



Panasonic[®]

Reference Manual

Personal Computer

Model No. **CF-U1 Series**





We recommend that this Reference Manual be printed.

Terms and illustrations in this manual


 : Page in this Manual.

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 model.

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

Click : Touch the screen with the stylus.

Right-click :


① Click  on the notification area.



② Click the object you want to right-click.

[start] - [All Programs] :




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

NOTE

- Do not repeatedly press the keys in quick succession.
- Do not use the key combinations together with touchscreen or other key operations.
- Do not use the key combinations before you log on to Windows. Wait until the flash memory drive indicator  turns off. On the Setup Utility screen, you can use the key combinations of “LCD brightness” and “Display switching”.
- The key combinations may not work with some applications.
- The pop-up icon appears after logging on to Windows. It may not appear in some application conditions (e.g., when [Command Prompt] is set to “Full Screen”).



QWERTY key-board model	Numeric key-board model	Function	Pop-up icon
Fn + Q (▼☀) Fn + W (☀▲)	Fn + * (▼☀) Fn + + (☀▲)	LCD brightness <QWERTY keyboard model> Fn + Q (▼☀) = down / Fn + W (☀▲) = up <Numeric keyboard model> Fn + * (▼☀) = down / Fn + + (☀▲) = up	
Fn + E (□/□)	Fn + 4 (□/□)	Display switching (→ page 50) (When an external display is connected) Internal LCD → Simultaneous display → External display  <div style="border: 1px solid orange; padding: 2px; margin-top: 10px;">CAUTION</div> <ul style="list-style-type: none"> ● Do not press any keys until the display has finished switching. ● Do not use this function: <ul style="list-style-type: none"> • When an external display is not connected. • When playing motion video such as DVD or MPEG. • When showing a game screen such as pinball. • When operating on the Fast User Switching display, and on the display in the process of returning to the normal desktop from Screen Saver with a password, or from Standby/Hibernation. ● Until Windows startup is completed (during Setup Utility, etc.), the simultaneous display cannot be used and pressing Fn + E (□/□)^{*1} switches the display between the internal LCD and the external display. ● When the display cannot be switched, right-click on the desktop and click [Graphic Properties] to select the display. 	—

^{*1} For Numeric keyboard model : **Fn + 4** (□/□)

QWERTY key-board model	Numeric key-board model	Function	Pop-up icon
Fn + R (🔇)	Fn + 5 (🔇)	Speaker on/off NOTE <ul style="list-style-type: none"> Beeps do not sound if you turn off the speaker sound. 	  OFF (MUTE) ON
Fn + A (🔊) Fn + S (🔊)	Fn + ▢ (🔊) Fn + 7 (🔊)	Volume (Fn + A) (🔊) *2= down / (Fn + S) (🔊) *3 = up NOTE <ul style="list-style-type: none"> When fine-tuning the sound volume, press and hold Fn, and press A (🔊) *2 or S (🔊) *3 intermittently. This does not work on beeps or speakers connected to the USB port. <p>*2 For Numeric keyboard model : Fn + ▢ (🔊)</p> <p>*3 For Numeric keyboard model : Fn + 7 (🔊)</p>	
Fn + T (🔌)	Fn + 6 (🔌)	Activate standby (→ page 18)	—
Fn + F (🔋)	Fn + 9 (🔋)	Remaining battery charge	(→ page 25)
Fn + G (🔌)	Fn + 0 (🔌)	Activate hibernation (→ page 18)	—
Fn + Z (🖱)	Fn + Ctrl (🖱)	Light up the keyboard	—

Lock the keyboard and operation buttons

When you operate the computer only by touchscreen, etc., accidental keyboard or other button operations are ignored.

QWERTY keyboard model	Numeric keyboard model	Function
Fn + D (🔒)	Fn + 8 (🔒)	<p>Keyboard (except for Fn + D (🔒))^{*4}, scroll button, zoom button and application buttons are disabled.</p> <p>When locked:</p> <ul style="list-style-type: none"> • The message appears to show how to unlock. •  icon on the notification area changes to . • If a locked key is pressed, the entire keyboard gleams. <p>To cancel, press Fn + D (🔒)^{*4} again.</p> <p>NOTE</p> <ul style="list-style-type: none"> ● Power switch is not disabled. ● When you enter the user account selection display (Switch user, etc.) in the locked condition, unlocking is impossible. ● This function is canceled when you turn the computer off. <p>^{*4} For Numeric keyboard model : Fn + 8 (🔒)</p>

Hotkey Settings

■ Setting Fn key operations

You can make 2 settings:

- **Fn key lock**

When you press **Fn**, the key is locked (pressed-down) until you press another key. Use this when pressing difficult key combinations.

- **Pop-up icon on/off**

1 Start up the Hotkey Settings.

Click [start] - [All Programs] - [Panasonic] - [Hotkey Settings].

2 Make the settings.

[Use Fn key lock]

- When using an **Fn** key combination

① Press **Fn** once. (Fn key is locked and the indicator next to the key lights up.)

② Press another key. (Lock released)

- When using successive **Fn** key combinations

① Press **Fn** twice. (Fn key is locked and the indicator next to the key lights up.)



② Press another key.

Fn key remains locked until you press **Fn** again.

[Notification]

[Make sounds when Fn key is pressed]^{*5}

[Show status on screen]: Displays the Fn key status on the notification area.

-  **Fn** is locked.
-  **Fn** is not locked.

[Disable popup]

The pop-up icon will not be displayed.

3 Click [OK].

NOTE

- You can have different settings for each user.

^{*5} If the speakers are muted, beeps do not sound.

■ Setting Ctrl, Alt*⁶, Shift*⁶ keys and Windows key operations

When you press **Ctrl**, **Alt***⁶, **⇧** (Shift)*⁶ or **⊞** (Windows), the key is locked (pressed-down) until you press another key. Use this when pressing difficult key combinations.


1 Click  icon on the notification area.

2 Setting Sticky Key function

- To enable this function
Add a check mark for [Enable Sticky Key Function].
- To disable this function
Remove the check mark for [Enable Sticky Key Function].

Ctrl, **Alt***⁶, **⇧** (Shift)*⁶, **⊞** (Windows) keys operations when Sticky key function is enabled

- Press once: The key is locked. Press another key to release the lock.
 - Press twice: The key is locked. The lock cannot be released even if you press another key.
 - Press 3 times: The lock is released.
- The indicator next to each key lights up while each key is locked. (except for Windows key)
 - An illustration is displayed on the notification area as below.

 : A locked key icon is highlighted.

(The illustration shows **⇧** (Shift)*⁶ key is locked).

NOTE






- You can have different settings for each user.
- When Sticky key is active:
The start menu is not displayed by pressing **⊞** (Windows) key once. Press 3 times to display the menu. (Windows specification)
- When Sticky key is not active:
After pressing **Ctrl** + **Alt** + **Fn** + **←** (Del)*⁷, the indicator next to **Ctrl** and **Alt***⁶ remains lit. The light goes off when the original display is returned.

*⁶ For Numeric keyboard model, use a USB keyboard.

*⁷ For Numeric keyboard model : **Fn** + **●** (Ctrl+Alt+Del)

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

- **To right-click**

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

NOTE

- The touchscreen function does not work in the Setup Utility.

Operation of the touchscreen

- **Operate the touchscreen with your finger or with an approved stylus**

When using the touchscreen function, use only your finger or an approved stylus on the surface.

Operating the touchscreen with an object other than your fingertip or the stylus (a fingernail or metal object, or other hard or sharp objects that may leave a mark) may scar or stain the surface, causing the touchscreen to malfunction.

- **Do not apply too much pressure when operating the touchscreen**

Only a light touch is required to operate the touchscreen. Applying too much pressure may damage the surface.

Maintaining the performance of the touchscreen

- **When the touchscreen becomes dirty, wipe it with a soft cloth**

The touchscreen is specially treated to prevent dirt from adhering to the surface, so dirt can be removed easily using a dry cloth. If the dirt does not come off easily, breathe on the surface and try again.

Do not apply water or solvents to the soft cloth.

- **Clean the touchscreen while the computer is powered off**

Cleaning the screen while the power is on may cause the computer to malfunction. Also, dirt on the touchscreen is easier to see when the computer is powered off, and so is easier to clean.

- **Wash the soft cloth when it becomes dirty**

When the soft cloth becomes dirty, wash it with mild detergent. Do not use bleach or fabric conditioner (softener), or try to sterilize the cloth by boiling.

If the soft cloth is dirty, it may be ineffective in cleaning the touchscreen, and in fact may cause dirt to adhere to the touchscreen.

- **Check the following to prevent the surface of the touchscreen from being scratched**
 - Are you using your finger or a stylus to operate the touchscreen?
 - Is the surface clean?
 - Is the soft cloth clean?
 - Are you using the stylus with the tip extended?
 - Is the tip of the stylus clean?
 - Is your finger clean?

Things to keep in mind when using the touchscreen

- **Do not touch the screen outside of the LCD display area**


The touchscreen input area is defined by the LCD display screen. Touching the screen outside of the display area may result malfunctions or damage to the touchscreen.
- **Do not apply excessive force to the touchscreen**

Do not lift the computer while holding the LCD screen, or allow the screen to be twisted. Do not place any objects on the LCD screen. Any of the above may cause the touchscreen glass to break, or may damage the LCD screen.
- **Operation response may be slower in low temperature environments**

The touchscreen may respond to operations more slowly when using the computer in temperatures less than 5°C, but this is not a malfunction. Response time will return to normal when the computer is returned to room temperature.
- **If the cursor jumps to a location other than where the screen was touched, or if the LCD resolution changes, recalibrate the touchscreen**

Perform the procedure of “Touchscreen Calibration” (→ [page 10](#)).

Touchscreen Calibration

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

NOTE

- Perform the following calibration for each user.

Hardware Button Setting

You can adjust the scroll speed for Scroll button or assign the startup functions of your favorite applications to 4 Applications Buttons.

1 Click  icon on the notification area to display the menu.

2 Click [Setup]

Hardware Button Setting starts up.

3 Make the settings.

[Scroll Button] (A)

Slide the bar to the left (Slow) or right (Fast) to adjust how many lines to scroll by pressing the scroll button once.

[Application Buttons] (B)

You can register the execute files of the applications.

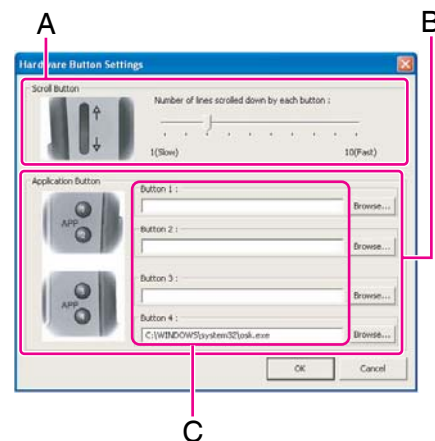
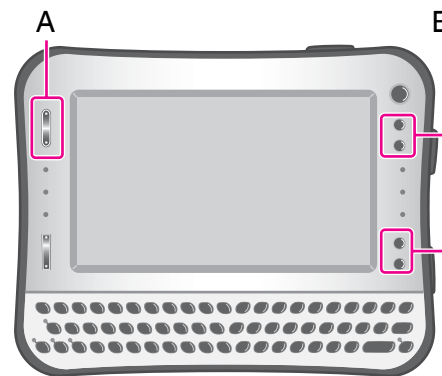
- The execute file for On Screen Keyboard has been registered for [Button 4] at the time of purchase. No files have been registered for the other buttons.

① Click any [Browse] button from [Button 1] to [Button 4].

② Select a file you wish to execute and confirm.

- You can also select files with extensions: [.pdf] [.jpeg] [.wma], etc. other than [.exe]
 - When selecting files other than [.exe], select [All File(*.*)].
 - You can specify the parameter only for [.exe] files.
 - If the application software starting up from the file has not been associated, this function does not work.
- You can register different files for from [Button 1] to [Button 4] respectively.
- To cancel the file registered, make the text box (C) blank.

4 Click [OK].



By zooming in the screen, small characters or icons become easy to see.
You can operate the computer (e.g. click) with the zoomed screen.

NOTE

- The Zoom function is not available in the following conditions.
 - When selecting a larger display resolution than the actual display resolution in the display setting
 - On the logon screen during startup of Windows or in the log off condition
- You cannot zoom the items below.
 - Transparent window
 - Hot key icon displayed when **Fn** key is pressed
- Motion pictures may not be zoomed in.
- Tablet PC Input Panel is not displayed while the screen is zoomed. Use On Screen Keyboard instead.
- You can use the Zoom function on the external display only in the mirroring mode.

1 Put the cursor (A) on the position you want to zoom in.


2 Press the zoom button (B).

+ : Zoom in

- : Zoom out (to the original size)

The area around the cursor is zoomed in.

Each time you press the button, zoom ratio changes. You can zoom between 100% and 500% (at 50 % intervals).

- You can also click  icon on the notification area to display Zoom menu and select the zoom ratio.
- You can operate the computer (e.g. click) with the zoomed screen.

■ To move the zoom position


Press and hold near the screen frame using the stylus.

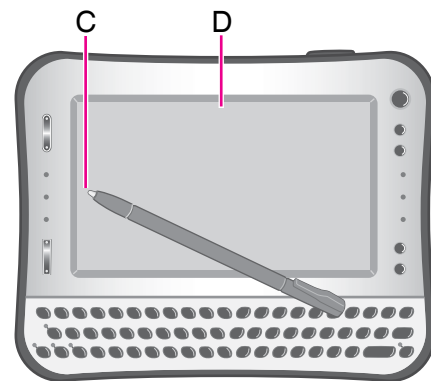
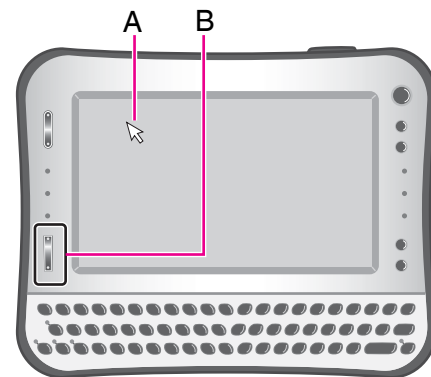
Example: Press around (C) to move left.

Press around (D) to move up.

■ To zoom out to the original size

There are 2 ways.

- Press the zoom button to [-] direction to return to the original screen.
- Click  icon on the notification area to display Zoom menu and click [100% Zoom].



NOTE

- The Zoom ratio returns to 100% in the following conditions even while the screen is zoomed.
 - When you switch the log in user
 - When the computer resumes from Standby/Hibernation
 - In the log off condition
 - When you press **Ctrl** + **Alt** + **Fn** + **←** (Del)^{*1}

^{*1} For Numeric keyboard model : **Fn** + **●** (Ctrl+Alt+Del)

Cursor synchronization mode

You can synchronize the movement of zoomed screen with the movement of cursor by the following setting.

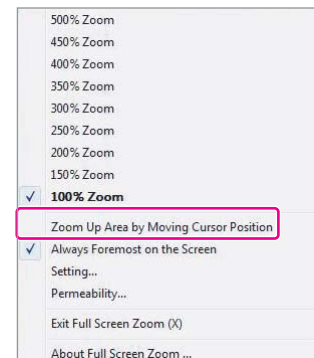
1 Click icon on the notification area.

Zoom menu appears.

2 Click [Zoom Up Area by Moving Cursor Position] to add a check mark.

Cursor synchronization mode becomes active.

Click again to return to Cursor non-synchronization mode.




■ To move the zoom position

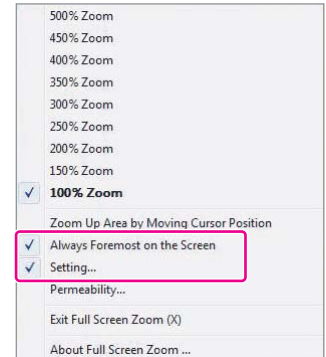
When you move the cursor to the position you want to zoom, the zoom position changes as well.

Other settings

■ Always Foremost mode


You can display the notification area in its original size for easy operations even in the zoomed screen.

- ① Click  icon on the notification area to display Zoom menu.
- ② Click and add a check mark for [Always Foremost on the Screen]. (In the default setting, check mark is added.)





■ Hot Key Setting

You can make the zoom setting by key combinations.


- ① Click  icon on the notification area to display Zoom menu.
- ② Click [Setting]
- ③ Click the text box (A) and press the key you prefer.

You can use only  (Windows), **Ctrl** or  (Shift)^{*2} key for combinations.

- To combine with  (Windows) key, add a check mark for [Windows Key +], click the text box and press any key. (e.g., **Z**, etc.)

Note that  (Windows) cannot be combined with the following keys:

B, C, D, E, F, L, M, P, R, U, Ctrl+F and  (Shift) + **M**.^{*2}

- To combine with **Ctrl** or  (Shift)^{*2} key, click the text box and press together with any key simultaneously. (e.g., **Ctrl + Z**, etc.)
- You can make 3 types of key combinations.
- Selectable items

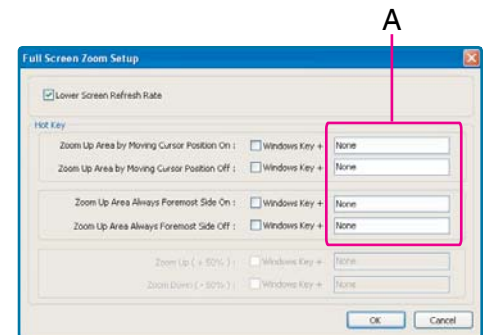
[Zoom Up Area by Moving Cursor Position On]: Set Cursor synchronization mode to ON.

[Zoom Up Area by Moving Cursor Position Off]: Set Cursor synchronization mode to OFF.

[Zoom Up Area Always Foremost Side On]: Set Always Foremost mode to ON.

[Zoom Up Area Always Foremost Side Off]: Set Always Foremost mode to OFF.

- ④ Click [Ok].



^{*2} For Numeric keyboard model, use a USB keyboard.

Lower Screen Refresh Rate


Leave the check mark added normally.

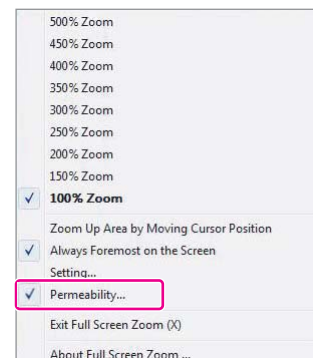
When you do not operate the computer certain length of time in the zoomed condition, the screen updating frequency changes from every 0.1 second to every 1 second.

To keep 0.1 second interval, remove the check mark. In this case, the computer does not enter hibernation in the zoomed condition.

■ Transparency Setting

You can set the permeability degree for the zoomed screen.

- ① Click  icon on the notification area to display Zoom menu.
- ② Click [Permeability].
- ③ Drag the slider right and left to set the permeability degree.
- ④ Click [OK].




You can make a bitmap file (.bmp) of a simple character and a figure such as signature by handwriting on the touchscreen.

CAUTION

- Do not use the Fast User Switching function while Panasonic Hand Writing is active.
- If you install other pointing devices (e.g., commercially available mouse driver), Panasonic Hand Writing will not work.

NOTE

- The display of Panasonic Hand Writing may be distorted if the number of display colors is changed. Right-click  on the notification area and click [Exit Panasonic Hand Writing], and then restart Panasonic Hand Writing.
- Panasonic Hand Writing may not work properly if another application software is active. In this case, close the application software and try handwriting again.

Starting Panasonic Hand Writing

1 Double-click on the notification area.

Alternatively you can click [start] - [All Programs] - [Panasonic] - [Panasonic Hand Writing].

NOTE

- Select the image size before handwriting by clicking [Option] - [Window size]. If you change the size after handwriting, the image quality will become lower.
- You can copy the bitmap image by clicking [Edit] - [Copy], and paste it in another application software that supports bitmap format.

Starting Up Your Computer Quickly

The standby or hibernation functions allow you to shut off the computer without closing programs and documents. You can quickly return to the programs and documents that you were working on before standby or hibernation.

Function	Data is saved to	Recovery time	Power supply
Standby	Memory	Short	Required. (If power is not supplied, all data will be lost.)
Hibernation	Flash memory	Rather long	Not required. (However power is slightly consumed to keep the hibernation.)

Setting Standby or Hibernation


- 1 Click [start] - [Control Panel] - [Performance and Maintenance] - [Power Options] - [Advanced].
- 2 Select [Stand by] or [Hibernate] for [When I close the lid of my portable computer] / [When I press the power button on my computer], and then click [OK].

NOTE

- You do not need to make the setting if you use the Windows menu to enter standby or hibernation.

Precautions

- Connect the AC adaptor if the computer will be in standby for a long period of time. If you cannot use the AC adaptor, use hibernation instead.
- Using standby or hibernation repeatedly may cause malfunction of the computer. To stabilize computer operation, restart Windows regularly (about once a week) without using standby or hibernation.
- Save the necessary data.
- Close files you have opened from removable disks and network drives.
- It may take 1 or 2 minutes to enter hibernation. Do not touch any key though the screen becomes dark.
- The password you set in the Setup Utility is not requested at resuming. You can use the Windows password for security in standby or hibernation.
 - ① Click [start] - [Control Panel] - [User Accounts], and select the account.
 - ② Click [Create a password] and set the password.

- ③ Click [start] - [Control Panel] - [Performance and Maintenance] - [Power Options] - [Advanced], and add a check mark in [Prompt for password when computer resumes from standby].
- Do not enter standby or hibernation in the conditions below, otherwise the data or file may be corrupted, standby or hibernation may not work, or malfunction may occur in the computer or the peripheral devices.
 - When any of the flash memory drive indicator  and the SD Memory Card indicator is on.
 - When playing/recording audio files or displaying motion video such as MPEG files.
 - When using communication software or network functions.
 - When using peripheral devices.
(If peripheral devices fail to work normally, restart the computer.)




Entering/Resuming from Standby or Hibernation

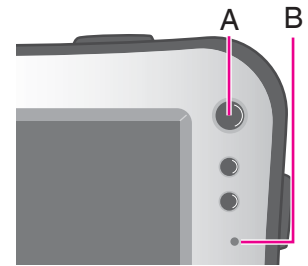
■ To enter standby or hibernation

1 Press the power switch (A) until a beep*1 sounds.



Standby: The power indicator (B) blinks green.

Hibernation: The power indicator (B) goes off.

- There are another 2 ways to enter Standby/Hibernation.
 - **Fn** + **I** () (Standby) / **Fn** + **G** () (Hibernation)*2
 - To enter standby, click [start] - [Turn Off Computer] - [Stand By]. To enter hibernation, click [start] - [Turn Off Computer], then press and hold  (Shift)*3 and click [Hibernate].



*1 If the speakers are muted, beeps do not sound.

*2 For Numeric keyboard model : **Fn** + **6** () (Standby) / **Fn** + **0** () (Hibernation)

*3 For Numeric keyboard model, use a USB keyboard.

CAUTION

- At the beep*4, immediately release the power switch. If you press and hold the power switch for longer than 4 seconds, the computer will forcibly shut down and unsaved data will be lost even if you have set [Shut down] in [When I press the power button on my computer] (→ page 17 “Setting Standby or Hibernation”).

*4 If the speakers are muted, beeps do not sound.

- While the computer is entering standby or hibernation, do not touch the computer.
For example, do not:
 - Touch the keyboard, touchscreen or power switch.
 - Use an external mouse or other peripheral devices.

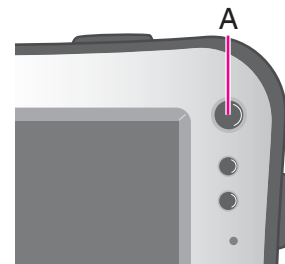
- Connect or disconnect the AC adaptor.
 - Operate the wireless switch.
 - Insert and remove the SD Memory Card.
- Wait until the power indicator blinks green (standby) or goes off (hibernation).
- It may take 1 or 2 minutes to enter standby or hibernation.

In standby or hibernation

- Do not attach or remove a peripheral device. Doing so may cause malfunction.
- Power is consumed in standby. When power is exhausted, the data retained in memory will be lost. Connect the AC adaptor when using the standby function.

■ To resume from standby or hibernation

- 1 Press the power switch(A).



CAUTION

- Do not perform the following operations until resuming is complete. After the display is resumed, wait approximately 30 seconds (normally) or 60 seconds (when the computer is on a network).
 - Touch the keyboard (except for password input), touchscreen or power switch.
 - Use an external mouse or other peripheral devices.
 - Connect or disconnect the AC adaptor.
 - Shut down or restart Windows.
 - Enter standby or hibernation (Wait approximately 1 minute).
 - Operate the wireless switch.
 - Insert and remove the SD Memory Card.

NOTE

- <Only for model with Bluetooth>
After resuming from standby or hibernation, the message “TosBtMng has stopped working” may appear. Click [Close program].
If Bluetooth connections are cut off, click [start] - [All Programs] - [Bluetooth] - [Bluetooth Settings], and connect to the Bluetooth devices again.

You can extend battery life and save power also during AC adaptor usage.

Reducing Power Consumption

Use the methods below to reduce power consumption.


- **Change [Power Options]**

Click [start] - [Control Panel] - [Performance and Maintenance] - [Power Options] to select [Max Battery] under [Power schemes].

While [Portable/Laptop] is selected under [Power Options] as the factory default, selecting [Max Battery] will further reduce power consumption. Also, make detailed settings such as reducing the time entered in the [Turn off monitor] setting.

- **Press $\overline{\text{Fn}} + \overline{\text{Q}}$ (∇ )^{*1} to reduce LCD brightness**

Reducing internal LCD brightness will reduce power consumption.



^{*1} For Numeric keyboard model : $\overline{\text{Fn}} + \overline{*}$ (∇ )

- **Turn off the computer when it is not in use**


You can also turn off only the wireless LAN, wireless WAN or Bluetooth power.

- **Disconnect external devices (USB devices, external mice, etc.) that are not being used**

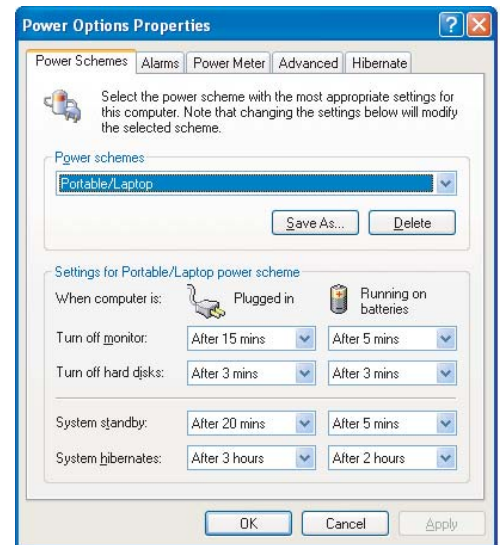
- **Use Standby/Hibernation**

Press $\overline{\text{Fn}} + \overline{\text{T}}$ ()^{*2} to set the computer to standby or $\overline{\text{Fn}} + \overline{\text{G}}$ ()^{*3} to set it to hibernation when you have to leave the computer. This shuts down computer operation to reduce power consumption.

To confirm current settings, click [start] - [All Programs] - [Panasonic] - [Power Saving Utility] to view [Wired LAN standby power saving function] or [Wireless LAN standby power saving function].

^{*2} For Numeric keyboard model : $\overline{\text{Fn}} + \overline{\text{6}}$ ()

^{*3} For Numeric keyboard model : $\overline{\text{Fn}} + \overline{\text{0}}$ ()



Use these features to protect your data.

Setting the Supervisor Password/User Password

Set the Supervisor Password before setting the User Password.

- 1 Start up the Setup Utility (→ page 59).**
- 2 Select [Security].**
- 3 Select [Set Supervisor Password] or [Set User Password], and press ↵ (Enter).**
- 4 Enter your password in [Enter New Password] and press ↵ (Enter).**
 - When the password has been set, you need to enter your password in [Enter Current Password] and press ↵ (Enter).
 - To disable the password, leave the input field empty and press ↵ (Enter).
- 5 Enter your password again in [Confirm New Password] and press ↵ (Enter).**
- 6 In [Setup Notice], press ↵ (Enter).**
- 7 Press Fn + B (F10), and then select [Yes] and press ↵ (Enter).**

CAUTION

- Do not forget your password. If you forget your Supervisor Password, you will not be able to use your computer. Contact Panasonic Technical Support.
- When running the Setup Utility, do not leave and go away from your computer even for a short time, since other people may set or change the password.

NOTE

- The password will not be displayed on the screen.
- You can use up to 32 alphanumeric characters (including spaces).
 - The case (upper/lower) is ignored.
 - Use only the upper horizontal row of numeric keys to input your password.
 - You cannot use ⇧ (Shift) and **Ctrl** to input a password.
- Disabling the Supervisor Password also disables the User Password.

Preventing Your Computer from Unauthorized Use

You can set a start-up password to protect your computer from unauthorized use.

- 1 **Set the password (→ page 21), and select [Enabled] in [Password on Boot] in the [Security] menu of the Setup Utility (→ page 64).**

NOTE

- If the Supervisor Password or User Password has been set, the password input screen will be displayed on starting-up of the Setup Utility even though [Password on Boot] is set to [Disabled].

Preventing Your Flash Memory Data from Being Read or Written

The flash memory lock function protects the flash memory data from being read or written when the flash memory is attached to another computer. The data can be read/written when the flash memory is returned to the original computer.

- 1 **Select [Enabled] in [Hard Disk Lock] in the [Security] menu of the Setup Utility (→ page 64).**

CAUTION

- For the data being read/written on the original computer, the Setup Utility settings must be the same as when the flash memory was removed.
- You cannot use the flash memory lock function without setting the Supervisor Password. Set the Supervisor Password beforehand (→ page 21).
- When you have your flash memory drive repaired
 - Contact Panasonic Technical Support.
 - Before sending back the flash memory drive, be sure to set the [Hard Disk Lock] to [Disabled].

NOTE

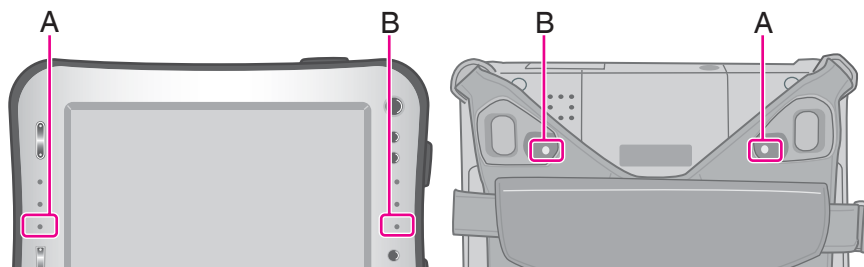
- The flash memory lock function works with the built-in flash memory. It does not work with the external hard disk.
- We recommend you to set [Password on boot] to [Enabled] to ensure security though it is not required to enable the flash memory lock. (Note that the flash memory lock does not guarantee complete protection of the data.)

Battery Indicator

You can attach 2 batteries packs to this computer. The battery indicators are prepared for each battery.

A : Battery 1 indicators

B : Battery 2 indicators



Battery indicator	Battery status												
Not lit	<p>The battery pack is not inserted or not being charged.</p> <ul style="list-style-type: none"> You can check presence of the battery pack by pressing Fn + F (🔋) ^{*1} (→ page 25) <p>^{*1} For Numeric keyboard model : Fn + 9 (🔋)</p>												
Orange	Charging is in progress.												
Green	The battery is fully-charged.												
Blinking green	<p>When you attach the battery cover with the battery pack already inserted:</p> <ul style="list-style-type: none"> You can check the battery level by blinking times <table border="1"> <thead> <tr> <th>Blinking times</th> <th>Battery level</th> </tr> </thead> <tbody> <tr> <td>5 times</td> <td>95 % to 100 %</td> </tr> <tr> <td>4 times</td> <td>50 % to 94 %</td> </tr> <tr> <td>3 times</td> <td>25 % to 49 %</td> </tr> <tr> <td>2 times</td> <td>5 % to 24 %</td> </tr> <tr> <td>1 time</td> <td>0 % to 4 %</td> </tr> </tbody> </table> <p>Except for the operations stated above:</p> <p>In high temperature mode, the battery pack is discharging the power to 80%^{*2} of normal temperature mode (→ page 26). Do not remove the battery pack since the power is not supplied even if you connect the AC adaptor in this mode. If remove the battery pack, the computer will be turned off and lose data.</p> <p>^{*2} In high temperature mode, the 100% battery level is equivalent to 80% level of the normal temperature mode.</p>	Blinking times	Battery level	5 times	95 % to 100 %	4 times	50 % to 94 %	3 times	25 % to 49 %	2 times	5 % to 24 %	1 time	0 % to 4 %
Blinking times	Battery level												
5 times	95 % to 100 %												
4 times	50 % to 94 %												
3 times	25 % to 49 %												
2 times	5 % to 24 %												
1 time	0 % to 4 %												
Red	The remaining battery is approximately 9% or less.												

Battery indicator	Battery status
Blinking red	<p>When blinking approx. every 1 second: The battery pack or the charging circuit is not operating properly.</p> <p>When blinking approx. every 4 second: The battery cover is open. You can remove the battery pack in this case.</p> <p>When blinking approx. every 0.5 second: The battery cover is open. If you remove the battery pack in this case, the power supply is cut off and the computer is shut down. Do not remove the battery pack because this may cause data to be lost and the computer to malfunction.</p>
Blinking orange	<p>The battery cannot be charged temporarily due to the following reasons:</p> <ul style="list-style-type: none">• Its internal temperature is out of the acceptable range.• The power supply is not enough because software applications or peripheral devices are consuming a large amount of power.

NOTE

- Once the battery is fully charged, the computer performs recharging only when the battery level becomes less than approximately 95%, so overcharging is avoided.





Checking the Remaining Battery Charge

You can check the remaining battery charge on the screen.

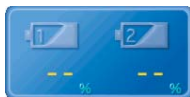
(After logging on to Windows)


1 Press **Fn + F** ()^{*3}.

- When the battery pack is inserted (example)

	Normal temperature mode (→ page 26)	High temperature mode (→ page 26)
In charging		
In discharging (The battery pack in the frame is discharging)		

- When the battery pack is not inserted



^{*3} For Numeric keyboard model : **Fn + 9** ()

NOTE

- The battery display may not correspond to the actual remaining battery charge in the cases as below. To correct the display, perform the Battery Recalibration (→ page 28).
 - The battery indicator remains red.
 - The indicator lights orange and the display shows 99% for a long time.
 - Low battery warning appears soon after a short time of use.

This can occur when the computer is in standby for a long time without power supply from the AC adaptor.
- The battery display may not be the same as that of notification area or of [Power Meter] in [Power Options Properties]. This is not a malfunction.

High temperature mode

The high temperature mode can prevent the battery from deteriorating when the computer is used in high-temperature environment or used for a long time with its battery fully charged.

Select [Auto] (default) or [High Temperature] in [Environment] of the [Main] menu of the Setup Utility (→ [page 61](#)).

NOTE

- Note that a level corresponding to a 100% charge for high temperature mode is approximately equivalent to an 80% charge level for normal temperature mode.
 - After switching from [Normal Temperature] to [High Temperature] or vice versa, the remaining battery capacity will not be displayed correctly until the battery pack is completely discharged or fully charged.
 - In the [Auto] mode:
Once the computer has automatically switched from the normal temperature mode to the high temperature mode, the computer will not switch back to the normal temperature mode until the battery has been used and recharged to a total charge level of about 5 times as much as that of the fully-charged state. This is to avoid battery deterioration.
In [Auto] mode, mode switching is possible only for the battery pack in operation. The other battery's [Environment] mode remains the same.
-

Computer behavior with low battery

The default settings are as follows.

- This computer automatically switches from Battery 1 to Battery 2 and vice versa when either battery becomes empty. When both batteries are not sufficiently charged, the computer operates as below.

When the battery level becomes 10% [Low battery alarm]	When the battery level becomes 5% [Critical battery alarm]
<ul style="list-style-type: none">● Displays a message that the battery level is low. <p style="text-align: center;">↓</p>	<ul style="list-style-type: none">● The computer enters hibernation. <p style="text-align: center;">↓</p>
Charge the battery.	Connect the AC adaptor or replace the battery to start up the computer.
<ul style="list-style-type: none">● Connect the AC adaptor immediately. If you do not have the AC adaptor, exit the running programs and Windows, then confirm that the power indicator is off.● If you have a fully charged spare battery, turn off the computer, replace the battery and turn the computer on again.	<ul style="list-style-type: none">● Connect the AC adaptor and charge the battery.● If you have a fully charged spare battery, turn off the computer, replace the battery and turn the computer on again. <p>When the computer enters hibernation with the battery down and you resume the operation without charging the battery, Windows may not start up normally or the alarm function may not operate normally from then on.</p>

Correcting the Battery Display (Battery Recalibration)

The “Battery Recalibration” function measures and memorizes the battery capacity. To correct the battery display, use this function to fill the battery and then discharge it completely. Perform the procedure at least once immediately after purchasing the computer. Normally the interval of battery recalibration is 3 months. The battery display may not be correct when the battery pack deteriorates after a long time use. In this case, perform the procedure again.

1 Connect the AC adaptor.

2 Close all the applications.

3 Perform “Battery Recalibration”.

① Click [start] - [All Programs] - [Panasonic] - [Battery] - [Battery Recalibration].

② When the confirmation message appears, click [Start].

- Frequent recalibration of the battery can degrade the battery. A caution message appears when the battery recalibration is performed at the shorter interval than approximately a month. In this case, cancel the battery recalibration.

③ When the message requests shut down of Windows, click [Yes].

The battery recalibration starts.

After the battery pack is fully charged, discharging starts. When the discharging is completed, the power goes off automatically.

After the battery recalibration is finished, normal charging starts.

NOTE

- The temperature range should be 10°C to 30°C {50°F to 86°F}.
- The battery recalibration may take a long time due to the large battery capacity. This is not a malfunction.
 - Full charge: Approx. 7 hours with 2 batteries
 - Complete discharge: Approx. 6 hours with 2 batteries
- If the computer is turned off during the battery recalibration (e.g., due to power failure, or accidental removal of the AC adaptor and battery pack), the battery recalibration will not be completed.
- You can also perform the battery recalibration with the following procedure.
 - ① Restart the computer.
 - ② Press and hold **Fn** + **F9**^{*4} while the [Panasonic] boot screen is displayed just after the computer starts the startup procedure.
 - ③ When the remaining battery capacity is displayed, press **↵** (Enter).
 - ④ Follow the on-screen instructions.

^{*4} For Numeric keyboard model, connect a USB keyboard and press **F9**.

Replacing the Battery Pack

If you have a battery charger (optional), you can remove one battery pack to charge while the other battery pack is operating. The battery pack is a consumable item so the replacement will be necessary. If the battery operation time becomes noticeably short and not recovered even after recalibrating the battery, replace with a new battery.

CAUTION

- The battery pack is not charged when you first purchase it. Be sure to charge it before using for the first time. Charging starts automatically when the AC adaptor is connected to the computer.
- Use only the specified battery pack with your computer.

Checking the battery pack that can be replaced/removed

Remove/replace the battery pack under the right conditions according to the chart below because if the computer is mistakenly shut down, this may cause data to be lost and the computer to malfunction.

When the computer is ON or in Standby	When the AC adaptor is not connected	Only one battery pack can be removed/replaced. To check if the battery pack can be removed/replaced: When you open the battery cover, the blinking (red) of battery indicator tells. <ul style="list-style-type: none"> • When blinking approx. every 4 seconds: Can be replaced • When blinking approx. every 0.5 second: Cannot be replaced
	When the AC adaptor is connected	Both battery packs can be removed/replaced.
When the computer is OFF		Both battery packs can be removed/replaced.
When the computer is in Hibernation		Both battery packs can be removed/replaced.

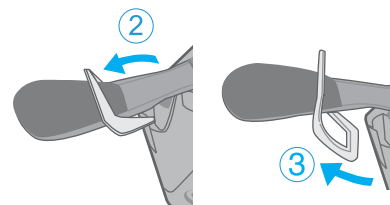
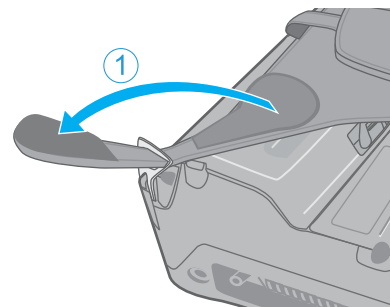
1 Place the computer with the panel side down.

- Place it on a soft cloth, etc.

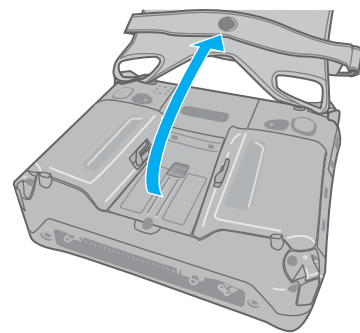
2 Remove right and left hand strap clips from the computer.

The illustration shows the clip on the left side as an example.

- ① Remove the edge of hand strap passing through the clip.
 - ② Tip the top of clip front.
 - ③ Pull out the clip from the computer.
- Do the same for the right clip.



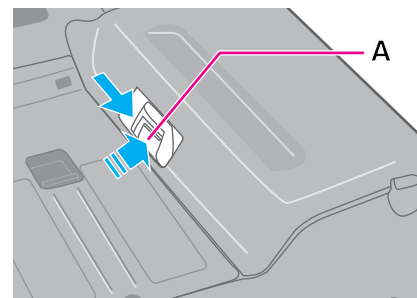
3 Open up the whole hand strap.



4 Press and hold (A) and slide the latch to unlock the battery cover.

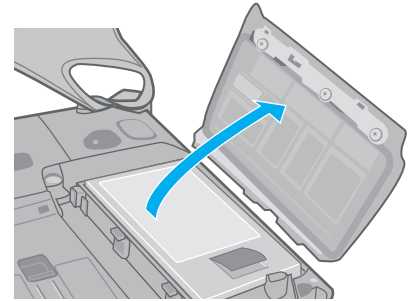
The following illustration shows how to attach/remove Battery 1 as an example.

Do the same for Battery 2.



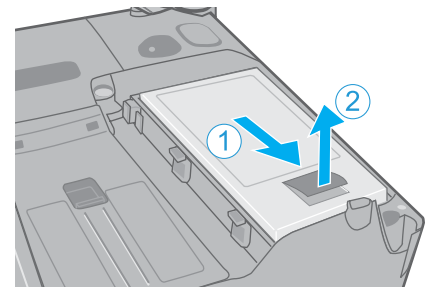
5 Remove the battery cover.

- Check the blinking (red) status of battery indicator. (→ [page 29](#)).



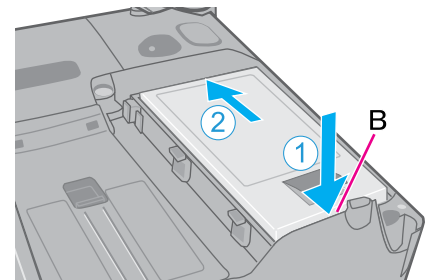
6 Pull the tab to remove the battery pack.

- ① Slightly pull the battery pack to front.
- ② Lift up the battery pack.



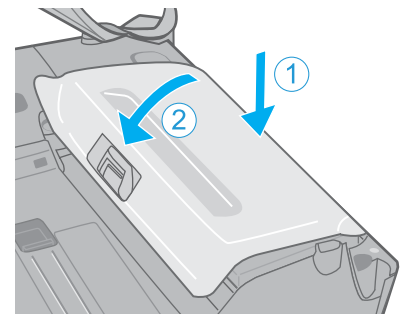
7 Insert the new battery pack.

- ① Insert the battery pack matching with (B) side.
- ② Slide down the battery pack.



8 Attach the battery cover.

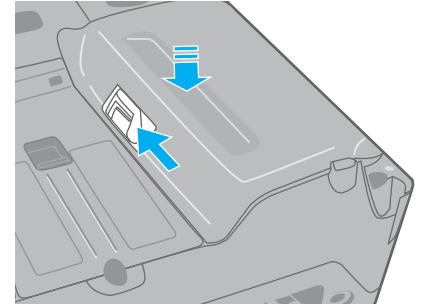
- ① Insert the claw of the cover matching the dent of computer.
 - ② Press down the latch side of cover to close.
- If the cover does not close firmly, insert the claw again. If the problem persists, check if the battery is inserted properly.



9 Pressing and holding the battery cover, slide the latch to fix.

10 Attach the hand strap back to the original form.

- Take the step **2** (① to ③) in the reverse order.



CAUTION

- Make sure the latch is securely locked, otherwise the battery pack may fall when you carry the computer.

SD Memory Card Information

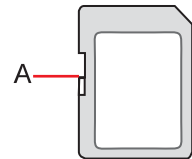
- This computer supports SDHC Memory Cards (SD Memory Cards with a capacity more than 2 GB).
- When you use a miniSD Card or a microSD Card, set the card to a miniSD Card adaptor or a microSD Card adaptor, and insert/remove the card with the adaptor. Be sure not to leave the adaptor in the card slot.
- The SD Memory Card has a copyright protection function which is compatible with content on-demand services on the Internet, etc.
- To use the SD Memory Card on other devices, format the card on the devices. For further information, refer to the instruction manual of the devices.

Handling and storage cautions

- Store the SD Memory Card in the case after removing it from the computer.
- Do not:
 - Disassemble or modify the card.
 - Hit, bend, or drop the card.
 - Touch the terminals with fingers or metal object.
 - Remove the labels of the card / Attach other labels or stickers to the card.
- Do not place the card in the following locations.
 - In direct sunlight or in very hot location such as inside of a car.
 - In very dusty or humid location.
 - In location subject to corrosive gas, etc.

Data handling cautions

- Set the write-protect switch (A) to the LOCK position. Unlock the switch when recording (checkout), saving, or editing data.
- We recommend you to back up the important data to another storage medium.
- When disposing the card, we recommend you to physically destroy the card (using a hammer, etc.) to prevent personal or confidential data leakage.



Inserting/Removing the SD Memory Card

CAUTION

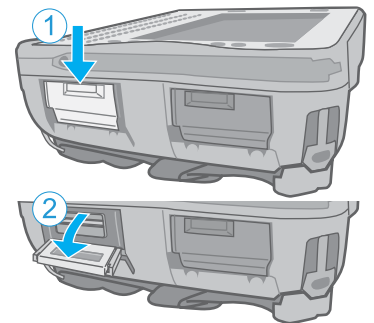
- Do not remove or insert the SD Memory Card until Windows has completed loading.
- Do not remove the card or turn off the computer in the following cases, otherwise the data may be corrupted.
 - While the computer is in standby or hibernation.
 - While the SD Memory Card indicator is on.
 - While data is being read from or written to the card.
 - Immediately after the writing operation.

The computer may still continue the access to the card just after writing operation. If you remove the card before the operation is completed, the data may be damaged or the card access may no longer be performed normally.
- Note that Panasonic assumes absolutely no liability for any loss of data recorded by the user, or any other damages, direct or indirect.
- Do not forcibly draw out the card, otherwise the slot may be damaged.
- Insert the card in the correct direction, otherwise the card and the slot may be damaged.
- After resuming from standby or hibernation, do not access the SD Memory Card for approximately 30 seconds.

■ To insert the card

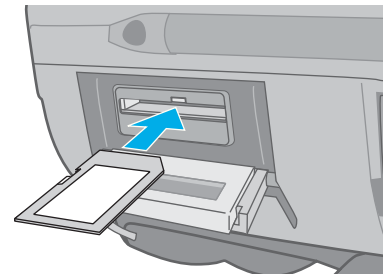
1 Open the cover.

- ① Slide the latch down to unlock the cover.
- ② Open the cover.



2 Insert the SD Memory Card with the label side facing up and with the cut corner facing in.

- It may take 0.5 to 1 minute for the computer to recognize the SD Memory Card which is inserted for the first time to this computer.




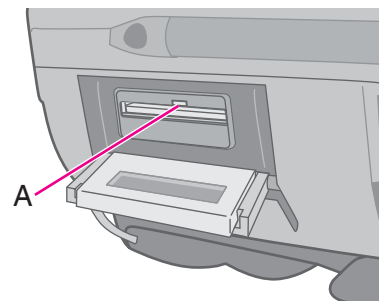
■ To remove the card

Preparation

- Save the data and close all applications.
- Open the cover and confirm the SD Memory Card indicator (A) is off.

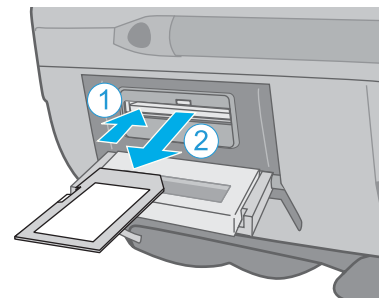
1 Disable the card function.

- ① Double-click  on the notification area and click [SD Memory Card], then click [Stop].
- ② Follow the on-screen instructions.
 - This step is not necessary when removing the card after turning off the computer.



2 Remove the card.

- ① Press the card so it comes out of the slot.
- ② Draw it straight out.

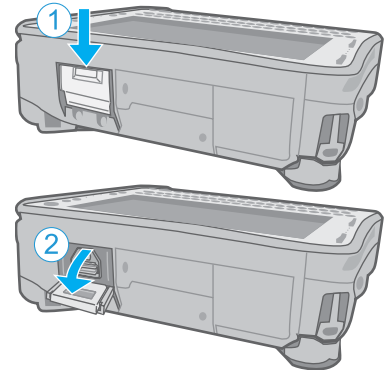


Connecting/Removing USB Devices

■ To connect the USB device

1 Open the cover.

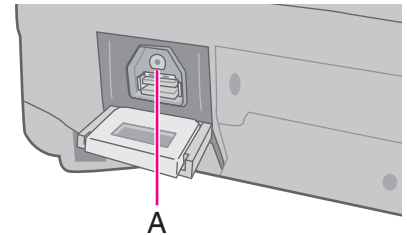
- ① Slide the latch down to unlock the cover.
- ② Open the cover.



2 Connect the USB device to the USB port.



When using the cable specifically designed for this, you can tighten screws at position (A).

For further information, refer to the instruction manual of the USB device.




■ To remove the USB device

1 Disable the USB device.

- ① Double-click  on the notification area and select the USB device, then click [Stop].
- ② Follow the on-screen instructions.
 - This step is not necessary when;
 - Removing the device after turning off the computer.
 -  is not displayed.
 - The device does not appear in the list in step ①.

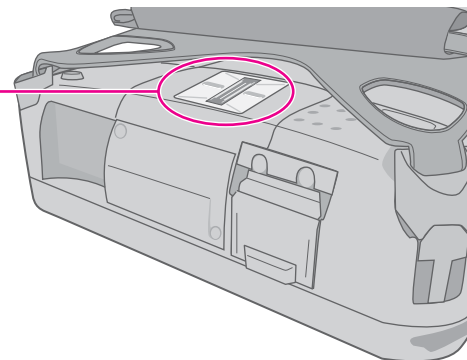
2 Remove the USB device.

NOTE

- If you have the Cradle (optional), you can connect USB devices to the Cradle.
- You may need to install the driver for the USB device. Follow the on-screen instructions or refer to the instruction manual of the USB device.
- You may need to install the driver again when connecting the device to another port.
- When a USB device is connected, standby and hibernation may not function normally. If the computer does not start up normally, remove the USB device and restart the computer.
- When the USB device is removed and then inserted,  may appear in the Device Manager and the device may not be correctly recognized. In this case, remove and connect the device again.
- When a USB device is connected, power consumption increases. Remove the USB device when it is not in use, especially when operating by battery power.

<Only for model with Fingerprint Reader>

Fingerprint Reader



NOTE

- Enrollment and authentication is unavailable to an extremely minority of people including those whose fingerprints give little data for personal identification.

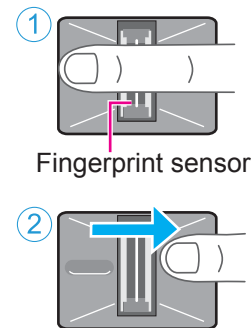
How to Use the Fingerprint Reader

This section explains how your fingerprints are enrolled and authenticated.

1 Slide your finger.

- To prevent a reading error.
 - ① Set the first joint of your index finger on the sensor as illustrated to the right.
 - ② Slide your finger until it completely crosses.
 - You can slide your finger from both sides.
- When the fingerprint sensor does not enroll or authenticate your fingerprint properly:
 - You slid your finger too fast or too slow.
 - Your finger was soiled or it has a scar on the surface.
 - Your finger was wet or extremely dry.
 - Your fingerprint does not have sufficient data for personal identification.

For further information, refer to “Fingerprint Reader” (→ [page 78](#)).



CAUTION

- We shall not be liable for any loss or damage whatsoever resulting from your Fingerprint device or neglect of Fingerprint device use, or any data loss resulting from such developments as Fingerprint authentication device malfunctioning.

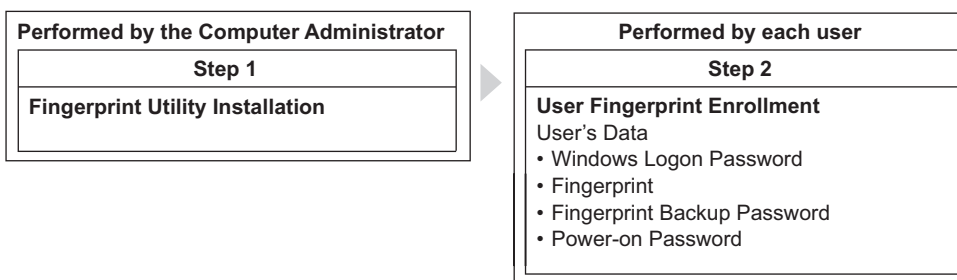
Overview

Fingerprint's Outline

The conventional security systems use ID/passwords and token devices such as IC cards to authenticate users. Therefore the passwords and token devices are exposed to the risk of being lost, stolen and hacking.

The Fingerprint authentication method uses user's fingerprints instead of passwords for security authentication. You can use your fingerprints to start up your computer and log on Windows.

Recommended Installation Procedure



■ To access the online manual

For further information, refer to the UPEK Protector Suite QL Help menu.

- Click [start] - [All Programs] - [Protector Suite QL] - [Help].

Precautions


■ Security Functions

- Fingerprint Authentication Technology does not guarantee complete authentication and individual identification. Please acknowledge we shall not be liable for any loss or damage whatsoever resulting from the use of, or inability to use your Fingerprint device.
- The Fingerprint authentication method uses multiple fingerprints, encryption keys, credentials data and passwords. You might not be able to use your data if you lose fingerprints, keys, credentials and passwords. Back up the Fingerprint authentication data in a safe place. For further information, refer to “Backup” (→ [page 43](#)).
- General interaction with third-party applications: There is no guarantee that there will not be any negative interaction with any third-party software, and will not accept any responsibility for such an interaction.

Installation

1 Fingerprint Utility Installation

Performed by the Computer Administrator.

- ① Log on to Windows as an Administrator.
- ② Close all other programs.
- ③ Click [start] - [Run], enter “c:\util\drivers\fgnprint\application\x86\install\setup.exe”, and click [OK].
- ④ Click [Next].
Installation starts. Follow the on-screen instructions.
- ⑤ When the “Protector Suite *.* has been successfully installed.” message appears, click [Finish].
At the confirmation message, click [Yes].
The computer restarts.
- ⑥ Log on to Windows as an Administrator.
The “Protector Suite QL Icon”  appears in the notification area.

2 User Fingerprint Enrollment

Performed by each user.

- ① Click [start] - [All Programs] - [Protector Suite QL] - [User Enrollment].
Carefully read the License Agreement, select [I Accept the terms of the License Agreement] and click [OK].
- ② Click [Next].
- ③ Select an enrollment mode, and click [Finish].
 - Enrollment mode
You can make the configuration for the enrollment only once during this initialization phase.

- Enrollment to the biometric device
All enrolled fingerprints are stored directly in the fingerprint sensor. The user data will be secured by the hardware protection keys obtained by the fingerprint sensor. This mode allows up to 21 fingerprints to be enrolled.
- Enrollment to the hard disk
All enrolled fingerprints are stored on the flash memory. Hardware protection of the user data is not possible, but multiple users can enroll their fingerprints.
- When the [Finish] screen appears, read the description carefully.
- [User Enrollment] wizard starts. Follow the on-screen instructions.

NOTE

- Enroll at least 2 fingers. Even if one of them is injured, you can use another one to access your account and secret data. For further information about the enrollment, refer to “How to Use the Fingerprint Reader” (→ [page 38](#)) and [Fingerprint Tutorial].
 - Click [start] - [All Programs] - [Protector Suite QL] - [Fingerprint Tutorial].
- We recommend you use the Power-on Security feature. This feature prevents unauthorized access to the user's computer at the BIOS level.
After first finger enrollment, [Power-on Security] message appears. Select [Yes].
 - ① When the [Power-on Security] screen appears, click [Manage Passwords].
 - ② Select [Power-On] in [Password Types], and click [Set password].
 - ③ Enter the password for [Power-on Security], and click [OK].
 - ④ Click [Close].
 - ⑤ Add a check mark for [Power-On] in [Password Types].
 - ⑥ Enter the password (step ③), and click [OK].
 - ⑦ Click [Next].
 - Follow the on-screen instructions.

NOTE

- The number of fingerprints for [Power-on Security] is maximum of 21, because they are stored in the fingerprint sensor regardless of the selected enrollment mode.

More Advanced Security

You can increase your computer's security level by setting the BIOS level described in this section.
Performed by the Computer Administrator.

<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**

1 Register the Supervisor Password.

You have to register the Supervisor Password to proceed to the next step.

If you have already registered the Supervisor Password, you can skip this step, and move on to step 2.

If you have not done this, have enrolled your fingerprint using Protector Suite QL, and have already made Power-on Security effective, after step ②, your fingerprint authentication will be necessary.

- ① Turn on or restart the computer.
- ② Press **Fn** + **U** (F2) or **Fn** + **←** (Del) while [Panasonic] boot screen is displayed soon after the computer starts the startup procedure.
- ③ Select the [Security] menu.
- ④ Select [Setup Supervisor Password], and press **↵** (Enter).
- ⑤ Enter your password in the [Create New Password], and press **↵** (Enter).
 - The password will not be displayed on the screen.
 - You can use up to 32 alphanumeric characters (including spaces).
 - The case (upper/lower) is ignored.
 - You cannot use **⇧** (Shift) and **Ctrl** to input a password.
- ⑥ Enter your password again in [Confirm New Password], and press **↵** (Enter).

2 Set the High Security Level.

- ① Select [Fingerprint Security], and press **↵** (Enter).
- ② Select [Security mode], and select [High].
 - Default setting: Simple
- ③ Press **Fn** + **Tab** (ESC) to close the sub-menu.
- ④ Press **Fn** + **B** (F10), select [Yes], and press **↵** (Enter) to exit the Setup Utility.

NOTE

- In the [High] security mode, you have to enter the Supervisor or User Password even after fingerprint authentication. In the [Simple] security mode, you do not have to enter the Supervisor or User password after fingerprint authentication.

Useful Information

Backup

The file described below is necessary for recovering the Fingerprint authentication data. Back up this file periodically in a safe location such as removable disk to avoid data loss resulting from some accidents. We recommend you to store the file in a removable disk or network drive because the benefit of Fingerprint authentication security can be reduced if you keep the file in the internal flash memory drive.

The backup password described below is necessary for bypassing the Fingerprint authentication. We recommend you set the backup password using the [User Enrollment] wizard. If you do not define the backup password, you may lose your data in case of authentication hardware failure.

- File used by each user
 - Backup user passport data
(Default name: <UserAccount>.vtp)
You need this file when you replace the embedded fingerprint chip, or the flash memory drive, or when reinstalling Windows.
This file contains the fingerprints, encryption keys, and logon authentication data.


NOTE

- How to Backup:
Select [Export] in [Import or Export User Data] to save the user data.
 - Click [start] - [All Programs] - [Protector Suite QL] - [Control Center] - [Fingerprints].
For further information, refer to the software's online manual ([→ page 39](#)).
- Password used by each user
 - Backup Password for Enrollment
This backup password can be used in case of hardware failure to bypass the fingerprint authentication.

CAUTION

- The passwords other than those explained above are also used for security, so do not lose them. For further information, refer to the software's online manual ([→ page 39](#)).

Limitations in Use

- Password Bank^{*1} limitations: The following web pages cannot be supported.
Web pages which are created by the following technologies:
 - Web forms created on the fly using javascript.
 - Web forms which looks as one form (e.g. login field, password field), but internally created with 2 independent forms.
 - There can be auto submit problems with web forms which do not have Submit button. All forms that you cannot submit with  (Enter) will be entered by Password Bank, but not submitted.
 - Password Bank^{*1} limitations: The following Windows applications cannot be supported.
 - Applications which do not use standard Windows controls and draw controls by their own.
 - This includes any Java based application.
- ^{*1} For information of these functions, refer to the software's online manual ([→ page 39](#)).

Handling & Maintenance

- The enrolling and authentication sensitivity may decline under the conditions below. Wipe off stains or moisture on the sensor surface with a soft cloth.
 - The surface of the fingerprint sensor is soiled with dust, skin oil, or sweat.
 - The surface of the fingerprint sensor is wet as a result of moisture or condensation.
- Static electricity may also cause the sensor to malfunction. To make your finger static-free, touch a metal surface before placing it on the fingerprint sensor. Exercise caution against static electricity in winter and other dry conditions.
- Malfunction or damage may occur when:
 - The fingerprint sensor surface was damaged by the strong rubbing of a solid material, scratches, or being pecked with a pointed item.
 - The sensor was touched with a finger soiled with mud, damaging the sensor surface with a tiny substance, and staining the surface.
 - The sensor surface was covered with a seal, or soiled with ink.

Deleting (Initializing) Owner's Data

When you dispose of the computer or transfer the ownership, delete (initialize) the owner's data to avoid unauthorized access.

NOTE

- The data enrolled in the fingerprint sensor is not image data. You cannot restore fingerprint image data from the data enrolled in the fingerprint sensor.

1 Disable Power-on Security

Performed by the Computer Administrator.

- ① Click [start] - [All Programs] - [Protector Suite QL] - [Control Center].
 - The [Fingerprint Control Center] screen appears.
- ② Click [Settings], and click [Power-on Security].
- ③ Remove the check mark from [Enable power-on security using fingerprints], and click [OK].
- ④ Click [Fingerprints], and click [Enroll or Edit Fingerprints].
 - [User Enrollment] wizard starts. Follow the on-screen instructions.
- ⑤ When the [User's Fingers] screen appears, click [Next] without deleting fingerprint samples.
- ⑥ Click [Manage Passwords].
- ⑦ Select [Power-On] in [Password Types], and click [Unset password].
- ⑧ Enter the password for Power-on Security, and click [OK].
- ⑨ Click [Close].
 - Confirm that there is no item in [Password Types].
- ⑩ Click [Next] - [Next].
- ⑪ Click [Finish].
 - Follow the on-screen instructions.

2 Delete Fingerprint Data.

Performed by each user.

- ① Click [Fingerprints], and click [Delete].
 - The [Swipe finger] screen will appear.
- ② Swipe user's finger.
 - If the authentication is successfully completed, the confirmation message appears.
- ③ Click [Yes].
 - Confirm that all users' data was deleted.

NOTE

- If the enrollment mode is set to “Enrollment to the hard disk” (→ [page 41](#)), you need to remove the fingerprints data after step 2. Performed by the Computer Administrator.
 - ① Click [start] - [All Programs] - [Protector Suite QL] - [Control Center].
 - ② Click [Settings], and click [Power-on Security].
 - ③ Select the fingerprint, and click [Remove].
 - Surely remove all of the fingerprints.

3 Uninstall Protector Suite

Performed by the Computer Administrator.

- ① Log on to Windows as an Administrator.
- ② Close all programs.
- ③ Click [start] - [Control Panel] - [Add or Remove Programs].
- ④ Click [Protector Suite *.*], and click [Change].
- ⑤ Select [Remove].
- ⑥ Select [Remove all Protector Suite *.* data], and click [Next].
 - Uninstallation starts. Follow the on-screen instructions.
- ⑦ When the “Protector Suite *.* has been successfully uninstalled.” Message appears, click [Finish].
 - If the confirmation message appears, click [Yes].
 - The computer restarts.

Starting Over

If the specific solutions for your problem in Fingerprint Reader (→ [page 78](#)) do not work, you can use these instructions as the last measure and start over. However, please note that you can lose your data - passwords, secret keys and fingerprints.

- ① Log on to Windows as an Administrator.
 - You can always access the computer by using your Windows log on password.
In convenient mode, any user can access the computer by using the Windows log on password.
- ② Try to export your passport to a file if you are planning to use your passwords, secret keys or enrolled fingers in the future.
 - If you exported your passport recently, this step is not required.
 - If biometrics authorization works and your finger are recognized, use [Import or Export User Data] wizard, swipe your finger and continue according to wizard's instructions.
 - If biometrics authorization works, but your finger is not recognized, you can start the [Import or Export User Data] wizard and export the passport even without using your fingerprint. You need to cancel fingerprint dialog, and you will be prompted for a password. If you do not use [Advanced Security], enter your Windows log on password. Otherwise, enter your [Advanced Security] backup password.

CAUTION

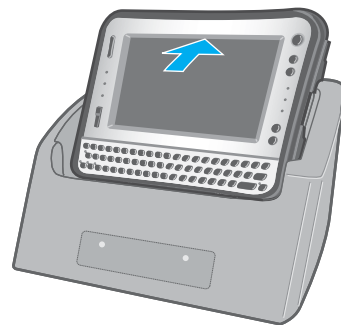
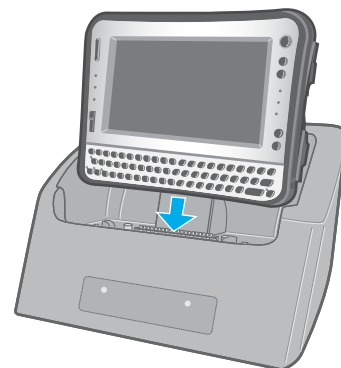
- If you used [Advanced Security] without a backup password. There is no way to backup your data.
 - If biometrics authorization does not work, there is no way to backup your data.
-

- ③ Deleting the passport.
 - Use the [Delete] wizard. Please note that all your stored secret data (passwords, [File Safe] encryption keys) will be lost. If you backed up the data, you can restore it in the next step; otherwise it will be lost permanently. To perform the delete operation it is necessary to cancel the fingerprint verification operation to get to the password dialog, then enter your Windows log on password or backup password.
- ④ Make sure your fingerprint sensor is working.
 - Use the Tutorial wizard to verify that the fingerprint sensor works. If not, reboot and try again. If it still does not work, please contact Panasonic Technical Support.
- ⑤ Restore or create passport.
 - If you have a backup of your data, you can now use [Import or Export User Data] wizard to restore your data. Otherwise you can create a new passport by using the [Enroll or Edit Fingerprints] wizard.

You can connect external equipment in variety by attaching the computer to the Cradle (optional) or Mini Dock (optional). Following is an example of how to set the computer to the Cradle. For further information, read the operating instructions that comes with the Cradle or Mini Dock.

■ Setting the computer to the Cradle

- 1 Turn off the computer.**
 - Do not use standby or hibernation function.
 - Disconnect all the devices and cables and close the terminal cover.
- 2 Insert the computer to the Cradle from above.**
- 3 Tip the computer back to fix it to the Cradle.**



CAUTION

- The driver of the Cradle is preinstalled in the computer.
- Hot or warm docking/undocking is not possible with the Cradle or Mini Dock.
- If impure substance is attached on the connector parts of Cradle or Mini Dock, brush off the dirt. Wipe off the water if attached. Contact failure may occur.

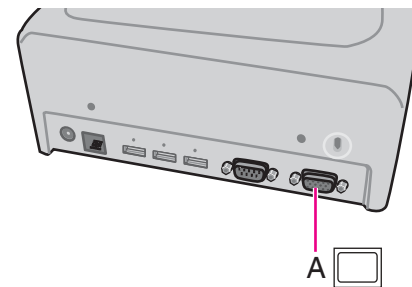
<Cradle only>

- To boot the computer from a USB floppy disk drive or a USB CD/DVD drive, be sure to connect the USB drive to the USB port on the computer, not to the USB port on the Cradle.

<Only when connected to Cradle>

You can switch the output destination to an external display.

Before switching the computer on, connect the external display to the external display port (A) on the Cradle.



NOTE

- After resuming from standby or hibernation, or restarting the computer, the output destination may not be the same as the one selected in the previous status.
- When you change the display after Windows starts up, do not press any key until switching is complete.
- Until Windows startup is completed (during Setup Utility, etc.), the simultaneous display cannot be used and pressing **Fn** + **E** (□/□)^{*1} switches the display between the internal LCD and the external display.
- Display switching by pressing **Fn** + **E** (□/□)^{*1} may not work when you use the Fast User Switching function to switch the user. In this case, log off all users and restart the computer.
- “Full Screen” of [Command Prompt] is not supported.
Do not set [Command Prompt] to “Full Screen”.
- Do not connect or remove the external display during standby or hibernation.
- It may take some time to switch between displays depending on the displays used.
- When you use high resolution displays, the display color, resolution or refresh rate may be changed, switching to [MID] in [Intel(R) Graphics Media Accelerator Driver for ultra mobile].

We recommend you to switch the output destination by pressing **Fn** + **E** (□/□)^{*1}.

- When you use the external display only, set the suitable number of colors, resolution, or refresh rate separately from when you use the internal LCD only or when you use the simultaneous display.
Depending on the settings, some external displays may be distorted or may not display the mouse cursor correctly. In this case, set the settings to lower value.
- When you use the simultaneous display, DVD-Video, MPEG files and other motion image files may not be played back smoothly.
- Carefully read the instruction manual of the external display.
- When connecting an external display that does not conform to the Plug & Play standards, select the display driver accordingly in the following menu, or use the driver disc supplied with the monitor.
[start] - [Control Panel] - [Appearance and Themes] - [Display] - [Settings] - [Advanced] - [Monitor] - [Properties] - [Driver] - [Update Driver]
- If a picture is not displayed normally, lower the level of [Hardware acceleration] in the following menu.
[start] - [Control Panel] - [Appearance and Themes] - [Display] - [Settings] - [Advanced] - [Troubleshoot]

*1 For Numeric keyboard model : **Fn** + **4** (□/□)

CAUTION

- Before disconnecting the external display, switch to the internal LCD by pressing **Fn** + **E** (□/□)^{*2}. Otherwise the displayed image quality may become different after disconnection (e.g., wrong resolution). In this case, press **Fn** + **E** (□/□)^{*2} to reset the image quality.
- The screen may become distorted due to the following operations. In this case, restart the computer.
 - Disconnecting an external display for which you have set high resolution or high refresh rate.
 - Connecting/disconnecting an external display during computer operations.

^{*2} For Numeric keyboard model : **Fn** + **4** (□/□)

Switching the Display

1 Press **Fn** + **E** (□/□)^{*3}.

Each time you press the key combination:

Internal LCD → Simultaneous display → External display
↑

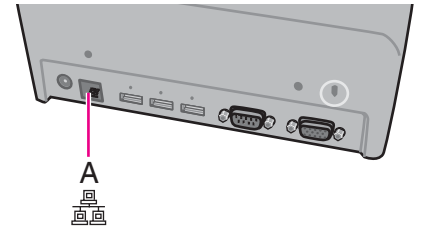
- When the display cannot be switched, right-click on the desktop and click [Graphic Properties] to select the display.

^{*3} For Numeric keyboard model : **Fn** + **4** (□/□)

<Only when connected to Cradle or Mini Dock>

Connecting LAN

- 1 Turn off the computer.**
 - Do not use standby or hibernation function.
- 2 Set the computer to the Cradle.**
- 3 Connect the LAN port (A) and the network system (server, HUB, etc.) by using a LAN cable.**
- 4 Turn on the computer.**



<Only for model with wireless LAN, Bluetooth, and/or wireless WAN>

There are 3 ways of disabling and enabling wireless communication.

- The wireless switch is at right next to DC-IN jack.
- Wireless Switch Utility (→ [page 53](#))
- Settings in the [Advanced] menu of the Setup Utility (→ [page 62](#))

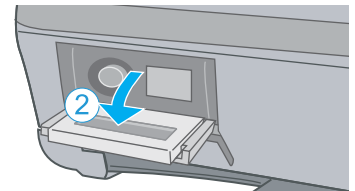
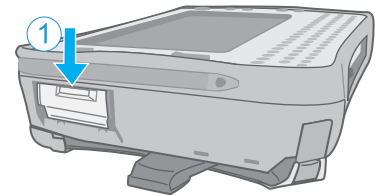
NOTE

- For further information about Wireless LAN: → [page 55](#)
- For further information about Bluetooth: → [page 58](#)
- For further information about Wireless WAN: Refer to the instruction manual of the wireless device.

The Wireless Switch

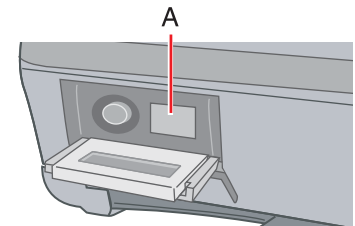
1 Open the cover.

- ① Slide the latch down to unlock the cover.
- ② Open the cover.



■ To disable all wireless communication

2 Switch (A) to OFF







■ To enable wireless communication

2 Switch (A) to ON

- In the default setting, the wireless switch enables all wireless devices when it is set to ON.

NOTE

- If you uninstall the Wireless Switch Utility, set the wireless switch to ON.
- Do not turn on/off the switch repeatedly at too short intervals.




- Do not restart, log off, or enter standby or hibernation immediately after turning on/off the switch.
- Do not turn on/off the switch while Windows is starting up.
- To use wireless communication, set the wireless devices ([Wireless LAN] / [Bluetooth] / [Wireless WAN]) to [Enabled] (default) in the [Advanced - Wireless Configuration] menu of the Setup Utility (→ [page 62](#)).
- When you set [Wireless Switch] to [Disabled] in the [Advanced - Wireless Configuration] menu of the Setup Utility (→ [page 62](#)), the Wireless Switch Utility icon will not appear in the notification area. All wireless equipment (wireless LAN, Bluetooth, wireless WAN) will remain ready irrespective of the wireless switch setting.
- It may take some time to turn off wireless communication after switching the wireless switch off.
- If the IEEE802.11a setting is changed in [Device Manager] (→ [page 57](#)), the display will be changed accordingly.
- You can check the wireless LAN communication status in Intel® PROSet/Wireless Software. Perform either of the following procedure.
 - Double-click , , , or  on the notification area.
 - Click [start] - [All Programs] - [Intel PROSet Wireless] - [WiFi Connection Utility]

Wireless Switch Utility

This utility allows you to control the function of the wireless switch. This utility also allows you to enable or disable wireless devices from a pop-up menu in the notification area. In the default setting, all wireless devices are enabled.

■ The Wireless Switch Utility icon

The icon appears in the notification area when the computer is turned ON. It shows the status of wireless devices.

-  : Indicates that the wireless devices are enabled.
-  : Indicates that the wireless devices are off.
-  : Indicates that the wireless devices have been disabled in the Setup Utility.

■ To enable or disable particular wireless devices

- 1 Click the Wireless Switch Utility icon to show the pop-up menu.
- 2 Select ON or OFF for the device you want to enable or disable.

■ To change the function of the wireless switch

In the default setting, the wireless switch enables devices that you select turning the wireless switch off last time. You can change this function.

[Selects the device for which to turn the device status on each time with the dialog box]



Display a dialog each time you set the wireless switch to ON so you can choose which wireless device to enable.

[Turns on the following device]

Only selected devices are enabled when you set the wireless switch to ON.

[Turns on the device that was on immediately before the wireless switch was turned off the last time] (default)

When you turn on the wireless switch, the on/off settings that were selected when you last turned off the wireless switch will be restored.

- 1 Click the Wireless Switch Utility icon ( or ) on the notification area and click [Settings].
- 2 Select the setting you want to assign to the wireless switch.
- 3 Click [OK].

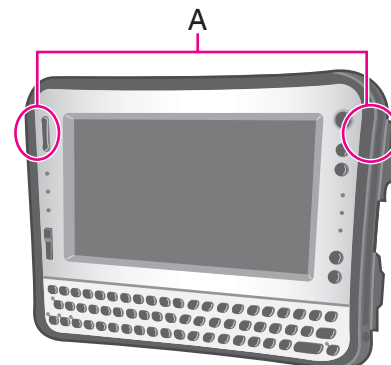
<Only for model with wireless LAN>

CAUTION

- **Do not use wireless LAN on airplanes, in hospitals, or in other locations where wireless LAN signals may affect devices.**
Follow the instructions of airline companies and hospitals. If you use the computer in these locations, turn off the wireless LAN.
- **To avoid unauthorized access to the computer through wireless LAN**
We recommend you to make security settings such as encryption before using wireless LAN. Otherwise the flash memory data such as the shared files can be exposed to the risk of unauthorized access.

NOTE

- Communication is established through the wireless LAN antenna (A). Do not block the antenna area with your hand or body.
- You cannot use the wireless LAN function together with the Fast User Switching function.
- The transmission rate will be lower when a microwave oven is used near by.
- To use wireless LAN, set [Wireless LAN] to [Enabled] (default) in the [Advanced - Wireless Configuration] menu of the Setup Utility (→ [page 62](#)).





■ To turn on/off wireless LAN




→ [page 52](#), Disabling/Enabling Wireless Communication

■ To check the wireless LAN communication status




- 1 Place the cursor over the Wireless Switch Utility icon ( or ) on the notification area.
A tooltip appears.

NOTE




- The Wireless Switch Utility icons ( and ) indicate the on/off status of wireless communication, not the IEEE802.11a setting.

- If the setting is changed in [Device Manager], the display will be changed accordingly.
- Perform either of the following procedures to check the status in Intel® PROSet/Wireless Software.
 - Double-click , , or  on the notification area.
 - Click [start] - [All Programs] - [Intel PROSet Wireless] - [WiFi Connection Utility].

Setting the Profiles

- 1 Double-click  /  /  on the notification area.**



The [Intel® PROSet/Wireless WiFi Connection Utility] screen appears.

 - When  or  is displayed, skip step 2.
- 2 When you double-clicked  in step 1, slide the wireless switch to turn on.**
- 3 Click [Profiles] at the lower right corner of the window, and click [Add].**
- 4 Enter the profile name and WiFi Network Name (SSID), and make other necessary changes, then click [Next].**
- 5 Make necessary settings and click [OK].**
- 6 Select the profile you set and click [Connect].**
- 7 Click [Close].**



NOTE

- You need to set the profile for each user.
- The settings depend on the network environment. For further information, ask the system administrator or the person in charge of the network.
- For further information of Intel® PROSet/Wireless software, refer to [Help] in the menu bar.

Enabling/Disabling the Wireless LAN Standard IEEE802.11a (802.11a)

- 1 Click  or  on the notification area.
- 2 Click [802.11a Enabled] or [802.11a Disabled].

NOTE

- In some countries, communication using IEEE802.11a (5 GHz wireless LAN) standard is restricted by law.
- The Wireless Switch Utility icon ( or ) indicates the on/off status of wireless LAN and/or Bluetooth and/or wireless WAN, not the setting of IEEE802.11a.
- If IEEE802.11a is enabled or disabled while the computer is connected to an IEEE802.11b/g access point, the connection will be temporarily interrupted.
- You can also change the IEEE802.11a setting in [Device Manager].
 - ① Click [start] - [Control Panel] - [Performance and Maintenance] - [System] - [Hardware] - [Device Manager].
 - ② Double-click [Network adapters] and double-click [Intel(R) Wireless WiFi Link 5100].
 - ③ Click [Advanced], and then select [Wireless Mode] in [Property].
 - ④ Remove the check mark from [Use default value] in [Value], and select the settings (e.g., [802.11a and 802.11g]).
 - ⑤ Click [OK].

If you enable or disable 802.11a using the pop-up menu of Wireless Switch Utility, the setting in [Device Manager] will be accordingly changed as below.

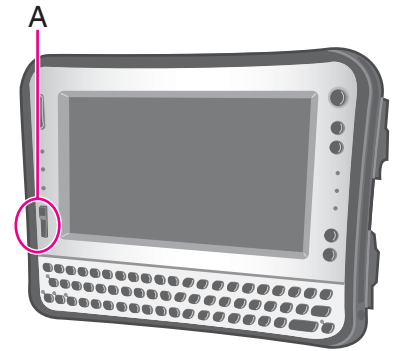
Settings in Device Manager	Settings in Wireless Switch Utility	
	When 802.11a is enabled	When 802.11a is disabled
[802.11a, 802.11b and 802.11g] [802.11b and 802.11g]	a+b+g is enabled	b+g is enabled
[802.11g only] [802.11a and 802.11g]	a+g is enabled	g is enabled
[802.11a only] [802.11b only]	a is enabled	b is enabled

<Only for model with Bluetooth>

You can access internet and other Bluetooth devices without connecting cables.

NOTE

- Communication is established through the Bluetooth antenna (A). Do not block the antenna area with your hand or body.
- To use Bluetooth, set [Bluetooth] to [Enabled] (default) in the [Advanced - Wireless Configuration] menu of the Setup Utility (→ [page 62](#)).
- The transmission rate will be lower when a microwave oven is used near by.



■ To turn on/off Bluetooth

→ [page 52](#), Disabling/Enabling Wireless Communication

■ To check the Bluetooth communication status

→ [page 53](#), The Wireless Switch Utility icon

■ To access the online manual

- 1 Click [start] - [All Programs] - [Bluetooth] - [User's Guide].

You can make the settings of the computer's operating environment (password settings, startup drive selection, etc.)

<For Numeric keyboard model>

To use all functions of the Setup Utility, 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**

Starting the Setup Utility

- 1 Turn on or restart the computer.
- 2 Press **Fn** + **U** (F2) or **Fn** + **←** (Del) several times while [Panasonic] boot screen is displayed soon after the computer starts the startup procedure.

When [Enter Password] is displayed, input your password.

When you start the Setup Utility with Supervisor Password

- You can make the settings of all items of the Setup Utility.

When you start the Setup Utility with User Password

- Note the following:
 - In the [Advanced] and [Boot] menus, you cannot make the settings of all items.
 - In the [Security] menu, you can change only the User Password when [User Password Protection] is set to [No Protection]. You cannot delete the User Password.
 - In the [Exit] menu, you cannot make the setting of [Load Default Values] and [Boot Override].
 - **Fn** + **▣** (F9) (Setup Defaults) does not function.

Information Menu

Underlined items are the factory presets.

Language	<u>English</u> Japanese
Product Information	Computer information (cannot be changed.)
Model No	
Serial No	
System Information	
Processor Type	
Processor Speed	
Memory Size	
Available Memory	
Hard Disk	
BIOS Information	
BIOS	
Embedded Controller	
Accumulative Operating Time	
Access Level	

Main Menu

Underlined items are the factory presets.

System Date <ul style="list-style-type: none"> • Month/Day/Year. • You can use <u>Tab</u> to move the cursor. 	[xx/xx/xxxx]
System Time <ul style="list-style-type: none"> • 24-hr. style. • You can use <u>Tab</u> to move the cursor. 	[xx:xx:xx]
Main Configuration	
Touchscreen Mode	Touchscreen Mode Tablet Mode <u>Auto</u>
Current Status <ul style="list-style-type: none"> • Only when [Touchscreen Mode] is set to [Auto]. 	Depending on the touchscreen mode setting, either “Touchscreen Mode” or “Tablet Mode” is displayed.
Display <ul style="list-style-type: none"> • The display during the Windows start-up process. When an external display is not connected, the information appears on the internal LCD even though the [External Monitor] is selected. 	<u>External Monitor</u> Internal LCD
Environment	Normal Temperature High Temperature <u>Auto</u>
Battery 1 Current Status <ul style="list-style-type: none"> • Only when [Environment] is set to [Auto]. 	Depending on the battery status, either “Normal Temperature” or “High Temperature” is displayed.
Battery 2 Current Status <ul style="list-style-type: none"> • Only when [Environment] is set to [Auto]. 	Depending on the battery status, either “Normal Temperature” or “High Temperature” is displayed.

Advanced Menu

Underlined items are the factory presets.

CPU Configuration	
Execute-Disable Bit Capability	Disabled <u>Enabled</u>
Hyper Threading Technology	Disabled <u>Enabled</u>
Intel (R) Virtualization Technology	<u>Disabled</u> Enabled
Peripheral Configuration	
SD Slot	Disabled <u>Enabled</u>
Legacy USB Support	Disabled <u>Enabled</u>
▶ Wireless Configuration	Enter the sub-menu ^{*1} .
▶ Serial Port Configuration • Used to configure the GPS and Barcode Reader	Enter the sub-menu ^{*2} .

^{*1} The sub-menu that appears when [Wireless Configuration] is selected:

Wireless Switch	Disabled <u>Enabled</u>
Wireless LAN. • Only for model with Wireless LAN	Disabled <u>Enabled</u>
Wireless WAN • Only for model with Wireless WAN	Disabled <u>Enabled</u>
Bluetooth • Only for model with Bluetooth	Disabled <u>Enabled</u>

^{*2} The sub-menu that appears when [Serial Port Configuration] is selected:

GPS • Only for model with GPS	Disabled <u>Enabled</u>
Barcode Reader • Only for model with Barcode Reader	Disabled <u>Enabled</u>


Boot Menu

Underlined items are the factory preset

Boot Option Priorities	
Boot Option # 1	USB Floppy Disk ^{*1}
Boot Option # 2	Hard Disk
Boot Option # 3	USB Hard Disk
Boot Option # 4	USB CD/DVD Drive

■ To change the boot order

The default order is [USB Floppy Disk^{*1}] -> [Hard Disk] -> [USB Hard Disk] -> [USB CD/DVD Drive].

- Press  (Enter) on the boot device you want to change and select the boot device from the following menu.
 - When a selected boot device in the following menu already exists in either of the [Boot Option (#1 to #4)], the boot device appears at the newly selected position by switching the positions with the original boot device that existed before at the position.
 - When you select [Disabled] in the following menu, the disabled [Boot Option] is ignored and the boot device in the next [Boot Option] operates.
 - [USB Floppy Disk]^{*1}
 - [Hard Disk]
 - [USB Hard Disk]
 - [USB CD/DVD Drive]
 - Disabled

^{*1} Use the Panasonic USB floppy disk drive (optional: CF-VFDU03U)

NOTE

- To boot from the following devices, make the settings as below.

<u>To boot from</u>	<u>You need to set</u>
• USB connected device	: [Legacy USB Support] to [Enabled] (→ page 62)

Security Menu

Underlined items are the factory presets.

Boot Prompt Configuration	
Setup Utility Prompt <ul style="list-style-type: none"> When [Setup Utility Prompt] is set to [Disabled], the message “Press F2 for Setup” is not displayed on [Panasonic] boot screen. However <u>U</u> (F2) and will work even if the message is not displayed. 	Disabled <u>Enabled</u>
Password on Boot	Disabled <u>Enabled</u>
▶ Set Supervisor Password	Enter the sub-menu.
Hard Disk Lock <ul style="list-style-type: none"> Can be changed only when [Set Supervisor Password] is set. 	<u>Disabled</u> Enabled
User Password Protection	<u>No Protection</u> Protected
▶ Set User Password <ul style="list-style-type: none"> Can be changed only when [Set Supervisor Password] is set. 	Enter the sub-menu.
▶ Fingerprint Security <ul style="list-style-type: none"> Only for model with Fingerprint Reader 	Enter the sub-menu.

Exit Menu

Save Values and Reboot	Reboot the system after saving the changes.
Reboot Without Saving Changes	Reboot the system without saving the changes.
Save Options	
Save Current Values	Save the changes for all Setup options.
Load Previous Values	Load previous values for all Setup options.
Load Default Values	Load default values for all Setup options.
Boot Override	
(Device Information)	To select a boot device which operates only in the next booting.

If it appears that the hardware installed in this computer is not operating properly, you can use the PC-Diagnostic Utility to determine whether or not there is a problem.

If the utility discovers a problem in the hardware, contact Panasonic Technical Support.

Software cannot be checked using this utility.

<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**

Hardware that can be checked using the PC-Diagnostic Utility

- CPU/Systems (check CPU)
- RAM XXX MB (check Memory)
- HDD XXX GB (check Flash Memory)
- Video (check Video Controller)
- Sound^{*1}
- Wireless LAN^{*2}
- Wireless WAN^{*3}
- Bluetooth^{*4}
- GPS^{*5}
- USB
- SD (check SD Card Controller)
- Keyboard
- Touchscreen

^{*1} When the diagnostic utility is running, a loud beep will sound, so do not use headphones at this time. (The beep will not sound if mute is using Windows.)

^{*2} Only for model with wireless LAN

^{*3} Only for model with wireless WAN

^{*4} Only for model with Bluetooth

^{*5} Only for model with GPS

- When the video diagnostic check is running, the display may be distorted, and when the audio diagnostic check is running, sounds may be generated from the speaker. These are not malfunctions.

Regarding the PC-Diagnostic Utility

NOTE

- For the flash memory drive and memory only, you can select standard diagnostic check or extended diagnostic check. When the PC-Diagnostic Utility starts up, it will run the standard diagnostic check.
- You can operate using the internal keyboard.

Operations	External mouse operations	Internal keyboard operations
Select icon	Place the cursor above the icon	Press Space . and then press → ← ↑ ↓ ((<input type="checkbox"/> close) cannot be selected)
Click the icon	Click (right click cannot be used)	Press Space above the icon
Complete the PC-Diagnostics Utility and then restart the computer	Click <input type="checkbox"/> (close)	Press Ctrl , Alt , and Fn + ← (Del). ^{*6} ^{*6} For USB keyboard : Ctrl + Alt + Del

Running the Diagnostic Check

Run this utility using the default settings in the Setup Utility.

If the Setup Utility or other settings will not allow hardware to be executed, the hardware icon will be displayed in gray.

1 Connect the AC adaptor, and turn on the wireless switch.

During the diagnostic check, do not remove the AC adaptor, or attach any peripheral devices.

2 Turn on or restart the computer, and press **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.
- If you are using the computer after changing the settings from the status at the time of purchase, we recommend that you make a note of the settings that are changed.

3 Press **Fn** + **▬** (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.

5 Press and hold **Ctrl + Fn + K** (F7) while [Panasonic] boot screen is displayed.



When the PC-Diagnostic Utility starts up, it will automatically begin the diagnostic check for all hardware components.

- If the password is requested, enter the password.
- The internal keyboard cannot be used until alternating blue and yellow colors are displayed on the left side of the hardware icon (A).
- By clicking the icon, you can execute the following operations:
 -  : Start the diagnostic check from the beginning
 -  : Stop the diagnostic check (You cannot restart the check partway through by clicking )
 -  : Display help (click the screen or press **Space** to return to the original diagnostic check screen)
- You can check the status of the diagnostic check by the display color on the left side of the hardware icon (A).
 - Aqua: Not running diagnostic check
 - Alternating blue and yellow: Currently running diagnostic check. The interval of the alternating colors differs depending on the type of diagnostic check currently running.
During memory diagnostic check, the display may freeze for a long period of time. Wait until the process is complete.
 - Green: No problems discovered
 - Red: Problems discovered



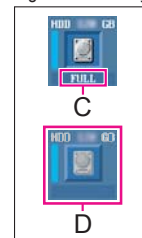
NOTE

- Using the following procedure, you can run a diagnostic check on a specified hardware component, or run an extended diagnostic check on the memory or the flash memory (The extended diagnostic check is only for the memory and the flash memory). The extended diagnostic check is more detailed, and so requires a longer period of time to run.

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



e.g. flash memory



6 When all the hardware has been checked, confirm the diagnostic check results.

If the display is red and the message “Check Result TEST FAILED” is displayed, you can assume that there is a problem with the computer’s hardware. Confirm which hardware component is displayed as red, and contact Panasonic Technical Support.

If the display is green and the message “Check Result TEST PASSED” is displayed, the computer’s hardware is operating normally. Continue using the computer as it is. If the computer still does not operate properly, reinstall the software. (⇒ *OPERATING INSTRUCTIONS* “Reinstalling Software”)

7 After the diagnostic check is complete, click (⊠ close), or press **Ctrl, Alt and Fn + ← (Del)^{*7} to restart the computer.**

^{*7} For USB keyboard : **Ctrl + Alt + Del**

When disposing the computer or transferring the ownership, erase all flash memory data in order to avoid data leakage. Even if you erase the data or initialize the flash memory using normal Windows commands, the data can be read with some special software. Use the flash memory data erase utility to erase the data completely.

Note that transferring of the ownership without uninstalling the commercial software will be a violation of the software's license agreement.

<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**

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

NOTE

- You cannot choose a specific partition to erase data.

Preparation

- Prepare the following items:
 - The Product Recovery DVD-ROM for Windows XP (included)
 - 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 flash memory data erase is complete.

- 1 Turn off the computer and connect the CD/DVD drive to the USB port.**
- 2 Turn on the computer, and press and hold **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 Press **Fn** + **▬** (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.

5 Press and hold **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.

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 **↵ (Enter).**

- The computer will restart.
- If [Enter Password] is displayed during the following procedures, input the Supervisor Password or the User Password.

9 Press 2 to execute [2. [Erase HDD]].

- To cancel this operation, press **0**.

10 At the confirmation message, press **Y.**

11 When [<<< Start menu >>>] is displayed, press **↵ (Enter).**

The approximate time required for erasing data will be displayed.

12 Press **Space.**

At the confirmation message, press **↵** (Enter).

The hard disk erase process starts. When the operation is completed, the [Hard disk data has been deleted] message will appear. If a problem has occurred during the operation, an error message will appear.

- To cancel partway, press **Ctrl** + **C**. The data erasure will be up to that point.

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

Follow the instructions below when an error message or code appears. If the problem persists or if the error code/message is not shown here, contact Panasonic Technical Support.

Error Code/Message	Solution
Bad System CMOS	An error has occurred in the memory of system settings. This occurs when the memory content is changed by an unexpected program operation, etc. <ul style="list-style-type: none">● Start the Setup Utility and return the settings to the default values, and then change the settings as necessary.● If the problem persists, the internal clock battery may need to be replaced. Contact Panasonic Technical Support.
System CMOS Checksum Error	
Invalid Year. System date restored to 01/01/2008	The date and time settings are not correct. <ul style="list-style-type: none">● Start the Setup Utility and set the correct date and time.● If the problem persists, the internal clock battery may need to be replaced. Contact Panasonic Technical Support.
Press <F2> to enter setup	<ul style="list-style-type: none">● Write down the error details and press Fn + U (F2) or Fn + ← (Del) to start the Setup Utility. Change the settings if necessary. (→ page 59)


Network Connections and Communications Software

Close the communications software before using the power saving function.

- If the power saving function (standby or hibernation) is activated while communications software is used, the network connection may be interrupted, or the performance may be adversely affected. In this case, restart the computer.
- In a network environment, set the [System standby] and [System hibernates] settings to [Never].
Click [start] - [Control Panel] - [Performance and Maintenance] - [Power Options] - [Power Schemes].

Regarding Windows XP

You can select the Classic view of Control Panel or the Classic Start menu. You can also change the way a user logs on or off. This manual explains using the Windows XP default setting (not Classic view or Classic Start menu etc.).

- Windows Update
You can update to the latest patches and service packs for Windows with the following menus.
Click [start] - [All Programs] - [Windows Update].
Do not apply "Driver Updates" even if a message to update a driver appears. If a driver update is required, contact your technical support office.
- If the message "Your computer might be at risk" is displayed
Select  (red icon) on the notification area and make the appropriate settings. The Windows Security Center regularly gives you notice so that you can make the optimum settings. This is not an error message and you can use the computer. However, making appropriate measures is recommended to reduce the risk of virus and other attacks.

Using the Windows Associated Files

The Windows files included in the retail version of the Windows CD-ROM for OS are contained in the following folders:
c:\windows\docs, c:\windows\dotnetfx, c:\windows\i386, c:\windows\support, c:\windows\valueadd

Refer to the following instructions when a problem occurs. If the remedies indicated in the chart do not solve the problem, contact Panasonic Technical Support. For a software problem, refer to the instruction manual of the software.

- To check the computer's usage status (→ [page 82](#)).


■ Shut Down

Cannot shut down or restart Windows.	<ul style="list-style-type: none"> ● Remove USB devices. ● It may take 1 or 2 minutes to shut down.
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■ Standby or Hibernation

Cannot enter standby or hibernation.	<ul style="list-style-type: none"> ● Remove USB devices temporarily. If the problem persists, restart the computer. ● It may take 1 or 2 minutes to enter standby or hibernation. ● The computer does not enter standby or hibernation immediately after resuming. Wait approximately 1 minute.
Cannot enter standby or hibernation automatically.	<ul style="list-style-type: none"> ● Disconnect peripheral devices. ● If you connect to a network using wireless LAN function, select the profile and connect to the access point (→ page 56). ● If you do not use wireless LAN function, turn off wireless LAN function (→ page 52). ● Make sure that you are not using any software that regularly accesses the flash memory.



■ Sound

No sound.	<ul style="list-style-type: none"> ● Press Fn + A (▼🔊) or Fn + S (🔊▲) to cancel mute.*¹ ● Restart the computer. <p>*¹ For Numeric keyboard model : Fn + ■ (▼🔊) or Fn + 7 (🔊▲)</p>
Distorted sound.	<ul style="list-style-type: none"> ● Performing Fn key combinations sometimes causes sound distortion. Stop and restart playback.
Cannot change the volume by pressing Fn + A (▼🔊) or Fn + S (🔊▲). ^{*2}	<ul style="list-style-type: none"> ● Activate the Windows sound function. When it is not active, the volume does not change even if  is displayed. <p>*² For Numeric keyboard model : Fn + ■ (▼🔊) or Fn + 7 (🔊▲)</p>
"There was an error updating the registry" appears when Sound Recorder is started.	<ul style="list-style-type: none"> ● Sound Recorder is started by a limited account user whose language setting is not the same as the administrator user who last started Sound Recorder. This does not affect the operation.







■ Keyboard

Cannot enter special characters (ß, à, ç, etc.) and symbols.	<ul style="list-style-type: none"> ● Use the character map. Click [start] - [All Programs] - [Accessories] - [System Tools] - [Character Map].
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■ Network

Cannot connect to network.	<ul style="list-style-type: none"> ● Set LAN (→ page 51).
Cannot check the computer's MAC address.	<ul style="list-style-type: none"> ● Follow the steps below. <ol style="list-style-type: none"> ① Click [start] - [All Programs] - [Accessories] - [Command Prompt]. ② Input "ipconfig/all", and press  (Enter). ③ Write down the 12-digit string of alphanumeric displayed in the "Physical Address" line of the LAN or the wireless LAN (only for model with wireless LAN). ④ Input [exit], and press  (Enter).


■ Wireless Communication (only for model with wireless LAN/Bluetooth/wireless WAN)

Cannot connect to a network.	<ul style="list-style-type: none"> ● Slide the wireless switch to turn on the wireless devices. ● Set the device ([Wireless LAN] / [Bluetooth] / [Wireless WAN]) to [Enabled] in the [Advanced] menu of the Setup Utility (→ page 62). ● Restart the computer.
Access point is not detected.	<ul style="list-style-type: none"> ● Confirm that  /  /  is displayed on the notification area. ● If  /  /  is not displayed on the notification area, turn on the wireless communication (→ page 52).

■ Connecting Peripherals

An error occurs while installing the driver.	<ul style="list-style-type: none"> ● When you install a driver of card or peripheral device, make sure that the driver is compatible with the operating system. If it is not compatible, malfunction may occur. For information about the driver, contact the manufacturer of the peripheral device.
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■ Connecting Peripherals

<p>A peripheral device does not work.</p>	<ul style="list-style-type: none"> ● Install the driver. ● Contact the manufacturer of the device. ● When operation resumes from standby or hibernation, devices such as a mouse may not function properly. In this case, restart the computer or reinitialize the device. ● When  is displayed in the Device Manager, remove and insert the device. If the problem persists, restart the computer. ● The computer may not recognize the connection/removal of some devices, or may not operate normally with some devices. Operate the following steps. <ol style="list-style-type: none"> ① Click [start] - [Control Panel] - [Performance and Maintenance] - [System] - [Hardware] - [Device Manager]. ② Select the device and remove the check mark for [Allow the computer to turn off this device to save power.] in [Power Management]. (This item may be unavailable for some types of devices.)
<p>The connected mouse does not work.</p>	<ul style="list-style-type: none"> ● Check the mouse connection.
<p>USB floppy disk drive does not work as a boot drive.</p>	<ul style="list-style-type: none"> ● You can use only the Panasonic CF-VFUDU03U USB floppy disk drive (optional). ● Connect the floppy disk drive directly to a USB port of the computer. Do not connect it via a USB hub or USB connector of the Cradle or the Mini Dock. ● Set [Legacy USB support] to [Enabled] in the [Advanced] menu of the Setup Utility (→ page 62). ● Set [Boot Option #1] in [Boot] menu of the Setup Utility to [USB FDD Disk]. (→ page 63). ● Turn off the computer and connect the USB floppy disk drive, and then restart the computer.
<p>You do not know the address map for IRQ, I/O port address, etc.</p>	<ul style="list-style-type: none"> ● To check the current address map, click [start] - [Control Panel] - [Performance and Maintenance] - [System] - [Hardware] - [Device Manager] - [View] - [Resources by type].
<p>Cannot print.</p>	<ul style="list-style-type: none"> ● Check the printer connection. ● Turn on the printer. ● The printer is not online. ● No paper is in the printer tray or there is a paper jam. ● Turn on the printer and connect it to the computer, and then restart the computer.

■ Connecting Peripherals

<p>LAN transmission speed slows down noticeably. <Only for model with wireless LAN> Wireless LAN connection is cut.</p>	<ul style="list-style-type: none"> ● These problems may occur due to performance loss that results from the CPU power-saving function. Log on to Windows as an administrator and follow the steps below. <ol style="list-style-type: none"> ① Click [start] - [Run] and input [c:\util\cpupower\setup.exe], and click [OK]. Follow the on-screen instructions. ② Click [start] - [All Programs] - [Panasonic] - [CPU Idle Setting]. ③ Click [Performance] and click [OK], then click [Yes]. The computer will restart. <ul style="list-style-type: none"> ● If the problem persists, click [start] - [Control Panel] - [Performance and Maintenance] - [Power Options] - [Power schemes], select [Always On] in [Power schemes], and click [OK]. ● The above remedy is effective for performance loss resulting from the CPU power saving function, but not for other causes (e.g., noise generated by high CPU load such as video playback). ● The above remedy slightly reduces the battery operation time. Normally it is recommended to select [Battery (Windows XP Standard)] in [CPU Idle Setting] and to select [Portable/Laptop] in [Power schemes].
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■ Touchscreen

<p>The cursor does not work.</p>	<ul style="list-style-type: none"> ● Connect the external mouse correctly. ● Restart the computer using the keyboard. (Press  (Windows)^{*3}, U and R to select [Restart].) ^{*3} When the Sticky Key function is enabled (at the time of purchase), press  (Windows) 3 times. ● If the computer does not respond to keyboard commands, read “No response.” (→ page 81).
<p>Cannot point the correct position using the included stylus.</p>	<ul style="list-style-type: none"> ● Perform the touchscreen calibration (→ page 10).
<p>Cannot input using the touchscreen</p>	<ul style="list-style-type: none"> ● Set [Touchscreen Mode] to [Auto] or [Touchscreen Mode] in the [Main] menu of the Setup Utility (→ page 61).
<p>Cannot use scroll function of scroll button on Internet Explorer.</p>	<ul style="list-style-type: none"> ● Use Touchscreen. ● Move the mouse cursor to outside of Internet Explorer, and return to Internet Explorer.

■ SD Memory Card

<p>Cannot use an SD Memory Card.</p>	<ul style="list-style-type: none"> ● Set [SD Slot] to [Enabled] in the [Advanced] menu of the Setup Utility (→ page 62).
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■ Fingerprint Reader (only for model with Fingerprint Reader)

<p>The sensor does not enroll or authenticate my fingerprint.</p>	<ul style="list-style-type: none"> ● Slide your finger correctly. For further information about enrollment and authentication, refer to “How to Use the Fingerprint Reader” (→ page 38) and [Fingerprint Tutorial]. <ul style="list-style-type: none"> • Click [start] - [All Programs] - [Protector Suite QL] - [Fingerprint Tutorial]. ● The sensor enrolls or authenticates no fingerprint, or performs authentication poorly, despite the correct way of finger sliding when your finger is in any of the conditions stated below: <ul style="list-style-type: none"> • Rough skin, or injured finger (with a cut or a skin inflammation) • Extremely dry • Soiled with mud or oil • Fingerprint has been worn and has faded • Wet with water or sweat <p><You can improve enrolling and authentication sensitivity by taking the following steps when any of the conditions described above exists></p> <ul style="list-style-type: none"> • Wash your hands or wipe them dry. • Use a different finger for registration or authentication. • Treat your finger with a hand cream when it is rough skin or dry. ● Clean the fingerprint sensor. For further information, refer to “Handling & Maintenance” (→ page 44). ● The fingerprint sensor may be malfunctioning when it continues to perform poorly after the steps described above have been performed. Contact Panasonic Technical Support.
<p>Sensor does not work.</p>	<ul style="list-style-type: none"> ● Exported passport can help you if you need to replace the sensor. <ul style="list-style-type: none"> • Log on to Windows as an Administrator. You can always access the computer by using your Windows log on password. In convenient mode, any user can access the computer by using your Windows log on password. • To access [File Safe] [File Safe] can be always accessed by using the [File Safe] backup password. • Other functions Replace/Repair the sensor, then follow the instructions in section “Replacing sensor.” (→ page 79). <p>Some limited functions (e.g. deleting passport) is available without a functional sensor. In case of deleted operation, it is necessary to cancel the fingerprint verification operation to get to the password dialog.</p>

■ Fingerprint Reader (only for model with Fingerprint Reader)

<p>User cannot use enrolled finger. (e.g. injury)</p>	<ul style="list-style-type: none"> ● It is strongly recommended to enroll at least 2 fingers to avoid this problem. If you enrolled multiple fingers, simply use other finger. If you only enrolled one finger that can be used, we recommend to use the [Enroll or Edit Fingerprints] wizard and enroll additional fingerprints. <p>If none of your enrolled fingers can be used, follow this procedure:</p> <ol style="list-style-type: none"> ① Log on to Windows as an Administrator. You can always access the computer by using your Windows log on password. In convenient mode, any user can access the computer by using your Windows log on password. ② Update the enrolled fingerprints. To be able to fully use Protector Suite QL, you need to have usable enrolled fingerprints. Enter the [Enroll or Edit Fingerprints] wizard. <ul style="list-style-type: none"> • If you do not use [Advanced Security], you can still enter using the Windows password. • If you use [Advanced Security] with backup password, you can enter using the backup password. • If you use [Advanced Security] without backup password, there is no other way to add a different fingerprint. In this case we recommend either to wait until your finger is usable again (e.g. the injury heals), or to delete the passport (Use [Delete] wizard) and then reenroll new fingerprints. Please note that in the latter case all your stored secret data (passwords, [File Safe] encryption keys) will be lost. To perform the delete operation it is necessary to cancel the fingerprint verification operation to get to the password dialog, then enter your Windows log on password. • To access [File Safe] If you did not perform the procedure in step ② or it did not work, you can still access [File Safe] by using the [File Safe] backup password.
<p>Replacing sensor.</p>	<ul style="list-style-type: none"> ● If you need to replace a non-functioning Fingerprint Reader, follow this procedure. Enrollment to the hard disk: If enrollment to hard disk is used, "Protector Suite QL" has not stored any data on the device and therefore has no problem to continue after you replaced the sensor. However, in case you use the Power-on security (Preboot Authentication), you may need to use the [Enroll or Edit Fingerprints] wizard to update the related data. Enrollment to the device: If the fingerprint has been enrolled to the device, a new passport will be required. Follow the procedure in the section "Starting Over".

■ Fingerprint Reader (only for model with Fingerprint Reader)

<p>Lost [Advanced Security] backup password.</p>	<ul style="list-style-type: none"> ● To change the [Advanced Security] backup password, go to the [Enroll or Edit Fingerprints] wizard and swipe your finger and go through the Fingerprint enrollment. On the Advanced Security page you can change the backup password.
<p>Protector Suite QL reinstallation.</p>	<ul style="list-style-type: none"> ● During Protector Suite QL uninstallation, you can select whether to delete the Protector Suite Data - including passports. ● If you want to reinstall the product, select button to leave the Protector Suite QL data on the computer. After the new installation, you will be able to use your data again. ● If the Protector Suite QL was uninstalled including the passports, then in case of enrollment to device the fingerprints will still be stored in the device and the user can use them reenrollment.
<p>Lost [File Safe] backup password.</p>	<ul style="list-style-type: none"> ● It is necessary to change the backup password for [File Safe], refer to the software's online manual (→ page 39).
<p>Accessing [File Safe] after Protector Suite QL uninstallation.</p>	<ul style="list-style-type: none"> ● [File Safe] data can be accessed only using Protector Suite QL. If you accidentally uninstalled Protector Suite QL, you have to reinstall it. If passport data was not removed during uninstallation, everything will work automatically including [File Safe]. If the passport data was removed during uninstallation the [File Safe] will recognize that the installation was changed and will offer to use the backup password, instead.
<p>Accessing [File Safe] after computer crash.</p>	<ul style="list-style-type: none"> ● If you have an exported passport, import it now so you can access [File Safe] directly using fingerprints. Otherwise you can access [File Safe] using the [File Safe] backup password: [File Safe] will recognize that the installation was changed and will offer to use the backup password, instead.
<p>Removing data from the Reader.</p>	<ul style="list-style-type: none"> ● When enrollment to the device is used, passport data is stored to the device. To remove it, go to the [Delete] passport wizard and delete existing passports, and then use the [Fingerprint Storage Inspector] to remove remaining fingerprints (e.g. left over from previous installations). ● In convenient mode, the [Fingerprint Storage Inspector] does not allow deleting the last fingerprint for an existing passport and only user's own fingerprints can be deleted. Therefore it is necessary to delete passports first.

■ Fast User Switching Function

<p>Some applications do not work properly.</p>	<ul style="list-style-type: none">● When switching to a different user with the Fast User Switching function, the following problems may occur.<ul style="list-style-type: none">• Some applications may not work properly.• Key combination with Fn may not work.• The display settings may not be possible.• A serial mouse may not work.• <Only for model with wireless LAN> Wireless LAN cannot be used.• <Only for model with Bluetooth> Bluetooth cannot be used.● In these cases, log off all users without using Fast User Switching function and perform the operation once more. If the problem persists, restart the computer.
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■ Screen Saver

<p>“Could not find any compatible Direct3D devices” appears.</p>	<ul style="list-style-type: none">● Do not use a 3D screen-saver.
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■ Others

<p>No response.</p>	<ul style="list-style-type: none">● Press Ctrl, ⇧ (Shift)^{*4}, Fn and Tab (ESC)^{*5} to open Task Manager and close the software application.● An input screen (e.g., password input screen at startup) may be hidden behind another window. Use Alt^{*4} + Tab to check.● Shut down by pressing and holding the power switch for 4 seconds or longer, and turn on the computer and open the application again. If Windows runs correctly, but the application software does not start, click [start] - [Control Panel] - [Add or Remove Programs] and remove the failing application software, then reinstall the application software. <p>^{*4} For Numeric keyboard model, use a USB keyboard. ^{*5} For Numeric keyboard model : Esc</p>
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Checking the Computer's Usage Status

You can check the computer's usage status in the PC Information Viewer. You may need this information when calling Panasonic Technical Support for advice.

NOTE

- This computer periodically records the management information of the flash memory etc. The maximum data volume for each record is 1024 bytes. The 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 a check mark for [Disable the automatic save function for management information history] in [Hard Disk Status] of PC Information Viewer, and click [OK].
- If you have not logged on with the administrator authority, some information will be displayed as [Not Found].
- As long as it is activated, the PC Information Viewer will appear in front of all other screens.
- Depending on your network environment, it may take sometime to start up PC Information Viewer.

- 1** Click [start] - [All Programs] - [Panasonic] - [PC Information Viewer] - [PC Information Viewer].
- 2** Select the item to display the detailed information.

■ To save the information as a text file

- 1** Display the information you want to save.
 - 2** Click [Save].
 - 3** Select the file save range option and click [OK].
 - 4** Select the folder to save the information, input the file name, and click [Save].
- If automatic saving of the management information record has not been disabled, the records already recorded are also saved.

■ To save a copy of the screen as an image file

- 1** Display the screen you want to save.
- 2** Press **Ctrl + Alt + Fn + K (F7)***6.

*6 For Numeric keyboard model, use a USB keyboard.

3 When the screen copy message appears, click [OK].

The screen image is saved in [My Documents] folder.

- Alternatively you can save a copy of the screen in the following procedure.
Click [start] - [All Programs] - [Panasonic] - [PC Information Viewer] - [Screen Copy].

NOTE

- The image is a bitmap file in 256 colors.
- The default key combination to copy is **Ctrl + Alt + Fn + K** (F7)^{*7}. You can change it in the following procedure.
 - ① Log on to Windows as an administrator, and click [start] - [All Programs] - [Panasonic] - [PC Information Viewer].
 - ② Right-click [Screen Copy] and click [Properties] - [Shortcut].
 - ③ Click [Shortcut key] and press the key(s) you want to use for the shortcut.
 - ④ Click [OK].

^{*7} For Numeric keyboard model, use a USB keyboard.

Disabling auto-defragment

Windows automatically processes “defragment” to speed up in accessing files, etc. However, this process is not always necessary because you can access files at high speed even if they are decentrally-saved in the flash memory. Also, we recommend disabling auto-defragment because reducing the number of writing times is effective to use the flash memory for a long period of time.

NOTE

- If auto-defragment is disabled, this function will not work when an external hard disc is connected, too. Change the setting when necessary to prevent the computer performance from being affected.

■ Disabling auto-defragment processed in the background by Windows

- 1 Close all the applications.**
- 2 Click [start] - [Run], and input “c:\util\setdfrg\setdfeg.exe” and click [OK].**
 - If you have logged on as a standard user, enter an administrator password and click [OK].
 - The Automatic Defragmentation Utility starts up.
- 3 Click [Deactivate automatic defragmenetation].**
 - To return the setting to the previous value, click [Activate automatic defragmentation (Windows standard)]
- 4 When the screen shows the display to change the setting, click [OK].**

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