



# Panasonic®

## OPERATING INSTRUCTIONS

Personal Computer

Model No. **CF-31** series

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Getting Started

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Troubleshooting

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Appendix




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

To access the on-screen manual  
→ page 18 “On-screen Manual”

# Introduction

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

## ■ Terms and illustrations in these instructions

<b>CAUTION</b> :	Conditions that may result in minor or moderate injury.
<b>NOTE</b> :	Useful and helpful information.
<u>Enter</u> :	Press [Enter] key.
<u>Fn + F5</u> :	Press and hold [Fn] key, and then press [F5] key.
<b>Windows 7</b>	
 (Start) - [All Programs] :	Click  (Start), and then click [All Programs]. You may need to double-click in some cases.
<b>Windows XP</b>	
[start] - [Run] :	Click [start], and then click [Run]. You may need to double-click in some cases.
→ :	Page in these Operating Instructions or in the Reference Manual.
 :	Reference to the on-screen manuals.

- **Windows 7** indicates Genuine Windows® 7 Professional Operating System.
- **Windows XP** indicates Genuine Microsoft® Windows® XP Professional Operating System.
- 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.
  - “Genuine Windows® 7 Professional 32-bit Service Pack 1” and “Genuine Windows® 7 Professional 64-bit Service Pack 1” as “Windows” or “Windows 7”
  - “Genuine Microsoft® Windows® XP Professional Service Pack 3” as “Windows”, “Windows XP” or “Windows XP Professional”
  - DVD MULTI drive as “CD/DVD drive”
  - Circular media including DVD-ROM and CD-ROM as “discs”

## ■ Disclaimer

Computer specifications and manuals are subject to change without notice. Panasonic Corporation assumes no liability for damage incurred directly or indirectly from errors, omissions or discrepancies between the computer and the manuals.

## ■ Trademarks

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Intel, Core, Centrino and PROSet are either registered trademarks or trademarks of Intel Corporation.

SDXC Logo is a trademark of SD-3C, LLC.



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HDMI, the HDMI Logo and High-Definition Multimedia Interface are trademarks or registered trademarks of HDMI Licensing LLC in the United States and other countries.

Names of products, brands, etc., appearing in this manual are trademarks or registered trademarks of their respective own companies.

# 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.

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.

### FCC RF Exposure Warning:

- This equipment is provided with PC Card slot that could be used with wireless transmitters, which will be specifically recommended when they become available. Other third-party wireless transmitters have not been RF exposure evaluated for use with this computer and may not comply with FCC RF exposure requirements.

<Only for model with wireless LAN/wireless WAN/Bluetooth>

- This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment.
- This equipment has been approved for portable operation, and does not require any minimum spacing be provided between antennas and all person's body.
- This equipment may not be co-located or operated with any other antenna or transmitter.

25-M-3

<Only for model with wireless WAN>

- This PC with WWAN transmitter installed, has been approved for mobile operation and to assure compliance with RF exposure requirements, a minimum of 20 cm (8 inches) must be maintained between the WWAN antenna located in top of LCD and all person's body (excluding extremities of hands, wrist and feet) during wireless modes of operation.

25-M-5

<Only for model with wireless LAN>

This product is restricted to indoor use due to its operation in the 5.15 to 5.25 GHz frequency range.

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

25-M-W-5

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

<Only for model with modem>

### 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 entry, or other individual sending the message and the telephone number of the sending machine or such business, other entity, or individual. In order to program this information into your fax software, you should refer to the manual of the Fax software being used.

# Read Me First

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 (e.g., 24 AWG) UL listed or CSA certified telecommunication line cord."  
"ATTENTION : Pour réduire le risque d'incendie, utiliser uniquement des conducteurs de télécommunications 26 AWG ou de section supérieure (p.ex. 24 AWG) UL énumérés ou CSA certifié."

16-M-1

USA Only: Disposal may be regulated in your community due to environmental considerations. For disposal or recycling information, please visit Panasonic website: <http://www.panasonic.com/environmental> or call 1-888-769-0149

65-M-2

<For USA-California Only>

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

See [www.dtsc.ca.gov/hazardouswaste/perchlorate/](http://www.dtsc.ca.gov/hazardouswaste/perchlorate/)

38-M-1

## Models for Canada

<Only for model with modem>

### 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

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'exécède pas 5."

IES: Voir sous le fond de l'ordinateur

17-Ca-1

### Canadian ICES-003

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

Cet appareil numérique de la classe B est conforme à la norme NMB-003 du Canada.

7-M-2

<Only for model with wireless LAN/Bluetooth>

### 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.

<Ne s'applique qu'aux modèles avec technologie Bluetooth/LAN sans fil/WAN sans fil>

### Industrie Canada

Cet équipement est conforme à la norme CNR-210 d'industrie Canada. Son fonctionnement est soumis aux deux conditions suivantes :

- (1) ce dispositif ne peut produire de brouillage, et
- (2) ce dispositif doit accepter le brouillage, y compris le brouillage pouvant entraîner le fonctionnement non désiré de l'appareil.

30-Ca-1-1

<Only for model with wireless LAN>

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 LE-LAN devices.

<Ne s'applique qu'aux modèles avec technologie LAN sans fil>  
Cet appareil (pour réseaux locaux radioélectriques) dans les bandes de fréquences 5150-5250 MHz est réervéàune utilisation àl'intérieur afin de réuire le risque d'interférence avec les systèmes satellites mobiles bicanaux.

Les radars forte puissance sont désignés comme étant les premiers utilisateurs (c'est-à-dire qu'ils ont la priorité) des bandes de fréquences 5250-5350 MHz et 5650-5850 MHz. Ces stations radars peuvent provoquer des interférences et/ou des dommages à ce périphérique.

30-Ca-2-1

25-Ca-1-1

## Models for Europe

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



### Declaration of Conformity (DoC)

"Hereby, Panasonic declares 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 above mentioned products, please contact our web address: <http://www.doc.panasonic.de>

Authorized Representative:

Panasonic Testing Centre

Panasonic Marketing Europe GmbH

Winsbergring 15, 22525 Hamburg, Germany

Network connection of Wired Modem.

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

In all the countries of European Economical Area and Turkey;

- Public Switched Telephony Networks

Technical Features of Wired Modem.

The terminal equipment includes the following features;

- DTMF dialing

- Maximum bitrate receiving mode: 56 kbit/s

- Maximum bitrate sending mode: 33.6 kbit/s

18-E-1

## Important Safety Instructions / Importantes Mesures De Sécurité

<Only for model with modem>

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

<Pour modèles avec modem uniquement>

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.

CONSERVER CES INSTRUCTIONS

19-F-1

## Information to the User

<Only for model with wireless LAN/Bluetooth>

### 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

## Informations destinées aux utilisateurs

<Uniquement les modèles avec réseau local sans fil et/ou Bluetooth>

### Ce produit et votre santé

Ce produit, comme tout autre appareil radio, émet de l'énergie radioélectrique. Toutefois, la quantité d'énergie émise par ce produit est beaucoup moins importante que l'énergie radioélectrique émise par des appareils sans fil tels que les téléphones portables. L'utilisation de ce produit ne comporte aucun risque pour le consommateur du fait que cet appareil opère dans les limites des directives concernant les normes et les recommandations de sécurité sur les fréquences radio. Ces normes et recommandations reflètent le consensus de la communauté scientifique et résultent de délibérations de jurys et comités de scientifiques qui examinent et interprètent continuellement les nouveautés de la vaste littérature sur les recherches effectuées. Dans certaines situations ou environnements, l'utilisation de ce produit peut être restreinte par le propriétaire du bâtiment ou par les représentants responsables de l'organisation. Ces situations peuvent être les suivantes par exemple :

- A bord d'un avion, ou
- Dans tout autre environnement où les risques d'interférence sur d'autres appareils ou services sont perçus ou identifiés comme dangereux.

Si vous n'êtes pas sûr de la réglementation applicable à l'utilisation d'appareils sans fil dans une organisation ou un environnement spécifique, (par exemple dans un aéroport) nous vous invitons à demander l'autorisation d'utiliser ce produit avant sa mise en marche.

Informations concernant la réglementation  
Nous déclinons toute responsabilité pour toute interférence radio ou télévision causée par des modifications non autorisées apportées à ce produit. La correction d'interférences causées par de telles modifications non autorisées sera la seule responsabilité de son utilisateur. Nous-mêmes, les revendeurs officiels et les distributeurs ne sommes pas responsables de tout dégât ou de toute violation des règlements de l'État pouvant découler du non-respect de ces directives.

26-F-1

## Safety Precautions

<Only for model with wireless WAN>

The following safety precautions must be observed during all phases of the operation, usage, service or repair of any Personal Computer or Handheld Computer incorporating wireless WAN modem. Manufacturers of the cellular terminal are advised to convey the following safety information to users and operating personnel and to incorporate these guidelines into all manuals supplied with the product. Failure to comply with these precautions violates safety standards of design, manufacture and intended use of the product. Panasonic assumes no liability for customer failure to comply with these precautions.



When in a hospital or other health care facility, observe the restrictions on the use of mobiles. Switch Personal Computer or Handheld Computer incorporating wireless WAN modem off, if instructed to do so by the guidelines posted in sensitive areas. Medical equipment may be sensitive to RF energy.

The operation of cardiac pacemakers, other implanted medical equipment and hearing aids can be affected by interference from Personal Computer or Handheld Computer incorporating wireless WAN modem placed close to the device. If in doubt about potential danger, contact the physician or the manufacturer of the device to verify that the equipment is properly shielded. Pacemaker patients are advised to keep their Personal Computer or Handheld Computer incorporating wireless WAN modem away from the pacemaker, while it is on.



Switch off Personal Computer or Handheld Computer incorporating wireless WAN modem before boarding an aircraft. Make sure it cannot be switched on inadvertently. The operation of wireless appliances in an aircraft is forbidden to prevent interference with communications systems. Failure to observe these instructions may lead to the suspension or denial of cellular services to the offender, legal action, or both.



Do not operate Personal Computer or Handheld Computer incorporating wireless WAN modem in the presence of flammable gases or fumes. Switch off the cellular terminal when you are near petrol stations, fuel depots, chemical plants or where blasting operations are in progress. Operation of any electrical equipment in potentially explosive atmospheres can constitute a safety hazard.



Your Personal Computer or Handheld Computer incorporating wireless WAN modem receives and transmits radio frequency energy while switched on. Remember that interference can occur if it is used close to TV sets, radios, computers or inadequately shielded equipment. Follow any special regulations and always switch off Personal Computer or Handheld Computer incorporating wireless WAN modem wherever forbidden, or when you suspect that it may cause interference or danger.



Road safety comes first! Do not use a Personal Computer or Handheld Computer incorporating wireless WAN modem while driving a vehicle. Do not place the computer with wireless WAN modem in an area where it could cause personal injury to the driver or passengers. It is recommended to stow the unit in the boot or secure stowage area while driving. Do not place the computer with wireless WAN modem in an area over an air bag or in the vicinity where an air bag may deploy.

Air bags inflate with great force and if the computer with wireless WAN modem is placed in the air bag deployment area may be propelled with great force and cause serious injury to occupants of the vehicle.



SOS

**IMPORTANT!**

Personal Computer or Handheld Computer incorporating wireless WAN modem operate using radio signals and cellular networks cannot be guaranteed to connect in all conditions. Therefore, you should never rely solely upon any wireless device for essential communications, for example emergency calls.

Remember, in order to make or receive calls, Personal Computer or Handheld Computer incorporating wireless WAN modem must be switched on and in a service area with adequate cellular signal strength.

Some networks do not allow for emergency calls if certain network services or phone features are in use (e.g. lock functions, fixed dialing etc.). You may need to deactivate those features before you can make an emergency call.

Some networks require that a valid SIM card be properly inserted in Personal Computer or Handheld Computer incorporating wireless WAN modem.

27-1-2

## 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.

### 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-E-1

15-F-1

## For Used in Motor Vehicle /Pour L'utilisation Dans Un Véhicule Motorisé

Warning: Notebook Computer may be installed in a motor vehicle and visible to the driver only if used to support vehicle related functions such as vehicle information, system control, rear or side observation and navigation. If used for entertainment purpose, such as television reception or video play, it must be installed to the rear of the driver's seat where it will not be visible, directly or indirectly, to the operator of the motor vehicle. Check with individual state/provincial laws to determine lawful use of this product while operating within a motor vehicle.

Avertissement : L'ordinateur bloc-notes peut être installé dans un véhicule motorisé et dans le champ de vision du conducteur uniquement en tant que dispositif d'aide aux fonctions du véhicule, comme par exemple pour fournir des informations sur le véhicule, comme dispositif de contrôle de système, pour l'observation à l'arrière ou sur les côtés du véhicule, ainsi que pour fournir de l'information routière. Pour toute utilisation à fin de divertissement, comme par exemple pour regarder la télévision ou jouer à des jeux vidéo, il doit être installé à l'arrière du siège du conducteur, en un emplacement où il ne sera pas visible, ni directement ni indirectement, pour le conducteur du véhicule motorisé. Vérifiez les lois fédérales et nationales qui régissent l'utilisation légale de cet appareil à l'intérieur d'un véhicule motorisé.

35-M-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

Laser safety information is appropriate only when drive with laser is installed.

12-M-2-1

### AVERTISSEMENT!

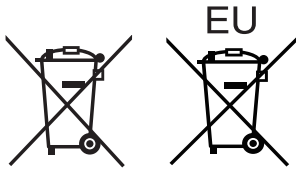
CET APPAREIL UTILISE UN LASER. L'UTILISATION DE COMMANDES OU DE RÉGLAGES OU L'EXÉCUTION DE PROCÉDURES AUTRES QUE CELLES SPÉCIFIÉES ICI PEUVENT PROVOQUER UNE EXPOSITION À DES RADIATIONS DANGEREUSES. NE PAS OUVRIR LES COUVERCLES NI ESSAYER DE RÉPARER SOIMÊME. CONFIER TOUT TRAVAIL D'ENTRETIEN À UN PERSONNEL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

12-F-1

Les mesures de sécurité relatives au laser ne s'appliquent que lors de l'installation d'une unité avec laser.

12-F-2-1

## Information on Disposal in other Countries outside the European Union



These symbols are only valid in the European Union.

If you wish to discard this product, please contact your local authorities or dealer and ask for the correct method of disposal.

53-M-1

## External Antenna

### FCC RF Exposure Warning:

The maximum allowable antenna gain for the external WWAN base whip antenna for the cellular band is 7.0 dBi and PCS band is 3.5 dBi. Also, user must maintain minimum 20 cm spacing between external antenna(s) and all person's body (excluding extremities of hands, wrist and feet) during wireless modes of operation.

32-M-1-1

### <For Canada>

This device has been designed to operate with the WWAN antenna having a maximum gain of 7.0 dB for the cellular band and 3.5 dB for the PCS band. WWAN Antenna having a higher gain is strictly prohibited per regulations of Industry Canada. The Required antenna impedance is 50 ohms.

To reduce potential radio interference to other users, the antenna type and its gain should be so chosen that the equivalent isotropically radiated power (EIRP) is not more than that required for successful communication.

### <Utilisation au Canada>

Cet appareil est conçu pour opérer avec une antenne WWAN (réseau étendu sans fil) dont le gain maximum est fixé à 7.0 pour la bande cellulaire et à 3.5 pour la bande de service de communications personnelles (PCS). Les règlements d'Industrie Canada interdisent l'utilisation d'une antenne WWAN dont le gain serait supérieur à cette limite. L'antenne doit avoir une impédance de 50 ohms.

Afin de réduire le risque d'interférence radioélectrique aux autres utilisateurs des bandes de fréquences, le type d'antenne et son gain doivent être tels que la puissance isotrope rayonnée équivalente (PIRE) n'est pas plus élevée que le niveau requis pour assurer la communication.

32-Ca-1-1



## Precautions

THIS PRODUCT IS NOT INTENDED FOR USE AS, OR AS PART OF, NUCLEAR EQUIPMENT/SYSTEMS, AIR TRAFFIC CONTROL EQUIPMENT/SYSTEMS, AIRCRAFT COCKPIT EQUIPMENT/SYSTEMS<sup>1</sup>, MEDICAL DEVICES OR ACCESSORIES<sup>2</sup>, LIFE SUPPORT SYSTEMS OR OTHER EQUIPMENTS/DEVICES/SYSTEMS THAT ARE INVOLVED WITH ENSURING HUMAN LIFE OR SAFETY. PANASONIC WILL NOT BE RESPONSIBLE FOR ANY LIABILITY RESULTING FROM THE USE OF THIS PRODUCT ARISING OUT OF THE FOREGOING USES.

<sup>1</sup> 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.

<sup>2</sup> As defined by the European Medical Device Directive (MDD) 93/42/EEC.

Panasonic cannot guarantee any specifications, technologies, reliability, safety (e.g. Flammability/Smoke/Toxicity/Radio Frequency Emission, etc) requirements related to aviation standards and medical equipment standards that differ from the specifications of our COTS (Commercial-Off-The-Shelf) products.

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

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

The CF-31 was developed based on thorough research into the real-world portable computing environments. Exhaustive pursuit of usability and reliability under harsh conditions led to innovations such as the magnesium alloy exterior, vibration damped hard disk drive and floppy disk drive, flexible internal connections. The CF-31's outstanding engineering has been tested using the strict MIL-STD- 810F (for vibration and shock) and IP (for dust and water) based procedures.

As with any portable computer device precautions should be taken to avoid any damage. The following usage and handling procedures are recommended.

Before putting the computer away, be sure to wipe off any moisture.

### If a Malfunction or Trouble Occurs, Immediately Stop Use

#### If a Malfunction Occurs, Immediately Unplug the AC Plug and the Battery Pack

- This product is damaged
- Foreign object inside this product
- Smoke emitted
- Unusual smell emitted
- Unusually hot

Continuing to use this product while any of the above conditions are present may result in fire or electric shock.

- If a malfunction or trouble occurs, immediately unplug the AC plug and remove the unit from this product. Then, contact your technical support office for repair.

#### Do Not Touch This Product and Cable When It Starts Thundering

Electric shock may result.

#### Do Not Connect the AC Adaptor to a Power Source Other Than a Standard Household AC Outlet

Otherwise, a fire due to overheating may result. Connecting to a

DC/AC converter (inverter) may damage the AC adaptor. On an airplane, only connect the AC adaptor/charger to an AC outlet specifically approved for such use.

#### Do Not Do Anything That May Damage the AC Cord, the AC Plug, or the AC Adaptor

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

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

#### Do Not Pull or Insert the AC Plug If Your Hands Are Wet

Electric shock may result.

#### Clean Dust and Other Debris of the AC Plug Regularly

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

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

#### Insert the AC Plug Completely

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

- Do not use a damaged plug or loose AC outlet.

#### Close the Connector Cover Tightly When Using This Product Where Is a Lot of Water, Moisture, Steam, Dust, Oily Vapors, etc.

The entry of foreign matter may cause a fire or electric shocks.

- If foreign matter has found its way inside, immediately turn the power off and unplug the AC cord, and then remove the battery pack. Then contact your technical support office.

#### Do Not Disassemble This Product

The high-voltage areas inside may give you an electric shock, or foreign matter may enter and result in a fire.

#### 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 This Product on Unstable Surface

If balance is lost, this product may fall over or drop, resulting in an injury.

#### Avoid Stacking

If balance is lost, this product may fall over or drop, resulting in an injury.

#### Do Not Leave This Product in High Temperature Environment for a Long Period of Time

Leaving this product where it will be exposed to extremely high temperatures such as near fire or in direct sunlight may deform the cabinet and/or cause trouble in the internal parts. Continued use in such a resulting condition may lead to short-circuiting or insulation defects, etc. which may in turn lead to a fire or electric shocks.

#### Do Not Block the Ventilation Hole (Exhaust)

Using this product wrapped in cloth or on top of bedding or a blanket can block the ventilation hole and cause heat to build up inside. Possibly resulting in a fire.

#### Hold the Plug When Unplugging the AC Plug

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

#### Do Not Move This Product While the AC Plug Is Connected

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

- If the AC cord is damaged, unplug the AC plug immediately.

#### Use Only the Specified AC Adaptor With This Product

Using an AC adaptor other than the one supplied (supplied with the unit or one sold separately as an accessory) may result in a fire.

#### Do Not Subject the AC Adaptor to Any Strong Impact

Using the AC adaptor after a strong impact such as being dropped may result in electric shock, short circuit, or fire.

# Read Me First

## Take a Break of 10-15 Minutes Every Hour

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

## Do Not Turn the Volume Up To Loud When Using Headphones

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

## Do Not Connect a Telephone Line, or a Network Cable Other Than the One Specified, into the LAN Port

If the LAN port is connected to a network such as the ones listed right, a fire or electric shock may result.

- Networks other than 1000BASE-T, 100BASE-TX or 10BASE-T
- Phone lines (IP phone (Internet Protocol Telephone), Telephone lines, internal phone lines (on-premise switches), digital public phones, etc.)

## Do Not Use With Exposing the Skin To This Product For a Long Period of Time

Using this product with exposing the skin to the heat source of this product or AC adaptor for a long period of time can cause a low-temperature burn.

## Do Not Expose the Skin to This Product When Using the Product In a Hot or Cold Environment

Burns, low-temperature burns or frostbite may result.

- When it is necessary to expose the skin to this product such as to scan a fingerprint, perform the operation in the shortest time possible.

<Only for model with modem>

## Use the Modem with a Regular Telephone Line

Connection to an internal phone line (on-premise switches) of a company or business office, etc. or to a digital public phone or use in a country or area not supported by the computer may result in a fire or electric shocks.

- Do not place the computer near a television or radio receiver.
- Keep the computer away from magnets. Data stored on the hard disk may be lost.

## Precautions (Battery Pack)

### Do Not Use With Any Other Product

The battery pack is rechargeable and was intended for the specified product. If it is used with a product 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 Methods Other Than Those Specified

If the battery is not charged using one of the specified methods, 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.

- If this product is subjected to a strong impact, stop using it immediately.

### 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 Product with a Battery Pack Other Than the One Specified

Use only the specified battery pack (CF-VZSU46AU) with your product. Use of battery packs other than those manufactured and supplied by Panasonic may present a safety hazard (generation of heat, ignition or rupture).

### When the battery pack has become degraded, replace it with a new one

Continued use of a damaged battery pack may result in heat generation, ignition or battery 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% 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.

### CAUTION:

Risk of Explosion if Battery is replaced by an Incorrect Type. Dispose of Used Batteries According to the Instructions.

58-E-1



### ATTENTION:

Il y a risque d'explosion si la batterie est remplacée par une batterie de type incorrect.

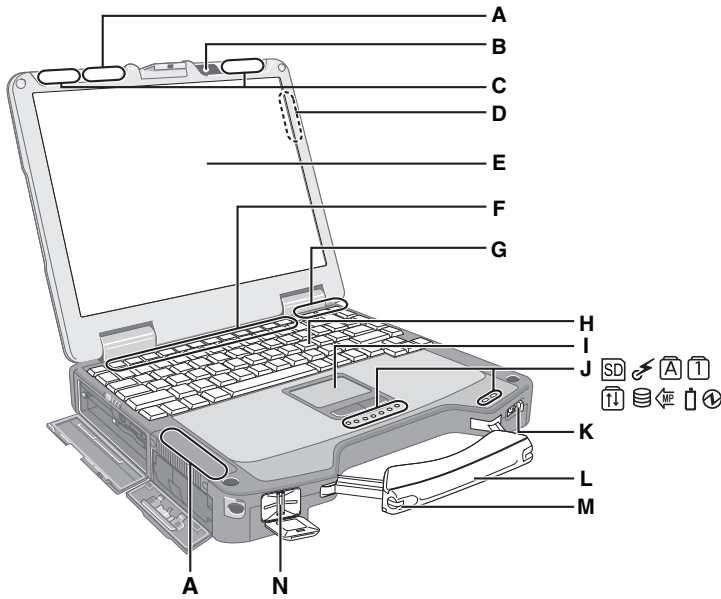
Mettre au rebut les batteries usagées conformément aux instructions.

58-F-1

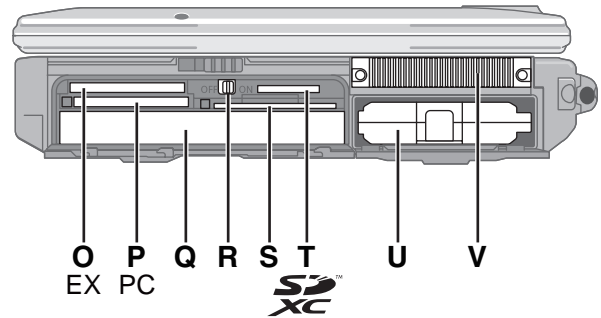
### NOTE

- The battery pack may become warm during recharging or normal use. This is completely normal.
- Recharging will not commence if internal temperature of the battery pack is outside of the allowable temperature range (0 °C to 50 °C {32°F to 122 °F}).  
(→  Reference Manual "Battery Power") Once the allowable range requirement is satisfied, charging begins automatically. Note that the recharging time varies based on the usage conditions. (Recharging takes longer than usual when the temperature is 10 °C {50 °F} or below.)
- If the temperature is low, the operating time is shortened. Only use the computer within the allowable temperature range.
- This computer has a high temperature mode function that prevents the degradation of the battery in high temperature environments. (→  Reference Manual "Battery Power") A level corresponding to a 100% charge for high temperature mode is approximately equivalent to an 80% charge level for normal temperature mode.
- 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



## Left side



### A: Wireless LAN Antenna

<Only for model with wireless LAN>  
 → Reference Manual "Wireless LAN"

### B: Web Camera

<Only for model with Web Camera>  
 To use the Web Camera, the software corresponding to the web camera is needed.

### C: Wireless WAN Antenna

<Only for model with wireless WAN>

### D: GPS Antenna (Rear side)

<Only for model with GPS>

### E: LCD

→ Reference Manual "Touchscreen" (Only for model with touchscreen)

### F: Function Key

→ Reference Manual "Key Combinations"

### G: Bluetooth Antenna

<Only for model with Bluetooth>  
 → Reference Manual "Bluetooth"

### H: Keyboard

### I: Touch Pad

### J: LED Indicator

- : SD Memory Card Indicator  
 (Blinking: During access)  
 → Reference Manual "SD Memory Card"
- : Wireless ready  
 This indicator lights when Wireless LAN, Bluetooth, and/or Wireless WAN are connected and ready. It does not necessarily indicate the On/Off condition of the wireless connection.  
 → Reference Manual "Wireless LAN", "Bluetooth", "Disabling/Enabling Wireless Communication"

: Caps lock

: Numeric key (NumLk)

: Scroll lock (ScrLk)

: Hard disk drive status

: Multimedia pocket device status or the second battery status.

: Battery status

→ Reference Manual "Battery Power"

: Power status

(Off: Power off/Hibernation, Green: Power on, Blinking green: Sleep (**Windows 7**)/Standby (**Windows XP**), Blinking green rapidly: Cannot power on or resume due to low temperature.)

### K: Power Switch

### L: Carrying Handle

### M: Stylus Holder

### N: Fingerprint Reader

<Only for model with Fingerprint Reader>  
 → Reference Manual "Fingerprint Reader"

### O: ExpressCard Slot

→ Reference Manual "PC Card / ExpressCard"

### P: PC Card Slot

→ Reference Manual "PC Card / ExpressCard"

### Q: Multimedia Pocket

→ Reference Manual "Multimedia Pocket"

### R: Wireless Switch

→ Reference Manual "Disabling/Enabling Wireless Communication"

### S: Smart Card Slot

<Only for model with Smart Card slot>  
 → Reference Manual "Smart Card"

### T: SD Memory Card Slot

→ Reference Manual "SD Memory Card"

### U: Battery Pack

Specified Battery pack: CF-VZSU46AU

### V: Ventilation Hole (Exhaust)

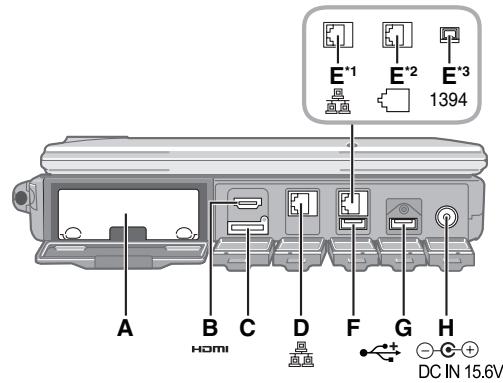


A lithium ion battery that is recyclable powers the product you have purchased. Please call 1-800-8-BATTERY for information on how to recycle this battery.

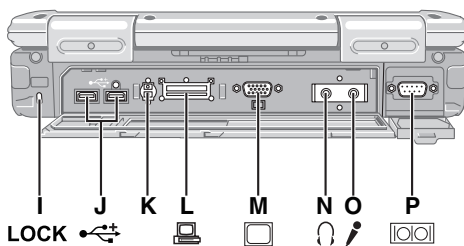
L'appareil que vous vous êtes procuré est alimenté par une batterie au lithium-ion. Pour des renseignements sur le recyclage de la batterie, veuillez composer le 1-800-8-BATTERY.

# Description of Parts

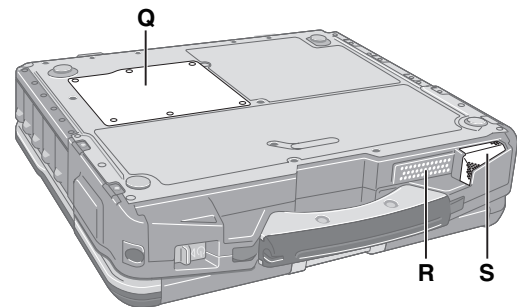
## Right side



## Rear side



## Bottom



### A: Hard Disk Drive

→ *Reference Manual* "Hard Disk Drive"

### B: HDMI Port

→ *Reference Manual* "External Display"

### C: SIM Card Slot

<Only for model with wireless WAN>  
Insert the SIM card into the SIM card slot with the contact side facing down and the cut corner facing forward.

### D: LAN Port

→ *Reference Manual* "LAN"

### E: 2nd LAN Port<sup>1</sup> / Modem Port<sup>2</sup> / IEEE 1394 Interface Connector<sup>3</sup>

<sup>1</sup> <Only for model with 2nd LAN>

→ *Reference Manual* "LAN"

<sup>2</sup> <Only for model with Modem>

→ *Reference Manual* "Modem"

<sup>3</sup> <Only for model with IEEE 1394>

→ *Reference Manual* "IEEE 1394 Devices"

### F: USB Port

→ *Reference Manual* "USB Devices"

### G: USB Port

→ *Reference Manual* "USB Devices"

### H: DC-IN Jack

### I: Security Lock

A Kensington cable can be connected.  
For further information, read the manual that comes with the cable.

### J: USB Port

→ *Reference Manual* "USB Devices"

### K: External Antenna Connector

### L: Expansion Bus Connector

→ *Reference Manual* "Port Replicator / Car Mounter"

### M: External Display Port (VGA)

→ *Reference Manual* "External Display"

### N: Headphone Jack

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

### O: 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.

### P: Serial Port

### Q: RAM Module Slot

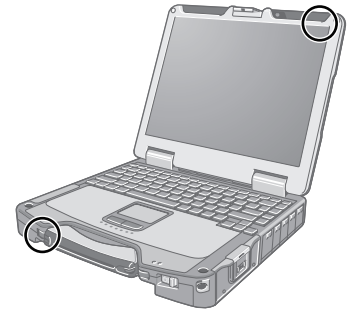
→ *Reference Manual* "RAM Module"

### R: Speaker

→ *Reference Manual* "Key Combinations"

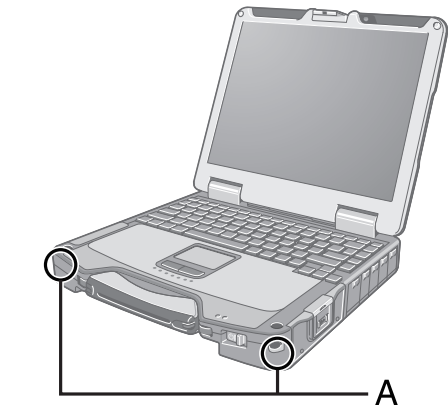
### S: Ventilation Hole (Intake)

- This computer contains a magnet and magnetic products at the locations circled in the illustration at right. Avoid leaving metallic object or magnetic media in contact with these areas.

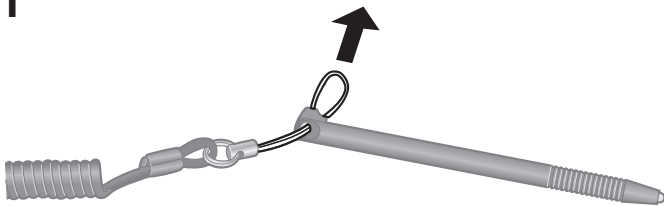


## Attaching the stylus to the computer (only for model with touchscreen)

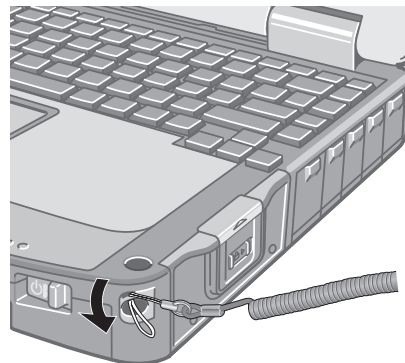
Use the tether to attach the stylus to the computer so you will not lose it. There are holes (A) to attach it.



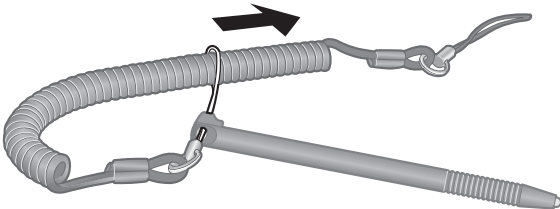
1



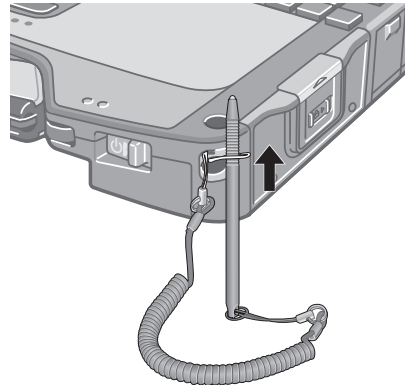
3



2



4



### CAUTION

- Do not pull the tether with excessive force. The stylus may hit the computer, person's body or other objects when released.

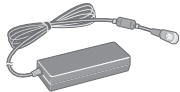
# First-time Operation

## ■ Preparation

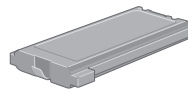
① Check and identify the supplied accessories.

If you do not find the described accessories, contact Panasonic Technical Support (→ page 35).

- AC Adaptor . . . . . 1
- AC Cord . . . . . 1
- Battery Pack . . . . . 1



Model No: CF-AA5713A



Model No: CF-VZSU46AU

<Only for model with touchscreen>

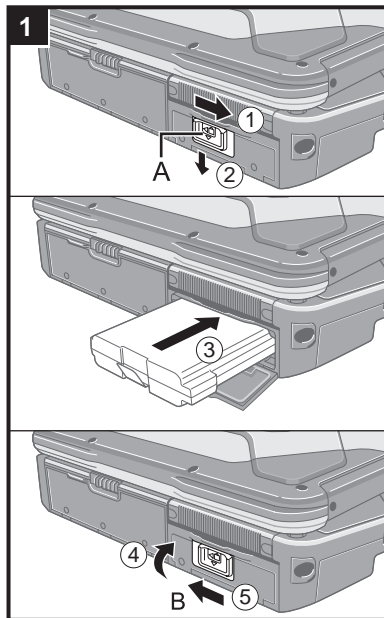
- Soft Cloth . . . . . 1
- Tether . . . . . 1
- Stylus . . . . . 1



(→ Reference Manual "Touchscreen")

- Operating Instructions (This book) . . . . . 1

② Read the LIMITED USE LICENSE AGREEMENT before breaking the seal on the computer's packaging (→ page 28).



### 1 Inserting the Battery Pack

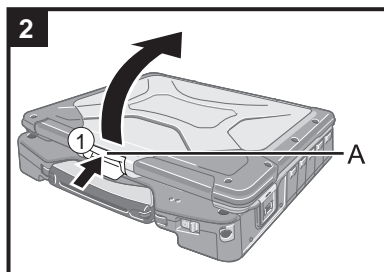
- ① Slide the latch (A) to the right to unlock the cover.
- ② Slide the latch (A) down, and open the cover.
- ③ Insert the battery pack until it securely fits the connector.
- ④ Close the cover until it clicks.
- ⑤ Slide the latch (B) to the left to lock the cover.

#### 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.

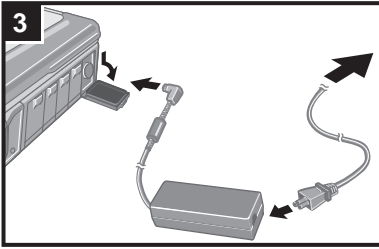
#### NOTE

- 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 the following period of time:
    - When power is off: Approx. 6 weeks
    - In sleep (**Windows 7**)/standby (**Windows XP**): Approx. 3 days<sup>\*1</sup>
    - In hibernation: Approx. 6 days<sup>\*1</sup>
- <sup>\*1</sup> If "Wake Up from wired LAN" is disabled, the period of time will be longer.



### 2 Opening the Display

- ① Push and hold the latch (A), and lift open the display.

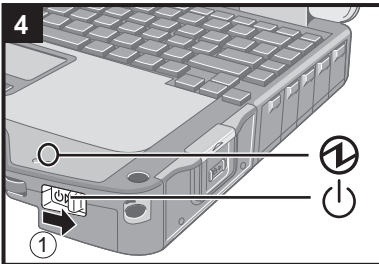


### 3 Connect your computer to a power outlet.

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.


① Slide and hold the power switch  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 4 seconds or longer.
- Once you turn off the computer, wait for 10 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
  - Touching the keyboard, touch pad or touchscreen (only for model with touchscreen)
  - Closing the display
  - Turn on/off the wireless switch
- 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 Panasonic Technical Support (→ page 35).
- Any changes from the default setting of the Setup Utility must not be made until the First-time Operation is completed.

### 5 Setup Windows.


Follow the on-screen instructions.

- The computer restarts several times. Do not touch the keyboard or touch pad, and wait until the hard disk drive indicator  has turned off.

#### Windows 7

- After the computer is turned on, the screen remains black or unchanged for a while. This is not a malfunction. Wait for a moment until the Windows setup screen appears.
- During setup of Windows, use the touch pad and clicking to move the cursor and to click an item.
- Setup of Windows will take approximately 20 minutes.  
Go to the next step, confirming each message on the display.
- “Join a wireless network” screen may not appear.  
You can set the Wireless Network after the setup of Windows is complete.

#### CAUTION

- You can change the user name, password, image and security setting after setup of Windows.
- Remember your password. If you forget the password, you cannot use Windows. Creating a password reset disk beforehand is recommended.
- Wait until the hard disk drive indicator  has turned off.

## Windows 7

- Do not use the following words for user name: CON, PRN, AUX, CLOCK\$, NUL, COM1 to COM9, LPT1 to LPT9, @. In particular, if you create a user name (account name) that includes the "@" mark, a password will be requested at the log-on screen, even if no password has been set. If you try to log on without entering a password, "The user name or password is incorrect." may be displayed and you will not be able to log on to Windows (→ page 25).

## Windows XP

- You cannot choose the following words for user name and password: CON, PRN, AUX, CLOCK\$, NUL, COM1 to COM9, LPT1 to LPT9.
- 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.
- If "An unexpected error has occurred ..." (or a similar message) is displayed, click [OK]. This is not a malfunction.


## 6 <Only for model with touchscreen> Perform the touchscreen calibration.

### Windows 7

- Before performing the calibration, close Tablet PC Input Panel.


#### NOTE

- At first, log on to Windows as an administrator and perform this calibration.

- ① Click  (Start) - [Control Panel] - [Hardware and Sound] - [Tablet PC Setting].
- ② Click [Calibrate].
- ③ Using the stylus, touch each of the "+" target marks one by one, and then click [Yes].
- ④ Click [OK].

#### NOTE

- Perform the following calibration for each user.

- ① Click  (Start) - [Control Panel] - [Hardware and Sound] - [Tablet PC Setting].
- ② Click [Calibrate].
- ③ Using the stylus, touch each of the "+" target marks one by one, and then click [Yes].
- ④ Click [OK].

- Perform the calibration for the orientation to be used.

### Windows XP

- ① Click [start] - [All Programs] - [Fujitsu Touch Panel (USB)] - [Touch Screen Calibration Utility].
- ② Using the stylus, touch each of the 12 "+" target marks one by one until it blinks, and then press Enter.
- ③ Press Enter.



## Windows XP

### 7 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 operating system. Creating a password reset disk beforehand is recommended.

#### NOTE

##### ● PC Information Viewer

This computer periodically records the management information of the hard disk, etc. The maximum data volume for each record is 1024 bytes.

This information is only used for estimating the cause in the case when the hard disk goes down by any possibility. They are never sent to outside via network nor used for any other purpose except for the purpose described the above.


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

(→  Reference Manual "Checking the Computer's Usage Status")

##### ■ Precaution against Starting Up/Shutting Down

- Do not do the following
  - Connecting or disconnecting the AC adaptor
  - Sliding the power switch
  - Touching the keyboard, touch pad, touchscreen (only for model with touchscreen), or external mouse
  - Closing the display
  - Turn on/off the wireless switch


#### NOTE

- To conserve power, the following power saving methods are set at the time of purchase.
    - The screen automatically turns off after 10<sup>2</sup> minutes of inactivity.
    - The computer automatically enters sleep<sup>2</sup>(**Windows 7**)/standby<sup>3</sup>(**Windows XP**) after 20 minutes of inactivity.
- <sup>2</sup> Windows XP :15 minutes
- <sup>3</sup> Refer to  Reference Manual "Sleep or Hibernation Functions" about resuming from sleep.

## Windows 7

##### ■ To change the partition structure

You can shrink a part of an existing partition to create unallocated disk space, from which you can create a new partition. This computer has a single partition as default setting.

- ① Click  (Start) and right-click [Computer], then click [Manage].
  - A standard user needs to enter an administrator password.
- ② Click [Disk Management].
- ③ Right-click the partition for Windows ("c" drive in the default setting), and click [Shrink Volume].
  - The partition size depends on the computer specifications.
- ④ Input the size in [Enter the amount of space to shrink in MB] and click [Shrink].
  - You cannot input a larger number than the displayed size.
  - To select [Reinstall to the first 3 partitions.] in reinstalling Windows 7 (→ page 22), 30000 MB or more is necessary for [Total size after shrink in MB].
- ⑤ Right-click [Unallocated] (the shrunk space in the step ④) and click [New Simple Volume].
- ⑥ Follow the on-screen instructions to make the settings, and click [Finish].  
Wait until formatting is completed.

#### NOTE

- You can create an additional partition using remaining unallocated space or newly creating unallocated space.
- To delete a partition, right-click the partition and click [Delete Volume] in step ③.

# On-screen Manual

You can access the Reference Manual and the Important Tips on the computer screen. 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:

**Windows 7** Double-click  on the desktop.

- Alternatively click  (Start) - [All Programs] - [Panasonic] - [On-Line Manuals] - [Reference Manual].

**Windows XP** Click [start] - [Reference Manual].


- Alternatively click [start] - [All Programs] - [Panasonic] - [On-Line Manuals] - [Reference Manual].

## ■ Important Tips

The Important Tips will provide you with the battery information so that you can use the battery pack in the optimum condition to obtain longer operation time.

### To access the Important Tips:

**Windows 7** Double-click  on the desktop.

- Alternatively click  (Start) - [All Programs] - [Panasonic] - [On-Line Manuals] - [Important Tips].

**Windows XP** Double-click  on the desktop.

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

#### NOTE

- When Adobe Reader update notice is displayed, we recommend you follow the on-screen procedure and update. See <http://www.adobe.com/> for the latest version of Adobe Reader.

#### CAUTION

- Do not remove the check mark for [IntelliMouse Wheel mode] in [Scroll Configuration] of [Touch Pad] in [Mouse] of [Control Panel]. The Adobe Reader scrolling function may not work correctly.

# Handling and Maintenance

## Operation environment

- Place the computer on a flat stable surface. Do not place the computer upright or turn it over. If the computer is exposed to an extremely strong impact, it may become damaged.
- Temperature: Operation : -10 °C to 50 °C {14 °F to 122 °F} (IEC60068-2-1, 2)<sup>\*1</sup>  
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.

- <sup>\*1</sup> Do not expose the skin to this product when using the product in a hot or cold environment. (→ page 10)  
If the computer is wet in temperatures of 0 °C {32 °F} or below, freeze damage may occur. Make sure to dry off the computer in such temperatures.
- Do not place the computer in the following areas, otherwise the computer may be damaged.
    - Near electronic equipment. Image distortion or noise may occur.
    - 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

This computer is designed to minimize shock to parts such as the LCD and the hard disk drive and equipped with a drip-proof keyboard, but no warranty is provided against any trouble caused by shock. Be extremely careful when handling the computer.

- When carrying the computer:
  - Turn off the computer.
  - Remove all external devices, cables, PC Cards and other protruding objects.
  - Remove a disc 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.
- Do not put anything (e.g., a piece of paper) between the display and keyboard.
- When you board an airplane, take the computer with you and never put it in your checked 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.
- The touch pad is designed to be used by finger tip. Do not place any object on its surface and do not press down strongly with sharp-pointed or hard objects that may leave marks (e.g., nails, pencils and ball point pens).
- Avoid any harmful substances such as oil from getting into the touch pad. The cursor may not work correctly.
- Be careful not to get injured by dropping or getting hit when carrying the computer.

<Only for model with touchscreen>

- Use only the included stylus to touch the touchscreen. Do not place any object on its surface and do not press down strongly with sharp-pointed or hard objects that may leave marks (e.g., nails, pencils and ball point pens).
- Do not use the touchscreen when dust or dirt (e.g., oil) is on the screen. Otherwise foreign particles on the screen/ stylus can scratch the screen surface or obstruct the stylus operation.
- Use the stylus only for touching the screen. Using it for any other purpose may damage the stylus and result in scratches on the screen.

### ■ When using peripheral devices

Follow these instructions and the Reference Manual to avoid any damage to the devices. Carefully read the instruction manuals of the peripheral devices.

- Use the peripheral devices conforming to the computer's specifications.
- Connect to the connectors in the correct direction.
- If it is hard to insert, do not try forcibly but check the connector's shape, direction, alignment of pins, etc.
- If screws are included, fasten them securely.
- Remove the cables when you carry the computer. Do not pull the cables forcibly.

# Handling and Maintenance

## ■ Preventing your computer from unauthorized use via wireless LAN/Bluetooth/wireless WAN


<Only for model with wireless LAN/Bluetooth/wireless WAN>

- Before using wireless LAN/Bluetooth/wireless WAN, make the appropriate security settings such as data encryption.

## Maintenance

### To clean the LCD panel

<Only for model with touchscreen>

Use the soft cloth included with the computer. (For further information, refer to “Suggestions About Cleaning the LCD Surface”. →  *Reference Manual* “Touchscreen”)

<Only for model without touchscreen>

Wipe with a soft dry cloth such as gauze.

### To clean areas other than the LCD panel

Wipe with a soft dry cloth such as gauze. When using detergent, dip a soft cloth in water-diluted detergent and wring it thoroughly.

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#### 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.
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