

Panasonic®



OPERATING INSTRUCTIONS Personal Computer

Model No. **CF-U1** series

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

To access the on-screen manual → page 32 “On-screen Manual”

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

Getting Started

Useful Information

Troubleshooting

Appendix

Introduction

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

In these instructions, the names are referred as follows.

Windows Vista

- “Windows Vista® Business” as “Windows” or “Windows Vista”

Windows XP

- “Microsoft® Windows® XP Professional Service Pack 2 with Advanced Security Technologies” as “Windows”, “Windows XP”

■ Terms and illustrations in these instructions

→ : Page in these Operating Instructions or in the Reference Manual.





: Reference to the on-screen manuals.

CAUTION : Conditions that may result in minor or moderate injury.

NOTE : Useful and helpful information.



: Press [↵] (Enter) key.

Fn +  (Del): Press and hold [Fn] key, and then press [] (Del) key.

This manual explains key operations based on QWERTY keyboard models for US-English.

When the key combinations differ in using Numeric keyboard model, see the footnote.

The key combinations may differ when using QWERTY keyboards other than US-English models. In such cases, look for the functions or icons (printed in blue) on your keyboard that correspond to the key functions in parenthesis in this manual, and press the key that is above or below these functions.

Click : Touch the screen with the stylus.

Right-click : **Windows Vista**

Touch and hold with the stylus, or touch and select the right button of “touch pointer”.

Windows XP

① Click  on the notification area.

② Click the object you want to right-click.

Windows Vista

 (Start) - [All Programs] :

Click  (Start), and then click [All Programs].

Windows XP

[start] - [All Programs] :

Click [start], and then click [All Programs].

You may need to double-click in some cases.

- Some illustrations are simplified to help your understanding and may look different from the actual unit.
- The CF-U1 series personal computer comes with two different models; the QWERTY keyboard model and the Numeric keyboard model.
This operating instructions manual uses illustrations of the QWERTY keyboard model.



<QWERTY keyboard model>



<Numeric keyboard model>

- 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.

■ **Disclaimer**

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Read Me First

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

Indication of the countries where WLAN is intended to be used:

AT BE BG CH CY CZ DE DK EE ES
FI FR GB GR HU IE IS IT LT LU
LV MT NL NO PL PT RO SE SI SK

Models for UK

Warning

This apparatus must be earthed for your safety.

To ensure safe operation the three-pin plug must be inserted only into a standard three-pin power point which is effectively earthed through the normal household wiring.

Extension cords used with the equipment must be three-core and be correctly wired to provide connection to earth. Wrongly wired extension cords are a major cause of fatalities.

The fact that the equipment operates satisfactorily does not imply that the power point is earthed and that the installation is completely safe.

For your safety, if you have any doubt about the effective earthing of the power point, consult a qualified electrician.

FOR YOUR SAFETY PLEASE READ THE FOLLOWING TEXT CAREFULLY

This appliance is supplied with a moulded three pin mains plug for your safety and convenience.

A 3 amp fuse is fitted in this plug.

Should the fuse need to be replaced please ensure that the replacement fuse has a rating of 3 amps and that it is approved by ASTA or BSI to BS 1362.

Check for the ASTA mark  or the BSI mark  on the body of the fuse.

If the plug contains a removable fuse cover you must ensure that it is refitted when the fuse is replaced.

If you lose the fuse cover the plug must not be used until a replacement cover is obtained.

A replacement fuse cover can be purchased from your local Panasonic Dealer.

IF THE FITTED MOULDED PLUG IS UNSUITABLE FOR THE SOCKET OUTLET IN YOUR HOME THEN THE FUSE SHOULD BE REMOVED AND THE PLUG CUT OFF AND DISPOSED OF SAFELY.

THERE IS A DANGER OF SEVERE ELECTRICAL SHOCK IF THE CUT OFF PLUG IS INSERTED INTO ANY 13 AMP SOCKET.

If a new plug is to be fitted please observe the wiring code as shown below.

If in any doubt please consult a qualified electrician.

Warning: THIS APPLIANCE MUST BE EARTHED.

Important


The wires in this mains lead are coloured in accordance with the following code:

Green-and-yellow: Earth

Blue: Neutral

Brown: Live

As the colours of the wires in the mains lead of this apparatus may not correspond with the coloured markings identifying the terminals in your plug, proceed as follows:

The wire which is coloured GREEN-and-YELLOW must be connected to the terminal in the plug which is marked by the letter E or by the safety earth symbol  coloured GREEN or GREEN-and-YELLOW.

The wire which is coloured Blue must be connected to the terminal which is marked with the letter N or coloured BLACK.

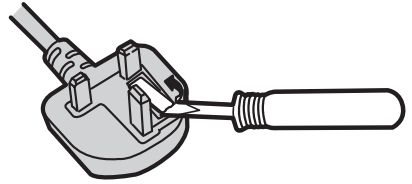
The wire which is coloured Brown must be connected to the terminal which is marked with the letter L or coloured RED.

The mains plug on this equipment must be used to disconnect the mains power. Please ensure that a socket outlet is available near the equipment and shall be easily accessible.

Read Me First

■ How to replace the fuse

Open the fuse compartment with a screwdriver and replace the fuse.



Warnings

- This equipment is not designed for connection to an IT power system. (An IT system is a system having no direct connections between live parts and Earth; the exposed-conductive-parts of the electrical installation are earthed. An IT system is not permitted where the computer is directly connected to public supply systems in the U.K.)
- Disconnect the mains plug from the supply socket when the computer is not in use.

This equipment is produced to BS800/1983.

8-E-1

Important Safety Instructions

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

1. Do not use this product near water, for example, near a bath tub, 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

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

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*1.

Read Me First



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

*1 In locations where the use of wireless devices is prohibited, please turn your Wireless Switch off, or check to make sure that your Wireless Ready Indicator is off. Please note that in some cases, wireless devices may be operating even in Sleep/Standby modes.

Lithium Battery

Lithium Battery!

This computer contains a lithium battery to enable the date, time, and other data to be stored. The battery should only be exchanged by authorized service personnel.

Warning!

A risk of explosion from incorrect installation or misapplication may possibly occur.

15-E-1

For Used in Motor Vehicle

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.

Read Me First

Information for Users on Collection and Disposal of Old Equipment and used Batteries



These symbols on the products, packaging, and/or accompanying documents mean that used electrical and electronic products and batteries should not be mixed with general household waste.

For proper treatment, recovery and recycling of old products and used batteries, please take them to applicable collection points, in accordance with your national legislation and the Directives 2002/96/EC and 2006/66/EC.

By disposing of these products and batteries correctly, you will help to save valuable resources and prevent any potential negative effects on human health and the environment which could otherwise arise from inappropriate waste handling.

For more information about collection and recycling of old products and batteries, please contact your local municipality, your waste disposal service or the point of sale where you purchased the items.

Penalties may be applicable for incorrect disposal of this waste, in accordance with national legislation.



For business users in the European Union

If you wish to discard electrical and electronic equipment, please contact your dealer or supplier for further information.

[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.



Note for the battery symbol (bottom two symbol examples):

This symbol might be used in combination with a chemical symbol. In this case it complies with the requirement set by the Directive for the chemical involved.

Precautions

THIS PRODUCT IS NOT INTENDED FOR USE AS, OR AS PART OF, NUCLEAR EQUIPMENT/SYSTEMS, AIR TRAFFIC CONTROL EQUIPMENT/SYSTEMS, OR AIRCRAFT COCKPIT EQUIPMENT/SYSTEMS². PANASONIC WILL NOT BE RESPONSIBLE FOR ANY LIABILITY RESULTING FROM THE USE OF THIS PRODUCT ARISING OUT OF THE FOREGOING USES.

² 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, 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.

39-E-1

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-U1 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 flash memory disk drive, flexible internal connections. The CF-U1'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 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 occurs, immediately turn the power off and unplug the AC plug, and then remove the battery pack. Then, contact your technical support office.

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.

Read Me First

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

There are high-voltage areas inside which may give you an electric shock if you should touch them. Do not touch the pins and circuit boards inside, and do not allow foreign matter to enter inside.

Also, remodeling or disassembly may cause 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.

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 (attached to your product or supplied by Panasonic) 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.

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 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 place the computer near a television or radio receiver.
- Keep the computer away from magnets. Data stored on the hard disk may be lost.

Interface Cable

Use of an interface cable longer than 3 m {9.84 feet} is not recommended.

11-E-1

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-VZSU53W) 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 degraded battery pack may generate high levels of heat, cause a fire to start and cause the pack to burst or explode.

- Do not touch the terminals on the battery pack. The battery pack may no longer function properly if the contacts are dirty or damaged.

Read Me First

- 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.
- In high-temperature environments, the battery takes longer to fully recharge and the operating time is shorter. 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.

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). (→  *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 or below.)
- 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: LCD

→ *Reference Manual*
“Touchscreen”

B: Scroll Button

You can scroll the screen, etc. This works as a mouse wheel.

→ *Reference Manual*
“Hardware Button Setting”

C: LED Indicator

: 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*
“Disabling/Enabling
Wireless Communication”

: Wireless WAN status
<Only for model with wireless WAN>

→ Refer to the instruction manual of the wireless device.

1 : Battery 1 status

→ *Reference Manual*
“Battery Power”

D: Zoom Button

→ *Reference Manual*
“Zoom Function”

E: Keyboard

Blue letters and icons indicate functions that are operated by pressing the key in combination with **Fn**. If a key has two blue-letter or blue-icon functions, the lower right function is operated in combination with **Fn**, while the upper left function is operated in combination with **Fn** + **↑** (Shift).

(On Turkish keyboards, the placement of blue-letter/blue-icon functions is reversed.)

NOTE

: [Back space] key

: [Enter] key

<For QWERTY keyboard model only>

: [Shift] key

<For Numeric keyboard model only>

: Does not function when pressed alone. Pressing this key in combination with **Fn** performs the same as **Ctrl** + **Alt** + **Del**.

F: Power Switch

G: Application Buttons


You can register your favorite application files to 4 buttons respectively.

→ *Reference Manual*
“Hardware Button Setting”

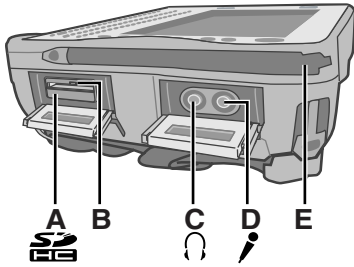
Description of Parts

H: LED Indicator


- ① : Power status
 - Off: Power off/Hibernation
 - Green: Power on
 - Blinking green
- Windows Vista** : Sleep
- Windows XP** : Standby
- 🔋 : Flash memory status
- 🔋² : Battery 2 status

➔  *Reference Manual*
“Battery Power”


Right side



A: SD Memory Card Slot

➔  *Reference Manual*
“SD Memory Card”

B: SD Memory Card Indicator

(Blinking: During access)
➔  *Reference Manual*
“SD Memory Card”

C: Headphone Jack


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

D: 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:

Windows Vista


Click  (Start) - [Control Panel] - [Hardware and Sound] - [Sound] - [Recording] - [Microphone] - [Properties], and then add a check mark for [No Audio enhancements] in [Microphone Enhancements].

Windows XP

Click [start] - [All Programs] - [SoundMAX] - [Control Panel] and select [Microphone], and then add a check mark for [No Filtering] in [Microphone Enhancements].

- When using a monaural microphone with a 2-terminal plug:

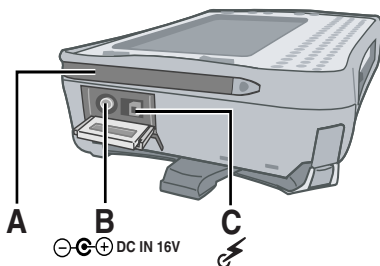
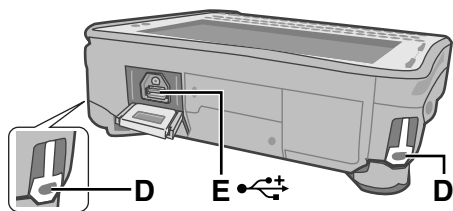
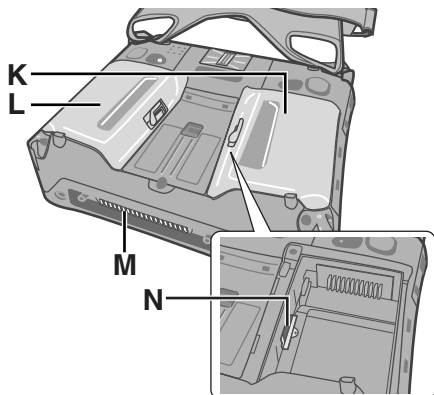
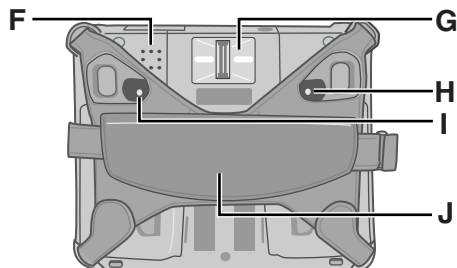
Windows Vista

Click  (Start) - [Control Panel] - [Hardware and Sound] - [Sound] - [Recording] - [Microphone] - [Properties], and then add a check mark for [Voice enhancements] in [Microphone Enhancements]. Otherwise, only audio on the left track will be recorded.

Windows XP

Click [start] - [All Programs] - [SoundMAX] - [Control Panel] and select [Microphone], and then add a check mark for [Voice Recording] in [Microphone Enhancements]. Otherwise, only audio on the left track will be recorded.

E: Stylus Holder (right side)

Left side**Top****Rear and Bottom****A: Stylus Holder (left side)****B: DC-IN Jack****C: Wireless Switch**

→ *Reference Manual*
“Disabling/Enabling Wireless
Communication”

D: Security Lock (2 holes)

A Kensington cable can be connected.

For further information, read the manual that comes with the cable.

E: USB Port

→ *Reference Manual* “USB
Devices”

F: Speaker

→ *Reference Manual*
“Key Combinations”

G: Fingerprint Reader

<Only for model with Fingerprint
Reader>

→ *Reference Manual*
“Fingerprint Reader”

H: Battery 1 Indicator**I: Battery 2 Indicator**

→ *Reference Manual* “Battery
Power”

J: Hand Strap**K: Battery 1 Case****L: Battery 2 Case**

→ *Reference Manual* “Battery
Power”

M: Expansion Bus Connector

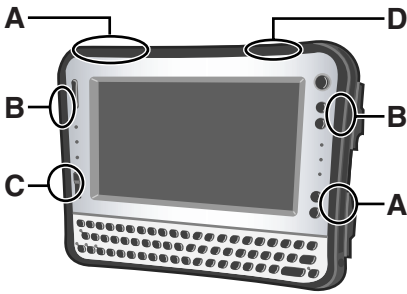
→ *Reference Manual* “Cradle /
Mini Dock”

N: SIM Card Slot

To open the battery cover → page
19 “Inserting the Battery Packs”.

Description of Parts

Inside



- A: Wireless WAN antenna**
<Only for model with wireless WAN>
- B: Wireless LAN antenna**
<Only for model with wireless LAN>
→ *Reference Manual*
"Wireless LAN"
- C: Bluetooth antenna**
<Only for model with Bluetooth>
→ *Reference Manual*
"Bluetooth"
- D: GPS antenna**
<Only for model with GPS>

NOTE

- This computer contains a magnet and magnetic products at the locations circled in the illustration. The battery cover also has the magnet on the back side. Avoid leaving metallic object or magnetic media in contact with these areas.



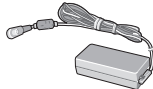
Preparation

■ Confirmation

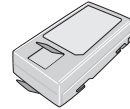
① Check and identify the supplied accessories.

If you do not find the described accessories, contact Panasonic Technical Support.

- AC Adaptor. 1
- AC Cord 1
- Battery Packs . . . 2



Model No: CF-AA1633A



Model No: CF-VZSU53W

- Stylus 1
- Tether 1



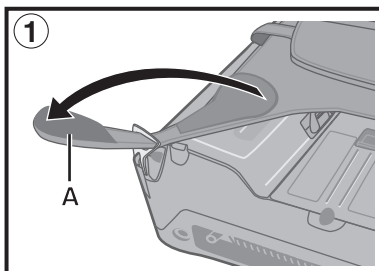
- Soft Cloth 1
- Operating Instructions (This book) 1
- Product Recovery DVD-ROM Windows Vista® Business SP1 1
- **Windows XP**
- Product Recovery DVD-ROM Windows XP Professional SP2 1

② Read the LIMITED USE LICENSE AGREEMENT before breaking the seal on the computer's packaging (→ page 47).

■ Inserting the Battery Packs

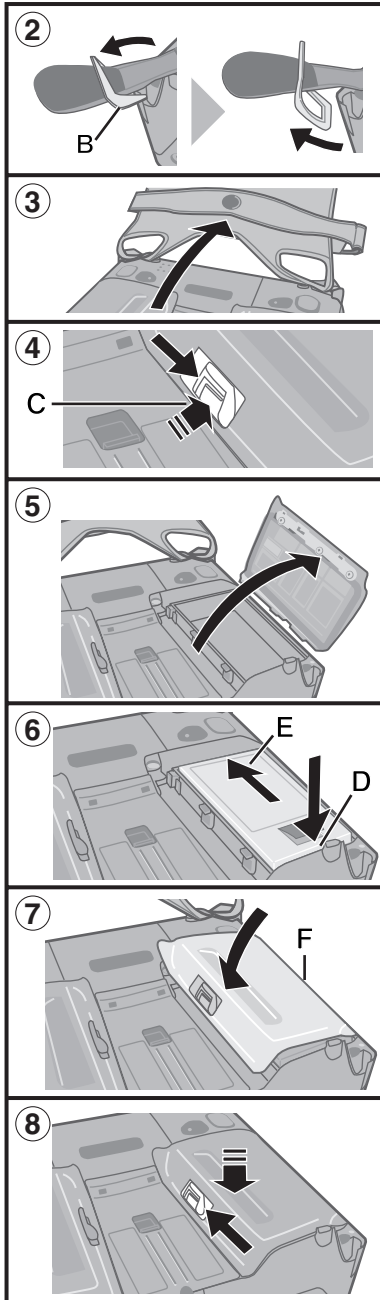
Insert the battery pack to 2 battery cases.

Place the computer on a soft cloth with the panel side down.



① Remove the edge (A) of hand strap passing through the clip. (The illustration shows the left side of hand strap as an example.)

Preparation



② Tip the clip (B) front to pull it out of the computer. (Do the same for the right side of hand strap.)

③ Open up the whole hand strap.

④ Press and hold (C) and slide the latch to unlock the battery cover. (The illustration shows Battery 1 as an example.)

⑤ Remove the battery cover.

⑥ Insert the battery pack matching with (D) side. Then, slide down the battery pack (E).

⑦ Attach the battery cover.

Insert the claw (F) of the cover matching the dent of computer, and press down the latch side of cover to close.

- Make sure the latch is on the “OPEN” side.

- If the cover does not close firmly, insert the claw again. If the problem persists, check if the battery is inserted properly.

⑧ Press and hold the battery cover and slide the latch to fix.

(Take the steps ④ to ⑧ for Battery 2 as well.)

⑨ Attach the hand strap back to the original form.

Take the steps ① and ② in the reverse order.


CAUTION

- The computer does not operate without the battery cover attached.
- 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.

About the battery for this computer

This computer uses 2 battery packs.

The battery is charged (➔ page 24) and power is consumed only on either battery pack. Those operations switch to the other battery pack automatically.

- When the computer is connected to the Cradle (optional: CF-VEBU11U), the battery pack is charged when the AC adaptor is connected to the Cradle.
- With the battery charger (optional: CF-VCBU11U) or the Cradle (optional: CF-VEBU11U), you can remove the empty battery pack and charge it while using the computer.
- You can insert or remove the battery pack while the computer is ON. Be sure not to remove the battery pack being used by mistake. (Refer to  *Reference Manual* “Battery Power”)


NOTE

- To conserve power, the following power saving methods are set at the time of purchase.

- The screen automatically turns off after 15 minutes of inactivity.


Windows Vista

- The computer automatically enters sleep^{*1} after 20 minutes of inactivity.

^{*1} Refer to  *Reference Manual* “Sleep and Hibernation Functions” about resuming from sleep.

Windows XP

- The computer automatically enters standby^{*2} after 20 minutes of inactivity.

^{*2} Refer to  *Reference Manual* “Standby and Hibernation Functions” about resuming from standby.

- 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. 7 weeks
- In sleep (**Windows Vista**) / standby (**Windows XP**) : Approx. 2 days
- In hibernation: Approx. 3 days

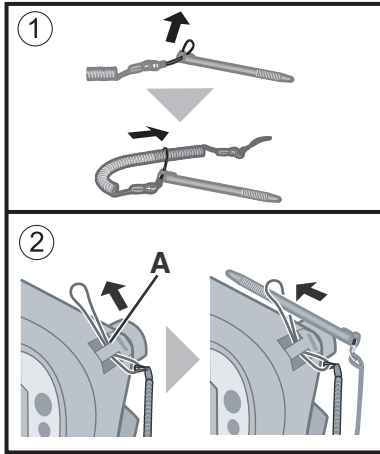
- When the DC plug is not connected to the computer, disconnect the AC cord from your AC wall outlet. Power is consumed simply by having the AC adaptor plugged into an electrical outlet.

Power consumption in each mode is as follows. (When AC adaptor is connected)

- When the screen is off: Approx. 6.7 W
- In sleep (**Windows Vista**) / standby (**Windows XP**) : Approx. 1 W
- The battery pack is fully charged (or not being charged) and the computer is off: Approx. 0.9 W

Preparation

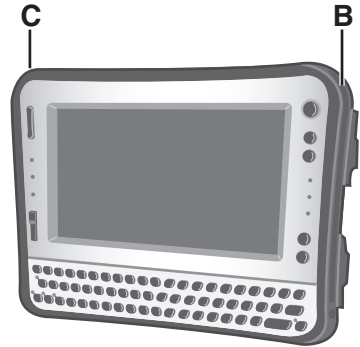
■ Attaching the stylus to the computer



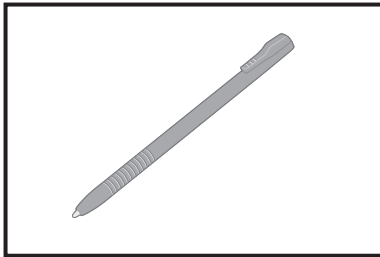
We recommend you fix the stylus in safe to the computer using the tether (supplied).

- ① Attach the tether to the stylus.
- ② Insert the tether to (A) of computer and pass the stylus to fix.

You can store the stylus at (B) or (C) of the computer.



■ Using the stylus




You can use the touchscreen function to perform the same operation as the mouse. Touch the screen surface with the stylus (included).

To right-click

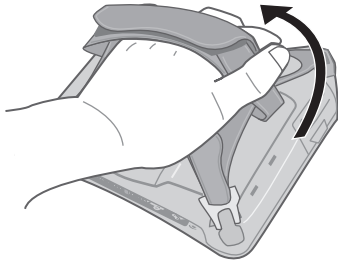
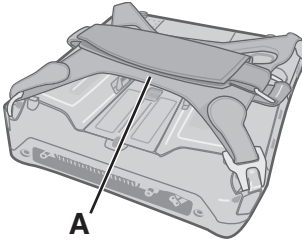
Windows Vista

Touch and hold with the stylus, or touch and select the right button of “touch pointer”.

Windows XP

- ① Click  on the notification area.
- ② Click the object you want to right-click.

■ Using the hand strap



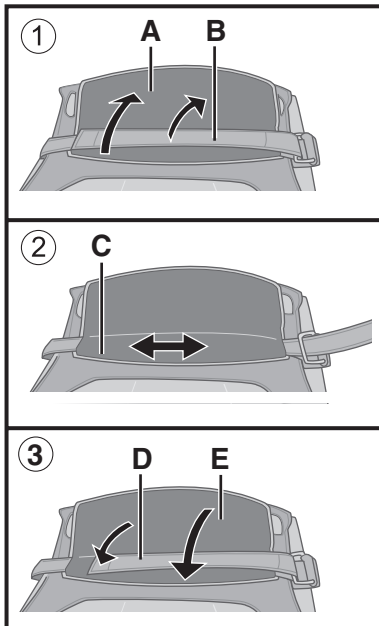
When using the computer holding with hand, insert your hand to (A) part of the hand strap. Fix the hand strap firmly so that the computer does not come off, and then turn it over.

- When the hand strap is too loose or too tight, you can adjust the hand strap according to the instructions below.

CAUTION

- If the hand is not securely fixed to the hand strap, the computer may drop.

■ Adjusting the hand strap



Adjust the fastening strength of hand strap as below.

- ① Remove (A) from the strap joint and next remove (B).
- ② Adjust the position (C).
- ③ Attach (D), then (E) to the joint.
Attach the hand strap firmly so that the strap does not come off.

CAUTION

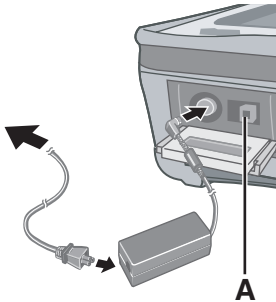
- If the hand strap loosens, the computer may fall down.
- Do not use the strap if it becomes worn or damaged.

First-time Operation

■ Setting up the computer

NOTE

- Be sure the Wireless switch (A) is ON before setting. The computer may not be set properly if the switch is OFF.

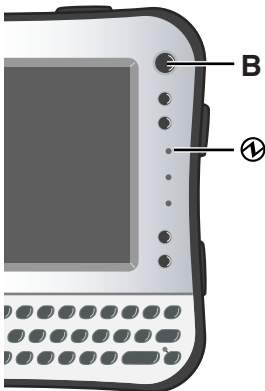


1 Connect your computer to a power outlet.

The battery charging starts automatically. (→ page 21).

CAUTION

- Do not disconnect the AC adaptor until the “Setting up the computer” 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.
- <For Numeric keyboard model>
- Connecting the USB keyboard to the computer or USB port of the Cradle is necessary.




2 Turn on the computer.

- ① Press the power switch (B).
The power indicator ① lights.

CAUTION

- Do not press the power switch repeatedly.
- The computer will forcibly be turned off if you press 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 flash memory drive indicator  turns off.
 - Connecting or disconnecting the AC adaptor
 - Pressing the power switch
 - Touching the keyboard, touchscreen or external mouse
 - 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.
 - Any changes from the default setting of the Setup Utility must not be made until the “Setting up the computer” procedure is completed.
-

Windows Vista

3 <For MUI OS model> Select OS language.

- ① Select OS language on “Select Language” screen and click [OK].

The language setting will start by clicking [OK] on the confirmation screen. You can return to the “Select Language” screen by clicking [Cancel].
The language setting will be complete in about 20 minutes.
- ② Click [OK] on the termination screen.

The power of the computer goes off by clicking [OK].
- ③ Turn on the computer.
 - Carefully choose your language because you cannot change it later. If you set a wrong language, you need to reinstall Windows (→ page 35).

4 Setup Windows.

During setup of Windows, use the stylus to move the cursor and to click an item. (→ page 22)

① Follow the on-screen instructions.

Windows Vista

- After turning on the computer, “Please wait while windows sets up your computer” appears, and then a small circle circulates on the screen. This will take a few minutes.
- Setup of Windows will take approximately 20 minutes. Go to the next step, confirming each message on the display.

<For MUI OS model>

- For some languages, the characters on the key and inputted character may not match. Set the keyboard properly after the setup is complete. Then set the password.

CAUTION

Windows Vista

- You cannot choose the following words for user name and password: CON, PRN, AUX, CLOCK\$, NUL, COM1 to COM9, LPT1 to LPT9.
- 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 the Windows. Creating a password reset disk beforehand is recommended.
- The wallpaper for the first logon user has already been set on “4 Setup Windows.”


When using this computer under the sun, the screen becomes easily viewable by changing the wallpaper to the white wallpaper.

- ① Right-click on the desktop, and click [Personalize] - [Background].
- ② Select [Solid Colors] at [Location].
- ③ Select the white wallpaper and click [OK].

<For MUI OS model>

- When setting up the keyboard, choose the appropriate one to your computer. Otherwise, input by the keyboard may become unavailable.

Windows XP

- 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, 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.
- Wait until the flash memory drive indicator  has turned off.

<For MUI OS model>



- The keyboard will operate as the US keyboard until the keyboard setting is changed. Because of this, some alphabets shown on display may differ from inputted ones.
To avoid the accidental selections, during setting up Windows,
 - Use the touchscreen to make some selections.
- To match the languages, change the language settings after setting up Windows (➔ page 29). Do not change the settings in [To change system or these settings, click Customize] of [Regional and Language Options] during setting up Windows.

5 <For MUI OS model> Install Adobe Reader.

NOTE

Install Adobe Reader to read the Important Tips and the Reference Manual.

Windows Vista

Click  (Start) and input the following in [Start Search], then press  (Enter).

Windows XP

Click [start] - [Run], input the following, then click [OK].
 English: [c:\util\reader\m\setup.exe]
 Dutch: [c:\util\reader\nl\setup.exe]
 Finnish: [c:\util\reader\fi \setup.exe]
 French: [c:\util\reader\fr\setup.exe]
 German: [c:\util\reader\g\setup.exe]
 Italian: [c:\util\reader\i\setup.exe]

First-time Operation

Norwegian: [c:\util\reader\no\setup.exe]

Russian: [c:\util\reader\ru\setup.exe]

Spanish: [c:\util\reader\p\setup.exe]

Swedish: [c:\util\reader\s\setup.exe]

Turkish: [c:\util\reader\tr\setup.exe]

Windows XP

Depending on the model, the following languages may also be supported.

Arabic: [c:\util\reader\ar\setup.exe]

Bulgarian: [c:\util\reader\bg\setup.exe]

Chinese (Simplified): [c:\util\reader\sc\setup.exe]

Chinese (Traditional): [c:\util\reader\tc\setup.exe]

Croatian: [c:\util\reader\yx\setup.exe]

Czech: [c:\util\reader\cs\setup.exe]

Danish: [c:\util\reader\da\setup.exe]

Estonian: [c:\util\reader\et\setup.exe]

Greek: [c:\util\reader\el\setup.exe]

Hebrew: [c:\util\reader\he\setup.exe]

Hungarian: [c:\util\reader\hu\setup.exe]

Japanese: [c:\util\reader\ja\setup.exe]

Korean: [c:\util\reader\ko\setup.exe]

Latvian: [c:\util\reader\lv\setup.exe]

Lithuanian: [c:\util\reader\lt\setup.exe]

Polish: [c:\util\reader\pl\setup.exe]

Portuguese: [c:\util\reader\pt\setup.exe]

Romanian: [c:\util\reader\ro\setup.exe]

Slovak: [c:\util\reader\sk\setup.exe]

Slovenian: [c:\util\reader\sl\setup.exe]

Windows XP

**6 <For MUI OS model>
Change the language settings.**

<Languages installed in this computer>

- | | | | |
|-----------|-----------|-------------|-----------|
| • English | • Dutch | • Finnish | • French |
| • German | • Italian | • Norwegian | • Russian |
| • Spanish | • Swedish | • Turkish | |

Depending on the model, the following languages may also be supported.

- | | | |
|--------------------------|-------------|------------------------|
| • Arabic | • Bulgarian | • Chinese (Simplified) |
| • Chinese (Traditional) | • Croatian | • Czech |
| • Danish | • Estonian | • Greek |
| • Hungarian | • Japanese | • Korean |
| • Lithuanian | • Polish | • Portuguese |
| • Portuguese (Brazilian) | • Romanian | • Slovak |
| • Slovenian | • Thai | |

Change the language settings in the following menu.

[start] - [Control Panel] - [Date, Time, Language, and Regional Options] - [Regional and Language Options]

- [Regional Options] - [Standards and Formats]
- [Languages] - [Language used in menus and dialogs]
- [Languages] - [Details] - [Default input language]
- [Advanced] - [Language for non-unicode Programs]

NOTE

- When you use MUI OS and localized OS versions together on the same network, use English computer names on localized versions of Windows.
- Some UI (User Interface) strings remain in English even if the user's UI is set to another language.
- For more information, refer to "c:\windows\mui\relnotes.txt".

If you change the language in [Languages] - [Language used in menus and dialogs], the desktop color will be changed when logging on to Windows next time.


The desktop color can be changed by following the procedure below.

Click [start] - [Control Panel] - [Appearance and Themes] - [Display] - [Desktop] and select color from [Color], then click [OK].


7 Perform the touchscreen calibration.

Windows Vista


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

- ① Click  (Start) - [Control Panel] - [Additional Options] - [Tablet Calibration].
- ② Using the stylus, touch each of the 9 “+” target marks one by one.

Perform the following calibration for each user.

- ① Click  (Start) - [Control Panel] - [Mobile PC] - [Tablet PC Settings].
- ② Click [Calibrate].
- ③ Using the stylus, touch each of the 4 “+” target marks one by one, and then click [OK].

Windows XP

- ① Click [start] - [Control Panel] - [Other Control Panel Options] - [Touch Panel].
- ② Select [Calibration] in [Touch Panel Settings].
- ③ Select [9 point], [12 point] or [20 point] in [Accuracy required], and click [Apply].
- ④ Click [Calibrate Now] in [Calibration].
- ⑤ Using the stylus, touch each of the “+” target marks one by one until it blinks, and then press  (Enter).
- ⑥ Click [Update] in [Calibration].
- ⑦ Click [OK].

Windows XP

8 Create a new account.

- ① 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.

NOTE

● PC Information Viewer

This computer periodically records the management information of the flash memory, etc. The maximum data volume for each record is 1024 bytes. This information is only used for estimating the cause when the flash memory 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
 - Pressing the power switch
 - Touching the keyboard, touchscreen or external mouse
 - Turn on/off the wireless switch

Windows Vista

■ To change the partition structure

You can shrink a part of an existing partition to create unallocated drive space, from which you can create a new partition. This computer has a single partition in the 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.
- 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 the 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 Vista

- ① Double-click  on the desktop.
 - Alternatively click  (Start) - [All Programs] - [Panasonic] - [On-Line Manuals] - [Reference Manual].

Windows XP

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

■ Important Tips

Windows Vista



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.

Windows XP


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

To access the Important Tips:

Windows Vista

- ① Double-click  on the desktop.
 - Alternatively click  (Start) - [All Programs] - [Panasonic] - [On-Line Manuals] - [Important Tips].

Windows XP

- ① Double-click  on the desktop.
 - Alternatively click [start] - [All Programs] - [Panasonic] - [Battery] - [Important Tips] or 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.

Handling and Maintenance

Operation environment

- Temperature: Operation : 5 °C to 35 °C
Storage : -20°C to 60 °C
- 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.
 - 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 flash memory 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 and other protruding things and then close all terminal covers.
 - Do not drop or hit the computer against solid objects.
 - Do not grip the display part.
- 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.
- Be careful of computer drop resulting from the hand strap damage.
- Use only the included stylus to touch the screen. 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 stylus 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.

Handling and Maintenance

■ 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.

■ 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.

■ Computrace® Software

Computrace® software tracks your stolen computer.

- Computrace® software is not included or installed in this computer.
- 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>

Maintenance

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.

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.

Reinstalling Software

Reinstalling software will return the computer to the default condition. When you reinstall the software, the flash memory data will be erased.

Back up important data to other media or an external hard disk before reinstallation.

Preparation

- Prepare the following items:
 - The Product Recovery DVD-ROM (included)
 - Windows Vista**
Product Recovery DVD-ROM Windows Vista® Business SP1
 - Windows XP**
Product Recovery DVD-ROM Windows XP Professional SP2
 - Panasonic USB CD/DVD drive (optional) (refer to recent catalogs and other sources for information about the products available)
- Remove all peripherals (except for the CD/DVD drive).
- Connect the AC adaptor and do not remove it until installation is complete.

<For Numeric keyboard model>

Connecting the USB keyboard to the computer or USB port of the Cradle is necessary.

The following explanations show operations using key combinations of **Fn** and other keys. When using USB keyboard, press buttons indicated in ().

Example: Press **Fn** + **U** (F2) → Press **F2**

■ Reinstalling Windows Vista

1 Turn off the computer and connect the CD/DVD drive to the USB port (→ page 17).

2 Turn on the computer, and press **Fn + **U** (F2) or **Fn** + **Del** while [Panasonic] boot screen is displayed.**

The Setup Utility starts up.

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

3 Write down all of the contents of the Setup Utility and press **Fn + **Esc** (F9).**

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

4 Press **Fn + **B** (F10).**

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

The computer will restart.

Reinstalling Software

- 5 **Press $\overline{\text{Fn}} + \overline{\text{U}}$ (F2) or $\overline{\text{Fn}} + \overline{\leftarrow}$ (Del) while [Panasonic] boot screen is displayed.**

The Setup Utility starts up.

 - If the password is requested, enter the Supervisor Password.
- 6 **Set the Product Recovery DVD-ROM into the CD/DVD drive.**
- 7 **Select the [Exit] menu, then select your CD/DVD drive in [Boot Override].**
- 8 **Press $\overline{\rightarrow}$ (Enter).**

The computer will restart.
- 9 **Select [Reinstall Windows] and press $\overline{\rightarrow}$ (Enter).**

The License Agreement screen appears.
- 10 **Select [Yes, I agree to the provisions above and wish to continue!] and press $\overline{\rightarrow}$ (Enter).**
- 11 **Select the settings and press $\overline{\rightarrow}$ (Enter).**
 - [Reinstall Windows to the whole Hard Disk to factory default.]
You will have a single partition.
 - [Reinstall Windows to the operating system partition.]
You can keep the partition structure.
- 12 **At the confirmation message, press $\overline{\rightarrow}$ (Enter).**

Reinstallation starts automatically. (It will take approximately 30 - 120 minutes.)

 - Do not interrupt reinstallation, for example by turning off the computer or pressing $\overline{\text{Ctrl}}$, $\overline{\text{Alt}}$ and $\overline{\text{Fn}} + \overline{\leftarrow}$ (Del). Otherwise reinstallation may become unavailable as Windows may not start up or the data may be corrupted.
- 13 **Remove the Product Recovery DVD-ROM, and then select [OK] and press $\overline{\rightarrow}$ (Enter) to turn off the computer, then remove the CD/DVD drive.**
- 14 **Turn on the computer.**
 - If the password is requested, enter the Supervisor Password.
- 15 **Perform the steps 3, 4, 5 and 7 for setting up the computer (→ pages 25 to 30).**
- 16 **Start the Setup Utility and change the settings as necessary.**
- 17 **Perform Windows Update.**

■ Reinstalling Windows XP

- 1 **Turn off the computer and connect the CD/DVD drive to the USB port (→ page 17).**
- 2 **Turn on the computer, and press $\overline{Fn} + \overline{U}$ (F2) or $\overline{Fn} + \overline{\leftarrow}$ (Del) while [Panasonic] boot screen is displayed.**
The Setup Utility starts up.
 - If the password is requested, enter the Supervisor Password.
- 3 **Write down all of the contents of the Setup Utility and press $\overline{Fn} + \overline{\square}$ (F9).**
At the confirmation message, select [Yes] and press $\overline{\leftarrow}$ (Enter).
- 4 **Press $\overline{Fn} + \overline{B}$ (F10).**
At the confirmation message, select [Yes] and press $\overline{\leftarrow}$ (Enter).
The computer will restart.
- 5 **Press $\overline{Fn} + \overline{U}$ (F2) or $\overline{Fn} + \overline{\leftarrow}$ (Del) while [Panasonic] boot screen is displayed.**
The Setup Utility starts up.
 - If the password is requested, enter the Supervisor Password.
- 6 **Set the Product Recovery DVD-ROM into the CD/DVD drive.**
- 7 **Select the [Exit] menu, then select your CD/DVD drive in [Boot Override].**
- 8 **Press $\overline{\leftarrow}$ (Enter).**
The computer will restart.
- 9 **Press $\overline{1}$ to execute [1. [Recovery]].**
The License Agreement screen appears.
 - To cancel partway, press $\overline{0}$.
- 10 **Press $\overline{1}$ to select [1. Yes, I agree to the provisions above and wish to continue!].**

Reinstalling Software

11 Select the settings.

- [2]: Enter the size of operating system partition and press Enter. (The size of data partition will be determined by subtracting the operating system partition size from the maximum size.)
- [3]: Windows will be installed in the first partition. (The size of the first partition must be 13 GB or more. If smaller, installation will not be possible.)

At the confirmation message, press Y or 2.

Reinstallation starts automatically. (It will take approximately 30 - 75 minutes.)

- Do not interrupt reinstallation, for example by turning off the computer or pressing Ctrl, Alt and Fn + ← (Del). Otherwise reinstallation may become unavailable as Windows may not start up or the data may be corrupted.

12 Remove the Product Recovery DVD-ROM, and then press any key to turn off the computer.

If additional instructions are included with the computer, be sure to read them. It may be necessary to perform additional operations during the following procedure.

13 Turn on the computer.

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

14 Perform the steps 4 to 8 for setting up the computer (→ pages 26 to 30).


15 Start the Setup Utility and change the settings as necessary.

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 Panasonic Technical Support. You can also check the computer’s status in the PC Information Viewer



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

■ Starting Up




<p>Cannot start up. The power indicator or battery indicator is not lit.</p>	<ul style="list-style-type: none">● Connect the AC adaptor.● Insert a fully charged battery.● Remove the battery pack and the AC adaptor, then connect them again.● If a device is connected to the USB port, disconnect the device, or set [Legacy USB Support] to [Disabled] in the [Advanced] menu of the Setup Utility. (→  <i>Reference Manual</i> “Setup Utility”)
<p>Cannot turn on the computer. The computer does not resume from sleep (Windows Vista) /standby (Windows XP). (The power indicator blinks quickly in green.)</p>	<ul style="list-style-type: none">● Leave it in an environment of 5 °C or higher temperature for about an hour, then turn on the power again.
<p>You have forgotten the password.</p>	<ul style="list-style-type: none">● Supervisor Password or User Password: Contact Panasonic Technical Support.● Administrator password:<ul style="list-style-type: none">• If you have a password reset disk, you can reset the administrator password. Set the disk and enter any wrong password, then follow the on-screen instructions and set a new password.• If you do not have a password reset disk, reinstall (→ page 35) and set up Windows, and then set a new password.

Troubleshooting (Basic)

■ Starting Up



<p>“Remove disks or other media. Press any key to restart” or a similar message appears.</p>	<ul style="list-style-type: none">● A floppy disk is in the drive and it does not contain system startup information. Remove the floppy disk and press any key.● If a device is connected to the USB port, disconnect the device, or set [Legacy USB Support] to [Disabled] in the [Advanced] menu of the Setup Utility. (→  <i>Reference Manual</i> “Setup Utility”)● If the problem persists after having tried the above solutions, it may be a flash memory failure. Contact Panasonic Technical Support.
<p>Windows startup and operation is slow.</p>	<ul style="list-style-type: none">● Press Fn + F9^{*1} in the Setup Utility (→  <i>Reference Manual</i> “Setup Utility”) to return the Setup Utility settings (excluding the passwords) to the default values. Start the Setup Utility and make the settings again. (Note that the processing speed depends on the application software, so this procedure may not make Windows faster.) <p>^{*1} For Numeric keyboard model, select [Load Default Value] in [Exit] menu by using → ← ↑ ↓ and press ↵ (Enter), or connect a USB keyboard and press F9.</p> <ul style="list-style-type: none">● If you installed a resident software after purchase, turn off the residence. <p>Windows Vista</p> <ul style="list-style-type: none">● Disable the pop-up menu and Input Panel Tab.<ol style="list-style-type: none">① Open the Input Panel, and click [Tools] - [Options] - [Opening].② Remove the check mark of [Show the Input Panel tab] and click [OK]. <p>Windows XP</p> <ul style="list-style-type: none">● Disable Indexing Service in the following menu. Click [start] - [Search] - [Change preferences] - [With Indexing Service (for faster local service)].

■ Starting Up

<p>The date and time are incorrect.</p>	<ul style="list-style-type: none"> ● Make the correct settings. <ul style="list-style-type: none"> Windows Vista Click  (Start) - [Control Panel] - [Clock, Language, and Region] - [Date and Time]. Windows XP Click [start] - [Control Panel] - [Date, Time, Language, and Regional Options] - [Date and Time]. ● If the problem persists, the internal clock battery may need to be replaced. Contact Panasonic Technical Support. ● When the computer is connected to LAN, check the date and time of the server. ● The 2100 A.D. or later year will not be correctly recognized on this computer.
<p>[Executing Battery Recalibration] screen appears.</p>	<ul style="list-style-type: none"> ● 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.
<p>[Enter Password] does not appear when resuming from sleep (Windows Vista) /standby (Windows XP) or hibernation.</p>	<ul style="list-style-type: none"> Windows Vista <ul style="list-style-type: none"> ● The password you have set in the Setup Utility is not requested at resuming. To use the password security at resuming, set the Windows password. <ol style="list-style-type: none"> ① Click  (Start) - [Control Panel] - [Add or remove user accounts] and select the account, and set the password. ② Click  (Start) - [Control Panel] - [System and Maintenance] - [Require a password when the computer wakes] and add a check mark for [Require a password]. Windows XP <ul style="list-style-type: none"> ● Set the Windows password. The password you have set in the Setup Utility is not requested at resuming. <ol style="list-style-type: none"> ① Click [start] - [Control Panel] - [User Accounts] and select the account, and set the password. ② Click [start] - [Control Panel] - [Performance and Maintenance] - [Power Options] - [Advanced] and add a check mark for [Prompt for password when computer resumes from standby].

Troubleshooting (Basic)

■ Starting Up

Cannot resume.	<ul style="list-style-type: none">● An error may occur when the computer automatically enters the sleep (Windows Vista) / standby (Windows XP) or hibernation mode while the screensaver is active. In this case, turn off the screensaver or change the pattern of the screensaver.● If you press and hold the power switch for 4 seconds or longer, the power will be turned off forcibly and the computer will not resume. In this case, all unsaved data will be lost.● You disconnected the AC adaptor and the battery pack while the computer was in sleep (Windows Vista) / standby (Windows XP). If the computer's power supply is disconnected in sleep (Windows Vista) / standby (Windows XP), unsaved data will be lost and the computer will not resume.● The battery is exhausted. Sleep (Windows Vista) / standby (Windows XP) and hibernation consume some power.
Other startup problems.	<ul style="list-style-type: none">● Press Fn + F9² in the Setup Utility (→  <i>Reference Manual</i> "Setup Utility") to return the Setup Utility settings (excluding the passwords) to the default values. Start the Setup Utility and make the settings again. ² For Numeric keyboard model, select [Load Default Value] in [Exit] menu by using → ← ↑ ↓ and press ↵ (Enter), or connect a USB keyboard and press F9.● Remove all peripheral devices.● Check to see if there was a disk error. Windows Vista<ol style="list-style-type: none">① Remove all peripheral devices including an external display.② Click  (Start) - [Computer] and right-click [Local Disk (C:)], and click [Properties].③ Click [Tools] - [Check Now].<ul style="list-style-type: none">• A standard user needs to enter an administrator password.④ Select the option in [Check disk options] and click [Start].⑤ Click [Schedule disk check] and restart the computer.Windows XP<ol style="list-style-type: none">① Click [start] - [My Computer] and right-click [Local Disk(C:)], and click [Properties].② Click [Tools] - [Check Now].③ Select the option in [Check disk options] and click [Start].

■ Starting Up

Other startup problems. (continued)	<ul style="list-style-type: none"> ● Start the computer in Safe Mode and check the error details. When the [Panasonic] boot screen disappears*³ at startup, press and hold Fn + L (F8)^{*4} until the Windows Advanced Options Menu is displayed. <p>^{*3} When [Password on boot] is set to [Enabled] in the [Security] menu of the Setup Utility, [Enter Password] appears after the [Panasonic] boot screen disappears. As soon as you enter the password and press ↵ (Enter), press and hold Fn + L (F8).</p> <p>^{*4} For Numeric keyboard model, connect a USB keyboard and press F8.</p>
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■ Shutting down

Windows does not shut down.	<ul style="list-style-type: none"> ● Remove the USB device. ● Wait one or two minutes. It is not a malfunction.
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■ Display


No display.	<ul style="list-style-type: none"> ● The external display is selected. Press Fn + E (□/□)^{*5} to switch the display. Wait until the display has been switched completely before pressing Fn + E (□/□)^{*5} again. <p>^{*5} For Numeric keyboard model: Fn + 4 (□/□)</p> <ul style="list-style-type: none"> ● When using an external display, <ul style="list-style-type: none"> • 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 sleep (Windows Vista) / standby (Windows XP) or hibernation by the power-saving function. To resume, press the power switch. <p>Windows XP</p> <ul style="list-style-type: none"> ● The screen may not be displayed even after the computer resumed from standby or hibernation. In this case, press Fn + I (z/z) ^{*6} to enter standby and resume the computer again. <p>^{*6} For Numeric keyboard model: Fn + 6 (z/z)</p>
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Troubleshooting (Basic)

■ Display

<p>The screen is dark.</p>	<ul style="list-style-type: none"> ● The screen is darker when the AC adaptor is not connected. Press Fn + W (☀▲)⁷ and adjust the brightness. As you increase the brightness, battery consumption increases. You can separately set the brightness for when the AC adaptor is connected and when not connected. ⁷ For Numeric keyboard model: Fn + + (☀▲)
<p>Windows XP The LCD brightness changes a number of times when the AC adaptor is disconnected.</p>	<ul style="list-style-type: none"> ● Intel(R) Display Power Saving Technology is active and automatically changes the LCD brightness. This is not a malfunction.
<p>The screen is disordered.</p>	<ul style="list-style-type: none"> ● 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.
<p>During Simultaneous display, one of the screens becomes disordered.</p>	<ul style="list-style-type: none"> ● Simultaneous display cannot be used until Windows startup is complete (during Setup Utility, etc.). <p>Windows Vista</p> <ul style="list-style-type: none"> ● When using the Extended Desktop, use the same display colors for the external display as those used by the LCD. ● If you continue to experience problems, try changing the display. Right-click on the desktop, and click [Graphics Properties] - [Display Devices]. <p>Windows XP</p> <ul style="list-style-type: none"> ● If the [Command Prompt] is displayed in full-screen, reduce the display size.
<p>The external display does not work normally.</p>	<ul style="list-style-type: none"> ● 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.
<p>Windows Vista When the computer starts up, simultaneous display becomes active.</p>	<ul style="list-style-type: none"> ● When simultaneous display is activated, press Fn + E (□/□)⁸ to switch the display. ⁸ For Numeric keyboard model: Fn + 4 (□/□)

■ Display

<p>Windows Vista <Only for model with GPS> The cursor cannot be controlled properly.</p>	<ul style="list-style-type: none"> ● Operate the following steps. <ol style="list-style-type: none"> ① Set [GPS] to [Disabled] in the [Advanced] - [Serial Port Configuration] of the Setup Utility. ② Press Fn + B (F10)⁹ and select [Yes] at the confirmation message, and press ↵ (Enter). The computer will restart. ③ Log on to Windows as an administrator. ④ Click  (Start) and input "c:\util\drivers\gps\GPSVista.reg" in [Start Search], and press ↵ (Enter). ⑤ Click [Yes] and click [OK]. The computer will restart. ⑥ Press Fn + U (F2)¹⁰ or Fn + ← (Del) while [Panasonic] boot screen is displayed. ⑦ Set [GPS] to [Enabled] in the [Advanced] - [Serial Port Configuration]. ⑧ Press Fn + B (F10)⁹ and select [Yes] at the confirmation message, and press ↵ (Enter). <p>⁹ For Numeric keyboard model, select [Load Default Value] in [Exit] menu by using → ← ↑ ↓ and press ↵ (Enter), or connect a USB keyboard and press F10.</p> <p>¹⁰ For Numeric keyboard model, connect a USB keyboard and press F2.</p>
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■ Touchscreen

<p>The cursor does not work.</p>	<ul style="list-style-type: none"> ● When using the external mouse, connect it correctly. ● Restart the computer using the keyboard. <p style="margin-left: 20px;">Windows Vista</p> <p style="margin-left: 20px;">Press ⊞ (Windows) and press → three times, and press ↑ to select [Restart] and press ↵ (Enter).</p> <p style="margin-left: 20px;">Windows XP</p> <p style="margin-left: 20px;">Press ⊞ (Windows), U and R to select [Restart].</p> ● If the computer does not respond to keyboard commands, read "No response." (→ page 46).
<p>Cannot input using the touchscreen.</p>	<ul style="list-style-type: none"> ● Set [Touchscreen Mode] to [Auto] or [Tablet] in the [Main] menu of the Setup Utility.
<p>Cannot point the correct position using the included stylus.</p>	<ul style="list-style-type: none"> ● Perform the touchscreen calibration (→ page 30).

Troubleshooting (Basic)

■ Reference Manual

The Reference Manual is not displayed.

- Install Adobe Reader.
<For localized OS model>
 - ① Log on to Windows as an administrator.
 - ② **Windows Vista**
Click  (Start) and input "c:\util\reader\setup.exe" in [Start Search] then press  (Enter).
Windows XP
Click [start] - [Run], input "c:\util\reader\setup.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].<For MUI OS model>
→ page 27



■ Keyboard

The LED below Ctrl lights when AltGr is pressed.

- This is normal in Windows, and is not a malfunction.

■ Others

No response.

- Press Ctrl,  (Shift), Fn and Tab (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.
- Press the power switch for 4 seconds or longer to shut down the computer, and then press the power switch to turn it on. If the application program does not work normally, uninstall and reinstall the program.
To uninstall:
Windows Vista
Click  (Start) - [Control Panel] - [Uninstall a program].
Windows XP
Click [start] - [Control Panel] - [Add or Remove Programs].

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Specifications

This page provides the specifications for the basic model.

The model number is different according to the unit configuration.

- To check the model number:
Check the bottom of the computer or the box the computer came in at the time of purchase.
- To check CPU speed, memory size and the flash memory drive (HDD) size:
Run the Setup Utility (→  *Reference Manual* “Setup Utility”) and select [Information] menu.
[Processor Speed]: CPU speed, [Memory Size]: Memory size, [Hard Disk]: Flash memory drive size

■ Main Specifications

Model No.		CF-U1ANB Series	CF-U1AQB Series
CPU/ Secondary cache memory		Intel® Atom™ Processor Z520 (1.33 GHz, 512 KB ¹ cache, 533 MHz FSB)	
Chipset		Intel® System Controller Hub	
Main Memory ²		1 GB ¹ DDR2 SDRAM (1 GB ¹ Max.)	
Video Memory		256 MB ¹ Max. ³	
Flash Memory Drive		16 GB ⁴	
Display Method		5.6 WSVGA type (TFT) (1024 × 600 dots) 65,536/16,777,216 colors (800 × 600 dots/1024 × 600 dots/1024 × 768 dots ⁵) ⁶	
Wireless LAN		Intel® WiFi Link 5100 (→ page 51 “Wireless LAN”)	
Bluetooth™		(→ page 51 “Bluetooth™”)	
Sound		WAVE and MIDI playback, Monaural speaker, Intel® High Definition Audio subsystem support	
Card Slot	SD Memory Card Slot ⁷	x 1	
Interface		USB port (4-pin, USB 2.0) ⁸ x 1, Microphone Jack (Miniature jack, 3.5 DIA, Stereo), Headphone Jack (Miniature jack, 3.5 DIA, Impedance 32 Ω, Output Power 4 mW x 2, Stereo), Expansion Bus Connector (Dedicated 19-pin female)	
Keyboard / Pointing Device		29 keys Numeric Keyboard / Touchscreen	61 keys US or UK English Mini Qwerty Keyboard / Touchscreen
Button		Scroll (up/down), Zoom (up/down) Application× 4	
Power Supply		AC adaptor or Battery pack	
AC Adaptor ⁹		Input: 100 V to 240 V AC, 50 Hz/60 Hz, Output: 16.0 V DC, 3.75 A	

Specifications

■ Main Specifications

Model No	CF-U1ANB Series	CF-U1AQB Series
Battery Pack (typ.)	Li-ion 7.2 V, 2900 mAh x 2 packs	
Operating Time ^{*10}	Approx. 9 hours	
Charging Time ^{*11}	Power on	Approx. 10 hours
	Power off	Approx. 7 hours
Power Consumption ^{*12}	Approx. 12 W ^{*13} / Approx. 20 W (Maximum when re-charging in the ON state)	
Physical Dimensions (W × D × H) (excluding the hand strap)	184 mm × 151 mm × 57 mm	
Weight (including the hand strap)	Approx. 1.06 kg	
Operation Environment	Temperature: 5 °C to 35 °C Humidity: 30% to 80% RH (No condensation)	
Storage Environment	Temperature: -20 °C to 60 °C Humidity: 30% to 90% RH (No condensation)	

■ Software

Operating System ^{*14}	Windows Vista® Business Service Pack 1	Microsoft® Windows® XP Professional Service Pack 2 with Advanced Security Technologies
Utility Programs	Adobe Reader 8, PC Information Viewer, Full Screen Zoom, Keyboard Button Manager, Intel® PROSet/Wireless WiFi Connection Utility, Bluetooth™ Stack for Windows® by TOSHIBA, Wireless Switch Utility, Hotkey Settings, Battery Recalibration Utility, Setup Utility	

■ Wireless LAN <Only for model with wireless LAN>

Data Transfer Rates	IEEE802.11a: 54/48/36/24/18/12/9/6 Mbps (automatically switched) ^{*15} IEEE802.11b: 11/5.5/2/1 Mbps (automatically switched) ^{*15} IEEE802.11g: 54/48/36/24/18/12/9/6 Mbps (automatically switched) ^{*15} IEEE802.11n: (HT20) 144.4/130/117/115.6/104/86.7/78/65/58.5/57.8/52/43.3/39/28.9/26/19.5/14.4/13/6.5 Mbps (automatically switched) ^{*15} (HT40) 300/270/243/240/216/180/162/130/120/117/108/104/90/81/78/60/54/52/39/30/27/26/13 Mbps (automatically switched) ^{*15}
Standards Supported	IEEE802.11a/IEEE802.11b/IEEE802.11g/IEEE802.11n (Draft 2.0)
Transmission method	OFDM system, DS-SS system
Wireless Channels Used	IEEE802.11a: Channels 36/40/44/48/52/56/60/64/100/104/108/112/116/132/136/140 IEEE802.11b/IEEE802.11g: Channels 1-13 IEEE802.11n: Channels 1-11 /36/40/44/48/52/56/60/64/100/104/108/112/116/132/136
RF Frequency Band	IEEE802.11a: 5.18 GHz - 5.32 GHz, 5.5 GHz - 5.7 GHz IEEE802.11b/IEEE802.11g: 2.412 GHz - 2.472 GHz IEEE802.11n: 2.412 GHz - 2.472 GHz, 5.15 GHz - 5.35 GHz, 5.5 GHz - 5.7 GHz

■ Bluetooth™ <Only for model with Bluetooth>

Bluetooth Version	2.0 + EDR
Transmission method	FHSS system
Wireless Channels Used	Channels 1 to 79
RF Frequency Band	2.402 GHz - 2.48 GHz

^{*1} 1 KB = 1,024 bytes / 1 MB = 1,048,576 bytes / 1 GB = 1,073,741,824 bytes

^{*2} You can physically expand the memory up to 4 GB, but the total amount of usable memory available will be less depending on the actual system configuration.

^{*3} A segment of the main memory is allotted automatically depending on the computer's operating status. The size of the Video Memory cannot be set by the user. The size of Video memory is allotted depending on the operating system.

^{*4} 1 GB = 1,000,000,000 bytes. Your operating system or some application software will report as fewer GB.

^{*5} The monitor will be reduced to the area of 1024 × 600 dots.

Windows Vista

Only with 16,777,216 colors can be displayed.

Specifications

Windows XP

The screen resolution of 1024 × 768 dots may not be chosen with the factory presets depending on the computer's model.

In that case, perform the following procedure to set up the screen resolution of 1024 × 768 dots.

- ① Click [start] - [Control Panel] - [Appearance and Themes] - [Display] - [Settings] - [Advanced] - [Monitor].
 - ② Remove a check mark for [Hide modes that this monitor cannot display] in [Monitor settings], then click [OK].
 - ③ Slide the bar of [Screen resolution] to both sides and choose [1024 by 768 pixels], then click [OK].
 - [Color quality] appearing on the right side of [Screen resolution] needs to be used with [Highest [32 bit]].
- ^{*6} A 16,777,216 color display is achieved by using the dithering function.
- ^{*7} This slot is compatible with High-Speed Mode. Operation has been tested and confirmed using Panasonic SD/SDHC Memory Cards with a capacity of up to 32 GB. Operation on other SD equipment is not guaranteed.
- ^{*8} Does not guarantee operation of all USB-compatible peripherals.
- ^{*9} <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
- ^{*10} Measured at (LCD brightness: 60 cd/m², Windows XP Mobile Mark2005)
Varies depending on the usage conditions, or when an external device is attached.
- ^{*11} Varies depending on the usage conditions.
- ^{*12} Approx. 0.9 W when the battery pack is fully charged (or not being charged) and the computer is OFF.
- ^{*13} Rated power consumption 23-E-1
- ^{*14} Operations of this computer are not guaranteed except for the pre-installed OS and the OS which is installed by using the Product Recovery DVD-ROM provided by Panasonic.
- ^{*15} These are speeds specified in IEEE802.11a+b+g+n standards. Actual speeds may differ.

Memo

Memo



As an ENERGY STAR[®] Partner, Panasonic Corporation 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

Importer's name & address pursuant to the EU GPSD (General Product Safety Directive) 2001/95/EC Art.5

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