



Panasonic®

OPERATING INSTRUCTIONS

Personal Computer

Model No. **CF-W2 Series**

XP

1

For first-time and basic operation, refer to the Operating Instructions (this manual).

2

For more information on how to use this computer, refer to the onscreen Reference Manual.

→ page 8

For your technical support office, refer to the Operating Instructions.

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Troubleshooting

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Important Information

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-W2DWADZBM) located on the bottom of the computer.

Introduction

Thank you for purchasing the Panasonic computer. Read this manual thoroughly for proper operation of your new computer.

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Read Me First

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.



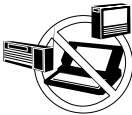
Avoid Humidity, Liquids and Dust

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^{*1}

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.



Do not touch the computer and cable when it starts thundering



Keep SD memory cards and MultiMedia Cards (both sold separately) away from infants and small children

Accidental swallowing will result in bodily injury.

In the event of accidental swallowing, see a doctor immediately.

◆ 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.



Do Not Disassemble the Computer

Do not disassemble the computer using methods other than those shown in this manual.

This computer contains high-voltage parts, contact with which may result in electrical shock. Modification or incorrect disassembly may result in fire.



Avoid Excessive Force on the Display

Do not apply excessive downward force on the display.



Do not connect a telephone line, or a network cable other than the one specified, into the LAN port

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 100BASE-TX or 10BASE-T
- Telephone lines
- Internal phone lines (on-premise switches)
- Digital public phones
- Phone lines other than those listed above

^{*1} About low-temperature burns
Allowing one area of the skin to be in direct contact with an object that is even slightly warmer than body temperature for long periods of time may result in a "low-temperature burn."

Read Me First



If a malfunction occurs, immediately unplug the AC cord and the battery pack

- Computer is damaged
- Foreign object inside computer
- Smoke emitted
- Unusual smell emitted
- Unusually hot

Continuing to use the computer while any of the above conditions are present may result in fire or electrical shock.

- If a malfunction occurs, immediately turn the power off and unplug the AC cord and the battery pack.



Do not do anything that may damage the AC cord, the DC plug, or the AC adaptor

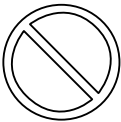
Do not damage or modify the cord, place it near hot tools, bend, twist, or pull it forcefully, place heavy objects on it, or bundle it tightly.

Continuing to use a damaged cord may result in fire, short circuit, or electrical shock.

Clean the DC plug of dust and other debris regularly

If dust or other debris accumulates on the plug, humidity, etc. may cause a defect in the insulation, which may result in a fire.

- Pull the plug, and wipe it with a dry cloth.
Pull the plug if the computer is not being used for a long period of time.



Do not pull or insert the DC plug if your hands are wet

May result in electrical shock.

Insert the AC plug completely

If the plug is not inserted completely, fire due to overheating or electrical shock may result.

- Do not use a damaged plug or loose electrical socket.



Do not place metal objects or containers of liquid on top of the computer

- If water or other liquid spills, or if paper clips, coins, or other metal objects get inside the computer, fire or electrical shock may result.



Do not place the computer on unstable surfaces

If balance is lost, the computer may fall over or drop, resulting in an injury.



Do not move the computer while the DC plug is connected

The AC cord may be damaged, resulting in fire or electrical shock.

- If the AC cord is damaged, remove the DC plug immediately.

Hold the plug when unplugging the AC cord

Pulling on the cord may damage the cord, resulting in a fire or electrical shock.

Do not turn the volume up to loud when using headphones

Listening at high volumes that overstimulate the ear for long periods of time may result in loss of hearing.

Take a break of 10-15 minutes every hour

Using the computer for long periods of time may have detrimental health effects on the eyes or hands.

Do not look into the DVD-ROM & CD-R/RW drive

Looking directly at the internal laser light source may result in damage to eyesight.

Do not use disks that are cracked or deformed

Because the disks rotate at high speeds, damaged disks may break apart causing injury.

- Disks that are not round and disks that have been repaired using adhesives are similarly dangerous, and so should not be used.

Do not cover the computer with a thick cloth, such as a blanket

Precautions (Wireless LAN)

Keep the computer at least 22 cm {8.7"} away from heart pacemaker devices

Pacemaker operations may be affected by radio waves.

Turn off^{*1} inside of airplanes

Radio waves may obstruct the safe operations of the aircraft. Follow the instructions of the airline with regard to use on airplanes.

Do not use near automatic doors, fire alarms, and other automatic control devices

Radio waves from this computer may affect automatic control devices, resulting in damage due to malfunctions.



Turn off^{*1} in hospitals and other locations with electrical medical devices (do not bring into operating rooms, intensive care units, CCUs^{*2}, etc.)

Radio waves from this computer may affect electrical medical devices, resulting in damage due to malfunctions.

Turn off^{*1} in crowded areas, as persons wearing heart pacemakers may be nearby

Pacemaker operations may be affected by radio waves.

^{*1} If it is necessary to use the computer in these types of environments, turn the wireless LAN off using the following procedure. Note, however, that use of computers even while the wireless LAN is off may be prohibited during takeoff and landings, and at other times.

Double-click the  icon or the  icon on the notification area, and click [Off].

^{*2} CCU: Coronary Care Unit

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 charge the battery using the methods other than indicated in this manual



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 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 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.

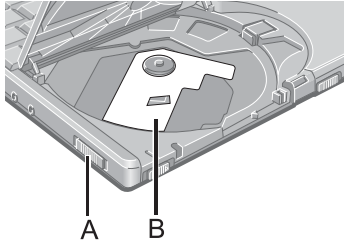
- Do not touch the terminals on the battery pack. The battery pack may no longer function properly if the contacts are dirty or damaged.
- Do not expose the battery pack to water, or allow it to become wet.
- If the battery pack will not be used for a long period of time (a month or more), charge or 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 outside of the allowable temperature range (0 °C to 55 °C {32 °F to 131 °F}). (→ "Chapter 2: Battery Power" in onscreen Reference Manual) 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 less.)
- 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 off 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.

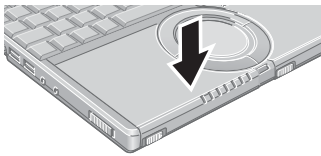
Usage Precautions / About Notations

Usage Precautions



◆ Before using the drive:

- When using the drive for the first time, slide the open lever (A) on the left side of the computer to open the disk cover after the computer has been powered on, and if the protective sheet (B) is attached to the drive, remove it from the lens area.
- Do not expose the DVD-ROM & CD-R/RW drive to excessive smoke that may leave a residue, e.g. oil smoke, or tobacco smoke. Doing so could shorten the life of the drive lens.



◆ When closing the disk cover:

- Press down near the power indicator (Ⓛ) (position of the arrow) to ensure that the cover is locked.

About Notations

Notations	Meanings
NOTE	NOTE provides a useful fact or helpful information.
CAUTION	CAUTION indicates a condition that may result in minor or a moderate degree of injury.
Enter	This illustration means pressing the Enter key.
Fn+F5	This illustration refers to pressing and holding the Fn key, then pressing the F5 key. When using with the Fn and Ctrl functions interchanged (→ page 27), read with Fn and Ctrl reversed.
[start] - [Run]	This illustration tells you to click [start], then to click [Run]. For some applications, you may need to double-click.
→	This symbol indicates related pages.

- Some of the illustrations in this manual may differ slightly in shape from the actual items on your computer. This should make the explanation easier to understand
- If a user has logged on to Windows without the Administrator Authority, some functions may not be executable, and some screens may not be displayed as shown in this manual.
If this happens, log-on to Windows with the Administrator Authority to enable these functions
- 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"
- Circular media such as DVD-ROM and CD-ROM is described as a "disk".
- Optional Products or Accessories
Confirm the latest information on optional products or accessories from other sources

How to Use this Manual

Manual Types and Contents

Using the hard copy	Operating Instructions (This manual)	This manual explains startup methods and basic operations required when using the computer for the first time.
Using the onscreen manual	Reference Manual (PDF format)	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.
	Important Tips (PDF format)	Important Tips provides information on how to maximize use of the battery pack, which is necessary for computing away from your home or office.
	Windows Help	Windows Help explains operations and functions about Windows.

How to Use the Onscreen Manual

Contents of the Reference Manual

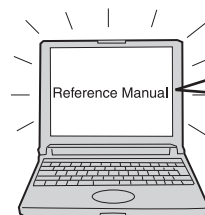
- [-] Reference Manual (Cover)
- [-] Chapter 1: About the Reference Manual
 - [-] Read Me First
 - [-] How to Use this Reference Manual
- [-] Chapter 2: Getting Started (Basic Operations)
 - [-] Using the Touch Pad
 - [-] Using the Fn Key
 - [-] Confirm the Status Using the LEDs
 - [-] Battery Power
 - [-] Computing on the Road
 - [-] Standby/Hibernation Functions
 - [-] Security Measures
 - [-] SD-MovieStage
- [-] Chapter 3: Using the Drive
 - [-] DVD-ROM & CD-R/RW Drive
 - [-] About CD Media
 - [-] About DVD Media
 - [-] Inserting a Disk
 - [-] Watching DVD Video
 - [-] Writing to CDs
- [-] Chapter 4: Using Cards and Peripheral Devices
 - [-] PC Cards
 - [-] SD Memory Card/MultiMedia Card
 - [-] SD Memory Card Security Function
 - [-] External Display
 - [-] USB Devices
 - [-] Printer
- [-] Chapter 5: Communications
 - [-] Modem
 - [-] LAN
 - [-] Wireless LAN
- [-] Chapter 6: Changing for the Computer's Status
 - [-] Setup Utility
 - [-] Icon Enlarger
- [-] Chapter 7: Troubleshooting
 - [-] Dealing with Problems (Advanced)
 - [-] Starting Up
 - [-] Enter Password
 - [-] Display
 - [-] Setup Utility
 - [-] Shutting Down
 - [-] Standby/Hibernation Function
 - [-] Battery Indicator
 - [-] Keyboard
 - [-] Networking: General
 - [-] Networking: Wireless LAN
 - [-] Connecting Peripherals
 - [-] Disk Operations
 - [-] Touch Pad
 - [-] Sound
 - [-] SD Memory Card/MultiMedia Card
 - [-] Fast User Switching Function
 - [-] Others
 - [-] Check the Computer's Usage Status
 - [-] Information for Installed Applications
- [-] Chapter 8: Important Information
 - [-] Protecting Your Computer from Viruses
 - [-] To Update this Computer to its Latest Version
- [-] Chapter 9: Useful Information
 - [-] Windows-related Information
 - [-] To View the System Configuration (DMI Viewer)
 - [-] Glossary
 - [-] Index

The manual is saved in the computer's hard disk. To view the manual, start up the computer after completing the settings for "First-time Operation" (→ page 13).

- When the manuals in PDF format (see above) are accessed for the first time, the License Agreement of the Acrobat Reader may be displayed. If it is displayed, after reading the agreement, click [Accept].
- Refer to Acrobat Reader Help to use the Acrobat Reader.

◆ How to access the Reference Manual

- 1 Click [start] then click [Reference Manual].



Using onscreen Reference Manual

- How to set the power conservation function
- How to set peripheral device functions
- Other information not included in the Operating Instructions

◆ How to access the Important Tips

- 1 Double-click the  icon on the desktop.

Important Tips can also be accessed from [start] - [All Programs] - [Panasonic] - [On-Line Manuals] - [Important Tips].

◆ How to access Windows Help

- 1 Click [start] - [Help and Support].

◆ Enjoy videos, music, data exchange, and other functions easily with SD memory card!

→ “Chapter 4: SD Memory Card/MultiMedia Card” in onscreen Reference Manual

◆ Enlarge the display of characters and icons on the screen!*

→ “Chapter 6: Icon Enlarger” in onscreen Reference Manual

*1 Some characters in the application software, homepages and HTML e-mails may not be magnified.

◆ Set a password to prevent unauthorized use!

- Various password settings / using the SD memory card

→ “Chapter 2: Security Measures” and “Chapter 4: SD Memory Card Security Function” in onscreen Reference Manual

◆ Effective in giving presentations!

- Also offers a standard external display connector

→ “Chapter 4: External Display” in onscreen Reference Manual

◆ Enjoy wireless broadband wireless LAN functions (conforms to IEEE802.11b+g)!

Before using a wireless LAN, check the wireless LAN on. (→ page 34)

◆ Various methods for connecting to the Internet!

- Use a telephone line, LAN, or wireless LAN.

→ “Chapter 5: Modem/LAN/Wireless LAN” in onscreen Reference Manual

◆ Protect your computer from viruses!

- Use Internet Connection Firewall and other functions.

→ “Chapter 8: Protecting Your Computer from Viruses” in onscreen Reference Manual

◆ Keep your computer in the most updated condition!

- Use Windows Update or other update functions.

→ “Chapter 8: To Update this Computer to its Latest Version” in onscreen Reference Manual


◆ Watch DVD videos! Write to CDs!

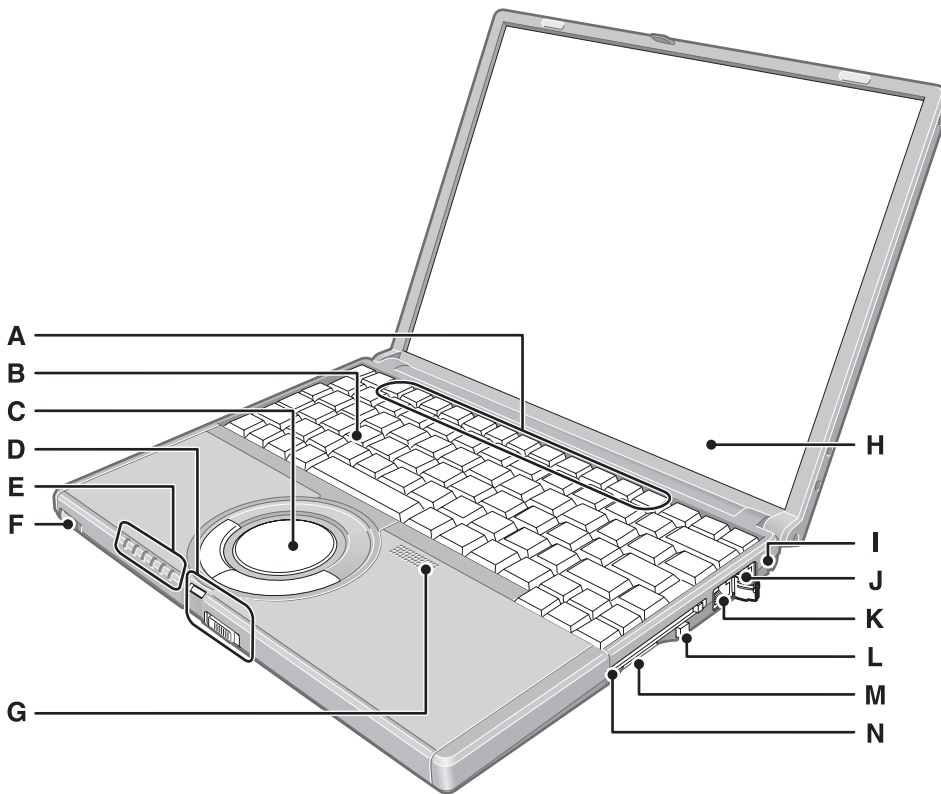
- WinDVD, B's Recorder, B's CLiP already installed.



- The drive construction (in which the disk cover opens from the top) makes it easy to set disks even in tight places.






→ “Chapter 3: DVD-ROM & CD-R/RW Drive” in onscreen Reference Manual

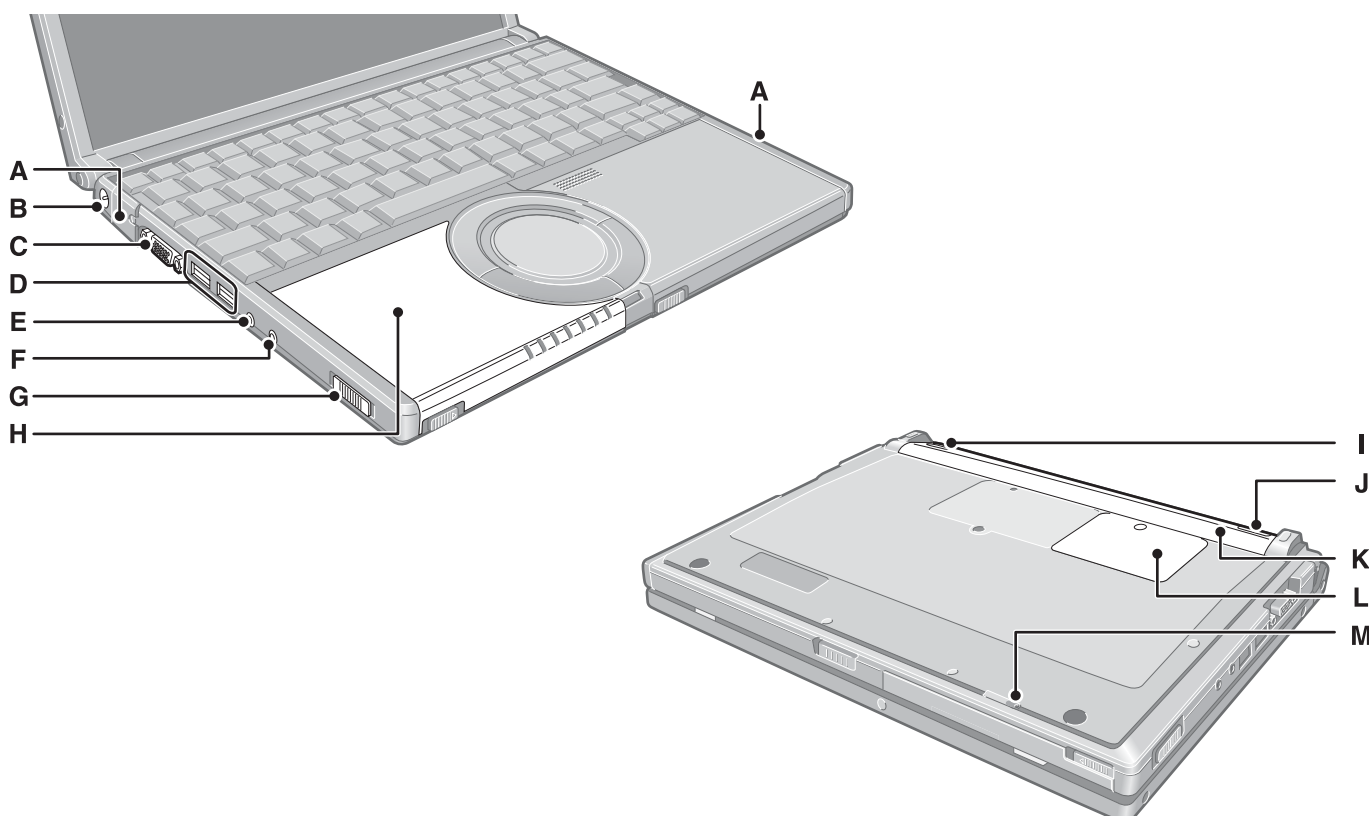
Names and Functions of Parts

Names		Functions/Reference
A	Function Keys	Press a key in combination with the Fn key to execute the function allocated to that key. → page 22
B	Keyboard	—
C	Touch Pad	→ page 21
D	Latch	When the display is closed and the latch is locked, the computer goes into standby or hibernation Mode. (→ “Chapter 2: Standby/Hibernation Functions” in onscreen Reference Manual) <ul style="list-style-type: none"> ● When the computer is in standby or hibernation mode, open the display to restart operations.
E	LEDs	→ page 12
F	Power Switch 	Slide the switch for about one second to turn the power on. → page 14
G	Speaker	<ul style="list-style-type: none"> ● To adjust the volume: Fn+F5 / Fn+F6 ● Speaker on/off: Fn+F4



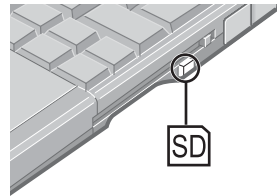
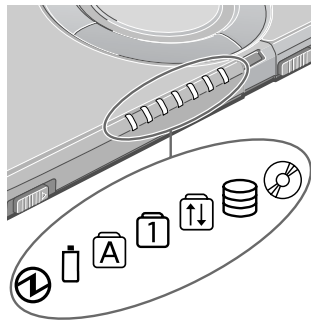
H	Display (Internal LCD)	—
I	Security Lock	A Kensington cable can be connected. For more information, read the manual that comes with cable.
J	Modem Port 	Connect modem telephone cable. → “Chapter 5: Modem” in onscreen Reference Manual
K	LAN Port 	Connect LAN cable. → “Chapter 5: LAN” in onscreen Reference Manual
L	SD Memory Card Indicator	→ page 12
M	SD Memory Card Slot	→ “Chapter 4: SD Memory Card/MultiMedia Card” in onscreen Reference Manual
N	PC Card Slot	→ “Chapter 4: PC Cards” in onscreen Reference Manual





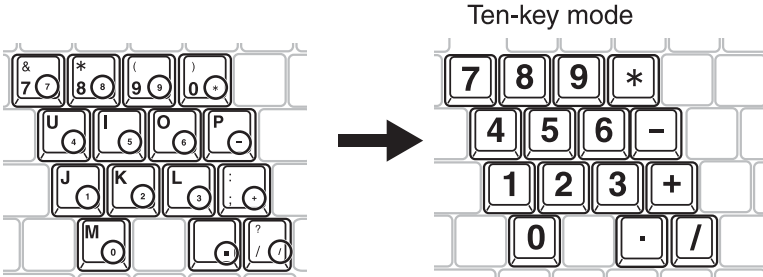




Names		Functions/Reference
A	Wireless LAN Antenna (built-in)	This computer has a built-in antenna for wireless LAN communications. → “Chapter 5: Wireless LAN” in onscreen Reference Manual
B	DC-IN Jack 	Connect the AC adaptor. → page 14
C	External Display Port 	Connect the external display cable. → “Chapter 4: External Display” in onscreen Reference Manual
D	USB Ports 	Connect the USB cable. → “Chapter 4: USB Devices” in onscreen Reference Manual
E	Microphone Jack 	Use only a monaural condenser microphone (miniature jack). Using an input source other than a monaural condenser microphone may not allow audio to be input or may damage the equipment.
F	Headphone Jack 	Use this jack to connect headphones or amplifier-equipped speakers. Audio output from the internal speaker is disabled when headphones or external speakers are connected.
G	Open Lever	Slide the lever to open the disk cover. This works only when the power is on.
		When using the drive for the first time, slide the open lever to open the disk cover after the computer has been powered on, and if the protective sheet is attached to the drive, remove it from the lens area.
H	DVD-ROM & CD-R/RW Drive	→ page 38, “Chapter 3: DVD-ROM & CD-R/RW Drive” in onscreen Reference Manual



I	Latch (left)	This latch is locked manually when inserting/removing the battery pack. → page 13
J	Latch (right)	This latch is locked automatically when inserting the battery pack properly.
K	Battery Pack	→ page 13, “Chapter 2: Battery Power” in onscreen Reference Manual
L	RAM Module Slot	→ page 23
M	Emergency Hole	→ page 38, “Chapter 3: DVD-ROM & CD-R/RW Drive” in onscreen Reference Manual

Confirm the Status Using the LEDs



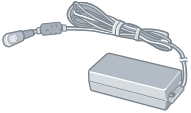
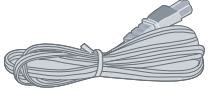
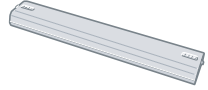


Indicators	Indicator Name/Status
	<p>Power indicator</p> <ul style="list-style-type: none"> ● Not lit: Power off / Hibernation mode ● Green: Power on ● Blinking green: Standby mode
	<p>Battery pack indicator</p> <ul style="list-style-type: none"> ● Not lit: Battery pack is not connected or no charging. ● Orange: Charging in progress. ● Green: Fully charged. ● Red: The battery level is very low (the charge is approx. 9% or less). ● Blinking red: Battery pack or charging circuit may not be working properly. ● Blinking orange: Battery cannot be recharged temporarily (The internal temperature of the battery pack is outside the acceptable temperature range for recharging.)
	<p>Caps Lock indicator</p> <ul style="list-style-type: none"> ● This indicator lights green when the Caps Lock key is pressed: Subsequent non-shifted input is capitalized.
	<p>NumLk indicator (Ten-key mode)</p> <ul style="list-style-type: none"> ● This indicator lights green when the NumLk key is pressed: Part of the keyboard (see figure below) will function as a ten-key numeric input. When the green light is on, if the Fn key is pressed along with keys on certain other segments of the keyboard, then those keys will operate as numeric keys. The [Enter] key functions differently depending on the application. To disable, press the NumLk key once more (the indicator will turn off). ● When the NumLk indicator is on: the following functions will operate: <p style="text-align: center;">Ten-key mode</p> <div style="display: flex; align-items: center; justify-content: center;">  </div>
	<p>ScrLk indicator (Scroll lock)</p> <ul style="list-style-type: none"> ● This indicator lights green when the Fn+ScrLk key are pressed: Scroll lock functions differently depending on the application.
	<p>Hard disk drive indicator</p> <ul style="list-style-type: none"> ● Lighted: This indicator lights when the hard disk drive is accessed.
	<p>DVD-ROM & CD-R/RW drive indicator</p> <ul style="list-style-type: none"> ● Lighted: This indicator lights when the DVD-ROM & CD-R/RW drive is accessed.
	<p>SD memory card indicator</p> <ul style="list-style-type: none"> ● Lighted: This indicator lights when the SD memory card or MultiMedia Card is accessed.

First-time Operation

Explains operating procedures from the time of purchase to the start of first Windows operations.

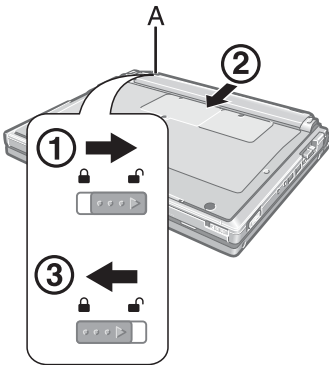
1 Confirm the inclusion of all parts.

Make sure the parts shown in the figure have been supplied. If any of these items are missing or is not working properly, contact your technical support office (→ page 60).

AC adaptor..... 1  Model No: CF-AA1623A	AC Cord..... 1 	Battery Pack..... 1  Model No: CF-VZSU27
Product Recovery DVD-ROM..... 1 	Modem Telephone Cable..... 1 	Operating Instructions (This book)..... 1 Supplementary Instructions 1 Windows® Book.... 1

2 Read the LIMITED USE LICENSE AGREEMENT (→ page 54).

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



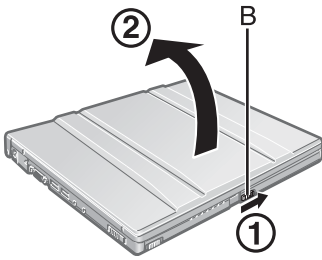
3 Turn the computer over and insert the battery pack.

- ① Slide the left-side latch (A) to the unlock position (🔓).
- ② Make sure the battery pack is facing the correct direction, slide it in the direction of the arrow.
- ③ Slide the left-side latch to the lock position (🔒), and then check to ensure that the battery pack is held firmly.
(Right-side latch is locked automatically.)

CAUTION

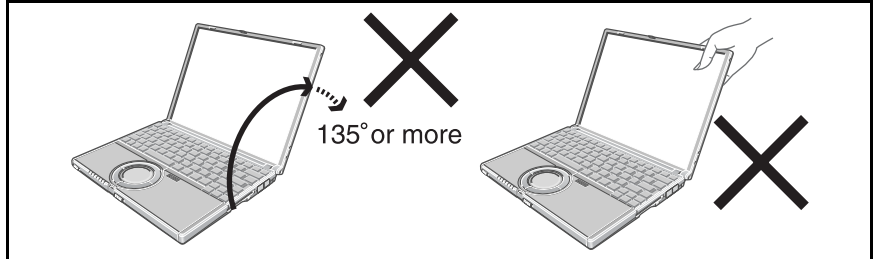
- Confirm that the latch is properly locked. If it is not, the battery pack may come off while you are carrying the computer.
- Do not touch the terminals on the battery pack and the computer. The battery pack may no longer function properly if the contacts are dirty or damaged. Also, the computer may not operate properly.
- Before using the battery pack, carefully read "Precautions (Battery Pack)" (→ page 6).

First-time Operation



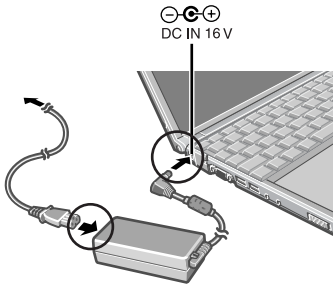
4 Open the display.

- ① Slide the latch (B) located at the front.
- ② Lift open the display.
 - Do not open the display wider than necessary (135° or more), and do not apply excessive pressure to the LCD. Also, do not hold the LCD when opening or closing the display.



5 Connect your computer to a power outlet.

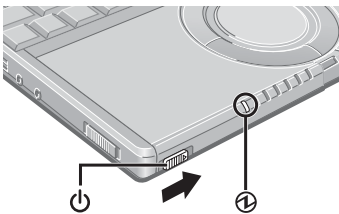
- Be sure the AC adaptor is connected until completing the first-time use operation.
- The battery pack will be charged automatically.
Charging Time: Approx. 4.5 hours (Varies depending on the usage conditions.)
- When using the computer for the first time, do not connect any peripheral device except the battery pack and AC adaptor to the computer.





CAUTION

Handling the AC adaptor

- Do not subject the AC adaptor to any strong impact.
Using the AC adaptor after a strong impact such as being dropped may result in electrocution, short circuit, or fire.
- 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.
- 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.

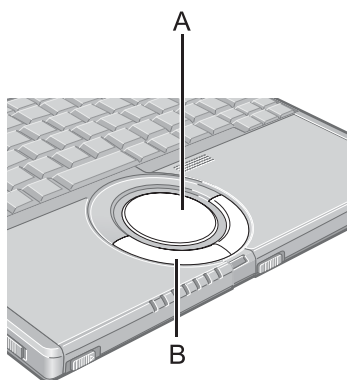


6 Turn your computer on.


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

CAUTION

- Do not slide the power switch and hold it for more than four seconds; this will cause the power to be turned off forcibly.
- Do not slide the power switch repeatedly.
- It takes some time before [Windows XP Professional Setup] is displayed. Do not press any keys or touch the touch pad, and do not change the Setup Utility settings. If you do, Windows setup may not operate properly.






7 Setup Windows.

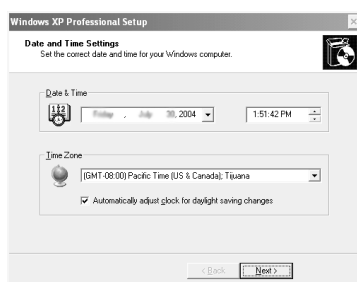
Moving the cursor  or clicking buttons can be performed with the touch pad (A) and left button (B).

- During operations, it may take some time before the next screen is displayed.

Wait, and do not press any keys, or touch the touch pad, etc.

- ① At [Welcome to the Windows XP Setup Wizard], click [Next].
- ② After reading the agreement, click [I accept this agreement], then click [Next].
 - If [I don't accept this agreement] is selected, the Windows setup will be aborted.
- ③ Select settings for your region, then click [Next].
- ④ Enter your name and then click [Next]. (You do not need to enter your organization.)
- ⑤ Enter your computer name and administrator password and then click [Next].
 - "Computer name" is for recognizing this computer when multiple computers are connected via the network.
 - Remember this password! This password may be needed to manage the computer.
- ⑥ Enter the correct date, time and the time zone, then select [Next].
 - Click  or  to set.
 - If set properly, click [Next].
 - After being set automatically, the computer will restart automatically, and Windows will start.

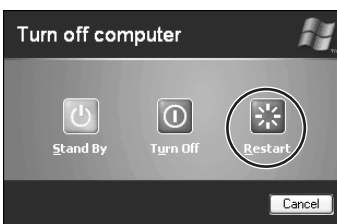
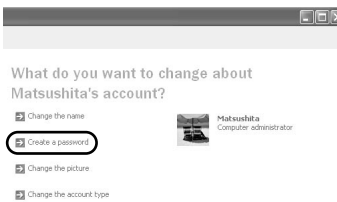
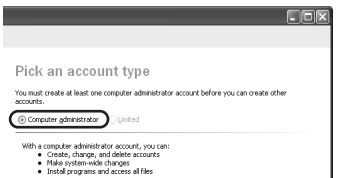
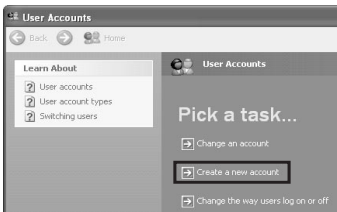
- It may take some time before the computer restarts. Wait, and do not press any keys, or touch the touch pad, etc.
- ⑦ Enter your password set in step ⑤ and select .
 - When inputting the password, confirm that character input is not set to "Caps Lock" or "NumLk." (→ page 12)



NOTE

- At the time of purchase, the wireless LAN is turned on. If you want to use the computer with the wireless LAN turned off: → page 34.

First-time Operation



8

Create "User Accounts" to recognize this computer's user.

- If you make mail settings, create password reset disks (→ page 18), or conduct other related operations before creating the user account, you will be unable to use mail history or settings. Create the user account at this time.

① Click [start]^{*1} - [Control Panel] - [User Accounts] - [Create a new account].

^{*1} Immediately after Windows setup, the screen may show a display as though [start] has been clicked (i.e., [All Programs] and other menus may be shown above [start]).

② Enter a new name for the new account, then click [Next].
(For example: Matsushita)

③ Click [Create Account].

- 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 by operating step 8.

④ Set the password.

- When sharing this computer with multiple users, we recommend setting a password for your own account.
- When setting password, click the account for which you will set the password, click [Create a password], and the password following the onscreen instructions, and click [Create Password].
 - Remember the password you have set. It is useful to input a hint in [password hint] in case you forget your password. In addition, we recommend that you create a password reset disk beforehand (→ page 18).
- Refer to "When administrator password is forgotten" (→ page 42) in "Dealing with Problems (Summary)."

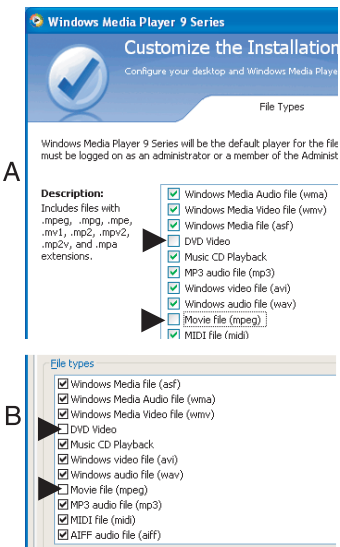
⑤ Click [start] - [Turn Off Computer] - [Restart] to restart the computer.

⑥ At the Welcome screen, click the created user (user icon) to log-on.

- If the password has been set, enter the password and click [OK]. You cannot operate the computer until the proper password is entered. Confirm that character input is not set to "Caps Lock" or "NumLk." (→ page 12)
- 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.

NOTE

- If the characters or icons on the screen are too small and difficult to see:
 - ① Click [start] - [All Programs] - [Panasonic].
 - ② Click [Icon Enlarger], and click [Large Size] or [Extra Large Size], and click [OK].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.



9 Double-click the icon on the desktop, start up Windows® Media Players, and agree to the license agreement.

After this, start up the application following the instructions on the screen.

- During this process, you will be required to agree to the license agreement.
- If [I Decline] is selected or a window is closed without any decision being made in the license agreement, no icons on the desktop may be selected. In this case, restart the computer.
- To have DVD video and MPEG files played back automatically on WinDVD (→ “Chapter 3: Watching DVD Video” in onscreen Reference Manual), remove the check mark from [DVD Video] and [Movie file (mpeg)] on screen A or B on the left.

A. When starting up Windows® Media Player for the first time, one of the setting screens will be displayed. After removing the check mark, select [Finish].

B. After starting up Windows® Media Player, the screen will be displayed when [Tools] - [Options] - [File Types] is selected. After removing the check mark, select [Apply].

- After completing the settings, select  on the screen of the Windows® Media Player.

◆ This concludes the first-time use operation guidelines.

Password Reset Function

◆ When you have forgotten a Windows log-on password.

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

- ① Connect the USB floppy disk drive (optional: CF-VFDU03) to your computer.
- ② Click [start] - [Control Panel] - [User Accounts].
- ③ Click the account you have logged on, and click [Prevent a forgotten password] from [Related Tasks] menu.

Create a password reset disk following the onscreen instructions, and store the password reset disk in a safe place.

- Only the log-on password for each account can be reset. The password set in the Setup Utility cannot be reset.



Screen Display

The screen displayed first when powering on the computer and logging on to Windows, is called the “desktop.” (These screens and icons are only examples.)



- Icons on the desktop
When you double-click icons, the software application will run and the window will open.

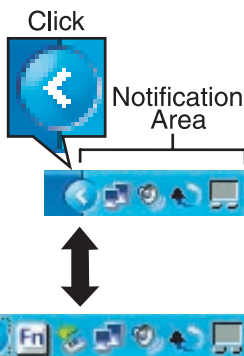


- [start] menu
When you click [start], the menu will be displayed.
Select the software application, etc. that you want to use from the menu, and click it.



- Notification area (see the bottom right on the screen)
Each of the icons has a separate role; for example, to set functions or confirm status.

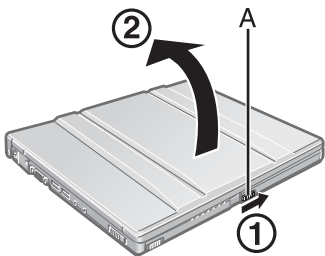
	(Use for screen settings)
	(Turn wireless LAN on/off and use to set Wireless LAN connections)
	(Use to make various touch pad settings)
	(Use to make settings and confirm status for the Touch Pad utility)
	(Set volume)
	(Use to set LAN or wireless LAN connections)
	(Use to make various B's CLiP settings)



- When disconnecting the AC adaptor, the icon will be displayed. (Use it for the battery settings.)
- If the icon on the notification area being explained in this manual is hidden and not displayed, click on the icon to display all icons.
- The notification area icons used in this manual are only examples. The actual display of the order and types of icons may differ depending on your computer environment (various function settings, devices connected, etc.).

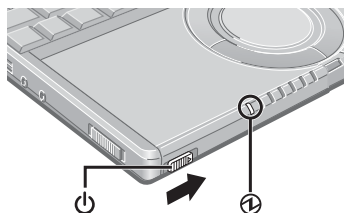
Starting Up/Shutting Down

Starting Up






1 Open the display.

- Slide the latch (A) located at the front.
- Lift open the display.
 - Do not open the display wider than necessary (135° or more), and do not apply excessive pressure to the LCD. Also, do not hold the LCD when opening or closing the display.




2 Turn your computer on.


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

- Do not slide the power switch and hold it for more than four seconds; this will cause the power to be turned off forcibly.
- 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, touch pad, or external mouse operations.
 - Closing the display.
- Do not slide the power switch repeatedly.
- Once the computer is powered off, you must wait at least ten seconds before powering it on again.



3 Log-on to Windows.

After confirming that the hard disk drive indicator  has turned off, click the user (user's icon).

- Input the password, then click . Until the correct password is entered, the computer will not operate. Confirm that character input is not set to “Caps Lock” or “NumLK.” (→ page 12)
- This operation may differ according to [Use the Welcome screen setting].
- When only one user has been created and no password has been set, the screen for selecting the user will not be displayed (automatic log-on).

4 Select your application.

Run various software applications, etc. and operate them.

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 the **Space** key or the **Enter** key 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 the **Ctrl** key. In addition, when the computer is left alone, it automatically enters the standby or hibernation mode. The computer will resume by sliding the power switch. (→“Chapter 2: Standby/Hibernation Functions” in onscreen Reference Manual)

Starting Up/Shutting Down

- 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 your technical support office. (→ page 60)

◆ 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 the **Enter** key.

- 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).

Shutting Down (power off your computer)



1 Save important data and close each application.

2 Display the shutdown screen.

Click [start] - [Turn Off Computer].

(→ page 35 “Change the Way Users log on or off”)

3 Click [Turn Off].

Your computer will power off automatically.

- Restarting your computer (without shutting down): click [Restart].

◆ To shut down using the keyboard:

- ① Press the **Windows** key, the **U** key, and select [Turn Off] with **→ ← ↑ ↓**.
- ② Press the **Enter** key.

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.

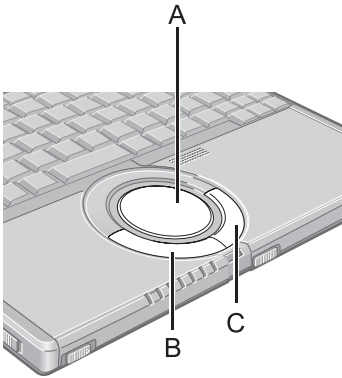
NOTE

- When the DC plug is not connected to the computer, disconnect the AC cord from your AC wall outlet. About 1.5 W of power is consumed simply by having the AC adaptor plugged into an electrical outlet.

◆ When you leave the computer or interrupt your work...


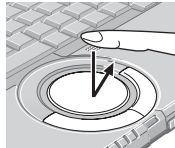
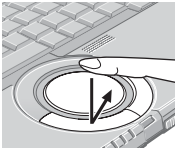

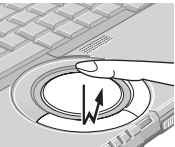

If you use the “Standby” or “Hibernation” function, then when you turn on the power next time, the application software and files you were using before will be displayed, and you can restart the same operations. (→ “Chapter 2: Standby/Hibernation Function” in onscreen Reference Manual)

Using the 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	 <p>Move the tip of your finger lightly over the work surface.</p>
Tapping/Clicking	 <p>tapping</p> <p>or</p>  <p>clicking</p> <ul style="list-style-type: none"> ● A right-click: Can only be performed by clicking the right button.
Double-Tapping/ Double-Clicking	 <p>double-tapping</p> <p>or</p>  <p>double-clicking</p>
Dragging	 <p>Two quick taps, but on the second tap leave your finger down (applying pressure) and move it on the work surface.</p> <p>or</p> <p>While holding down the button, move your finger on the work surface.</p>
Scroll	Trace a circle around the edge of touch pad. (→ “Chapter 2: Using the Touch Pad” in onscreen Reference Manual)

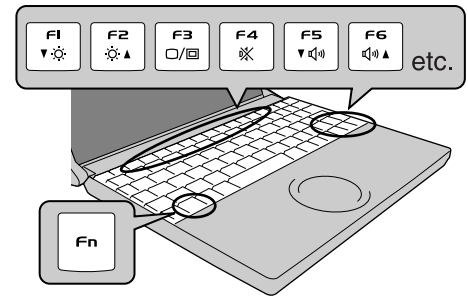
NOTE

- You can change the speed of the double-click or the operations of mouse buttons using [Mouse Properties] screen
 - To display [Mouse Properties]:
Click [start] - [Control Panel] - [Printers and Other Hardware] - [Mouse].
- Sensitivity when touching the touch pad can be adjusted (→ “Chapter 2: Using the Touch Pad” in onscreen Reference Manual)
- When an external mouse is connected and the cursor does not operate properly:
In the [Main] menu of the Setup Utility, set [Touch Pad] to [Disable]. When you want to use the touch pad again, return the setting to [Enable]. (→ page 27)
- 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 or press down forcefully with sharp-pointed objects, i.e. finger nails, pencils, or pens on the work surface.
 - 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.

Using the Fn key

If you press a key for a character or symbol contained in a key while pressing the **Fn** key, the function for the character or the symbol contained in that key will be executed.

- Details of various functions → “Chapter 2: Using the Fn key” in onscreen Reference Manual
- When using with the **Fn** key and the **Ctrl** key functions interchanged. (→ page 27)
Press the **Ctrl** key instead of the **Fn** key for the desired Fn function. (It is not possible to replace the markings on the keys, or the keys themselves)



Key	Functions	Pop-up Window (Displayed after logging on to Windows)
Fn+F1 Fn+F2	LCD brightness control (Fn+F1 = down / Fn+F2 = up)	
Fn+F3	Display change (When the external display is connected)	—
Fn+F4	Speaker on/off switch	OFF (MUTE) ON
Fn+F5 Fn+F6	Volume control (Fn+F5 = down / Fn+F6 = up)	
Fn+F7	Forcing the standby function	—
Fn+F9	Remaining capacity of the battery pack	When the battery pack is inserted in the computer (example) When the battery pack is not inserted in the computer
Fn+F10	Forcing the hibernation function	—
Fn+NumLk Fn+Home	The functions differ depending on the application software being used.	—

Expanding Memory

Depending on the computer, you can expand the RAM module (sold separately). The increase in memory will improve the processing speed of Windows and other application software. (Effects may differ depending on your usage conditions.)

- Use recommended RAM module products. Do not use non-recommended RAM modules. Non-recommended RAM modules may not operate properly, and may cause damage to your computer. Refer to "Specifications" (→ page 57) for recommended RAM module specifications. Refer to various sources for recommended RAM module.
- Matsushita Electric Industrial Co., Ltd. will bear no responsibility whatsoever for failures or damage caused by the use of non-recommended RAM modules, or by incorrect installation or removal of such RAM modules. Before installing a RAM module, confirm the product type and the correct installation method.

CAUTION

- RAM modules are extremely sensitive to static electricity. There are cases where static electricity generated by the human body has adversely affected such RAM modules. When inserting or removing a RAM module, do not touch the terminals or internal components, insert objects other than the module, or allow foreign particles to enter. Doing so has been known to cause damage, fire or electric shock.

Inserting / Removing the RAM Module

◆ Inserting

1 Power off your computer. (→ page 20)

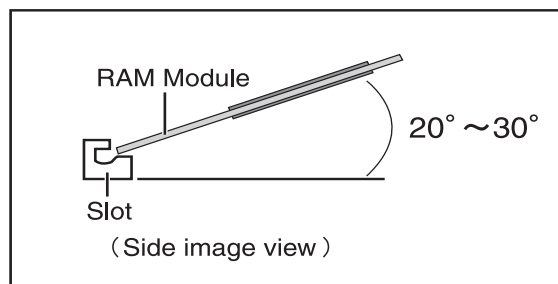
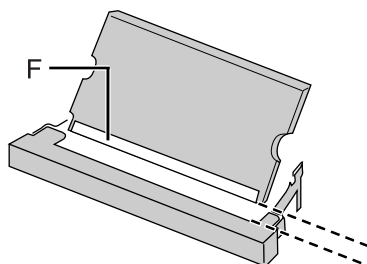
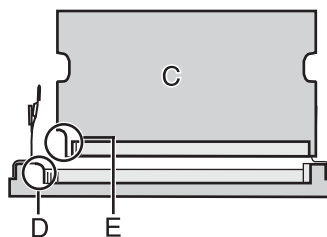
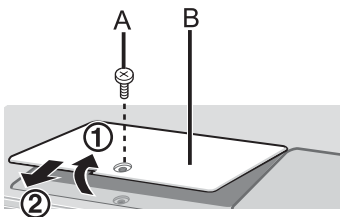
- Do not shut down using the standby or hibernation function.
- Disconnect the AC adaptor.

2 Turn the computer over, remove the battery pack and the screw (A), then ① hold up the cover (B) and ② pull it out.

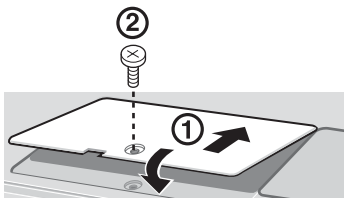
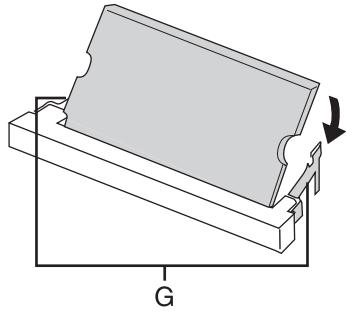
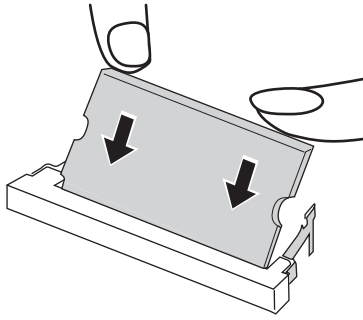
- There is one screw on the cover. Do not confuse this with the cover with two screws.
- Use the proper size screw driver to insure that the screw does not get stripped.

3 Insert the RAM module.

- ① Check direction of a RAM module (C).
Hold the RAM module in the direction that the notch (E) of the RAM module suits to the protrusion (D) of the slot.
- ② Place the RAM module lightly in parallel with a slot.
(The gold terminals (F) are visible)



Expanding Memory



- ③ Insert the module parallel to the slot and press firmly until the gold terminals are no longer visible.
 - If the RAM module is difficult to insert, do not force it. Check once more to ensure that the module is positioned correctly.
 - The slot may be damaged if the following procedure is performed without inserting the module firmly.

- ④ Press the RAM module down until the right and left hooks (G) lock into place.
 - When pressing down the module, the right and left hooks will open slightly and will return after locking.
 - If the RAM module is difficult to press down, do not force it. Check once more to ensure that the module is positioned correctly.

4 Put the cover back in place.

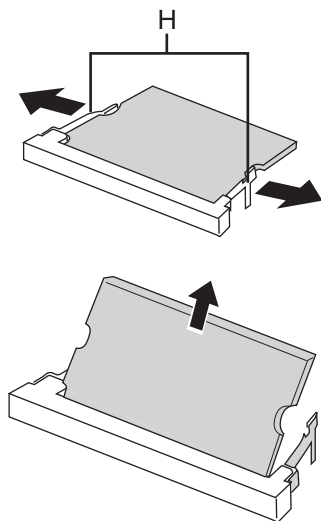
- ① Insert the cover at an angle, then fit it into place.
- ② Fasten the screw.

NOTE

- The memory size in [Information] menu of the Setup Utility (→ page 26) has increased if the RAM module has been recognized. If the RAM module is not recognized, power off the computer and insert it again. Refer to the main memory in the specifications to check the memory size at the time of shipment. (→ page 57)

◆ Removing

After making the settings in step 1 to 2 of “◆ Inserting,” remove the RAM module as follows.



- ① Gently open the left and right hooks (H).
The RAM module will be raised at an angle.
- ② Gently remove the RAM module from the slot.
- ③ Put the cover back in place.
Refer to step 4 of “◆ Inserting.”

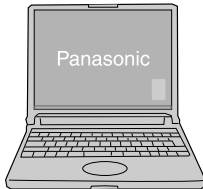
Setup Utility

The Setup Utility sets the computer's boot-up operating environment (i.e. passwords, startup drive). The following six menu items are available:

[Information], [Main], [Advanced], [Security], [Boot], [Exit]

Running the Setup Utility

1 Turn on or restart the computer.



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



When the password is set, the screen shown at left will be displayed. Enter your password, and press the **Enter** key.

When the Setup Utility is started with Supervisor Password

- You can modify all items of the Setup Utility

When the Setup Utility is started with User Password

- On the [Advanced] and the [Boot] menu:
 - You can view the settings, but cannot change them
- On the [Security] menu:
 - [Clear registered SD card], [Set Supervisor Password] and [Hard Disk Lock] will not be displayed
 - [Password on boot], [SD Startup], [SD Setting Method], [Setup Utility Prompt], [Boot First Menu] and [User Password Protection] will be displayed, but cannot be set
 - The User Password can be changed only when [User Password Protection] has been set to [No Protection]. The User Password cannot be deleted
- On the [Exit] menu:
 - [Get Default Values] option will not be displayed
- The **F9** key does not work

NOTE

- When [Password on boot] in the Setup Utility is set to [Disable]:
 - The computer can be started up without entering a password
- When the Setup Utility is started:
 - The password becomes necessary. This alternative prevents the contents of the Setup Utility from being changed
- If you fail to press the **F2** key at the right moment, the Setup Utility will not start up. In this case, let the computer fully boot up, and then perform a shutdown or restart from Windows.
- To close the Setup Utility:
 - ① Press the **Esc** key.
 - ② Select the exiting method from the [Exit] menu and press the **Enter** key.
 - ③ Select [Yes] and then press the **Enter** key.

Key Operations

- **F1**
To display the corresponding "help" file (Press the **F1** key to return to the original screen)
- **Esc**
To display the [Exit] menu
- **↑ ↓**
To move among the items (Use these keys when selecting the item)
- **← →**
To move among the menus (Use these keys when the [Information], [Main], [Advanced], [Security], [Boot], or [Exit] menu is selected)
- **F5**
Select previous item (Use this key when changing setting values)
- **F6**
Select next item (Use this key when changing setting values)
- **Enter**
To display sub-menu of each item (Use this key after selecting the item by using the **↑** key or the **↓** key)
- **F9**
To set default settings (except the password, System Time and System Date)
- **F10**
To save the settings and exit

Information Menu

Language:	[English]
Model No.:	CF-xxxxxxxx
Serial No.:	xxxxxxxxxx
CPU Type:	xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx
CPU Speed:	x.x GHz
BIOS:	Vx.xxLxx
Embedded Controller:	Vx.xxLxx
System Memory:	xxx MB
Primary Master:	xx GB
Secondary Master:	CD/DVD Drive

◆ Parameters

(An underline indicates the factory default settings)

Language	<u>English</u> Japanese
● Select the language for displaying the Setup Utility	

Main Menu

System Time:	[xx:xx:xx] ^{*1*3}
System Date:	[xx/xx/xxxx] ^{*2*3}
Touch Pad:	[Enable]
Fn/Ctrl Key:	[Normal]
Display:	[Simultaneous]
Display Expansion:	[Enable]
CD/DVD Drive Speed:	[High]

*1 Time is shown in 24-hr. style.

*2 Date is shown in order of Month/Day/Year.

*3 The **Tab** key can be used to move the cursor.

◆ Parameters

(An underline indicates the factory default settings)

Touch Pad <ul style="list-style-type: none"> Select whether to use the touch pad ([Enable]) or not ([Disable]) 	Disable <u>Enable</u>
Fn/Ctrl Key <ul style="list-style-type: none"> Select whether to switch the <u>Fn</u> functions with the <u>Ctrl</u> functions, and vice versa on the internal keyboard Do not attempt to replace the markings on the keys, or the keys themselves 	<u>Normal</u> Replace
Display <ul style="list-style-type: none"> The display destination in cases where Windows is not running is set here If an external display is not connected, all information will appear on the internal LCD even if [External Monitor] or [Simultaneous] is selected. After Windows starts up, the screen is displayed on the display destination set in the following menu [start] - [Control Panel] - [Other Control Panel Options] - [Intel(R) Extreme Graphics] - [Devices]	External Monitor Internal LCD <u>Simultaneous</u>
Display Expansion <ul style="list-style-type: none"> Select whether to have the display expanded when not using the native screen resolution 	Disable <u>Enable</u>
CD/DVD Drive Speed <ul style="list-style-type: none"> Select whether to set the DVD-ROM & CD-R/RW drive speed to fast ([High]) or slow ([Low]) 	<u>High</u> Low

Advanced Menu

Modem:	[Enable]
LAN:	[Enable]
Boot up from LAN:	[Enable]
Wireless LAN:	[Enable]
Legacy USB Support:	[Enable]

NOTE

- The [Advanced] menu cannot be changed when the Setup Utility is started up with the User Password

◆ Parameters

(An underline indicates the factory default settings)

Modem <ul style="list-style-type: none"> • Select whether to use the internal modem function ([Enable]) or not ([Disable]) (This does not work for the external modem) 	Disable <u>Enable</u>
LAN <ul style="list-style-type: none"> • Select whether to use the internal LAN function ([Enable]) or not ([Disable]) (This does not work for the external LAN card) 	Disable <u>Enable</u>
Boot up from LAN <ul style="list-style-type: none"> • Select whether to use the function starting the computer from a LAN server ([Enable]) or not ([Disable]) • This can be set only when [LAN] is set to [Enable]. (This function works only for the internal LAN. This does not work for an internal wireless LAN and external wireless LAN card) 	Disable <u>Enable</u>
Wireless LAN <ul style="list-style-type: none"> • Select whether to use the internal wireless LAN function ([Enable]) or not ([Disable]) (This does not work for the external wireless LAN card) 	Disable <u>Enable</u>
Legacy USB Support <ul style="list-style-type: none"> • Select whether to use the function that makes the computer recognize USB keyboard and USB floppy disk ([Enable]) or not ([Disable]) before starting Windows 	Disable <u>Enable</u>

Security Menu

Password on boot:	[Enable]
SD Startup: ^{*1}	[Enable]
SD Setting Method: ^{*1}	[Leave Set]
▶ Clear registered SD card: ^{*1}	[Enter]
▶ Set Supervisor Password:	[Enter]
Setup Utility Prompt:	[Enable]
Boot First Menu:	[Enable]
Hard Disk Lock:	[Disable]
User Password Protection:	[No Protection]
▶ Set User Password:	[Enter]

^{*1} This is displayed only when an SD memory card has been registered. (→ “Chapter 4: SD Memory Card Security Function” in onscreen Reference Manual)

NOTE

- When the Setup Utility is started up with the User Password:
 - [Clear registered SD card], [Set Supervisor Password] and [Hard Disk Lock] will not be displayed
 - [Password on boot], [SD Startup], [SD Setting Method], [Setup Utility Prompt], [Boot First Menu] and [User Password Protection] will be displayed, but cannot be set
 - The User Password can be changed only when [User Password Protection] has been set to [No Protection]. The User Password cannot be deleted

◆ Parameters

(An underline indicates the factory default settings)

Password on boot ● Select whether you will need to input ([Enable]) or not ([Disable]) the Supervisor Password or the User Password on booting	Disable <u>Enable</u>
SD Startup ^{*2} ● Select whether to use an SD memory card instead of entering the password on booting ([Enable]) or not ([Disable])	<u>Disable</u> Enable
SD Setting Method ^{*2} ● Select whether to set an SD memory card to [Leave Set] or [Set and Eject] when an SD memory card is used instead of entering the password ● This can be set only if [SD Startup] has been set to [Enable]	<u>Leave Set</u> Set and Eject
Clear registered SD card ● Clear the registration from all registered SD memory cards not to be used instead of entering the password on booting	To the sub-menu
Set Supervisor Password ● Set a Supervisor Password if you wish to prevent any unauthorized changes to the Setup Utility settings, also if you require a password on boot, set [Password on boot] to [Enable] after you set Supervisor Password	To the sub-menu

^{*2} [SD Startup] and [SD Setting Method] cannot be set if [Password on boot] is set to [Disable].

Setup Utility Prompt <ul style="list-style-type: none"> Select whether to display ([Enable]) or not to display ([Disable]) the message “Press F2 for Setup/F12 for LAN” shown on the bottom of the [Panasonic] boot screen that is displayed after starting this computer 	<u>Disable</u> <u>Enable</u>
Boot First Menu <ul style="list-style-type: none"> Select whether to display “Boot Menu” ([Enable]) or not ([Disable]) 	<u>Disable</u> <u>Enable</u>
Hard Disk Lock <ul style="list-style-type: none"> Select whether enable ([Enable]) or disable ([Disable]) the hard disk lock This function will not work without the Supervisor Password being set 	<u>Disable</u> <u>Enable</u>
User Password Protection <ul style="list-style-type: none"> Select whether to permit changing the User Password ([Protected]) or not ([No Protection]) 	<u>No Protection</u> <u>Protected</u>
Set User Password <ul style="list-style-type: none"> Set User Password when more than one person will use this computer, etc. For example, when the system administrator sets Supervisor Password and User Password and lets other users know only the User Password, other users cannot change some of the settings in Setup Utility This function will not work without the Supervisor Password being set 	To the sub-menu

Boot Menu

Set priorities (displayed in order from top to bottom) for devices that start up the operating system.

To move a device up by one in the order, select the device with the ↑ key and the ↓ key, and then press the **F6** key.

To move a device down by one in the order, select the device with the ↑ key and the ↓ key, and then press the **F5** key.

- Panasonic USB floppy disk drive (CF-VFDU03 (optional)) can be used for startup (recommended)

Floppy Drive Hard Disk Drive CD/DVD Drive LAN* ¹

*¹ This is not displayed when [LAN] or [Boot up from LAN] is set to [Disable] on the [Advanced] menu.

NOTE

- The [Boot] menu cannot be changed when the Setup Utility is started up with the User Password
- Boot Menu**
The device for starting up the operating system can also be selected during computer start-up. After the computer is turned on and the **Esc** key is pressed at [Panasonic] boot screen, [Boot Menu] (the device selection screen) will appear. When the [Boot] menu setting is changed, the selection screen display

will also change. [Boot Menu] is displayed only when [Boot First Menu] in the [Security] menu is set to [Enable]

Exit Menu

Save Values & Exit
Exit Without Saving Changes
Get Default Values *¹
Load Previous Values
Save Current Values

Battery Recalibration

*¹ This item is not displayed when starting up the Setup Utility with the User Password.

◆ Parameters

Save Values & Exit	Exit the Setup Utility and save your changes to CMOS.
Exit Without Saving Changes	Exit the Setup Utility without saving your changes to CMOS.
Get Default Values	Set the Setup Utility to the default settings.
Load Previous Values	Load previous values from CMOS for all Setup items.
Save Current Values	Save your changes to CMOS.
Battery Recalibration	To accurately display remaining battery capacity, fully charge the battery pack, then fully discharge it. (→ “Chapter 2: Battery Power” in onscreen Reference Manual)

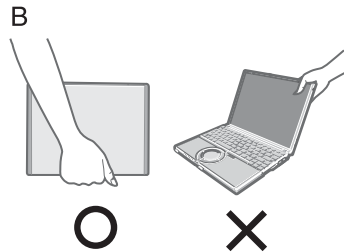
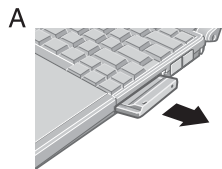
Usage / Handling / Maintenance

Usage Environment



- Place the computer on a flat stable surface. Do not place the computer to tip over. When the computer receives extremely strong shock after disk 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)
- Keep the computer clear of electromagnetic cards and objects that emit electromagnetic waves.
 - Do not place the computer near magnets, electromagnetic bracelets, or other magnetic fields.
 - This computer uses a magnet in the position marked with a circle in the diagram on the left. Do not place a magnetic card or other magnetic field in contact with the computer.

Handling



◆ When Carrying the computer, be sure to keep to the following:

- Turn off the computer.
- Remove all external devices, cables, PC Cards protruding from the computer (see figure A), SD memory cards, and MultiMedia Cards before transporting the computer.
- Close the display, and ensure that the latch (→ page 10) is positioned correctly in the slot. Do not carry the computer by gripping the display or the cabinet around the display (see figure B).
- Do not drop or hit the computer against solid objects.
- When taking an airplane
 - Always carry your computer and disks, etc with you. Never check it in with luggage.
 - Before using the computer inside an airplane, we recommend asking the airlines regarding their policy on this issue.
- When transporting a spare battery pack (sold separately) inside a package, briefcase, etc., it is recommended that it be placed in a plastic bag in order to protect its contacts.
- If the computer is being carried in a soft bag when the battery pack has been removed, be careful to avoid undue pressure on the body of the computer in a crowded place, etc., as this may result in damage to the LCD.

◆ We recommend the following:

- Preparing a spare battery pack (sold separately).
- Making backup copies on SD memory cards, etc. and if necessary, carrying them with you.

Maintenance

- Care of the display / touch pad:
Wipe lightly with a gauze or other dry, soft cloth.
- When the touch pad or other area other than the screen becomes dirty: wet a soft cloth with water or a diluted kitchen cleanser (neutral), wring the cloth out thoroughly, and wipe the dirty area gently. Using a detergent other than a neutral kitchen cleanser (e.g., a weak alkali cleanser) may adversely affect painted surfaces.

CAUTION

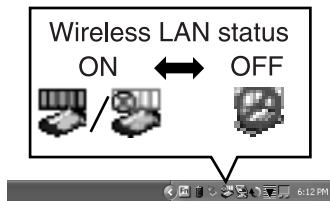
- Do not use benzene, thinner, or rubbing alcohol. Doing so may adversely affect the surface, e.g., discoloration. In addition, do not use commercially-available household cleaners and cosmetics, as they may contain components harmful to the surface.
 - Do not directly add or spray water or detergent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




Wireless LAN

For instructions on settings for wireless LAN and cautions during use, click [start] - [Reference Manual], and refer to "Chapter 5: Wireless LAN".

About Turning on/off the Wireless LAN

- Before using a wireless LAN, turn it on using the following method (at the time of purchase, the wireless LAN is set to [On]).
- Turn on/off the wireless LAN using Intel(R) PROSet client.



1 Double-click the  icon / the  icon (when the wireless LAN is on) or the  icon (when the wireless LAN is off) on the notification area.

2 Select your wireless LAN adaptor and click [General].

3 Click [On] or [Off] for [Switch radio].

4 Click [OK].

- Do not click [Disable]^{*1} in [Network Connections].

^{*1} This is displayed by right-clicking [Wireless Network Connection] in [Network Connections].

◆ **Do not use the wireless LAN in airplanes, hospitals, or in other locations where wireless LAN signals may affect the operation of devices in the vicinity.**

Abide by instructions regarding use in airplanes and hospitals.

◆ **This computer uses channels 1 through 11^{*2}**

Check the channel being used by the access point.

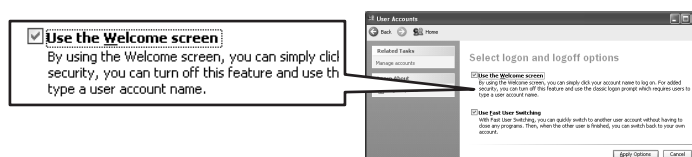
^{*2} In the case of wireless communications, the frequency band being used can be divided into segments, so that different communications can be conducted on each band segment. A "Channel" refers to the individual frequency bandwidth divisions.

Depending on the settings in Windows installed applications, drivers, menus and other displays may be inoperable. In this case, refer to the items below, and the applied items from this manual, “Chapter 7: Dealing with Problems (Advanced)” in onscreen Reference Manual, Windows Help (➔ page 8), and the software application and driver’s operating instructions, etc.

Change the Way Users Log on or off

If the check mark is added for [Use the Welcome screen] or [Use Fast User Switching] in [start] - [Control Panel] - [User Accounts] - [Change the way users log on or off], the operation differs as follows.

◆ Welcome screen settings



The operations when starting and exiting Windows differ as follows.

[Use the Welcome screen] setting	Operation when starting	Operation when exiting
When adding the check mark (when using)	The list of user names will be displayed. Click the user name with which you want to log-on.	Click [start] - [Turn Off Computer] - [Turn Off].
With no check mark (when not using)	Enter the user name and password, and click [OK].	Click [start] - [Shut Down] - [Shut down] and click [OK].

- At the time of purchase, it is set with the check mark added (when using).
- When [Use when logging on to Windows] is set in [SD Card Setup] (➔ “Chapter 4: SD Memory Card Security Function” in the onscreen Reference Manual), the Welcome screen cannot be used.

◆ Fast User Switching settings



When adding the check mark for this setting, you can change to another user without logging on again when multiple users use the computer.

In the following case, Fast User Switching cannot be used.

- When the check mark is not added for [Use the Welcome screen]
- When joining the network domain
- When the [Use when logging on to Windows] is set in [SD Card Setup] (➔ “Chapter 4: SD Memory Card Security Function” in the onscreen Reference Manual)

Depending on the software application, the computer may not work properly if this function is used.

This manual explains the procedure for cases where the check mark is added.

- When switching to a different user with the Fast User Switching function, it may not be possible to set the display settings. In this case, log-off all users, and retry the operation.

Antivirus Measures/When Disposing of This Device

Antivirus Measures/Windows Updates

To improve the security of the computer, use the following measures.

- Use antivirus software (commercially available).
- Use Windows XP Internet Connection Firewall.
- Update Windows

If you can connect to the Internet, perform Windows Update. This can help protect the computer against virus attacks.

Windows Update enables you to update Windows on your computer by applying the latest patches and service packs for Windows.

- Get the newest information about viruses from the Website of Microsoft Corp. and other software makers, etc.

For detailed information, refer to Reference Manual. (→“Chapter 8: Protecting Your Computer from Viruses” and “Chapter 8: To Update this Compute to its Latest Version” in onscreen Reference Manual)

When Disposing 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). (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.

Use of Peripheral Devices/Internal Hard Disk

When Using Peripheral Devices

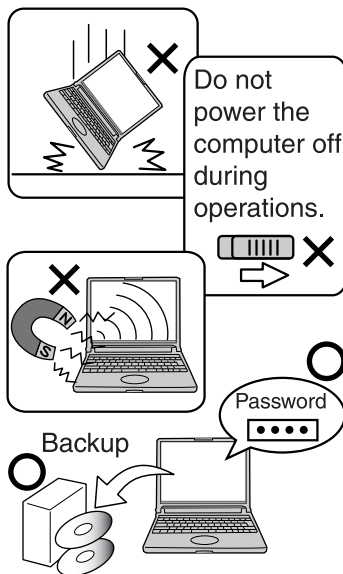
Pay strict attention to the following points to avoid damage to the computer, peripheral devices, cables, etc.

Also, in addition to following this manual and the onscreen 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.

Internal Hard Disk

To Protect Data



Keep the following.

- **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 off your computer while software applications are running or hard disk drive indicator  is on.**
Properly shut Windows down from the [start] menu to avoid problems. (→ page 20)
- **Do not place the Computer close to objects that emit electromagnetic waves (magnets, electromagnetic bracelets, etc.).**
The data saved on the hard disk may be erased.
- **Important data saved on the hard disk should be saved regularly (e.g., in case of failures, unexpected data updates, erasure, etc.)**
Regular backups are recommended as a means of minimizing damages in the event of trouble.
- **Use the security function for all important data.**
(→ “Chapter 2: Security Measures” and “Chapter 4: SD Memory Card Security Function” in onscreen Reference Manual)

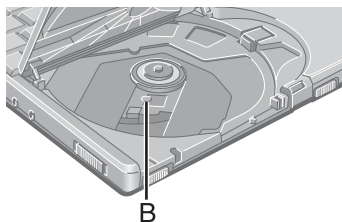
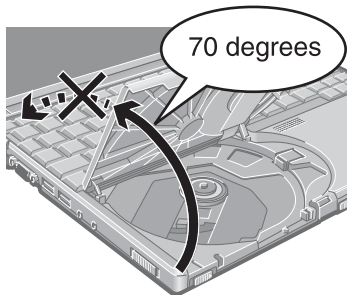
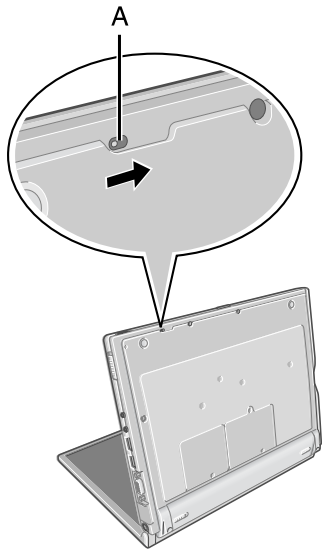
When Changing Hard Disk Partitions

- During reinstallation, you can divide the hard disk space into two partitions by executing: [Make two partitions, for the operating system and data, and reinstall Windows to the operating system partition].


Confirm the minimum partition size required for the OS by checking the screen during the reinstallation.

If you want to create three or more partitions, after creating an OS partition and a data partition during the reinstallation, start up Windows, erase the second partition once using [Disk Management], and then create the partitions in the open space.

Using CD/DVD



◆ About opening or closing the disk cover/cleaning the drive lens

- When the computer is on, be sure to use the open lever on the left side of the computer or perform the ejecting operation through Windows.
When using the following software application, you cannot open the cover using the open lever
 - When using B's Recorder or B's CLiP, refer to "Chapter 3: Writing to CDs" in onscreen Reference Manual
- To remove a disk when the disk cover cannot be opened or when the computer is powered off, insert a pointed object (e.g., the bent-out tip of a paper clip, or the tip of a ballpoint pen) into the emergency hole (A), and move in the direction of the arrow
- Be careful not to do any of the following when the disk cover is open:
 - Do not close the display.
Be sure to close the display only after confirming the disk cover is closed. If the disk cover is open, the LCD may become damaged
 - Never insert foreign objects such as paper clips into the DVD-ROM & CD-R/RW drive.
This could cause it to malfunction
- The disk cover can be opened up to an angle of 70 degrees. Do not force the cover open any further.
If a hand or other object touches the disk cover and accidentally opens it wider than 70 degrees, pull it forward slowly until the stopper holds the cover in its proper position
- Do not leave the disk cover in the open position or touch the lens.
- Over time, dust may build up on the lens, or on a disk. This may result in a read or write malfunction
- Insert the disk securely. If the disk cover is closed without inserting the disk securely, it may become damaged.
- Do not access the drive until after the disk cover is closed and the DVD-ROM & CD-R/RW drive status indicator  is off
- We recommend cleaning the drive lens (B) with an air puffer used for camera lenses (Do not use any spray lens cleaning products)

◆ While the DVD-ROM & CD-R/RW drive is being accessed

- Do not open the DVD-ROM & CD-R/RW drive or move the computer while the DVD-ROM & CD-R/RW drive is being accessed
Doing so could cause the disk to shift position, which may damage the disk, or cause the DVD-ROM & CD-R/RW drive to malfunction.
After running an application involving access to a disk, do not open the DVD-ROM & CD-R/RW drive until after the application has been closed
- Do not apply excessive force on the disk cover
- Do not shock the computer by removing or inserting cables and cards, etc. This may result in a read or write malfunction

◆ About recognition of media

- It may take about 30 - 40 seconds for an image recorded to a rewritable media to be played back

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 your technical support office (→ page 60).

Error Code/Message	Action
0211: Keyboard error	<ul style="list-style-type: none"> ● If an external keyboard or mouse is connected, disconnect these devices.
0251: System CMOS checksum bad - Default configuration used	<p>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.</p> <ul style="list-style-type: none"> ● Run the Setup Utility and load the default values, then change the settings to the appropriate values as needed. (→ page 25) ● If the problem persists, the internal clock battery may need to be replaced. Contact your technical support office.
0271: Check date and time settings	<p>The date and time setting are incorrect.</p> <ul style="list-style-type: none"> ● Set the date and time correctly in the [Main] menu of the Setup Utility. (→ page 27) ● If the problem persists, the internal clock battery may need to be replaced. Contact your technical support office.
0280: Previous boot incomplete - Default configuration used	<p>Startup has failed repeatedly, so the Setup Utility settings have been returned to their default values, and the computer has been booted.</p> <ul style="list-style-type: none"> ● Run the Setup Utility and load the default values, then change the settings to the appropriate values as needed. (→ page 25)
Press <F1> to resume, <F2> to Setup	<ul style="list-style-type: none"> ● Write down the error details and press the F2 key to run the Setup Utility. Confirm the settings, and change the settings to the appropriate values as needed. (→ page 25)
Operating System not found	<p>The OS is not properly installed on the floppy disk or the hard disk that you are trying to boot from.</p> <ul style="list-style-type: none"> ● 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 the [Information] menu of the Setup Utility. (→ page 26) <ul style="list-style-type: none"> • If the hard disk is recognized (“xx GB” is displayed), perform the reinstallation procedure. • If the hard disk is not recognized (“none” is displayed), contact your technical support office. ● If a device is connected to the USB port, disconnect the device, or run the Setup Utility and set [Legacy USB Support] in the [Advanced] menu to [Disable]. (→ page 28)

How to Resolve the Problem

When the operation does not start or work properly, check the following items.

1 Does the computer power on?

Yes

- Click [start] - [Reference Manual], and refer to onscreen Reference Manual. View troubleshooting methods and other information not included in this manual.
- If you cannot resolve the problem: refer to step 2.

No

Refer to this section when the keyboard or touch pad do not operate, or when the screen is not displayed

- Refer to “Dealing with Problems (Summary)” in this manual. (→ page 41)

2 Does the software application run?

Yes

- Refer to each software application’s help section.
- For Windows, click [start] - [Help and Support] and refer to Windows Help.
- If you cannot resolve the problem: refer to step 3.

No

- Regarding the pre-installed software on this computer (→ page 59), ask the makers of the software applications. (→ page 48)

3 Do the connected peripherals work properly?

Yes

Refer to this section even if the peripheral device is not connected.

No

- Contact the peripheral device makers. Refer to the manual included with the peripheral device for contact information.

If you cannot resolve these problems: Refer to your technical support office (→ page 60)

Dealing with Problems (Summary)

If you encounter a problem, try the following methods.

- Windows Setup: → below
- Starting up: → below
- Enter Password: → page 42
- Display: → page 43
- Setup Utility: → page 44
- Shutting Down: → page 44
- Standby/Hibernation Functions: → page 44
- Battery Indicator: → page 45
- Onscreen Reference Manual: → page 45
- Disk Operations: → page 45
- Reinstalling B's Recorder/B's CLiP: → page 45
- SD Card Setup (SD Memory Card security function): → page 45
- Fast User Switching Function: → page 46
- Wireless LAN: → page 46
- Expanding Memory: → page 46
- Other Problems: → page 46

You can use the PC Information Viewer to check the computer's usage status. (→ page 47)

◆ Windows Setup

During Windows setup, the process does not move to the next screen	<ul style="list-style-type: none"> ● Sometimes it takes time to move to the next screen. Also, it may take two to three minutes while the computer moves to the next screen from the [Date and time settings] screen, and then restarts automatically. Wait, and do not press any keys, or touch the touch pad, etc. (→ page 15)
--------------------------------------------------------------------	-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------

◆ Starting Up

The power indicator or battery indicator is not lit	<ul style="list-style-type: none"> ● Check the cable connection for the AC adaptor ● Check to see if a fully charged battery is properly inserted ● Remove the battery pack and disconnect the AC adaptor. Then reconnect them
The computer does not operate when a USB device is connected	<ul style="list-style-type: none"> ● The computer may not operate when certain USB devices are connected. Disconnect the USB device, or set [Legacy USB Support] to [Disable] in [Advanced] menu of the Setup Utility (→ page 28)
[Enter Password] is displayed	<ul style="list-style-type: none"> ● Enter your Supervisor Password or User Password. If you have forgotten your password, contact your technical support office (→ page 60)
POST Startup Error(s) are displayed	→ page 39
Windows startup, or an operation is extremely slow	<ul style="list-style-type: none"> ● Press the F9 key in the Setup Utility (→ page 25). This will restore the Setup Utility's settings to their default values (except for the password, System Date and System Time). 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 operations slow down during streaming playback, try changing the number of colors of the display ● If you install resident software after purchasing this computer, disable the resident software
The date and time are incorrect	<ul style="list-style-type: none"> ● You can set the date and time using the following menu: [start] - [Control Panel] - [Date, Time, Language, and Regional Options] - [Date and Time] ● If you continue to experience problems, the internal battery maintaining the clock may need to be replaced. Contact your technical support office (→ page 60) ● When the computer is connected to a LAN, confirm the date and time of the server ● This computer will not correctly recognize the date and time starting from the year 2100 A.D.

Dealing with Problems (Summary)

◆ Starting Up

<p>When resuming from the standby or hibernation mode, [Enter Password] does not appear even if a password has been set in the Setup Utility</p>	<ul style="list-style-type: none"> ● Even when a password has been set in the [Security] menu of the Setup Utility, [Enter Password] does not appear when the computer resumes from the standby or hibernation mode. Use the Windows password as follows: <ol style="list-style-type: none"> ① Click 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].
<p>When the administrator password is forgotten</p>	<ul style="list-style-type: none"> ● If you have created a password reset disk (→ page 18), 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
<p>When "Remove disks or other media. Press any key to restart" (or a similar message) is displayed</p>	<ul style="list-style-type: none"> ● This means a floppy disk that dose not contain system startup information has been left in the floppy disk drive. Remove the floppy disk, and press any key ● This message may appear when certain USB devices are connected. Remove the USB device, or set [Legacy USB Support] in the [Advanced] menu of the Setup Utility to [Disable] ● If the message still appears even after trying the above measures, this may be an indication that some type of hard disk failure has occurred. Contact your technical support office
<p>When the previous items are not the cause</p>	<ul style="list-style-type: none"> ● Press the F9 key 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: <ol style="list-style-type: none"> ① Display [Local Disk (C:) Properties]. Click [start] - [My Computer], right-click [Local Disk(C:)] and click [Properties]. ② Click [Tools] - [Check Now]. ③ Click [Start] after selecting required items in [Check disk options]. ● At startup, hold down the F8 key 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 <p>^{*1} When [Password on boot] is set to [Enable], [Enter Password] appears after the [Panasonic] boot screen disappears. Hold down the F8 key soon after inputting the password and pressing the Enter key.</p>

◆ Enter Password


<p>Even after entering the password, [Enter password] is displayed again</p>	<ul style="list-style-type: none"> ● The computer may be in "ten-key" mode If NumLk lights up, press the NumLk key to disable the ten-key mode, and then input (→ page 12) ● The computer may be in Caps Lock mode If Caps Lock lights up, press the Caps Lock key to disable the Caps Lock mode, and then input (→ page 12)
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◆ Display

<p>No display after powering on</p>	<ul style="list-style-type: none"> ● When the external display is not visible <ul style="list-style-type: none"> • Check your cable connection to the external display • Confirm that 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 destination by pressing the Fn+F3 key. If you want to switch the display destination repeatedly by pressing the Fn + F3 key, make sure that the display destination has switched completely each time before pressing the Fn+F3 key again ● Press the Fn+F2 key and adjust the brightness
<p>The power has not been turned off, but after a certain period of time, there is no display</p>	<ul style="list-style-type: none"> ● Has the computer been set to the power-saving mode? To resume operation of your computer when the display's power is off (for energy conservation purposes), press any key unrelated to the direct triggering of a selection, like the Ctrl key ● To save power, your computer may have automatically entered the standby mode (the power indicator blinks green) or hibernation mode (the power indicator turns off). If so, slide the power switch
<p>When the battery pack is used, the screen is darker than when the AC adaptor is connected</p>	<ul style="list-style-type: none"> ● Press the Fn+F2 key 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
<p>An afterimage appears (e.g., the key green, red, and blue dots remain on the display) or there are dots not displaying the correct colors</p>	<ul style="list-style-type: none"> ● 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 used in the production of color liquid crystal displays (color LCDs). Therefore, if 0.002% or less of the picture's elements either fail to light or remain constantly lit (that means that more than 99.998% of the elements are functioning properly), this is not considered a defect
<p>The screen becomes disordered</p>	<ul style="list-style-type: none"> ● Changing the number of colors or resolution of the display may affect the screen. Restart the computer
<p>The external display no longer shows the correct image</p>	<ul style="list-style-type: none"> ● When an external display, not compatible with the power-saving mode, is connected to the computer. The display may not function correctly when the computer enters the power-saving mode. Turn off the power to the external display
<p>When you want to display the fonts or icons in a larger size</p>	<ul style="list-style-type: none"> ● Change the size of the icons, etc. using "Icon Enlarger" ● You can also change the settings as follows (for more details, refer to the Windows Help) <ol style="list-style-type: none"> ① Click [start] - [Control Panel] - [Appearance and Themes] - [Display] - [Appearance]. ② Select the font size in [Font size] and click [Effects]. Then add the check mark for [Use large icons] to increase the icon size. ③ Click [OK], then click [OK].
<p>During simultaneous display, if one of the screens malfunctions</p>	<ul style="list-style-type: none"> ● Try changing the display by pressing the Fn + F3 key ● If you continue to experience problems, try changing the display destination as follows: <ol style="list-style-type: none"> ① Click [start] - [Control Panel], from the [See Also] area click [Other Control Panel Options], then click [Intel(R) Extreme Graphics] - [Devices]. ② Click the display destination. Then click [OK]. ● When [Command Prompt] is set to "Full Screen" by pressing the Alt + Enter key, the screen is shown on only one of the displays. When the window display is restored by pressing the Alt + Enter key, the screen is exhibited on both displays

Dealing with Problems (Summary)

◆ Display

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 the Fn + F3 key	<ul style="list-style-type: none"> ● The display destination cannot be switched while a video such as an MPEG file or a DVD video are playing. Stop playing the video before switching the display destination
The notification area icons on the bottom right of the screen are hidden and cannot be seen	<ul style="list-style-type: none"> ● Click the  icon on the notification area to display the hidden icons ● If you want all icons to be displayed constantly, right-click on the taskbar, click on [Properties], and remove the check mark from [Notification area] - [Hide inactive icons]

◆ Setup Utility

[Enter Password] is displayed	<ul style="list-style-type: none"> ● Enter the Supervisor Password or User Password. If you have forgotten it, a fee will be charged for repairs. Contact your technical support office (→ page 60)
<ul style="list-style-type: none"> ● The [Advanced] and [Boot] menu can not be registered ● Some items in [Security] menu can not be registered ● F9 does not work 	<ul style="list-style-type: none"> ● Restart the Setup Utility with the Supervisor Password

◆ Shutting Down

Windows cannot be shut down or restarted	<ul style="list-style-type: none"> ● If a USB device is connected, try remove it ● Is the connection to the ISP provider set properly? If the setting are incorrect, Windows may not shut down, or may not start up. For details of communication settings, refer to the ISP provider's manual ● Is the LAN or wireless LAN set properly? If settings are incorrect, Windows may not shut down, or may not start up. Check with your provider or with your system administrator about LAN and wireless LAN settings
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◆ Standby/Hibernation Function

Unable to enter standby or hibernation mode	<ul style="list-style-type: none"> ● If a USB device is connected to the computer, the standby or hibernation function may not work properly. Simply remove the USB device. If the problem persists, restart the computer ● It may take a minute or two to enter standby or hibernation mode ● The computer may not enter standby mode properly and seems to be frozen while the computer is communicating via the modem. If this happens, slide the power switch for four seconds or more to forcibly turn your computer off ● If there is a disk in the DVD-ROM & CD-R/RW drive that has been formatted using B's CLiP, the computer will not enter standby or hibernation mode. Remove the disk
Unable to automatically enter standby or hibernation mode	<ul style="list-style-type: none"> ● If a peripheral is connected to the computer, disconnect the device ● When the internal LCD is closed, the computer may not enter standby or hibernation mode. In order to activate standby or hibernation automatically while using the computer with the internal LCD closed, set [Touch Pad] to [Disable] in the [Main] menu of the Setup Utility ● If there is a disk in the DVD-ROM & CD-R/RW drive that has been formatted using B's CLiP, the computer will not enter standby or hibernation mode. Remove the disk
The computer does not resume	<ul style="list-style-type: none"> ● Did you disconnect the AC adaptor or the battery pack while the computer was in standby mode? If the computer's power supply is disconnected while the computer is in standby mode all unsaved data will be lost ● Did you slide the power switch and hold it for four seconds or more? If so, the power will be turned off forcibly. In this case, all unsaved data will be lost

◆ Battery Indicator

The red indicator is lit	<ul style="list-style-type: none"> ● 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 again
The red indicator blinks	<ul style="list-style-type: none"> ● Quickly save your data and power off your computer. Disconnect the AC adaptor and remove the battery pack, then connect them again. If the problem persists, contact your technical support office (→ page 60). The battery pack or charging circuit may be defective
The orange indicator blinks	<ul style="list-style-type: none"> ● Battery cannot be recharged temporarily because the internal temperature of the battery pack is beyond 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

◆ Onscreen Reference Manual

The Reference Manual is not displayed	<ul style="list-style-type: none"> ● Has Acrobat Reader been uninstalled? If Acrobat Reader has been uninstalled, run [c:\util\reader\acroreader51_enu_full.exe] in [start] - [Run] to reinstall the program. When installing the program, do not change the installation destination folder. If the destination folder is changed, the Reference Manual cannot be opened from the [start] menu
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◆ Disk Operations

If the DVD-ROM & CD-R/RW drive vibrates excessively or is noisy	<ul style="list-style-type: none"> ● Is the disk bent or labeled? ● Check to see if the disk is inserted correctly, and it is in good condition. If the disk is good and inserted correctly, set [CD/DVD Drive Speed] to [Low] in the Setup Utility (→ page 27) ● When writing to a disk using B's Recorder, you can minimize vibration while writing by setting the writing speed at [8x] or less
Cannot eject disk	<ul style="list-style-type: none"> ● Is the computer powered on? Open lever works only when the computer is powered on. To remove a disk when the computer is powered off, insert a pointed object (e.g., the bent-out tip of a paper clip, or the tip of a pencil or ballpoint pen) into the emergency hole, and then move it (→ page 38)
Cannot play back TV programs recorded on a commercial DVD recorder	<ul style="list-style-type: none"> ● In the following cases, finalize the recording on the DVD recorder: <ul style="list-style-type: none"> • If the program was recorded in DVD-R/RW in video mode • If the program was recorded in DVD-RW in VR mode

◆ Reinstalling B's Recorder/B's CLiP

When reinstalling, you will be asked for a serial number	<ul style="list-style-type: none"> ● Input the following serial number. B's Recorder: B's CLiP:
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◆ SD Card Setup (SD Memory Card security function)

Cannot log-on to Windows with the SD memory card	<ul style="list-style-type: none"> ● Windows log-on user name and password are not set in the SD memory card correctly Enter the Windows user name and password without using the SD memory card After logging on to Windows, set the same user name and the password on the SD memory card and Windows, using one of the following operations: <ul style="list-style-type: none"> • Change the setting for the SD memory card [SD Card Setup] • Change the setting for Windows [Control Panel] (→ "Chapter 2: Security Measures" in onscreen Reference Manual)
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Dealing with Problems (Summary)

◆Fast User Switching Function

<p>Some applications may not work properly</p>	<ul style="list-style-type: none"> ● When switching to a different user with the Fast User Switching function, the following problems may occur: <ul style="list-style-type: none"> • Some applications may not work properly • Key combination with the Fn key may not work • It may not be possible to set the settings of the display • The wireless LAN cannot be used • The B's CLiP icon will no longer be shown on the notification area and B's CLiP cannot be used <p>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.</p>
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◆Wireless LAN

<p>Wireless LAN cannot be used Access point is not detected</p>	<ul style="list-style-type: none"> ● When the wireless LAN function is turned off, turn it on using Intel(R) PROSet. (→ page 34) ● Even if the wireless LAN function is turned on, when access point is not displayed in [Available Networks] from [Intel(R) PROSet] - [Networks] - [Scan], click [Refresh]. ● For detailed information, refer to "Networking: Wireelss LAN" of "Chapter 7: Dealing with Problems (Advanced)" in onscreen Reference Manual
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◆Expanding Memory

<p>You do not know the available RAM module</p>	<p>→ page 57</p>
<p>Cannot tell whether the RAM module has been correctly installed</p>	<ul style="list-style-type: none"> ● You can check whether the RAM module is recognized using the [Information] menu in the Setup Utility. (→ page 26) If the RAM module is not recognized, turn the computer off and reinsert.
<p>The RAM module has not been recognized</p>	<ul style="list-style-type: none"> ● Make sure the RAM module has been properly inserted ● Use the RAM module that supports the recommended specifications (→ page 23)

◆Other Problems

<p>No response</p>	<ul style="list-style-type: none"> ● Press the Ctrl+Shift+Esc key to open Task Manager and close the software application that is not responding ● Is there an input screen (e.g., password input screen at startup) hidden behind another window? Use the Alt+Tab key to check for other windows being displayed ● After shutting down by sliding the power switch for more than four seconds, slide the power switch to power on and open the application again. If the program no longer works normally, delete the program using the following menu. Then reinstall the program [start] - [Control Panel] - [Add or Remove Programs]
<p>Cannot operate Fn keys (→ page 22)</p>	<ul style="list-style-type: none"> ● In the [Main] menu of the Setup Utility, is [Fn/Ctrl Key] set to [Replace]? (→ page 27) Return the setting to [Normal], or press the Ctrl key instead of the Fn key if you want to leave the setting in [Replace]

Check the Computer's Usage Status

You can use the PC Information Viewer to check the computer's usage status, and use this information when calling your technical support office for advice. (If you have not logged on to Windows with the Administrator Authority, some information will be displayed as [Not Found].)

◆ Running PC Information Viewer

- ① Click [start] - [All Programs] - [Panasonic] - [PC Information Viewer] - [PC Information Viewer].

Click on the items to display detailed information for each item.

- The [PC Information Viewer] screen is always displayed on the top of every other screen

◆ Save information to a file

Displayed information can be saved on a text file (.txt).

- ① Run the PC Information Viewer and display the information you wish to save.
- ② Click [Save].
 - To save the item that is displayed.
Click [Save only the information displayed] and click [OK].
Some of the hidden information on the screen, which cannot be shown without scrolling the screen, will be saved, too
 - To save all items.
Click [Save all the information] and click [OK]
- ③ Select the folder, input the file name, then click [Save].

◆ Save a copy of the screen to a file

You can save a copy of the screen currently being displayed to a file in bitmap format (.bmp).

- ① Display the screen you want to save.
- ② Press the **Ctrl+Alt+F8** key.
- ③ When a message "The copy of the screen was saved..." is displayed, click [OK].

[pcinfo.bmp] file will be saved in [My Documents] folder. If [pcinfo.bmp] file already exists, it will ne overwritten. (If [pcinfo.bmp] file is set as a "Read-only" of "Hidden" file, the new file cannot be saved.)

- To display the extension of the file, click [Tools] - [Folder Options] - [View] from Explorer, and remove the check mark for [Hide extensions for known file types] under the [Advanced settings] section

NOTE

- You can also save a copy of the screen to a file using the following procedure:
Click [start] - [All Programs] - [Panasonic] - [PC Information Viewer] - [Screen Copy]
- At the time of purchase, the computer is set so that a copy of the screen can be saved to a file by pressing the **Ctrl+Alt+F8** key. This setting can be changed using the following procedure:
 - ① Click [start] - [All Programs] - [Panasonic] - [PC Information Viewer].
 - ② Right-click [Screen Copy], then click [Properties] - [Shortcut].
 - ③ Move the cursor to [Shortcut key], and press the key to be used for the shortcut, and then click [OK].
- Colors are saved in 256 colors
- When using an Extended Desktop:
A copy of the screen displayed on the primary device will be saved.

Information for Installed Applications

If the application software included with this computer does not operate properly, first carefully read “Dealing with Problems” in this manual, and onscreen Reference Manual as well as the help files for the application software.

If you can connect to the Internet, refer to “Frequently Asked Questions” and other support information available on the relevant homepage for the manufacturer of the application software.

If you cannot find any hints or methods there to resolve your problem, forward your question to the address shown below.

When forwarding an inquiry, include information on your computer’s usage conditions.

- B’s Recorder / B’s CLiP
B.H.A.
 - URL:
 - <http://www.bhacorp.com/>
 - <http://www.bha.co.jp/> (In Japanese)
 - E-mail addresses:
 - U.S./Canada/Australia (English, French): BHAXpsupport@bhacorp.com
 - Europe (English, German, French): eurosupport@bhacorp.com
 - Asia (Chinese): asiastupport@bhacorp.com

- WinDVD
InterVideo, Inc.
 - URL:
 - <http://www.intervideo.com/>
 - E-mail address:
 - support@intervideo.com

- Other pre-installed software
Contact the Panasonic technical support office as listed in the “LIMITED WARRANTY” in this manual.
Confirm the contact information for the Panasonic technical support office using the following procedure:
 - ① Click [start], right-click on [My Computer], and click on [Properties].
 - ② Click on [Support Information].

Reinstalling Software

When reinstallation procedure is performed, the contents of the hard disk will be erased. Be sure to back up any critical data on your hard disk to another media or to an external 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.

◆ What is “Reinstallation”?

Reinstallation refers to formatting the hard disk, and reinstalling Windows.

◆ When is “Reinstallation” necessary?

- When Windows does not start up, or when Windows operation is unstable and cannot be recovered.
- When using the hard disk with two partitions.

Before Reinstallation

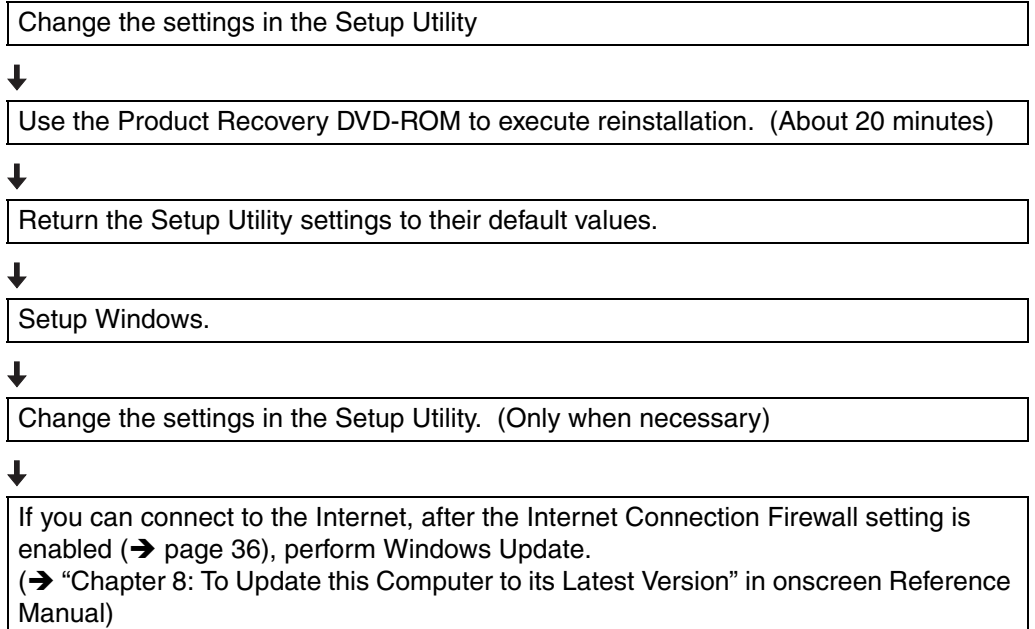
◆ Preparing

- You will need the Product Recovery DVD-ROM (included).

◆ Confirm the following

- Remove all peripherals and SD memory cards/MultiMedia Cards. Especially, when a USB floppy disk drive or a USB CD/DVD drive is connected, the reinstallation does not operate properly. Remove them.
- 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.

◆ Reinstallation Procedure



Reinstalling

1 Connect the AC adaptor.

2 Change the settings in the Setup Utility.

Make the following settings.

- Return settings to the status at the time of shipment.
 - Change settings to enable startup from DVD-ROM & CD-R/RW drive.
- If you change the status of the computer from that at the time of purchase, we recommend that you make a note of the settings that are changed.

① Turn on the computer, and press the **F2** key while [Panasonic] boot screen is displayed.

The Setup Utility will start up.

- If the password has been set, enter the Supervisor Password, and press the **Enter** key.

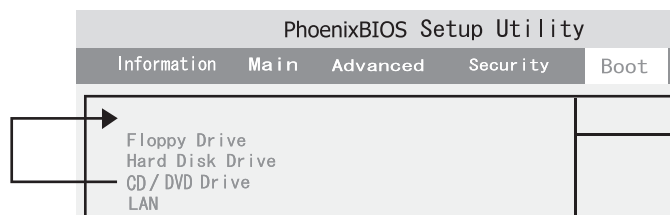


② Press the **F9** key.

At the confirmation message, select [Yes] and press the **Enter** key.



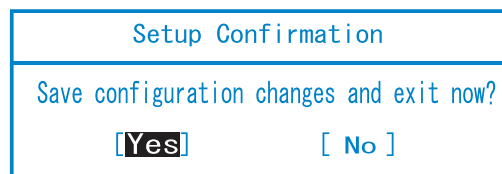
③ Select the [Boot] menu, then select [CD/DVD Drive] and press the **F6** key until [CD/DVD Drive] is at the top of the [Boot] menu.



④ Place the Product Recovery DVD-ROM into the DVD-ROM & CD-R/RW drive.

⑤ Press the **F10** key.

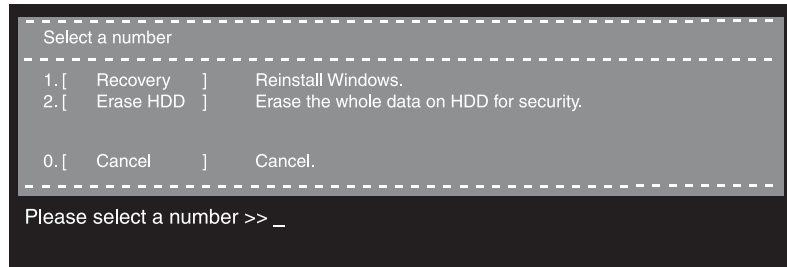
At the confirmation message, select [Yes] and press the **Enter** key.



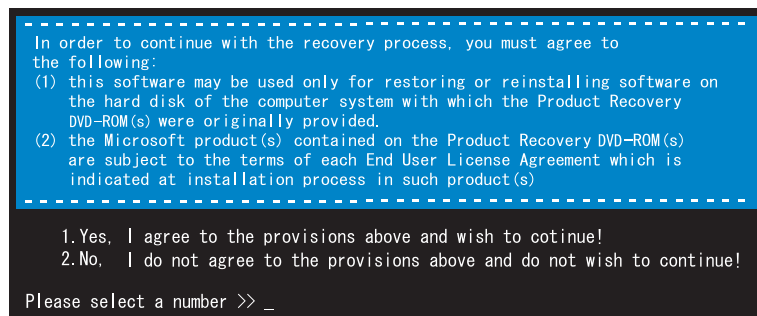
The Setup Utility will close, and the computer will restart.

3 Use the Product Recovery DVD-ROM to execute reinstallation.

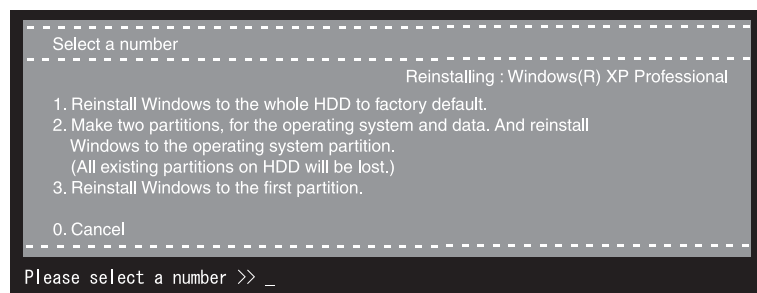
- ① Press the **1** key to execute [1. [Recovery]].
(All of the screens below are only examples).



- The provision to perform the reinstallation will be displayed.
- ② If you agree, press the **1** key.
If you do not agree, press the **2** key.
- If you press the **1** key the menu will be displayed.
 - If you press the **2** key the reinstallation will be complete.



- ③ Make a selection from the menu.



- To return the computer to its status at the time of purchase
Press the **1** key.
- To divide the hard disk into two partitions (for OS and data)
Press the **2** key.
↓
Enter the basic partition size (GB) for the operating system installation and press the **Enter** key.
 - You can cancel this operation by pressing the **0** key.
 - The data partition size is the remainder after subtracting the basic partition size. (Data partition: 1 GB or more)
Maximum settable size differs depending on the model.
- To reinstall Windows in the original partition without changing the partition configuration
Press the **3** key.
 - The first partition size must be 6 GB or more of the hard disk size.
Reinstallation cannot be performed with a small partition size.

- ④ At the confirmation message, press the **Y** key.

```
-----
Reinstalling: Windows(R) XP Professional
Initialize and reinstall Windows to the whole HDD to factory default.
All data on HDD will be lost.
Will you continue?
[Y,N]?_
```

The operation of reinstallation for the hard disk starts automatically. (The operations take about 20 minutes.)

- Do not interrupt the reinstallation procedure before completion, for example by turning off the computer or pressing the **Ctrl+ Alt+ Del** key, as this may prevent Windows from starting up, or may cause data to be lost so that the reinstallation procedure cannot be executed.
- ⑤ The message "[Recovery] is complete" will be displayed. Remove the Product Recovery DVD-ROM, and press any key to shut down the computer.

```
-----
[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.
-----
```

4 Return the Setup Utility settings to their default values.

Return the Setup Utility to its settings at the time of shipment to ensure proper setup of Windows.

- ① Turn on the computer, and press the **F2** key while [Panasonic] boot screen is displayed.
The Setup Utility will start up.
If the password has been set, enter the Supervisor Password, and press the **Enter** key.
- ② Press the **F9** key.
At the confirmation message, select [Yes] and press the **Enter** key.
- ③ Press the **F10** key.
At the confirmation message, select [Yes] and press the **Enter** key.
The Setup Utility will close, and the computer will restart.

5 Setup Windows. (→ page 15)

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

(The Setup Utility settings will return to their default values. Even the security settings with the exception of the password(s), date and time will return to their default values.)

7 If you can connect to the Internet, after the Internet Connection Firewall setting is enabled (→ page 36), perform Windows Update. (→ “Chapter 8: To Update this Computer to its Latest Version” in onscreen Reference Manual)

◆ Changing the drive letter

You can change the drive letter for the DVD-ROM & CD-R/RW 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 Click [start] - [Control Panel] - [Performance and Maintenance] - [Administrative Tools], and double click [Computer Management].
 - ② Click [Disk Management] from [Storage].
 - ③ Right click on the partition of the hard disk or the name of the DVD-ROM & CD-R/RW drive and click [Change Drive Letter and Paths...].
 - ④ Click [Change].
 - ⑤ Click [Assign the following drive letter] and select the new drive letter, and then click [OK].
 - ⑥ At the confirmation message, click [Yes].

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Hard Disk Data Erase Utility

This computer is equipped with a utility for 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.

Before Erasing Data

◆ Preparing

- You will need the Product Recovery DVD-ROM (included).

◆ Confirm the followings

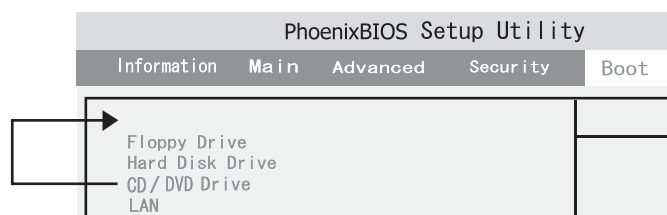
- Be sure the AC adaptor is connected until the procedure is completed.
- This utility can only be used for internal hard disk. It cannot be used to erase data from external hard disks.
- This utility cannot erase data from damaged disk.
- This utility cannot erase data for specific partitions.
- After executing this utility, the computer cannot be booted from the hard disk.

Completely Erasing Data

- ① Turn the computer on, and press the **F2** key while [Panasonic] boot screen is displayed.
The Setup Utility will start up.
If the password has been set, enter the Supervisor Password, and press the **Enter** key. The [Boot] menu cannot be changed with User Password.



- ② Select the [Boot] menu, then select [CD/DVD Drive] and press the **F6** key until [CD/DVD Drive] is at the top of the [Boot] menu.



- ③ Place the Product Recovery DVD-ROM into the DVD-ROM & CD-R/RW drive.
- ④ Press the **F10** key.
At the confirmation message, select [Yes] and press the **Enter** key.
The Setup Utility will close, and the computer will restart.
If [Enter Password] is displayed during the following procedure, enter the Supervisor Password or User Password.
- ⑤ When the message "Select a number" is displayed, press the **2** key and perform "2. [Erase HDD]."
(You can cancel this operation by pressing the **0** key.)
The confirmation message will be displayed.

Hard Disk Data Erase Utility

- ⑥ Press the **Y** key.
Hard Disk Data Erase Utility will start.
(All of the screens below are only examples.)
- ⑦ When [**<<<Start menu>>>**] is displayed, press the **Enter** key.

```
Hard Disk Data Erase Utility Version *.****
(C) **** Matsushita Electric Industrial Co., Ltd.
-----
<<<Start menu>>>
The Hard Disk Data Erase Utility will erase all data contained on
the hard disk.
Please backup all important data before erasure.
Choose keys according to the instruction messages.
(Continue: Enter key / Cancel: any other key)... _
```

- ⑧ The approximate time required for erasing data will be displayed.
Press the **Space** key.

```
Hard Disk Data Erase Utility Version *.****
(C) **** Matsushita Electric Industrial Co., Ltd.
-----
<<<Drive list>>>
0:Drive : Total Sectors : ***** (***** )
          Total Size   : ***** MB.
(NOTE)
The Hard Disk Data Erase Utility takes approx. ** to ** minutes
to erase all data from the hard disk.
Please ensure that your computer is running on an AC power supply.
Do you want to execute the Hard Disk Data Erase Utility?
(Yes: Space key / No: any other key)... _
```

- ⑨ At the confirmation message, press the **Enter** key.

```
Hard Disk Data Erase Utility Version *.****
(C) **** Matsushita Electric Industrial Co., Ltd.
-----
<<<Drive list>>>
0:Drive : Total Sectors : ***** (***** )
          Total Size   : ***** MB.
(NOTE)
The Hard Disk Data Erase Utility takes approx. ** to ** minutes
to erase all data from the hard disk.
Please ensure that your computer is running on an AC power supply.
Do you want to execute the Hard Disk Data Erase Utility?
(Yes: Space key / No: any other key)...[Yes]
(NOTE)
Once the Hard Disk Data Erase Utility has been executed, erased data is
never recovered. Press the Enter key to start the Data Erase.
Do you want to execute the Hard Disk Data Erase Utility?
(Execute: Enter key / Cancel: any other key)... _
```

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 the **Ctrl+C** key.
If the operation is cancelled before being completed, a part of data will not be erased.
- ⑩ The message "Hard disk data has been deleted" will be displayed.
Remove the Product Recovery DVD-ROM, and press any key to shut down the computer.
 - If a problem occurred during the operation, an error message will be displayed.

Specifications

● Main Specifications

Model No.	CF-W2DWADZBM CF-W2DWAEZBM CF-W2DWAFFZBM CF-W2DWAGZBM	CF-W2DWBDZBM CF-W2DWBEZBM CF-W2DWBFFZBM CF-W2DWBGZBM	CF-W2DWGDZBM CF-W2DWGEZBM CF-W2DWGFZBM CF-W2DWGGZBM
CPU/ Secondary cache memory	Intel® Pentium® M Processor 1.1 GHz ULV (FSB: 400 MHz)/ 1MB*1 On-Die Level 2 (L2) Cache		
Chip Set	Intel® 855 GM chip set		
Main Memory	256 MB*1, DDR SDRAM (768 MB*1 Max.)	512 MB*1, DDR SDRAM (256-MB*1 RAM module has been added to the RAM module slot. 768 MB*1 Max.)	768 MB*1, DDR SDRAM (512-MB*1 RAM module has been added to the RAM module slot.)
Video Memory	UMA (64 MB*1 Max.)*2		
Hard Disk Drive	Approx. 40 GB*3		
DVD-ROM & CD-R/RW Drive	Buffer underrun error prevention function: Supported		
Continuous Data Transfer Speed*4*5/ Playback	●DVD-RAM*6: 2X speed (4.7 GB*3)/1X speed (2.6 GB*3) ●DVD-R*7: 4X speed (Max.) ●DVD-RW: 4X speed (Max.) ●DVD-ROM*8: 8X speed (Max.) ●CD-ROM*8: 24X speed (Max.) ●CD-R*8: 24X speed (Max.) ●CD-RW*8: 24X speed (Max.)		
Continuous Data Transfer Speed*4*5/ Recording	●CD-R write*9: 4X speed, 8X speed, 8-16X speed, 8-24X speed ●CD-RW write: 4X speed ●High-Speed CD-RW write*10: 4X speed, 8X speed, 10X speed ●Ultra-Speed CD-RW write*10*11: 8X speed, 10X speed, 8-16X speed		
Compatible Disk and Compatible For- mats*5/Playback	DVD-ROM (Single Layer, Dual Layer), DVD-R*7(1.4 GB, 3.95 GB, 4.7 GB)*3, DVD-RW (Ver.1.1 4.7 GB, 9.4 GB)*3, DVD-RAM*6 (1.4 GB, 2.8 GB, 2.6 GB, 5.2 GB, 4.7 GB, 9.4 GB)*3, CD-Audio, CD-ROM (XA compatible), CD-R, Photo CD (multiple session com- patible), VideoCD, CD-EXTRA, CD-RW, CD-TEXT		
Compatible Disks and Compatible For- mats*5/Recording	CD-R, CD-RW*10		
Display Method	12.1 XGA type (TFT) (1024 × 768 dots)		
Internal LCD Display	65,536/16,777,216 colors (1024 × 768 dots)*12		
External Display*13	65,536/16,777,216 colors (800 × 600 dots/1024 × 768 dots/1280 × 1024 dots/1600 × 1200 dots)		
Simultaneous Display on LCD + Exter- nal Display*13	65,536/16,777,216 colors (800 × 600 dots, 1024 × 768 dots)*12		
Wireless LAN	Built in (→ page 59)		
LAN*14	IEEE 802.3 10Base-T, IEEE 802.3u 100Base-TX		
Modem	Data: 56 kbps (V.92 & K56flex)*15 FAX: 14.4 kbps		
Sound	WAVE and MIDI playback, Monaural Speaker (built in)		
Card Slots	PC Card Slot × 1: (One Type I or Type II, Allowable current 3.3 V: 400 mA, 5 V: 400 mA) SD Memory Card Slot*16 × 1		
RAM Module Slot	172-pin, 2.5 V, Micro DIMM, DDR SDRAM, PC2100 Compliant*17		
	To add the RAM module, remove the 256-MB*1 RAM module currently in the RAM module slot.*18		512-MB*1 RAM module has been added to the RAM module slot.

Specifications

● Main Specifications

Interface		USB Ports × 2 (USB2.0 × 2) ^{*19} / Modem Port (RJ-11) / LAN Port (RJ-45) ^{*14} / External Display Port: Mini Dsub 15-pin female / Microphone Jack: Miniature jack, 3.5 DIA / Headphone Jack: Miniature jack, 3.5 DIA	
Keyboard/Pointing Device		85 keys/Touch Pad	
Power		AC adaptor or Battery pack	
AC Adaptor ^{*20}		Input: 100 V - 240 V AC, 50 Hz/60 Hz Output: 16 V DC, 2.5 A	
Battery Pack		Li-ion 7.4 V, 6.6 Ah	
Operating Time ^{*21}		Approx. 4 hours - 7.5 hours ^{*22} (Approx. 5.5 hours ^{*23})	
Charging Time ^{*24}		Approx. 4.5 hours	
Power Consumption ^{*25}		Approx. 35 W ^{*26} / Approx. 40 W (maximum when recharging in the ON state)	
Physical Dimensions (W × H × D)		268 mm × 27.5 mm (at the front)/41.5 mm (at the rear) × 209.2 mm (excluding protrusion) {10.6 " × 1.1 " / 1.7 " × 8.3 "}	
Weight		Approx. 1300 g {2.87 lb.}	
Environment	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)

^{*1} 1 MB = 1,048,576 bytes

^{*2} 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.

^{*3} 1 GB = 1,000,000,000 bytes. Operating system or some application software will report as fewer GB.

^{*4} Data transfer speeds indicate values measured by Matsushita Electric Industrial Co., Ltd.

^{*5} Performance of CD-R, CD-RW, DVD-RAM, DVD-R, and DVD-RW cannot be guaranteed depending on writing status and recording format. Also, some data cannot be played back depending on the disk, settings, and environment being used.

^{*6} In the case of DVD-RAM, only non-cartridge disks or removable cartridge disks can be used.

^{*7} DVD-R is compatible with 4.7 GB (for General) playback. DVD-R (for Authoring) playback is compatible with disks recorded using Disk-at-Once recording.

^{*8} If an unbalanced disk (e.g., a disk with which the balance has been displaced from the center) is inserted, the speed may become slower if there are large vibrations while the disk is rotating.

^{*9} Depending on the disk, the writing speed may become slower.

^{*10} To rewrite at 8-16X speed, a disc that accommodates Ultra-Speed is required (does not support 4X speed). Also, to rewrite at 8-10X speed, a disc that accommodates High-Speed is required.

^{*11} Does not support 24X speed rewriting.

^{*12} A 16,777,216 color display is achieved by using the dithering function.

^{*13} Display may be impossible using some connected external displays.

^{*14} Some devices cannot be used depending on the port type.

^{*15} The settings for the K56flex modem need to be changed according to the AT command.

^{*16} The transfer rate using the SD memory card slot on this computer is 2 MB per second (this is a theoretical value, and differs from actual speeds). The transfer rate is 2 MB per second even if you use an SD memory card that supports high-speed transfer rates. Does not guarantee connection/operation of all SD devices. Does not support SD I/O.

^{*17} A PC2700-compliant RAM module added to this computer, operates at the same speed as a PC2100-compliant RAM module.

^{*18} For the RAM module's model number, refer to your technical support office. (→ page 60)

^{*19} Does not guarantee operation of all USB-compatible peripherals.

^{*20} <Only for North America>

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.

^{*21} Varies depending on the usage conditions, CPU speed, etc.

^{*22} Measured using BatteryMark™ Version 4.0.1 (LCD brightness: Maximum - Minimum)

^{*23} Measured using MobileMark™ 2002 (LCD brightness: 60 cd/m²)

^{*24} Varies depending on the usage conditions, CPU speed, etc.

It may take a long time to charge a fully charged battery.

^{*25} Approx. 1.5 W when the battery pack is fully charged (or not being charged) and the computer is off.

^{*26} Rated power consumption.

● Main Specifications

OS ^{*1}	Microsoft® Windows® XP Professional with Service Pack 2
Pre-installed Software	Microsoft® Internet Explorer 6 Service Pack 2 / DirectX 9.0 c / Microsoft® Windows® Media Player 9 / Microsoft® Windows® Movie Maker 2.1
	Adobe® Acrobat® Reader, Intel® PROSet, SD-MovieStage, SD Utility, Icon Enlarger, Touch Pad Utility, DMI Viewer, PC Information Viewer, WinDVD™5 (OEM Version), B's Recorder GOLD7 BASIC, B's CLiP 5 ^{*2} , Hotkey Settings
	Setup Utility, Hard Disk Data Erase Utility ^{*3}

*1 Operations of this computer are not guaranteed except for the pre-installed OS.

*2 Preinstalled B's CLiP does not support CD-R.

*3 The Product Recovery DVD-ROM is required.

● Wireless LAN

Data Transfer Speeds	IEEE802.11b: 11 Mbps/5.5 Mbps/2 Mbps/1 Mbps (automatic switching) ^{*4} IEEE802.11g: 54 Mbps/48 Mbps/36 Mbps/24 Mbps/18 Mbps/12 Mbps/9 Mbps/6 Mbps (automatic switching) ^{*4}
Conformance Standards	IEEE802.11b/IEEE802.11g (wireless LAN standard protocol)
Forwarding Methods	OFDM, DS-SS
Effective Distances	About 50 m unobstructed (during communications with access point) ^{*5}
Wireless Channels Used	Channels 1-11
RF Frequency Bands	All 2.4 GHz bands (2.4 GHz - 2.4835 GHz)

*4 These are speeds specified in IEEE802.11b+g standards. Actual speeds may differ.

*5 Effective distances differ depending on surrounding conditions such as radio wave environment, obstructions, and setting environment, and on usage conditions such as application software and OS.

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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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Memo

Index

Also, refer to onscreen Reference Manual. Some explanations that are not described in this manual may be described in onscreen Reference Manual. (→ page 8)

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