SONY

Personal Computer

VAIO Fit 13A Model: SVF13NA1EL

How to Use

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- What should I do if I cannot turn off my VAIO computer?
- Why does a message appear and Windows fail to start when I turn on my VAIO computer?
- What should I do if my VAIO computer does not turn on or the power button does not work (the charge indicator light blinks fast)?
- What should I do if the power indicator light turns on in green when I press the power button but the screen remains blank?
- What should I do if Hibernate mode is not available or my VAIO computer does not enter Hibernate mode?
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- What should I do if my battery pack is not fully charged?
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Display

- What should I do if videos are not displayed on the computer screen?

- What should I do if my computer screen goes blank?
- What should I do if my computer screen flickers or fades to white? (Intel graphics accelerator installed models)
- Why does the LCD brightness automatically change?
- What should I do if captured images flicker?
- What should I do if captured images contain dropped frames and audio interruptions?
- What should I do if the touch screen does not work correctly? (Touch screen equipped models)
- Why does the viewfinder show no images or poor-quality images?
- How do I change the LCD brightness?
- What should I do if no image is displayed on my external display or TV screen?
- What should I do if some items do not fit on the computer screen?
- Why do sound interruptions and/or dropped frames occur when I play high-definition videos, such as those recorded with the AVCHD digital video camcorder?
- What should I do if no image is displayed on my TV screen or external display connected to the HDMI output port?
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HDMI

- What should I do if no image is displayed on my TV screen or external display connected to the HDMI output port?

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- What should I do if sound interruptions occur during video or audio playback?
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Microphone

- What should I do if my microphone does not work?
- What should I do if I hear microphone feedback from speakers when using my microphone?

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- What should I do if my VAIO computer screen freezes?
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- What should I do if my VAIO computer screen freezes?
- Why can't I use the touch pad?
- How do I disable the touch pad?
- How do I avoid unintentional clicks caused by a light touch on the touch pad?
- What should I do if the pointer does not move?

Camera

- What should I do if captured images flicker?
- Why are captured images poor in quality?

- What should I do if captured images contain dropped frames and audio interruptions?
- Why does the viewfinder show no images or poor-quality images?
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LAN

- How can I find the physical address (MAC address) of the built-in wireless network interface of my VAIO computer?
- What should I do if I cannot play back movies or audio tracks received via Wi-Fi(R) (Wireless LAN), or their playback is interrupted? Why is the data transfer speed slow?
- What should I do if I do not know the SSID or security key for the access point?
- What should I do if I cannot connect my VAIO computer to an access point (or the Internet)?
- What should I do if I cannot use the Wi-Fi(R) (Wireless LAN) function?

Wi-Fi

- How can I find the physical address (MAC address) of the built-in wireless network interface of my VAIO computer?
- What should I do if I cannot play back movies or audio tracks received via Wi-Fi(R) (Wireless LAN), or their playback is interrupted? Why is the data transfer speed slow?
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- What should I do if I cannot connect my VAIO computer to an access point (or the Internet)?
- What should I do if I cannot use the Wi-Fi(R) (Wireless LAN) function?

BLUETOOTH

- What should I do if I cannot use the BLUETOOTH(R) function?
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- What should I do if I cannot find the BLUETOOTH(R) device I want to communicate with?
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- Why can't I use BLUETOOTH(R) devices when I switch users?

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- What should I do if I forget the Windows password?
- What should I do if the Enter Onetime Password message appears and Windows does not start after I enter a wrong power-on password three times consecutively?
- What should I do if I forget the power-on password to start my VAIO computer?

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- What should I do if I forget the power-on password to start my VAIO computer?

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- What should I do if I cannot charge the device connected to the USB port that supports USB charging?

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- Why can't I write data to a memory card?

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- Why do sound interruptions and/or dropped frames occur when I play high-definition videos, such as those recorded with the AVCHD digital video camcorder?

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- Why is my VAIO computer running slowly and the CPU clock frequency low while the computer is running on battery power?

Touch panel

- What should I do if the touch screen does not work correctly? (Touch screen equipped models)

NFC/One-touch functions

- What should I do if I cannot use NFC/One-touch functions?

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- Why doesn’t the built-in digital compass show the correct direction?
- Why doesn’t the computer screen rotate?

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Display

- Why do sound interruptions and/or dropped frames occur when I play high-definition videos, such as those recorded with the AVCHD digital video camcorder?

Software

- Why do sound interruptions and/or dropped frames occur when I play high-definition videos, such as those recorded with the AVCHD digital video camcorder?
- What should I do if my game app does not work or it keeps crashing?

Network / Internet

LAN

- How can I find the physical address (MAC address) of the built-in wireless network interface of my VAIO computer?
- What should I do if I cannot play back movies or audio tracks received via Wi-Fi(R) (Wireless LAN), or their playback is interrupted? Why is the data transfer speed slow?
- What should I do if I do not know the SSID or security key for the access point?
- What should I do if I cannot connect my VAIO computer to an access point (or the Internet)?
- What should I do if I cannot use the Wi-Fi(R) (Wireless LAN) function?

Wi-Fi

- How can I find the physical address (MAC address) of the built-in wireless network interface of my VAIO computer?
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- What should I do if I do not know the SSID or security key for the access point?
- What should I do if I cannot connect my VAIO computer to an access point (or the Internet)?
- What should I do if I cannot use the Wi-Fi(R) (Wireless LAN) function?

BLUETOOTH

- What should I do if I cannot use the BLUETOOTH(R) function?
- What should I do if other BLUETOOTH(R) devices cannot connect to my VAIO computer?
- Why can't I use the BLUETOOTH(R) function when I sign in to my VAIO computer as a user with a standard user account?
- Why is my BLUETOOTH(R) connection slow?
- What should I do if I cannot find the BLUETOOTH(R) device I want to communicate with?
- What should I do if the BLUETOOTH(R) icon is not displayed in the desktop notification area?
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- What should I do if I cannot create Recovery Media?
- What should I do if I cannot start/complete the recovery process?
- What should I do if my VAIO computer becomes unstable (Windows does not start)?
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- What should I do if I cannot recover my VAIO computer from the recovery area?
- How do I create Recovery Media?
- How can I restore my VAIO computer system to its factory default settings?
- How can I reinstall the original apps and drivers?

Security

Password

- What should I do if I forget the Windows password?
- What should I do if the Enter Onetime Password message appears and Windows does not start after I enter a wrong power-on password three times consecutively?
- What should I do if I forget the power-on password to start my VAIO computer?

BIOS

- What should I do if I forget the power-on password to start my VAIO computer?

Peripheral Devices

USB

- What should I do if my VAIO computer does not recognize the USB device?
- What should I do if I cannot print a document?

Printer

- What should I do if my VAIO computer does not recognize the USB device?
- What should I do if I cannot print a document?

Switching from a Local Account to a Microsoft Account

In Windows 8, you can switch between a local account and a Microsoft account.
By switching from a local account to a Microsoft account, you can download apps from **Windows Store**.
To create or switch to a Microsoft account, follow these steps.

1. Open the charms and select the **Settings** charm. (See Opening the Charms to open the charms.)
2. Select **Change PC settings** in the lower right corner.
3. Select **Users** in the left pane of the **PC settings** screen.
4. Select **Switch to a Microsoft account**.
5. Follow the on-screen instructions.

Hint

- To switch to a local account, select **Switch to a local account** in step 4 instead of **Switch to a Microsoft account**.

- If you forget your Microsoft account password, contact Microsoft support services.

About User Account Types

There are two types of user accounts available in Windows 8: a local account and a Microsoft account.

Local account

A local account is a user name and password that you set on your VAIO computer. Because one local account is expected to be used for a single computer, you cannot share the same account on multiple computers.

Hint

- Setting a local account password is optional. If you forget your local account password, recover your VAIO computer.

Microsoft account

A Microsoft account is an email address and password that you use to sign in to Microsoft services. Because a Microsoft account can be set for each user, you can share the same account on multiple computers. To download apps from **Windows Store**, you need to switch from a local account to a Microsoft account.

Hint

- Setting a Microsoft account password is required. If you forget your Microsoft account password, contact Microsoft support services.

Controlling the Power State of Your VAIO Computer (Sleep Mode/Shutdown)

By default, your VAIO computer automatically enters Sleep mode after a certain period of inactivity.
In Sleep mode, the computer will retain its current state, including data you are working on, while you take a break.
See Using Sleep Mode for more information on Sleep mode.

When you do not use your VAIO computer for a while

To avoid losing unsaved data, follow these steps to shut down your VAIO computer.

1. Save your data and close all running apps.
2. Turn off any peripherals connected to your VAIO computer.
3. Open the charms, and then select the **Settings** charm. (See Opening the Charms to open the charms.)
4. Select **Power** and **Shut down**.
   After a short time, your VAIO computer automatically turns off. If the computer is equipped with the power indicator, the green power indicator light turns off.
   If your VAIO computer is equipped with the power indicator, make sure it is off before closing the LCD screen lid.

Note

- An improper shutdown may cause loss of unsaved data or cause your VAIO computer to malfunction.
- To disconnect your VAIO computer completely from an AC power source, turn off the computer, and then unplug the power cord from the AC outlet.

Hint

- If you select **Shut down** while holding down the **Shift** key in step 4, you can place your VAIO computer into the minimum power consumption state (ACPI S5 mode). In this case, the fast boot function is temporarily disabled on the next start-up.

Restarting Your VAIO Computer

After changing the settings or installing an app on your VAIO computer, you may be required to restart the computer.

1. Save your data and close all running apps.
2. Open the charms and select the **Settings** charm. (See Opening the Charms to open the charms.)
3. Select **Power** and **Restart**.
   Your VAIO computer will restart.

Entering Sleep Mode, Shutting Down, or Restarting

You can place your VAIO computer into Sleep mode or shut down/restart the computer by following these steps.

1. Open the charms and select the **Settings** charm. (See Opening the Charms to open the charms.)
2. Select **Power** and **Sleep**, **Shut down**, or **Restart**.

Using Sleep Mode

In Sleep mode, you can step away from your VAIO computer while retaining the computer's state including data you are working on.

To activate Sleep mode

1. Open the charms and select the **Settings** charm. (See Opening the Charms to open the charms.)
2. Select **Power** and **Sleep**.
   If your VAIO computer is equipped with the power indicator, it turns off when the computer enters Sleep mode (with the default setting).

To return to Normal mode

1. Press the (Power) button.

Note

- If you press and hold down the (Power) button for more than 4 or 10 seconds, your VAIO computer will turn off automatically. Doing this will erase all unsaved data.
- By default, your VAIO computer automatically enters Hibernate mode when the battery pack is running out of power. However, depending on the operating conditions, the computer may fail to enter Hibernate mode.
  If this occurs and the battery pack is running out of power, the computer will be turned off, resulting in loss of unsaved data.
  While the computer is running on battery power, save data frequently.
- Before moving your VAIO computer, make sure that the computer is off to avoid impact or vibration to the running hard disk drive. If the computer is equipped with the power indicator, make sure that it is completely off.

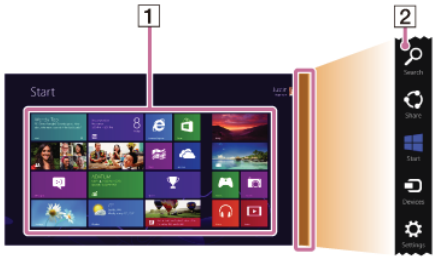
Hint

- By default, your VAIO computer enters Sleep mode automatically after a certain period of inactivity while running on AC power.
- The operations below also place your VAIO computer into Sleep mode.
  - Press the (Power) button (with the default setting).
  - Close the LCD screen lid. The computer will enter Sleep mode after a few seconds.
- You can restore your VAIO computer from Sleep mode to Normal mode by opening the LCD screen. (For SVF14N/SVF15N, even if you open the LCD screen, the computer does not return to Normal mode 24 hours after the computer enters Sleep mode.)
  To change the action when you open the LCD screen, start **VAIO Control Center** and change the settings in **Power and Battery**. To start **VAIO Control Center**, see Searching/Starting Apps, Settings, or Files.

About the Start Screen and Menu

You can add shortcuts to apps, the desktop, and websites that you use the most.

Overview



1 Tiles
Select a tile to start an app and personalize the **Start** screen by adding and rearranging tiles.

2 Charms
Search for apps and files, share content, play content on other devices or print, and set up your VAIO computer.

To open the Start screen

Touch operation (Touch screen equipped models)

Open the charms, then tap the **Start** charm. (See Opening the Charms to open the charms.)

Mouse / Touch pad operation

Open the charms, then click the **Start** charm. (See Opening the Charms to open the charms.)

Keyboard operation

Press the (Windows) key.

Opening the Desktop

You can access the desktop from a tile, just like an app. Open the desktop by following the instruction below.

1. Open the **Start** screen and select the **Desktop** tile. (See About the Start Screen and Menu to open the **Start** screen.)

Installing Apps from Windows Store

You can install apps from **Windows Store**.
You will need a Microsoft account to use certain apps or services, including **Windows Store**.
On how to create and what you can do with the Microsoft account, refer to **Windows Help and Support** (Opening Windows Help and Support).

1. Connect to the Internet.
   See Connecting to the Internet with a Wired Connection (LAN port equipped models) for more information on how to connect to the Internet.
2. Open the **Start** screen and select the **Store** tile. (See About the Start Screen and Menu to open the **Start** screen.)

3. Find an app to install.
4. Follow the on-screen instructions to install the app.

Switching from a Local Account to a Microsoft Account

In Windows 8, you can switch between a local account and a Microsoft account.
By switching from a local account to a Microsoft account, you can download apps from **Windows Store**.
To create or switch to a Microsoft account, follow these steps.

1. Open the charms and select the **Settings** charm. (See Opening the Charms to open the charms.)
2. Select **Change PC settings** in the lower right corner.

3. Select **Users** in the left pane of the **PC settings** screen.
4. Select **Switch to a Microsoft account**.
5. Follow the on-screen instructions.

Hint

- To switch to a local account, select **Switch to a local account** in step 4 instead of **Switch to a Microsoft account**.
- If you forget your Microsoft account password, contact Microsoft support services.

About User Account Types

There are two types of user accounts available in Windows 8: a local account and a Microsoft account.

Local account

A local account is a user name and password that you set on your VAIO computer. Because one local account is expected to be used for a single computer, you cannot share the same account on multiple computers.

Hint

- Setting a local account password is optional. If you forget your local account password, recover your VAIO computer.

Microsoft account

A Microsoft account is an email address and password that you use to sign in to Microsoft services. Because a Microsoft account can be set for each user, you can share the same account on multiple computers. To download apps from **Windows Store**, you need to switch from a local account to a Microsoft account.

Hint

- Setting a Microsoft account password is required. If you forget your Microsoft account password, contact Microsoft support services.

Searching/Starting Apps, Settings, or Files

You can search apps, files, or settings on the charms, and then start your desired apps, files, or settings.
To search and start them, open the charms, select the **Search** charm, and follow these steps. To open the charms, see Opening the Charms.

1. Enter a keyword in the search box (1).
2. Select **Apps**, **Settings**, or **Files** (2) to narrow the search result.
3. Select your desired app or file (3).

Hint

- When you open the **Search** charm with certain **Windows Store** apps running, you can search from within the running apps. If no apps are running, you can also search from within the apps by selecting **Apps** below the search box in step 2.

Switching Apps

You can switch between apps that are currently running.

Touch operation (Touch screen equipped models)

Display currently running apps, touch and swipe in your desired app icon from the left edge. To display the currently running apps, see Viewing Running Apps.

Mouse / Touch pad operation

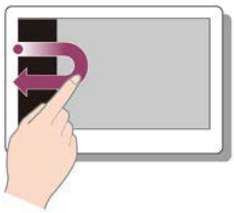
Display currently running apps and drag your desired app icon from the left edge to the center. To display the currently running apps, see Viewing Running Apps.

Viewing Running Apps

You can view running apps by displaying the list on the **Start** screen. See About the Start Screen and Menu for more information.

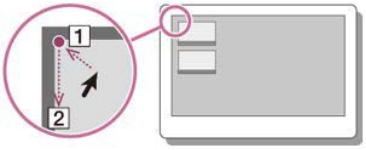
Touch operation (Touch screen equipped models)

Swipe in from the left edge until a small app icon appears, then drag the icon back towards the left edge.



Mouse / Touch pad operation

Point to the upper-left corner (1), then move downward (2).



Keyboard operation

Press the (Windows) key and the **Tab** key at the same time.

Installing Apps from Windows Store

You can install apps from **Windows Store**.
You will need a Microsoft account to use certain apps or services, including **Windows Store**.
On how to create and what you can do with the Microsoft account, refer to **Windows Help and Support** (Opening Windows Help and Support).

1. Connect to the Internet.
   See Connecting to the Internet with a Wired Connection (LAN port equipped models) for more information on how to connect to the Internet.
2. Open the **Start** screen and select the **Store** tile. (See About the Start Screen and Menu to open the **Start** screen.)

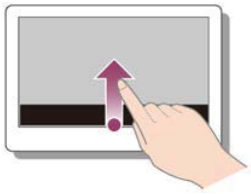
3. Find an app to install.
4. Follow the on-screen instructions to install the app.

Opening the App Menu

Many apps have app menus that you can use to control your app. Follow the instructions below to open the app menu.

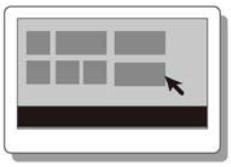
Touch operation (Touch screen equipped models)

Swipe up from the bottom edge.



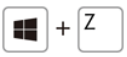
Mouse / Touch pad operation

When an app is open, right-click anywhere on the screen. On a touch pad, click the bottom-right corner.



Keyboard operation

Press the (Windows) key and the **Z** key at the same time.



Hint

- Open the app menu when an app is displayed on the computer screen.
- App commands vary depending on the app that is currently displayed on the computer screen.

Closing Apps

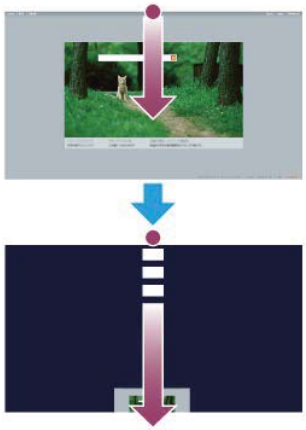
You can close currently running apps by following the instruction below.

Touch operation (Touch screen equipped models)

1. When an app is open, point to the top-center of the screen.
2. Drag the app to the bottom of the screen until the app disappears from the screen.

Mouse / Touch pad operation

1. When an app is open, move the cursor to the top-center of the screen until the hand icon appears.
2. Drag the app to the bottom of the screen until the app disappears from the screen.



Keyboard operation

Press the **Alt** key and the **F4** key at the same time.

Alt + F4

Switching User Accounts

You can switch to another user account by following these steps.

1. Open the **Start** screen and select an account name at the upper-right corner of the computer screen. (See About the Start Screen and Menu to open the **Start** screen.)
2. Select your desired account name.

Hint

- To create a new user account, you need to sign in as an administrator. Then, open the charms and select the **Settings** charm. Select **Change PC settings** in the lower right corner, and select **Users** in the left pane.
  To open the charms, see Opening the Charms.

Opening Windows Help and Support

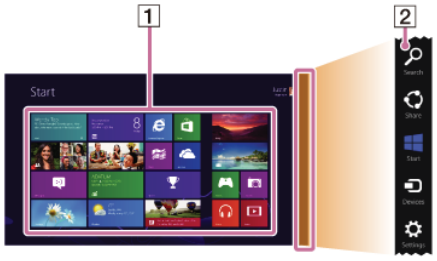
You can open **Windows Help and Support** by following these steps.

1. Open the charms and select the **Search** charm. (See Opening the Charms to open the charms.)
2. Select **Apps** (1).
3. Enter "Help and Support" in the search box (2).
4. Select **Help and Support** (3).

About the Start Screen and Menu

You can add shortcuts to apps, the desktop, and websites that you use the most.

Overview



1 Tiles
Select a tile to start an app and personalize the **Start** screen by adding and rearranging tiles.

2 Charms
Search for apps and files, share content, play content on other devices or print, and set up your VAIO computer.

To open the Start screen

Touch operation (Touch screen equipped models)

Open the charms, then tap the **Start** charm. (See Opening the Charms to open the charms.)

Mouse / Touch pad operation

Open the charms, then click the **Start** charm. (See Opening the Charms to open the charms.)

Keyboard operation

Press the (Windows) key.

Opening Control Panel

You can open **Control Panel** by following these steps.

1. Open the charms and select the **Search** charm. (See Opening the Charms to open the charms.)
2. Select **Apps** (1).
3. Enter "Control Panel" in the search box (2).
4. Select **Control Panel** (3).

Opening the Desktop

You can access the desktop from a tile, just like an app. Open the desktop by following the instruction below.

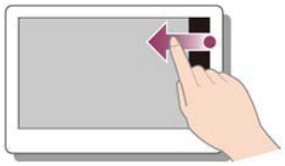
1. Open the **Start** screen and select the **Desktop** tile. (See About the Start Screen and Menu to open the **Start** screen.)

Opening the Charms

You can open the charms to search for apps and files, share content, play content on other devices or print, and set up your VAIO computer.

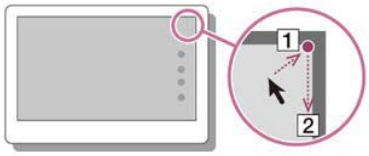
Touch operation (Touch screen equipped models)

Swipe in from the right edge.



Mouse / Touch pad operation

Point to the upper-right corner (1), then move downward (2).
With a touch pad, you can also swipe in from the right edge.



Keyboard operation

Press the (Windows) key and the **C** key at the same time.

Controlling the Power State of Your VAIO Computer (Sleep Mode/Shutdown)

By default, your VAIO computer automatically enters Sleep mode after a certain period of inactivity.
In Sleep mode, the computer will retain its current state, including data you are working on, while you take a break.
See Using Sleep Mode for more information on Sleep mode.

When you do not use your VAIO computer for a while

To avoid losing unsaved data, follow these steps to shut down your VAIO computer.

1. Save your data and close all running apps.
2. Turn off any peripherals connected to your VAIO computer.
3. Open the charms, and then select the **Settings** charm. (See Opening the Charms to open the charms.)
4. Select **Power** and **Shut down**.
   After a short time, your VAIO computer automatically turns off. If the computer is equipped with the power indicator, the green power indicator light turns off.
   If your VAIO computer is equipped with the power indicator, make sure it is off before closing the LCD screen lid.

Note

- An improper shutdown may cause loss of unsaved data or cause your VAIO computer to malfunction.
- To disconnect your VAIO computer completely from an AC power source, turn off the computer, and then unplug the power cord from the AC outlet.

Hint

- If you select **Shut down** while holding down the **Shift** key in step 4, you can place your VAIO computer into the minimum power consumption state (ACPI S5 mode). In this case, the fast boot function is temporarily disabled on the next start-up.

Restarting Your VAIO Computer

After changing the settings or installing an app on your VAIO computer, you may be required to restart the computer.

1. Save your data and close all running apps.
2. Open the charms and select the **Settings** charm. (See Opening the Charms to open the charms.)
3. Select **Power** and **Restart**.
   Your VAIO computer will restart.

Using Sleep Mode

In Sleep mode, you can step away from your VAIO computer while retaining the computer's state including data you are working on.

To activate Sleep mode

1. Open the charms and select the **Settings** charm. (See Opening the Charms to open the charms.)
2. Select **Power** and **Sleep**.
   If your VAIO computer is equipped with the power indicator, it turns off when the computer enters Sleep mode (with the default setting).

To return to Normal mode

1. Press the (Power) button.

Note

- If you press and hold down the (Power) button for more than 4 or 10 seconds, your VAIO computer will turn off automatically. Doing this will erase all unsaved data.
- By default, your VAIO computer automatically enters Hibernate mode when the battery pack is running out of power. However, depending on the operating conditions, the computer may fail to enter Hibernate mode.
  If this occurs and the battery pack is running out of power, the computer will be turned off, resulting in loss of unsaved data.
  While the computer is running on battery power, save data frequently.
- Before moving your VAIO computer, make sure that the computer is off to avoid impact or vibration to the running hard disk drive. If the computer is equipped with the power indicator, make sure that it is completely off.

Hint

- By default, your VAIO computer enters Sleep mode automatically after a certain period of inactivity while running on AC power.
- The operations below also place your VAIO computer into Sleep mode.
  - Press the (Power) button (with the default setting).
  - Close the LCD screen lid. The computer will enter Sleep mode after a few seconds.
- You can restore your VAIO computer from Sleep mode to Normal mode by opening the LCD screen. (For SVF14N/SVF15N, even if you open the LCD screen, the computer does not return to Normal mode 24 hours after the computer enters Sleep mode.)
  To change the action when you open the LCD screen, start **VAIO Control Center** and change the settings in **Power and Battery**. To start **VAIO Control Center**, see Searching/Starting Apps, Settings, or Files.

Installing Apps from Windows Store

You can install apps from **Windows Store**.
You will need a Microsoft account to use certain apps or services, including **Windows Store**.
On how to create and what you can do with the Microsoft account, refer to **Windows Help and Support** (Opening Windows Help and Support).

1. Connect to the Internet.
   See Connecting to the Internet with a Wired Connection (LAN port equipped models) for more information on how to connect to the Internet.
2. Open the **Start** screen and select the **Store** tile. (See About the Start Screen and Menu to open the **Start** screen.)

3. Find an app to install.
4. Follow the on-screen instructions to install the app.

Switching User Accounts

You can switch to another user account by following these steps.

1. Open the **Start** screen and select an account name at the upper-right corner of the computer screen. (See About the Start Screen and Menu to open the **Start** screen.)

2. Select your desired account name.

Hint

- To create a new user account, you need to sign in as an administrator. Then, open the charms and select the **Settings** charm. Select **Change PC settings** in the lower right corner, and select **Users** in the left pane.
  To open the charms, see Opening the Charms.

Opening Windows Help and Support

You can open **Windows Help and Support** by following these steps.

1. Open the charms and select the **Search** charm. (See Opening the Charms to open the charms.)
2. Select **Apps** (1).
3. Enter "Help and Support" in the search box (2).
4. Select **Help and Support** (3).

Parts and Controls on the Back

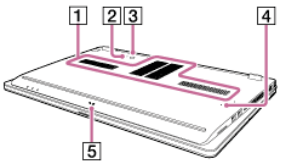
Describes the features on the back of the VAIO computer, such as connection ports.

1 **VOL** (Volume) buttons

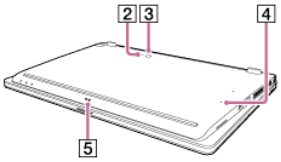
Parts and Controls on the Bottom

Describes the features on the bottom of the VAIO computer.

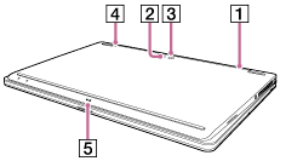
SVF15N



SVF14N



SVF13N



1 Air intake vents

2 Built-in rear camera indicator (Built-in rear camera equipped models) (Using the Built-in Camera)

3 Built-in rear camera (Built-in rear camera equipped models) (Using the Built-in Camera)

4 Battery off button

5 Touch mark (NFC supported models) (Using NFC/One-touch functions (NFC supported models))

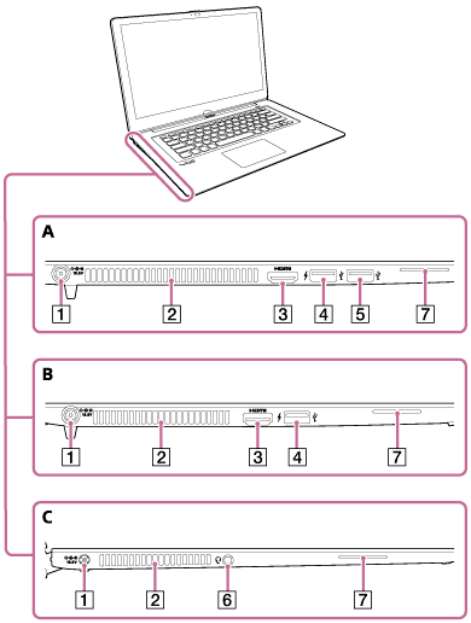
Note

- If the battery off button is pressed while your VAIO computer is running, unsaved data may be lost. Be sure to save your working data and turn off the computer before pressing the battery off button.

Parts and Controls on the Sides

Describes the features on the sides of the VAIO computer, such as connection ports.

A : SVF15N
B : SVF14N
C : SVF13N



1 DC IN port (Connecting a Power Source)

2 Air exhaust vent

3 **HDMI** output port (Connecting a TV with an HDMI Input Port)

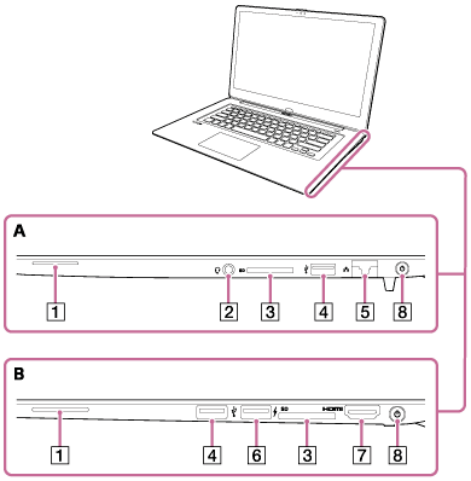
4 USB port (Connecting a USB Device)
This USB port supports USB charging. See Charging a USB Device for more information.

5 USB port (Connecting a USB Device)

6 Headset compatible headphone jack (Connecting External Speakers/Headphones/Headset)

7 Built-in speaker (stereo)

A : SVF15N / SVF14N
B : SVF13N



1 Built-in speaker (stereo)

2 Headset compatible headphone jack (Connecting External Speakers/Headphones/Headset)

3 **SD** memory card slot (Inserting SD Memory Cards)

4 USB port (Connecting a USB Device)

5 LAN port (Connecting to the Internet with a Wired Connection (LAN port equipped models))
For details on the LAN port, see Using the LAN Port (LAN port equipped models).

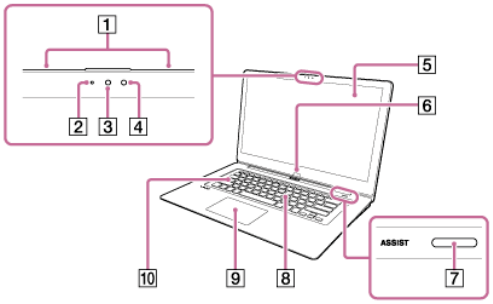
6 USB port (Connecting a USB Device)
This USB port supports USB charging. See Charging a USB Device for more information.

7 **HDMI** output port (Connecting a TV with an HDMI Input Port)

8 Power button (Turning On Your VAIO Computer)

Parts and Controls on the Front

Describes the features on the front of the VAIO computer, such as buttons and indicator lights.



1 Built-in dual microphones (Using the Built-in Camera)

2 Built-in front camera indicator (Using the Built-in Camera)

3 Built-in front camera (Using the Built-in Camera)

4 Ambient light sensor (Adjusting the LCD Brightness Automatically)

5 Touch screen (How to Use the Touch Screen (Touch screen equipped models))

6 Windows button*

7 **ASSIST** button (About the ASSIST Button)

8 Keyboard

9 Touch pad (Using the Touch Pad)

10 Caps lock indicator

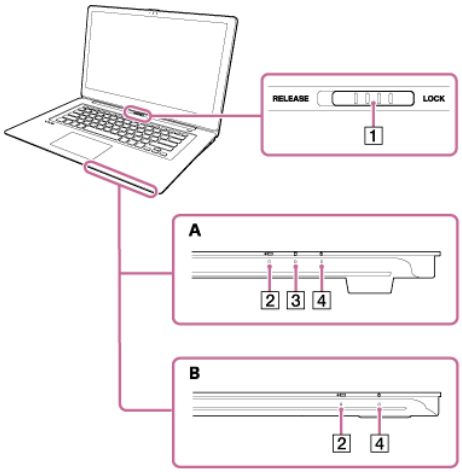
* The shape of the Windows button depends on the model.

Note

- The magnets are built in around the touch screen, or the areas in front of the left and right corners of the keyboard

depending on the models. Do not place credit cards etc., which are affected by magnetism, near your VAIO computer. The computer may cause data corruption.

A:SVF15N / SVF14N
B:SVF13N



1 Display lock switch

2 Charge indicator (Charge Indicator Status List)

3 Disc drive indicator (Disc drive indicator equipped models)

4 Power indicator (Turning On Your VAIO Computer)

About the LCD Screen Rotation

You can use your VAIO computer in three different modes by changing the LCD screen orientation.

Laptop Mode

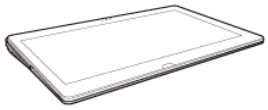
Use this mode to enter characters with the keyboard.

Viewer Mode

Use this mode when you want to see only the computer screen during video playback so that you can concentrate on the video content, or show the screen to the person in front of you. To change Laptop Mode to Viewer Mode, see Using Your VAIO Computer in Viewer Mode.

Tablet Mode

Use this mode to operate your VAIO computer with the touch screen as a tablet. To change Laptop Mode to Tablet Mode, see Using Your VAIO Computer in Tablet Mode.



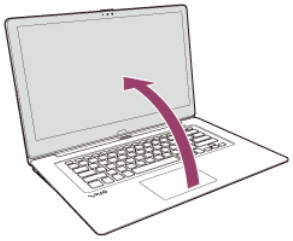
Note

- Make sure the display lock switch is set to the **LOCK** position before using your VAIO computer in Laptop Mode.
- Make sure your VAIO computer is in Laptop Mode and the LCD screen is closed when carrying the computer in a case.
- If you change the LCD screen orientation during video playback, your VAIO computer may become unstable. Exit the video playback app before changing the screen orientation.
- The **VAIO Care (Rescue Mode)** screen appears upside down when your VAIO computer is in Viewer Mode. Be sure to change Viewer Mode to Laptop Mode before using **VAIO Care (Rescue Mode)**.

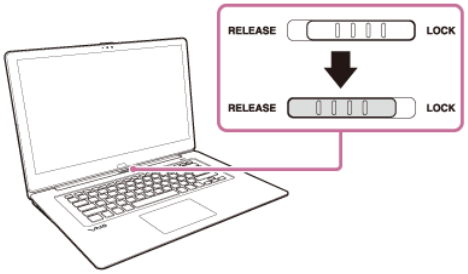
Using Your VAIO Computer in Viewer Mode

You can use your VAIO computer in Viewer Mode when you want to see only the computer screen during video playback so that you can concentrate on the video content, or show the screen to the person in front of you.

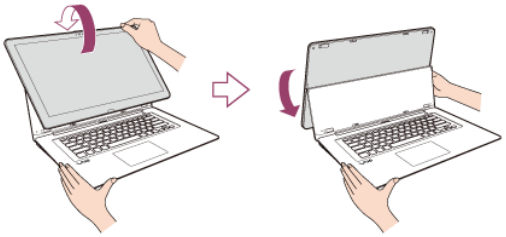
1. Open the LCD screen more than 90 degrees.



2. Set the display lock switch to the **RELEASE** position.



3. Hold down the area in front of the keyboard with your hand, grasp the top corner of the LCD screen with the other hand, and rotate the screen in the direction of the arrow.



To change back to Laptop Mode

Rotate the LCD screen to the front side of your VAIO computer and set the display lock switch to the **LOCK** position.

Checking Supplied Items

Check all items packed with the product before use.

AC adapter
Power cord
Digitizer stylus
(Not supplied with all models. Availability depends on your computer's specifications.)
Wireless router
(Not supplied with all models. Availability depends on your computer's specifications.)
VGA adapter
(Not supplied with all models. Availability depends on your computer's specifications.)

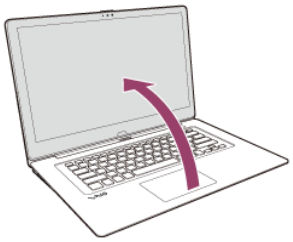
Hint

- No Recovery Media is included because your VAIO computer can be recovered using data stored in the hard disk drive or SSD. See Recovering from the Recovery Area for more information.

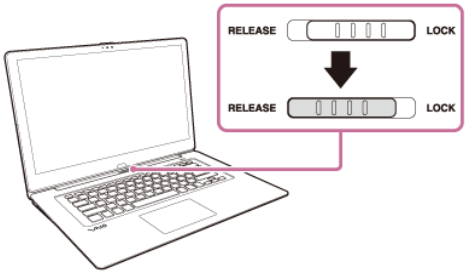
Using Your VAIO Computer in Tablet Mode

You can use your VAIO computer in Tablet Mode to operate the computer with the touch screen as a tablet.

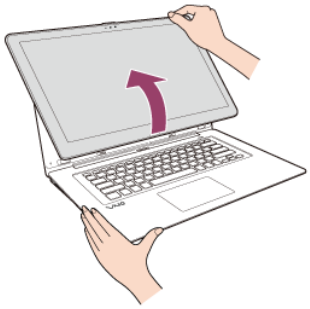
1. Open the LCD screen more than 90 degrees.



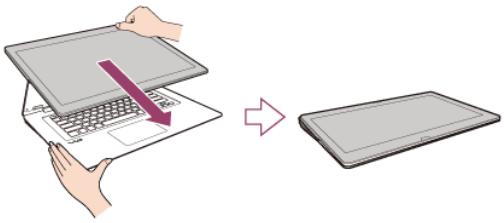
2. Set the display lock switch to the **RELEASE** position.



3. Hold down the area in front of the keyboard with your hand, grasp the top corner of the LCD screen with the other hand, and rotate the screen slightly to the back side of your VAIO computer.

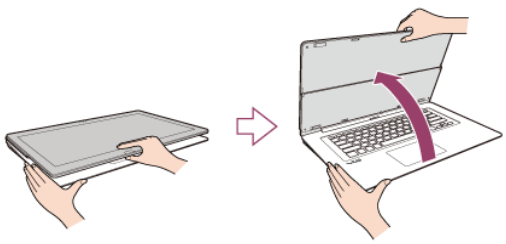


4. Move the LCD screen in the direction of the arrow to fold the screen.
   The LCD screen is folded on the keyboard.



To change back to Laptop Mode

Grasp the center of the LCD screen and raise the screen to change Tablet Mode to Viewer Mode. Then, rotate the screen to the front side of your VAIO computer and set the display lock switch to the **LOCK** position.



Setting Up an Appropriate Work Environment

This topic describes where to or not to place your VAIO computer and ergonomic instructions.

Where to place your VAIO computer

When placing your VAIO computer, ensure that:

- You have easy access to a power source and necessary ports.
- You leave enough space around the computer.
- The computer is placed on a flat surface that is wide enough and you can face the computer screen as you operate it.
- You can place the computer in front of you where you can sit upright and keep your forearms parallel to the floor.

Where not to place your VAIO computer

Placing your VAIO computer in an inappropriate location may cause damage or a malfunction. Do not place the computer in a location subject to:

- Direct sunlight
- Magnetic items or sources
- Heat sources, such as residential heating equipment
- Excessive dust
- High humidity
- Poor ventilation

Note

- The area around the air exhaust vent may become extremely hot while your VAIO computer is on. Be careful before touching the area.
- Do not place any object near the air exhaust vent that may block the vent.

Hint

- Your VAIO computer uses high-frequency radio signals and may cause interference to radio or TV reception. If this occurs, move the computer a suitable distance away from the radio or TV.

Ergonomic considerations

Whenever possible, you should attempt to take account of the following ergonomic considerations.

Furniture and posture

Sit in a chair with good back support. Adjust the level of the chair so your feet are flat on the floor. A footrest may make you more comfortable.
Sit in a relaxed, upright posture and avoid slouching forward or leaning far backwards.

Viewing angle of the computer screen

Use the screen tilting feature to find the best position. Make sure the computer screen is at or slightly below eye level when you are sitting in front of your VAIO computer. Adjust the brightness level of the display as well.
You can reduce eye strain and muscle fatigue by adjusting the tilt and brightness level of the computer screen to the proper position.

Lighting

Choose a location where windows and lights do not cause glare and reflection on the computer screen. Use indirect lighting to avoid bright spots on the computer screen. Proper lighting adds to your comfort and work efficiency.

Note

- While adjusting the viewing angle, do not exert excessive pressure on your VAIO computer to eliminate a risk of mechanical damage.

Hint

- The same considerations apply when you use an external display.

Notes on handling your VAIO computer

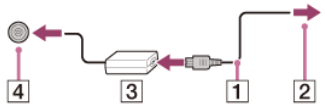
Observe the following to avoid malfunctions and damage to your VAIO computer.

- Place your VAIO computer gently on a flat surface to avoid a mechanical shock.
- Be sure to turn off your VAIO computer before moving the computer. Moving the computer that is turned on may cause a hard disk malfunction. Be sure to disconnect all cables connected to the computer before moving it.
- Do not drop or hit your VAIO computer. Even a slight shock or vibration may cause a hard disk malfunction.
- Do not place your VAIO computer in an unstable position.

Connecting a Power Source

Connect your VAIO computer to an AC power source.
Carefully read the precautions in Notes on Using the Power Source before connection.

1. Plug one end of the power cord (1) into the AC adapter (3).
2. Plug the other end of the power cord into an AC outlet (2).
3. Plug the cable from the AC adapter (3) into the DC IN port (4) on your VAIO computer.



Note

- Do not plug more than one device into the same AC outlet.
- The shape of the AC adapter varies depending on the model you purchased.
- Make sure that the power plug is firmly plugged into your VAIO computer.

Hint

- You can purchase a power strip with a surge protector to help prevent damage to your VAIO computer caused by sudden power surges (in an electrical storm, for example).

Charging the Battery Pack

The battery pack can be charged even while you are using your VAIO computer when the computer is connected to a power source. The charging time may vary depending on operating conditions.

1. Plug your VAIO computer into an AC outlet. (See Connecting a Power Source.)

Hint

- The charging time varies depending on ambient temperature.
  Note that at a low ambient temperature, it takes longer time to charge the battery pack.
- Open the desktop and select the battery icon, such as (on battery) or (plugged in), in the desktop notification area to check the built-in battery status of your VAIO computer. To open the desktop, see Opening the Desktop.

Turning On Your VAIO Computer

Turn on your VAIO computer to start Windows.
Carefully read the precautions in Notes on Using the Power Source before turning on.

1. Connect your VAIO computer to an AC outlet. (See Connecting a Power Source.)
2. Lift the LCD screen lid.
3. Press the (Power) button.
   If your VAIO computer is equipped with the power indicator, it turns on in green.
   The computer is turned on, and Windows starts after a while.

Note

- If you press and hold down the (Power) button for more than four seconds, your VAIO computer will not turn on.
- When moving the LCD screen, do not hold the built-in camera as it may cause your VAIO computer to malfunction.
- If you press the (Power) button with the LCD screen lid closed, your VAIO computer will not turn on.
- Do not touch the touch screen when turning on your VAIO computer as it may cause the computer to malfunction. (Touch screen equipped models)

Hint

- By default, your VAIO computer automatically enters Sleep mode after a certain period of inactivity while the computer is connected to an AC outlet. See Using Sleep Mode for more information.

Controlling the Power State of Your VAIO Computer (Sleep Mode/Shutdown)

By default, your VAIO computer automatically enters Sleep mode after a certain period of inactivity.

In Sleep mode, the computer will retain its current state, including data you are working on, while you take a break.
See Using Sleep Mode for more information on Sleep mode.

When you do not use your VAIO computer for a while

To avoid losing unsaved data, follow these steps to shut down your VAIO computer.

1. Save your data and close all running apps.
2. Turn off any peripherals connected to your VAIO computer.
3. Open the charms, and then select the **Settings** charm. (See Opening the Charms to open the charms.)
4. Select **Power** and **Shut down**.
   After a short time, your VAIO computer automatically turns off. If the computer is equipped with the power indicator, the green power indicator light turns off.
   If your VAIO computer is equipped with the power indicator, make sure it is off before closing the LCD screen lid.

Note

- An improper shutdown may cause loss of unsaved data or cause your VAIO computer to malfunction.
- To disconnect your VAIO computer completely from an AC power source, turn off the computer, and then unplug the power cord from the AC outlet.

Hint

- If you select **Shut down** while holding down the **Shift** key in step 4, you can place your VAIO computer into the minimum power consumption state (ACPI S5 mode). In this case, the fast boot function is temporarily disabled on the next start-up.

Charging the Battery Pack

The battery pack can be charged even while you are using your VAIO computer when the computer is connected to a power source. The charging time may vary depending on operating conditions.

1. Plug your VAIO computer into an AC outlet. (See Connecting a Power Source.)

Hint

- The charging time varies depending on ambient temperature.
  Note that at a low ambient temperature, it takes longer time to charge the battery pack.
- Open the desktop and select the battery icon, such as (on battery) or (plugged in), in the desktop notification area to check the built-in battery status of your VAIO computer. To open the desktop, see Opening the Desktop.

Notes on Using the Battery Pack

Before using the battery pack, read the following precautions for correct use.

About the battery pack

- The battery pack built in your VAIO computer is not removable.
- For safety reasons, battery charging may be suspended at higher or lower temperatures.
- The battery pack is not fully charged at the time of delivery.
- While the battery pack is in use or being charged, heat builds up in the battery pack. This is normal and is not cause for concern.

About battery discharge

After battery charge, the battery pack will gradually discharge over time even while not in use. If it is left unused for an extended period of time, the battery power may be depleted. It is recommended that you recharge the battery pack before use.

About battery life

Battery life varies depending on usage and settings.

About battery deterioration and replacement

- The battery pack is consumable. The capacity gradually declines through repeated cycles of recharging and discharging, and depending on the ambient temperature during use or storage. As a result, the battery life becomes short even if it is fully charged and eventually the battery pack reaches the end of its life.

- If the battery pack quickly runs out of power after being fully charged or it has reached the end of its life, replace it with a new one.
  Contact an authorized Sony service/support center and replace the battery pack with a new one specified by Sony.

When the battery pack is running out of power

If the battery pack runs out and your VAIO computer is not plugged in, power will be cut off and any data you are working on will be lost.
While your VAIO computer is running on battery power, save data frequently.

About the LCD Screen Rotation

You can use your VAIO computer in three different modes by changing the LCD screen orientation.

Laptop Mode

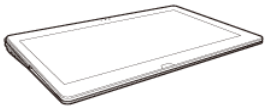
Use this mode to enter characters with the keyboard.

Viewer Mode

Use this mode when you want to see only the computer screen during video playback so that you can concentrate on the video content, or show the screen to the person in front of you. To change Laptop Mode to Viewer Mode, see Using Your VAIO Computer in Viewer Mode.

Tablet Mode

Use this mode to operate your VAIO computer with the touch screen as a tablet. To change Laptop Mode to Tablet Mode, see Using Your VAIO Computer in Tablet Mode.



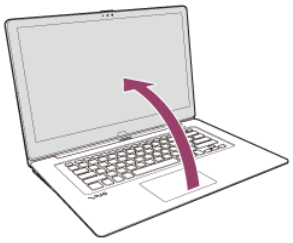
Note

- Make sure the display lock switch is set to the **LOCK** position before using your VAIO computer in Laptop Mode.
- Make sure your VAIO computer is in Laptop Mode and the LCD screen is closed when carrying the computer in a case.
- If you change the LCD screen orientation during video playback, your VAIO computer may become unstable. Exit the video playback app before changing the screen orientation.
- The **VAIO Care (Rescue Mode)** screen appears upside down when your VAIO computer is in Viewer Mode. Be sure to change Viewer Mode to Laptop Mode before using **VAIO Care (Rescue Mode)**.

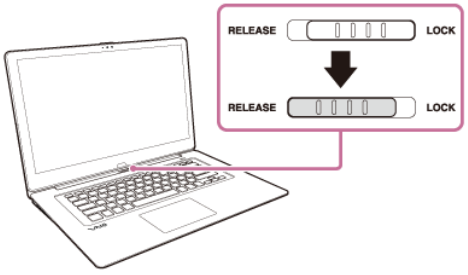
Using Your VAIO Computer in Viewer Mode

You can use your VAIO computer in Viewer Mode when you want to see only the computer screen during video playback so that you can concentrate on the video content, or show the screen to the person in front of you.

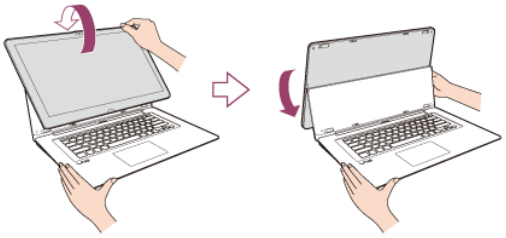
1. Open the LCD screen more than 90 degrees.



2. Set the display lock switch to the **RELEASE** position.



3. Hold down the area in front of the keyboard with your hand, grasp the top corner of the LCD screen with the other hand, and rotate the screen in the direction of the arrow.



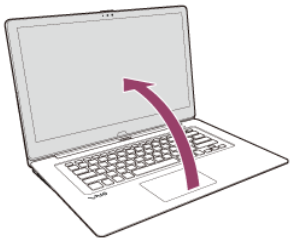
To change back to Laptop Mode

Rotate the LCD screen to the front side of your VAIO computer and set the display lock switch to the **LOCK** position.

Using Your VAIO Computer in Tablet Mode

You can use your VAIO computer in Tablet Mode to operate the computer with the touch screen as a tablet.

1. Open the LCD screen more than 90 degrees.



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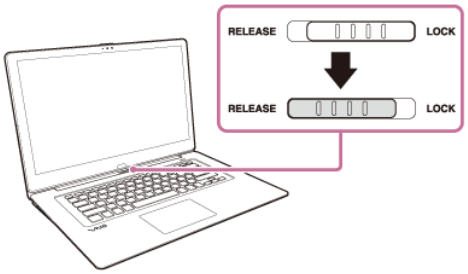

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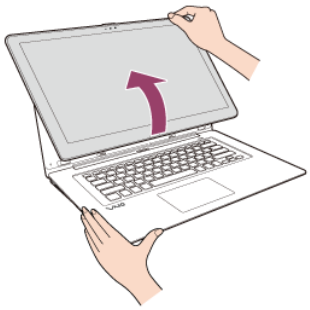

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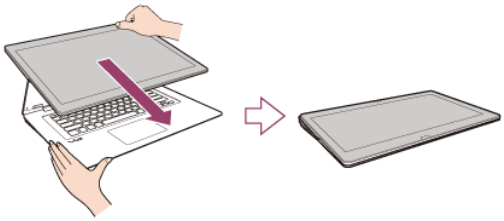
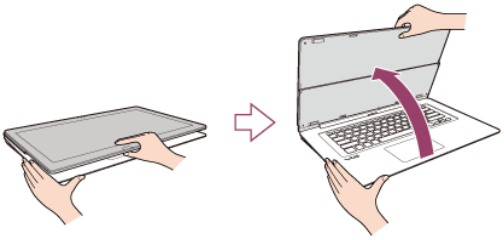


To change back to Laptop Mode

Grasp the center of the LCD screen and raise the screen to change Tablet Mode to Viewer Mode. Then, rotate the screen to the front side of your VAIO computer and set the display lock switch to the **LOCK** position.



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(Not supplied with all models. Availability depends on your computer's specifications.)
VGA adapter
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Hint

- No Recovery Media is included because your VAIO computer can be recovered using data stored in the hard disk drive or SSD. See Recovering from the Recovery Area for more information.

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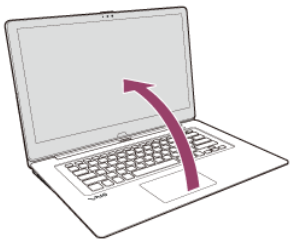
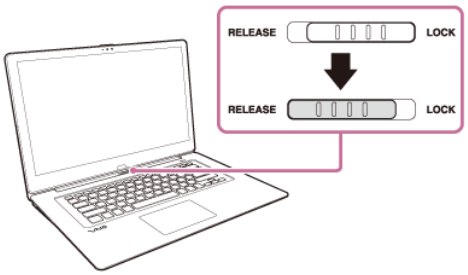
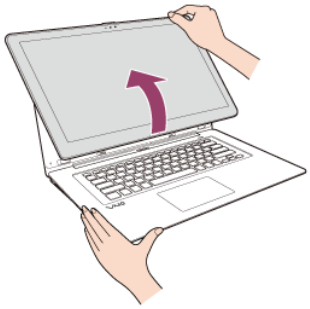


2. Set the display lock switch to the **RELEASE** position.



3. Hold down the area in front of the keyboard with your hand, grasp the top corner of the LCD screen with the other hand, and rotate the screen slightly to the back side of your VAIO computer.



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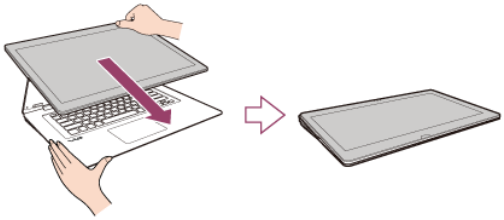
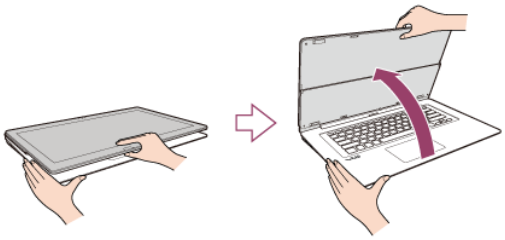
   The LCD screen is folded on the keyboard.



To change back to Laptop Mode

Grasp the center of the LCD screen and raise the screen to change Tablet Mode to Viewer Mode. Then, rotate the screen to the front side of your VAIO computer and set the display lock switch to the **LOCK** position.



Controlling the Power State of Your VAIO Computer (Sleep Mode/Shutdown)

By default, your VAIO computer automatically enters Sleep mode after a certain period of inactivity.
In Sleep mode, the computer will retain its current state, including data you are working on, while you take a break.
See Using Sleep Mode for more information on Sleep mode.

When you do not use your VAIO computer for a while

To avoid losing unsaved data, follow these steps to shut down your VAIO computer.

1. Save your data and close all running apps.
2. Turn off any peripherals connected to your VAIO computer.
3. Open the charms, and then select the **Settings** charm. (See Opening the Charms to open the charms.)
4. Select **Power** and **Shut down**.
   After a short time, your VAIO computer automatically turns off. If the computer is equipped with the power indicator, the green power indicator light turns off.
   If your VAIO computer is equipped with the power indicator, make sure it is off before closing the LCD screen lid.

Note

- An improper shutdown may cause loss of unsaved data or cause your VAIO computer to malfunction.
- To disconnect your VAIO computer completely from an AC power source, turn off the computer, and then unplug the power cord from the AC outlet.

Hint

- If you select **Shut down** while holding down the **Shift** key in step 4, you can place your VAIO computer into the minimum power consumption state (ACPI S5 mode). In this case, the fast boot function is temporarily disabled on the next start-up.

Using the Antivirus App for Your VAIO Computer

Protect your VAIO computer against computer viruses by using the antivirus app.
You can keep the antivirus app current with the latest updates by downloading and installing the updates from the website of the app publisher. To update the antivirus app, find the antivirus app installed on your VAIO computer from the following and follow these steps.

1. Make sure your VAIO computer is connected to the Internet.
2. Perform any of these operations according to the preinstalled antivirus app.
   For Trend Micro:
   Start **Trend Micro Titanium Maximum Security**.
   For McAfee:
   Start **McAfee LiveSafe - Internet Security**, **McAfee Internet Security**, or **McAfee Total Protection**.
   For Kaspersky Internet Security:
   Start **Kaspersky Internet Security**.
3. Follow the on-screen instructions.

Note

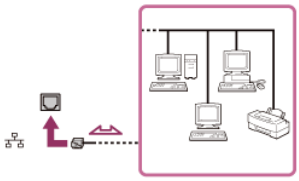
- The actual procedure may be different from the above depending on the version of the app installed on your VAIO computer. In such a case, follow the on-screen instructions.

Hint

- To start the antivirus app, see Searching/Starting Apps, Settings, or Files.
- Refer to the help file included with your app for more information.

Connecting to the Internet with a Wired Connection (LAN port equipped models)

Before using the Internet, you need to sign up with an Internet Service Provider (ISP) and set up devices required for connecting your VAIO computer to the Internet.
Connect one end of a LAN cable (not supplied) to the LAN port on your VAIO computer and the other end to your network.



Note

- For detailed information on devices required for Internet access and how to connect your VAIO computer to the Internet, ask your ISP.
- When connecting your VAIO computer to the Internet, be sure to use a cable with “Network” or “Ethernet” writing on it.
- Do not plug a telephone cable into the LAN port on your VAIO computer.
  If the LAN port is connected to the following networks or telephone lines, high electric current to the port may cause damage, overheating, or fire.
  - Any network, except 1000BASE-T/100BASE-TX/10BASE-T type networks
  - Public telephone subscriber line
  - Private branch exchange (PBX)
  - Home (intercom speakerphone) or business-use telephone lines (multi-line business telephone)

Hint

- To connect your VAIO computer to the Internet using the Wi-Fi(R) (Wireless LAN) function, you need to set up the Wi-Fi

settings. See Starting Wi-Fi(R) (Wireless LAN) Communications for more information.

About the Internet Connection Services

The following types of Internet connection services are available.
You can select from among the services according to your preference, for example, communication speed or a usage fee. For detailed information on a variety of connection services, contact Internet Service Providers (ISPs).

- Fiber to the Home (FTTH)
- Cable modem
- Digital Subscriber Line (DSL)
- Satellite
- Dial-up

About the Network (LAN) - (not for SVF13N model)

The network (LAN) enables you to connect your VAIO computer to the Internet and transfer data between the computer and other devices.
You can connect your VAIO computer to 1000BASE-T/100BASE-TX/10BASE-T type networks with a LAN cable (not supplied). Connect one end of a LAN cable to the LAN port on the computer and the other end to your network. (LAN port equipped models)
You can also connect your VAIO computer to a network using the Wi-Fi(R) (Wireless LAN) function.
For information on peripheral devices required for LAN access, ask your Internet Service Provider (ISP) or refer to the manual that came with your modem.
For information on how to connect your VAIO computer to the network, refer to your ISP's instructions or the manual that came with the modem and other peripheral devices. If you require information on the network settings at your workplace, ask the network administrator.

Disabling the Wi-Fi(R) (Wireless LAN) Function

You can disable the Wi-Fi function by following these steps.

1. Open the charms and select the **Settings** charm. (See Opening the Charms to open the charms.)
2. Select **Change PC settings** in the lower right corner.
3. Select **Wireless** in the left pane of the **PC settings** screen.
4. Change the **Wi-Fi** setting under **Wireless devices** to **Off**.

Hint

- To enable the Wi-Fi function, turn off **Airplane mode** and change the **Wi-Fi** setting under **Wireless devices** to **On**.
- To disable all wireless functions, turn on **Airplane mode**.
- The wireless function(s) whose setting is on will be enabled when you turn off **Airplane mode**.
- Refer to **Windows Help and Support** (Opening Windows Help and Support) for more information on **Airplane mode**.

Notes on Using the Wi-Fi(R) (Wireless LAN) Function

Before using the Wi-Fi function, read the following precautions for correct use.

- In some countries or regions, using the Wi-Fi products may be restricted by the local regulations.
- Wi-Fi devices work on the 2.4 GHz band, which is used by a variety of devices. They use the technology to minimize radio interference from other devices that use the same band; however, radio interference may still slow communication speeds, reduce communication range, or cause communication failure.
- If both the BLUETOOTH function and the 2.4 GHz Wi-Fi function of your VAIO computer are enabled, interference may occur and cause slower communication speeds or other problems.
- To communicate via Wi-Fi while you are on the road, you may need to contract with a Wi-Fi connection service provider.
- If your VAIO computer is equipped with the IEEE 802.11a/b/g/n standard, outdoor use of the 5 GHz Wi-Fi function is prohibited by law.
- The communication speed and range may vary depending on the following conditions:

- Distance between devices
- Existence of obstacles between devices
- Device configuration
- Radio conditions
- Ambient environment (including wall material, etc.)
- Apps in use

  Communications may be cut off depending on radio conditions.

- The data transfer rate specified in the specification is the theoretical maximum, and may not reflect actual data transfer rate.
- Actual communication speed may not be as fast as the one displayed on your VAIO computer.
- The 2.4 GHz and 5 GHz Wi-Fi frequency bands are not communicable with one another.
- The data transfer rate of IEEE 802.11g and IEEE 802.11n (2.4 GHz) may be affected by interference when used with an IEEE 802.11b product. Also, IEEE 802.11g and IEEE 802.11n automatically lower the transfer rate to maintain compatibility with an IEEE 802.11b product. The transfer rate may be regained by changing the channel settings of your access point.
- To stop the Wi-Fi function abruptly, turn off your VAIO computer and the wireless devices (if any).
- The WLAN standard includes the encryption methods: Wired Equivalent Privacy (WEP), which is a security protocol, Wi-Fi Protected Access 2 (WPA2), and Wi-Fi Protected Access (WPA). Proposed jointly by the IEEE and Wi-Fi Alliance, both WPA2 and WPA are specifications of standards based on interoperable security enhancements that increase the level of data protection and access control for existing Wi-Fi networks. WPA is designed to be forward compatible with the IEEE 802.11i specification. It utilizes the enhanced data encryption Temporal Key Integrity Protocol (TKIP) in addition to user authentication using 802.1X and Extensible Authentication Protocol (EAP). Data encryption protects the vulnerable wireless link between clients and access points. Besides that, there are other typical LAN security mechanisms to ensure privacy, such as: password protection, end-to-end encryption, virtual private networks, and authentication. WPA2, the second generation of WPA, provides stronger data protection and network access control and is also designed to secure all versions of 802.11 devices, including 802.11b, 802.11a, 802.11g, 802.11n, and 802.11ac (draft) standards, multi-band and multi-mode. In addition, based on the ratified IEEE 802.11i standard, WPA2 provides government grade security by implementing the National Institute of Standards and Technology (NIST) FIPS 140-2 compliant AES encryption algorithm and 802.1X-based authentication. WPA2 is backward compatible with WPA.

Stopping Wi-Fi(R) (Wireless LAN) Communications

You can stop Wi-Fi communications by following these steps.

1. Open the charms and select the **Settings** charm. (See Opening the Charms to open the charms.)
2. Select (the network icon).
3. Select the desired access point and **Disconnect**.

Note

- Do not disable the Wi-Fi function while accessing remote documents, files, or resources, as it may result in data loss.

About the Wi-Fi(R) (Wireless LAN) Standards

Wi-Fi allows your VAIO computer to connect to a network through a wireless connection.
Wi-Fi uses the following IEEE 802.11a/b/g/n/ac (draft) standard, which specifies the type of technology used. Refer to the specifications to find out about the configuration of the computer.

IEEE 802.11a (Frequency band:5 GHz)

Exclusive to models compliant with the IEEE 802.11a/b/g/n/ac (draft) standard.

IEEE 802.11b/g (Frequency band:2.4 GHz)

The IEEE 802.11g standard provides higher-speed communications than the IEEE 802.11b.

IEEE 802.11n (Frequency band:2.4 GHz/5 GHz)

For models compliant with the IEEE 802.11b/g/n standard, only 2.4 GHz band can be used.

IEEE 802.11ac (draft) (Frequency band:5 GHz)

Exclusive to models compliant with the IEEE 802.11a/b/g/n/ac (draft) standard.

Installing Apps from Windows Store

You can install apps from **Windows Store**.
You will need a Microsoft account to use certain apps or services, including **Windows Store**.

On how to create and what you can do with the Microsoft account, refer to **Windows Help and Support** (Opening Windows Help and Support).

1. Connect to the Internet.
   See Connecting to the Internet with a Wired Connection (LAN port equipped models) for more information on how to connect to the Internet.
2. Open the **Start** screen and select the **Store** tile. (See About the Start Screen and Menu to open the **Start** screen.)

3. Find an app to install.
4. Follow the on-screen instructions to install the app.

Starting Wi-Fi(R) (Wireless LAN) Communications

You can establish Wi-Fi communications between your VAIO computer and an access point (not supplied).
Before using Wi-Fi, make sure a Wi-Fi access point is on and operating.

1. Connect an access point to your VAIO computer.
   Refer to **Windows Help and Support** (Opening Windows Help and Support) and the manual that came with the access point for more information.
2. Open the charms and select the **Settings** charm. (See Opening the Charms to open the charms.)
3. Select **Change PC settings** in the lower right corner.
4. Select **Wireless** in the left pane of the **PC settings** screen.
5. Change **Airplane mode** to **Off** and the **Wi-Fi** setting under **Wireless devices** to **On**.
6. Open the charms and select the **Settings** charm. (See Opening the Charms to open the charms.)
7. Select (the network icon).
8. Select the desired access point and **Connect**.
   After the connection is established, **Connected** appears in the selected wireless access point field.
   If a security key entry window appears, enter the security key as required and select **OK**. See About a Security Key for Wi-Fi(R) (Wireless LAN) for more information.
   Note that security keys are case-sensitive.

To check Wi-Fi connection status

Open the desktop and move the mouse pointer over (the Network icon) in the desktop notification area to check the Wi-Fi connection status, such as the access point currently connected to your VAIO computer.
To open the desktop, see Opening the Desktop.

Note

- On IEEE 802.11a/b/g/n/ac (draft) equipped models, when only the 2.4 GHz Wi-Fi function is enabled, your VAIO computer cannot connect to a 5 GHz Wi-Fi access point. Also, when only the 5 GHz Wi-Fi function is enabled, the computer cannot connect to a 2.4 GHz Wi-Fi access point.
  On IEEE 802.11b/g/n equipped models, when the 2.4 GHz Wi-Fi function is disabled, the computer cannot connect to an access point. Also, the computer cannot connect to a 5 GHz Wi-Fi access point.
- It may take some time to find and connect to a Wi-Fi access point before starting communications via Wi-Fi.

Hint

- Refer to **Windows Help and Support** (Opening Windows Help and Support) for more information on **Airplane mode**.
- Once you connect your VAIO computer to the access point by entering the security key, the access point will be registered in the computer. You do not have to enter the security key for subsequent connections.

About a Security Key for Wi-Fi(R) (Wireless LAN)

A security key is a security protocol for Wi-Fi that encrypts data transmitted on Wi-Fi. It is also referred to as an encryption

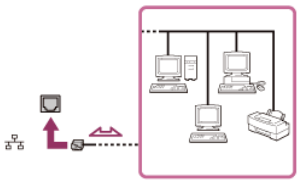
key or a WEP (Wired Equivalent Privacy) key.
The security key allows wireless devices that have the same key, such as a Wi-Fi access point and a computer, to communicate with each other on Wi-Fi.
The security key is assigned to each access point by default. (Make sure the default security key has been changed to protect data from unauthorized use.) If you cannot find the default security key, refer to the manual that came with your access point.

If you enter a wrong security key, follow these steps to re-enter the security key.

1. Open the charms and select the **Settings** charm. (See Opening the Charms to open the charms.)
2. Select (the network icon).
3. Right-click the desired network and select **View connection properties**.
4. Select the **Security** tab.
5. Enter a security key in the **Network security key** field and select **OK**.

Connecting to the Internet with a Wired Connection (LAN port equipped models)

Before using the Internet, you need to sign up with an Internet Service Provider (ISP) and set up devices required for connecting your VAIO computer to the Internet.
Connect one end of a LAN cable (not supplied) to the LAN port on your VAIO computer and the other end to your network.



Note

- For detailed information on devices required for Internet access and how to connect your VAIO computer to the Internet, ask your ISP.
- When connecting your VAIO computer to the Internet, be sure to use a cable with “Network” or “Ethernet” writing on it.
- Do not plug a telephone cable into the LAN port on your VAIO computer.
  If the LAN port is connected to the following networks or telephone lines, high electric current to the port may cause damage, overheating, or fire.
  - Any network, except 1000BASE-T/100BASE-TX/10BASE-T type networks
  - Public telephone subscriber line
  - Private branch exchange (PBX)
  - Home (intercom speakerphone) or business-use telephone lines (multi-line business telephone)

Hint

- To connect your VAIO computer to the Internet using the Wi-Fi(R) (Wireless LAN) function, you need to set up the Wi-Fi settings. See Starting Wi-Fi(R) (Wireless LAN) Communications for more information.

About the Internet Connection Services

The following types of Internet connection services are available.
You can select from among the services according to your preference, for example, communication speed or a usage fee. For detailed information on a variety of connection services, contact Internet Service Providers (ISPs).

- Fiber to the Home (FTTH)
- Cable modem
- Digital Subscriber Line (DSL)
- Satellite
- Dial-up

About the Network (LAN) - (not for SVF13N model)

The network (LAN) enables you to connect your VAIO computer to the Internet and transfer data between the computer and other devices.
You can connect your VAIO computer to 1000BASE-T/100BASE-TX/10BASE-T type networks with a LAN cable (not supplied). Connect one end of a LAN cable to the LAN port on the computer and the other end to your network. (LAN port equipped models)
You can also connect your VAIO computer to a network using the Wi-Fi(R) (Wireless LAN) function.

For information on peripheral devices required for LAN access, ask your Internet Service Provider (ISP) or refer to the manual that came with your modem.
For information on how to connect your VAIO computer to the network, refer to your ISP's instructions or the manual that came with the modem and other peripheral devices. If you require information on the network settings at your workplace, ask the network administrator.

About the Wi-Fi(R) (Wireless LAN) Standards

Wi-Fi allows your VAIO computer to connect to a network through a wireless connection.
Wi-Fi uses the following IEEE 802.11a/b/g/n/ac (draft) standard, which specifies the type of technology used. Refer to the specifications to find out about the configuration of the computer.

IEEE 802.11a (Frequency band:5 GHz)

Exclusive to models compliant with the IEEE 802.11a/b/g/n/ac (draft) standard.

IEEE 802.11b/g (Frequency band:2.4 GHz)

The IEEE 802.11g standard provides higher-speed communications than the IEEE 802.11b.

IEEE 802.11n (Frequency band:2.4 GHz/5 GHz)

For models compliant with the IEEE 802.11b/g/n standard, only 2.4 GHz band can be used.

IEEE 802.11ac (draft) (Frequency band:5 GHz)

Exclusive to models compliant with the IEEE 802.11a/b/g/n/ac (draft) standard.

About a Security Key for Wi-Fi(R) (Wireless LAN)

A security key is a security protocol for Wi-Fi that encrypts data transmitted on Wi-Fi. It is also referred to as an encryption key or a WEP (Wired Equivalent Privacy) key.
The security key allows wireless devices that have the same key, such as a Wi-Fi access point and a computer, to communicate with each other on Wi-Fi.
The security key is assigned to each access point by default. (Make sure the default security key has been changed to protect data from unauthorized use.) If you cannot find the default security key, refer to the manual that came with your access point.

If you enter a wrong security key, follow these steps to re-enter the security key.

1. Open the charms and select the **Settings** charm. (See Opening the Charms to open the charms.)
2. Select (the network icon).
3. Right-click the desired network and select **View connection properties**.
4. Select the **Security** tab.
5. Enter a security key in the **Network security key** field and select **OK**.

About the Internet Connection Services

The following types of Internet connection services are available.
You can select from among the services according to your preference, for example, communication speed or a usage fee. For detailed information on a variety of connection services, contact Internet Service Providers (ISPs).

- Fiber to the Home (FTTH)
- Cable modem
- Digital Subscriber Line (DSL)
- Satellite
- Dial-up

Disabling the Wi-Fi(R) (Wireless LAN) Function

You can disable the Wi-Fi function by following these steps.

1. Open the charms and select the **Settings** charm. (See Opening the Charms to open the charms.)
2. Select **Change PC settings** in the lower right corner.
3. Select **Wireless** in the left pane of the **PC settings** screen.
4. Change the **Wi-Fi** setting under **Wireless devices** to **Off**.

Hint

- To enable the Wi-Fi function, turn off **Airplane mode** and change the **Wi-Fi** setting under **Wireless devices** to **On**.
- To disable all wireless functions, turn on **Airplane mode**.
- The wireless function(s) whose setting is on will be enabled when you turn off **Airplane mode**.
- Refer to **Windows Help and Support** (Opening Windows Help and Support) for more information on **Airplane mode**.

Notes on Using the Wi-Fi(R) (Wireless LAN) Function

Before using the Wi-Fi function, read the following precautions for correct use.

- In some countries or regions, using the Wi-Fi products may be restricted by the local regulations.
- Wi-Fi devices work on the 2.4 GHz band, which is used by a variety of devices. They use the technology to minimize radio interference from other devices that use the same band; however, radio interference may still slow communication speeds, reduce communication range, or cause communication failure.
- If both the BLUETOOTH function and the 2.4 GHz Wi-Fi function of your VAIO computer are enabled, interference may occur and cause slower communication speeds or other problems.
- To communicate via Wi-Fi while you are on the road, you may need to contract with a Wi-Fi connection service provider.
- If your VAIO computer is equipped with the IEEE 802.11a/b/g/n standard, outdoor use of the 5 GHz Wi-Fi function is prohibited by law.
- The communication speed and range may vary depending on the following conditions:
  - Distance between devices
  - Existence of obstacles between devices
  - Device configuration
  - Radio conditions
  - Ambient environment (including wall material, etc.)
  - Apps in use

  Communications may be cut off depending on radio conditions.
- The data transfer rate specified in the specification is the theoretical maximum, and may not reflect actual data transfer rate.
- Actual communication speed may not be as fast as the one displayed on your VAIO computer.
- The 2.4 GHz and 5 GHz Wi-Fi frequency bands are not communicable with one another.
- The data transfer rate of IEEE 802.11g and IEEE 802.11n (2.4 GHz) may be affected by interference when used with an IEEE 802.11b product. Also, IEEE 802.11g and IEEE 802.11n automatically lower the transfer rate to maintain compatibility with an IEEE 802.11b product. The transfer rate may be regained by changing the channel settings of your access point.
- To stop the Wi-Fi function abruptly, turn off your VAIO computer and the wireless devices (if any).
- The WLAN standard includes the encryption methods: Wired Equivalent Privacy (WEP), which is a security protocol, Wi-Fi Protected Access 2 (WPA2), and Wi-Fi Protected Access (WPA). Proposed jointly by the IEEE and Wi-Fi Alliance, both WPA2 and WPA are specifications of standards based on interoperable security enhancements that increase the level of data protection and access control for existing Wi-Fi networks. WPA is designed to be forward compatible with the IEEE 802.11i specification. It utilizes the enhanced data encryption Temporal Key Integrity Protocol (TKIP) in addition to user authentication using 802.1X and Extensible Authentication Protocol (EAP). Data encryption protects the vulnerable wireless link between clients and access points. Besides that, there are other typical LAN security mechanisms to ensure privacy, such as: password protection, end-to-end encryption, virtual private networks, and authentication. WPA2, the second generation of WPA, provides stronger data protection and network access control and is also designed to secure all versions of 802.11 devices, including 802.11b, 802.11a, 802.11g, 802.11n, and 802.11ac (draft) standards, multi-band and multi-mode. In addition, based on the ratified IEEE 802.11i standard, WPA2 provides government grade security by implementing the National Institute of Standards and Technology (NIST) FIPS 140-2 compliant AES encryption algorithm and 802.1X-based authentication. WPA2 is backward compatible with WPA.

Stopping Wi-Fi(R) (Wireless LAN) Communications

You can stop Wi-Fi communications by following these steps.

1. Open the charms and select the **Settings** charm. (See Opening the Charms to open the charms.)
2. Select (the network icon).
3. Select the desired access point and **Disconnect**.

Note

- Do not disable the Wi-Fi function while accessing remote documents, files, or resources, as it may result in data loss.

About the Wi-Fi(R) (Wireless LAN) Standards

Wi-Fi allows your VAIO computer to connect to a network through a wireless connection.
Wi-Fi uses the following IEEE 802.11a/b/g/n/ac (draft) standard, which specifies the type of technology used. Refer to the specifications to find out about the configuration of the computer.

IEEE 802.11a (Frequency band:5 GHz)

Exclusive to models compliant with the IEEE 802.11a/b/g/n/ac (draft) standard.

IEEE 802.11b/g (Frequency band:2.4 GHz)

The IEEE 802.11g standard provides higher-speed communications than the IEEE 802.11b.

IEEE 802.11n (Frequency band:2.4 GHz/5 GHz)

For models compliant with the IEEE 802.11b/g/n standard, only 2.4 GHz band can be used.

IEEE 802.11ac (draft) (Frequency band:5 GHz)

Exclusive to models compliant with the IEEE 802.11a/b/g/n/ac (draft) standard.

Starting Wi-Fi(R) (Wireless LAN) Communications

You can establish Wi-Fi communications between your VAIO computer and an access point (not supplied).
Before using Wi-Fi, make sure a Wi-Fi access point is on and operating.

1. Connect an access point to your VAIO computer.
   Refer to **Windows Help and Support** (Opening Windows Help and Support) and the manual that came with the access point for more information.
2. Open the charms and select the **Settings** charm. (See Opening the Charms to open the charms.)
3. Select **Change PC settings** in the lower right corner.
4. Select **Wireless** in the left pane of the **PC settings** screen.
5. Change **Airplane mode** to **Off** and the **Wi-Fi** setting under **Wireless devices** to **On**.
6. Open the charms and select the **Settings** charm. (See Opening the Charms to open the charms.)
7. Select (the network icon).
8. Select the desired access point and **Connect**.
   After the connection is established, **Connected** appears in the selected wireless access point field.
   If a security key entry window appears, enter the security key as required and select **OK**. See About a Security Key for Wi-Fi(R) (Wireless LAN) for more information.
   Note that security keys are case-sensitive.

To check Wi-Fi connection status

Open the desktop and move the mouse pointer over (the Network icon) in the desktop notification area to check the Wi-Fi connection status, such as the access point currently connected to your VAIO computer.
To open the desktop, see Opening the Desktop.

Note

- On IEEE 802.11a/b/g/n/ac (draft) equipped models, when only the 2.4 GHz Wi-Fi function is enabled, your VAIO computer cannot connect to a 5 GHz Wi-Fi access point. Also, when only the 5 GHz Wi-Fi function is enabled, the computer cannot connect to a 2.4 GHz Wi-Fi access point.
  On IEEE 802.11b/g/n equipped models, when the 2.4 GHz Wi-Fi function is disabled, the computer cannot connect to an access point. Also, the computer cannot connect to a 5 GHz Wi-Fi access point.
- It may take some time to find and connect to a Wi-Fi access point before starting communications via Wi-Fi.

Hint

- Refer to **Windows Help and Support** (Opening Windows Help and Support) for more information on **Airplane mode**.
- Once you connect your VAIO computer to the access point by entering the security key, the access point will be registered in the computer. You do not have to enter the security key for subsequent connections.

About a Security Key for Wi-Fi(R) (Wireless LAN)

A security key is a security protocol for Wi-Fi that encrypts data transmitted on Wi-Fi. It is also referred to as an encryption

key or a WEP (Wired Equivalent Privacy) key.
The security key allows wireless devices that have the same key, such as a Wi-Fi access point and a computer, to communicate with each other on Wi-Fi.
The security key is assigned to each access point by default. (Make sure the default security key has been changed to protect data from unauthorized use.) If you cannot find the default security key, refer to the manual that came with your access point.

If you enter a wrong security key, follow these steps to re-enter the security key.

1. Open the charms and select the **Settings** charm. (See Opening the Charms to open the charms.)
2. Select (the network icon).
3. Right-click the desired network and select **View connection properties**.
4. Select the **Security** tab.
5. Enter a security key in the **Network security key** field and select **OK**.

Installing Apps from Windows Store

You can install apps from **Windows Store**.
You will need a Microsoft account to use certain apps or services, including **Windows Store**.
On how to create and what you can do with the Microsoft account, refer to **Windows Help and Support** (Opening Windows Help and Support).

1. Connect to the Internet.
   See Connecting to the Internet with a Wired Connection (LAN port equipped models) for more information on how to connect to the Internet.
2. Open the **Start** screen and select the **Store** tile. (See About the Start Screen and Menu to open the **Start** screen.)

3. Find an app to install.
4. Follow the on-screen instructions to install the app.

Installing Apps from Windows Store

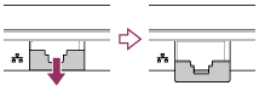
You can install apps from **Windows Store**.
You will need a Microsoft account to use certain apps or services, including **Windows Store**.
On how to create and what you can do with the Microsoft account, refer to **Windows Help and Support** (Opening Windows Help and Support).

1. Connect to the Internet.
   See Connecting to the Internet with a Wired Connection (LAN port equipped models) for more information on how to connect to the Internet.
2. Open the **Start** screen and select the **Store** tile. (See About the Start Screen and Menu to open the **Start** screen.)

3. Find an app to install.
4. Follow the on-screen instructions to install the app.

Using the LAN Port (LAN port equipped models-not for SVF13N)

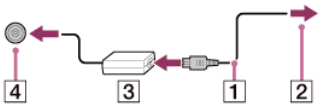
Before connecting a LAN cable to the LAN port, pull the port cover down as illustrated below.



Connecting a Power Source

Connect your VAIO computer to an AC power source.
Carefully read the precautions in Notes on Using the Power Source before connection.

1. Plug one end of the power cord (1) into the AC adapter (3).
2. Plug the other end of the power cord into an AC outlet (2).
3. Plug the cable from the AC adapter (3) into the DC IN port (4) on your VAIO computer.



Note

- Do not plug more than one device into the same AC outlet.
- The shape of the AC adapter varies depending on the model you purchased.
- Make sure that the power plug is firmly plugged into your VAIO computer.

Hint

- You can purchase a power strip with a surge protector to help prevent damage to your VAIO computer caused by sudden power surges (in an electrical storm, for example).

Changing the Resolution (Size) of the Screen Image on an HDMI-Connected Device

You can change the screen resolution or size of your VAIO computer's screen image displayed on an external display, such as a TV, connected to the computer with an HDMI cable (not supplied).

1. Connect your VAIO computer to an HDMI equipped TV with an HDMI cable. (See Connecting a TV with an HDMI Input Port for more information.)
2. Turn on the TV.
3. Start **VAIO Control Center** and select **Image Quality**. (See Searching/Starting Apps, Settings, or Files to start **VAIO Control Center**.)
4. Select **Details** in **External Display Resolution**.
5. On the **Select Resolution** tab, select the desired resolution.
   After a few seconds, the selected resolution is applied.
6. If the computer image does not fit the displayable region of the TV, select the **Adjust Resolution** tab to adjust the display size.

Note

- Some resolution options may not be available, depending on the model or the HDMI-connected device.
- The function to adjust the screen resolution may be disabled depending on the selected resolution.

Notes on the LCD screen

Read the following precautions for correct use of the LCD screen.

- The LCD screen is manufactured using high-precision technology. You may, however, see tiny black points and/or bright points (red, blue, or green) that continuously appear on the LCD screen. This is a normal result of the manufacturing process and does not indicate a malfunction.
- Do not scratch the surface of the LCD screen or exert pressure on it. This could cause damage.
- Do not exert pressure on the LCD screen lid with the lid closed as it may scratch the LCD screen or soil it.

- The LCD screen may become warm during operation. This is normal and does not indicate a malfunction.
- Due to the mechanical design of your VAIO computer's LCD screen/touch screen, the screen surface may become warm while you are using the computer for an extended period of time. This is normal and does not indicate a malfunction. (Touch screen equipped models)
- The LCD screen/touch screen is made of reinforced glass to implement high durability, however, treat the screen with care as it is not 100% unbreakable. In case the screen breaks into small pieces, be careful not to cut yourself on the pieces of broken glass. (Touch screen equipped models)
- Do not leave the LCD screen facing the sun. This could damage the LCD screen. Be sure to block direct sunlight when using your VAIO computer near a window.
- Do not exert pressure on the LCD screen or its edges. The LCD screen may be sensitive to pressure or added stress, and exerting pressure may damage the screen or cause it to malfunction.
- Using your VAIO computer in low temperature conditions may produce a residual image on the LCD screen. This does not indicate a malfunction. When the computer returns to normal temperature, the screen returns to normal.
- A residual image may appear on the LCD screen if the same image is displayed for an extended period of time. The residual image disappears after a while. You can use a screen saver to prevent residual images.

Using the Multiple Monitors Function

The Multiple Monitors function allows you to distribute portions of your desktop across separate displays.
For example, if you have an external display connected to the monitor port, the computer screen and the external display can function as a single desktop.

1. Right-click on the desktop and select **Screen resolution**. (See Opening the Desktop to open the desktop.)
2. Select **Extend these displays** from the drop-down list next to **Multiple Displays** and **OK**.
   The setting options vary depending on the number of the connected external displays.

Note

- Your external display may not support the Multiple Monitors function.
- Certain apps may not be compatible with the Multiple Monitors settings.
- Do not change the display settings while using video/image apps or playing DVDs, as it may cause unsuccessful playback/display or unstable system operations.
  Change the display settings after you exit the video/image app.

Hint

- You can set the screen resolution for each display used for the Multiple Monitors function.

Selecting Display Modes

You can switch the display output between the computer screen and an external display connected to your VAIO computer.

1. Turn on an external display.
2. Press the **Fn**+**F7** keys several times to select your desired display output, and then press the **Enter** key.

Note

- If you disconnect a display cable (not supplied) while only an external display is selected as the display output, it is hard to operate your VAIO computer because the computer screen is blank.
  To switch the display output to the computer screen, press the **Fn**+**F7** keys twice, and then press the **Enter** key.
- The display switch may become unavailable or your VAIO computer may become unstable during video playback. Exit the video playback app before switching the display output.
- The display switch may not be available depending on the type of external display or projector.

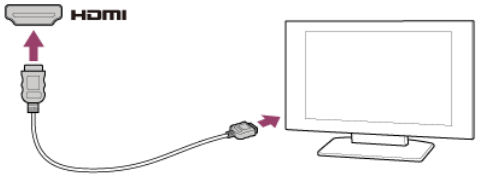
Connecting a TV with an HDMI Input Port

You can connect a TV with an HDMI input port to your VAIO computer with an HDMI cable (not supplied).
Refer to the manual that came with your TV for more information on installation and use.

1. Plug the power cord of your TV into an AC outlet and turn it on.
2. Connect one end of an HDMI cable to the **HDMI** output port (Parts and Controls on the Sides) on your VAIO computer and

the other end to the TV.

3. Set the TV input to the external input.
   The screen image of your VAIO computer is displayed on the TV.



Note

- The shape of the **HDMI** output port varies depending on the model you purchased. Be sure to use an HDMI cable that is compatible with the **HDMI** output port on your VAIO computer.
- If a device driver other than the one provided by Sony is used, the image will not be displayed and audio will not be heard. Always use the device driver provided by Sony for updates.
- To hear sound from a device connected to the **HDMI** output port, you need to change the sound output device. For detailed instructions, see Changing the Sound Output Device.

Hint

- The **HDMI** output port on your VAIO computer is compliant with the High-bandwidth Digital Content Protection (HDCP) standard and capable of encrypting the transmission channel of digital video signals for the purpose of copyright protection, which enables you to view a wide variety of copyright protected and high-quality content.

Changing the Resolution (Size) of the Screen Image on an HDMI-Connected Device

You can change the screen resolution or size of your VAIO computer's screen image displayed on an external display, such as a TV, connected to the computer with an HDMI cable (not supplied).

1. Connect your VAIO computer to an HDMI equipped TV with an HDMI cable. (See Connecting a TV with an HDMI Input Port for more information.)
2. Turn on the TV.
3. Start **VAIO Control Center** and select **Image Quality**. (See Searching/Starting Apps, Settings, or Files to start **VAIO Control Center**.)
4. Select **Details** in **External Display Resolution**.
5. On the **Select Resolution** tab, select the desired resolution.
   After a few seconds, the selected resolution is applied.
6. If the computer image does not fit the displayable region of the TV, select the **Adjust Resolution** tab to adjust the display size.

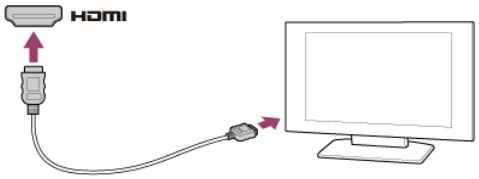
Note

- Some resolution options may not be available, depending on the model or the HDMI-connected device.
- The function to adjust the screen resolution may be disabled depending on the selected resolution.

Connecting a TV with an HDMI Input Port

You can connect a TV with an HDMI input port to your VAIO computer with an HDMI cable (not supplied).
Refer to the manual that came with your TV for more information on installation and use.

1. Plug the power cord of your TV into an AC outlet and turn it on.
2. Connect one end of an HDMI cable to the **HDMI** output port (Parts and Controls on the Sides) on your VAIO computer and the other end to the TV.
3. Set the TV input to the external input.
   The screen image of your VAIO computer is displayed on the TV.



Note

- The shape of the **HDMI** output port varies depending on the model you purchased. Be sure to use an HDMI cable that is compatible with the **HDMI** output port on your VAIO computer.
- If a device driver other than the one provided by Sony is used, the image will not be displayed and audio will not be heard. Always use the device driver provided by Sony for updates.
- To hear sound from a device connected to the **HDMI** output port, you need to change the sound output device. For detailed instructions, see Changing the Sound Output Device.

Hint

- The **HDMI** output port on your VAIO computer is compliant with the High-bandwidth Digital Content Protection (HDCP) standard and capable of encrypting the transmission channel of digital video signals for the purpose of copyright protection, which enables you to view a wide variety of copyright protected and high-quality content.

Connecting a High-Quality Digital Sound Output Device between Your VAIO Computer and a TV

You can connect a high-quality home theater receiver or other surround sound decoder devices between your VAIO computer and a TV using an HDMI connection.

1. Make sure the HDMI connection has been set up between the TV and the home theater receiver or surround sound decoder device.
2. Change the device for sound output to the HDMI output. (See Changing the Sound Output Device for more information.)
3. Turn on the TV and set its input to the HDMI input.
4. Turn on the home theater receiver or surround sound decoder device and set its input to the HDMI input.
5. Plug one end of an HDMI cable to the HDMI input port on the home theater receiver or surround sound decoder device and the other end to the **HDMI** output port on your VAIO computer.

Hint

- You can adjust the screen resolution of the connected TV with your VAIO computer. See Changing the Resolution (Size) of the Screen Image on an HDMI-Connected Device for more information.
- With the HDMI connection, the volume can be adjusted by the connected audio device only. Your VAIO computer has no control over the output volume of any connected devices.

Changing the Sound Output Device

If there is no sound coming from an external device connected to your VAIO computer, you need to change the device for sound output.

1. Open **Control Panel** and select **Hardware and Sound**. (See Opening Control Panel to open **Control Panel**.)
2. Select **Sound**.
3. Select the **Playback** tab.
4. Ensure there is a check mark next to the icon of the device you intend to output computer sound from.
   If there is no check mark next to the icon, select it and **Set Default**.
5. Select **OK**.

To change the sound rate and bit depth

The sound rate and bit depth of the digital audio output signal should be set according to your digital audio device.
Follow the above steps 1 to 3, and then select the HDMI device icon and **Properties**. On the **Advanced** tab, select the sample rate and bit depth (for example, 16 bit, 48000 Hz (DVD quality)) which the device supports, and then **OK**.

Notes on the LCD screen

Read the following precautions for correct use of the LCD screen.

- The LCD screen is manufactured using high-precision technology. You may, however, see tiny black points and/or bright points (red, blue, or green) that continuously appear on the LCD screen. This is a normal result of the manufacturing process and does not indicate a malfunction.
- Do not scratch the surface of the LCD screen or exert pressure on it. This could cause damage.
- Do not exert pressure on the LCD screen lid with the lid closed as it may scratch the LCD screen or soil it.
- The LCD screen may become warm during operation. This is normal and does not indicate a malfunction.
- Due to the mechanical design of your VAIO computer's LCD screen/touch screen, the screen surface may become warm while you are using the computer for an extended period of time. This is normal and does not indicate a malfunction. (Touch screen equipped models)
- The LCD screen/touch screen is made of reinforced glass to implement high durability, however, treat the screen with care as it is not 100% unbreakable. In case the screen breaks into small pieces, be careful not to cut yourself on the pieces of broken glass. (Touch screen equipped models)
- Do not leave the LCD screen facing the sun. This could damage the LCD screen. Be sure to block direct sunlight when using your VAIO computer near a window.
- Do not exert pressure on the LCD screen or its edges. The LCD screen may be sensitive to pressure or added stress, and exerting pressure may damage the screen or cause it to malfunction.
- Using your VAIO computer in low temperature conditions may produce a residual image on the LCD screen. This does not indicate a malfunction. When the computer returns to normal temperature, the screen returns to normal.
- A residual image may appear on the LCD screen if the same image is displayed for an extended period of time. The residual image disappears after a while. You can use a screen saver to prevent residual images.

Using the Multiple Monitors Function

The Multiple Monitors function allows you to distribute portions of your desktop across separate displays.
For example, if you have an external display connected to the monitor port, the computer screen and the external display can function as a single desktop.

1. Right-click on the desktop and select **Screen resolution**. (See Opening the Desktop to open the desktop.)
2. Select **Extend these displays** from the drop-down list next to **Multiple Displays** and **OK**.
   The setting options vary depending on the number of the connected external displays.

Note

- Your external display may not support the Multiple Monitors function.
- Certain apps may not be compatible with the Multiple Monitors settings.
- Do not change the display settings while using video/image apps or playing DVDs, as it may cause unsuccessful playback/display or unstable system operations.
  Change the display settings after you exit the video/image app.

Hint

- You can set the screen resolution for each display used for the Multiple Monitors function.

Selecting Display Modes

You can switch the display output between the computer screen and an external display connected to your VAIO computer.

1. Turn on an external display.
2. Press the **Fn**+**F7** keys several times to select your desired display output, and then press the **Enter** key.

Note

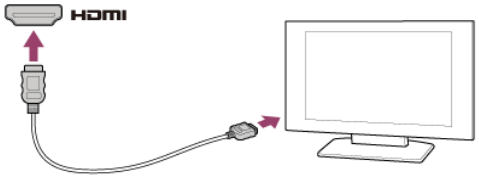
- If you disconnect a display cable (not supplied) while only an external display is selected as the display output, it is hard to operate your VAIO computer because the computer screen is blank.
  To switch the display output to the computer screen, press the **Fn**+**F7** keys twice, and then press the **Enter** key.
- The display switch may become unavailable or your VAIO computer may become unstable during video playback. Exit the video playback app before switching the display output.

- The display switch may not be available depending on the type of external display or projector.

Connecting a TV with an HDMI Input Port

You can connect a TV with an HDMI input port to your VAIO computer with an HDMI cable (not supplied).
Refer to the manual that came with your TV for more information on installation and use.

1. Plug the power cord of your TV into an AC outlet and turn it on.
2. Connect one end of an HDMI cable to the **HDMI** output port (Parts and Controls on the Sides) on your VAIO computer and the other end to the TV.
3. Set the TV input to the external input.
   The screen image of your VAIO computer is displayed on the TV.



Note

- The shape of the **HDMI** output port varies depending on the model you purchased. Be sure to use an HDMI cable that is compatible with the **HDMI** output port on your VAIO computer.
- If a device driver other than the one provided by Sony is used, the image will not be displayed and audio will not be heard. Always use the device driver provided by Sony for updates.
- To hear sound from a device connected to the **HDMI** output port, you need to change the sound output device. For detailed instructions, see Changing the Sound Output Device.

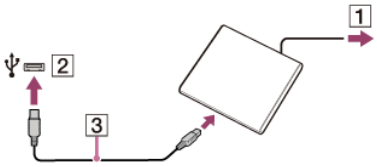
Hint

- The **HDMI** output port on your VAIO computer is compliant with the High-bandwidth Digital Content Protection (HDCP) standard and capable of encrypting the transmission channel of digital video signals for the purpose of copyright protection, which enables you to view a wide variety of copyright protected and high-quality content.

Connecting an External Drive

Connect an external disc drive or hard disk drive to a USB port on your VAIO computer.

1. Plug the power cord of your external drive into an AC outlet (1).
2. Plug one end of a USB cable (3) (not supplied) into the USB port (2), and the other end to the external drive.



See Connecting a USB Device for information on the USB connection.

Note

- Be sure to connect an external drive to a power source with an AC adapter (if supplied).

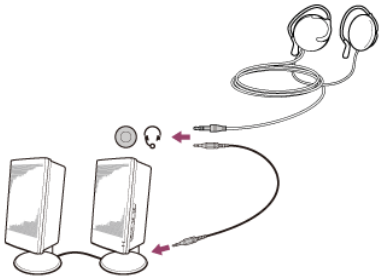
Hint

- You may need to install a driver depending on the external drive you use.
  In addition, procedures to connect and use an external drive vary depending on the drive you use. Refer to the manual that came with your external drive for more information.

Connecting External Speakers/Headphones/Headset

You can connect external sound output devices (such as speakers, headphones, or a headset) to your VAIO computer.
Use a Sony smartphone compatible headset (not supplied) to make an Internet call and voice chat.

1. Connect external speakers, headphones, or a headset to the headset compatible headphone jack (Parts and Controls on the Sides).



Note

- Turn down the volume of the speakers before turning them on.
- Your headset may not work correctly with your VAIO computer.
- An external microphone does not work if you connect it to the headset compatible headphone jack .
- The remote of your headset does not work with your VAIO computer.

Hint

- Refer to the manual that came with your speakers, headphones, or headset.

Connecting a High-Quality Digital Sound Output Device between Your VAIO Computer and a TV

You can connect a high-quality home theater receiver or other surround sound decoder devices between your VAIO computer and a TV using an HDMI connection.

1. Make sure the HDMI connection has been set up between the TV and the home theater receiver or surround sound decoder device.
2. Change the device for sound output to the HDMI output. (See Changing the Sound Output Device for more information.)
3. Turn on the TV and set its input to the HDMI input.
4. Turn on the home theater receiver or surround sound decoder device and set its input to the HDMI input.
5. Plug one end of an HDMI cable to the HDMI input port on the home theater receiver or surround sound decoder device and the other end to the **HDMI** output port on your VAIO computer.

Hint

- You can adjust the screen resolution of the connected TV with your VAIO computer. See Changing the Resolution (Size) of the Screen Image on an HDMI-Connected Device for more information.
- With the HDMI connection, the volume can be adjusted by the connected audio device only. Your VAIO computer has no control over the output volume of any connected devices.

Changing the Sound Output Device

If there is no sound coming from an external device connected to your VAIO computer, you need to change the device for sound output.

1. Open **Control Panel** and select **Hardware and Sound**. (See Opening Control Panel to open **Control Panel**.)
2. Select **Sound**.
3. Select the **Playback** tab.
4. Ensure there is a check mark next to the icon of the device you intend to output computer sound from.
   If there is no check mark next to the icon, select it and **Set Default**.
5. Select **OK**.

To change the sound rate and bit depth

The sound rate and bit depth of the digital audio output signal should be set according to your digital audio device.

Follow the above steps 1 to 3, and then select the HDMI device icon and **Properties**. On the **Advanced** tab, select the sample rate and bit depth (for example, 16 bit, 48000 Hz (DVD quality)) which the device supports, and then **OK**.

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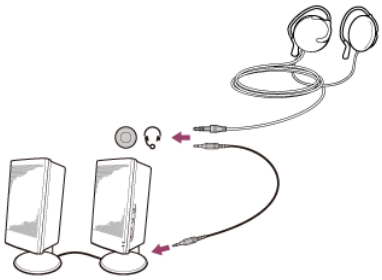
You can connect external sound output devices (such as speakers, headphones, or a headset) to your VAIO computer.
Use a Sony smartphone compatible headset (not supplied) to make an Internet call and voice chat.

1. Connect external speakers, headphones, or a headset to the headset compatible headphone jack (Parts and Controls on the Sides).



Note

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- Your headset may not work correctly with your VAIO computer.
- An external microphone does not work if you connect it to the headset compatible headphone jack .
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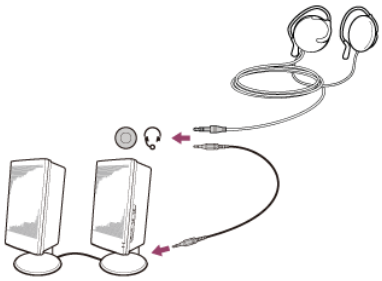

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Connecting a High-Quality Digital Sound Output Device between Your VAIO Computer and a TV

You can connect a high-quality home theater receiver or other surround sound decoder devices between your VAIO computer and a TV using an HDMI connection.

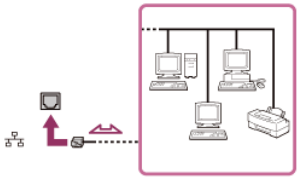
1. Make sure the HDMI connection has been set up between the TV and the home theater receiver or surround sound decoder device.
2. Change the device for sound output to the HDMI output. (See Changing the Sound Output Device for more information.)
3. Turn on the TV and set its input to the HDMI input.
4. Turn on the home theater receiver or surround sound decoder device and set its input to the HDMI input.
5. Plug one end of an HDMI cable to the HDMI input port on the home theater receiver or surround sound decoder device and the other end to the **HDMI** output port on your VAIO computer.

Hint

- You can adjust the screen resolution of the connected TV with your VAIO computer. See Changing the Resolution (Size) of the Screen Image on an HDMI-Connected Device for more information.
- With the HDMI connection, the volume can be adjusted by the connected audio device only. Your VAIO computer has no control over the output volume of any connected devices.

Connecting to the Internet with a Wired Connection (LAN port equipped models)

Before using the Internet, you need to sign up with an Internet Service Provider (ISP) and set up devices required for connecting your VAIO computer to the Internet.
Connect one end of a LAN cable (not supplied) to the LAN port on your VAIO computer and the other end to your network.



Note

- For detailed information on devices required for Internet access and how to connect your VAIO computer to the Internet, ask your ISP.
- When connecting your VAIO computer to the Internet, be sure to use a cable with “Network” or “Ethernet” writing on it.
- Do not plug a telephone cable into the LAN port on your VAIO computer.
  If the LAN port is connected to the following networks or telephone lines, high electric current to the port may cause damage, overheating, or fire.
  - Any network, except 1000BASE-T/100BASE-TX/10BASE-T type networks
  - Public telephone subscriber line
  - Private branch exchange (PBX)
  - Home (intercom speakerphone) or business-use telephone lines (multi-line business telephone)

Hint

- To connect your VAIO computer to the Internet using the Wi-Fi(R) (Wireless LAN) function, you need to set up the Wi-Fi settings. See Starting Wi-Fi(R) (Wireless LAN) Communications for more information.

About the Internet Connection Services

The following types of Internet connection services are available.
You can select from among the services according to your preference, for example, communication speed or a usage fee. For detailed information on a variety of connection services, contact Internet Service Providers (ISPs).

- Fiber to the Home (FTTH)
- Cable modem
- Digital Subscriber Line (DSL)
- Satellite
- Dial-up

About the Network (LAN) - not for SVF13N models

The network (LAN) enables you to connect your VAIO computer to the Internet and transfer data between the computer and other devices.

You can connect your VAIO computer to 1000BASE-T/100BASE-TX/10BASE-T type networks with a LAN cable (not supplied). Connect one end of a LAN cable to the LAN port on the computer and the other end to your network. (LAN port equipped models)
You can also connect your VAIO computer to a network using the Wi-Fi(R) (Wireless LAN) function.
For information on peripheral devices required for LAN access, ask your Internet Service Provider (ISP) or refer to the manual that came with your modem.
For information on how to connect your VAIO computer to the network, refer to your ISP's instructions or the manual that came with the modem and other peripheral devices. If you require information on the network settings at your workplace, ask the network administrator.

Disabling the Wi-Fi(R) (Wireless LAN) Function

You can disable the Wi-Fi function by following these steps.

1. Open the charms and select the **Settings** charm. (See Opening the Charms to open the charms.)
2. Select **Change PC settings** in the lower right corner.
3. Select **Wireless** in the left pane of the **PC settings** screen.
4. Change the **Wi-Fi** setting under **Wireless devices** to **Off**.

Hint

- To enable the Wi-Fi function, turn off **Airplane mode** and change the **Wi-Fi** setting under **Wireless devices** to **On**.
- To disable all wireless functions, turn on **Airplane mode**.
- The wireless function(s) whose setting is on will be enabled when you turn off **Airplane mode**.
- Refer to **Windows Help and Support** (Opening Windows Help and Support) for more information on **Airplane mode**.

Notes on Using the Wi-Fi(R) (Wireless LAN) Function

Before using the Wi-Fi function, read the following precautions for correct use.

- In some countries or regions, using the Wi-Fi products may be restricted by the local regulations.
- Wi-Fi devices work on the 2.4 GHz band, which is used by a variety of devices. They use the technology to minimize radio interference from other devices that use the same band; however, radio interference may still slow communication speeds, reduce communication range, or cause communication failure.
- If both the BLUETOOTH function and the 2.4 GHz Wi-Fi function of your VAIO computer are enabled, interference may occur and cause slower communication speeds or other problems.
- To communicate via Wi-Fi while you are on the road, you may need to contract with a Wi-Fi connection service provider.
- If your VAIO computer is equipped with the IEEE 802.11a/b/g/n standard, outdoor use of the 5 GHz Wi-Fi function is prohibited by law.
- The communication speed and range may vary depending on the following conditions:
  - Distance between devices
  - Existence of obstacles between devices
  - Device configuration
  - Radio conditions
  - Ambient environment (including wall material, etc.)
  - Apps in use
    Communications may be cut off depending on radio conditions.
- The data transfer rate specified in the specification is the theoretical maximum, and may not reflect actual data transfer rate.
- Actual communication speed may not be as fast as the one displayed on your VAIO computer.
- The 2.4 GHz and 5 GHz Wi-Fi frequency bands are not communicable with one another.
- The data transfer rate of IEEE 802.11g and IEEE 802.11n (2.4 GHz) may be affected by interference when used with an IEEE 802.11b product. Also, IEEE 802.11g and IEEE 802.11n automatically lower the transfer rate to maintain compatibility with an IEEE 802.11b product. The transfer rate may be regained by changing the channel settings of your access point.
- To stop the Wi-Fi function abruptly, turn off your VAIO computer and the wireless devices (if any).
- The WLAN standard includes the encryption methods: Wired Equivalent Privacy (WEP), which is a security protocol, Wi-Fi Protected Access 2 (WPA2), and Wi-Fi Protected Access (WPA). Proposed jointly by the IEEE and Wi-Fi Alliance, both WPA2 and WPA are specifications of standards based on interoperable security enhancements that increase the level of data protection and access control for existing Wi-Fi networks. WPA is designed to be forward compatible with the IEEE 802.11i specification. It utilizes the enhanced data encryption Temporal Key Integrity Protocol (TKIP) in addition to user authentication using 802.1X and Extensible Authentication Protocol (EAP). Data encryption protects the vulnerable wireless

link between clients and access points. Besides that, there are other typical LAN security mechanisms to ensure privacy, such as: password protection, end-to-end encryption, virtual private networks, and authentication. WPA2, the second generation of WPA, provides stronger data protection and network access control and is also designed to secure all versions of 802.11 devices, including 802.11b, 802.11a, 802.11g, 802.11n, and 802.11ac (draft) standards, multi-band and multi-mode. In addition, based on the ratified IEEE 802.11i standard, WPA2 provides government grade security by implementing the National Institute of Standards and Technology (NIST) FIPS 140-2 compliant AES encryption algorithm and 802.1X-based authentication. WPA2 is backward compatible with WPA.

Stopping Wi-Fi(R) (Wireless LAN) Communications

You can stop Wi-Fi communications by following these steps.

1. Open the charms and select the **Settings** charm. (See Opening the Charms to open the charms.)
2. Select (the network icon).
3. Select the desired access point and **Disconnect**.

Note

- Do not disable the Wi-Fi function while accessing remote documents, files, or resources, as it may result in data loss.

About the Wi-Fi(R) (Wireless LAN) Standards

Wi-Fi allows your VAIO computer to connect to a network through a wireless connection.
Wi-Fi uses the following IEEE 802.11a/b/g/n/ac (draft) standard, which specifies the type of technology used. Refer to the specifications to find out about the configuration of the computer.

IEEE 802.11a (Frequency band:5 GHz)

Exclusive to models compliant with the IEEE 802.11a/b/g/n/ac (draft) standard.

IEEE 802.11b/g (Frequency band:2.4 GHz)

The IEEE 802.11g standard provides higher-speed communications than the IEEE 802.11b.

IEEE 802.11n (Frequency band:2.4 GHz/5 GHz)

For models compliant with the IEEE 802.11b/g/n standard, only 2.4 GHz band can be used.

IEEE 802.11ac (draft) (Frequency band:5 GHz)

Exclusive to models compliant with the IEEE 802.11a/b/g/n/ac (draft) standard.

Starting Wi-Fi(R) (Wireless LAN) Communications

You can establish Wi-Fi communications between your VAIO computer and an access point (not supplied).
Before using Wi-Fi, make sure a Wi-Fi access point is on and operating.

1. Connect an access point to your VAIO computer.
   Refer to **Windows Help and Support** (Opening Windows Help and Support) and the manual that came with the access point for more information.
2. Open the charms and select the **Settings** charm. (See Opening the Charms to open the charms.)
3. Select **Change PC settings** in the lower right corner.
4. Select **Wireless** in the left pane of the **PC settings** screen.
5. Change **Airplane mode** to **Off** and the **Wi-Fi** setting under **Wireless devices** to **On**.
6. Open the charms and select the **Settings** charm. (See Opening the Charms to open the charms.)
7. Select (the network icon).
8. Select the desired access point and **Connect**.
   After the connection is established, **Connected** appears in the selected wireless access point field.
   If a security key entry window appears, enter the security key as required and select **OK**. See About a Security Key for Wi-Fi(R) (Wireless LAN) for more information.
   Note that security keys are case-sensitive.

To check Wi-Fi connection status

Open the desktop and move the mouse pointer over (the Network icon) in the desktop notification area to check the Wi-Fi connection status, such as the access point currently connected to your VAIO computer.
To open the desktop, see Opening the Desktop.

Note

- On IEEE 802.11a/b/g/n/ac (draft) equipped models, when only the 2.4 GHz Wi-Fi function is enabled, your VAIO computer cannot connect to a 5 GHz Wi-Fi access point. Also, when only the 5 GHz Wi-Fi function is enabled, the computer cannot connect to a 2.4 GHz Wi-Fi access point.
  On IEEE 802.11b/g/n equipped models, when the 2.4 GHz Wi-Fi function is disabled, the computer cannot connect to an access point. Also, the computer cannot connect to a 5 GHz Wi-Fi access point.
- It may take some time to find and connect to a Wi-Fi access point before starting communications via Wi-Fi.

Hint

- Refer to **Windows Help and Support** (Opening Windows Help and Support) for more information on **Airplane mode**.
- Once you connect your VAIO computer to the access point by entering the security key, the access point will be registered in the computer. You do not have to enter the security key for subsequent connections.

About a Security Key for Wi-Fi(R) (Wireless LAN)

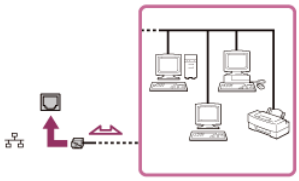
A security key is a security protocol for Wi-Fi that encrypts data transmitted on Wi-Fi. It is also referred to as an encryption key or a WEP (Wired Equivalent Privacy) key.
The security key allows wireless devices that have the same key, such as a Wi-Fi access point and a computer, to communicate with each other on Wi-Fi.
The security key is assigned to each access point by default. (Make sure the default security key has been changed to protect data from unauthorized use.) If you cannot find the default security key, refer to the manual that came with your access point.

If you enter a wrong security key, follow these steps to re-enter the security key.

1. Open the charms and select the **Settings** charm. (See Opening the Charms to open the charms.)
2. Select (the network icon).
3. Right-click the desired network and select **View connection properties**.
4. Select the **Security** tab.
5. Enter a security key in the **Network security key** field and select **OK**.

Connecting to the Internet with a Wired Connection (LAN port equipped models)

Before using the Internet, you need to sign up with an Internet Service Provider (ISP) and set up devices required for connecting your VAIO computer to the Internet.
Connect one end of a LAN cable (not supplied) to the LAN port on your VAIO computer and the other end to your network.



Note

- For detailed information on devices required for Internet access and how to connect your VAIO computer to the Internet, ask your ISP.
- When connecting your VAIO computer to the Internet, be sure to use a cable with “Network” or “Ethernet” writing on it.
- Do not plug a telephone cable into the LAN port on your VAIO computer.
  If the LAN port is connected to the following networks or telephone lines, high electric current to the port may cause damage, overheating, or fire.
  - Any network, except 1000BASE-T/100BASE-TX/10BASE-T type networks
  - Public telephone subscriber line
  - Private branch exchange (PBX)
  - Home (intercom speakerphone) or business-use telephone lines (multi-line business telephone)

Hint

- To connect your VAIO computer to the Internet using the Wi-Fi(R) (Wireless LAN) function, you need to set up the Wi-Fi settings. See Starting Wi-Fi(R) (Wireless LAN) Communications for more information.

About the Internet Connection Services

The following types of Internet connection services are available.
You can select from among the services according to your preference, for example, communication speed or a usage fee. For detailed information on a variety of connection services, contact Internet Service Providers (ISPs).

- Fiber to the Home (FTTH)
- Cable modem
- Digital Subscriber Line (DSL)
- Satellite
- Dial-up

About the Network (LAN) - (not for SVF13N models)

The network (LAN) enables you to connect your VAIO computer to the Internet and transfer data between the computer and other devices.
You can connect your VAIO computer to 1000BASE-T/100BASE-TX/10BASE-T type networks with a LAN cable (not supplied). Connect one end of a LAN cable to the LAN port on the computer and the other end to your network. (LAN port equipped models)
You can also connect your VAIO computer to a network using the Wi-Fi(R) (Wireless LAN) function.
For information on peripheral devices required for LAN access, ask your Internet Service Provider (ISP) or refer to the manual that came with your modem.
For information on how to connect your VAIO computer to the network, refer to your ISP's instructions or the manual that came with the modem and other peripheral devices. If you require information on the network settings at your workplace, ask the network administrator.

About the Wi-Fi(R) (Wireless LAN) Standards

Wi-Fi allows your VAIO computer to connect to a network through a wireless connection.
Wi-Fi uses the following IEEE 802.11a/b/g/n/ac (draft) standard, which specifies the type of technology used. Refer to the specifications to find out about the configuration of the computer.

IEEE 802.11a (Frequency band:5 GHz)

Exclusive to models compliant with the IEEE 802.11a/b/g/n/ac (draft) standard.

IEEE 802.11b/g (Frequency band:2.4 GHz)

The IEEE 802.11g standard provides higher-speed communications than the IEEE 802.11b.

IEEE 802.11n (Frequency band:2.4 GHz/5 GHz)

For models compliant with the IEEE 802.11b/g/n standard, only 2.4 GHz band can be used.

IEEE 802.11ac (draft) (Frequency band:5 GHz)

Exclusive to models compliant with the IEEE 802.11a/b/g/n/ac (draft) standard.

About a Security Key for Wi-Fi(R) (Wireless LAN)

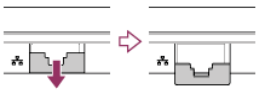
A security key is a security protocol for Wi-Fi that encrypts data transmitted on Wi-Fi. It is also referred to as an encryption key or a WEP (Wired Equivalent Privacy) key.
The security key allows wireless devices that have the same key, such as a Wi-Fi access point and a computer, to communicate with each other on Wi-Fi.
The security key is assigned to each access point by default. (Make sure the default security key has been changed to protect data from unauthorized use.) If you cannot find the default security key, refer to the manual that came with your access point.

If you enter a wrong security key, follow these steps to re-enter the security key.

1. Open the charms and select the **Settings** charm. (See Opening the Charms to open the charms.)
2. Select (the network icon).
3. Right-click the desired network and select **View connection properties**.
4. Select the **Security** tab.
5. Enter a security key in the **Network security key** field and select **OK**.

Using the LAN Port (LAN port equipped models)

Before connecting a LAN cable to the LAN port, pull the port cover down as illustrated below.



About the Internet Connection Services

The following types of Internet connection services are available.
You can select from among the services according to your preference, for example, communication speed or a usage fee. For detailed information on a variety of connection services, contact Internet Service Providers (ISPs).

- Fiber to the Home (FTTH)
- Cable modem
- Digital Subscriber Line (DSL)
- Satellite
- Dial-up

Disabling the Wi-Fi(R) (Wireless LAN) Function

You can disable the Wi-Fi function by following these steps.

1. Open the charms and select the **Settings** charm. (See Opening the Charms to open the charms.)
2. Select **Change PC settings** in the lower right corner.
3. Select **Wireless** in the left pane of the **PC settings** screen.
4. Change the **Wi-Fi** setting under **Wireless devices** to **Off**.

Hint

- To enable the Wi-Fi function, turn off **Airplane mode** and change the **Wi-Fi** setting under **Wireless devices** to **On**.
- To disable all wireless functions, turn on **Airplane mode**.
- The wireless function(s) whose setting is on will be enabled when you turn off **Airplane mode**.
- Refer to **Windows Help and Support** (Opening Windows Help and Support) for more information on **Airplane mode**.

Notes on Using the Wi-Fi(R) (Wireless LAN) Function

Before using the Wi-Fi function, read the following precautions for correct use.

- In some countries or regions, using the Wi-Fi products may be restricted by the local regulations.
- Wi-Fi devices work on the 2.4 GHz band, which is used by a variety of devices. They use the technology to minimize radio interference from other devices that use the same band; however, radio interference may still slow communication speeds, reduce communication range, or cause communication failure.
- If both the BLUETOOTH function and the 2.4 GHz Wi-Fi function of your VAIO computer are enabled, interference may occur and cause slower communication speeds or other problems.
- To communicate via Wi-Fi while you are on the road, you may need to contract with a Wi-Fi connection service provider.
- If your VAIO computer is equipped with the IEEE 802.11a/b/g/n standard, outdoor use of the 5 GHz Wi-Fi function is prohibited by law.
- The communication speed and range may vary depending on the following conditions:
  - Distance between devices
  - Existence of obstacles between devices
  - Device configuration
  - Radio conditions
  - Ambient environment (including wall material, etc.)
  - Apps in use
    Communications may be cut off depending on radio conditions.
- The data transfer rate specified in the specification is the theoretical maximum, and may not reflect actual data transfer rate.
- Actual communication speed may not be as fast as the one displayed on your VAIO computer.
- The 2.4 GHz and 5 GHz Wi-Fi frequency bands are not communicable with one another.

The data transfer rate of IEEE 802.11g and IEEE 802.11n (2.4 GHz) may be affected by interference when used with an IEEE 802.11b product. Also, IEEE 802.11g and IEEE 802.11n automatically lower the transfer rate to maintain compatibility with an IEEE 802.11b product. The transfer rate may be regained by changing the channel settings of your access point.

- To stop the Wi-Fi function abruptly, turn off your VAIO computer and the wireless devices (if any).
- The WLAN standard includes the encryption methods: Wired Equivalent Privacy (WEP), which is a security protocol, Wi-Fi Protected Access 2 (WPA2), and Wi-Fi Protected Access (WPA). Proposed jointly by the IEEE and Wi-Fi Alliance, both WPA2 and WPA are specifications of standards based on interoperable security enhancements that increase the level of data protection and access control for existing Wi-Fi networks. WPA is designed to be forward compatible with the IEEE 802.11i specification. It utilizes the enhanced data encryption Temporal Key Integrity Protocol (TKIP) in addition to user authentication using 802.1X and Extensible Authentication Protocol (EAP). Data encryption protects the vulnerable wireless link between clients and access points. Besides that, there are other typical LAN security mechanisms to ensure privacy, such as: password protection, end-to-end encryption, virtual private networks, and authentication. WPA2, the second generation of WPA, provides stronger data protection and network access control and is also designed to secure all versions of 802.11 devices, including 802.11b, 802.11a, 802.11g, 802.11n, and 802.11ac (draft) standards, multi-band and multi-mode. In addition, based on the ratified IEEE 802.11i standard, WPA2 provides government grade security by implementing the National Institute of Standards and Technology (NIST) FIPS 140-2 compliant AES encryption algorithm and 802.1X-based authentication. WPA2 is backward compatible with WPA.

Stopping Wi-Fi(R) (Wireless LAN) Communications

You can stop Wi-Fi communications by following these steps.

1. Open the charms and select the **Settings** charm. (See Opening the Charms to open the charms.)
2. Select (the network icon).
3. Select the desired access point and **Disconnect**.

Note

- Do not disable the Wi-Fi function while accessing remote documents, files, or resources, as it may result in data loss.

About the Wi-Fi(R) (Wireless LAN) Standards

Wi-Fi allows your VAIO computer to connect to a network through a wireless connection.
Wi-Fi uses the following IEEE 802.11a/b/g/n/ac (draft) standard, which specifies the type of technology used. Refer to the specifications to find out about the configuration of the computer.

IEEE 802.11a (Frequency band:5 GHz)

Exclusive to models compliant with the IEEE 802.11a/b/g/n/ac (draft) standard.

IEEE 802.11b/g (Frequency band:2.4 GHz)

The IEEE 802.11g standard provides higher-speed communications than the IEEE 802.11b.

IEEE 802.11n (Frequency band:2.4 GHz/5 GHz)

For models compliant with the IEEE 802.11b/g/n standard, only 2.4 GHz band can be used.

IEEE 802.11ac (draft) (Frequency band:5 GHz)

Exclusive to models compliant with the IEEE 802.11a/b/g/n/ac (draft) standard.

Starting Wi-Fi(R) (Wireless LAN) Communications

You can establish Wi-Fi communications between your VAIO computer and an access point (not supplied).
Before using Wi-Fi, make sure a Wi-Fi access point is on and operating.

1. Connect an access point to your VAIO computer.
   Refer to **Windows Help and Support** (Opening Windows Help and Support) and the manual that came with the access point for more information.
2. Open the charms and select the **Settings** charm. (See Opening the Charms to open the charms.)
3. Select **Change PC settings** in the lower right corner.
4. Select **Wireless** in the left pane of the **PC settings** screen.
5. Change **Airplane mode** to **Off** and the **Wi-Fi** setting under **Wireless devices** to **On**.

6. Open the charms and select the **Settings** charm. (See Opening the Charms to open the charms.)
7. Select (the network icon).
8. Select the desired access point and **Connect**.
   After the connection is established, **Connected** appears in the selected wireless access point field.
   If a security key entry window appears, enter the security key as required and select **OK**. See About a Security Key for Wi-Fi(R) (Wireless LAN) for more information.
   Note that security keys are case-sensitive.

To check Wi-Fi connection status

Open the desktop and move the mouse pointer over (the Network icon) in the desktop notification area to check the Wi-Fi connection status, such as the access point currently connected to your VAIO computer.
To open the desktop, see Opening the Desktop.

Note

- On IEEE 802.11a/b/g/n/ac (draft) equipped models, when only the 2.4 GHz Wi-Fi function is enabled, your VAIO computer cannot connect to a 5 GHz Wi-Fi access point. Also, when only the 5 GHz Wi-Fi function is enabled, the computer cannot connect to a 2.4 GHz Wi-Fi access point.
  On IEEE 802.11b/g/n equipped models, when the 2.4 GHz Wi-Fi function is disabled, the computer cannot connect to an access point. Also, the computer cannot connect to a 5 GHz Wi-Fi access point.
- It may take some time to find and connect to a Wi-Fi access point before starting communications via Wi-Fi.

Hint

- Refer to **Windows Help and Support** (Opening Windows Help and Support) for more information on **Airplane mode**.
- Once you connect your VAIO computer to the access point by entering the security key, the access point will be registered in the computer. You do not have to enter the security key for subsequent connections.

About a Security Key for Wi-Fi(R) (Wireless LAN)

A security key is a security protocol for Wi-Fi that encrypts data transmitted on Wi-Fi. It is also referred to as an encryption key or a WEP (Wired Equivalent Privacy) key.
The security key allows wireless devices that have the same key, such as a Wi-Fi access point and a computer, to communicate with each other on Wi-Fi.
The security key is assigned to each access point by default. (Make sure the default security key has been changed to protect data from unauthorized use.) If you cannot find the default security key, refer to the manual that came with your access point.

If you enter a wrong security key, follow these steps to re-enter the security key.

1. Open the charms and select the **Settings** charm. (See Opening the Charms to open the charms.)
2. Select (the network icon).
3. Right-click the desired network and select **View connection properties**.
4. Select the **Security** tab.
5. Enter a security key in the **Network security key** field and select **OK**.

About the BLUETOOTH(R) Function

You can establish wireless communications between your VAIO computer and other BLUETOOTH devices, such as another computer, a smartphone, a mobile phone, a headset, or a mouse.
You can transfer data between these devices without cables at a range of up to 33 feet / 10 meters in an open area.

One BLUETOOTH device can connect with up to seven devices via wireless network to exchange data.
When a device requires connection to another device, it sends out an inquiry to neighboring BLUETOOTH devices. If any device responds to the inquiry, the two devices can connect with each other.

Communicating with Another BLUETOOTH(R) Device such as a Mouse

You can connect BLUETOOTH devices to your VAIO computer.
For details on BLUETOOTH communication, see About the BLUETOOTH(R) Function.

1. Open the charms and select the **Settings** charm. (See Opening the Charms to open the charms.)
2. Select **Change PC settings** in the lower right corner.
3. Select **Wireless** in the left pane of the **PC settings** screen.
4. Change **Airplane mode** to **Off** and the **Bluetooth** settings to **On**.
5. Select **Devices** in the left pane of the **PC settings** screen.
6. When connecting a BLUETOOTH mouse, turn it on and press the button to connect the mouse.
   Refer to the manual that came with your BLUETOOTH device for the procedure to ready the device for connection.
7. Select **Add a device**.
   Your VAIO computer searches for devices and displays a device list.
   Follow the on-screen instructions to register your device.

Note

- Depending on the BLUETOOTH device, it may take some time for your VAIO computer to find the device.
  If your device does not appear in the list, repeat the procedure to ready the device for connection (for example, pressing the button for connection).
- Depending on the BLUETOOTH device, the procedure to establish connection may vary. Refer to the manual that came with the device for the procedure.

Hint

- If your VAIO computer is compliant with BLUETOOTH high speed technology and you intend to use it for high-speed communications, change the **Wi-Fi** setting under **Wireless devices** to **On** in step 4.
- A window appears for passcode input if a BLUETOOTH device is requesting authentication to establish connection. Follow the on-screen instructions to share the passcode between the BLUETOOTH device and your VAIO computer. If you do not wish to connect, select the **Cancel** button in the window.
  - A passcode is a secret number that is entered by a user to use for the authentication process to allow two BLUETOOTH devices to communicate with each other. Enter the same alphanumeric string (case-sensitive) for both devices to allow them to communicate with each other. You can change the passcode every time you perform authentication, providing you enter the same passcode for both devices during the authentication process. For details on the passcode of a BLUETOOTH device, refer to the manual that came with the device. If no BLUETOOTH passcode is entered for a certain time, the connection process will be terminated for security. In this case, try again.
- For details on the operations, open **Windows Help and Support** (Opening Windows Help and Support), and enter "BLUETOOTH" in the search box.

About BLUETOOTH(R) Security

The BLUETOOTH wireless technology has an authentication function, which allows you to control communication with other devices.
The authentication function helps you prevent unwanted anonymous BLUETOOTH devices from accessing your VAIO computer.
The first time two BLUETOOTH devices communicate, a common passcode (a password required for authentication) should be identified to register both devices. Once a device is registered, there is no need to re-enter the passcode.
For details, open **Windows Help and Support** (Opening Windows Help and Support), and enter "BLUETOOTH" in the search box.

Notes on Using the BLUETOOTH(R) Function

Before using the BLUETOOTH function, read the following precautions for correct use.

- In some countries or regions, using the BLUETOOTH function may be restricted by the local regulations.
- The BLUETOOTH function may not work with some devices, depending on the manufacturer or the app version employed by the manufacturer. Check the system requirements of the BLUETOOTH device before purchasing.
  For information on BLUETOOTH devices, visit the VAIO Support website.
  Some BLUETOOTH devices require authentication (pairing) before establishing connection with another device. Perform the

authentication process before connecting to such devices.

- BLUETOOTH devices work on the 2.4 GHz band, which is used by a variety of devices. BLUETOOTH devices use the technology to minimize radio interference from other devices that use the same band; however, radio interference may still cause slower communication speeds, reduce communication range, or in some cases, cause communication failure.
- Communication speed and range may vary depending on the following conditions:
  - Distance between communication devices
  - Existence of obstacles between devices
  - Ambient environment that includes existence of walls and materials of such walls
  - Device configuration
  - Apps in use
  - Radio conditions
    Communications may be cut off depending on radio conditions.
- If your VAIO computer is compliant with BLUETOOTH high speed technology and you intend to use it for high-speed communications, enable both the wireless LAN and BLUETOOTH functions on the computer.
- Large files may occasionally be corrupted during continuous transfer due to limitations of the BLUETOOTH standard and electromagnetic interference in the environment.
- Connecting multiple BLUETOOTH devices to your VAIO computer may cause channel congestion, resulting in poor device performance. This is normal with BLUETOOTH technology and does not indicate a malfunction.
- Video and audio may not be synchronized if you play videos on your VAIO computer with audio output from a connected BLUETOOTH device. This is a frequent occurrence with BLUETOOTH technology and does not indicate a malfunction.
- All BLUETOOTH devices must be certified through the procedure stipulated by Bluetooth SIG to ensure that they are compliant with the BLUETOOTH standard.
  Even if the BLUETOOTH devices are compliant with the BLUETOOTH standard, individual device performance, specifications, and operation procedures may vary. Data exchange may not be possible in all situations.
- Not all BLUETOOTH devices are guaranteed of compatibility with your VAIO computer.
- If you urgently need to disable the BLUETOOTH function, turn off your VAIO computer.

Stopping BLUETOOTH(R) Communications

You can stop BLUETOOTH communications by following these steps.

1. Open the charms and select the **Settings** charm. (See Opening the Charms to open the charms.)
2. Select **Change PC settings** in the lower right corner.
3. Select **Wireless** in the left pane of the **PC settings** screen.
4. Change the **Bluetooth** setting under **Wireless devices** to **Off**.

Charging a USB Device

You can charge a USB device even while your VAIO computer is off, in Hibernate mode, or Sleep mode by enabling the USB charging settings.
Change the settings while the USB device is disconnected from the USB port that supports USB charging.

1. Start **VAIO Control Center** and select **Hardware**. (See Searching/Starting Apps, Settings, or Files to start **VAIO Control Center**.)
2. Enable the **USB Charging** setting.
3. Connect a USB device to the USB port with the ⚡ mark printed around it.
   If charging does not start even when you connect a USB device to the USB port that supports USB charging, disconnect and connect the device.

Note

- With the USB charging settings enabled, power consumption when your VAIO computer is off or in Hibernate mode or Sleep mode increases because the computer supplies power to the USB port even when a USB device is not connected to the port.
- When the USB charging settings are enabled, you cannot use the remote wake-up function on the USB device connected to the USB port that supports USB charging.

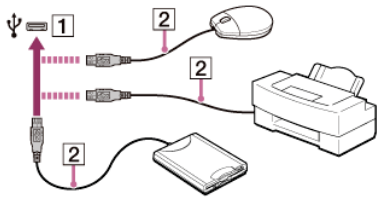
Hint

- The USB charging settings are disabled by default.

Connecting a USB Device

You can connect a Universal Serial Bus (USB) device such as a mouse, floppy disk drive, speaker or printer to your VAIO computer.
Installation of the device driver supplied with the USB device may be required when connecting.
Refer to the manual that came with the device for more information.

1. Choose the USB port (1) you prefer to use.
2. Plug the USB device cable (2) (not supplied) into the USB port.



Note

- You may need to install the driver supplied with your USB device before use. Refer to the manual that came with the USB device for more information.
- In order to print documents, be sure the USB printer is compatible with your version of Windows.
- Before disconnecting USB speakers from your VAIO computer, stop DVD or music playback or turn off the computer. If you disconnect the USB speakers during playback, it may cause a malfunction.
  For information on how to remove a USB device, refer to the manual that came with the device.
- To protect your VAIO computer and/or USB devices from damage, observe the following:
  - When moving your VAIO computer with USB devices connected, avoid exposing the USB ports to shock or impact.
  - Do not put your VAIO computer in a bag or carrying case with USB devices connected.

Hint

- The USB ports on your VAIO computer are compliant with the USB 2.0 standard and/or USB 3.0 standard.
  USB ports that are compliant with the USB 3.0 standard are identifiable by their blue color.
- In addition to the USB 2.0 standard transfer modes, the USB 3.0 standard specifies the following transfer mode:
  - SuperSpeed: Transfer rate of 5 Gbps.

Switching from a Local Account to a Microsoft Account

In Windows 8, you can switch between a local account and a Microsoft account.
By switching from a local account to a Microsoft account, you can download apps from **Windows Store**.
To create or switch to a Microsoft account, follow these steps.

1. Open the charms and select the **Settings** charm. (See Opening the Charms to open the charms.)
2. Select **Change PC settings** in the lower right corner.
3. Select **Users** in the left pane of the **PC settings** screen.
4. Select **Switch to a Microsoft account**.
5. Follow the on-screen instructions.

Hint

- To switch to a local account, select **Switch to a local account** in step 4 instead of **Switch to a Microsoft account**.
- If you forget your Microsoft account password, contact Microsoft support services.

Viewing the System Information

You can view the system information of your VAIO computer.

1. Start **VAIO Care (Desktop)**. (See Searching/Starting Apps, Settings, or Files to start **VAIO Care (Desktop)**.)
2. Select **About Your VAIO** and **System information**.
   The system information of your VAIO computer is displayed.

Booting Your VAIO Computer from External Devices

You can boot your VAIO computer from external devices, such as an optical disc drive, a USB floppy disk drive, or a USB flash drive by using the BIOS function.

1. Connect an external device to your VAIO computer.
2. Press the **ASSIST** button while your VAIO computer is off.
   The **VAIO Care (Rescue Mode)** screen appears.
3. Select **Start from media (USB device / optical disc)**.
   The booting process from the external device starts.

Note

- Disconnect all devices from your VAIO computer except for the external device from which you intend to boot up. Some devices cannot be used to boot the computer, or cannot be used with the computer.
- If an AC adapter is supplied with the external device, be sure to connect it to an AC power source in advance.

Customizing Your VAIO Computer

VAIO Control Center allows you to change settings of various kinds of functions such as display and sounds.

1. Start **VAIO Control Center**. (See Searching/Starting Apps, Settings, or Files to start **VAIO Control Center**.)
2. Select your desired item and change the settings.

Hint

- Some of the items will not be visible if you sign in as a user without administrative rights.

Updating Your VAIO Computer

Be sure to update your VAIO computer by installing the following apps to enhance its efficiency, security and functionality.

Note

- To perform the update settings below, your VAIO computer must be connected to the Internet.

Windows Update

Windows Update enables you to make your VAIO computer more stable.

1. Open the charms and select the

SONY

4-487-018-**11**(1)

Safety Regulations
Réglementations de sécurité
Reglamentación de Seguridad
Regulamentação de Segurança

IMPORTANTE

Por favor lea detalladamente este manual de instrucciones antes de conectar y operar este equipo. Recuerde que un mal uso de su aparato podría anular la garantía.

Por favor, leia atentamente este manual de instruções antes de conectar e utilizar o computador. Lembre-se que a utilização inadequada deste equipamento poderá invalidar a garantia.

VAIO

Personal Computer / Ordinateur personnel /
Computadora Personal / Computador Pessoal

VAIO Fit 13A/14A/15A SVF13N/SVF14N/SVF15N Model: SVF13NA1EL

For customers in USA and Canada

Pour les utilisateurs aux Etats-Unis et au Canada

Owner's Record

The model number and serial number are located on the bottom, the back panel, or inside the back panel or the battery compartment of your VAIO® computer. Record the model and serial numbers in the space provided here, and keep in a secure location. The model and serial numbers will be required when calling the Sony Service Center.

Model Number:	
Serial Number:	

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Updates and additions to software may require an additional charge. Subscriptions to online service providers may require a fee and credit card information. Financial services may require prior arrangements with participating financial institutions.

Important information for Canadian customers: Your new VAIO® computer includes certain software versions or upgrades, and Internet services or offers that are available to U.S. customers only.

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The Wireless LAN functionality, which is incorporated into selected models only, has passed Wi-Fi certification and complies with the interoperability specifications established by WFA (Wi-Fi Alliance).

Reverse engineering or disassembly is prohibited.

End User / Product Activation Requirements

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Safety Information and Caution

For questions regarding your product or for the Sony Service Center nearest you, visit the Sony online support web site at http://www.sony.com/am/vaiosupport/.

For the State of California, USA
Perchlorate Material - special handling may apply, See
www.dtsc.ca.gov/hazardouswaste/perchlorate/
Perchlorate Material: Lithium battery contains perchlorate.

- ❑ To prevent fire or shock hazard, do not expose your computer to rain or moisture.
- ❑ Do not open the cabinet if it is unnecessary. If you need to open the cabinet, follow the instructions in the user guide. Do not touch any parts other than those specified in the user guide. Touching unspecified parts may cause electrical shock.
- ❑ Turning off your computer with the ⏻ (power) button does not disconnect the computer completely from mains voltage. To disconnect it completely, unplug the AC adapter or the power cable from mains. The socket-outlet shall be installed near the equipment and shall be easily accessible.
- ❑ Do not use your computer directly on your lap. The temperature of the base of the unit will rise during normal operation and over time could result in discomfort or burns.
- ❑ Do not place the AC adapter in contact with your skin. Remove the AC adapter away from your body if it becomes warm and causes discomfort.
- ❑ Do not block the air exhaust or intake vents while the computer is in operation.
- ❑ Blocking the air vents leads to restriction on air circulation, which can cause internal overheating, resulting in deformation of the computer, a malfunction, or a fire hazard.
- ❑ Observe the following precautions to provide adequate air circulation and to ensure normal reliable operation:
  - ❑ Do not use the computer on any cloth covered surfaces such as rugs, cushion or blankets, near draperies, or on dusty surfaces that may block its air vents. Always use the computer on flat surfaces.
  - ❑ Do not use the computer and/or the AC adapter while covered or wrapped in cloth. Ensure the AC adapter operates in a clear environment.
  - ❑ Before putting your computer in a bag, turn off the computer or place it into Sleep mode. If the computer is equipped with the power indicator, make sure the power indicator light is off.
- ❑ When holding the computer, be sure to wait until it cools down. The surface around the air exhaust vent may be extremely hot.
- ❑ To prevent possible damage and risk of ignition to your computer during transportation, first attach any supplied connector covers and slot protectors in their appropriate locations, and secure the battery pack in the battery compartment if it is removable.
- ❑ Do not use or store your computer in a location subject to heat sources, such as radiators or air ducts; direct sunlight; excessive dust; moisture or rain; mechanical vibration or shock; strong magnets or speakers that are not magnetically shielded; excessively high and low temperatures; and high humidity.
- ❑ Do not charge the battery pack in any way other than as described in the user guide or as designated by Sony in writing.
- ❑ Sony recommends using the genuine Sony AC adapter that is provided with this product. If the item needs to be replaced during the life of the product, be sure to use a compatible genuine Sony AC adapter. Information about compatible models can be found at http://www.sony.net/.
- ❑ Sony disclaims and shall assume no responsibility in case of any losses and damages arising from:
  – the use of non-genuine Sony battery packs or AC adapters with your VAIO® computer.
  – the disassembly, alteration of, or tampering with any Sony battery pack.

- ❑ Do not use wireless functionality on hospital premises. Doing so may cause medical devices to malfunction.
- ❑ Check for and respect airline restrictions on use of wireless capabilities. If use of the wireless function is prohibited on the airline, disable all wireless connections before boarding.
  For Windows 8 models, open the charms by pointing to the top right corner of the screen, then move the pointer down and select the **Settings** charm. Select the network icon and then turn on **Airplane mode**.
  For Windows 7 models, right-click the **VAIO Smart Network** icon in the desktop notification area and select the option to disable all wireless connections.
  If you urgently need to disable the wireless function, turn off the computer.
  For models with a wireless keyboard and/or a wireless mouse, turn off the wireless devices as well.
- ❑ If using wireless functionality near a pacemaker, make sure it is at least 8 inches / 20 cm away from the pacemaker.
- ❑ Sony is not responsible for any interference that you may experience or that may be caused when operating this device.
- ❑ Do not clean your computer with aerosol products (air dusters, aerosol sprays, etc.) that contain flammable gas. Doing so may fill the inside of the computer with gas and if the motors, the switch contacts, or other internal parts of the computer spark, the gas may ignite and it could cause an explosion or fire.

On viewing 3D images (for 3D-capable models only)

- ❑ Be sure to follow the instructions in the manuals that came with the 3D display you use when viewing 3D images.
- ❑ Some people may experience discomfort (such as eye strain, fatigue, or nausea) while watching 3D video images or playing stereoscopic 3D games. Sony recommends that all viewers take regular breaks while watching 3D video images or playing stereoscopic 3D games. The length and frequency of necessary breaks will vary from person to person. You must decide what works best. If you experience any discomfort, you should stop watching the 3D video images or playing stereoscopic 3D games until the discomfort ends; consult a doctor if you believe necessary.
  You should also see the instruction manual of any other device or software used with this computer.
  The vision of young children (especially those under six years old) is still under development. Consult your doctor (such as a pediatrician or eye doctor) before allowing young children to watch 3D video images or play stereoscopic 3D games. Adults should supervise young children to ensure they follow the recommendations listed above.

Avertissement

Pour toute question concernant ce produit, veuillez écrire à Sony Customer Information Service Center au 12451 Gateway Blvd., Fort Myers, FL 33913, USA ou se trouve le Sony Customer Service (service consommateur de Sony) sur Internet à : http://www.sony.com/am/vaiosupport/.

- ❑ Pour prévenir tout risque d'incendie ou d'électrocution, garder cet appareil à l'abri de la pluie et de l'humidité.
- ❑ N'ouvrez l'armoire qu'en cas de nécessité absolue. Si vous devez impérativement l'ouvrir, suivez les instructions fournies dans le guide d'utilisation. Ne touchez aucune pièce autre que celles indiquées dans le guide d'utilisation, sans quoi vous risqueriez de subir une décharge électrique.
- ❑ Si vous éteignez votre ordinateur à l'aide du bouton ⏻ (bouton d'alimentation), vous ne le débranchez pas complètement de la tension de secteur. Pour le débrancher entièrement, déconnectez l'adaptateur c.a. ou le câble d'alimentation de la prise. L'appareil doit être le plus près possible d'une prise murale pour en faciliter l'accès.
- ❑ Ne posez pas l'ordinateur directement sur vos genoux. Durant le fonctionnement normal, la température augmente et cela pourrait créer un inconfort ou des brûlures.
- ❑ Ne mettez pas l'adaptateur c.a. en contact avec votre peau. Éloignez l'adaptateur c.a. de votre corps s'il devient chaud et qu'il cause un inconfort.
- ❑ Lorsque l'ordinateur fonctionne, ne bloquez pas la sortie d'air ou des évents d'aération.
- ❑ Si vous bloquez les évents d'aération, cela pourrait restreindre la circulation d'air et causer une surchauffe interne pouvant entraîner une déformation de l'ordinateur, une défaillance ou un risque d'incendie.
- ❑ Afin d'assurer une circulation d'air normale et un fonctionnement fiable standard, suivez les précautions suivantes :
  - ❑ N'utilisez pas l'ordinateur sur une surface couverte de tissu, comme un tapis, un coussin ou une couverture, près d'une draperie ou d'une surface poussiéreuse susceptible de bloquer les évents d'aération. Utilisez toujours l'ordinateur sur une surface plate.
  - ❑ N'utilisez pas l'ordinateur et/ou l'adaptateur c.a. lorsqu'il est recouvert d'une toile. Assurez-vous que l'adaptateur c.a. fonctionne dans un environnement dégagé.
  - ❑ Avant de ranger votre ordinateur dans une sacoche, éteignez l'ordinateur ou mettez-le en mode Veille. Si l'ordinateur est équipé d'un témoin d'alimentation, assurez-vous que le témoin d'alimentation est éteint.
- ❑ Lorsque vous tenez l'ordinateur, assurez-vous qu'il est refroidi. Il est possible que la surface autour d'un évent d'aération soit extrêmement chaude.
- ❑ Afin de prévenir des indemnités à votre ordinateur pendant le transport, attachez d'abord tous les volets de connecteurs et protecteurs d'emplacements comme il convient, et insérez la batterie dans le logement de la batterie si elle est amovible.
- ❑ N'utilisez pas votre ordinateur et ne le rangez pas dans un endroit exposé à des sources de chaleur, comme des radiateurs ou des conduits d'air ; le rayonnement solaire. Ne l'exposez pas non plus à une quantité excessive de poussière ; à l'humidité ou la pluie ; à une vibration mécanique ou à un choc ; à des aimants puissants ou à des haut-parleurs non protégés contre les champs magnétiques ; à des températures extrêmement basses ou hautes et à une humidité intense.
- ❑ N'essayez pas de charger le module batterie d'une autre façon que celle décrite dans le Guide de l'utilisateur ou dans la documentation écrite de Sony.
- ❑ Sony recommande d'utiliser son adaptateur c.a. authentique fourni avec le produit. Si, pendant sa durée de vie, il s'avère nécessaire de remplacer le produit, assurez-vous d'utiliser un adaptateur c.a. Sony authentique et compatible. Vous pourrez trouver les renseignements sur les modèles compatibles à l'adresse suivante : http://www.sony.net/.
- ❑ Sony rejette toute responsabilité en cas de perte ou de dommages engendrés par l'utilisation de modules batterie ou d'adaptateurs secteur de marque autre que Sony avec votre ordinateur VAIO®, ou par le désassemblage ou l'altération des modules batterie Sony.

- ❑ Ne pas utiliser la fonctionnalité sans fil dans les hôpitaux car cela risquerait de provoquer le mauvais fonctionnement des appareils médicaux.
- ❑ Vérifiez et respectez les restrictions des compagnies aériennes concernant l'utilisation des fonctions sans fil. Si une compagnie interdit l'utilisation d'une fonction sans fil, coupez toutes les connexions de vos appareils sans fil avant d'embarquer.
  Pour les modèles Windows 8, ouvrez les icônes en pointant le coin supérieur droit de l'écran, puis déplacez le curseur vers le bas et sélectionnez l'icône **Paramètres**, sélectionnez l'icône du réseau et activez le **Mode Avion**.
  Pour les modèles Windows 7, faites un clic droit sur l'icône **VAIO Smart Network** dans la zone de notification du bureau et sélectionnez l'option pour désactiver toutes les connexions sans fil.
  Si vous avez besoin de désactiver la fonction sans fil de toute urgence, éteignez l'ordinateur. Pour les modèles équipés d'un clavier et/ou d'une souris sans fil, coupez également les appareils sans fil.
- ❑ Si vous utilisez la fonctionnalité sans fil à proximité d'un stimulateur cardiaque, assurez-vous qu'il est au moins à 8 pouces / 20 cm du stimulateur cardiaque.
- ❑ Sony n'est pas responsable des interférences que vous risquez de rencontrer ou qui risquent d'être provoquées lors du fonctionnement de cet appareil.
- ❑ Ne nettoyez pas votre ordinateur à l'aide de produits en aérosol (bombes d'air sec, sprays etc.) contenant des gaz inflammables, afin d'éviter toute pénétration de gaz dans l'ordinateur. En cas d'étincelle provenant des moteurs, des contacts de l'interrupteur ou d'autres pièces internes de l'ordinateur, le gaz risquerait de prendre feu et de causer une explosion ou un incendie.

Sur le visionnement d'images 3D (uniquement pour les modèles compatibles 3D)

- ❑ Suivez les instructions contenues dans les manuels livrés avec l'affichage 3D que vous utilisez lorsque vous visualisez des images 3D.
- ❑ Il est possible que certaines personnes ressentent un inconfort (comme une fatigue de l'oeil ou des nausées) lorsqu'elles regardent des images vidéo 3D ou lorsqu'elles jouent à des jeux stéréoscopiques 3D. Sony recommande à tous les spectateurs de prendre régulièrement des pauses lorsqu'ils regardent des images vidéo 3D ou lorsqu'ils jouent à des jeux stéréoscopiques 3D. La longueur et la fréquence des pauses nécessaires varient d'une personne à l'autre. C'est à vous de déterminer ce qui convient le mieux. Si vous éprouvez un inconfort, vous devez cesser de regarder les images vidéo 3D ou de jouer à des jeux stéréoscopiques 3D jusqu'à la disparition de l'inconfort ; consultez un médecin si vous le jugez nécessaire.
  Par ailleurs, vous devez consulter le mode d'emploi de tout autre périphérique ou logiciel utilisé avec cet ordinateur.
  La vision des jeunes enfants (particulièrement ceux de moins de six ans) est toujours en développement. Consultez votre médecin (comme un pédiatre ou un ophtalmologue) avant de permettre aux jeunes enfants de regarder des images vidéo 3D ou de jouer à des jeux stéréoscopiques 3D. Les adultes doivent superviser les jeunes enfants afin de s'assurer qu'ils respectent les recommandations énumérées ci-dessus.

⚠ **To change the backup battery, please contact your nearest Sony Service Center.**

⚠ **Pour changer la pile de rechange, veuillez contacter votre centre de service Sony le plus près.**

Wireless LAN Security

Creating security settings for a Wireless LAN is extremely important. Sony assumes no responsibility for any security problems that may arise from the use of a Wireless LAN.

Sécurité du réseau local sans fil

La création de paramètres de sécurité pour le réseau local sans fil est extrêmement importante. Sony n'est pas tenu responsable des problèmes de sécurité susceptibles de se produire lors de l'utilisation du réseau local sans fil.

The following cautions apply to the models which support the IEEE 802.11a/n (5 GHz) .

Only use Wireless LAN indoors when using it with IEEE 802.11a/n (5 GHz) .

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

This device uses the 5 GHz band for wireless LAN communication and the maximum gain of the antenna in this device is 1.07 dBi.

Les avis suivants se rapportent aux modèles qui prennent en charge la norme IEEE 802.11a/n (5 GHz) .

Utiliser le réseau local sans fil à l'intérieur uniquement lorsqu'il est utilisé avec IEEE 802.11a/n (5 GHz) .

Les radars à haute puissance sont alloués en tant qu'usagers principaux (ce qui signifie qu'ils ont la priorité) de 5 250-5 350 MHz et 5 650-5 850 MHz et ces radars pourraient provoquer des interférences ou encore des dommages à l'appareil.

Ce périphérique utilise une bande de fréquences 5 GHz lors de communication sans fil LAN et le gain maximal de l'antenne de l'appareil est de 1.07 dBi.

The following FCC statements apply only to the version of this model manufactured for sale in the USA. Other versions may not comply with FCC technical regulations, and the FCC statements are not applicable in Canada, including the Province of QUEBEC.

L'avis suivant de la FCC s'applique uniquement à la version de ce modèle fabriqué pour être vendu aux É.-U. Il est possible que d'autres versions ne soient pas conformes aux règlements techniques de la FCC. Par ailleurs, l'avis de la FCC ne s'applique pas au Canada, y compris dans la province de QUÉBEC.

FCC Information (USA)

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

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

Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.
NOTE: The manufacturer is not responsible for any radio or TV interference caused by unauthorized modifications to this equipment. Such modifications could void the user's authority to operate the equipment.

Only peripherals (computer input/output devices, terminals, printers, etc.) that comply with FCC Class B limits may be attached to this computer product. Operation with noncompliant peripherals is likely to result in interference to radio and television reception.

All cables used to connect peripherals must be shielded and grounded. Operation with cables connected to peripherals that are not shielded and grounded may result in interference to radio and television reception.

For product available in the USA/Canada market, only channel 1-11 can be operated. Selection of other channels is not possible.

This device and its antenna(s) must not be co-located or operation in conjunction with any other antenna or transmitter except in accordance with FCC multi-transmitter product procedure.

This device is going to operated in 5.15~5.25GHz frequency range, it is restricted in indoor environment only.

FCC/IC Radio Frequency Exposure

The available scientific evidence does not show that any health problems are associated with using low power wireless devices. There is no proof, however, that these low power wireless devices are absolutely safe. Low power Wireless devices emit low levels of radio frequency energy (RF) in the microwave range while being used. Whereas high levels of RF can produce health effects (by heating tissue), exposure to low level RF that does not produce heating effects causes no known adverse health effects. Many studies of low level RF exposures have not found any biological effects. Some studies have suggested that some biological effects might occur, but such findings have not been confirmed by additional research.

This equipment has been tested and found to comply with FCC/IC radiation exposure limits set forth for an uncontrolled environment and meets the FCC radio frequency (RF) Exposure Guidelines in Supplement C to OET65 and RSS-102 of the IC radio frequency (RF) Exposure rules.

Exposition aux radiofréquences FCC/IC

Selon les preuves scientifiques disponibles, aucun problème de santé n'est associé à l'utilisation d'appareils sans fil de faible puissance. Rien ne prouve cependant que ces appareils sont absolument sans danger. Lorsqu'ils sont utilisés, les appareils sans fil de faible puissance émettent de faibles niveaux d'énergie radiofréquence (RF) dans la gamme des hyperfréquences. Bien que les niveaux élevés de radiofréquence puissent avoir un effet sur la santé (réchauffement des tissus), l'exposition à de faibles niveaux n'ayant pas d'effet thermique n'a aucun impact négatif connu sur la santé. De nombreuses études sur l'exposition aux radiofréquences de faible niveau n'ont révélé aucun effet biologique. Certaines d'entre elles ont sous-entendu qu'il pourrait y avoir de tels effets, mais leurs résultats n'ont pas été confirmés par des recherches supplémentaires.

Cet equipement a ete teste et s'est avere conforme aux limites d'exposition aux rayonnements definies par la FCC et IC pour l'environnement non controle ; il repond aux regles sur l'exposition aux rayonnements RF (radiofrequence) figurant dans le Supplement C de la norme OET65 de la FCC et a celles de la norme RSS-102 d'IC.

IC RSS (Canada)

For the 5GHz band only
To prevent radio interference to the licensed service, this device is intended to be operated indoors and away from windows to provide maximum shielding. Equipment (or its transmit antenna) that is installed outdoors is subject to licensing.

Pour la bande 5GHz seulement
Pour empêcher que cet appareil cause du brouillage au service faisant l'objet d'une licence, il doit être utilisé à l'intérieur et devrait être placé loin des fenêtres afin de fournir un écran de blindage maximal. Si le matériel (ou son antenne d'émission) est installé à l'extérieur, il doit faire l'objet d'une licence.

This device complies with Industry Canada license-exempt RSS standard(s).
Operation is subject to the following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation of the device.

Le présent appareil est conforme aux CNR d'Industrie Canada applicables aux appareils radio exempts de licence.
L'utilisation de ce dispositif est autorisée seulement aux deux conditions suivantes : (1) il ne doit pas produire de brouillage, et (2) l'utilisateur du dispositif doit être prêt à accepter tout brouillage radioélectrique reçu, même si ce brouillage est susceptible de compromettre le fonctionnement du dispositif.

For product available in the USA/Canada market, only channel 1~11 can be operated. Selection of other channels is not possible.

Pour les produits disponibles aux États-Unis / Canada du marché, seul le canal 1 à 11 peuvent être exploités. Sélection d'autres canaux n'est pas possible.

This device and it's antennas(s) must not be co-located or operating in conjunction with any other antenna or transmitter except in accordance with IC multi-transmitter product procedures.

Cet appareil et son antenne (s) ne doit pas être co-localisés ou fonctionnement en association avec une autre antenne ou transmetteur.

Dynamic Frequency Selection (DFS) for devices operating in the bands 5250-5350 MHz,
5470-5600 MHz and 5650-5725 MHz

Sélection dynamique de fréquences (DFS) pour les dispositifs fonctionnant dans les bandes 5250-5350 MHz, 5470-5600 MHz et 5650-5725 MHz

The device for the band 5150-5250 MHz is only for indoor usage to reduce potential for harmful interference to co-channel mobile satellite systems.

les dispositifs fonctionnant dans la bande 5150-5250 MHz sont réservés uniquement pour une
utilisation à l'intérieur afin de réduire les risques de brouillage préjudiciable aux systèmes de satellites mobiles utilisant les mêmes canaux.

The maximum antenna gain permitted (for devices in the bands 5250-5350 MHz and 5470-5725 MHz) to comply with the e.i.r.p. limit.

le gain maximal d'antenne permis pour les dispositifs utilisant les bandes 5250-5350 MHz et 5470-5725 MHz doit se conformer à la limite de p.i.r.e.;

Specifications of the supplied battery pack

Model number :	VGP-BPS41
Maximum Charge Current :	2.957 A
Maximum Charge Voltage :	12.96 V

For customers in USA

Regulatory Information

If you have questions about this product, you can write to the Sony Customer Information Service Center at 12451 Gateway Blvd., Fort Myers, FL 33913, USA or find Sony Customer Service on the Web site at: http://www.sony.com/am/vaiosupport/.

Declaration of Conformity

Trade Name:	SONY
Model No.:	SVF13NA1EL
Responsible Party:	Sony Electronics Inc.
Address:	16530 Via Esprillo, San Diego, CA 92127, U.S.A.
Telephone No.: (For FCC-related matters only)	858-942-2230

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions:

(1) this device may not cause harmful interference, and

(2) this device must accept any interference received, including interference that may cause undesired operation.

VAIO Support Homepage
http://www.sony.com/am/vaiosupport/

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