will start.

Never touch the keyboard, mouse or touchpad during the burning process except when the message prompts you to do so. If you touch them, the burning process may be stopped.

6. Replace the CD-R by following the instructions on the screen. Label each CD-R in the order of burning so that you will set them in correct order when recovering.

If a window or dialog box opens, close it.

7. When you see the message *Disc creation complete* on the screen, click *OK*, then, *Close*.
8. Click *Yes* and remove the CD-R from the optical drive.

Appendixes

> ⚠️ • *Store the burned disks in a secure place.*
> • *Keep your disks away from direct sunlight, heat and excessive moisture.*

9. Close the optical drive.

10. Restart the computer.

Enabling Auto Protect of Norton AntiVirus

If the Norton Antivirus icon on the taskbar is disabled, appearing as (🛡️), follow these steps. If it is (🛡️), skip the steps.

1. Right-click the *Norton Antivirus* icon (🛡️) on the taskbar.

2. Click *Norton AntiVirus Options*.

3. Check the boxes of *Enable Auto-Protect* and *Start Auto-Protect when Windows starts up* in the *How to stay protected* field.

4. Click *OK*.

5. If a message appears, read it and click *OK*.

> ✓ *The icon (🛡️) will change to (🛡️).*

Recovering with Recovery CDs

> ⚠️ *When you format the entire hard disk drive (both C and D drives), the reinstallation data stored in it will be eliminated. Therefore you will not be able to recover your system via hard disk.*

1. Make sure the computer is turned off.

2. If any peripheral devices are connected to the computer, disconnect them.

3. Connect the AC adapters to the computer and then, turn it on.

> ⚠️ *Be sure to connect the AC adapter. If the battery is completely discharged, the installation process will be canceled.*

4. When the message *Press F2 for System Utilities* appears, press **F2**. The Setup Utility will open.

5.   Insert the Recovery CD disk 1 into the optical drive.

6.   In the *Exit* menu, select *Load Setup Defaults*; then, press **Enter** twice.

7.   In the *Boot* menu, confirm the *Boot Sequence* is highlighted and then, press **Enter**.

8.   In the *Boot Sequence*, select the *Optical Disk Drive* and press the space bar to place the *Optical Disk Drive* in the top of the list; then, press **Esc**.

9.   In the *Exit* menu, confirm *Exit Saving Changes* is highlighted and press **Enter** twice.

10.   Read the message on the screen, and select the way to recover your system; then, press **Enter**. If you select *Formats hard disk and creates new partition*, go to the next step. Otherwise, go to the step 12.

> ⚠ *When you select* Recovers both C: and D: drive *or* Formats hard disk and creates new partition*, the recovery process will delete the reinstallation data stored in the hard disk. Therefore you will not be able to recover your system from the hard disk.*

11.   Select the volume of C drive and press **Enter**.

12.   Read the message and select *Continue*; then, press **Enter**. Follow the on-screen instructions for replacing the recovery CD.

> ⚠ *Although the pointer may be shown on the screen, never touch the keyboard, the mouse or the screen during recovery except when the message prompts you to. If you touch them, the reinstallation process may be canceled.*

13.   After the recovery process is complete, the system will restart automatically. When the message *Press F2 for System Utilities* appears, press **F2**. The Setup Utility will open.

14.   In the *Exit* menu, select *Load Setup Defaults*; then, press **Enter** twice.

15.   In the *Exit* menu, confirm *Exit Saving Changes* is highlighted and press **Enter** twice. The system will restart.

16.   Set up Windows, following the instructions on the screen.

17.   Remove the recovery CD from the optical drive.

18.   Make sure to set date and time.

Appendixes

A-23
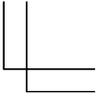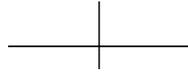
Appendixes
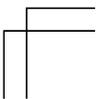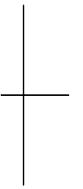
Troubleshooting

This chapter describes how to troubleshoot computer problems.

Common Problems

Problems with your computer can be caused by something as minor as an unplugged power cord or as major as a damaged hard disk drive. The information in this troubleshooting section is designed to help you find and solve minor problems. If you still have a problem after trying all the suggested remedies in this chapter, contact your dealer or, for users in U.S, call: 1-800-BE-SHARP (237-4277).

The problems that you might encounter can be divided into two basic categories: hardware and software. Hardware problems can be further divided into being of an electrical or a mechanical nature. You will know you have a hardware problem if, for example, the screen is blank, or your computer cannot recognize the disk drives.

Software problems can occur at several levels. Both your operating system and your software application programs are capable of generating errors and error messages. If you encounter a software error, try to determine if the error message is from your operating system or from an application program, and refer to the appropriate manual for possible remedies.

You can also refer to the Windows help program to solve the problem. To access the program, click *start – Help and Support*. It also gives you troubleshooting tips and an index.

Successful troubleshooting is the result of careful observation, deductive reasoning, and an organized approach to solving the problem. If you encounter a problem, begin by performing a careful visual inspection. Check the exterior of your computer first. If no lights are displayed, check the battery charge or power outlet, the plug and power cord, and any power switches that may affect your computer. If your computer has been connected to any peripheral devices, look for loose or disconnected cables. You may also need to check the fuses and breakers in your electric box. A few common problems and suggested solutions are presented in the examples that follow.

Troubleshooting

Trouble when Starting

Why doesn't the power indicator or the battery indicator turn on?

- Make sure the AC adapter is correctly connected to the AC adapter jack of your computer.

- Make sure the AC power cable is correctly connected to a live wall outlet. To find it is live or not, connect another electric equipment to the wall outlet.

- Make sure the battery pack is correctly installed and charged.

- If the battery pack is discharged, connect the AC adapter.

- If all the steps above failed, follow the instructions on *Why doesn't the keyboard or the touchpad respond to your operation*? on page T-3.

Why do I get the message *Invalid system disk*?

- You may have inserted a non-bootable disk (either a defective disk or one without an installed operating system) in the optional external floppy disk drive unit. Eject the disk.

Why can't I boot from the floppy disk?

- Make sure that the optional external floppy disk drive unit is correctly connected to your computer.

- Check whether the floppy disk set to the optional external floppy disk drive unit contains a system disk.

- Check whether *USB Boot* in the *Boot* menu of the Setup Utility is enabled. (Refer to the *Boot Menu* section on page 5-7.)

- Check whether *Floppy Disk Drive* is at the top in the *Boot Sequence* in the *Boot* menu of the Setup Utility. (Refer to the *Boot Menu* section on page 5-7.)

Why do I get the message *Operating System not found*?

- The message may appear when the installation has failed. Recover the C and D drives using the created recovery CDs.

Troubleshooting

Why do I get the message *Press <F1> to resume, <F2> to setup*?

- The setting of the Setup Utility is deleted. Follow these steps:

1. Press **F2** key while the message *Press F1 to resume, <F2> to setup* is appearing.

2. In the *Exit* menu, select *Load Setup Defaults* and press the **Enter** key to retrieve the default values.

3. Confirm *Yes* is highlighted and then, press the **Enter** key.

4. Set the desired values in the Setup Utility or just leave the default values.

5. In the *Exit* menu, select *Exit Saving Changes* and then, press the **Enter** key.

6. Confirm *Yes* is highlighted and then, press the **Enter** key.

7. On Windows, click *start – Control Panel*.

8. Click *Date, Time, Language, and Regional Options*.

9. Click *Change the date and time*.

10. In the *Date and Time Properties* dialog box, set the current date and time; then, click *OK*.

11. Close the dialog box.

12. Make an appropriate setting on the Setup Utility, if necessary. If you want to keep the default settings, no setting performance is needed.

- If the operation above fails to work, contact your dealer or call: 1-800-BE-SHARP (237-4277) for users in U.S.

Trouble with the Keyboard or Touchpad

Why doesn't the keyboard or the touchpad respond to your operation?

- Try the following in this order:

1. Press **Ctrl+Alt+Delete** and select the *Applications* tab of the *Windows Task Manager* dialog box. Click the program name that hangs up, then, the *End Task*. If this does not solve the problem, select the *Users* tab, click the *Disconnect* or *Logoff* of the *Windows Task Manager* dialog box, and then *Yes*.

2. If the step 1 fails to work, confirm the hard disk indicator is turned off and press the power button for more than four seconds to turn off the system. Ten seconds later, turn your computer on.

3. If pressing the power button fails to turn off your computer, confirm the hard disk indicator is turned off and remove the AC adapter, then, the battery pack. Ten seconds later, reinstall the battery pack, connect the AC adapter and then, turn on your computer.

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Why doesn't the touchpad function?

- The surface of the touchpad or your palm may be moist or dirty and grease. Wipe the touchpad with a soft, dry cloth.
- The touchpad may be disabled because of the connected USB mouse. Remove the mouse or enable the touchpad by following these instructions.

1. Click *start – Control Panel.*
2. Click *Printers and Other Hardware - Mouse.*
3. In the *Mouse Properties* dialog box, click the *Device Settings* tab.
4. Clear the box of *Disable internal pointing device when external USB pointing device is attached.*
5. Click *OK* to close the dialog box.
6. Close the *Printers and Other Hardware* dialog box.

Trouble with the Display

See also the *Adjusting the Display* section on page 1-19 and the *External Monitors* section on page 3-8.

Why is the screen blank?

- Confirm the computer is turned on by checking the power indicator. When it lights green, the computer is on.
- Press any key to find any power management feature has turned off the screen to save power.
- If you are using a battery pack, make sure it is correctly installed and has a charge remaining.
- Make sure the LCD screen is selected as the display by pressing **Fn+F5** (▢).
- Check whether the display is on by pressing **Fn+F11** (▧).
- If you still have the problem after trying the above, follow the steps in *Why doesn't the keyboard or the touchpad respond to your operation?* on page T-3.

Troubleshooting

Why does the external monitor display nothing or distorted images?

- Confirm the monitor is turned on.

- Confirm the monitor is connected correctly.

- Make sure the external monitor is selected as the output display by pressing **Fn+F5** (▢).

- If you use **Fn**+**F5** (▢) to change the display, the image may be distorted. Press **Fn**+**F5** (▢) again to return the previously selected display and then, use the *Display Properties* dialog box to change it again.

- Make sure the value of the *Screen resolution* field in the *Settings* tab of the *Display Properties* is same as or lower than the resolution of the external monitor.

- Make sure the external monitor is not near any electric devices having strong magnetic fields such as a TV set or radio.

- Do not share an outlet with a TV set or radio.

Why can't I change the display with the Fn+F5 keys?

- While you are playing a game or running animation, the **Fn**+**F5** (▢) key combination may not work. Close the currently running application(s).

- Use the *Display Properties* icon (▢) to change it.

- Use the *Display Properties* dialog box to change it.

- While the display is in the *Extended Desktop* mode, **Fn**+**F5** (▢) key combination may not work.

Why does the screen brightness increase or decrease not when intended?

- If you press the APM button, the selected screen brightness value of the APM button is applied.

Troubleshooting

Trouble with Floppy Disks

Why can't I use a floppy disk?

- Confirm the optional external floppy disk drive unit is correctly connected.
- Confirm the floppy disk is inserted correctly.
- Confirm the drive or file name is correct.

- The floppy disk may not be formatted or could be corrupted. Format the disk or use another disk.

- If you cannot write to a floppy disk, the disk may be write-protected. Eject the disk and ensure that the write-protect tab covers the detection hole.

- If you cannot write to a floppy disk, the disk may be full. Use another disk.

- 720KB (2DD) disks are not available to boot the computer.

- 720KB (2DD) disks cannot be formatted in your computer.

- The DISKCOPY command on 720KB (2DD) disks is not available.

- 720KB (2DD) disks are not appropriate to save data.

- 720KB (2DD) disks may not be available for data transfer with other computers using 1.44MB (2HD) disks.

Trouble with the Optical Drive

Why does not the drive open?

- Confirm your computer is turned on.

- When your computer is turned off, insert a fine rod into the drive tray ejection hole. (Try this only if the eject button does not work.)

Ejection Hole
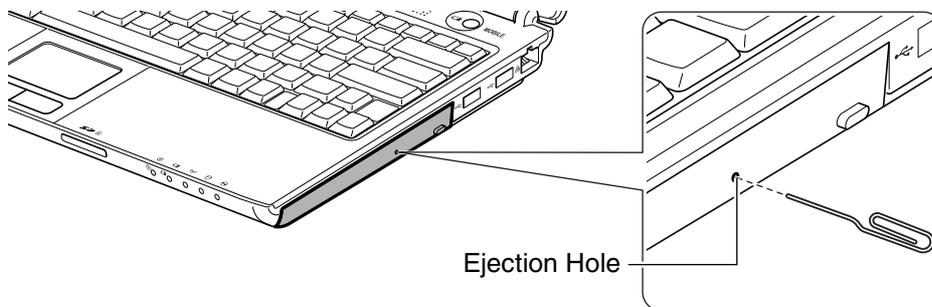
Why can't I read/write the data from/onto a disk or play files?

- Confirm the disk is inserted correctly.
- Confirm the drive and file names are correct.
- Confirm the disk is not stained or scratched.
- Confirm the disk or files are supported by the optical drive.

Why can't I write/delete the data onto/from a disk?

- Confirm the disk is available in writing or deleting data.

- If you wish to use the Windows CD writing software, you may need to enable it. (Refer to *Windows Help and Support*.)

Why doesn't the DVD video play smoothly?

- Ensure that the AC adapter is attached to the computer and a power source.
- Disable system standby and system hibernate.
- Set the APM button to the max power mode and then, select 100% for the CPU performance. (See the *Using the Advanced Power Management Button* section on page 2-9.)
- When playing a DVD video, you may experience a picture with irregular motion or frame dropouts, depending on videos. Enabling the *Hardware Decode Acceleration* function of *InterVideo WinDVD* may solve this problem. Follow these instructions to enable the function.

1. Quit the playback if it is running.
2. Right-click somewhere in the *InterVideo WinDVD5* window and select *Setup…* from the pop-up menu. The *Setup* dialog box will open.
3. Check the box of *Use Hardware Decode Acceleration* in the *Video Hardware Configuration* field.
4. Click *OK*.

   When the *Hardware Decode Acceleration* function is enabled, the *LCD Optimization* function is disabled. (Refer to *Help* of *WinDVD* for *LCD Optimization*.)

Why isn't the optical drive recognized?/Why can't I find the optical drive in My Computer window?

- If your computer is turned on with a DVD disk inserted in the drive, the drive may not be recognized. In this case, turn off your computer and open the disk tray by inserting a fine rod into the ejection hole. (Refer to the *Why does not the drive open?* section on page T-6.) Remove the disk from the drive, close the optical drive, and then, turn on your computer again.

- If you click the *Safely Remove Hardware* icon (📷) on the taskbar and MATSHITA xxxxx (xxxxx is your optical drive name), the optical drive powers off. The optical drive icon does not appear in the *My Computer* window while the drive is off.
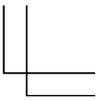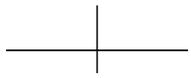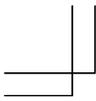
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- If you press the APM button and select the mode where the *Optical drive* is *OFF*, the optical drive powers off. To power it on, press the optical drive eject button or **Fn+F2** keys.

Trouble with the Hard Disk

Why can't I read or write data to/from the hard disk?
- Confirm the drive and file names are correct.
- Confirm the hard disk has sufficient free space.

Trouble with Communications

Why can't I communicate through the built-in modem?
- Confirm the telephone line is properly connected to the modem jack.
- Confirm the dial setting (pulse or tone) of Windows XP and/or communication software is matched with the telephone line.
- If you set your connection status using the *New Connection Wizard*, check the *Use dialing rules* in the *Properties* dialog box of that connection status. (Refer to the *Internet Connection* section on page 4-21.)
- Confirm the country/region setting is appropriate.
- Confirm the network configuration is appropriate.
- Confirm the user name or password is correct.
- Confirm the COM port in the communication software is set appropriately.
- Disable system standby and system hibernate.
- If an unusual device is attached to the line you are connecting to, the modem may not function properly. Remove the device or contact the dealer of the device.
- If your computer is connected to a PBX, consult the PBX maintenance staff or its service company. If the electric characteristics of your PBX are different from those of a regular analog line, the modem will not function properly. If you connect the modem to a digital PBX, both the modem and the PBX may be damaged.

Why is the access speed so slow?
- Set the APM button to the max power mode and then, select 100% for the CPU performance. (See the *Using the Advanced Power Management Button* section on page 2-9.)

- Close the applications currently opened.

- Try to connect another ISP (Internet Service Provider), or try to connect in some other time.

Why can't I access the LAN?

- Confirm the cable is properly connected to the LAN jack and the network hub.

- Confirm the network configuration is appropriate. (Refer to the *Configuring the LAN* section on page 4-3.)

- Confirm the user name or the password is correct.

- Reconfigure the network settings by following the *Network Setup Wizard*.

Why can't I detect the wireless access point on my computer?

- Confirm your computer is enabled for the wireless LAN communication.

- Confirm the access point is powered on.

- Confirm the antenna indicator is lit.

- Restart your computer.

Why can't I connect to the network via an access point?

- Confirm the wireless LAN antenna is enabled. When the antenna indicator lights green, the antenna is enabled. If not, press the **Fn+F1** ( ) keys.

- Confirm *Any available network (access point preferred)* is selected in the *Networks to access* field of the *Advanced* dialog box. (To open *Advanced* dialog box, refer to the *Communicating with Other Computers* section on page 4-15.)

- Confirm the *Network name* of your computer matches that of the access point you want to communicate with.

- Confirm the security settings of your computer equals to those of the access point if the encryption security of the access point is enabled.

    - Reenter the *Network key*.

    - When using the WEP key, confirm the key index is correctly selected.

- When you have more than one access points, your computer may be connected to other than right one you want to access. Follow the steps below.

1.   Right-click the *Wireless Network Connection* icon ( ) on the taskbar; then, click *View Available Wireless Networks*.

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2.   Select the desired network in the *Available wireless networks* list; then, connect to the network. (Refer to the *Confirming the Status of Wireless Connection* section on page 4-14.)

- Repair the connection with the following steps.

1.   Right-click the *Wireless Network Connection* icon.

2.   Click *Repair*.

- If there are more than one available access points nearby, they interact in the connection. In this case, the connection speed will become low or the connection will stop.

- You may have accidentally enabled IEEE802.1x authentication. Disable it with the following steps.

1.   Click *start – Control Panel*.

2.   Click *Network and Internet Connections – Network Connections*. If Classic view is selected, double-click *Network Connections*.

3.   Right-click *Wireless Network Connection* and click *Properties*.

4.   Click *Wireless Networks* tab, select the network in *Preferred networks* field and click *Properties* button.

5.   Select *Authentication* tab, then, clear the box of *Enable IEEE802.1x authentication for this network*.

6.   Click *OK* twice and close the window.

Why can't I communicate with other computers through the wireless LAN?

- Confirm the antenna is enabled with pressing the **Fn+F1** (📶) key combination. When the antenna indicator is on, the antenna is enabled. (Refer to the *Activating the Wireless LAN Antenna* section on page 4-11.)

- Confirm each computer is enabled for wireless LAN.

- Confirm *Computer-to-computer (ad hoc) networks only* is selected in *Networks to Access* of *Advanced* dialog box. (To open the *Advanced* dialog box, refer to the *Communicating with Other Computers* section on page 4-15.) Also confirm the other computers are in ad-hoc mode.

- Adjust the distance between your computers by bringing your computer closer to others and remove any obstructions that may impede the communication; then, try to connect again.

- Confirm the IP address and the subnet mask of each computer are set correctly.

- Confirm the WEP keys are correctly set to your computer if the WEP security of the communicated computers is enabled.

How can I detect the MAC address?

- Follow the instructions below:

1. Click *start – All Programs – Accessories – Command Prompt*.

2. Type `ipconfig/all`; then, press **Enter**. The information about IP appears.

3. See the address of the *Physical Address* in the *Ethernet adapter Local Area Connection* section.

4. Type `exit`; then, press **Enter**.

Trouble with Peripherals

Why don't peripheral devices function?

- Confirm they are correctly connected to your computer.

- Confirm they are Windows XP compliant.

- Confirm drivers necessary for the devices are installed.

Why can't I print?

- Make sure the printer is turned on.

- Check whether your computer and the printer are connected correctly.

- Check whether the printer is ready to print.

- Check whether the printer has enough paper.

- Check whether the printer driver is installed.

- Click *start - Control Panel - Printers and Other Hardware – Printers and Faxes*. If the Classic view is selected, double-click the *Printers and Faxes* icon. Confirm your printer is installed. If not, click *Add a printer* of *Printer Tasks* to install it.

- See also the Windows help program by clicking *start - Help and Support*.

Why don't peripheral devices function correctly?

- Confirm they are Windows XP compliant.

- Confirm drivers necessary for the devices are installed.

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T-11
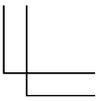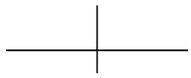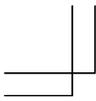
- Disable *System standby* and *System hibernates*. If this does not work, set *Turn off hard disks* to *Never*.

Trouble with Security Settings

Why do I have the message "Your computer might be at risk" each time I boot my computer?

- Make sure the three functions (*Firewall*, *Automatic Updates*, and *Virus Protection*) in the *Security Center* are *ON*.

- If you have the message "Automatic Updates is turned off" addition to the above message, turn on the Automatic Updates to enable your computer periodically to update Windows.

Other Troubles

Why does my computer not power on?

- Disconnect the AC adapter from the computer, remove the battery pack, correctly reinstall the battery pack and connect the AC adapter, then turn on the computer again.

Why do I get the message *Pop-up blocked* in the information bar?

- The Microsoft Internet Explorer prevents most pop-ups from appearing by using the popup blocker function.

  - If you wish to have the pop-ups on the current web site;
  1. Start up the Microsoft Internet Explorer.
  2. Click on the information bar.
  3. Select "Temporarily Allow Pop-ups" or "Always Allow Pop-ups from This Site…".

  - If you wish to have pop-up ads on the specified web site;
  1. Start up the Microsoft Internet Explorer.
  2. Open the *Tools* menu and select the *Pop-up Blocker – Pop-up Blocker Settings…*.
  3. Enter the URL to be permitted in the *Address of Web site to allow* field and then, click *Add*.

Why do I get the message *This site might require the following ActiveX control* in the information bar?

- The Microsoft Internet Explorer prevents active contents from appearing. The following steps allow them to appear. Before performing the steps, ensure the safety of the contents.

1. Click the information bar.
2. Select *Install ActiveX Control…* from the pop-up menu.
3. Click *Install*.

Why isn't the web site displayed properly?

- Disable the popup blocker. (Refer to the *Why do I get the message Pop-up blocked in the information bar?* Section on page T-12.)
- Install the appropriate ActiveX control application(s).

Why isn't the e-mail displayed properly?

- The Microsoft Outlook Express may prevent images in HTML e-mails from appearing. To display the image, follow theses steps. (Note that if you click the message, the sender of the e-mail may receive the fact that you open the message. Ensure the safety of the mail before operating these steps.)

1. Start up the Microsoft Outlook Express.
2. Select the e-mail containing the image to be displayed.
3. Click the message displayed in the bar.

Why does the battery pack discharge so quickly?

- Initialize the battery pack.

Why is the date and/or time incorrect?

- Correct the date and time in Windows. Double-click the time appearing on the taskbar and set them in *Date and Time Properties* dialog box.

Why can't I use a hardware device?

- Make sure the hardware device is not crossed out with an X mark using the following procedure.

1. Click *start – Control Panel*. Click *Performance and Maintenance*; then, *System*. If the Classic view is selected, double-click the *System* icon.

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2. Click the *Hardware* tab; then, *Device Manager*.

3. Double-click the device you cannot use and confirm *Use this device (enable)* appears in the *Device usage* field.

Why can't I produce sound?

- Click or double-click the speaker symbol on the taskbar and check the Windows volume.

- If you press the APM button and select the mode where the *Audio* is *Mute*, the sound turns off.

Why can't I turn off my computer?

- Follow the instructions on *Why doesn't the keyboard or the glide pad function*?

Why is the background white?

- If you press the APM button and select the mode where the *Wallpaper* is white, the screen background change to white.

Why is my computer so hot?

- When charging the battery pack, its surrounding area or the front of the keyboard may become hot, but this is not a problem.

Why can't I record the sound from the microphone?

- Follow the instructions below:

1. Double-click the speaker symbol on the taskbar.

2. Click *Options* and select *Properties*.

3. From the *Mixer device* pull down menu, select *Realtek HD Audio input* and then, click *OK*.

4. Confirm *Select* is checked in *MicVolume* of *Recording Control* dialog box.

5. Close the *Recording Control* dialog box.

Troubleshooting

Why can't I find the system drivers and software applications?

- You may accidentally remove them. Refer to the following to retrieve them.

  - The drivers are stored on the last recovery disk if you have created the recovery CDs.

  - The applications are stored on the last recovery disk if you have created the recovery CDs. Without the recovery CDs, you need to reinstall the operating system from the hard disk.

If you are not sure how to install them, consult local service staff.

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