



Panasonic®

OPERATING INSTRUCTIONS

Personal Computer

Model No. **CF-W5** series

Contents

Getting Started

Introduction	2
Read Me First	3
Description of Parts	10
First-time Operation	12

Getting Started

Useful Information

On-screen Manual	15
Handling and Maintenance	16
Expanding Memory	18
Hard Disk Backup Function (Recover Pro)	20
Hard Disk Data Erase Utility	22
Reinstalling Software	23

Useful Information

Troubleshooting

Troubleshooting (Basic)/Error Code/Message	25
Hardware Diagnostics	29

Troubleshooting

Appendix

LIMITED USE LICENSE AGREEMENT	31
Specifications	33

Appendix

For further information about the computer, you can refer to the on-screen manual.

To access the on-screen manual
→ page 15 "On-screen Manual"

For your technical support office, refer to
"LIMITED WARRANTY."

Introduction

Thank you for purchasing this Panasonic computer. For optimum performance and safety, please read these instructions carefully.

■ Terms and illustrations in these instructions

CAUTION	:	Conditions that may result in minor or moderate injury.
NOTE	:	Useful and helpful information.
Enter	:	Press [Enter] key.
Fn + F5	:	Press and hold [Fn] key, and then press [F5] key.
[start] - [Run]	:	Click [start], and then click [Run].
➔	:	Page in these Operating Instructions.
➔ 	:	Reference to the on-screen manuals.

- Some illustrations are simplified to help your understanding and may look different from the actual unit.
- If you do not log on as an administrator, you cannot use some functions or cannot display some screens.
- Refer for the latest information about optional products to the catalogs, etc.
- In these instructions, the names and terms are referred as follows.
 - “Microsoft® Windows® XP Professional Service Pack 2 with Advanced Security Technologies” as “Windows” or “Windows XP”
 - “WinDVD™ 5 (OEM Version)” as “WinDVD”
 - “B’s Recorder GOLD8 BASIC” as “B’s Recorder”
 - “B’s CLiP 6” as “B’s CLiP”
- The display modes are referred as follows. () indicates the terms in [Intel® Graphics Media Accelerator Driver for mobile] screen. To display the screen, select [start] - [Control Panel] - [Other Control Panel Options] - [Intel(R) GMA Driver for Mobile].
 - Internal LCD (Notebook): The computer’s display
 - External display (Monitor): External display
 - Simultaneous display (Intel® Dual Display Clone): The same screen is displayed on the internal LCD and the external display.
 - Extended desktop: The extended working area across the internal LCD and the external display.

Co., Ltd. with all rights reserved. No part of this manual may be reproduced without the written permission of Matsushita Electric Industrial Co., Ltd. The information contained herein is subject to change without notice.

without notice. Matsushita Electric Industrial Co., Ltd. is not responsible for errors, omissions or discrepancies between the computer and the actual operation.

■ Trademarks

Microsoft®, Windows®, and/or other names are registered trademarks or trademarks of Microsoft Corporation of the United States and/or other countries. Intel®, Core®, and/or other names are registered trademarks or trademarks of Intel Corporation.

SD Logo is a trademark of SD Card Association.

Adobe, the Adobe logo and/or other names are registered trademarks or trademarks of Adobe Systems Incorporated in the United States and/or other countries. WinDVD™ is a trademark of WinDVD Corp. Computrace is a registered trademark of Computrace, Inc. Panasonic® is a registered trademark of Matsushita Electric Industrial Co., Ltd. All other names are trademarks or registered trademarks of their respective owners.

Windows Vista™ Capable PC

Not all Windows Vista™ features are available on all Windows Vista Capable PCs. All Windows Vista Capable PCs will run the core experience of Windows Vista, such as innovations in organizing and finding information, security, and reliability. Some features available in premium editions of Windows Vista -- like the new Windows® Aero™ user interface -- require advanced or additional hardware. Check www.windowsvista.com/getready for details.

* If a hardware driver is required, it will be provided by Panasonic after the release of Windows Vista.



Read Me First

Models for U.S.A.

Federal Communications Commission Radio Frequency Interference Statement

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

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

Warning

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

6-M-1

FCC RF Exposure Warning:

<Only for model with wireless LAN/wireless WAN>

- This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment.
- This equipment must be installed and operated in accordance with provided instructions and minimum 1.5 cm spacing must be provided between antenna and all person's body (excluding extremities of hands, wrist and feet) during wireless modes of operation.
- This transmitter must not be co-located or operated in conjunction with any other antenna or transmitter.
- This computer is provided with a PC Card slot that could be used with wireless transmitter(s), which will be specifically recommended, when they become available. Other third-party wireless transmitter(s) have not been RF exposure evaluated for use with this computer and may not comply with FCC RF exposure requirements.

25-M-2-1

This device complies with Part 15 of the FCC Rules.

Operation is subject to the following two conditions:

- (1) This device may not cause harmful interference, and
- (2) This device must accept any interference received, including interference that may cause undesired operation.

Responsible Party: Panasonic Corporation of North America
One Panasonic Way
Secaucus, NJ 07094
Tel No: 1-800-LAPTOP5 (1-800-527-8675)

6-M-1

FCC Regulation Notice for modem

This equipment contains a FCC approved modem.

FC Tested To Comply
With FCC Standards
FOR HOME OR OFFICE USE

1. This equipment complies with CFR47 Part 68 rules. On the computer is a label that contains, among other information, the FCC registration number and ringer equivalence number (REN) for this equipment. If required, this information must be provided to the telephone company.
2. An FCC compliant telephone cord and modular plug is provided with this equipment. This equipment is designed to be connected to the telephone network or premises wiring using a compatible modular jack which is Part 68 compliant. See Installation Instructions for details.
3. The REN is used to determine the quantity of devices which may be connected to the telephone line. Excessive RENs on the telephone line may result in the devices not ringing in response to an incoming call. In most, but not all area, the sum of RENs should not exceed five (5.0). To be certain of the number of devices that may be connected to a line, as determined by the total RENs, contact the local telephone company.
4. If your telephone equipment cause harm to the telephone network, the telephone company will notify you in advance that temporary discontinuance of service may be required. But if advance notice isn't practical, the telephone company will notify the customer as soon as possible. Also, you will be advised of your right to file a complaint with the FCC if you believe it is necessary.
5. The telephone company may take changes in its facilities, equipment, operations or procedures that could affect the operation of the equipment. If this happens the telephone company will provide advance notice in order for you to make necessary modifications to maintain uninterrupted service.
6. If trouble is experienced with this equipment, for repair or warranty information, please contact Panasonic Corporation of North America at DIAL TOLL FREE 1-800-LAPTOP5 (1-800-527-8675). If the equipment is causing harm to the telephone network, the telephone company may request that you disconnect the equipment until the problem is resolved.
7. There are no user serviceable parts contained in this equipment.

8. This equipment may not be used on coin service provided by the telephone company. Connection to party lines is subject to state tariffs.
9. The Telephone Consumer Protection Act of 1991 makes it unlawful for any person to use a computer or other electronic device to send any message via a telephone fax machine unless such message clearly contains in a margin at the top or bottom of each transmitted page or on the first page of the transmission, the date and time it is sent and an identification of the business or other entity, or other individual sending the message and the telephone number of the sending machine or such business, other entity, or individual. In order to program this information into your fax software, you should refer to the manual of the Fax software being used.
10. According to the FCC's electrical safety advisory, we recommend that you may install an AC surge arrester in the AC outlet to which this equipment is connected. Telephone companies report that electrical surges, typically lightning transients, are very destructive to customer terminal equipment connected to AC power sources and that this is a major nationwide problem.

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

16-M-1

Notice for the products using LCD

This product uses one or more fluorescent lamps containing a small amount of mercury. It also contains lead in some components. Disposal of these materials may be regulated in your community due to environmental considerations.

For disposal or recycling information please contact your local authorities, or the Electronics Industries Alliance:
<http://www.eiae.org/>

24-M-1

<For USA-California Only>

This product contains a CR Coin Cell Lithium Battery which contains Perchlorate Material- special handling may apply.

See <http://www.dtsc.ca.gov/hazardouswaste/perchlorate/>

38-M-1

Models for Canada

Industry Canada (IC) Notice for modem

This equipment contains an Industry Canada approved modem unit.

The Industry Canada label is affixed on the modem unit.

EQUIPMENT ATTACHEMENT LIMITATIONS

"NOTICE: The Industry Canada label identifies certified equipment. This certification means that the equipment meets telecommunications network protective, operational and safety requirements as prescribed in the appropriate Terminal Equipment Technical Requirements document(s). The Department does not guarantee the equipment will operate to the user's satisfaction.

Before installing this equipment, users should ensure that it is permissible to be connected to the facilities of the local telecommunications company. The equipment must also be installed using an acceptable method of connection. The customer should be aware that compliance with the above conditions may not prevent degradation of service in some situations.

Repairs to certified equipment should be coordinated by a representative designated by the supplier. Any repairs or alterations made by the user to this equipment, or equipment malfunctions, may give the telecommunications company cause to request the user to disconnect the equipment.

Users should ensure for their own protection that the electrical ground connections of the power utility, telephone lines and internal metallic water pipe system, if present, are connected together. This precaution may be particularly important in rural areas. Caution: Users should not attempt to make such connections themselves, but should contact the appropriate electric inspection authority, or electrician, as appropriate."

"NOTICE: The Ringer Equivalence Number (REN) assigned to each terminal device provides an indication of the maximum number of terminals allowed to be connected to a telephone interface. The termination on an interface may consist of any combination of devices subject only to the requirement that the sum of the Ringer Equivalence Numbers of all the devices does not exceed 5."

REN: See bottom of the computer

RESTRICTIONS CONCERNANT LE RACCORDEMENT DE MATÉRIEL

"AVIS: L'étiquette d'Industrie Canada identifie le matériel homologué. Cette étiquette certifie que le matériel est conforme aux normes de protection, d'exploitation et de sécurité des réseaux de télécommunications, comme le prescrivent les documents concernant les exigences techniques relatives au matériel terminal. Le Ministère n'assure toutefois pas que le matériel fonctionnera à la satisfaction de l'utilisateur. Avant d'installer ce matériel, l'utilisateur doit s'assurer qu'il est permis de le raccorder aux installations de l'entreprise locale de télécommunication. Le matériel doit également être installé en suivant une méthode acceptée de raccordement.

L'abonné ne doit pas oublier qu'il est possible que la conformité aux conditions énoncées ci-dessus n'empêche pas la dégradation du service dans certaines situations.

Les réparations de matériel homologué doivent être coordonnées par un représentant désigné par le fournisseur.

L'entreprise de télécommunications peut demander à l'utilisateur de débrancher un appareil à la suite de réparations ou de modifications effectuées par l'utilisateur ou à cause de mauvais fonctionnement.

Pour sa propre protection, l'utilisateur doit s'assurer que tous les fils de mise à la terre de la source d'énergie électrique, des lignes téléphoniques et des canalisations d'eau métalliques, s'il y en a, sont raccordés ensemble. Cette précaution est particulièrement importante dans les régions rurales. Avertissement: L'utilisateur ne doit pas tenter de faire ces raccordements lui-même; il doit avoir recours à un service d'inspection des installations électriques, ou à un électricien, selon le cas."

"AVIS: L'indice d'équivalence de la sonnerie (IES) assigné à chaque dispositif terminal indique le nombre maximal de terminaux qui peuvent être raccordés à une interface. La terminaison d'une interface téléphonique peut consister en une combinaison de quelques dispositifs, à la seule condition que la somme d'indices d'équivalence de la sonnerie de tous les dispositifs n'excède pas 5."

IES: Voir sous le fond de l'ordinateur

17-Ca-1

<Only for model with wireless LAN>

Industry Canada

This product complies with RSS210 Industry Canada.

Operation is subject to the following two conditions;

- (1) this device may not cause interference, and
- (2) this device must accept any interference, including interference that may cause undesired operation of the device.

30-Ca-1

This product (local network devices) for the band 5150-5250 MHz is only indoor usage to reduce potential for harmful interference to co-channel Mobile Satellite systems.

High power radars are allocated as primary users (meaning they have priority) of 5250-5350 MHz and 5650-5850 MHz and these radars could cause interference and/or damage to LELAN devices.

Models for Europe

<Only for model with a "CE" mark on the bottom of the computer>



Declaration of Conformity (DoC)

"Hereby, we declare that this Personal Computer is in compliance with the essential requirements and other relevant provisions of the Directive 1999/5/EC."

Hint:

If you want to get a copy of the original DoC of our products which relates to the R&TTE, please contact our web address: <http://www.doc.panasonic.de>

Contact:

Panasonic Services Europe

A Division of Panasonic Marketing Europe GmbH

Panasonic Testing Centre

Network connection.

The terminal equipment is intended for connection to the following public network;

In all the countries of European Economical Area;

- Public Switched Telephony Networks

Technical Features.

The terminal equipment includes the following features;

- DTMF dialing
- Maximum bitrate receiving mode: 56 kbit/s
- Maximum bitrate sending mode: 33.6 kbit/s

This product is designed to interwork with the Public Switched Telecommunication Networks in UK, Ireland, Netherlands, Sweden, Denmark, Finland, Switzerland, Luxembourg, Belgium, France, Germany, Spain, Portugal, Iceland, Greece, Italy, Norway and Austria.

18-E-1

Compliance Notice - CE Mark

This equipment is in conformance with the requirements of the European Council Directive listed below:

73/23/EEC Low Voltage Directive with amendment 93/68/EEC

89/336/EEC EMC Directive with amendments 92/31/EEC and 93/68/EEC

1999/5/EC R&TTE

21-E-1

Important Safety Instructions / Importantes Mesures De Sécurité

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

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

SAVE THESE INSTRUCTIONS

19-E-1

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

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

ONSERVER CES INSTRUCTIONS

19-F-1

Information to the User

<Only for model with wireless LAN/wireless WAN>

This product and your Health

This product, like other radio devices, emits radio frequency electromagnetic energy. The level of energy emitted by this product however is far much less than the electromagnetic energy emitted by wireless devices like for example mobile phones.

Because this product operates within the guidelines found in radio frequency safety standards and recommendations, we believe this product is safe for use by consumers. These standards and recommendations reflect the consensus of the scientific community and result from deliberations of panels and committees of scientists who continually review and interpret the extensive research literature.

In some situations or environments, the use of this product may be restricted by the proprietor of the building or responsible representatives of the organization. These situations may for example include:

- Using this product on board of airplanes, or
- In any other environment where the risk of interference to other devices or services is perceived or identified as harmful.

If you are uncertain of the policy that applies on the use of wireless devices in a specific organization or environment (e.g. airports), you are encouraged to ask for authorization to use this product prior to turning on the product.

Regulatory Information

We are not responsible for any radio or television interference caused by unauthorized modification of this product. The correction of interference caused by such unauthorized modification will be the responsibility of the user. We and its authorized resellers or distributors are not liable for damage or violation of government regulations that may arise from failing to comply with these guidelines.

26-M-1

Lithium Battery / Pile au lithium

Lithium Battery!

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

15-E-1

Pile au lithium!

Le micro-ordinateur renferme une pile au lithium qui permet de sauvegarder certaines données, notamment la date et l'heure. La pile ne doit être remplacée que par un technicien qualifié.

Danger ! Risque d'explosion en cas de non respect de cette mise en garde!

15-F-1

CD/DVD Drive Caution

CAUTION!

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

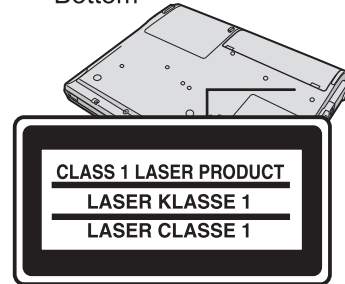
12-E-1

AVERTISSEMENT!

CET APPAREIL UTILISE UN LASER.
L'UTILISATION DE COMMANDES OU DE RÉGLAGES OU L'EXÉCU-
TION DE PROCÉDURES AUTRES QUE CELLES SPÉCIFIÉES ICI PEU-
VENT PROVOQUER UNE EXPOSITION À DES RADIATIONS
DANGEREUSES.
NE PAS OUVRIR LES COUVERCLES NI ESSAYER DE RÉPARER
SOIMÊME.
CONFIER TOUT TRAVAIL D'ENTRETIEN À UN PERSONNEL QUALIFIÉ.

12-F-1

Bottom



Precautions

THIS PRODUCT IS NOT INTENDED FOR USE AS, OR AS PART OF, NUCLEAR EQUIPMENT/SYSTEMS, AIR TRAF-
FIC CONTROL EQUIPMENT/SYSTEMS, OR AIRCRAFT
COCKPIT EQUIPMENT/SYSTEMS*¹. PANASONIC WILL
NOT BE RESPONSIBLE FOR ANY LIABILITY RESULTING
FROM THE USE OF THIS PRODUCT ARISING OUT OF
THE FOREGOING USES.

*¹ AIRCRAFT COCKPIT EQUIPMENT/SYSTEMS include Class2
Electrical Flight Bag (EFB) Systems and Class1 EFB Systems
when used during critical phases of flight (e.g., during take-off and
landing) and/or mounted on to the aircraft. Class1 EFB Systems
and 2 EFB Systems are defined by FAA: AC (Advisory Circular)
120-76A or JAA: JAA TGL (Temporary Guidance Leaflets) No.36.

Panasonic cannot guarantee any specifications, tech-
nologies, reliability, safety (e.g. Flammability/Smoke/
Toxicity/Radio Frequency Emission, etc) requirements
related to aviation standards that exceed the specifica-
tions of our COTS (Commercial-Off-The-Shelf) products.

Do Not Connect the AC Adaptor Other Than a Standard Home

Otherwise, a fire due to overheating may occur.
ing to a DC/AC converter.
adaptor. On an airplane, do not use a DC/AC converter
charger to an AC power source.

Do Not Do Any Work on the DC Plug

Do not damage, bend, or break the DC plug.
bend, or break the DC plug.
or break the DC plug.
Cautions

This computer is not intended for use in medical equipment including life-support systems, air traffic control systems, or other equipment, devices or systems involved with ensuring human life or health. Panasonic cannot be held responsible in any way for injury or loss resulting from the use of this product in any types of equipment, devices or systems.

If a Malfunction Occurs Cord and the Battery

- Computer is damaged
- Foreign object in the computer
- Smoke emitted from the computer
- Unusual smell from the computer
- Unusual sound from the computer

Continued use
conditions

- If the computer is damaged

Read Me First

Keep SD Memory Cards Away from Infants and Small Children

Accidental swallowing will result in bodily injury.
In the event of accidental swallowing, see a doctor immediately.

Do Not Place the Computer on Unstable Surfaces

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

Avoid Stacking

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

Do Not Keep the Computer Wherever There is a Lot of Water, Moisture, Steam, Dust, Oily Vapors, etc.

Otherwise, possibly resulting in fire or electric shock.

Do Not Leave the Computer in High Temperature Environment Such as in a Sun-Heated Car, for a Long Period of Time

Leaving the computer where it will be exposed to extremely high temperatures such as in a sun-heated car or in direct sunlight

e(u bWf12(r)-()4[(In)cabine12(g)12(h e2(s/12(r)-8caus2(a)-12(f Td Tm[(Lehi)-112(g)1h(l)-128(t)-3()]J-0.0115Tc -0.0036084

Precautions (Battery Pack)

Do Not Use with Any Other Computer

The battery pack is rechargeable and was intended for the specified computer or charger. If it is used with a computer other than the one for which it was designed, electrolyte leakage, generation of heat, ignition or rupture may result.

Do Not Charge the Battery Using the Methods Other Than Indicated in This Manual

If the battery pack is not charged using one of the methods indicated in this manual, electrolyte leakage, generation of heat, ignition or rupture may result.

Do Not Throw the Battery Pack into a Fire or Expose It to Excessive Heat

Generation of heat, ignition or rupture may result.

Avoid Extreme Heat (Near the Fire, in Direct Sunlight, for Example)

Electrolyte leakage, generation of heat, ignition or rupture may result.

Do Not Insert Sharp Objects into the Battery Pack, Expose It to Bumps or Shocks, Disassemble, or Modify It

Electrolyte leakage, generation of heat, ignition or rupture may result.

Do Not Short the Positive (+) and Negative (-) Contacts

Generation of heat, ignition or rupture may result. Do not place the battery pack together with articles such as necklaces or hairpins when carrying or storing.

Do Not Use This Computer with a Battery Pack Other Than the One Specified

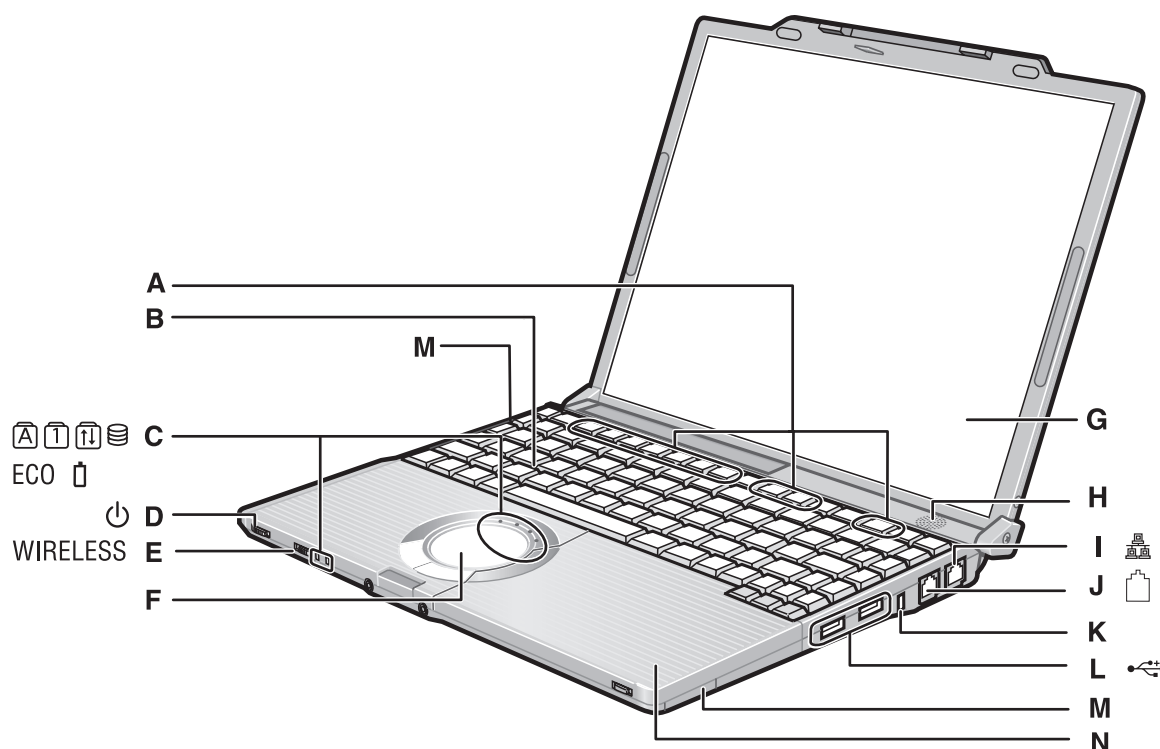
Use only the specified battery pack (CF-VZSU47) with your CF-W5. Use of battery packs other than those manufactured and supplied by Panasonic may present a safety hazard (generation of heat, ignition or rupture).

- 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% (when Economy Mode (ECO) is enabled: 75%) of capacity.
- The battery pack is not charged when the computer is first purchased. Be sure to charge it before using it for the first time. When the AC adaptor is connected to the computer, charging begins automatically.
- Should the battery leak and the fluid get into your eyes, do not rub your eyes. Immediately flush your eyes with clear water and see a doctor for medical treatment as soon as possible.

NOTE

- The battery pack may become warm during recharging or normal use. This is completely normal.
- Recharging will not commence if internal temperature of the battery pack is outside of the allowable temperature range (0 °C to 55 °C {32 °F to 131 °F}). (→  *Reference Manual* "Battery Power") Once the allowable range requirement is satisfied, charging begins automatically. Note that the recharging time varies based on the usage conditions. (Recharging takes longer than usual when the temperature is 10 °C {50 °F} or below.)
- If the temperature is low, the operating time is shortened. Only use the computer within the allowable temperature range.
- The battery pack is a consumable item. If the amount of time the computer can be run by using a particular battery pack becomes dramatically shorter and repeated recharging does not restore its performance, the battery pack should be replaced with a new one.
- When transporting a spare battery inside a package, briefcase, etc., it is recommended that it be placed in a plastic bag so that its contacts are protected.
- Always power off the computer when it is not in use. Leaving the computer on when the AC adaptor is not connected will exhaust the remaining battery capacity.

Description of Parts



A : Function Key

→ Reference Manual "Key Combinations"

B : Keyboard

C : LED Indicator

: Caps lock

: Numeric key (NumLk)

: Scroll lock (ScrLk)

: Hard disk drive status

ECO : Economy Mode (ECO) status

→ Reference Manual "Battery Power"

: Battery status

→ Reference Manual "Battery Power"

D : Power Switch

→ page 13

Power Indicator

- Off: Power off/Hibernation
- Green: Power on
- Blinking green: Standby

E : Wireless Switch

<Only for model with wireless LAN/wireless WAN>

→ Reference Manual "Wireless Switch Utility"
"Wireless LAN"

F : Touch Pad

→ Reference Manual "Using the Touch Pad"

G : LCD

H : Speaker

I : LAN Port

If the Mini Port Replicator is connected to the computer, connect the LAN cable to the LAN port on the Mini Port Replicator. You cannot use the LAN port on the computer.

→ Reference Manual "LAN"

J : Modem Port

Be sure to use the included modem telephone cable, and insert the end of the cable with the ferrite core into the modem port on the computer.

→ Reference Manual "Modem"

K : Security Lock

You can connect a Kensington cable. Refer to the instruction manual of the cable. The security lock and cable is a theft prevention device. Matsushita Electric Industrial Co., Ltd. will bear no responsibility in the event of theft.

L : USB Ports

→ Reference Manual "USB Devices"

M : Wireless LAN Antenna

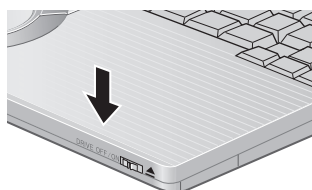
<Only for model with wireless LAN>

→ Reference Manual "Wireless LAN"

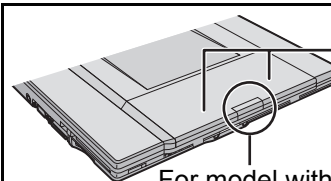
N : CD/DVD Drive

→ Reference Manual "CD/DVD Drive"

CAUTION

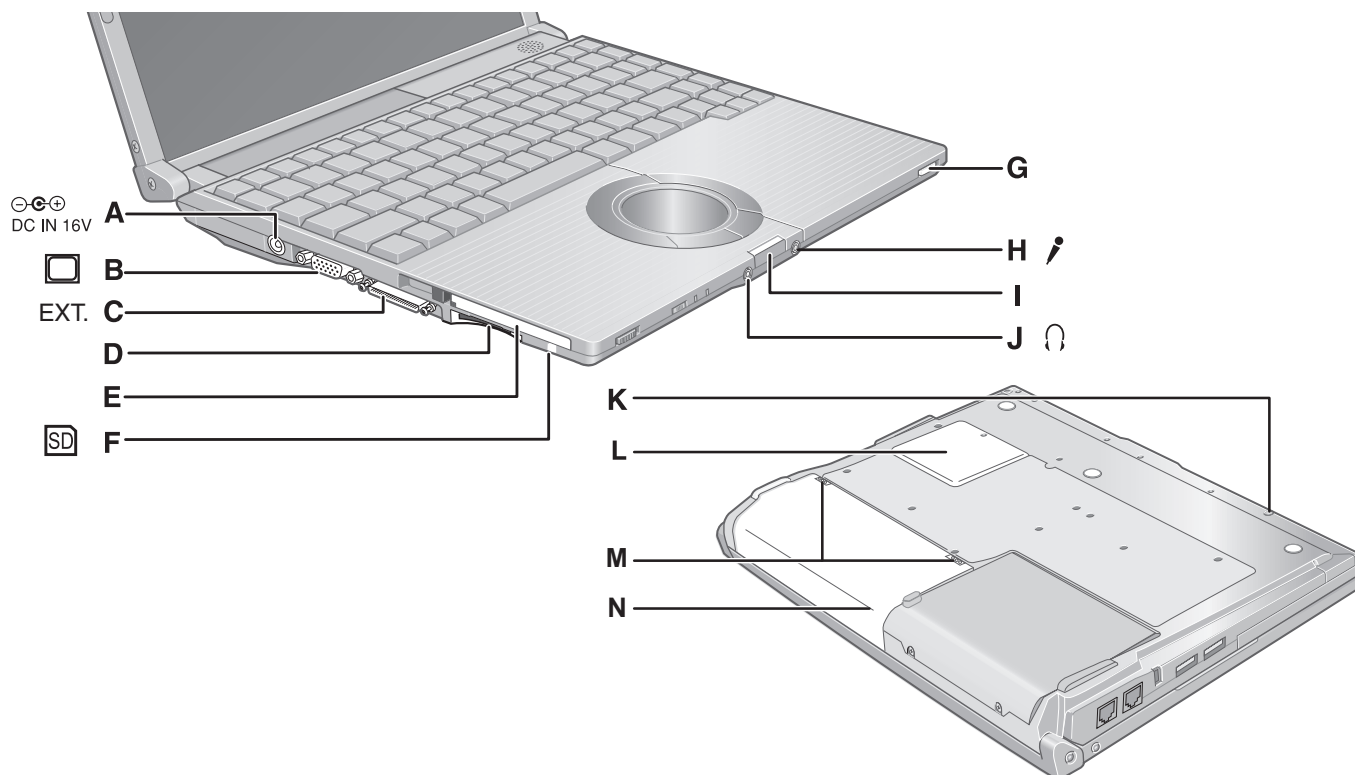


When closing the disk cover, press down near the drive power/open switch (position of the arrow) to ensure that the cover is locked.



Wireless WAN Antenna

For model with EVDO or without wireless WAN:
The SIM card slot under this cover is not used for this model. Do not open the cover.
For other models:
Refer to the additional instructions.

**A : DC-IN Jack****B : External Display Port**

If the Mini Port Replicator is connected to the computer, connect the external display to the external display port on the Mini Port Replicator. You cannot use the external display port on the computer.

→ *Reference Manual* "External Display"

C : Mini Port Replicator Connector

Connect the Mini Port Replicator (optional).

→ *Reference Manual* "Mini Port Replicator"

D : SD Memory Card Slot

→ *Reference Manual* "SD Memory Card"

E : PC Card Slot

→ *Reference Manual* "PC Cards"

F : SD Memory Card Indicator

Blinking: During access

→ *Reference Manual* "SD Memory Card"

G : CD/DVD Drive Power/Open Switch

- Slide the switch to the right to open the disk cover.
- Slide the switch to the left to turn on/off the drive power.

CD/DVD Drive Indicator

- Off: Drive power is off.
- Green: Drive power is on, but the drive is not accessed.
- Blinking green: Drive power is on, and the drive is being accessed.

H : Microphone Jack

A condenser microphone can be used. If other types of microphones are used, audio input may not be possible, or malfunctions may occur as a result.

- When recording in stereo using a stereo microphone:

Double-click in the notification area, click [Options] - [Properties], and add a check mark for [Recording], click [OK] - [Options] - [Advanced Controls] - [Advanced], remove a check mark for [Mono Microphone], and then click [Close].

- When using a monaural microphone with a 2-terminal plug: With the settings outlined above, only audio on the left track will be recorded.

When monitoring the microphone audio using headphones, sounds on the left track cannot be heard, regardless of the above settings. This is a result of the computer's specifications, and is not a malfunction.

I : Latch**J : Headphone Jack**

You can connect headphones or amplified speakers. When they are connected, audio from the internal speakers is not heard.

K : Emergency Hole

→ *Reference Manual* "CD/DVD Drive"

L : RAM Module Slot

→ page 18

M : Battery Latches

→ page 12

N : Battery Pack

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

L'appareil que vous vous êtes procuré est alimenté par une batterie au lithium-ion. Pour des renseignements sur le recyclage de la batterie, veuillez composer le 1-800-8-BATTERY.

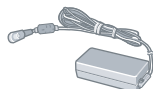
First-time Operation

■ Preparation

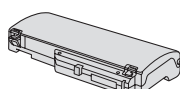
- ① Check and identify the supplied accessories.

If you do not find the described accessories, contact your technical support office.

- **AC Adaptor** 1 • **AC Cord** 1 • **Battery Pack** ... 1 • **Modem Telephone Cable** 1



Model No: CF-AA1623A



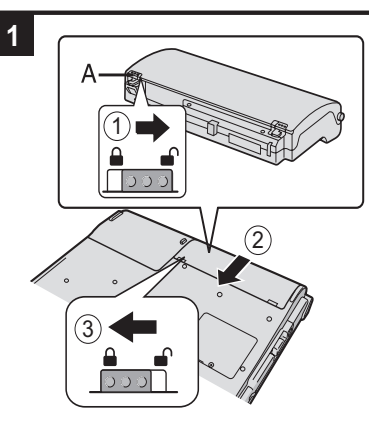
Model No: CF-VZSU47



- **Operating Instructions (This book)** .. 1 • **Windows® Book** 1
• **Product Recovery DVD-ROM** 1 • **LIMITED WARRANTY** 1

- You will need the serial number when you reinstall B's Recorder/B's CLiP using Product Recovery DVD-ROM (→ page 28).

- ② Read the LIMITED USE LICENSE AGREEMENT before breaking the seal on the computer's packaging (→ page 31).

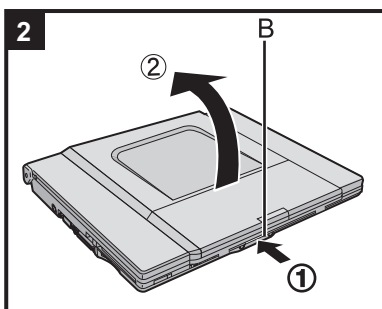


1 Insert the battery pack.

- ① Turn the computer over and slide the left latch (A) to the unlocked position (🔓).
- ② Insert the battery pack in the correct direction until it securely fits the connector.
- ③ Slide the left latch (A) to the locked position (🔒). (Right latch is locked automatically.)

CAUTION

- Make sure the latch is securely locked. Otherwise the battery pack may fall when you carry the computer.
- Do not touch the terminals of the battery pack and the computer. Doing so can make the terminals dirty or damaged, and may cause malfunction of the battery pack and the computer.

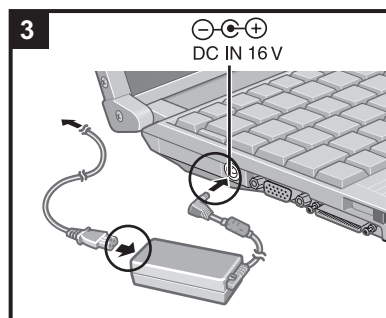


2 Open the display.

- ① Press and hold the latch (B) located at the front.
- ② Lift open the display.

CAUTION

- Do not open the display wider than necessary (140° or more), and do not apply excessive pressure to the LCD. Do not open or close the computer holding the edge of the LCD segment.

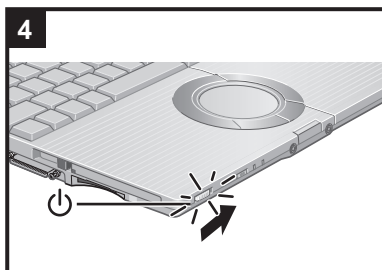


3 Connect your computer to a power outlet.

The battery charging starts automatically.

CAUTION

- Do not disconnect the AC adaptor and do not switch the wireless switch to on until the first-time operation procedure is completed.
- When using the computer for the first time, do not connect any peripheral device except the battery pack and AC adaptor.
- **Handling the AC adaptor**
 - 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.



4 Turn on the computer.

Slide and hold the power switch  for approximately one second until the power indicator  lights.

CAUTION

- Do not slide the power switch repeatedly.
- The computer will forcibly be turned off if you slide and hold the power switch for four seconds or longer.
- Once you turn off the computer, wait for ten seconds or more before you turn on the computer again.
- Do not perform the following operation until the hard disk drive indicator  turns off.
 - Connecting or disconnecting the AC adaptor
 - Sliding the power switch or CD/DVD drive power/open switch
 - Touching the keyboard or touch pad
 - Closing the display
- Do not change the Setup Utility until completing step 5. If you do so, Windows setup may not operate properly.

5 Setup Windows.

Follow the on-screen instructions.

- The computer will restart after the setup is complete.
To go to the next step, wait until the hard disk drive indicator  has turned off.

CAUTION

- When you set date/time/time zone and click [Next], the screen may not go to the next step for a few minutes. Do not touch the keyboard or touch pad, and wait until the screen changes.

6 Create a new account.

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

CAUTION

- Remember your password. If you forget the password, you cannot use the Windows operation system. Creating a password reset disk beforehand is recommended.

7 Change the internal CD/DVD drive letter if necessary.

➔ - Reference Manual "CD/DVD Drive"

NOTE

- **Regarding Windows XP**
You can select the Classic view of Control Panel or the Classic Start menu. You can also change the way a user logs on or off. This manual explains using the Windows XP default setting (not Classic view or Classic Start menu etc.).
- **Windows Update**
You can update to the latest patches and service packs for Windows with the following menus.
[start] - [All Programs] - [Windows Update]
Do not apply "Driver Updates" even if a message to update a driver appears. If a driver update is required, contact your technical support office.
- **If the message "Your computer might be at risk" is displayed**
Select  (red icon) on the notification area and make the appropriate settings. The Windows Security Center regularly gives you notice so that you can make the optimum settings. This is not an error message and you can use the computer. However, making appropriate measures is recommended to reduce the risk of virus and other attacks.
- **Internal Hard Disk**
You may hear a mechanical "click" shortly after the hard disk drive indicator has turned off when there has been no input from a key or device operation, when the computer enters the standby or hibernation mode, or when Windows is shut down. This is the sound of the head shifting positions, to reduce power consumption or to protect the hard disk from shocks. This sound does not indicate a malfunction.
- **If you hear the sounds from CD/DVD drive**
In the following situations, the motor from the CD/DVD drive can be heard.
 - Immediately after the computer or CD/DVD drive is turned on
 - When a CD or DVD is playing
 The sounds you hear are normal operating sounds created by the motor in the CD/DVD drive operating; it is not a malfunction.

First-time Operation

● PC Information Viewer

This computer periodically records the management information such as number of hours powered-on, number of times powered-on, internal temperature, replacement sector. The maximum data volume for each record is 750 byte. These information are only used for estimating the cause when the hard disk goes down by any possibility. They are never sent to outside via network nor used for other than its purpose.

To deactivate this function, run the PC Information Viewer and add a check mark for [Disable the automatic save function for management information history] in [Hard Disk Status] and click [OK].

(→  *Reference Manual* “Check the Computer’s Usage Status”)

■ When Starting Up/Shutting Down

CAUTION

- Do not do the following
 - Connecting or disconnecting the AC adaptor
 - Sliding the power switch or CD/DVD drive power/open switch
 - Touching the keyboard, touch pad or external mouse
 - 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.
- Note that the computer consumes electricity even when the computer power is off. If the battery pack is fully charged, the battery will fully discharge in Approx. 2 months.

On-screen Manual

You can access the Reference Manual and the Important Tips on the computer screen after completing the “First-time Operation”.

When you access the Reference Manual and the Important Tips for the first time, the License Agreement of the Adobe Reader may be displayed. Read it carefully and select [Accept] to proceed.

■ Reference Manual

The Reference Manual contains the practical information to help you fully enjoy the computer's performance.

To access the Reference Manual:

Click [start] - [Reference Manual].

Contents

- | | | |
|------------------------------------|---------------------------|---|
| ● Read Me First | ● SD Security | ● DMI Viewer |
| ● Using the Touch Pad | ● Mini Port Replicator | ● Recover Pro |
| ● Key Combinations | ● External Display | ● Troubleshooting (Advanced) |
| ● Battery Power | ● USB Devices | ● Check the Computer's Usage Status |
| ● Computing on the Road | ● Modem | ● Protecting Your Computer from Viruses |
| ● Standby or Hibernation Functions | ● LAN | ● Update Windows to its Latest Version |
| ● Security Measures | ● Wireless Switch Utility | ● Technical Information |
| ● CD/DVD Drive | ● Wireless LAN | |
| ● WinDVD | ● Setup Utility | |
| ● B's Recorder/B's CLiP | ● Icon Enlarger | |
| ● PC Cards | ● Loupe Utility | |
| ● SD Memory Card | | |

■ Important Tips

The Important Tips will provide you with the helpful information about the battery. Read to use the battery pack in the optimum condition to obtain longer operation time.

To access the Important Tips:

Double-click  on the desktop.
Important Tips

- Alternatively click [start] - [All Programs] - [Panasonic] - [On-Line Manuals] - [Important Tips].

Handling and Maintenance

Operation Environment

- Place the computer on a flat stable surface. Do not place the computer upright. If the computer is exposed to an extremely strong impact, it may become inoperable.
 - Temperature: Operation: 5 °C to 35 °C {41 °F to 95 °F}
 Storage: -20°C to 60 °C {- 4 °F to 140 °F}
 - Humidity: Operation: 30% to 80% RH (No condensation)
 Storage: 30% to 90% RH (No condensation)
- Even within the above temperature/humidity ranges, using for a long time in an extreme environment will result in the product deterioration and will shorten the product life.
- Do not place the computer in the following areas, otherwise the computer may be damaged.
 - Near electronic equipment. Image distortion or noise may occur.
 - Near magnets or in magnetic fields.
 - In extremely high or low temperature.
 - As the computer can become hot during operation, keep it away from items that are sensitive to heat.

Handling Cautions

- When carrying the computer:
 - Turn off the computer.
 - Remove all external devices, cables, cards and other protruding things.
 - Remove a disk in the CD/DVD drive.
 - Do not drop or hit the computer against solid objects.
 - Do not leave the display open.
 - Do not grip the display part.
- When you board an airplane, take the computer with you and never put it in your luggage. When using the computer on airplane, follow the airline's instructions.
- When carrying a spare battery, put it in a plastic bag to protect its terminals.
- This computer contains a magnet and magnetic products at the locations shown in the illustration at right. Avoid leaving metallic object or magnetic media in these areas.
- The touch pad is designed to be used with a finger tip. Do not place your palm on the face and do not press down strongly with sharp-pointed or hard objects (e.g., nails, pencils and ball point pens).
- Avoid any harmful substances such as oil from getting into the touch pad. The touch pad may not work correctly.
- If the computer is being carried in a soft bag with the handle, do not hold the handle of the computer in a crowded place, etc., as this may result in the computer being damaged.

■ When using peripheral devices

Follow these instructions and the Reference Manual and the manuals of the peripheral devices.

- Use the peripheral devices conforming to the specifications.
- Connect to the connectors in the correct direction.
- If it is hard to insert, do not try forcing it.
- If screws are included, fasten them correctly.

■ Preventing your computer from overheating

<Only for model with wireless LAN>

- Before using wireless LAN, turn off the wireless LAN function.

■ Computrace®

Computrace® is a registered trademark of

Perform the following steps:

- Connect the computer to the Internet.

CAUTION

-

NOTE

- Consult Absolute Software Corp. before disposal.
- Refer to the following URL for Computrace® software for installation and available service regions. Note that this service is only available in certain regions.
<http://www.absolute.com>

- 1 **Turn on or restart the computer, and press F2 while [Panasonic] boot screen is displayed.**
The Setup Utility starts up.
 - If the password is requested, enter the Supervisor Password.
- 2 **Select the [Security] menu, then select [Computrace (R) Sub-Menu] and press Enter.**
- 3 **Select [Computrace (R) BIOS Module], and set to [Enable].**
- 4 **At the confirmation message, select [Execute] and press Enter.**
- 5 **At the reconfirmation message, select [Execute] and press Enter.**
- 6 **Press F10.**
At the confirmation message, select [Yes] and press Enter.
The computer restarts.

Maintenance**To clean the LCD panel and touch pad**

Wipe lightly with a gauze or other dry, soft cloth.

To clean areas other than the LCD panel and touch pad

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 since it may adversely affect the surface causing discoloration, etc. Do not use commercially-available household cleaners and cosmetics, as they may contain components harmful to the surface.
- Do not apply water or detergent directly to the computer, since liquid may enter inside of the computer and cause malfunction or damage.

Expanding Memory

Use RAM modules that comply with the specifications below. Using any other module may cause malfunction or result in computer failure.

RAM module specifications:

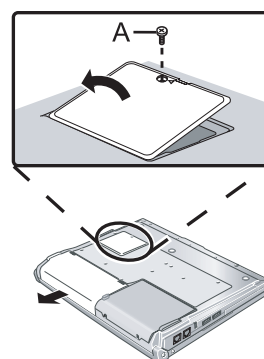
DDR2 SDRAM, 172 pins, Micro DIMM, 1.8 V, PC2-4200

CAUTION

- 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. Some non-recommended RAM modules may overheat, causing the cover to warp. Refer to various sources for recommended RAM module.
- 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.
- 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.

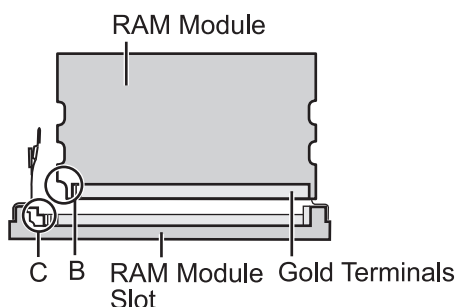
Preparation

- ① Turn off your computer.
 - Do not use the standby or hibernation.
- ② Disconnect the AC adaptor and remove the battery pack.
- ③ Remove the screw (A) and the cover on the bottom of the computer.
 - Use the appropriate screw driver so as not to strip the thread of screw.

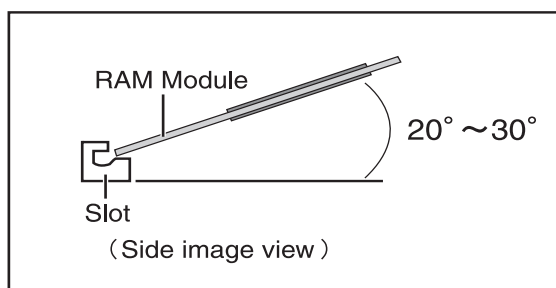


Inserting the RAM Module

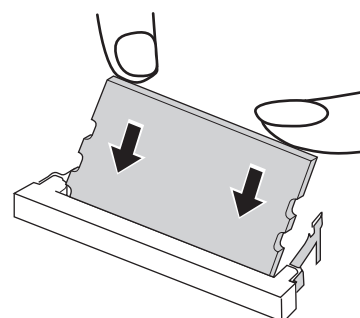
- 1 **Place the RAM module lightly in parallel with the RAM module slot so that the notch (B) of the RAM module and the protrusion (C) of the RAM module slot is in the same direction.**
 - The gold terminals are visible at this point.
 - RAM module is at an angle of 20° - 30° with the horizontal line.



(Front image view)

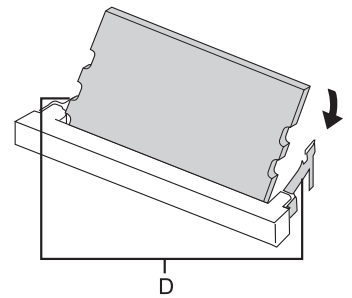


- 2 **Insert the RAM module parallel to the slot firmly until the gold terminals are invisible.**
 - If it is hard to insert the RAM module, do not try forcibly but check the module's direction.



3 Press the RAM module down until the right and left hooks (D) lock into place.

- When pressing down the module, the right and left hooks will open slightly and will return after locking.
- If it is hard to press down the RAM module, do not try forcibly but check the module's direction.



4 Set the cover and battery pack back.

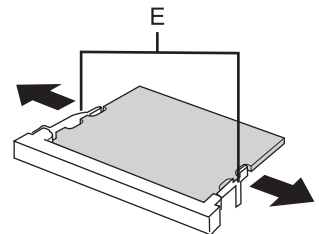
NOTE

- If the RAM module is recognized correctly, the total size of this computer's memory and RAM module memory is displayed on the [Information] menu of the Setup Utility.
If the RAM module is not recognized, turn off the computer and insert it again.

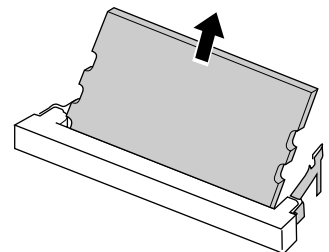
Removing the RAM Module

1 Carefully open the left and right hooks (E).

The RAM module will be raised.



2 Carefully remove the RAM module from the slot.



3 Set the cover and battery pack back.

Hard Disk Backup Function (Recover Pro)

The Recover Pro creates a backup area (storage area) on the hard disk to back up (store) the hard disk data, and restores the backup data to its original location when it is lost or corrupted by operational errors or other factors. You do not need external media or peripheral devices to back up or restore hard disk data on this computer. At purchase, the Recover Pro is not installed. Install using the instructions below.

The Recover Pro cannot back up or restore data correctly if a hard disk problem occurs during data backup or restoring. If an error occurs due to an unexpected malfunction, incorrect operation, or other reason while data is being restored, the hard disk data (data before restoration) may be lost. Matsushita Electric Industrial Co., Ltd. will bear no responsibility for any damage suffered (including loss of data) as a result of the use of this function.

The Recover Pro provides 3 types of backup as follows:

- Quick Backup: Scheduled backup of the updated data
- File Backup: File backup at file save and change
- Complete Backup: Backup of the entire data on the internal hard disk

Here, we will explain the procedures for installation, complete backup (backing up hard disk contents in case Windows cannot be booted), and complete restore (recovering the hard disk data to its condition at the time of the complete backup).

For further information, refer to the software's online manual (➔ page 21).

CAUTION

- All operations should be executed with the AC adaptor connected. Do not turn the power off while operations are in progress. If the power is turned off while installation, backup, or restore operations are in progress, these operations may not function properly, and it may be impossible to start Windows. Also, do not press any keys or slide any switches, including hot keys.
- When restarting the computer, the message "Check file system on C:" will appear. Follow the on-screen instructions. Do not skip the check process.
- Make sure you allow enough space on the hard disk when choosing settings during installation. To change these settings you must reinstall Recover Pro.
To execute Complete Backup reliably, we recommend performing [Typical] installation in the following cases.
 - Hard disk with a single partition
 - Immediately after reinstalling software (when more than half of the entire space of the hard disk is available) (➔ page 23)
- Be sure to use the internal hard disk drive to create the backup area. Never use disk or device other than the internal hard disk drive.
- Some software (security software, backup software, encryption software, or hard disk accessible specific software, etc.) may be incompatible with Recover Pro.
For further information, refer to:
<http://www.phoenix.com/en/Customer+Services/White+Papers-Specs/Recover+Pro/default.htm>
- When using Personal Secure Drive (➔  *Installation Manual* of "Trusted Platform Module (TPM)"), do not execute File Backup for Personal Secure Drive.
- The "Create recovery CD-DVD" function in Recover Pro is designed to help you save complete backup data to CD or DVD. When using the "Create recovery CD-DVD", you can view the complete backup data on the hard disk, but take care to avoid accidentally deleting this data.

Installation

Preparation

- Connect the AC adaptor.

1 Log on to Windows as an administrator.

2 Close all programs.

3 Disable anti-virus software.

4 Click [start] - [Run], enter [c:\util\rcvpro\setup.exe], and click [OK].

The InstallShield Wizard screen appears.

5 Click [Next].

Follow the on-screen instructions.

Carefully read the License Agreement, and click [I accept the agreement.].

- The computer restarts several times to complete installation.  appears in the notification area.

CAUTION

- During the installation, the screen may become black (no display) momentarily. This is not a malfunction.
- If you select [Typical] in installation, approximately 40% (max.) of the hard disk drive space is allocated as the backup area.
- You cannot change the size of backup area after creation.

Complete Backup

Backs up all data on the hard disk.

Preparation

- Connect the AC adaptor.

- 1 **Log on to Windows as an administrator.**
- 2 **Close all programs.**
- 3 **Click [start] - [All Programs] - [Phoenix Applications] - [Phoenix Recover Pro 6].**
"Recover Pro 6" screen appears.
- 4 **Click [Complete Backup], and click [Yes].**
 - The computer restarts, and "Recover Pro 6" screen appears.
Follow the on-screen instructions.

NOTE

- You can completely backup only one set of the whole data in the hard disk to the backup area.

Complete Restore

This function uses the data created during complete backup. It restores the hard disk data to the condition when you performed the complete backup. Files created and changes made to settings after the latest complete backup is made will be deleted.

Preparation

- Connect the AC adaptor.

- 1 **Click [start] - [All Programs] - [Phoenix Applications] - [Phoenix Always Launcher] and click [Run].**
 - The computer restarts, and "Phoenix Always" screen appears.
Alternatively turn on or restart the computer, and hold down **F4** while [Panasonic] boot screen is displayed until "Phoenix Always" screen appears.
- 2 **Click [Protect / Recover], and click [Phoenix Recover Pro 6].**
 - "Recover Pro 6" screen appears.
- 3 **Click [Complete Restore].**
Follow the on-screen instructions.

■ To access the online manual

- ① Click [start] - [All Programs] - [Phoenix Applications] - [Docs], and double-click [UserGuides].
- ② Double-click the file of Recover Pro user's guide or Phoenix Always user's guide.

Hard Disk Data Erase Utility

When disposing the computer or transferring the ownership, erase all hard disk data in order to avoid data leakage. Even if you erase the data or initialize the hard disk using normal Windows commands, the data can be read with some special software. Use the hard disk data erase utility to erase the data completely. Note that transferring of the ownership without uninstalling the commercial software will be a violation of the software's license agreement.

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.

CAUTION

- When the hard disk contains the Recover Pro backup data, the Recover Pro backup area is lost as well.

NOTE

- Even if hard disk data erase is performed, the number of times of DVD's region code setting will not be reset.
- This utility cannot erase data for specific partitions.

Preparation

- Prepare the Product Recovery DVD-ROM (included).
- Remove all peripherals.
- Connect the AC adaptor and do not remove it until hard disk data erase is complete.

- 1 Turn on the computer, and press F2 while [Panasonic] boot screen is displayed.**
The Setup Utility starts up.
 - If the password is requested, enter the Supervisor Password.
- 2 Press F9.**
At the confirmation message, select [Yes] and press Enter.
- 3 Select the [Boot] menu, then select [USB CDD] and press F6 until [USB CDD] is at the top of [Boot priority order].**
- 4 Set the Product Recovery DVD-ROM into the CD/DVD drive.**
 - When the disk cover does not open
 - ① Press F10.
At the confirmation message, select [Yes] and press Enter.
The computer will restart.
 - ② Press F2 while [Panasonic] boot screen is displayed.
 - ③ Set the Product Recovery DVD-ROM.
- 5 Press F10.**
At the confirmation message, select [Yes] and press Enter.
The computer will restart.
 - If [Enter Password] is displayed during the following procedures, input the Supervisor Password or the User Password.
- 6 Press 2 to execute [2. [Erase HDD]].**
 - To cancel this operation, press 0.
- 7 At the confirmation message, press Y.**
- 8 When [<<< Start menu >>>] is displayed, press Enter.**
The approximate time required for erasing data will be displayed.
- 9 Press Space.**
At the confirmation message, press Enter.
The hard disk erase process starts. When the operation is completed, the "Hard disk data has been deleted." message will appear. If a problem has occurred during the operation, an error message will appear.
 - To cancel partway, press Ctrl + C. The data erasure will be up to that point.
- 10 Remove the Product Recovery DVD-ROM, and then press any key to turn off the computer after the message "Hard disk data has been deleted." is displayed.**

Reinstalling Software

When you reinstall the software, the hard disk data will be erased. Back up important data to other media or an external hard disk before reinstallation.

Reinstalling software will return the computer to the default condition. The hard disk backup area and the backup data (→ page 20) will be erased. (If you reinstall Windows in the first partition, the backup area and data will not be erased.) Even if the data is stored in partitions on the hard disk, it may be erased or corrupted.

Preparation

- Prepare the Product Recovery DVD-ROM (included).
- Remove all peripherals.
- Connect the AC adaptor and do not remove it until reinstallation is complete.

CAUTION

- When using Recover Pro, in the following step 8,
 - If you select [1] or [2], the backup area will be erased.
 - If you select [3], Recover Pro will not function properly. Select [1] or [2].
 - If you need the data other than that on the first partition, perform the following steps.
 - ① Select [3].
 - ② After reinstallation, back up data to external media (e.g., removable disk) except for the data on the first partition.
 - ③ Start the reinstallation again, then select [1] or [2].
 - ④ Return the backed up data at step ② to the internal hard disk.

NOTE

- Even if reinstallation is performed, the number of times of DVD's region code setting is limited.

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

The Setup Utility starts up.

- If the password is requested, enter the Supervisor Password.

2 Write down all of the contents of the Setup Utility and exit the Setup Utility.

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

3 Select the [Boot] menu, then select [USB CDD], and move [USB CDD] to the top of [Boot priority order].

4 Set the Product Recovery DVD-ROM into the DVD-ROM drive.

- When the disk cover does not open

① Press **F10**.

At the confirmation message, select [Yes].

The computer will restart.

② Press **F2** while [Panasonic] boot screen appears.

③ Set the Product Recovery DVD-ROM into the DVD-ROM drive.

5 Press **F10**.

At the confirmation message, select [Yes].

The computer will restart.

6 Press **1** to execute the software.

The License Agreement appears.

- To cancel part of the software

7 Press **1** to execute the software.

8 Select the software.

- [2]

Reinstalling Software

- Do not interrupt reinstallation, for example by turning off the computer or pressing **Ctrl** + **Alt** + **Del**. Otherwise reinstallation may become unavailable as Windows may not start up or the data may be corrupted.
- 10 Remove the Product Recovery DVD-ROM, and then press any key to turn off the computer.**
 - 11 Turn on the computer, and press F2 while [Panasonic] boot screen is displayed.**

The Setup Utility starts up.

 - If the password is requested, enter the Supervisor Password.
 - 12 Press F9.**

At the confirmation message, select [Yes] and then press Enter.
The Setup Utility settings excluding the password(s) will return to the default values.
 - 13 Press F10.**

At the confirmation message, select [Yes] and press Enter.
The Setup Utility will close, and the computer will restart.
 - 14 Perform the first-time operation (➔ page 13).**
 - 15 Start the Setup Utility and change the settings as necessary.**
 - 16 Perform Windows Update.**

Troubleshooting (Basic)/Error Code/Message

Troubleshooting (Basic)

Follow the instructions below when a problem has occurred. There is also an advanced troubleshooting guide in the "Reference Manual". For a software problem, refer to the software's instruction manual. If the problem persists, contact your technical support office. You can also check the computer's status in the PC Information Viewer (➔ *Reference Manual* "Check the Computer's Usage Status").

■ Starting Up and Standby and Hibernation Mode

The computer does not power on/
The power indicator or battery indicator is not lit.

Windows does not start up.

- Connect the AC adaptor.
- Insert a fully charged battery.
- Remove the battery pack and the AC adaptor, then connect them again.
- If an additional RAM module has been inserted, remove the RAM module and check to see if the RAM module is the recommended one. (➔ page 18)
- When the CPU temperature is high, the computer may not start up to prevent overheating of the CPU. Wait until the computer cools down, and then turn the power on again. If the computer does not power on even after cooling down, contact your technical support office.
- Remove all peripheral devices.
 - If a device is connected to the USB port, disconnect the device or set [Legacy USB Support] to [Disable] in the [Advanced] menu of the Setup Utility.
- If an additional RAM module has been inserted, remove the RAM module and check to see if the RAM module is the recommended one. (➔ page 18)
- If the power indicator is lit, slide the power switch for four seconds or long 20225

Troubleshooting (Basic)/Error Code/Message

■ Starting Up and Standby and Hibernation Mode

[Executing Battery Recalibration] screen appears.	The Battery Recalibration was canceled before Windows was shut down last time. To start up Windows, turn off the computer by the power switch, and then turn on.
The computer will not automatically enter standby/hibernation.	- If you connect to a network using wireless LAN function, perform access point settings. (→ Reference Manual "Wireless LAN") - If you do not use wireless LAN function, turn off wireless LAN function. (→ Reference Manual "Wireless LAN") - Make sure that you are not using any software that regularly accesses the hard disk.
When logging on (e.g., resuming the computer), audio is distorted.	- Perform the following steps to change the audio settings to prevent audio output. - Click [start] - [Control Panel] - [Sounds, Speech, and Audio Devices] - [Sounds and Audio Devices], and click [Sounds]. - Set [Windows Logon] and [Windows Logoff] to [(None)].
Cannot resume.	- One of the following operations may have been carried out. - In standby mode, the AC adaptor or battery pack was disconnected, or a peripheral was connected or disconnected. - The power switch was slid for four seconds or longer to forcibly turn off the computer. Slide the power switch to turn on the computer. Data not saved will be lost. - If the [CD/DVD Drive Power] is set to [Off] in the [Main] menu of the Setup Utility, it may take about few seconds to resume from hibernation mode while a disk is set in the CD/DVD drive. Wait for a moment.
Other startup problems.	- Check to see if there was a disk error. - Remove all peripheral devices including an external display. - Click [start] - [My Computer] and right-click [Local Disk(C:)], and click [Properties]. - Click [Tools] - [Check Now]. - Select the option in [Check disk options] and click [Start]. - Start the computer in Safe Mode and check the error details. (Refer to "Windows does not start up" on page 25.)

■ Shutting Down

Windows does not shut down.	- Remove all peripheral devices. - Wait one or two minutes. It is not a malfunction.
-----------------------------	---

■ Password

Even after entering the password, [Type your password] is displayed again	- If lights up, press NumLk to disable the ten-key mode, and then input. - If lights up, press Caps Lock to disable the Caps Lock mode, and then input.
---	--

■ Display

No display.	- The external display is selected. Press Fⁿ + F³ to switch the display. Wait until the display has been switched completely before pressing Fⁿ + F³ again. - When using an external display, - Check the cable connection. - Turn on the display. - Check the settings of external display. - The display is turned off by the power-saving function. To resume, do not press the direct selection keys, but press any other key like Ctrl. - The computer entered standby or hibernation by the power-saving function. To resume, slide the power switch. - The screen may become darker. Press Fⁿ + F² to make the screen brighter.
The screen is disordered.	- Changing the number of display colors and resolution may affect the screen. Restart the computer. - Connecting/disconnecting an external display may affect the screen. Restart the computer.
The external display does not work normally.	If the external display does not support the power saving function, it may not work normally when the computer enters the power saving mode. Turn off the external display.
"Phoenix Always Launcher" was used to change the resolution setting, but that setting is not applicable.	You cannot set the resolution setting to a value of resolution this computer does not support.

■ Battery

The battery indicator is lights red	• 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 battery indicator is blinking	• If blinking red: Quickly save your data and power off your computer. Remove the battery pack and disconnect the AC adaptor, then connect them again. If the problem persists, contact your technical support office. The battery pack or charging circuit may be defective. • If blinking orange: • Battery cannot be recharged temporarily because the internal temperature of the battery pack is outside the acceptable temperature range for recharging. Your computer can be used normally in this state. Once the range requirement is satisfied, charging begins automatically. • Software applications and peripheral devices (USB devices, etc.) are consuming too much power. Exit the software applications currently running. Once the range requirement is satisfied, charging begins automatically.
The battery indicator is flashing	• The battery is recharging. If [Battery Charging Indicator] in [Main] menu of the Setup Utility is set to [Flashing], the indicator will alternately become lighter and darker.

■ Touch Pad

The cursor does not work.	• When using the external mouse, connect it correctly. • Restart the computer using the keyboard. (Press , , and  to select [Restart].) • If the computer does not respond to keyboard commands, read "No response" (→ page 28).
Cannot input using the touch pad.	• Set [Touch Pad] to [Enable] in the [Main] menu of the Setup Utility. • The drivers for some mice may disable the touch pad. Check your mouse's operating instructions.

■ Recover Pro

Cannot install Recover Pro	• Recover Pro cannot be installed when four primary partitions exist. Reduce the number of primary partitions to three or less before installation. You can check the number of the primary partitions in the order of [start] - [Control Panel] - [Performance and Maintenance] - [Administrative Tools] - [Computer Management] - [Disk Management]. • Recover Pro cannot be installed when a backup area is remaining on the hard disk. Try one of the following methods: • If the backup area has complete backup data and you want to restore that data: Follow the "Complete Restore" instructions in "Hard Disk Backup Function (Recover Pro)" (→ page 21) to restore the data. • To return the computer to its condition at the time of shipment: Reinstall the software (→ page 23). • In step 8, do not select "3. Reinstall Windows to the first partition." • If you do not need the data in the backup area, or if it is corrupted, or if does not include complete backup data: ① Access [http://www.phoenix.com/en/Customer+Services/Utilities/Recover+Pro+6.htm#Where], and download/install "Cleanup Utility for Recover Pro 6". ② Delete the backup area using "Cleanup Utility for Recover Pro 6". In this case, all data in the backup area will be lost.
An unnecessary backup area is present (is left) when Recover Pro is not installed.	① Access [http://www.phoenix.com/en/Customer+Services/Utilities/Recover+Pro+6.htm#Where], and download/install "Cleanup Utility for Recover Pro 6". ② Delete the backup area using "Cleanup Utility for Recover Pro 6".

■ Reference Manual

The Reference Manual is not displayed.	• Install Adobe Reader. ① Log on to Windows as an administrator. ② Click [start] - [Run], input [c:\util\reader\AdbeRdr70_enu_full.exe], then click [OK]. Follow the on-screen instructions. ③ Update Adobe Reader to its latest version If your computer is connected to the internet, start up Adobe Reader and click [Help] - [Check for updates now]
--	---

Troubleshooting (Basic)/Error Code/Message

■ Reinstalling B's Recorder/B's CLiP

A serial number is requested when reinstalling.	Input the following serial number B's Recorder: B's CLiP:
---	---

■ Others

No response.	- Press Ctrl+Shift+Esc to open Task Manager and close the software application that is not responding. - An input screen (e.g., password input screen at startup) may be hidden behind another window. Press Alt+Tab to check. - Slide the switch for four seconds or longer to shut down the computer, and then slide the power switch to turn it on. If the application program does not work normally, uninstall and reinstall the program. To uninstall, click [start] - [Control Panel] - [Add or Remove Programs].
--------------	--

Error Code/Message

Follow the instructions below when an error code or message appears. If the problem persists or if the error code/message displayed is not shown here, contact your technical support office.

Error Code/Message	Solution
0211 Keyboard error	Disconnect external keyboard.
0251 System CMOS checksum bad - Default configuration used	An error has occurred in the memory of Setup Utility settings. This occurs when the memory content is changed by an unexpected program operation, etc. - Start the Setup Utility and return the settings to the default values, and then change the settings as necessary. - If the problem persists, the internal clock battery may need to be replaced. Contact your technical support office.
0271 Check date and time settings	The date and time settings are not correct. - Start the Setup Utility and set the correct date and time. - 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	Startup has failed repeatedly, so the Setup Utility settings have been returned to the default values to startup the computer. Start the Setup Utility and return the settings to the default values, and then change the settings as necessary.
Press <F2> to Setup	Write down the error details and press F2 to start the Setup Utility. Change the settings if necessary.
Operating System not found	The operating system is not installed in the floppy disk or the hard disk that you are going to boot from. - If using a floppy disk, change the disk to the one you can use for boot. - If using the hard disk, check if the hard disk is recognized in [Information] menu of the Setup Utility. If the hard disk is recognized, perform the reinstallation (➔ page 23). If not, contact your technical support office. - If a device is connected to the USB port, disconnect the device, or set [Legacy USB Support] to [Disable] in the [Advanced] menu of the Setup Utility.

■ To start the Setup Utility

- Restart the computer.
- Press **F2** while [Panasonic] boot screen is displayed.

Hardware Diagnostics

If the hardware installed in this computer is not operating properly, you can use the PC-Diagnostic Utility to determine whether or not there is a problem.
If the utility discovers a problem in the hardware, contact your technical support office.

Hardware that can be checked using the PC-Diagnostic Utility

Hardware below can be checked using this utility. (Software cannot be checked.)

- CPU
- Memory
- Hard Disk
- CD/DVD Drive
- Video Controller
- Sound*¹
- Modem
- LAN
- Wireless LAN*²
- Wireless WAN*³
- USB
- PC Card Controller
- SD Card Controller
- Keyboard
- Touch Pad

*¹ When the PC-Diagnostic Utility is running, a loud beep will sound, so do not use headphones at this time. (The beep will not sound if mute is using Windows.)

*² Only for model with wireless LAN

*³ Only for model with wireless WAN

Regarding the PC-Diagnostic Utility

NOTE

- Run this utility using the default settings in the Setup Utility. If the Setup Utility or other settings will not allow a hardware to be executed, the hardware icon will be displayed in gray.
 - For the hard disk only, you can select standard diagnostic check or extended diagnostic check.
When the PC-Diagnostic Utility starts up, it will run the standard diagnostic check. The extended diagnostic check is more detailed, and so requires a longer period of time to run.
 - When the video diagnostic check is running, the display may be distorted, and when the audio diagnostic check is running, sounds may be generated from the speaker. These are not malfunctions.
 - You can check the status of the diagnostic check by the display color on the left side of the hardware icon (A).
 - Aqua: Not running diagnostic check
 - Alternating blue and yellow: Currently running diagnostic check. The interval of the alternating colors differs depending on the type of diagnostic check currently running.
During memory diagnostic check, the display may freeze for a long period of time. Wait until the process is complete.
 - Green: No problems discovered
 - Red: Problems discovered
- We recommend that you use the touch pad for operations. When not using the touch pad, you can operate using the internal keyboard instead.



Operations	Touch pad operations	Internal keyboard operations
Select icon	Place the cursor above the icon	Press Space and then press → ← ↑ ↓ (☒ (close) cannot be selected)
Click the icon	Tap or click (right click cannot be used)	Press Space above the icon
Complete the PC- Diagnostic Utility and then restart the computer	Click ☒ (close)	Press Ctrl + Alt + Del .

- By clicking the icon, you can execute the following operations:
 - : Start the diagnostic check from the beginning
 - : Stop the diagnostic check (You cannot restart the check partway through by clicking )
 - : Display help (click the screen or press **Space** to return to the original diagnostic check screen)

Hardware Diagnostics

Running the Diagnostic Check

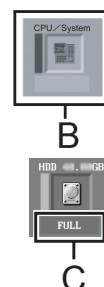
Disconnect any peripheral devices before running the diagnostic check.

- 1 Connect the AC adaptor, and turn on the wireless switch.**
During the diagnostic check, do not remove the AC adaptor, or attach any peripheral devices.
- 2 Turn on or restart the computer, and press F2 while [Panasonic] boot screen is displayed.**
The Setup Utility starts up.
 - If you are using the computer after changing the settings from the status at the time of purchase, we recommend that you make a note of the settings that are changed.
- 3 Press F9.**
At the confirmation message, select [Yes] and press Enter.
- 4 Press F10.**
At the confirmation message, select [Yes] and press Enter.
The computer will restart.
- 5 Press Ctrl + F7 while [Panasonic] boot screen is displayed.**
When the PC-Diagnostic Utility starts up, it will automatically begin the diagnostic check for all hardware components.
 - The touch pad and the internal keyboard cannot be used until alternating blue and yellow colors are displayed on the left side of the hardware icon (→ page 29). If the touch pad does not operate properly, press Ctrl + Alt + Del to restart the computer, or slide the power switch to turn the power off, and then restart the PC-Diagnostic Utility.

NOTE

- Using the following procedure, you can run a diagnostic check on a specified hardware component, or run an extended diagnostic check on the hard disk.

- ① Click  to stop the diagnostic check.
- ② Click the icon for the hardware that is not to be checked, so that the icon is displayed in gray (B).
When running a check on the hard disk, clicking the icon once will turn on the extended diagnostic check ("FULL" (C) will be displayed below the icon); click again, and the icon will be displayed in gray.
- ③ Click  to start the diagnostic check.



- 6 When all the hardware has been checked, confirm the diagnostic check results.**
If the display is red and the message "Check Result TEST FAILED" is displayed, you can assume that there is a problem with the computer's hardware. Confirm which hardware component is displayed as red, and contact your technical support office.
If the display is green and the message "Check Result TEST PASSED" is displayed, the computer's hardware is operating normally. Continue using the computer as it is. If the computer still does not operate properly, reinstall the software. (→ page 23)

NOTE

- If you run a memory diagnostic check after installing a new RAM module (sold separately) and the message "Check Result TEST FAILED" is displayed:
Remove the additional RAM module and run the diagnostic check again. If the message "Check Result TEST FAILED" is still displayed, you can assume that there is a problem with the internal RAM module.

- 7 After the diagnostic check is complete, click  (close), or press Ctrl + Alt + Del to restart the computer.**

LIMITED USE LICENSE AGREEMENT

THE SOFTWARE PROGRAM(S) ("PROGRAMS") FURNISHED WITH THIS PANASONIC® PRODUCT ("PRODUCT") ARE LICENSED ONLY TO THE END-USER ("YOU"), AND MAY BE USED BY YOU ONLY IN ACCORDANCE WITH THE LICENSE TERMS DESCRIBED BELOW. YOUR USE OF THE PROGRAMS SHALL BE CONCLUSIVELY DEEMED TO CONSTITUTE YOUR ACCEPTANCE OF THE TERMS OF THIS LICENSE.

Matsushita Electric Industrial Co., Ltd. ("MEI") has developed or otherwise obtained the Programs and hereby licenses their use to you. You assume sole responsibility for the selection of the Product (including the associated Programs) to achieve your intended results, and for the installation, use and results obtained therefrom.

LICENSE

- A. MEI hereby grants you a personal, non-transferable and non-exclusive right and license to use the Programs in accordance with the terms and conditions stated in this Agreement. You acknowledge that you are receiving only a LIMITED LICENSE TO USE the Programs and related documentation and that you shall obtain no title, ownership nor any other rights in or to the Programs and related documentation nor in or to the algorithms, concepts, designs and ideas represented by or incorporated in the Programs and related documentation, all of which title, ownership and rights shall remain with MEI or its suppliers.
- B. You may use the Programs only on the single Product which was accompanied by the Programs.
- C. You and your employees and agents are required to protect the confidentiality of the Programs. You may not distribute or otherwise make the Programs or related documentation available to any third party, by time-sharing or otherwise, without the prior written consent of MEI.
- D. You may not copy or reproduce, or permit to be copied or reproduced, the Programs or related documentation for any purpose, except that you may make one (1) copy of the Programs for backup purposes only in support of your use of the Programs on the single Product which was accompanied by the Programs. You shall not modify, or attempt to modify, the Programs.
- E. You may transfer the Programs and license them to another party only in connection with your transfer of the single Product which was accompanied by the Programs to such other party. At the time of such a transfer, you must also transfer all copies, whether in printed or machine readable form, of every Program, and the related documentation, to the same party or destroy any such copies not so transferred.
- F. You may not remove any copyright, trademark or other notice or product identification from the Programs and you must reproduce and include any such notice or product identification on any copy of any Program.

YOU MAY NOT REVERSE ASSEMBLE, REVERSE COMPILE, OR MECHANICALLY OR ELECTRONICALLY TRACE THE PROGRAMS, OR ANY COPY THEREOF, IN WHOLE OR IN PART.

YOU MAY NOT USE, COPY, MODIFY, ALTER, OR TRANSFER THE PROGRAMS OR ANY COPY THEREOF, IN WHOLE OR IN PART, EXCEPT AS EXPRESSLY PROVIDED IN THE LICENSE.

IF YOU TRANSFER POSSESSION OF ANY COPY OF ANY PROGRAM TO ANOTHER PARTY, EXCEPT AS PERMITTED IN PARAGRAPH E ABOVE, YOUR LICENSE IS AUTOMATICALLY TERMINATED.

TERM

This license is effective only for so long as you own or lease the Product, unless earlier terminated. You may terminate this license at any time by destroying, at your expense, the Programs and related documentation together with all copies thereof in any form. This license will also terminate effective immediately upon occurrence of the conditions thereof set forth elsewhere in this Agreement, or if you fail to comply with any term or condition contained herein. Upon any such termination, you agree to destroy, at your expense, the Programs and related documentation together with all copies thereof in any form.

YOU ACKNOWLEDGE THAT YOU HAVE READ THIS AGREEMENT, UNDERSTAND IT AND AGREE TO BE BOUND BY ITS TERMS AND CONDITIONS. YOU FURTHER AGREE THAT IT IS THE COMPLETE AND EXCLUSIVE STATEMENT OF THE AGREEMENT BETWEEN US, WHICH SUPERSEDES ANY PROPOSAL OR PRIOR AGREEMENT, ORAL OR WRITTEN, AND ANY OTHER COMMUNICATIONS BETWEEN US, RELATING TO THE SUBJECT MATTER OF THIS AGREEMENT.

About Intel® software products

The enclosed software products and documentation were developed at private expense, and are provided with "RESTRICTED RIGHTS." Use, duplication or disclosure by the government is subject to restrictions as set forth in FAR 52.227-14 and DFARS 252.227-7013 et. seq. or its successor. The use of this product by the government constitutes acknowledgment of Intel's proprietary rights in the product.

Contrat de licence d'usage limité

Le(s) logiciel(s) (les "Logiciels") fournis avec ce produit Panasonic® (le "Produit") sont exclusivement concédés en licence à l'utilisateur ultime ("vous"), et ils ne peuvent être utilisés que conformément aux clauses contractuelles cidessous. En utilisant les logiciels, vous vous engagez de manière définitive à respecter les termes, clauses et conditions des présentes.

Matsushita Electric Industrial Co., Ltd. ("MEI") a mis au point ou obtenu les Logiciels et vous en concède l'utilisation par les présentes. Vous assumez l'entière responsabilité du choix de ce Produit (y compris des Logiciels associés) pour obtenir les résultats escomptés, ainsi que de l'installation, de l'utilisation et des résultats obtenus.

Licence

- A. MEI vous octroie par les présentes le droit et la licence personnels, non cessibles et non exclusifs d'utiliser les Logiciels conformément aux termes, clauses et conditions de ce contrat. Vous reconnaissez ne recevoir qu'un droit limité d'utiliser les Logiciels et la documentation les accompagnant et vous vous engagez à n'obtenir aucun droit de titre, propriété ni aucun autre droit vis-à-vis des Logiciels et de la documentation les accompagnant ni vis-à-vis des algorithmes, concepts, dessins, configurations et idées représentés par ou incorporés dans les Logiciels et la documentation les accompagnant, dont les titres, propriété et droits resteront tous à MEI ou à leurs propriétaires.
- B. Vous ne pouvez utiliser les Logiciels que sur le Produit unique qui est accompagné par les Logiciels.
- C. Vous et vos employés ou agents êtes requis de protéger la confidentialité des Logiciels. Vous ne pouvez ni distribuer ni mettre les Logiciels et la documentation les accompagnant à la disposition d'un tiers, par partage de temps ou de quelque autre manière que ce soit, sans l'autorisation écrite préalable de MEI.
- D. Vous ne pouvez ni copier ni reproduire ni permettre la copie ni la reproduction des Logiciels ni de la documentation les accompagnant pour quelque fin que ce soit, à l'exception d'une (1) copie des Logiciels à des fins de sauvegarde uniquement pour soutenir votre utilisation des Logiciels sur le Produit unique qui est accompagné par les Logiciels. Vous ne pouvez ni modifier ni tenter de modifier les Logiciels.
- E. Vous ne pouvez céder les Logiciels et en octroyer la licence à une autre partie qu'en rapport avec votre cession du Produit unique qui est accompagné par les Logiciels à cette autre partie. Au moment de cette cession, vous devez céder également toutes les copies, que ce soit sous forme imprimée ou lisible par la machine, de tous les Logiciels ainsi que de la documentation les accompagnant, à la même partie ou détruire les copies non cédées.
- F. Vous ne pouvez retirer aucune marque de droits d'auteur, marque de commerce ou autre ni aucune identification de produit des Logiciels et vous devez reproduire et inclure toutes ces notices ou identifications de produit sur toutes les copies des Logiciels.

Vous ne pouvez assembler en sens inverse, compiler en sens inverse ni retracer les Logiciels ni aucune de leurs copies, de façon électronique ou mécanique, en tout ou en partie.

Vous ne pouvez utiliser, copier, modifier, altérer ni céder les Logiciels ni aucune de leurs copies, en tout ou en partie, à l'exception de ce qui est expressément stipulé dans ce contrat.

Si vous cédez la possession de toute copie ou de tout Logiciel à une autre partie, à l'exception de ce qui est autorisé au paragraphe E ci-dessus, votre licence est automatiquement résiliée.

Termes, clauses et conditions

Cette licence n'est effective que pour la durée de possession ou de crédit-bail du Produit, à moins d'une résiliation antérieure. Vous pouvez résilier cette licence à tout moment en détruisant, à vos frais, les Logiciels et la documentation les accompagnant avec toutes leurs copies, sous quelque forme que ce soit. Cette licence sera également résiliée, avec application immédiate, si les conditions de résiliation définies ailleurs dans ce contrat se sont réalisées ou si vous ne respectez pas les termes, clauses et conditions qui y sont contenues. Au moment de la résiliation, vous acceptez de détruire, à vos frais, les Logiciels et la documentation les accompagnant avec toutes leurs copies, sous quelque forme que ce soit.

Vous reconnaissez avoir lu ce contrat, en avoir compris toute la substance et avoir accepté de respecter ses termes, clauses et conditions. Vous reconnaissez en outre qu'ils sont la description complète et exclusive du contrat conclu entre nous, contrat qui remplace et annule toute proposition ou contrat précédent, écrit ou oral, et toute autre communication entre nous, relativement à l'objet du présent contrat.

Specifications

To check CPU speed, memory size and the hard disk drive (HDD) size:

Start the Setup Utility (→  *Reference Manual* “Setup Utility”) and select [Information] menu.

[CPU Speed]: CPU speed, [System Memory]: Memory size, [Primary Master]: Hard disk drive size

■ Main Specifications

Model No.		CF-W5LWEZZBM
CPU/ Secondary cache memory		Intel® Core™ Solo Processor Ultra Low Voltage U1400 (1.20 GHz, 2 MB ^{*1} L2 cache, 533 MHz FSB)
Chip Set		Mobile Intel® 945 GMS Express chip set
Main Memory		512 MB ^{*1} , DDR2 SDRAM (1536 MB ^{*1} Max.)
Video Memory		UMA (128 MB ^{*1} Max.) ^{*2}
Hard Disk Drive		60 GB ^{*3}
CD/DVD Drive		USB 2.0 connection interface DVD-ROM & CD-R/RW Drive built-in, Buffer underrun error prevention function: Supported
Continuous Data Transfer Speed ^{*4*5}	Reading ^{*6}	●DVD-RAM ^{*7} : 2X (4.7 GB ^{*3})/1X (2.6 GB ^{*3}) ●DVD-R ^{*8} : 4X (Max.) ●DVD-RW: 4X (Max.) ●DVD-ROM: 8X (Max.) ●CD-ROM: 24X (Max.) ●CD-R: 24X (Max.) ●CD-RW: 24X (Max.) ●+R: 4X (Max.) ●+R DL: 4X (Max.) ●+RW: 4X (Max.)
	Writing ^{*9}	●CD-R: 4X/8X/10-16X/10-24X ●CD-RW: 4X ●High-Speed CD-RW: 4X/8X/10X ●Ultra-Speed CD-RW: 10X/10-16X/10-24X
Supported Disks/Format ^{*5}	Reading	●DVD-ROM (Single Layer, Dual Layer) ●DVD-Video ●DVD-R ^{*8} (1.4 GB, 3.95 GB, 4.7 GB) ^{*3} ●DVD-RW (Ver.1.1/1.2 1.4 GB, 4.7 GB, 9.4 GB) ^{*3} ●DVD-RAM ^{*7} (1.4 GB, 2.8 GB, 2.6 GB, 5.2 GB, 4.7 GB, 9.4 GB) ^{*3} ●+R (4.7 GB) ^{*3} ●+R DL (8.5 GB) ^{*3} ●+RW (4.7 GB) ^{*3} ●CD-Audio ●CD-ROM (XA compatible) ●CD-R ●Photo CD (multiple session compatible) ●Video CD ●CD-EXTRA ●CD-RW ●CD-TEXT
	Writing	●CD-R ●CD-RW
Display Method		12.1 XGA type (TFT) (1024 × 768 dots)
Internal LCD		65,536/16,777,216 colors (1024 × 768 dots) ^{*10}
External Display ^{*11}		65,536/16,777,216 colors (800 × 600 dots/1024 × 768 dots/1280 × 768 dots/1280 × 1024 dots/1400 × 1050 dots/1600 × 1200 dots/2048 × 1536 dots (60 Hz) ^{*12})
Simultaneous Display on LCD + External Display ^{*11}		65,536/16,777,216 colors (800 × 600 dots, 1024 × 768 dots) ^{*10}
Wireless LAN		Intel® PRO/Wireless 3945 ABG Network Connection (→ page 34)
LAN ^{*13}		IEEE 802.3 10Base-T, IEEE 802.3u 100Base-TX
Modem		Data: 56 kbps (V.92) FAX: 14.4 kbps
Sound		WAVE and MIDI playback, Intel® High Definition Audio subsystem support, Monaural Speaker (built in)
Security Chip		TPM (TCG V1.2 compliant) ^{*14}
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 ^{*15}	× 1, Data transfer rate = 8 MB per second
RAM Module Slot		× 1, DDR2 SDRAM, 172-pin, 1.8 V, Micro DIMM, PC2-4200 Compliant ^{*16}
Interface		USB Ports × 2 (USB2.0 × 2) ^{*17} / Modem Port (RJ-11) / LAN Port (RJ-45) ^{*13} / External Display Port: Mini Dsub 15-pin female / Microphone Jack: Miniature jack, 3.5 DIA / Headphone Jack: Miniature jack, 3.5 DIA / Mini Port Replicator connector: Dedicated 50-pin male
Keyboard/Pointing Device		83 keys/Touch Pad
Power Supply		AC adaptor or Battery pack
AC Adaptor ^{*18}		Input: 100 V - 240 V AC, 50 Hz/60 Hz Output: 16 V DC, 2.5 A
Battery Pack		Li-ion 10.65 V, 5.7 Ah
Operating Time ^{*19}		Approx. 5.5 hours - 11 hours ^{*20} (Approx. 8 hours ^{*21}) (Disable Economy Mode (ECO))
Charging Time ^{*22}		Approx. 5 hours (Power off)/Approx. 6.5 hours (Power on)

Specifications

Model No.			CF-W5LWEZZBM
Power Consumption*23			Approx. 35 W*24 / Approx. 40 W (maximum when recharging in the ON state)
Physical Dimensions (W × H × D)			268 mm × 33.1 mm (at the front)/50.4 mm (at the rear) × 218 mm (excluding protrusion) {10.6 " × 1.3 " / 2.0 " × 8.6 "}
Weight*25			Approx. 1330 g {2.9 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)
OS*26			Microsoft® Windows® XP Professional Service Pack 2 with Advanced Security Technologies (NTFS File system)
Pre-installed Software*26			Microsoft® Internet Explorer 6 Service Pack 2 / DirectX 9.0c / Microsoft® Windows® Media Player 10 / Microsoft® Windows® Movie Maker 2.1 / Microsoft® .NET Framework 1.1 SP1/2.0 / Adobe Reader / Intel® PROSet/Wireless Software <Only for model with wireless LAN> / SD Utility / Icon Enlarger / Loupe Utility / Touch Pad Utility / DMI Viewer / PC Information Viewer / WinDVD™5 (OEM Version) / B's Recorder GOLD8 BASIC / B's CLiP 6*27 / Hotkey Settings / Optical Disc Drive Letter-Setting Utility / Optical Disc Drive Power-Saving Utility / Wireless Switch Utility <Only for model with wireless LAN/wireless WAN> / Economy Mode (ECO) Setting Utility / Battery Recalibration Utility / Infineon TPM Professional Package V2.5*28 / Recover Pro 6*28
			Setup Utility / Hard Disk Data Erase Utility*29 / PC-Diagnostic Utility*30

■ Wireless LAN <Only for model with wireless LAN>

Data Transfer Rates	IEEE802.11a: 54/48/36/24/18/12/9/6 Mbps (automatically switched) ^{*31} IEEE802.11b: 11/5.5/2/1 Mbps (automatically switched) ^{*31} IEEE802.11g: 54/48/36/24/18/12/9/6 Mbps (automatically switched) ^{*31}
Standard Supported	IEEE802.11a/IEEE802.11b/IEEE802.11g
Transmission Method	OFDM system, DS-SS system
Wireless Channels Used	IEEE802.11a: Channels 36/40/44/48/52/56/60/64/149/153/157/161/165 IEEE802.11b/ IEEE802.11g: Channels 1 to 11
RF Frequency Band	IEEE802.11a: 5.18 - 5.32 GHz, 5.745 - 5.825 GHz IEEE802.11b/ IEEE802.11g: 2412 - 2462 MHz

^{*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. Your operating system or some application software will report as fewer GB.

^{*4} Data transfer speeds indicate values measured by Matsushita Electric Industrial Co., Ltd. The data transfer rate of DVD per 1X speed is 1,350 KB/s. The data transfer rate of CD per 1X speed is 150 KB/s.

^{*5} Performance of CD-R, CD-RW, DVD-RAM, DVD-R, DVD-RW, +R, +R DL, and +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.
Does not support reading from DVD-R DL.

^{*6} 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.

^{*7} Only non-cartridge type or removable cartridge type can be used.

^{*8} 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.

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

^{*10} A 16,777,216 color display is achieved by using the dithering function.

^{*11} Display may be impossible using some connected external displays.

^{*12} When using an external display with a resolution of 2048 x 1536 dots, use a display that supports a 60Hz refresh rate. If an external display that does not support a 60Hz refresh rate is used, images may not be displayed properly.

^{*13} Some devices cannot be used depending on the port type.

^{*14} For information on TPM, click [start] - [Run] and input "c:\util\drivers\tpm\README.pdf", and refer to the Installation Manual of "Trusted Platform Module (TPM)".

^{*15} Operation has been tested and confirmed using Panasonic SD Memory Cards with a capacity of up to 2 GB. The transfer rate using the SD Memory Card slot on this computer is 8 MB per second. (This is a theoretical value, and differs from actual speeds.)
The transfer rate is 8 MB per second even if you use an SD Memory Card that supports high-speed transfer rates. Operation on other SD equipment is not guaranteed. This computer is not compatible with MultiMediaCards or SDHC Memory Cards.
Do not insert these kinds of cards.

*16 Only a RAM module designed for DDR2 (PC2-4200) can be added (Panasonic : CF-BAW0512U, CF-BAW1024U). JEDEC standard 214 pin Micro DIMM cannot be used. PC2100 / PC2700 172 pin Micro DIMM cannot be used. If a PC2-3200 RAM module is installed, the main memory processing speed may become slower.

*17 Does not guarantee operation of all USB-compatible peripherals.

*18 <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.

20-M-2-1

*19 Varies depending on the usage conditions, or when an optional device is attached. Measured when the power saving function on the USB2.0 USB Root Hub is set to on. (At the time of purchase, the power saving function is activated.) When Economy Mode (ECO) is enabled, the operating time becomes approximately 20% shorter than when it is disabled.

*20 Measured using BatteryMark™ Version 4.0.1 (LCD brightness : Maximum - Minimum).

*21 Measured using MobileMark™ 2005 (LCD brightness : 60 cd/m²).

*22 Varies depending on the usage conditions, CPU speed, etc. It may take a long time to charge a fully discharged battery.

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

*24 Rated power consumption.

23-E-1

*25 Average value. May differ depending on models.

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

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

*28 Must be installed before use.

*29 The Product Recovery DVD-ROM is required.

*30 For startup methods, refer to "Hardware Diagnostics" (➔ page 29).

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



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

Outline of the International ENERGY STAR® Office Equipment Program

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

22-E-1

Matsushita Electric Industrial Co., Ltd.
Web Site : <http://panasonic.net>

