Panasonic®

Personal Computer
OPERATING INSTRUCTIONS

Model No. **CF-51** series

XP

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Getting Started

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Operation

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Troubleshooting

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Appendix

[Additional Manual]
Reference Manual
This manual can be accessed on your computer.
Refer to "Reference Manual" on how to access the Reference Manual.
(➜ page 17)

Please read these instructions carefully before using this product and save this manual for future use.

Customer's Record

Model No.*1	**Dealer's Name**
Serial No.	
or **Code No.**	**Dealer's Address**
Date of Purchase	

*1 For the Model No., insert the 12 digit number (for example, CF-51ECMDBBM) located on the bottom of the computer.

Introduction

Thank you for purchasing the Panasonic computer. Read the operating instructions thoroughly for proper operation of your new computer.

Illustrations and Terminology in this Manual

NOTE	NOTE provides a useful fact or helpful information.
CAUTION	CAUTION indicates a condition that may result in minor or moderate injury.
Enter	This illustration means to press the [Enter] key.
Fn + **F5**	This illustration means to press and hold the [Fn] key, then press the [F5] key.
[start] - [Run]	This illustration means to click [start], then to click [Run]. For some applications, you may need to double-click.
➔ or ⇒	These symbols indicated related pages. ➔ : Refer to the page in this Operating Instructions ⇒ : Refer to the Reference Manual

- Some of the illustrations in this manual may differ slightly in shape from the actual items in order to make the explanation easier to understand.
- If the user has logged on without the administrator authority, some functions may not be executable, and some screens may be not displayed as shown in this manual.
  If this happens, log on with the administrator authority to enable these functions.
- Confirm the latest information on optional products in catalogs, etc.
- In this manual, "Microsoft® Windows® XP Professional" is indicated as "Windows" or "Windows XP".
- In this manual, the following software packages are described as follows:
  "WinDVD™ 5 (OEM Version)" as "WinDVD"
  "B's Recorder GOLD7 BASIC" as "B's Recorder"
  "B's CLiP 5" as "B's CLiP"
- The following drives may be described as "CD/DVD drive".
  DVD-ROM & CD-R/RW drive, DVD MULTI drive
- Circular media such as DVD-ROM and CD-ROM are described as "discs".

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Read Me First

For U.S.A.

Federal Communications Commission Radio Frequency Interference Statement

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 equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

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

Warning

To assure continued compliance, use only shielded interface cables when connecting to a computer or peripheral. Also, any changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate this equipment.

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two 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:
Panasonic Corporation of North America
One Panasonic Way Secaucus, NJ 07094
Tel No:1-800-LAPTOP5 (1-800-527-8675)
<Only for models with wireless LAN>
FCC RF Exposure Warning:
● This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment.
● This equipment must be installed and operated in accordance with provided instructions and minimum 1.5 cm spacing must be provided between antenna and all person's body (excluding extremities of hands, wrist and feet) during wireless modes of operation.
● This transmitter must not be co-located or operated in conjunction with any other antenna or transmitter.
● This computer is provided with a PC Card slot that could be used with wireless transmitter(s), which will be specifically recommended, when they become available. Other third-party wireless transmitter(s) have not been RF exposure evaluated for use with this computer and may not comply with FCC RF exposure requirements.

This product is restricted to indoor use due to its operation in the 5.15 to 5.25 GHz frequency range.
FCC requires this product to be used indoors for the frequency range 5.15 to 5.25 GHz to reduce the potential for harmful interference to co-channel Mobile Satellite systems.
High power radars are allocated as primary users of the 5.25 to 5.35 GHz and 5.65 to 5.85 GHz bands. These radar stations can cause interference with and /or damage this product.

FCC Regulation Notice for modem
This equipment contains a FCC approved modem.

FCC Tested To Comply
With FCC Standards
FOR HOME OR OFFICE USE
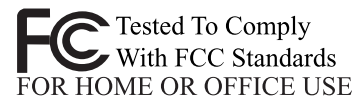
1. This equipment complies with CFR47 Part 68 rules. On the computer is a label that contains, among other information, the FCC registration number and ringer equivalence number (REN) for this equipment. If required, this information must be provided to the telephone company.
2. An FCC compliant telephone cord and modular plug is provided with this equipment. This equipment is designed to be connected to the telephone network or premises wiring using a compatible modular jack which is Part 68 compliant. See Installation Instructions for details.
3. The REN is used to determine the quantity of devices which may be connected to the telephone line. Excessive RENs on the telephone line may result in the devices not ringing in response to an incoming call. In most, but not all area, 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.
4. If your telephone equipment cause harm to the telephone network, the telephone company will notify you in advice that temporary discontinuance of service may be required. But if advice 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.
5. The telephone company may take 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.
6. If trouble is experienced with this equipment, for repair or warranty information, please contact Panasonic Corporation of North America at DIAL TOLL FREE 1-800-LAPTOP5 (1-800-527-8675). If the equipment is causing harm to the telephone network, the telephone

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Read Me First

company may request that you disconnect the equipment until the problem is resolved.

7. There are no user serviceable parts contained in this equipment.

8. This equipment may not be used on coin service provided by the telephone company. Connection to party lines is subject to state tariffs.

9. The Telephone Consumer Protection Act of 1991 makes it unlawful for any person to use a computer or other electronic device to send any message via a telephone fax machine 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 entry, or other individual sending the message and the telephone number of the sending machine or such business, other entity, or individual. In order to program this information into your fax software, you should refer to the manual of the Fax software being used.

10. According to the FCC's electrical safety advisory, we recommend that you may install an AC surge arrestor in the AC outlet to which this equipment is connected. Telephone companies report that electrical surges, typically lightning transients, are very destructive to customer terminal equipment connected to AC power sources and that this is a major nationwide problem.

"Caution: To reduce the risk of fire, use only No.26 AWG or larger telecommunication line cord."
"ATTENTION: Pour réduire le risque d'incendie, utiliser uniquement des conducteurs de télécommunications 26 AWG ou de section supérieure."

Notice for the products using LCD
This product uses one or more fluorescent lamps containing a small amount of mercury. It also contains lead in some components. Disposal of these materials may be regulated in your community due to environmental considerations. For disposal or recycling information please contact your local authorities, or the Electronics Industries Alliance: <http://www.eiae.org/>

Important Safety Instructions

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

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

SAVE THESE INSTRUCTIONS

Information to the User

<Only for models with wireless LAN>
This product and your Health
This product, like other radio devices, emits radio frequency electromagnetic energy. The level of energy emitted by this product however is far much less than the electromagnetic energy emitted by wireless devices like for example mobile phones.
Because this product operates within the guidelines found in radio frequency safety standards and recommendations, we believe this product is safe for use by consumers. These standards and recommendations reflect the consensus of the scientific community and result from deliberations of panels and committees of scientists who continually review and interpret the extensive research literature.
In some situations or environments, the use of this product may be restricted by the proprietor of the building or responsible representatives of the organization. These situations may for example include:
● Using this product on board of airplanes, or
● In any other environment where the risk of interference to other devices or services is perceived or identified as harmful.
If you are uncertain of the policy that applies on the use of wireless devices in a specific organization or environment (e.g. airports), you are encouraged to ask for authorization to use this product prior to turning on the product.

Regulatory Information
We are not responsible for any radio or television interference caused by unauthorized modification of this product. The correction of interference caused by such unauthorized modification will be the responsibility of the user. We and its

authorized resellers or distributors are not liable for damage or violation of government regulations that may arise from failing to comply with these guidelines.

Lithium Battery

Lithium Battery!
This computer contains a lithium battery to enable the date, time, and other data to be stored. The battery should only be exchanged by authorized service personnel.
Warning! A risk of explosion from incorrect installation or misapplication may possibly occur.

CD/DVD Drive Caution

CAUTION!
THIS PRODUCT UTILIZES A LASER.
USE OF CONTROLS, ADJUSTMENTS OR PERFORMANCE OF PROCEDURES OTHER THAN THOSE SPECIFIED HEREIN MAY RESULT IN HAZARDOUS RADIATION EXPOSURE.
DO NOT OPEN COVERS AND DO NOT REPAIR YOURSELF.

REFER SERVICING TO QUALIFIED PERSONNEL.

Bottom

CLASS 1 LASER PRODUCT
LASER KLASSE1
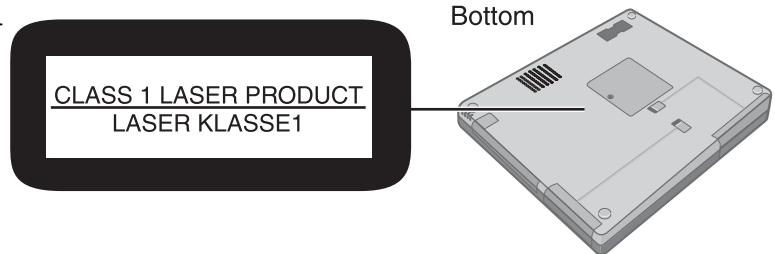
Precautions

■ Usage

Avoid Extreme Heat and Cold
Do not store or use the computer in locations exposed to heat, direct sunlight, or extreme cold.
Avoid moving the computer between locations with large temperature difference.
Operation: 5 °C to 35 °C {41 °F to 95 °F}
Storage: -20 °C to 60 °C {-4 °F to 140 °F}

Avoid Direct Sunlight on the LCD Panel
The LCD panel should not be exposed to direct sunlight or ultraviolet light.
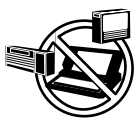
Avoid Humidity, Liquids and Dust
Do not store or use the computer in locations exposed to high humidity, liquids (including rain) or dust.

Prevent Shock
Avoid subjecting the computer to severe vibrations or impact. Do not place the computer inside a car trunk.

Avoid Radio Frequency Interference
Do not place the computer near a television or radio receiver.

Avoiding low-temperature burns
Avoid more than casual contact with any heat producing area of the notebook computer, AC adaptor, and any option or accessory you use with it. Even low heat, if warmer than body temperature, can cause a burn, if the skin is exposed to the heat source for a long enough period of time.
If the LAN port is connected to a network such as the ones listed below, a fire or electric shock may result.
• Networks other than 1000BASE-T, 100BASE-TX or 10BASE-T
• Phone lines (Telephone lines, internal phone lines (on-premise switches), digital public phones, etc.)

■ Handling

Avoid Magnetic Fields
Keep the computer away from magnets.
Data stored on the hard disk may be lost.

Avoid Stacking
Do not place heavy objects on top of the computer.

Keep Small Objects Away
Do not insert paper clips or other small objects into the computer.

Do Not Disassemble the Computer
Do not attempt to disassemble your computer.

Avoid Excessive Force on the Display
Do not apply excessive downward force on the display when it is completely opened, especially when plugs and/or cables are connected to the rear of the computer.

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Read Me First

Precautions (Battery Pack)

- Care should be exercised with regard to the following in order to avoid the possibility of overheating, fire or damage.

Avoid Heat
Do not throw the battery pack into a fire or expose it to excessive heat.

Keep Articles Away
Do not place the battery pack together with articles such as necklaces or hairpins when carrying or storing.

Do Not Disassemble
Do not insert sharp objects into the battery pack, expose it to bumps or shocks, deform, disassemble, or modify it.

Do Not Short
Do not short the positive (+) and negative (-) contacts.

Avoid Extreme Heat, Cold and Direct Sunlight
Do not charge, use or leave the battery pack for extended periods where it will be exposed to direct sunlight, in a hot place (in a car on a sunny day, for example), or in a cold place.

Do Not Use With Any Other Computer
The battery pack is rechargeable and was intended for the specified computer. Do not use it with a computer other than the one for which it was designed.

Do not use this computer with a battery pack other than the one specified (the one included with the computer or the specified battery pack sold separately)

Do Not Put into a Microwave
Do not put the battery pack into a microwave oven or a pressurized chamber.

Stop Using
Should the battery emit an abnormal odor, become hot to the touch, become discolored, change shape, or become in any way different from normal, remove it from the computer and stop using it.

- Do not touch the terminals on the battery pack. The battery pack may no longer function properly if the contacts are dirty or damaged.
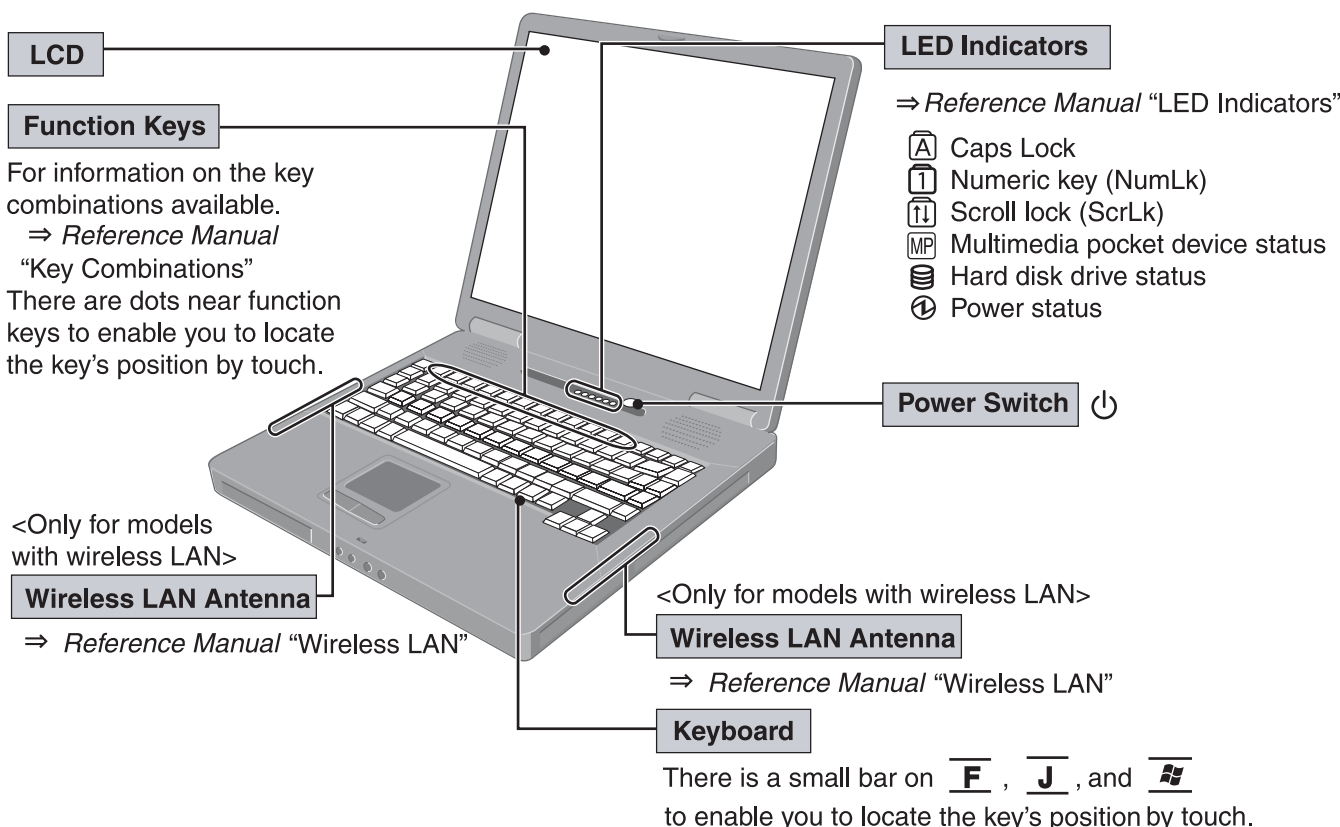- Do not expose the battery pack to water, or allow it to become wet.

- If the battery pack will not be used for a long period of time (a month or more), charge or discharge (use) the battery pack until the remaining battery level becomes 30% to 40% and store it in a cool, dry place.
- This computer prevents overcharging of the battery by recharging only when the remaining power is less than approx. 95% of capacity.
- The battery pack is not charged when the computer is first purchased. Be sure to charge it before using it for the first time. When the AC adaptor is connected to the computer, charging begins automatically.
- Should the battery leak and the fluid get into your eyes, do not rub your eyes. Immediately flush your eyes with clear water and see a doctor for medical treatment as soon as possible.
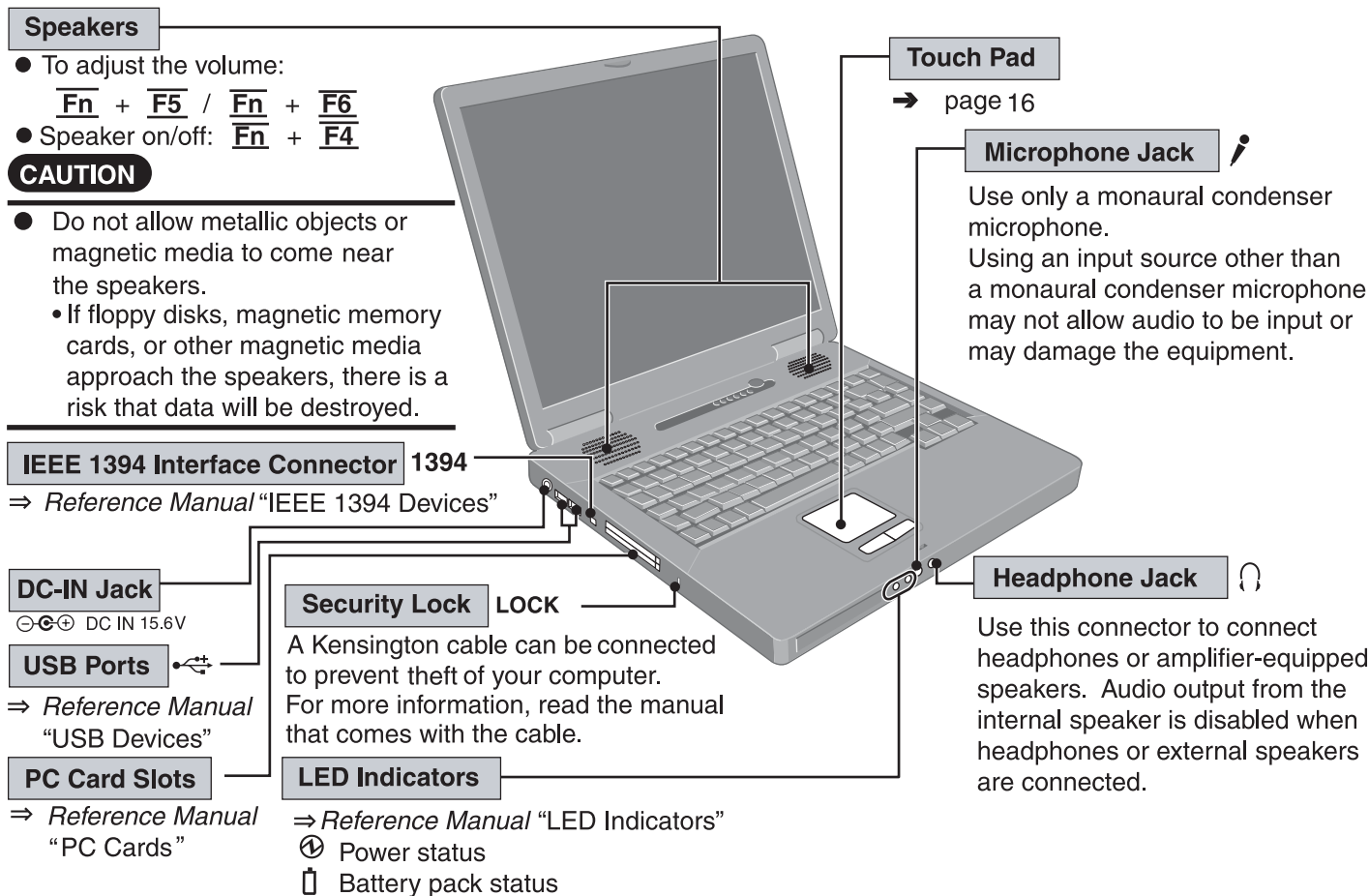
NOTE

- The battery pack may become warm during recharging or normal use. This is completely normal.
- Recharging will not commence if internal temperature of the battery pack is outside of the allowable temperature range (0 °C to 50 °C {32°F to 122°F}) (⇒ *Reference Manual* "Battery Power"). Once the allowable range requirement is satisfied, charging begins automatically. Note that the recharging time varies based on the usage conditions. (Recharging takes longer than usual when the temperature is 10 °C {50°F} or below.)
- If the temperature is low, the operating time is shortened. Only use the computer within the allowable temperature range.
- The battery pack is a consumable item. If the amount of time the computer can be run by using a particular battery pack becomes dramatically shorter and repeated recharging does not restore its performance, the battery pack should be replaced with a new one.
- When transporting a spare battery inside a package, briefcase, etc., it is recommended that it be placed in a plastic bag so that its contacts are protected.
- Always power off the computer when it is not in use. Leaving the computer on when the AC adaptor is not connected will exhaust the remaining battery capacity.
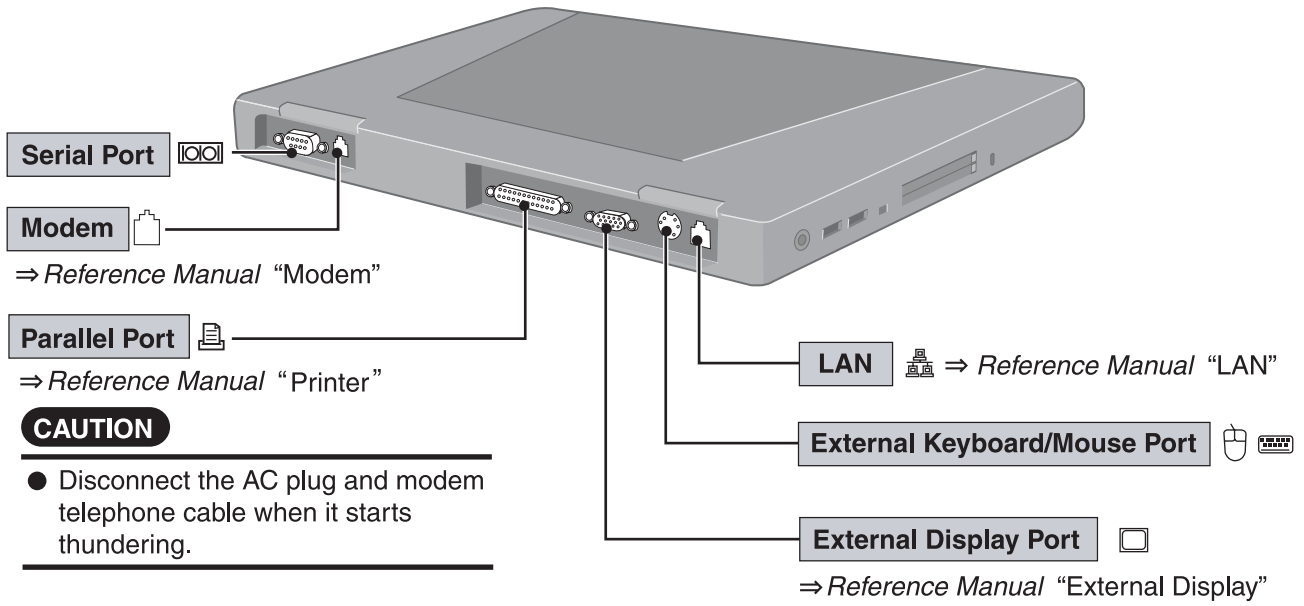
Names and Functions of Parts

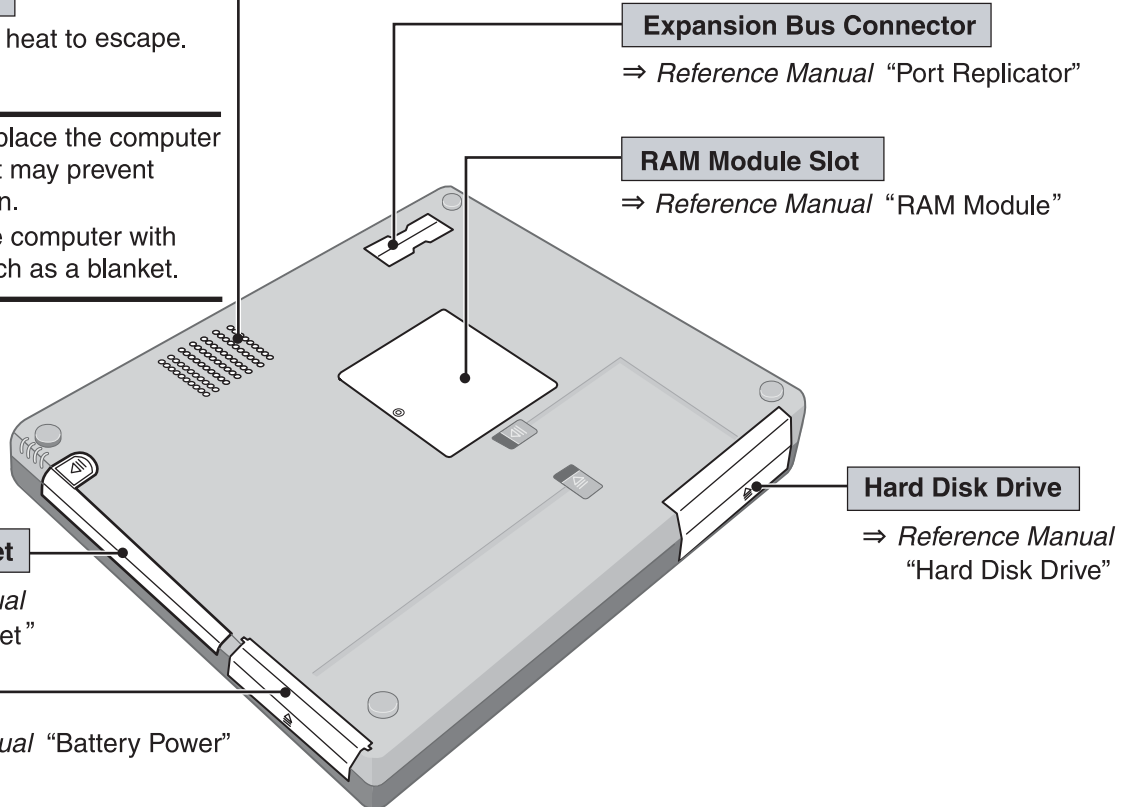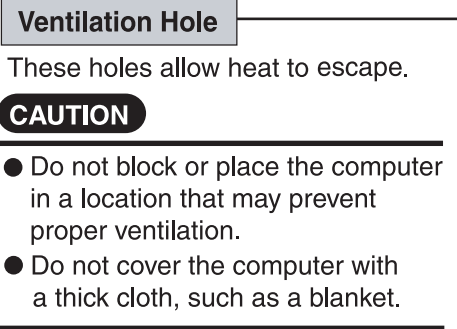The illustrations shown may differ from the actual physical appearances.

LCD

Function Keys

For information on the key combinations available.
⇒ *Reference Manual* "Key Combinations"
There are dots near function keys to enable you to locate the key's position by touch.

<Only for models with wireless LAN>

Wireless LAN Antenna

⇒ *Reference Manual* "Wireless LAN"

LED Indicators

⇒ *Reference Manual* "LED Indicators"

Ⓐ Caps Lock
① Numeric key (NumLk)
↑↓ Scroll lock (ScrLk)
MP Multimedia pocket device status
🖴 Hard disk drive status
① Power status

Power Switch ⏻

<Only for models with wireless LAN>

Wireless LAN Antenna

⇒ *Reference Manual* "Wireless LAN"

Keyboard

There is a small bar on F , J , and ⊞ to enable you to locate the key's position by touch.

Speakers

● To adjust the volume:
  Fn + F5 / Fn + F6
● Speaker on/off: Fn + F4

CAUTION

● Do not allow metallic objects or magnetic media to come near the speakers.
  • If floppy disks, magnetic memory cards, or other magnetic media approach the speakers, there is a risk that data will be destroyed.

IEEE 1394 Interface Connector 1394

⇒ *Reference Manual* "IEEE 1394 Devices"

DC-IN Jack

⊖–Ⓒ–⊕ DC IN 15.6V

USB Ports •⇇

⇒ *Reference Manual* "USB Devices"

PC Card Slots

⇒ *Reference Manual* "PC Cards"

Security Lock LOCK

A Kensington cable can be connected to prevent theft of your computer. For more information, read the manual that comes with the cable.

LED Indicators

⇒ *Reference Manual* "LED Indicators"
① Power status
🔋 Battery pack status

Touch Pad

➔ page 16

Microphone Jack 🎤

Use only a monaural condenser microphone.
Using an input source other than a monaural condenser microphone may not allow audio to be input or may damage the equipment.

Headphone Jack 🎧

Use this connector to connect headphones or amplifier-equipped speakers. Audio output from the internal speaker is disabled when headphones or external speakers are connected.

Names and Functions of Parts

Serial Port

Modem

⇒ *Reference Manual* "Modem"

Parallel Port

⇒ *Reference Manual* "Printer"

CAUTION

● Disconnect the AC plug and modem telephone cable when it starts thundering.

LAN ⇒ *Reference Manual* "LAN"

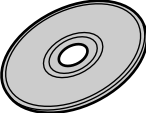**External Keyboard/Mouse Port**

External Display Port

⇒ *Reference Manual* "External Display"

Ventilation Hole

These holes allow heat to escape.

CAUTION

● Do not block or place the computer in a location that may prevent proper ventilation.
● Do not cover the computer with a thick cloth, such as a blanket.

Expansion Bus Connector

⇒ *Reference Manual* "Port Replicator"

RAM Module Slot

⇒ *Reference Manual* "RAM Module"

Hard Disk Drive

⇒ *Reference Manual* "Hard Disk Drive"

Multimedia Pocket

⇒ *Reference Manual* "Multimedia Pocket"

Battery Pack

⇒ *Reference Manual* "Battery Power"

RECYCLE
RBRC
Li-ion
1-800-822-8837

A lithium ion battery that is recyclable powers the product you have purchased.
Please call 1-800-8-BATTERY for information on how to recycle this battery.

First-time Operation

Read the steps below to help you learn what parts are included, and to gain an understanding of some basic computer-related operations.

1 Confirm the inclusion of all parts.

Make sure the parts shown in the figure have been supplied. If any of these items are missing or is not working properly, contact Panasonic Technical Support.(➔ page 38)

AC adaptor 1	AC Cord 1	Battery Pack 1
Model No :CF-AA1653A		Model No : CF-VZSU29
Product Recovery DVD-ROM 1	**Modem Telephone Cable 1**	**Operating Instructions (This book) . . . 1** **Windows® Book 1**

● When installing B's Recorder/B's CLiP with Product Recovery DVD-ROM, the serial number is required. Take care not to lose the serial number marked on the sticker.

2 Read the LIMITED USE LICENSE AGREEMENT.(➔ page 33)

Be sure to read the LIMITED USE LICENSE AGREEMENT before breaking the seal on the computer's packaging.

3 Insert the battery pack.

① Turn your computer over and remove the cover (A).

Slide and remove the cover without releasing the mark ⏏ (B).

② Insert the battery pack (C).
Firmly attach the pack to the connector.
● If the battery pack should be removed from the computer, slide the latch (D), and then without releasing it, pull the tab (E) on the battery pack. (⇒ *Reference Manual* "Battery Power")

③ Slide the cover back into place.
Be sure the tab does not get caught when closing the cover.

CAUTION

● For an improperly attached cover, your battery pack may fall out while you are carrying around your computer.
● Do not touch the terminals on the battery pack and the computer. The battery pack may no longer function properly if the contacts are dirty or damaged. Also, the computer may not operate properly.
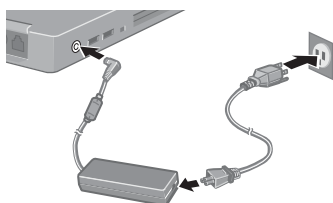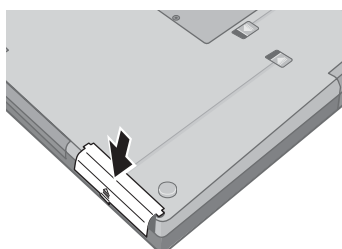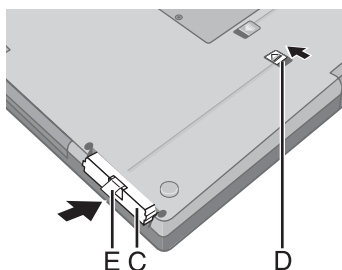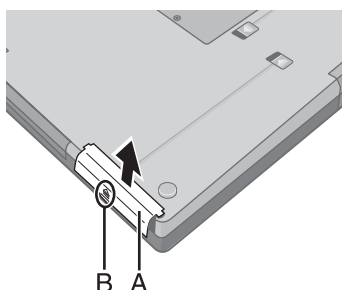
4 Connect your computer to a power outlet.

The battery pack will be charged automatically.
Charging Time: Approx. 4 hours
(Varies depending on the usage conditions.)

B A

E C   D

9

First-time Operation

CAUTION

- Be sure the AC adaptor is connected until completing the first-time use operation.
- When using the computer for the first time, do not connect any peripheral device except the battery pack and AC adaptor to the computer.

Handling the AC adaptor

- Do not twist or pull the AC power cord forcefully. Doing so may damage the connections.
- Use only the specified AC adaptor with your computer. Using an AC adaptor other than the one supplied might damage the battery and/or the computer.
- When the DC plug is not connected to the computer, disconnect the AC cord from your AC wall outlet.
- Problems such as sudden voltage drops may arise during periods of thunder and lightning. Since this could adversely affect your computer, an uninterruptible power source (UPS) is highly recommended unless running from the battery pack alone.
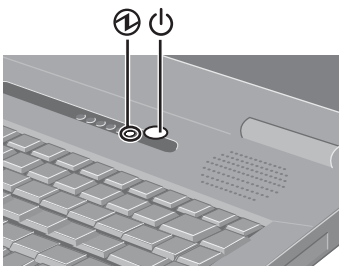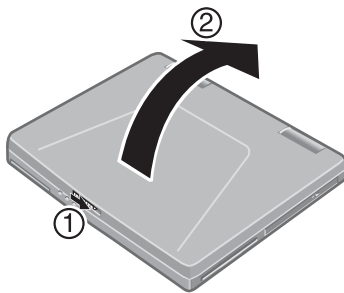
5 Open the display.

① Slide the latch located at the front.

② Lift open the display.

6 Turn your computer on.

Press the power switch ⏻ and hold it for approximately one second until the

power indicator turns on before releasing it.

- Do not press the power switch repeatedly.
- Once the computer is powered off, you must wait at least ten seconds before powering it on again.

7 Setup Windows.

Moving the cursor or clicking buttons can be performed with the touch pad.(➔ page 16)

- Do not press any key or move the touch pad until [Windows XP Professional Setup] is displayed.

① At [Welcome to the Windows XP Setup Wizard], select [Next].

② After reading the agreement, select [I accept this agreement] or [I don't accept this agreement], then select [Next].
  - If [I don't accept this agreement] is selected, the Windows setup will be aborted.

③ Select settings for your region, then select [Next].

④ Enter your name and organization and then select [Next].

⑤ Enter your computer name and administrator password and then select [Next].
  - Remember this password! If the password is forgotten, Windows cannot be operated.

⑥ Enter the correct date, time and the time zone, then select [Next].
  The computer will restart.
  - It may take some time before the computer restarts and the screen of step ⑦ is displayed. Wait, and do not press any keys, or touch the touch pad, etc.

⑦ Enter your administrator password and select →.
  - When Windows setup is completed, the following message will be displayed at the bottom right of the screen: "Your computer might be at risk." Continue to the next step.
  The message is generated by the [Security Center] function in [Control

Panel], and does not indicate an error or malfunction. For more information about [Security Center]: ➜ page 19.

8 Create a new account.

① Select [start] - [Control Panel] - [User Accounts] - [Create a new account].

② Enter a new name for the new account, then select [Next].

③ Select [Computer administrator], then select [Create Account].

④ <When you want to create a password for the new account>
Select the new account you have created and select [Create a password].
Follow the instructions on the screen to create a password.

⑤ Select [start] - [Turn Off Computer] - [Restart] to restart the computer.

CAUTION

● Remember this password! If the password is forgotten, Windows cannot be operated. You can create a password reset disk beforehand (➜ page 12).

NOTE

● When creating a new user account:
  • If you make mail settings, create password reset disks (➜ page 12), or conduct other related operations before creating the user account, you will be unable to use any previous mail history or settings.
  • When you create the first new account, you can only select [Computer administrator].
    Once a "Computer Administrator" account has been created, you can create additional limited user accounts.
    Note also that only the added user account will be displayed in the Welcome screen. The account for the administrator created during Windows setup will not be displayed.
● The message "Your computer might be at risk," which is displayed at the bottom right of the screen, is generated by the "Security Center" function in Windows XP, and does not indicate an error or malfunction.

  To prevent this message from being displayed, select 🛡 on the taskbar, then

  select [Turn on Automatic Updates].
● About the Icon Enlarger:
  • If the characters or icons on the screen are too small and difficult to see, after completing step *8*, select [start] - [All Programs] - [Panasonic] - [Icon Enlarger]. This will allow you to magnify the display of characters and icons on the screen.
  • The [Icon Enlarger] can be set separately for each account.
● You can also use [Loupe Utility], which enlarges a part of the screen.(⇒ *Reference Manual* "Loupe Utility")

NOTE

● If you use the wireless LAN, be sure to refer to the Reference Manual's "Wireless LAN".

This concludes the first-time use operation guidelines.

Getting Started

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Information for Windows XP

● Depending on the Windows settings, installed applications, and drivers, menus and other displays may differ, or some functions (such as use of the password reset disk) may be inoperable. Check with your system administrator for details.

● You can select Classic view for the Control Panel or select the Classic Start menu. You can also change the way a user logs on or off.
The procedure in this manual uses the method or view of the Windows XP default setting (not Classic view or Classic Start menu etc.).

■ Resetting the password

Windows XP has a function to reset a forgotten password.
To use this function, you need to create a password reset disk beforehand following the steps below.

① Insert the floppy disk drive into the multimedia pocket, or connect the USB floppy disk drive (optional: CF-VFDU03) to your computer.

② Select [start] - [Control Panel] - [User Accounts].

③ Select [Prevent a forgotten password] from [Related Tasks] menu of the account you used to logon and create a password reset disk following the on-screen instructions.
Store the password reset disk in a safe place.

● Only the logon password for each account can be reset.
The password set in the Setup Utility (⇒ *Reference Manual* "Setup Utility") cannot be reset.

Starting Up/Shutting Down

Starting Up
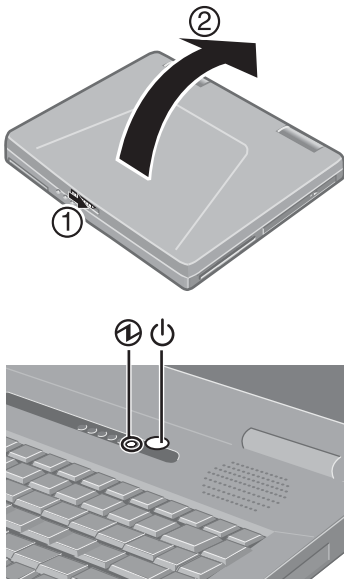
1 **Open the display.**

① Slide the latch located at the front.

② Lift open the display.

2 **Turn your computer on.**

Press the power switch ⏻ and hold it for approximately one second until the power indicator turns on before releasing it.

● While booting, avoid the following until the hard disk drive indicator has turned off.

  ● Connecting or disconnecting the AC adaptor.
  ● Touching the power switch.
  ● Performing any keyboard or touch pad or external mouse operations.
  ● Closing the display.

● Once the computer is powered off, you must wait at least ten seconds before powering it on again.

3 **Log on to Windows.**

Wait for 10 seconds after confirming that the hard disk access has been completed, select the user and input the password, then select ⟶ . Until the correct password is entered, the computer will not operate.

4 **Select your application.**

You are able to start working on your computer.

NOTE

● The power saving function is factory set, so if there is no input from a key, the touch pad or an external mouse (when one is connected) for a certain interval of time, the power to the LCD and hard disk may be turned off. The LCD will resume operation when the touch pad or an external mouse (when one is connected) is used or a key is pressed.
The power to the LCD may be turned off even when an application software is being installed. In this case, because it is conceivable that a selection dialog box will be shown, do not press **Space** or **Enter** to attempt to resume from this condition as doing so may trigger a selection, but instead, press a key unrelated to the direct triggering of a selection, like **Ctrl**.
In addition, when the computer is left alone, it automatically enters the standby or hibernation mode. The computer will resume by pressing the power switch. (⟹ *Reference Manual* "Standby/Hibernation Functions")

● When the CPU temperature rises, the computer may not power on to prevent the CPU from overheating. Should this happen, allow the computer to cool down then switch the power on again.
If the computer still does not power on, contact Panasonic Technical Support (➔ page 38).

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Starting Up/Shutting Down

● You may encounter the following situations when the computer is turned on at very low temperatures. These functions are designed to prevent hard disk drive malfunctions that may occur at low temperatures.

Situation	Action
The computer turns on, and the message "Warming up the system (up to 20 minutes)" is displayed.	The computer is warming up before start up. Wait for the computer to start up (takes up to 20 minutes). However, the computer may fail to warm up and the message "Cannot warm up the system" will be displayed, and the computer will not start. If this happens, turn off the computer, leave it in an environment with a temperature of 5°C {41°F} or more for about an hour, and then try turning the power on once more.
● The computer does not turn on. ● The computer does not resume operation from standby or hibernation mode. (The power indicator blinks quickly in green.)	Leave it in an environment with a temperature of 5 °C {41 °F} or more for about an hour, then try turning the power on once more.

Enter Password　　　[　　　　　]

■ If the screen on the left is displayed immediately after you turn on the power...

A password has been set to ensure the computer's security.

Enter your password[*1] and press **Enter**. (⇒ *Reference Manual* "Security Measures")

● When the correct password is input, the computer will start.
● When three incorrect password attempts or nothing is input for one minute, the computer will power off.

[*1] Supervisor Password or User Password set in the Setup Utility (not the Windows password).

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Shutting Down (power off your computer)

1   **Save important data and close each application.**

2   **Select [start] - [Turn Off Computer].**

3   **Select [Turn Off].**
Your computer will power off automatically.
- Restarting your computer (without shutting down):
  Select [Restart].

■ To shut down using the keyboard:

Press ⊞ , **U** , and select [Turn Off] with **U**.

CAUTION

- Do not do the following during the shutdown/restart procedure.
  - Connecting or disconnecting the AC adaptor.
  - Touching the power switch.
  - Performing any keyboard, touch pad or external mouse operations.
  - Closing the display.

NOTE

- To quickly resume computer operation after shutting down,
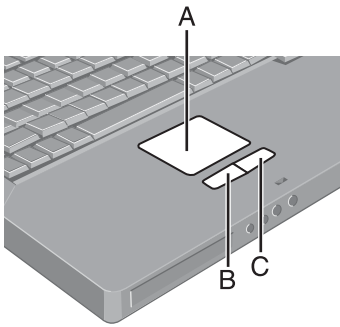 The standby or hibernation function is available (⇒*Reference Manual* "Standby/Hibernation Functions").

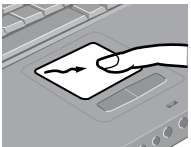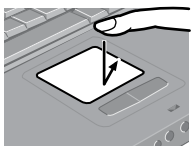## ■ When you leave the computer or interrupt your work...
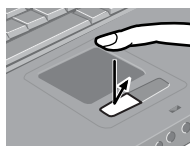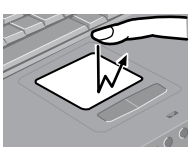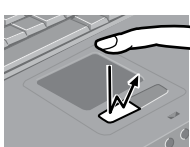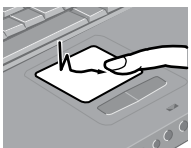
If you use the "Standby" or "Hibernation" function, then when you turn on the power next time, the application software and files you were using before will be displayed, and you can restart the same operations immediately. (⇒*Reference Manual* "Standby/Hibernation Functions")

Operation

Touch Pad

Use the touch pad to move the cursor on the screen and perform computer operations.

A. Work Surface (Touch Pad)
B. Left Button
C. Right Button

Function	Operation	
Moving the Cursor		Move the tip of your finger lightly over the surface.
Tapping/Clicking	Tapping	or	Clicking
Double-Tapping/ Double-Clicking	Double-Tapping	or	Double-Clicking
Dragging	Two quick taps, but on the second tap leaving your finger down (applying pressure) and moving it on the work surface. or While holding down the button, moving your finger on the work surface.	
Scroll	$\Rightarrow$ *Reference Manual* "Touch Pad"	

NOTE

- Besides the above operations, operations such as Zoom and Pan are possible by allocating these functions to the buttons and/or pad. For more details, refer to [Mouse Properties][*1].

[*1] Select [start] - [Control Panel] - [Printers and Other Hardware] - [Mouse].

- The operations of Scroll, Pan or Zoom will differ depending on the application. There are cases the touch pad will not support these operations even with an application that supports the functions.
- When using the touch pad, keep the following in mind.
  - By design the touch pad is to be used with a finger tip only. Do not place any object on the work surface or press down forcefully with sharp-pointed objects (e.g., nails) or hard objects that can leave marks (e.g., pencils and ball point pens).
  - Try to avoid having any harmful substances, such as oil, come in contact with the touch pad. The cursor may not work properly in such cases.

Reference Manual

Reference Manual / Important Tips

The Reference Manual and the Important Tips can be accessed on your computer. When a printer is connected, the Reference Manual can also be printed.

■ Reference Manual

The Reference Manual explains functions for you to make greater use of the computer, such as how to add peripheral devices, how the Setup Utility works, and other useful information.

Contents
- Read Me First
- Key Combinations
- LED Indicators
- Touch Pad
- Standby/Hibernation Functions
- Security Measures
- Computing on the Road
- Battery Power
- Multimedia Pocket
- CD/DVD Drive
- WinDVD
- B's Recorder/B's CLiP
- PC Cards
- RAM Module
- Port Replicator
- External Display
- Printer
- USB Devices
- IEEE 1394 Devices
- Modem
- LAN
- Wireless LAN
- Hard Disk Drive
- Setup Utility
- Technical Information
- DMI Viewer
- Icon Enlarger
- Loupe Utility
- List of Error Codes
- Dealing with Problems (Advanced)

● How to access the Reference Manual
Select [Reference Manual] in [start].

■ Important Tips

Important Tips provides information on how to maximize use of the battery pack, which is necessary for computing away from your home or office.

● How to access the Important Tips

Select ▨ on the desktop.
Important Tips

Important Tips can also be accessed from the following menu.
Select [Important Tips] in [start] - [All Programs] - [Panasonic] - [On-Line Manuals].

When the Reference Manual or Important Tips is accessed for the first time, the License Agreement of the Adobe Reader may be displayed. If it is displayed, after reading the agreement, select [Accept] to access the Reference Manual or Important Tips.

> **NOTE**
>
> ● Illustrations may be difficult to view depending on the magnification. If the illustration is too small, magnify the display.
> ● When the taskbar is hidden at the bottom portion of Adobe Reader, set the maximum display window size.
> ● If a printer is connected, we recommend printing pages. The illustrations and display samples may not print with a high quality.

Useful Information

Usage Environment

■ Environment

● Place the computer on a flat stable surface. Do not place the computer upright or allow it to tip over. When the computer receives extremely strong shock after falling, the hard disk or floppy disk drive, etc., may become inoperable.

● Operation　　Temperature: 5 °C to 35 °C {41 °F to 95 °F}
　　　　　　　　Humidity: 30% to 80% RH (No condensation)
　Storage　　　Temperature: -20 °C to 60 °C {-4 °F to 140 °F}
　　　　　　　　Humidity: 30% to 90% RH (No condensation)

■ Places not to use your computer

● Such areas may result in damage to the computer.
　Areas with electronic equipment
　　These areas may interfere with your display or cause your computer to produce strange sounds.
　Areas with extremely high/low temperatures

● Do not leave things near the computer that are sensitive to heat. During operation, the computer may become warm.

Handling
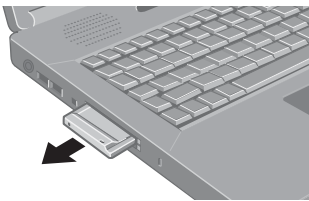
● This computer has been designed so as to minimize shock to the LCD and hard disk drive, etc., but no warranty is provided against such trouble. Therefore, as a precision instrument, be extremely careful in the handling.

● Do not drop or hit your computer against solid objects.

● Do not carry your computer when the power is on.

● Remove all external devices, cables, and PC Cards sticking out of the computer (see the figure on the left) before transporting the computer.

● We recommend preparing a fully charged battery.
When transporting a spare battery inside a package, briefcase, etc., it is recommended that it be placed in a plastic bag so that its contacts are protected.

● Do not carry the computer while the display is open, or carry it by gripping the display.

● Do not put anything (e.g., a piece of paper) between the display and keyboard.

● Always carry your computer with you. Never check it in with luggage. For use of the computer inside an aircraft, we recommend asking the airlines regarding their policy on this issue.

● It is a good idea to make backup copies on disks and carry them with you.

● Do not leave a disk in the drive while transporting your computer.

Maintenance

Display

Avoid using water when cleaning the panel. Ingredients included in water may leave scratches and reduce readability of the screen.

<When cleaning dust/dirt>

● Avoid rubbing off dust/dirt with cloth since it may leave scratch on the screen.
Sweep dust/dirt with fine brush, then wipe it with a dry soft cloth used for cleaning glasses.

<When cleaning oily surface>

● Apply camera lens cleaner on a soft gauze and clean it with gentle force. Then, wipe with a dry soft cloth used for cleaning glasses.

Areas excluding the display

Wipe these areas with a soft cloth, after applying water or detergent diluted with water to the soft cloth and firmly wringing out excess water.

Touch Pad (➜ page 16)

CAUTION

● Do not use benzene, thinner, or rubbing alcohol. Doing so may adversely affect the surface, e.g., discoloration. In addition, do not use commercially-available household cleaners and cosmetics, as they may contain components harmful to the surface.
● Do not directly add or spray water or detergent. If liquid enters the inside of the computer, it may cause it to work improperly or be damaged.

Add the following information.

Security Center/Antivirus Protection

Use the Windows Security Center function to protect Windows from damage by computer viruses, etc.
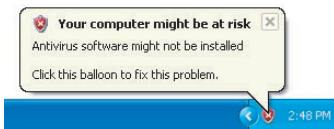
Windows Security Center

● What is Windows Security Center?
The Windows Security Center allows centralized management of Windows security information, and monitors antivirus measures and other Windows security settings to ensure optimum safety.
Use the Windows Security Center function to protect your computer from damage by viruses, etc.
Select [start] - [Control Panel] - [Security Center] to display the current settings for the following security functions.
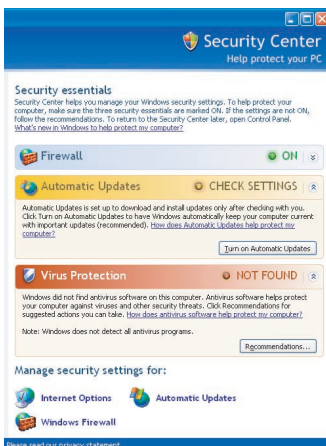
  • Windows Firewall
A security system for protecting the computer from unauthorized access via the Internet or other external networks.
The firewall regulates the data exchanged between the computer and the external network, so that only approved data can pass through.
At the time of purchase, the Windows Firewall is set to be enabled.
  • Automatic Updates
If your computer is connected to the Internet, this function regularly checks whether security updates and other important updates have been made available, and automatically installs these updates in their latest conditions.
  • Virus Protection
This function regularly checks whether antivirus software has been installed in the computer, and whether the version of that software is the latest version available.

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Useful Information

If the message "Your computer might be at risk" is displayed

Read the message, select (red icon) on the taskbar, and make the appropriate settings.

This message, which the Windows Security Center (→ page 19) displays to confirm the security-related settings regularly, will be displayed until the settings are made more properly.

NOTE

● This message does not indicate an error. You can use the computer while the message is displayed. However, in order to operate the computer more safely, we recommend making the appropriate measures to reduce damage from virus and other attacks, thus avoiding the appearance of this message.

Computer Viruses

Users are advised to purchase the latest versions of virus protection software and use them regularly.
We recommend you run the software:
● When booting your computer.
● After receiving data.
We recommend that you check data received on disks or from external sources, such as data downloaded from the Internet, e-mail, etc. (For compressed files, uncompress them before running a check).

Windows Update

You can use the latest patches and service packs for Windows with the following menus.
Do not apply "Driver Updates" even if a message to update a driver appears. If a driver update is required, contact Panasonic Technical Support. (→ page 38)
[start] - [All Programs] - [Windows Update]

When Using Peripheral Devices

Pay strict attention to the following points to avoid damage to the computer, peripheral devices, cables, etc. Also, in addition to following this manual and the Reference Manual, carefully read the instruction manuals for the peripheral devices being used.
● Use only peripheral devices that conform to the computer's specifications.
● Connect the devices properly, paying close attention to the condition and position of the connectors.
● If a connection cannot be made easily, do not apply undue force; check once more to confirm the condition and position of the connector (alignment of pins, etc.) .
● If the connector has holding screws, fasten the screws firmly.
● Do not carry the computer with cables attached, and do not pull on the cables forcefully.

Saving Data on the Hard Disk

● **Do not expose your computer to shock.**
Use care when handling your computer, shock may damage your hard disk or make your software applications and data unusable.
● **Do not power down your computer while software applications are running or hard disk drive indicator ⊟ is on.**
Properly shut Windows down to avoid problems.
● **Save all valuable data to disks.**
Backing up data to disks will limit damage should trouble occur to your computer or should you inadvertently change or erase data.

● **Use the security function for all important data.** ($\Rightarrow$ *Reference Manual* "Security Measures")

Hard Disk Lock

When the Hard Disk Lock is set to [Enable], it is impossible to read/write data from/to the hard disk when the hard disk is installed in a different computer, since a password is also set for the hard disk. When the hard disk is returned to the original computer, you can read/write data as before. In this case, however, make the settings in the Setup Utility exactly the same as they were before the hard disk was removed. (Note that this Hard Disk Lock does not guarantee the complete protection of data.) ($\Rightarrow$ *Reference Manual* "Security Measures")

Saving Data on Floppy Disks

● **Do not power down your computer or press the floppy disk drive eject button while the MP indicator MP is on.**
Doing so may damage the data on the floppy disk and render the floppy disk useless.
● **Use care when handling floppy disks.**
To protect the data on your floppy disks or to prevent a floppy disk from becoming stuck in your computer, avoid the following:
  • Sliding the shutter on the floppy disk manually.
  • Exposing the floppy disk to a magnetic field.
  • Storing the floppy disk in locations prone to high temperatures, low pitched noise, dampness, or dust.
  • Applying more than one label on the floppy disk.
● **Confirm the contents of a floppy disk before formatting it.**
Confirm that no important data is on the floppy disk, because all data on the floppy disk will be erased.
● **Use the write-protect tab (A).**
This is a must for preserving important data.
This prevents your data from being erased or overwritten.
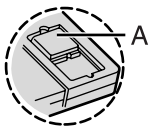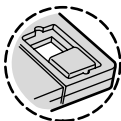
Write Enable   Write Disable

When Disposing of or Transferring Ownership of This Device

● When disposing of or transferring ownership of this device, erase all data on the hard disk in order to prevent the theft of hard disk data. Even if you delete data or initialize the hard disk through normal Windows commands, data can still be read using special software. In order to erase all data, either have the data erased by a specialist (at a charge) or use the hard disk data erase utility (included) (➔ page 34). (Note that this hard disk data erase utility does not guarantee that data will be completely erased.)
Also, note that if you transfer ownership of this device without deleting commercial software that you have installed to the hard disk, you may be in violation of the licensing agreement for that software.

Operation

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Useful Information

<Only for models with wireless LAN>

Wireless LAN

■ **To prevent theft of data or unauthorized access to the hard disk via a wireless LAN**

● If you plan to use wireless LAN functions, we recommend that you do so only after making the appropriate security settings, such as for data encryption.

Operation

List of Error Codes

When turning on the computer, if one of the following error codes or messages is displayed, follow the instructions shown below.
If the problem persists, or if the error code or message displayed is not shown here, contact Panasonic Technical Support.(➔ page 38)

Error Code/Message	Solution
0211 Keyboard error	● If an external keyboard or mouse is connected, disconnect these devices.
0251 System CMOS checksum bad - Default configuration used	An error has occurred in the memory that stores the Setup Utility settings. This error occurs when the memory content is changed through some inadvertent operation by a program or other function. ● Run the Setup Utility and load the default values, then change the settings to the appropriate values as needed. ● If the problem persists, the internal clock battery may need to be replaced. Contact Panasonic Technical Support.
0271 Check date and time settings	The date and time setting are incorrect. ● Run the Setup Utility and set the date and time correctly. ● If the problem persists, the internal clock battery may need to be replaced. Contact Panasonic Technical Support.
0280 Previous boot incomplete - Default configuration used	Startup has failed repeatedly, so the Setup Utility settings have been returned to their default values, and the computer has been booted. ● Run the Setup Utility and load the default values, then change the settings to the appropriate values as needed.
Press <F2> to Setup	● Write down the error details and press **F2** to run the Setup Utility. Confirm the settings, and change the settings to the appropriate values as needed.
Operating System not found	The OS is not properly installed on the floppy disk or the hard disk that you are trying to boot from. ● If the computer cannot be booted from the floppy disk, check the floppy disk drive to ensure that the disk is in fact bootable, and change it to another if not. ● If the computer cannot be booted from the hard disk, confirm whether the hard disk is properly recognized in [Information] menu of the Setup Utility. If the hard disk is recognized, perform the reinstallation procedure. If not, contact Panasonic Technical Support. ● If a device is connected to the USB port, disconnect the device, or run the Setup Utility and set [Legacy USB Support] to [Disable] in [Security] menu of the Setup Utility.
RAM Module Failed	● If the RAM module has not been inserted properly, or if a RAM module other than one matching the specifications has been inserted, a beep will sound and the message "RAM Module Failed" will be displayed when turning the power on. In this case, turn the power off, confirm that the RAM module meets the specifications, and reinsert it.

■ How to run the Setup Utility

1 **Restart the computer.**

2 **Press F2 while [Panasonic] boot screen is displayed soon after the computer begins the startup procedure.**

Troubleshooting

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Dealing with Problems (Summary)

When a problem occurs, refer to this page. The "Reference Manual" also contains detailed information. If a problem appears to be related to a software application, read the software related manual. If you still cannot troubleshoot the problem, contact Panasonic Technical Support (➔ page 38). You can use the PC Information Viewer to check the computer's usage status. (⇒*Reference Manual* "Dealing with Problems (Advanced)")

■ Starting Up

The power indicator or battery indicator is not lit	● Check the cable connection for the AC adaptor. ● Check to see if a fully charged battery is properly installed. ● Remove the battery pack and disconnect the AC adaptor, then connect them again.
The computer does not operate when a USB device is connected	● The computer may not operate when certain USB devices are connected. Disconnect the USB device, or set [Legacy USB Support] to [Disable] in [Security] menu of the Setup Utility.
[Enter Password] is displayed	● Input your Supervisor Password or User Password. If you have forgotten it, contact Panasonic Technical Support (➔ page 38).
POST Startup Error(s) is displayed	➔ page 23
Windows startup, or an operation is extremely slow	● Press **F9** in the Setup Utility (➔ page 23). This will restore the Setup Utility's settings to their default values (except the password settings). Then, the Setup Utility must be run once again for you to input the appropriate operating environment settings. (The processing speed depends on the application software used, so this operation may not cause the processing speed to increase.) ● If you install resident software after purchasing this computer, disable the resident software.
The date and time are incorrect	● You can set the date and time using the following menu. [start] - [Control Panel] - [Date, Time, Language, and Regional Options] - [Date and Time] ● When the computer is connected to a LAN, confirm the date and time of the server. ● If you continue to experience problems, the internal battery maintaining the clock may need to be replaced. Contact Panasonic Technical Support (➔ page 38). ● This computer will not correctly recognize the date and time starting from the year 2100 A.D.
When resuming from the standby or hibernation mode, [Enter Password] does not appear even if a password has been set in the Setup Utility	● Even when a password has been set in the Setup Utility, [Enter Password] does not appear when the computer resumes from the standby or hibernation mode. If you want to use the security function when using the standby or hibernation mode, use the Windows password as follows: ① Select the account to change in [start] - [Control Panel] - [User Accounts] and set the password. ② Add the check mark for [Prompt for password when computer resumes from standby] in [Control Panel] - [Performance and Maintenance] - [Power Options] - [Advanced].
When "Remove disks or other media. Press any key to restart" (or a similar message) is displayed	● This means a floppy disk that does not contain system startup information has been left in the floppy disk drive. Remove the floppy disk, and press any key. ● If the message still appears even after trying the above measure, this may be an indication that some type of hard disk failure has occurred. Contact Panasonic Technical Support.
When the administrator password is forgotten	● If you have created a password reset disk (➔ page 12), a message is displayed when you fail to correctly enter the password. Follow the message's instructions and set the password again by using the password reset disk. If you have not created a password reset disk, after reinstalling, setup Windows and then set the password again.

Troubleshooting

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■ Starting Up

When the previous item is not the cause	• Press **F9** in the Setup Utility. This will restore the Setup Utility's settings to their default values (except the password settings).
	 • Try removing all peripheral devices.
	 • Check a disk error using the following procedure.
	     ① Display [Local Disk (C:) Properties].
	       Select [Local Disk(C:)] with the right button in [start] - [My Computer], and select [Properties].
	     ② Select [Tools] - [Check Now].
	     ③ Select [Start] after selecting required items in [Check disk options].
	 • At startup, hold down **F8** when [Panasonic] boot screen disappears[*1], and release your finger when the Windows Advanced Option Menu is displayed. Start the computer in Safe Mode, and confirm the details of the error.
	 [*1] When [Password on boot] is set to [Enable], [Enter Password] appears after the [Panasonic] boot screen disappears. Hold down **F8** soon after inputting the password and pressing **Enter**.

■ Display

No display after powering on	• When there is no display to an external display,
	   • Check your cable connection to the external display.
	   • Confirm your display is powered on.
	   • Check the settings for your external display.
	 • The display destination may be set to the external display.
	 Try changing the display by pressing **Fn** + **F3**.
	 If you want to switch the display destination repeatedly by pressing **Fn** + **F3**, make sure that the display destination has switched completely each time before pressing **Fn** + **F3** again.
	 • When displaying only through an external display, if the computer is shut down by using the standby or hibernation function, there will be no display on the LCD unless the external display is connected when operations are resumed. In this case, connect the external display or press **Fn** + **F3**.
	 • Press **Fn**+**F2** and adjust the brightness.

The power has not been turned off, but after a certain period of time, there is no display	• Has the computer been set to the power-saving mode? To resume operation of your computer from the condition the power of the display is off (for energy conservation purposes), press any key unrelated to the direct triggering of a selection, like **Ctrl**. • To save power, your computer may have automatically entered the standby mode (power indicator blinks green) or hibernation mode (power indicator turns off). In such cases, press the power switch.
When the battery pack is used, the screen is darker than when the AC adaptor is connected	• Press **Fn** + **F2** and adjust the brightness. Note, however, that when the brightness is increased, the battery running time will become shorter. Brightness can be set to separate levels for when the AC adaptor is connected and when it is disconnected.
The cursor cannot be controlled properly	• If you are using an external mouse, ensure that the external mouse has been connected correctly. • Restart the computer by using the keyboard (Press **⊞**, **U**, and select [Restart] with **R**). • If the computer does not respond to keyboard commands, read "No response" (➔ page 27).
An afterimage appears (e.g., green, red, and blue dots remain on the display) or there are dots not displaying the correct colors	• If an image is displayed for a prolonged period of time, an afterimage may appear. This is not a malfunction. The afterimage will disappear when a different screen is displayed. • High-precision and advanced technologies are necessary in the production of color liquid crystal displays (color LCDs). Therefore, if 0.002% or less of the picture elements either fail to light or remain constantly lit (that is, more than 99.998% of elements are functioning properly), no defect is considered to exist.

Troubleshooting

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Dealing with Problems (Summary)

■ Display

During simultaneous display, one of the screens becomes disordered	● Try changing the display by pressing **Fn+F3**. ● When using the Extended Desktop, use the same display colors for the external display as those used by the LCD. ● If you continue to experience problems, try changing the display destination in the following menu. [start] - [Control Panel] - [Other Control Panel Options] - [Intel(R) Extreme Graphics 2 M] - [Devices] ● When the [Command Prompt] is set to "Full Screen" by pressing **Alt** + **Enter**, the picture is displayed on one of the screens only. When the window display is restored by pressing **Alt** + **Enter**, the picture is displayed on both screens.
The external display no longer displays properly	● When an external display not compatible with the power saving mode is used with the computer, the display may not function correctly when the computer enters the power saving mode. In such cases, turn off the power to the external display.

When you want to display the fonts or icons at a larger size	● Change the size of the icons, etc. using "Icon Enlarger" (⇒*Reference Manual* "Icon Enlarger").
	● You can also change the settings as follows (for more details, refer to the Windows Help).
	    ① Select [start] - [Control Panel] - [Appearance and Themes] - [Display] - [Appearance].
	    ② Select the font size in [Font size], and select [Effects] and then add the check mark for [Use large icons] to increase the icon size.
	    ③ Select [OK], then select [OK].

When a video such as an MPEG file and a DVD video is being played with WinDVD or Windows® Media Player, the display destination cannot be switched using **Fn+F3**	● The display destination cannot be switched while a video such as an MPEG file and a DVD video is playing. Stop playing the video before switching the display destination.

■ Shutting down

Windows cannot be shut down or restarted	● If a USB device is connected, try removing it.

■ Battery Indicator

The red indicator lights	● The battery level is very low (the charge is approx. 9% or less). Connect the AC adaptor. You can use the computer when the indicator light is orange. If you do not have an AC adaptor, save your data and power off your computer. After replacing the battery pack with a fully charged one, turn your computer on.
The red indicator blinks	● Quickly save your data and power off your computer. Remove the battery pack and disconnect the AC adaptor, then connect them again. If the problem persists, contact Panasonic Technical Support (➜ page 38). The battery pack or charging circuit may be defective.
The green indicator blinks	● In high temperature mode, the battery pack is discharging to a level of 80%[1] in normal temperature mode.(⇒*Reference Manual* "Battery Power") Do not remove the battery pack while the battery indicator is blinking green. [1] A level of 80% in normal temperature mode is displayed as [100%] in high temperature mode.
The orange indicator blinks	● Battery cannot be recharged temporarily because the internal temperature of the battery pack is outside of the acceptable temperature range for recharging. Once the allowable range requirement is satisfied, charging begins automatically. Your computer can be used normally in this state.

■ Reference Manual

The Reference Manual is not displayed	● Is Adobe Reader installed? If you have uninstalled Adobe Reader, install using the following procedures. ① Select [start] - [Run], input [c:\util\reader\AdbeRdr60_enu_full.exe], then select [OK]. Install Adobe Reader by following the instructions on the screen. ② Update Adobe Reader to its latest version. If your computer is connected to the Internet, start up Adobe Reader and select [Help] - [Update]. If your computer is not connected to the Internet, select [start] - [Run], input [c:\util\reader\Acro-Reader_6.0.2_Update.exe], then select [OK].

■ Fast User Switching function

Some applications do not work properly	● When switching to a different user with the Fast User Switching function, the following problems may occur. • Some applications may not work properly. • Key combination with **Fn** may not work. • It may not be possible to set the settings of the display. • The wireless LAN cannot be used. • A serial mouse may not work. • The B's CLiP icon will no longer be shown on the taskbar and B's CLiP cannot be used. In this case, log off all users without using Fast User Switching function, and try the operation once more. If the problem persists, restart the computer.

■ Others

No response	● Press **Ctrl**+**Shift**+**Esc** to open Task Manager and close the software application which is not responding. ● After shutting down by pressing the power switch for more than four seconds, press the power switch to power on and open the application again. If the program no longer works normally, delete the program using the following procedure. Then reinstall the program. [start] - [Control Panel] - [Add or Remove Programs]
When trying to play back video files using Windows® Media Player, the message [Codec required] appears, and the file cannot be played back	● Some video files use a Codec that is not installed as a standard. In these cases, if you play back the video file after connecting to the Internet, the Codec may be downloaded automatically, allowing you to play back the file.

Troubleshooting

Dealing with Problems (Summary)

■ Others

Cannot start a network-used program, or cannot share files or printers	● If you cannot start up a program or share files, this may be because the "Firewall (Windows Firewall)" in the "Windows Security Center" is set to be enabled. If this function is set to be enabled, damage from viruses and other attacks is reduced, but some programs and functions cannot be operated. To use the program or to share files or printers: You can use programs or other functions without the effects of the Windows Firewall by registering them as an exception in the Windows Firewall settings (it is not necessary to disable the Windows Firewall). Note, however, that if a program is registered as an exception, there is a risk of damage from viruses or other attacks. Before registering a program as an exception, confirm the program's safety with the manufacturer or other reliable source. ① Select [start] - [Control Panel] - [Security Center] - [Windows Firewall]. ② Select [Exceptions]. ③ To register a network game or other programs as an exception: Select [Add Program], select the program, and select [OK]. To set access through a specified port as an exception: Select [Add Port], set the port, and select [OK]. To set a file or printer as an exception: Add the check mark for [File and Printer Sharing]. ④ Confirm that there is a check mark for the item to be set as an exception, and select [OK].
Is it necessary to enable the Windows Firewall?	● The Windows Firewall is a security function designed to protect your computer from unauthorized access via the Internet and other external networks. The firewall regulates the data exchanged between the computer and the external network, so that only approved data can pass through. We recommend that you use your computer with the Firewall enabled to minimize damage from viruses and other malicious attacks. ● When installing additional commercially available firewall software, we recommend that you disable the Windows Firewall settings, as the new software may interfere with the Windows Firewall functions. For details, refer to the manual accompanying the firewall software to be installed.
When "Automatic Updates" is enabled, will all updates be downloaded (or installed)?	● Only Windows Update programs with a high level of priority will be automatically downloaded (or installed). Update programs with a comparatively low level of importance will not be downloaded (or installed) automatically. Check regularly whether new update programs have become available.
Security Center warning function does not operate	● The Security Center warning function will not operate if you are using a network domain, for example at a company.

Troubleshooting

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■ **Others**

Problem with Web page display (no display; display is completely white; advertisements, logon, and other pop-ups are not displayed)	● In Windows XP, security functions have been strengthened with regard to Web contents. One of these is the "Pop-up Blocker," which may prevent some Web pages from being displayed. If you have any problems with Web page displays (e.g., if a page cannot be displayed correctly on Internet Explorer), check the contents of the message window displayed below the address bar (called the "Information Bar"). The Information Bar shows the information that has been suppressed by Internet Explorer. • If the message "Pop-up blocked" is displayed: Select the message, and select "Temporarily Allow Pop-ups." The blocked Popup will be displayed temporarily. • If the message "This site might require the following ActiveX control..." is displayed: ① Select the message, and select "Install ActiveX Control." ② Check "Name" and "Publisher" on the [Security Warning] screen, and execute the installation. • If you cannot find the Information Bar: If you need to display the page, select the Web page link while pressing **Ctrl**. The pop-up blocker function will be temporarily disabled.
Images in HTML e-mail messages are not displayed in Outlook Express	● In Windows XP, there is a function that blocks image displays in HTML e-mail messages. To display images in HTML e-mail messages, it is necessary to access the sender's server, and this may cause problems in the computer. Preventing these images from appearing can decrease the risk of attack from viruses etc. If you need to display images, select the segment where the message "Some pictures have been blocked…" is displayed. The images can be displayed temporarily.
Cannot read attachment file in Outlook Express (cannot save file)	● If a message received in Outlook Express has contained an attachment file with an extension such as ".exe" or ".scr" (potentially unsafe files), Windows XP blocks those files. If you need to read the files, select [Tools] - [Options] - [Security] and remove the check mark from [Do not allow attachments to be saved or opened that could potentially be a virus].

Troubleshooting

Dealing with Problems (Summary)

■ Others

The message "Your computer might be at risk" is displayed	● This message is displayed by the "Security Center" function in Windows XP. The "Security Center" is a function that monitors the level of safety in Windows security settings in order to operate the computer safely, for example, with regard to antivirus measures. It checks the following three items regularly, and displays messages until the settings are made at an appropriate level of safety. • Firewall: Is the Windows Firewall enabled? • Automatic Updates: Is the automatic Windows Update function enabled? • Virus Protection: Has antivirus software been installed, has the latest version of the antivirus software been installed, and is the real-time search function enabled (ON)? ● The message "Your computer might be at risk" is displayed by the "Security Center" function, and does not indicate an error or malfunction. The "Security Center" function checks the above three items to ensure that your computer can be used safely, and notifies the user if the settings are not at an appropriate level of safety. You can continue to use the computer even if these messages continue to be displayed, but we recommend that you follow the procedures below to minimize damage from viruses. ① Read the message. ② Select ▨ (red icon) on the taskbar. The [Windows Security Center] screen will be displayed. ③ Select [Recommendations] in [Firewall] or [Virus Protection], or select [Turn on Automatic Updates] in [Automatic Updates]. If measures are not required, [Recommendations] or [Turn on Automatic Updates] will not be displayed. ④ Execute the appropriate measures, following the instructions in the [Recommendation] screen.
▨ is displayed	● This message is displayed because the "Automatic Updates" setting in the "Security Center" is disabled or is not set. (Settings have not been made at the time of purchase.) "Automatic Updates" is a function that regularly checks whether high-priority update programs (security updates, etc.) have been provided to Windows Update, and automatically installs these programs to maintain Windows in its latest condition. You can continue using the computer even if these messages continue to be displayed, but we recommend that "Automatic Updates" is set as [Automatic] to maintain its latest condition. ① Read the message. ② Select ▨ (yellow icon) on the taskbar. The [Automatic Updates] screen will be displayed. ③ Select [More options], and set the Automatic Updates to [Automatic].
Some applications do not work properly	● Some software applications installed after the time of purchase are not compatible with Windows XP Service Pack 2. Refer to software maker's homepage or other sources. ● If a network-used program is not compatible, also refer to "Cannot start a network-used program." (➔ page 28)

Troubleshooting

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Reinstalling Software

When reinstallation procedure is performed, the contents of the hard disk will be erased. Be sure to back up any critical data that is on your hard disk before running the reinstallation procedure.
The reinstallation procedure will return the computer to its original condition.
- If you have created partitions for data, the data may be erased or become corrupt as a result of the reinstallation procedure.

Before Reinstallation

■ Preparing
- The Product Recovery DVD-ROM (included).
- Panasonic CD/DVD drive

■ Important
- Before the reinstallation procedure, remove all peripherals (except for the CD/DVD drive).
- Turn off the computer and insert the CD/DVD drive into the multimedia pocket.
  (⇒*Reference Manual* "Multimedia Pocket")
- Be sure the AC adaptor is connected until the reinstallation procedure is completed.
- Even if reinstallation is executed, the number of times that the DVD video region code can be set will not be returned to the state set at the time of factory shipment.

Reinstalling

① Turn on the computer, and press **F2** while [Panasonic] boot screen is displayed.
   The Setup Utility will start up.
   If the password has been set, enter the Supervisor Password.
② Write down all of the contents of the Setup Utility and then press **F9**.
   At the confirmation message, select [Yes] and press **Enter** .
③ Select [Boot] menu, then select [CD/DVD Drive] and press **F6** until [CD/DVD Drive] is at the top of [Boot] menu.
④ Place the Product Recovery DVD-ROM into the CD/DVD drive.
⑤ Press **F10**.
   At the confirmation message, select [Yes] and press **Enter**. The computer will restart.
⑥ Press **1** to execute [1. [Recovery]].
   (You can cancel this operation by pressing **0**.)
   The License Agreement screen should appear.
⑦ Press **1** to select [1. Yes, I agree to the provisions above and wish to continue!].
   This screen should appear.

```
Select a number ----------------------------------------------
                     Reinstalling : Windows(R) XP Professional

 1. Reinstall Windows to the whole HDD to factory default.
 2. Make two partitions, for the operating system and data. And reinstall
    Windows to the operating system partition.
    (All existing partitions on HDD will be lost.)
 3. Reinstall Windows to the first partition.

 0. Cancel
----------------------------------------------------------------
```

⑧ Make a selection from the menu.
- When selecting [2], enter the basic partition size for the operating system installation and press **Enter**.
   (The data partition size is the remainder after subtracting the basic partition size.)

Reinstalling Software

● To select [3], the first partition size must be 6 GB or more of the hard disk size. Reinstallation cannot be performed with a small partition size.

⑨ At the confirmation message, press **Y**.
The operation of reinstallation for the hard disk starts automatically. (The operations take about 15 minutes.)
● Do not interrupt the reinstallation procedure before completion, for example by turning off the computer or pressing **Ctrl** + **Alt** + **Del**, as this may prevent Windows from starting up, or may cause data to be lost so that the reinstallation procedure cannot be executed.

⑩ After the reinstallation procedure completes, the screen should appear.
Remove the Product Recovery DVD-ROM, and then press any key.
The computer will be shut down.

```
[Recovery] is complete.
Windows(R) XP Professional install wizard will start after reboot.
Please remove the Product Recovery DVD-ROM, and turn off the computer.
```

⑪ Turn on the computer, and press **F2** while [Panasonic] boot screen is displayed.
The Setup Utility will start up.
If the password has been set, enter the Supervisor Password.

⑫ Press **F9**.
At the confirmation message, select [Yes] and then press **Enter**. (The Setup Utility settings will return to their default values. Even the security settings with the exception of the password(s) will return to their default values.)

⑬ Select [Exit] and then select [Save Current Values], then press **Enter**.
At the confirmation messages, select [Yes] and press **Enter**.

⑭ Turn the computer off by using the power switch.
● If additional instructions are included with the computer, be sure to read them. It may be necessary to perform additional operations during the following procedures.

⑮ Perform the first-time use operation. (➔ page 10)

⑯ Run the Setup Utility and change the settings where necessary.

■ Changing the drive letter

You can change the drive letter for the CD/DVD drive or hard disk drive by the following steps.
● Drive letters can only be changed when two or more partitions have been created on the hard disk drive. The name of the C: drive cannot be changed.
● We recommend that you make these changes before installing applications.

① Select [start] - [Control Panel] - [Performance and Maintenance] - [Administrative Tools] - [Computer Management].

② Select [Disk Management] from [Storage].

③ Right click on the partition of the hard disk or the name of the CD/DVD drive and select [Change Drive Letter and Paths...].

④ Select [Change].

⑤ Select [Assign the following drive letter] and the new drive letter, and then select [OK].

⑥ At the confirmation message, select [Yes].

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Hard Disk Data Erase Utility

This computer is equipped with a utility for completely erasing hard disk data.
When disposing of or transferring ownership of this device, erase all data on the hard disk in order to prevent the theft of hard disk data following the steps below.

The hard disk data erase utility erases data using an overwriting method, but there is a possibility that due to malfunctions or other operational errors, data may not be completely erased. There are also specialized devices that may be able to read data that has been erased using this method. If you need to erase highly confidential data, we recommend that you contact a company that specializes in this process. Matsushita Electric Industrial Co., Ltd. will bear no responsibility for losses or damages suffered as a result of the use of this utility.

Preparing

- You will need the Product Recovery DVD-ROM (included) and Panasonic CD/DVD drive.
- Turn off the computer and insert the CD/DVD drive into the multimedia pocket. (⇒*Reference Manual* "Multimedia Pocket")
- Be sure the AC adaptor is connected until the procedure is completed.
- This utility can only be used for internal hard disk. It cannot be used to erase data from external hard disks.
- This utility cannot erase data from damaged disk.
- This utility cannot erase data for specific partitions.
- After executing this utility, the computer cannot be booted from the hard disk.

Procedure

① Turn on the computer, and press **F2** while [Panasonic] boot screen is displayed. The Setup Utility will start up.
   If the password has been set, enter the Supervisor Password.
② Select [Boot] menu, then select [CD/DVD Drive] and press **F6** until [CD/DVD Drive] is at the top of [Boot] menu.
③ Place the Product Recovery DVD-ROM into the CD/DVD drive.
④ Press **F10**.
   At the confirmation message, select [Yes] and press **Enter**.
   The computer will restart.
⑤ Press **2** to execute [2. [Erase HDD]].
   (You can cancel this operation by pressing **0**.)
⑥ At the confirmation message, press **Y**.
⑦ When [<<< Start menu >>>] is displayed, press **Enter**.
⑧ The approximate time required for erasing data will be displayed.
   Press **Space**.
⑨ At the confirmation message, press **Enter**. The operation of erasing the hard disk starts.
   If necessary, the "hard disk data erase" operation can be cancelled after it has begun by pressing **Ctrl** + **C**.
   If the operation is cancelled before being completed, a part of the data will not be erased.)
⑩ After the operation is complete:
   Under normal conditions, the message [Hard disk data has been deleted.] will be displayed.
   If a problem occurred during the operation, an error message will be displayed.
⑪ Remove the Product Recovery DVD-ROM, and then press any key to turn off the computer.

Specifications

This page provides the specifications for the basic model CF-51ECCDBBM/CF-51ECMDBBM. The model number will change depending on the configuration of the unit, such as, CPU speed, memory size, HDD size, Operating System, LCD type, and whether a DVD-ROM drive, a DVD-ROM & CD-R/RW drive or a DVD MULTI drive is included or not.

To check the model number:
Check the bottom of the computer or the box the computer came in at the time of purchase.

To check CPU speed, memory size and the hard disk drive (HDD) size:
Run the Setup Utility ($\Rightarrow$ *Reference Manual* "Setup Utility") and select [Information] menu.
Confirm the required information by checking the following items.
CPU speed:[CPU Speed]
Memory size:[System Memory]
Hard disk drive size:[Primary Master]

■ Main Specifications

Model No.			CF-51ECCDBBM CF-51ECMDBBM
CPU			Intel® Pentium® M Processor 725 (1.60 GHz, 2 MB[*1] L2 cache, 400 MHz FSB)
Memory			256 MB[*1] (2048 MB[*1] [*2] Max.)
Video Memory			UMA (64 MB[*1] Max)[*3]
LCD	Type		15.0 XGA type (TFT)
	Displayed Colors[*4]		65536/Approx.16,000,000 colors (800 × 600 dots/1024 × 768 dots)
External Display			65536/Approx.16,000,000 colors (800 × 600 dots/1024 × 768 dots/1280 × 1024 dots/1600 × 1200 dots)[*5]
Hard Disk Drive			Approx. 40 GB[*6]
Battery Pack			Li-ion 11.1 V, 6.6 Ah
	Operating Time[*7]	Main Battery	Approx. 2.5 hours - 6.5 hours[*8] (Approx. 5.5 hours[*9])
		Main Battery + Second Battery	Approx. 4 hours - 10.5 hours[*8] (Approx. 8.5 hours[*9])
	Charging Time[*7]	Power On — Main Battery	Approx. 4 hours
		Power On — Main Battery + Second Battery	Approx. 6.5 hours
		Power Off — Main Battery	Approx. 4 hours
		Power Off — Main Battery + Second Battery	Approx. 6.5 hours
	Clock Battery		Coin type lithium battery 3.0 V

[*1] 1MB = 1,048,576 bytes
[*2] When expanding memory, remove the RAM module that was inserted at the time of factory shipment, and insert two 1024 MB-RAM modules.
[*3] A segment of the main memory is allotted automatically depending on the computer's operating status. The size of the Video Memory cannot be set by the user.
[*4] A 16,000,000 color display is achieved by using the dithering function.
[*5] Maximum resolution depends on the specifications of the external display.
[*6] 1GB = 1,000,000,000 bytes. Your operating system or some application software will report as fewer GB.
[*7] Varies depending on the usage conditions.
[*8] Measured using BatteryMark™ Version 4.0.1 (LCD brightness: Maximum - Minimum)
[*9] Measured using MobileMark™ 2002 (LCD brightness: 60 cd/m^2)

Appendix

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Specifications

■ Main Specifications

Slots	PC Card Slots		Two Type I or Type II, or one Type III
		Allowable current (total for two slots)	3.3 V: 400 mA 5 V: 400 mA
	RAM Module Slot[*1]		200-pin, SO-DIMM, DDR SDRAM, PC2700 Compliant
Interface	Parallel Port		Dsub 25-pin female
	External Display Port		Mini Dsub 15-pin female
	Serial Port		Dsub 9-pin male
	Microphone Jack[*2]		Miniature jack, 3.5 DIA
	Headphone Jack		Miniature jack, 3.5 DIA Impedance 32 Ω, Output Power 4 mW × 2
	External Keyboard/ Mouse Port		Mini DIN 6-pin female
	Expansion Bus Connector		Dedicated 100-pin female
	USB Port		4-pin x 2, USB 2.0
	Modem		RJ-11 Data: 56 kbps (V.92 & K56flex) FAX:14.4 kbps
	LAN		RJ-45 IEEE 802.3 10Base-T, IEEE 802.3u 100Base-TX, IEEE 802.3ab 1000Base-T
	Wireless LAN		IEEE802.11a/b/g
	IEEE1394 Interface Connector		4-pin × 1
Pointing Device			Touch Pad
Speaker			Stereo Speaker
Sound			WAVE and MIDI playback
Keyboard			87 keys
Operating System			Microsoft® Windows® XP Professional Service Pack 2 with Advanced Security Technologies
Utility Programs			Setup Utility, DMI Viewer, Adobe Reader, Hard Disk Data Erase Utility[*3], PC Information Viewer, Icon Enlarger, Loupe Utility, WinDVD™ 5 (OEM Version), B's Recorder GOLD7 BASIC, B's CLiP 5, Intel® PROSet, Hotkey Settings
AC Adaptor[*4]	Input		100 V - 240 V AC, 50 Hz/60 Hz
	Output		15.6 V DC, 5.0 A
Power Consumption[*5]			Approx. 35 W[*6]/ Approx. 90 W (maximum when recharging in the ON state)
Environ-ment	Operation	Temperature	5 °C to 35 °C {41 °F to 95 °F}
		Humidity	30% to 80% RH (No condensation)
	Storage	Temperature	-20 °C to 60 °C {-4 °F to 140 °F}
		Humidity	30% to 90% RH (No condensation)
Physical Dimensions (W × H × D)			325 mm × 47 mm × 278 mm {12.8 " × 1.9 " × 10.9 "}
Weight	with the DVD-ROM & CD-R/RW drive inserted in the multimedia pocket		Approx. 3.0 kg {Approx. 6.7 lb.}
	with no devices inserted in the multi-media pocket		Approx. 2.8 kg {Approx. 6.2 lb.}

[*1] Only a RAM card designed for PC2700 can be added.
[*2] Use only a monaural condenser microphone.
[*3] The Product Recovery DVD-ROM is required.
[*4] The AC adaptor is compatible with power sources up to 240 V AC adaptor. This computer is supplied with a 125 V AC compatible AC cord.
[*5] Approx. 0.9 W when the battery pack is fully charged (or not being charged) and the computer is OFF.
Approx. 1.5 W when the Wake up from LAN has been enabled.
[*6] Rated power consumption.

■ Multimedia Pocket

DVD-ROM & CD-R/RW Drive[*1]	Supports	DVD	DVD-ROM (Single Layer, Dual Layer), DVD-R[*2] (3.95 GB[*3], 4.7 GB[*3]), DVD-RW[*2] (4.7 GB[*3]), DVD-RAM[*2*4] (2.6 GB[*3], 4.7 GB[*3])
		CD	CD-Audio, CD-ROM, CD-R, Photo CD, VideoCD, Enhanced Music CD, CD-RW, CD-TEXT
	DVD-ROM read[*5]		8X speed (Max.)
	CD-ROM read[*5]		24X speed (Max.)
	CD-R write[*6]		4X speed, 8X speed, 16X speed (Max.), 24X speed (Max.)
	CD-RW write		4X speed
	High-Speed CD-RW write		4X speed, 8X speed, 10X speed
	Ultra-Speed CD-RW write		10X speed, 16X speed (Max.), 24X speed (Max.)
Floppy Disk Drive[*1]			720 KB[*7]/1.44 MB[*8] (two-mode)

[*1] The drives included in the computer cannot be inserted into the multimedia pocket simultaneously.

[*2] Read only.

[*3] 1GB = 1,000,000,000 bytes. Your operating system or some application software will report as fewer GB.

[*4] In the case of DVD-RAM, only non-cartridge discs or removable cartridge discs can be used.

[*5] If an unbalanced disc (e.g., a disc with which the balance has been displaced from the center) is inserted, the speed may become slower if there are large vibrations while the disc is rotating.

[*6] Depending on the disc, the writing speed may become slower.

[*7] 1KB = 1,024 bytes

[*8] 1MB = 1,024,000 bytes. Your operating system or some application software will report as fewer MB.

LIMITED WARRANTY

For U.S.A.

PANASONIC PERSONAL COMPUTER AND PERIPHERALS LIMITED WARRANTY

Panasonic Computer Solutions Company (referred to as "Panasonic") will repair this product (other than software, which is covered by a separate warranty) with new or rebuilt parts, free of charge in the U.S.A. for three (3) years from the date of original purchase in the event of a defect in materials or workmanship. This warranty includes the AC adaptor but excludes the batteries and all other options and accessories which are covered for a period of one (1) year from the date of purchase.

This warranty is extended solely to the original purchaser. A purchase receipt or other proof of date of original purchase will be required before warranty performance is rendered.

This warranty only covers failures due to defects in materials or workmanship which occur during normal use. It does not cover damage which occurs in shipment or failures which are caused by products not supplied by Panasonic, or failures which result from alteration, accident, misuse, introduction of liquid or other foreign matter into the unit, abuse, neglect, installation, maladjustment of consumer controls, improper maintenance, modification or service by anyone other than a Factory Service Center or authorized Panasonic Service Dealer, or damage that is attributable to acts of God.

Limits and Exclusions:

There are no other express warranties except as listed below.

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This limited warranty gives you specific legal rights, and you may also have other rights which vary from state to state. If a problem with your product develops during or after the warranty period, you may contact our representatives at 1-800-LAPTOP5. If the problem is not handled to your satisfaction, then write to the Consumer Affairs Division at the address indicated below.

SOFTWARE LIMITED WARRANTY

Panasonic Computer Solutions Company (referred to as "Panasonic") warrants to you only that the disk(s) or other media on which the Programs are furnished will be free from defects in materials and workmanship under normal use for a period of sixty (60) days from the date of delivery thereof to you, as evidenced by your purchase receipt.

This is the only warranty Panasonic makes to you. Panasonic does not warrant that the functions contained in the Programs will meet your requirements or that the operation of the Programs will be uninterrupted or error free.

Panasonic's entire liability, and your exclusive remedy under this warranty shall be limited to the replacement, in the United States, of any defective disk or other media which is returned to Panasonic's Authorized Service Center, together with a copy of the purchase receipt, within the aforesaid warranty period.

Anything in the foregoing to the contrary notwithstanding, Panasonic shall have no obligation for any defects in the disk(s) or other media on which the Programs are furnished resulting from your storage thereof, or for defects that have been caused by operation of the disk(s) or other media otherwise than on the Product or in environmental conditions other than those specified by Panasonic by alteration, accident, misuse, abuse, neglect, mishandling, misapplication, installation, maladjustment of consumer controls, improper maintenance, modification of damage that is attributable to acts of God. In addition, Panasonic shall have no obligation for any defects in the disk(s) or other media if you have modified, or attempted to modify any Program.

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Some states do not allow the exclusion or limitation of incidental or consequential damages, or limitations on how long an implied warranty lasts, so the above limitations or exclusions may not apply to you.

This limited warranty gives you specific legal rights, and you may also have other rights which vary from state to state.

This Limited Warranty will be governed by the laws the State of New York, without regard to its conflict-of-laws rules.

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To obtain service or technical assistance within the continental U.S.A. and Alaska.

DIAL TOLL FREE: 1-800-LAPTOP5

Correspondence requesting product information should be sent to:
Panasonic Computer Solutions Company
50 Meadowlands Parkway, Panazip 2F-5, Secaucus, NJ 07094

Appendix

Memo

As an ENERGY STAR® Partner, Matsushita Electric Industrial Co., Ltd. has determined that this product meets the ENERGY STAR® guidelines for energy efficiency.

Outline of the International ENERGY STAR® Office Equipment Program

The international ENERGY STAR® Office Equipment Program is an international program that promotes energy saving through the use of computers and other office equipment. The program backs the development and dissemination of products with functions that effectively reduce energy consumption. It is an open system in which business proprietors can participate voluntarily. The targeted products are office equipment such as computers, displays, printers, facsimiles, and copiers. Their standards and logos are uniform among participating nations.

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