

# User Guide

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# Chapter 1. Getting Started

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## Optimized Performance and Usability

- By adopting the latest processor, you can process tasks quickly and reinforce the security level using smart cards, TPM and fingerprint recognition devices. (Optional)
- NVIDIA Optimus technology not only provides powerful graphics performance but also extends the battery life. (Optional)



## Various Interfaces

- You can charge your mobile phone, MP3 player, etc. any time through the chargeable USB connection (without the charger), if you have a USB chargeable cable. (Optional)
- You can easily and quickly read and write data through USB 3.0. (Optional)



## Environmentally-Friendly Eco Design

- This is an environmentally friendly system designed in accordance with international environmental specifications regarding the use of environmentally friendly materials and the reduction of hazardous materials.
- The system ensures minimal noise by verifying the noise level on the basis of the noise levels of everyday life.



## Samsung's Proprietary Software

- You do not need to wait for a long time to boot the computer up, because it boots up quickly once you press the Power button. (Samsung Fast Start, Optional)
- You can resolve problems easily and quickly by using Samsung Recovery Solution program to restore the PC to the state when it was purchased. (Optional)



Optional items may be changed or may not be provided depending on the computer model.

Q

**The computer is not turning on or does not respond and displays a blank screen.**

A

Restore the computer using **Samsung Recovery Solution**.

1. Turn the computer on and press the **F4** key when the booting screen (SAMSUNG logo) appears.
2. The computer will boot up in restore mode after a short while and **Samsung Recovery Solution** appears.
3. When the start menu screen appears, click **Restore**.

Q

**The keyboard Fn keys (shortcut keys) do not work.**

A

Install **Easy Display Manager**.

Q

**I want to restore the computer to the state when it was purchased.**

A

If you use the Samsung Recovery Solution function, you can easily and quickly restore the computer to a previous state even if you do not have a separate OS recovery DVD or recovery CD.

Q

**I want to connect an external monitor, TV or projector.**

A

Connect the display device and the computer with the monitor and repeatedly press the **F4** key while holding down the **Fn** key.

Q

**The internet connection has slowed down or error messages appear continuously while using the Internet.**

A

Restore Internet Explorer to its initial state.

1. Launch **Internet Explorer**, click **Tools > Internet Options > Advanced > Load defaults**.
2. If the **Internet Explorer setting again** window appears, select **Set again**.
3. In the **Internet default setting restoration** window, select **Close**.

A

This is a compatibility problem between the Hancm Office software and Internet Explorer. To resolve this problem, reinstall Internet Explorer 8 or install Internet Explorer 7 or earlier.

Q

**How can I extend the battery usage time?**

A

The battery usage time may be shortened if you recharge the battery before it is completely discharged.

To resolve this problem, enter the **BIOS** Setup and select **Battery Calibration** to discharge the battery completely and then recharge the battery.



For detailed information on a function, refer to the corresponding section of the User Manual.

Before reading the User Guide, first check the following information.



- Optional items, some devices and software referred to in the User Guide may not be provided and/or changed by upgrade.  
Note that the computer environment referred in the User Guide may not be the same as your own environment.
- The pictures used for the cover and the main body in the User Manual are those of the representative model of each series and may differ from the actual appearance of the product.
- This guide describes procedures for using both the mouse and the touchpad.
- This manual has been written for the Windows operating system. The descriptions and figures may differ depending on the installed operating system.
- The User guide supplied with this computer may vary depending on your model.



## Using the software

- The software described in the main text can be launched using the following menu path.
  - **Start > All Programs**
  - **Start > All Programs > Samsung**
- When the programs are not installed, select **Samsung Recovery Solution > System Software** to install the programs. (Only for models supplied with Samsung Recovery Solution)

## Safety Precaution Notations

Icon	Notation	Description
	<b>Warning</b>	Failing to follow instructions marked with this symbol, may cause personal injury and or fatality.
	<b>Caution</b>	Failing to follow instructions marked with this symbol, may cause slight injury to yourself or damage your property.

## Text Notations

Icon	Notation	Description
	<b>Caution</b>	Content included in this section includes information required about the function.
	<b>Note</b>	Content included in this section includes helpful information to use the function.

## Copyright

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Samsung Electronics Co., Ltd. owns the copyright of this manual.

No part of this manual may be reproduced or transmitted in any form or by any means, electronic or mechanical, without the consent of Samsung Electronics Co., Ltd.

The information in this document is subject to change without notice due to improving the performance of the product.

Samsung Electronics shall not be liable for any data loss. Please take care to avoid losing any important data and backup your data to prevent any such data loss.

## Precautions for Operating System Support

If a problem occurs because of the reinstallation of other operating systems(OS) or a previous version of a OS pre-installed on this computer, or a software that does not support the OS, the company will not provide technical support, a replacement or refund, and if our service engineer visits you due to this problem, a service charge will be applied.

## About the Product Capacity Representation Standard

### About HDD Capacity Representation

The capacity of the storage device (HDD, SSD) of the manufacturer is calculated assuming that 1KB=1,000 Bytes.

However, the operating system (Windows) calculates the storage device capacity assuming that 1KB=1,024 Bytes, and therefore the capacity representation of the HDD in Windows is smaller than the actual capacity due to the difference in capacity calculation.

(E.g. For a 80GB HDD, Windows represents the capacity as 74.5GB,  $80 \times 1,000 \times 1,000 \times 1,000 \text{ byte} / (1,024 \times 1,024 \times 1,024) \text{ byte} = 74.505 \text{ GB}$ )

In addition, the capacity representation in Windows may be even smaller because some programs such as Recovery Solution may reside in a hidden area of the HDD.

## About Memory Capacity Representation

---

The memory capacity reported in Windows is less than the actual capacity of memory.

This is because BIOS or a video adapter uses a portion of memory or claims it for further use.

(E.g. For 1GB(=1,024MB) memory installed, Windows may report the capacity as 1,022MB or less)

For more information, refer to the Samsung Recovery Solution section.

For your security and to prevent damage, please read the following safety instructions carefully.

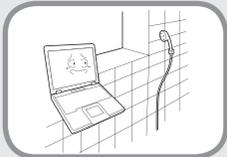


Since this is commonly applied to Samsung Computers, some pictures may differ from actual products.

## Warning

Failing to follow instructions marked with this symbol may cause personal injury and even fatality.

### Installation Related



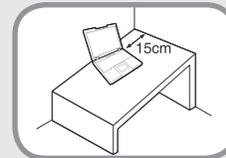
**Do not install the product in places exposed to humidity such as a bathrooms.**

There is a danger of electric shock. Use the product within the operating conditions specified in the Manufacturers User Guide.



**Keep the plastic bags out of the reach of children.**

There is a danger of suffocation.



**Keep a distance of 15cm or more between the computer and the wall and do not place any objects between them.**

This may increase the internal temperature of the computer and may cause an injury.



**Do not install the computer on a slant or a place prone to vibrations, or avoid using the computer in that location for a long time.**

This increases the risk that a malfunction or damage to the product will occur.



**Avoid exposing any part of your body to the heat from the computer vent or AC adapter for a long time when the computer is on.**

Exposing a part of your body close to the heat from the vent or AC adapter for long periods of time may cause a burn.



**Avoid blocking the vent at the bottom or side of the computer when using it on a bed or cushion.**

If the vent is blocked, there is a danger of damaging the computer or overheating the inside of the computer.



## Warning

Failing to follow instructions marked with this symbol may cause personal injury and even fatality.

### Power Related

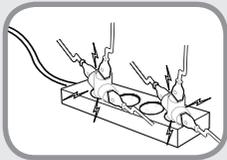


The power plug and wall outlet figures may differ depending on the country specifications and the product model.



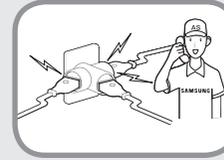
**Do not touch the main plug or power cord with wet hands.**

There is a danger of electric shock.



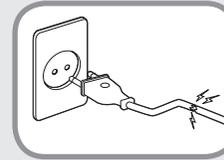
**Do not exceed the standard capacity (voltage/current) of a multiplug or power outlet extension when using it for the product.**

There is a danger of electric shock or fire hazard.



**If the power cord or power outlet makes a noise, disconnect the power cord from the wall outlet and contact a service center.**

There is a danger of electric shock or fire hazard.



**Do not use a damaged or loose main plug or power cord or power outlet.**

There is a danger of electric shock or fire hazard.



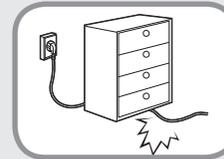
**Plug the power cord firmly into the power outlet and AC adapter.**

Failing to do so may cause fire hazard.



**Do not unplug the power cord out by pulling the cable only.**

If the cord is damaged, it may cause electric shock.

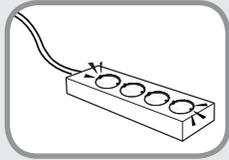


**Do not bend the power cord excessively or do not place a heavy object over the power cord. It is especially important to keep the power cord out of reach of infants and pets.**

If the cord is damaged, it may cause electric shock or fire.

## Warning

Failing to follow instructions marked with this symbol may cause personal injury and even fatality.



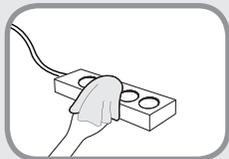
**Connect the power cord to an outlet or multiple power plug (extended cable) with a ground terminal.**

Failing to do so may result in electric shock.



**If water or a foreign substance enters the power jack, adapter or computer, immediately separate the power cord and battery and call the service center.**

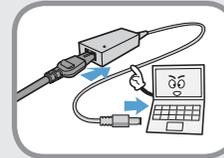
Damage to the device within the computer may cause electric shock or fire hazard.



**Keep the power cord or outlet clean so that they are not covered with dust.**

Failing to do so may result in fire.

## AC Adapter Usage Precautions



**Connect the power cord to the AC adapter firmly.**

Otherwise, there is a danger of fire due to an incomplete contact.

**Use only the AC adapter supplied with the product.**

Using another adapter may cause the screen to flicker.



**Do not place heavy objects or step onto the power cord or AC adapter to avoid damaging the power cord or AC adapter.**

If the cord is damaged, there is a danger of electric shock or fire.



## Warning

Failing to follow instructions marked with this symbol may cause personal injury and even fatality.

### Battery Usage Related

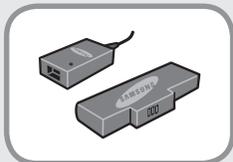


**Please charge the battery fully before using the computer for the first time.**



**Keep the battery out of the reach of infants and pets, as they could put the battery into their mouths.**

There is a danger of electric shock or choking.



**Use an authorized battery and AC adapter only.**

Please use an authorized battery and adapter approved by Samsung Electronics.

Unauthorized batteries and adapters may not meet the proper safety requirements and may cause problems or malfunctions and result in an explosion or fire.



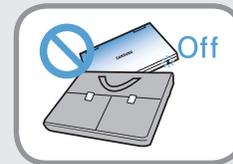
**Do not use the computer in a badly ventilated location such as on bedding, on a pillow or cushion, etc, and do not use it in a location such as room with floor heating as it may cause the computer to overheat.**

Take care that the computer vents (on the side or the bottom) are not blocked especially in these environments. If the vents are blocked, the computer may overheat and it may cause a computer problem, or even an explosion.



**Do not use the computer in a humid location such as a bathroom or sauna.**

Please use the computer within the recommended temperature and humidity range (10~32°C, 20~80% RH).

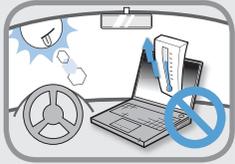


**Do not close the LCD panel and put the computer into your bag to move it when it is still turned on.**

If you put the computer into your bag without turning it off, the computer may overheat and there is a danger of fire. Shut the computer down properly before moving it.

## Warning

Failing to follow instructions marked with this symbol may cause personal injury and even fatality.



**Never heat the product(or battery) or put the product(or battery) into a fire. Do not put or use the product(or battery) in a hot location such as a sauna, inside a vehicle exposed to the heat, and so on.**

There is a danger of an explosion or fire.



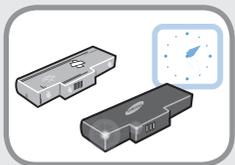
**Take care not to allow metal objects such as a key or clip to touch the battery terminal (metal parts).**

If a metal object touches the battery terminals, it may cause excessive current flow and it may damage the battery, or result in a fire.



**If liquid leaks out of the product(or battery) or there is a funny smell coming from the product(or battery), remove the the product(or battery) the computer and contact a service center.**

There is a danger of an explosion or fire.



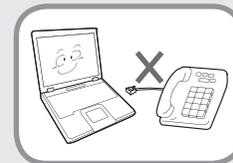
**To use the computer safely, replace a dead battery with a new, authorized battery.**

## Usage Related



**Disconnect all cables connected to the computer before cleaning it. If your notebook is external & removable battery type, remove the external battery.**

There is a danger of electric shock or damage to the product.



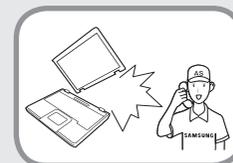
**Do not connect a phone line connected to a digital phone to the modem.**

There is a danger of a electric shock, fire or damage to the product.



**Do not place any container filled with water or chemicals over or near the computer.**

If water or chemicals enter the computer, this may cause fire or electric shock.



**If you drop or damage the computer, separate the power cord and battery and ask the service center to perform a safety check.**

Using a broken computer may cause electric shock or fire hazard.

## Warning

Failing to follow instructions marked with this symbol may cause personal injury and even fatality.



**Avoid direct sunlight when the computer is in an air-tight location such as inside a vehicle.**

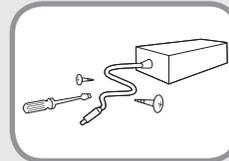
There is a danger of a fire hazard. The computer may overheat and also present opportunity to thieves.



**Do not use your notebook PC for long periods of time while a part of your body is making direct contact with it. The temperature of the product may increase during normal operation.**

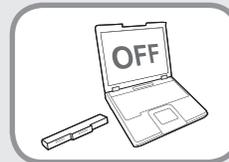
This may result in harming or burning your skin.

## Upgrade Related



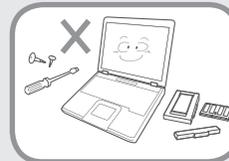
**Never disassemble the power supply or AC adapter.**

There is a danger of electric shock.



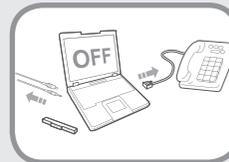
**When removing the RTC (Real Time Clock) battery, keep it out of the reach of children as they could touch and/or swallow it.**

There is a danger of choking. If a child has swallowed it, contact a doctor immediately.



**Use only authorized parts (multi-plug, battery and memory) and never disassemble parts.**

There is a danger of damaging the product, electric shock or fire hazard.



**Shut down the computer and disconnect all cables before disassembling the computer. If there is a modem, disconnect the phone line. If your notebook is external & removable battery type, remove the external battery.**

Failing to do so, may cause electric shock.

## Warning

Failing to follow instructions marked with this symbol may cause personal injury and even fatality.

### Security and Movement Related

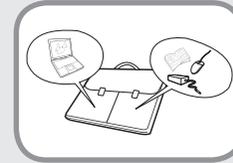


**Follow the instructions for the relevant location (e.g. airplane, hospital, etc.) when using a wireless communication device (wireless LAN, Bluetooth, etc.).**



**Avoid exposing a drive to magnetic fields. Security devices with magnetic fields include airport walk-through devices and security wands.**

**The airport security devices that check carry-on luggage, such as conveyor belts, use x-rays instead of magnetism and will not damage a drive.**



**When carrying the notebook computer with other items, such as the adapter, mouse, books etc, take care not to press anything against the notebook computer.**

If a heavy object is pressed against the notebook computer, a white spot or stain may appear on the LCD. Therefore, take care not to apply any pressure to the notebook.

In this case, place the notebook computer in a separate compartment away from the other objects.



## Caution

Failing to follow instructions marked with this symbol may cause slight injury or damage to the product.

### Installation Related

**Do not block the ports (holes), vents, etc. of the product and do not insert objects.**

Damage to a component within the computer may cause electric shock or fire.

**When using the computer with it lying on its side, place it so that the vents face upwards.**

Failing to do so, may cause the internal temperature of the computer to rise and the computer to malfunction or halt.

**Do not place a heavy object over the product.**

This may cause a problem with the computer. In addition, the object may fall and cause injury, or damage the computer.

### Battery Usage Related

**Dispose of worn-out batteries properly.**

- There is a danger of fire or explosion.
- The battery disposal method may differ depending on your country and region. Dispose of the used battery in an appropriate way.

**Do not throw or disassemble the battery and do not put it into water.**

This may cause an injury, fire or explosion.

**Use only a battery authorized by Samsung Electronics.**

Failing to do so may cause an explosion.

**Avoid contact with metal objects such as car keys or clips when keeping or carrying a battery.**

Contact with a metal may cause excessive current and a high temperature and may damage the battery or cause a fire.

**Charge the battery according to the instructions in the manual.**

Failing to do so, may cause an explosion or fire from damage to the product.

**Do not heat the product(or battery) or expose it to heat (e.g. inside a vehicle during the summer).**

There is a danger of explosion or fire.

## Caution

**Failing to follow instructions marked with this symbol may cause slight injury or damage to the product.**

### Usage Related

**Do not place a candle, light cigar, etc. over or on the product.**

There is a danger of fire.

**Use a wall outlet or multi-plug with a grounding part.**

Failing to do so may cause electric shock hazard.

**Make sure to have the product tested by a safety service engineer after repairing the product.**

Authorized Samsung Repair Centers will carry out safety checks after a repair. Using a repaired product without testing it for safety may cause an electric shock or fire.

**In case of lightning, immediately turn the system off, disconnect the power cord from the wall outlet and phone line from modem. Do not use a modem or phone.**

There is a danger of electric shock or fire.

**Do not use your computer and AC-Adapter on your lap or soft surfaces.**

If the computer temperature increases, there is a danger of burning yourself.

**Connect only permitted devices to the connectors or ports of the computer.**

Failing to do so, may cause electric shock and fire.

**Close the LCD panel only after checking if the notebook computer is turned off.**

The temperature may rise and it may cause overheating and deformation of the product.

**Do not press the Eject Button while the Floppy Disk/CD-ROM drive is in operation.**

You might lose data and the disk might be suddenly ejected and could cause an injury.

**Take care not to drop the product while using it.**

This may cause personal injury or loss of data.

**Do not touch the antenna with electricity facility such as the power outlet.**

There is a danger of electric shock.

**When handling computer parts, follow the instructions on the manual supplied with the parts.**

Failing to do so, may cause damage to the product.



## Caution

**Failing to follow instructions marked with this symbol may cause slight injury or damage to the product.**

**If the computer emits smoke, or there is a burning smell, disconnect the power plug from the wall outlet and contact a service center immediately. If your notebook is external & removable battery type, remove the external battery.**

There is a danger of fire.

**Do not use a damaged or modified CD/Floppy Disk.**

There is a danger of damaging the product or personal injury.

**Do not insert your fingers into the PC Card Slot.**

There is a danger of injury or electric shock.

**Use recommended computer cleansing solution when cleaning the product and only use the computer when it is completely dried.**

Failing to do so may cause electric shock or fire.

**Emergency disk eject method using paperclip should not be used while the disk is in motion. Make sure to use the emergency disk eject method only when the Optical Disk Drive is stopped.**

There is a danger of injury.

**Do not place your face close to the Optical Disk Drive tray when it is operating.**

There is a danger of injury due to an abrupt ejection.

**Check CDs for cracks and damage prior to use.**

It may damage the disc and cause disorder of device and injury of user.



## Caution

Failing to follow instructions marked with this symbol may cause slight injury or damage to the product.

### Upgrade Related

#### **Take care when touching the product or parts.**

The device may be damaged or you may be injured.

#### **Take care not to throw or drop a computer part or device.**

This may cause injury or damage to the product.

#### **Make sure to close the computer cover before connecting the power after a reassembly.**

There is a danger of electric shock if your body touches an internal part.

#### **Use parts authorized by Samsung Electronics only.**

Failing to do so, may cause fire or damage the product.

#### **Never disassemble or repair the product by yourself.**

There is a danger of electric shock or fire.

#### **To connect a device that is not manufactured or authorized by Samsung Electronics, enquire at your service center before connecting the device.**

There is a danger of damaging the product.

### Security and Movement Related

**When moving the product, turn the power off and separate all connected cables first.**

The product might be damaged or users may trip over the cables.

**For long periods of not using the notebook computer, discharge the battery and preserve as it is detached. (For external & removable battery type)**

The battery will be preserved at its best condition.

**Do not operate or watch the computer while driving a vehicle.**

There is a danger of a traffic accident. Please concentrate on driving.



## Caution

Failing to follow instructions marked with this symbol may cause slight injury or damage to the product.

### Cautions on Preventing Data Loss (Hard Disk Management)

#### Take care not to damage the data on a hard disk drive.

- A hard disk drive is so sensitive to external impact that an external impact may cause loss of data on the surface of the disk.
- Take extra care, because moving the computer or an impact on the computer when it is turned on may damage the data of the hard disk drive.
- The company is not liable for any loss of data on the hard disk drive.

#### Causes that may damage the data of a hard disk drive and the hard disk drive itself.

- The data may be lost when an external impact is applied to the disk while disassembling or assembling the computer.
- The data may be lost when the computer is turned off or reset by a power failure while the hard disk drive is operating.
- The data may be lost and irrecoverable due to a computer virus infection.
- The data may be lost if the power is turned off while running a program.
- Sudden movement or impact to the computer while the hard disk drive is operating, may cause files to be corrupted or bad sectors on the hard disk.

**To prevent data loss due to damage to the hard disk drive, please backup your data frequently.**

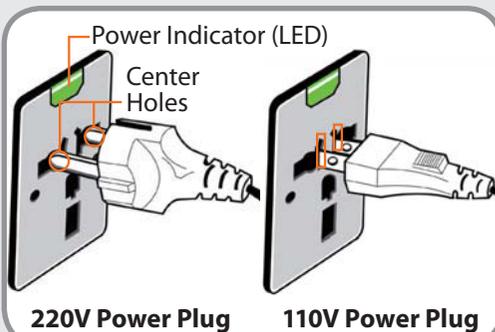
## Using the power supply in an airplane

Since the power outlet type differs depending on the type of airplane, connect the power appropriately.

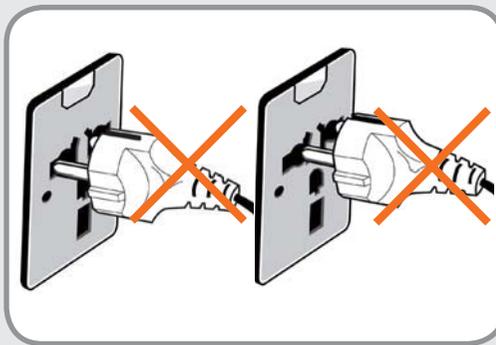
### When using the AC power plug

Connect the power plug pins perpendicular into the center of the power outlet.

- If the plug pins are not inserted into the center of the holes, the plug pins are only inserted up to half their length. In this case, reconnect the power plug.
- You have to insert the power plug into the outlet when the power indicator (LED) of the power outlet is lit green. If the power is connected properly, the power indicator (LED) remains green. Otherwise, the power indicator (LED) is turned off. In this case, unplug the power, check if the power indicator (LED) is green, and then reconnect the power plug.

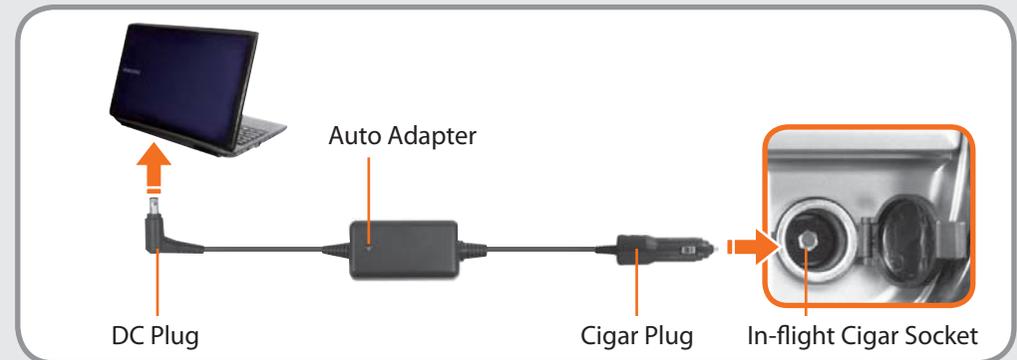


Good Example ○



### When using the auto adapter

When the cigar socket is provided, you have to use the auto adapter (optional). Insert the cigar plug of the auto adapter into the cigar socket and connect the DC plug of the auto adapter to the power input port of the computer.



### When using the Airplane Charging Converter

Depending on the airplane, you have to use the auto adapter and charging converter. Connect the airplane charging converter (optional) to the auto adapter (optional) and then insert the airplane power input jack into the power outlet.



Maintaining a proper posture during computer use is very important to prevent physical harm.

The following instructions are about maintaining a proper posture during computer use developed through human engineering. Please read and follow them carefully when using the computer.

Otherwise, the probability of (RSI: Repetitive Strain Injury) from repeated operations may increase and serious physical harm may be caused.



- The instructions in this manual have been prepared so that they can be applied within the coverage of general users.
- If the user is not included in the coverage, the recommendation is to be applied according to the user's needs.

## Proper Posture

### Adjust the heights of desks and chairs appropriate to your height.

The heights are to be adjusted so that your arm forms a right angle when you place your hand over the keyboard while sitting down on a chair.

Adjust the height of chair so that your heel is comfortably placed on the floor.

- Do not use the computer while you are lying down, but only while you are sitting down.
- Do not use the computer on your lap. If the computer temperature increases, there is a danger of burning yourself.
- Work while keeping your waist straight.
- Use a chair with a comfortable back.
- Keep the center of your leg weight not on the chair but on your feet when you are sitting on a chair.
- To use the computer while talking over the telephone, use a headset. Using the computer with the phone on your shoulder is bad for posture.
- Keep frequently used items within a comfortable work range (where you can reach them with your hands).



## Eye Position

Keep the monitor or LCD away from your eyes by at least 50cm.



- Adjust the height of the monitor and the LCD screen so that its top height is equal to or lower than your eyes.
- Avoid setting the monitor and LCD excessively bright.
- Keep the monitor and LCD screen clean.
- If you wear glasses, clean them before using the computer.
- When entering contents printed on a paper into the computer, use a static paper holder so that the height of the paper is almost equal to that of the monitor.

## Hand Position

Keep your arm at a right angle as shown by the figure.



- Keep the line from your elbow to your hand straight.
- Do not place your palm over the keyboard while typing.
- Do not hold the mouse with excessive force.
- Do not press the keyboard, touchpad or mouse with excessive force.
- It is recommended connecting an external keyboard and mouse when using the computer for long periods of time.

## Volume Control (Headphones and Speakers)

---

**Check your volume first to listen to music.**



- Check if the volume is too loud before using headphones.
- It is not recommended using headphones for long periods of time.
- Any deviation from the equalizer default setting could cause hearing impairment.
- The default setting can be changed through software and driver updates without your intervention. Please check the equalizer default setting before first usage.

## Use Time (Break Time)

---

- Take a break for 10 minutes or more after a 50-minute period when working for more than one hour.

## Illumination

---

- Do not use the computer in dark locations. The illumination level for computer use must be as bright so for reading a book.
- Indirect illumination is recommended. Use a curtain to prevent reflection on the LCD screen.

## Operation Condition

---

- Do not use the computer in hot and humid locations.
- Use the computer within the allowed temperature and humidity range specified in the User Guide.

## Front View



- The pictures used for the cover and the main body in the User Manual are those of the representative model of each series. Therefore the colors and appearance of the pictures may differ from the actual appearance of the product depending on the model.
- The actual color and appearance of the computer may differ from the pictures used in this guide.



1	<b>Camera/Camera LED (Optional)</b>	Using this camera, you can take still pictures and record video. If you use this, the LED will turn on.
2	<b>LCD</b>	The screen images are displayed here.
3	<b>Speaker</b>	A device used to generate sound.
4	<b>Power Button </b>	Turns the computer on and off.
5	<b>Keyboard</b>	A device to enter data by pressing the keys.
6	<b>Fingerprint Sensor (Optional)</b>	This is the device that recognizes fingerprints. Use the device with the security program.
7	<b>Status Indicators</b>	Shows the operating status of the computer. The corresponding operating LED is lit when the corresponding function operates.
8	<b>Multi Card Slot (Optional)</b>	A card slot supports multi cards.
9	<b>Touchpad/Touchpad buttons/Pointing Stick Buttons (Optional)</b>	These devices provide functions similar to the mouse ball and buttons.
10	<b>Pointing Stick (Optional)</b>	These devices provide functions similar to the mouse ball and buttons.
11	<b>Computer Lock Button </b>	You can lock Windows or switch users.
12	<b>Webcam/Internal MIC Button </b>	Press this button to turn the webcam and the internal microphone on or off.

## Front View



- The pictures used for the cover and the main body in the User Manual are those of the representative model of each series. Therefore the colors and appearance of the pictures may differ from the actual appearance of the product depending on the model.
- The actual color and appearance of the computer may differ from the pictures used in this guide.



13

### Wireless Button



Easily turns on or off the several wireless network settings at the same time.

- This button is useful on the airplane to turn off every wireless network device.
- You also can set up a specific wireless network device with the Fn +  key combination.

**On**  : Shows that any wireless network devices are turned on.

**Off**  : Shows that no wireless network device is turned on.



Initializing process will take about 5 seconds after pressing this button. If you want to change the status again, press this button after 5 seconds.

If the device cannot search wireless network while this button shows **On**, press the Fn +  key combination to search and configure it manually.

### 14 Microphone

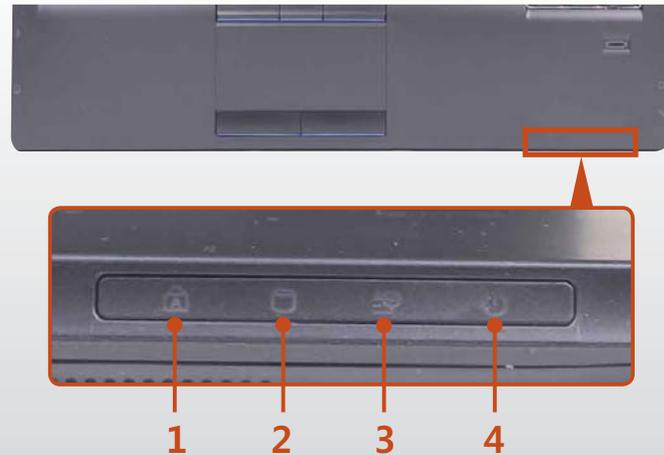
You can use the built-in microphone.



### Using the camera, web cam

Using the Cyberlink YouCam program (optional), you can take pictures or record video by using the computer's built-in camera by adding the balloon talk or frame effect.

## Status Indicators



### 1 Caps Lock

This turns on when the Caps Lock key is pressed allowing capital letters to be typed without holding the Shift button down.

**On:** Upper-case alphabetic input

**Off:** Lower-case alphabetic input

### 2 HDD/ODD

This turns when either the HDD or ODD is being accessed.

### 3 Charge Status

This shows the power source and the battery charge status.

 **Green:** When the battery is fully charged or the battery is not installed.

 **Red:** When the battery is being charged.

 **Off:** When the computer is running on battery power without being connected to AC adapter.

### 4 Power

This shows the computer operating status.

**On:** When the computer is operating.

**Blinks:** When the computer is in Sleep mode.

## Right View

### ► For 12.5 inch models



#### 1 USB Port

You can connect USB devices to the USB port such as a keyboard/mouse, digital camera, etc.

#### 2 eSATA/ USB Common Port (Optional)

This port can be used to connect a USB or eSATA device.

 Windows XP does not support eSATA.

#### 3 Monitor Port

A port used to connect a monitor, TV or projector supporting a 15pin D-SUB interface.

#### 4 Security Lock Port

You can connect a Kensington lock to the Security Lock Port to prevent the computer from being stolen.

#### What is an e-SATA port?

This is a new type of connection between a PC and peripheral devices. It is generally used to connect a PC and an external-type hard disk drive.

## Right View

### ► For 14 inch models



### ► For 15.6 inch models



#### 1 Headphone Jack

A jack used to connect the headphones.

#### 2 Microphone Jack

A jack used to connect the microphone.

#### 3 CD Drive (ODD) (Optional)

Plays CD or DVD titles.  
Since an ODD(Optical Disk Drive) is optional, the installed drive depends on the computer model.

#### 4 eSATA/ USB Common Port (Optional)

This port can be used to connect a USB or eSATA device.  
 Windows XP does not support eSATA.

#### 5 USB Port

You can connect USB devices to the USB port such as a keyboard/mouse, digital camera, etc.

#### 6 Security Lock Port

You can connect a Kensington lock to the Security Lock Port to prevent the computer from being stolen.

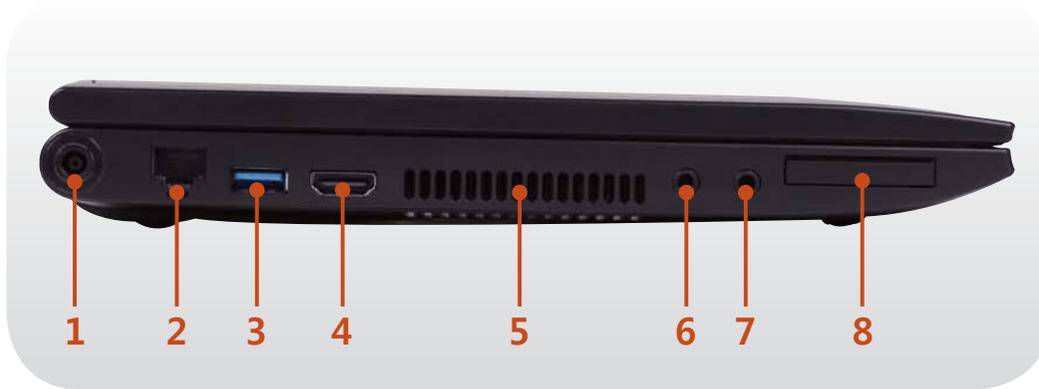
#### What is an e-SATA port?

This is a new type of connection between a PC and peripheral devices. It is generally used to connect a PC and an external-type hard disk drive.

# Overview

## Left View

### ► For 12.5 inch models



### What is a Chargeable USB port?

- USB device accessing and charging functions are supported.
- The USB charging function is supported regardless of whether the power is turned on or off.
- Charging a device through a Chargeable USB port may take longer than general charging.
- Using the Chargeable USB function when the computer is running on battery power reduces the battery usage time.
- The user cannot evaluate the charging status of the USB device from the computer.
- This may not be supported for some USB devices.

### 1 DC Jack

A jack to connect the AC adapter that supplies power to the computer.

### 2 Wired LAN Port

Connect the Ethernet cable to this port.

### 3 USB Port or Chargeable USB Port (Optional)

USB ports to which you can connect USB devices as well as a Chargeable USB port are provided.

Using a Chargeable USB port, you can access or charge a USB device.



The port can be distinguished by the figure printed on the port of the product.

 USB 2.0 port

 Chargeable USB 2.0 port

 USB 3.0 port

 Chargeable USB 3.0 port

### 4 Digital Video/Audio Port (HDMI) (Optional)

You can connect an HDMI cable to this port. Using this port, you can enjoy digital video and audio on the TV.

### 5 Fan Vents

The internal heat of the computer is emitted through these holes.



If the vents are blocked the computer may overheat. Avoid blocking the vents as this may be dangerous.

### 6 Microphone Jack

A jack used to connect the microphone.

### 7 Headphone Jack

A jack used to connect the headphones.

### 8 ExpressCard Slot (Optional)

Install the Express card into this slot.

## Left View

### ► For 14 inch models



### What is a Chargeable USB port?

- USB device accessing and charging functions are supported.
- The USB charging function is supported regardless of whether the power is turned on or off.
- Charging a device through a Chargeable USB port may take longer than general charging.
- Using the Chargeable USB function when the computer is running on battery power reduces the battery usage time.
- The user cannot evaluate the charging status of the USB device from the computer.
- This may not be supported for some USB devices.

### 1 DC Jack

A jack to connect the AC adapter that supplies power to the computer.

2	Wired LAN Port 	Connect the Ethernet cable to this port.
3	Fan Vents	<p>The internal heat of the computer is emitted through these holes.</p> <p> If the vents are blocked the computer may overheat. Avoid blocking the vents as this may be dangerous.</p>
4	Monitor Port 	A port used to connect a monitor, TV or projector supporting a 15pin D-SUB interface.
5	Digital Video/ Audio Port (HDMI) (Optional)	You can connect an HDMI cable to this port. Using this port, you can enjoy digital video and audio on the TV.
6	USB Port or Chargeable USB Port (Optional)	<p>USB ports to which you can connect USB devices as well as a Chargeable USB port are provided.</p> <p>Using a Chargeable USB port, you can access or charge a USB device.</p> <p> The port can be distinguished by the figure printed on the port of the product.</p> <ul style="list-style-type: none"> <li> USB 2.0 port</li> <li> Chargeable USB 2.0 port</li> <li> USB 3.0 port</li> <li> Chargeable USB 3.0 port</li> </ul>
7	ExpressCard Slot  (Optional)	Install the Express card into this slot.

## Left View

### ► For 15.6 inch models



### What is a Chargeable USB port?

- USB device accessing and charging functions are supported.
- The USB charging function is supported regardless of whether the power is turned on or off.
- Charging a device through a Chargeable USB port may take longer than general charging.
- Using the Chargeable USB function when the computer is running on battery power reduces the battery usage time.
- The user cannot evaluate the charging status of the USB device from the computer.
- This may not be supported for some USB devices.

**1 DC Jack**  A jack to connect the AC adapter that supplies power to the computer.

**2 Wired LAN Port**  Connect the Ethernet cable to this port.

### **3 USB Port or Chargeable USB Port (Optional)**

USB ports to which you can connect USB devices as well as a Chargeable USB port are provided.

Using a Chargeable USB port, you can access or charge a USB device.



The port can be distinguished by the figure printed on the port of the product.

 USB 2.0 port

 Chargeable USB 2.0 port

 USB 3.0 port

 Chargeable USB 3.0 port

### **4 Fan Vents**

The internal heat of the computer is emitted through these holes.



If the vents are blocked the computer may overheat. Avoid blocking the vents as this may be dangerous.

### **5 Monitor Port**

A port used to connect a monitor, TV or projector supporting a 15pin D-SUB interface.

### **6 Digital Video/Audio Port (HDMI) (Optional)**

You can connect an HDMI cable to this port. Using this port, you can enjoy digital video and audio on the TV.

### **7 Microphone Jack**

A jack used to connect the microphone.

### **8 Headphone Jack**

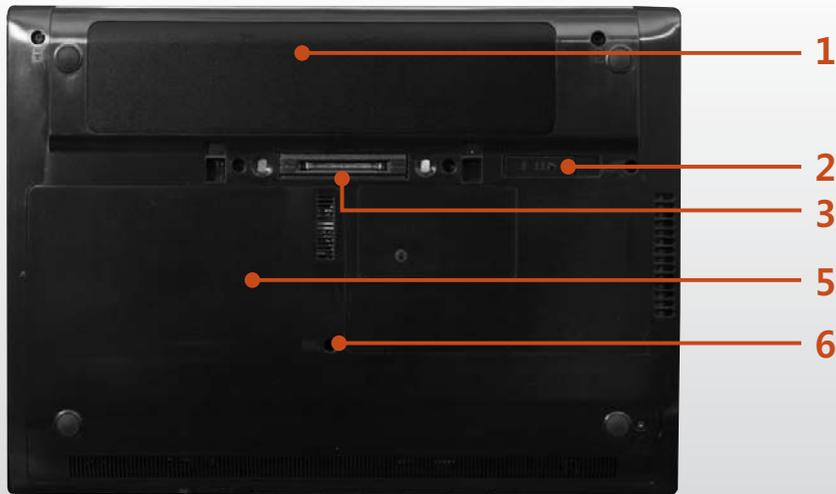
A jack used to connect the headphones.

### **9 ExpressCard Slot (Optional)**

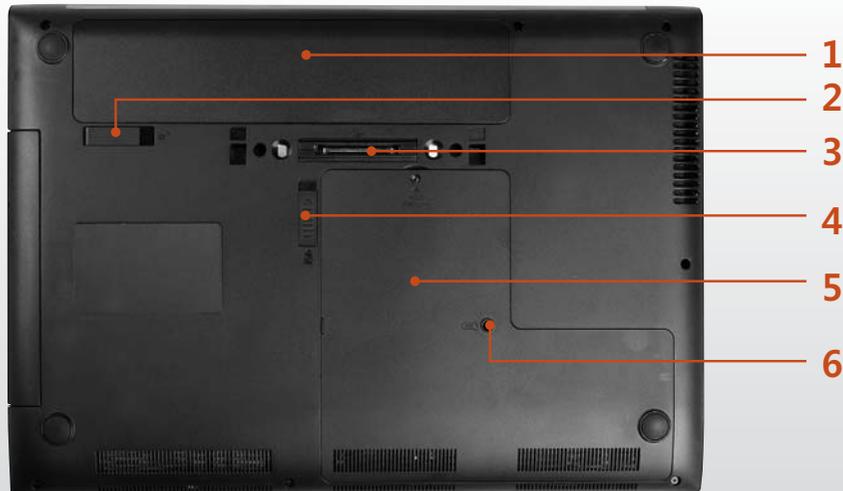
Install the Express card into this slot.

## Bottom View

### ► For 12.5 inch models



### ► For 14, 15.6 inch models



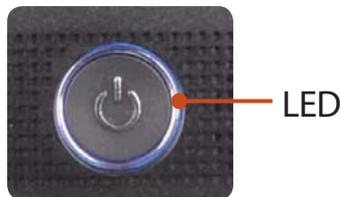
<p><b>1 Battery</b></p>	<p>This is a Lithium-Ion rechargeable battery that supplies power to the computer.</p>
<p><b>2 Battery Latches</b> </p>	<p>The latch used to remove or install the battery.</p>
<p><b>3 Docking Port</b>  (Optional)</p>	<p>This is the port to connect the Business Docking Station to (sold separately).</p>
<p><b>4 CD drive (ODD) separation latch</b>  (Optional)</p>	<p>This latch is to separate the CD or DVD drive from the computer.</p>
<p><b>5 Memory Compartment Cover/ Hard Disk Drive Compartment Cover</b></p>	<p>The main memory and hard disk drive is installed inside the cover.</p>
<p><b>6 Keyboard draining hole</b> </p>	<p>When a small amount of liquid is spilt over the keyboard, the liquid can be drained through this hole.</p> <p> Since completely water proofing the product is not guaranteed, in the case of inundation, immediately separate the power cord and battery and call the service center.</p>

## Turning the computer on

- 1 Install the **battery** and connect the **AC adapter**.
- 2 Lift the LCD panel up.
- 3 Press the **Power button** to turn the computer on.



- 4 **Power button LED** is lit while the computer is turned on.



## About Windows Activation

When you turn the computer on for the first time, the Windows activation screen appears.

Follow the activation procedures according to the instructions on the screen to use the computer.

## Entering Sleep mode

When the computer is turned on, press the computer's power button once briefly.

## Adjusting the screen brightness

When the computer runs on battery power, the LCD brightness is automatically set to low.

Press the **Fn** + **F3** key combination to increase the screen brightness.

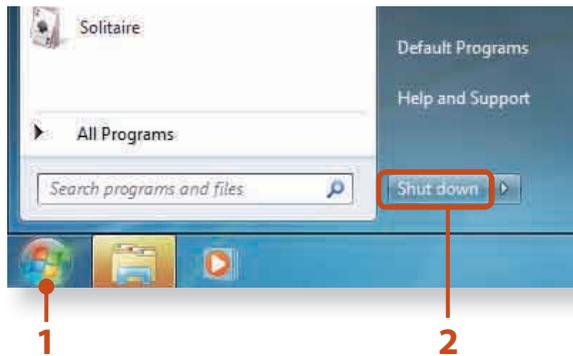
## Turning the computer off



- Since the procedures to turn the computer off may differ depending on the installed operating system, please turn the computer off according to the procedures for the purchased operating system.
- Save all your data before clicking on **Shut down**.
- If **Samsung Fast Start** is installed, the system shutdown location may differ.

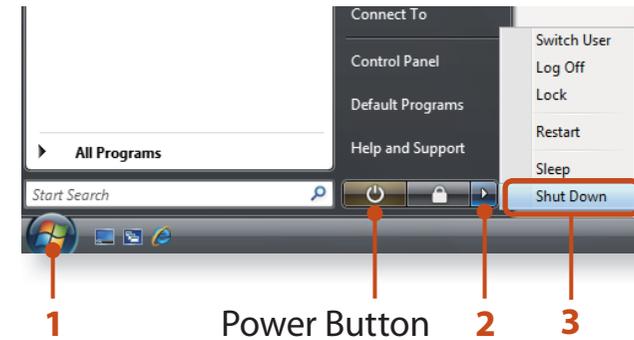
### ► For Windows 7

Click **Start**  > **Shut down mode**  to shutdown the computer.



### ► For Windows Vista

Click on **Start**  >  and then click on **Shut Down** as shown in the figure below to shut the computer down.



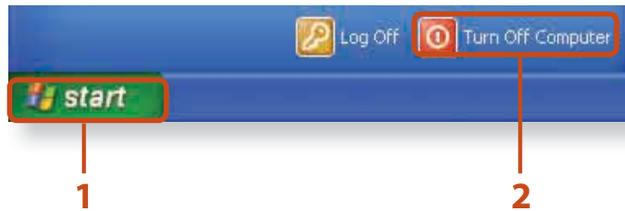
### Using the Power button in Windows Vista

For Windows Vista, the Power button is set to power saving mode. Therefore, if you click **Start** > **Power button** , the computer enters **power saving mode**.

To shut down the computer by clicking this icon, refer to the descriptions for Setting up Start menu power button of the Control Panel.

## ► For Windows XP

- 1 Click the **Start**  button on the taskbar.  
Click **Turn Off Computer**.



- 2 Click **Turn Off**.



 If the system cannot be shut down due to a system error, turn it off by pressing and holding the Power Button for a minimum of 4 seconds.

Please note that turning the computer off by this method may cause a system problem. Thereafter, when turning the computer back on, the disk checking program may launch to check for and correct any disk errors.

## Samsung Fast Start (Optional)



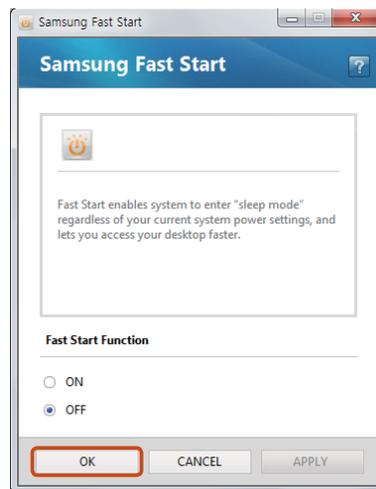
These descriptions are for Windows 7 and for supported models only.

If you are using the system very often while on the move, use **Fast Start** to reduce the booting time.

When the Samsung Fast Start function is being used, the computer runs in hybrid power-saving mode when the computer enters standby mode or hibernation mode.

### Using Fast Start

- 1 Runs **Samsung Fast Start**.
- 2 Select **ON** or **OFF** depending on your requirements, and click **OK**.



- 3 The Fast Start function will be turned on or off according to your selection.



#### While the Fast Start function is enabled

- You cannot change some power options in the Control Panel. To change these, first disable the Fast Start function.
- The existing power saving mode and maximum power saving mode functions have been replaced by this function.
- Battery and AC power should be removed before you open memory door to change or add memory.

The LCD may flicker once if the Fast Start function is turned ON or OFF.



#### What is hybrid power-saving mode?

In hybrid saving mode, the data you are working on will be saved to memory and the HDD, in the event of a sudden power failure, ensuring the safety of your data.

However, as unexpected accidents can always occur, it is recommended backing up any important data beforehand.



## Chapter 2. Using the computer

<b>Keyboard</b>	<b>38</b>
<b>Touchpad</b>	<b>42</b>
<b>Pointing Stick (Optional)</b>	<b>49</b>
<b>CD Drive (ODD, Optional)</b>	<b>54</b>
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<b>Connecting an External Display Device</b>	<b>60</b>
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<b>Using the Security Device (Optional)</b>	<b>90</b>

Shortcut key functions and procedures are discussed in the following sections.



- The keyboard image may differ from the actual keyboard.
- The keyboard may differ depending on your country. The following mainly describes the shortcut keys.

## Shortcut Keys

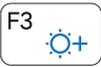
You can use the following functions by pressing the keys below with the **Fn** key.

### ► For 12.5 inch models



### ► For 14, 15.6 inch models

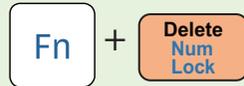


Fn	Name	Function
	<b>REST (Sleep Mode)</b>	Switches to Sleep mode. To wake the computer up, press the Power button.
 	<b>Screen Brightness Control</b>	Controls the screen brightness.
 +  or 	<b>CRT/LCD</b>	Switches the screen output to the LCD or external monitor when an external monitor (or TV) is connected to the computer.
	<b>Touchpad/ Pointing Stick</b>	Turns the touchpad function or pointing stick function on or off.
	<b>Omnipass</b>	The Omnipass security program is executed.

Fn	Name	Function
 +  or 	<b>Samsung Support Center</b>	System diagnosis, recovery and Internet consultation program, <b>Samsung Support Center</b> , will be launched. (Optional)   For some models, <b>Samsung Magic Doctor</b> is launched.
 +  or 	<b>Battery mode</b>	To use the battery efficiently, you can change the battery mode according to your usage environment.
 + 	<b>Mute</b>	Mutes or cancels mute.
 +  	<b>Volume Control</b>	Controls the volume.
 + 	<b>Wireless network</b>	Turns on or off wireless network device in a model equipped with wireless network device.

## Numeric Key (For 12.5 inch models)

Press the Fn + NumLock key to use some of the keys as numeric keys.



## Numeric Key (For 14, 15.6 inch models)

For 14-inch models, press the NumLock key to use some of the keys as numeric keys.

For 15.6-inch models, once the NumLock is on, the numeric keypad in the right side of the keyboard is enabled.



## Other Function Keys

Performs the right-click mouse function (touchpad).



If the hot keys do not work properly, you have to install the **Easy Display Manager**.

The touchpad provides the same function as a mouse and the left and right buttons of the touchpad plays the role of the left and right buttons of a mouse.

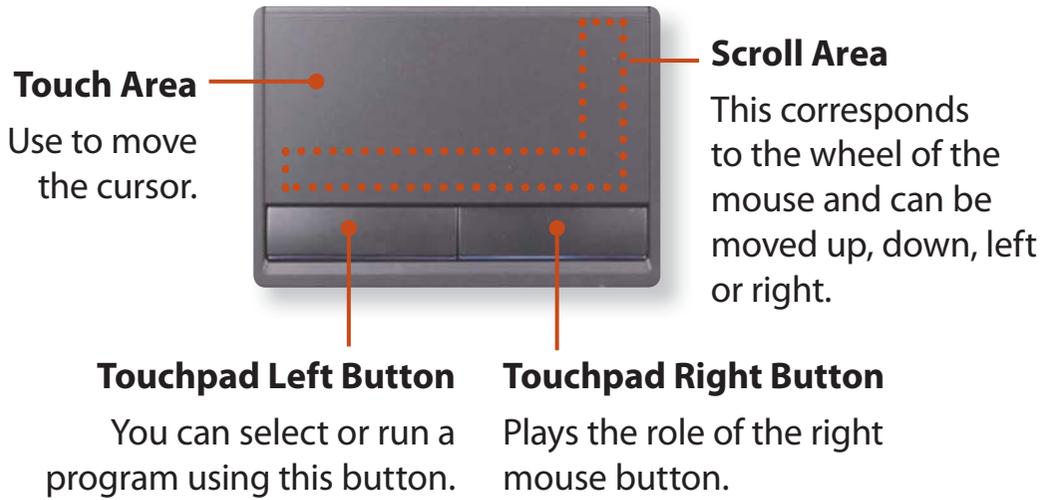
To use the touchpad, the touchpad driver is required.

A built-in Windows driver and a driver provided by the manufacturer are provided. For a better performance, using the driver provided by the touchpad manufacturer is recommended.

The driver provided by the touchpad manufacturer is already installed in this product by default when you purchase this product. **When you reinstall Windows or change the operating system, using the driver provided by the corresponding manufacturer is recommended.**



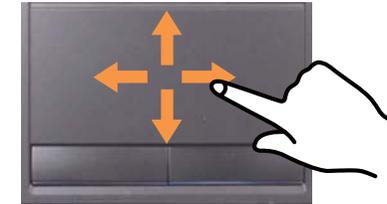
- Use the Touchpad with your fingers. Using a sharp object may damage the Touchpad.
- If you touch the Touchpad or press the Touchpad buttons while booting up, the Windows boot time may be extended.
- Checking the touchpad manufacturer Click the **Start > Control Panel > Hardware and Sound > Mouse > Hardware** tab and check the device (E.g. Elan, Synaptics, etc. ).
- The Windows driver provides basic touchpad functions (moving the pointer, clicking, etc.) but the gesture function is not supported.



## Basic Touchpad Functions

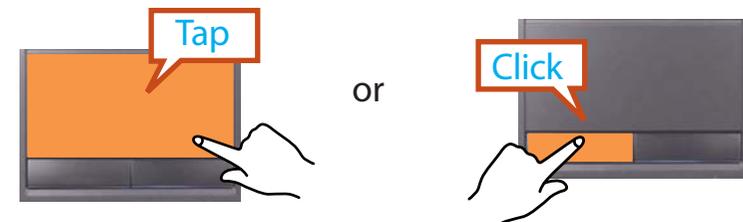
### Moving the cursor on the screen

Place your finger on the touchpad slightly and move your finger. The mouse cursor will move accordingly. Move your finger in the direction you wish to move the cursor.



### Click Function

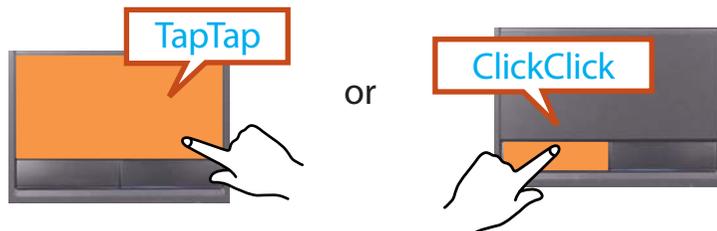
Place a finger on the touchpad and click on an item once. Alternatively, press the left button once quickly and release it.



## Double-Click Function

Put your finger on the touchpad and quickly tap twice with your finger on an item you want.

Alternatively, press the left touchpad button twice quickly.



## Right Button Function

This corresponds to clicking the right mouse button.

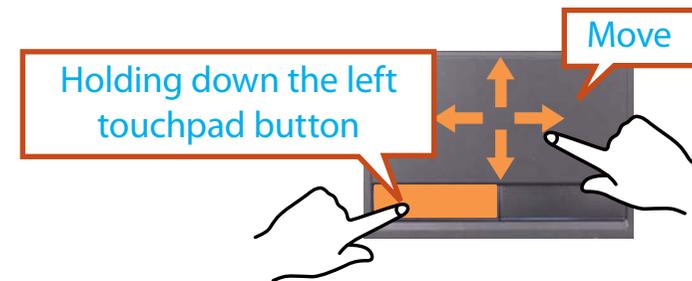
Press the right touchpad button once. The corresponding pop-up menu appears.



## Drag Function

Dragging refers to moving an item to another place after selecting it.

Press and hold down the left touchpad button over an item you want to drag and move the item to the new location.



## The Gesture Function of the Touchpad (Optional)



- The Touchpad Gesture function may not be provided and the version of the function may differ depending on the model. Some usage procedures may differ depending on the version.
- For detailed usage procedures, refer to the description in the Touchpad Settings window.
- Since these descriptions are written on the basis of the latest operating system, Windows 7, some of the content and the figures of the descriptions may differ depending on the operating system. Since the procedures for other Windows operating systems are similar, use the computer referring to these descriptions.

Using the Touchpad, you can use the following additional Gesture functions.

- **Scroll function**
- **Zoom functions**
- **Rotation function**
- **Page Move Function**

## Configuring the Gesture Function

If the Gesture function is not activated, you can activate it according to the following procedures.

1

### ▶ When using the Elan driver

Click the **Start > Control Panel > Hardware and Sound > Mouse > ELAN > Options** button.

### ▶ When using the Synaptics driver

Click the **Start > Control Panel > Hardware and Sound > Mouse > Device Settings** tab > **Settings** button.

2

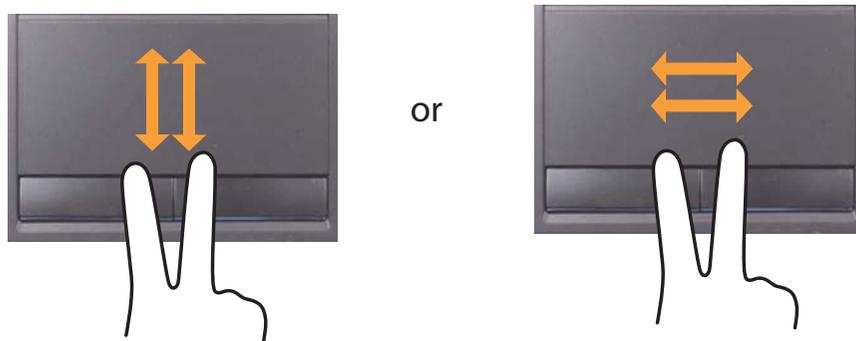
The Touchpad Settings window appears. Click over the corresponding item to select the item in the **Select an item** and click **OK**.



To cancel the Gesture function, unselect the corresponding item in the Touchpad Settings window and click **OK**.

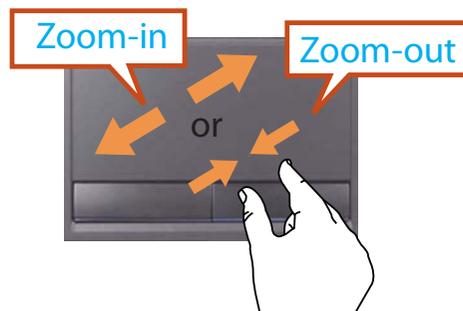
## The Scroll Function

This function is the same as the scroll area of the Touchpad. If you place two fingers over the Touchpad and move them up, down, left or right, the screen is scrolled up, down, left or right accordingly.



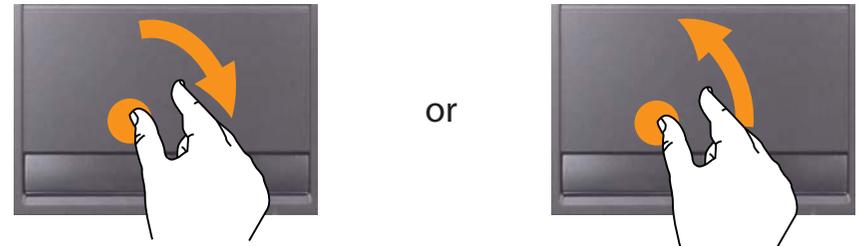
## Zoom Functions

If you place two fingers over the Touchpad together or apart, the current image or text is zoomed in or out.



## Rotation function

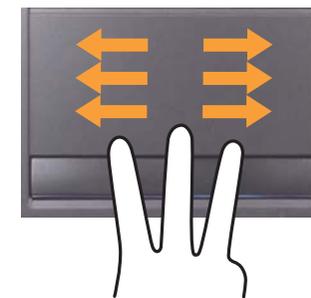
Place two fingers over the touchpad and move the fingers as follows to rotate the photo or image.



## Page Move Function

You can move to the previous or next page when you are looking at a photo or surfing the Internet.

For example, if you lightly brush three fingers to the left while you are looking at a web site, you will return to the previous page.



## Setting the Touchpad Sensitivity

If the touchpad reacts too sensitively or the pointer moves unintentionally, please adjust the touchpad pointer speed and sensitivity.

### Adjusting the Pointer Speed

Click **Start > Control Panel > Hardware and Sound > Mouse > Pointer Options** and then adjust the pointer speed.

### Adjusting the Touchpad Palm Detection Function

The palm detection function is to avoid malfunctions when the palm touches the touchpad by mistake.

 This function is provided by the touchpad driver provided by the manufacturer.



### ▶ When using the Elan driver

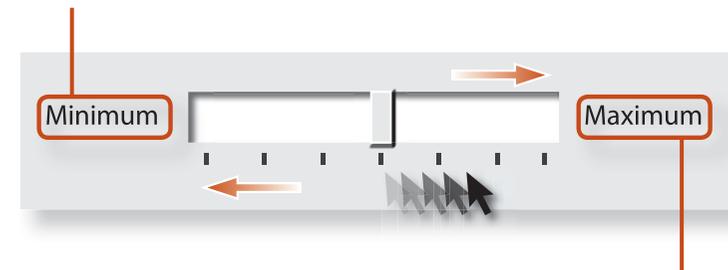
Click **Start > Control Panel > Hardware and Sound > Mouse > ELAN > Options > PalmTracking** and then adjust the sensitivity.

### ▶ When using the Synaptics driver

Click **Start > Control Panel > Hardware and Sound > Mouse > Device Settings > Settings > Pointing > Sensitivity > PalmCheck** and then adjust the sensitivity.

### When the touchpad pointer does not move smoothly:

Slide the bar appropriately in the direction of Minimum.



### When the touchpad pointer moves unintentionally (excessively):

Slide the bar appropriately in the direction of Maximum.

## Touchpad On/Off Function

### Locking with shortcut keys

If you don't want to use the touchpad, you can turn the touchpad off.

Press the  +  key combination once. Then the screen appears where you can select a device mode.

Since pressing the  key while holding down the  key changes the selection, select a device mode.

- Touchpad ON / Pointing Stick ON
- Touchpad ON / Pointing Stick OFF
- Touchpad OFF / Pointing Stick ON



You can set the touchpad and touchpad button settings in the tabs that appear when clicking **Start > Control Panel > Hardware and Sound > Mouse**.

### Auto-locking when connecting USB mouse

#### ► When using the Elan driver

Click **Start > Control Panel > Hardware and Sound > Mouse > ELAN**, and check the **Disable When external USB mouse plug in** option. This will turn the touchpad and the pointing stick off when a USB mouse is connected.

#### ► When using the Synaptics driver

Click **Start > Control Panel > Hardware and Sound > Mouse > Device Settings**, and check the **Disable internal pointing device when external USB pointing device is attached** in option. This will turn the touchpad and the pointing stick off when a USB mouse is connected.



In case of some touch-screen model, checking option locks the touchpad and the pointing stick even though you did not connect a USB mouse.



This auto-locking function is not provided for some models.

The pointing stick provides the same function as a mouse.

The buttons of the pointing stick plays the role of the left and right buttons and wheel button of a mouse.

To use the pointing stick, the pointing stick driver is required.

The driver provided by the pointing stick manufacturer is already installed in this product by default when you purchase this product. When you reinstall Windows or change the operating system, using the driver provided by the corresponding manufacturer is recommended.



- Use the pointing stick with your fingers. Using a sharp object may damage the pointing stick.
- If you touch the pointing stick or press the pointing stick buttons while booting up, the Windows boot time may be extended.
- Checking the pointing stick manufacturer  
Click the **Start > Control Panel > Hardware and Sound > Mouse > Hardware** tab and check the device (E.g. Elan, Synaptics, etc.).

## Pointing Stick

Use to move the cursor.



## Pointing Stick Left Button

You can select or run a program using this button.

## Pointing Stick Right Button

Plays the role of the right mouse button.

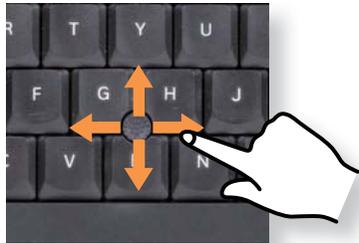
## Scroll Button

This corresponds to the wheel of the mouse.

## Basic Pointing Stick Functions

### Moving the cursor on the screen

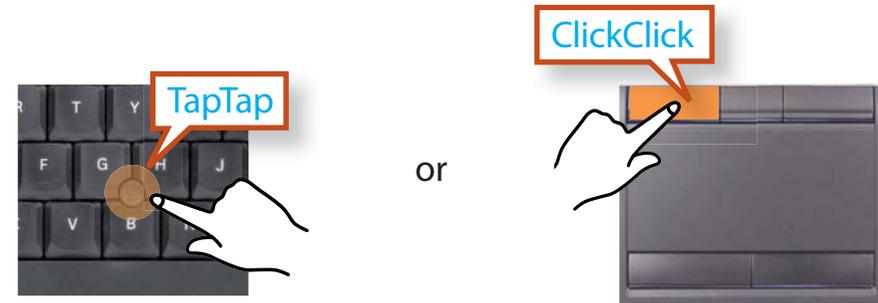
Place your finger on the pointing stick slightly and move your finger. The mouse cursor will move accordingly. Move your finger in the direction you wish to move the cursor.



### Double-Click Function

Put your finger on the pointing stick and quickly tap twice with your finger on an item you want.

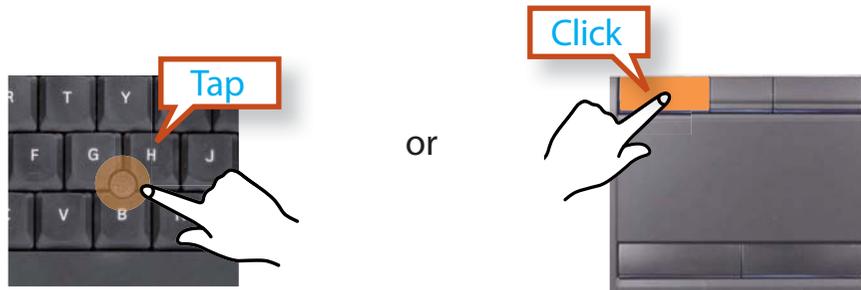
Alternatively, press the pointing stick left button twice quickly.



### Click Function

Place a finger on the pointing stick and click on an item once.

Alternatively, press the pointing stick left button once quickly and release it.



### Right Button Function

This corresponds to clicking the right mouse button.

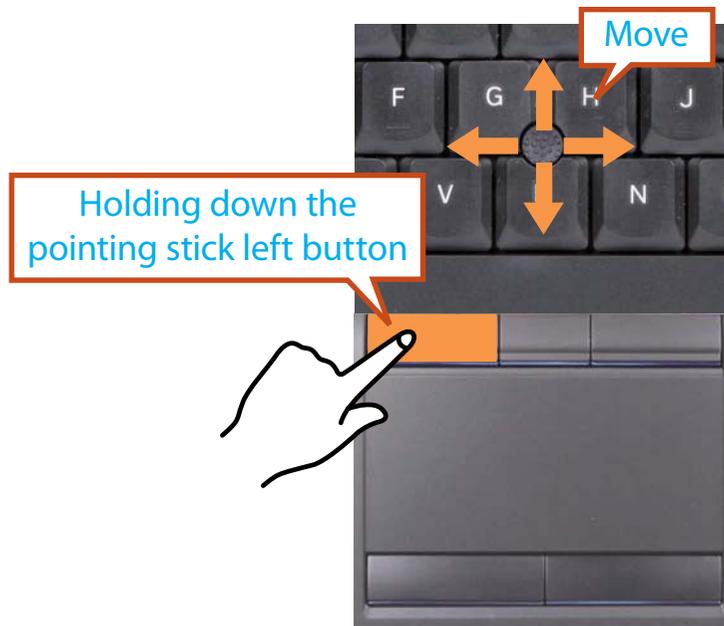
Press the pointing stick right button once. The corresponding pop-up menu appears.



## Drag Function

Dragging refers to moving an item to another place after selecting it.

Press and hold down the pointing stick left button over an item you want to drag and move the item to the new location.

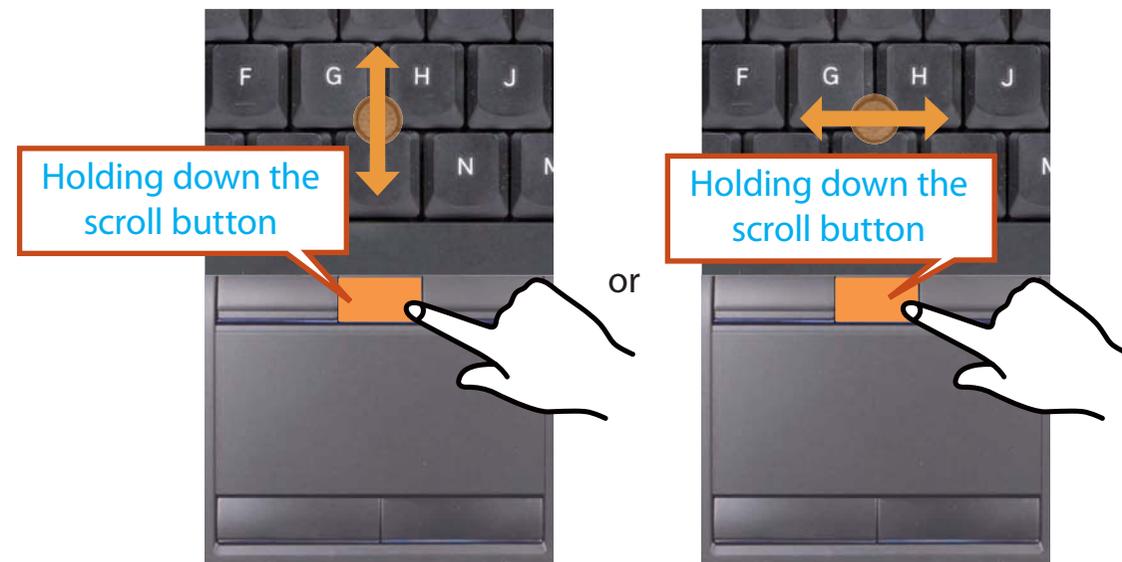


## Scroll Function

This function is the same as the scroll area of the Touchpad.

Press and hold down the scroll button and move the pointing stick up, down, left or right.

Then, the screen is scrolled up, down, left or right accordingly.



# Pointing Stick (Optional)

## Adjusting the Pointing Stick Sensitivity

If the pointing stick reacts too sensitively or the pointer moves unintentionally, please adjust the pointing stick pointer speed and sensitivity.

### Adjusting the Pointer Speed

Click **Start > Control Panel > Hardware and Sound > Mouse > Pointer Options** and then adjust the pointer speed.

### Adjusting the Pointing Stick Touch Sensitivity

You can control how much finger pressure is required to move the pointer.

#### ► When using the Synaptics driver

Click **Start > Control Panel > Hardware and Sound > Mouse > Device Settings > Settings > Touch Sensitivity** and then adjust the sensitivity.

## Pointing Stick On/Off Function

### Locking with short keys

If you don't want to use the pointing stick, you can turn the pointing stick off.

Press the  +  key combination once. Then the screen appears where you can select a device mode.

Since pressing the  key while holding down the  key changes the selection, select a device mode.

- Touchpad ON / Pointing Stick ON
- Touchpad ON / Pointing Stick OFF
- Touchpad OFF / Pointing Stick ON



You can set the pointing stick and pointing stick button settings in the tabs that appear when clicking **Start > Control Panel > Hardware and Sound > Mouse**.

## Auto-locking when connecting USB mouse

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### ► When using the Synaptics driver

Click **Start > Control Panel > Hardware and Sound > Mouse > Device Settings**, and check the **Disable internal pointing device when external USB pointing device is attached** in option. This will turn the touchpad and the pointing stick off when a USB mouse is connected.

 In case of some touch-screen model, checking option locks the touchpad and the pointing stick even though you did not connect a USB mouse.

 This auto-locking function is not provided for some models.

An optical disk drive is optional and may differ depending on your computer model. For detailed specifications, refer to the catalogue.

- ! Do not insert a cracked or scratched CD. Otherwise, the CD may break and damage the optical disk drive when the CD rotates at a high speed.
- When you clean a CD or DVD title, wipe with a soft cloth from inside to outside.
- Insert a Mini CD into the center of the CD drive.
- The figures used for the description are of a representative model. Therefore the figures may differ from the real ones.
- Using a CD that is not in the shape of a circle is not recommended.

## Inserting and Ejecting a CD

- 1 Press the **Eject** button of the optical disk drive at the side of the computer.



- 2 When the CD tray opens, insert a CD or DVD and push the tray in until it clicks.

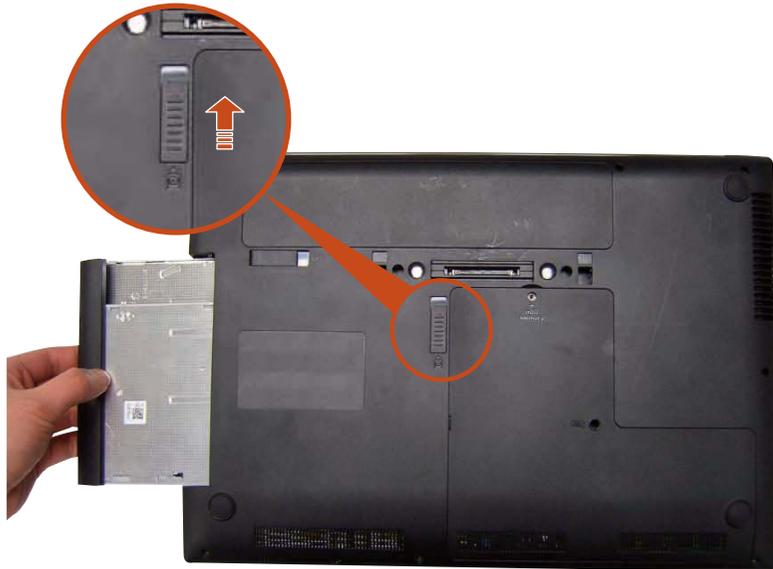


- 3 Push the CD tray inward until it clicks. The CD drive status indicator is turned on.

- A CD drive's reading and writing speed may differ depending on the condition and type of the media.
- To eject a CD when the CD drive does not work or the computer is off, place the end of a paper clip (  ) into the Emergency Hole until the CD tray is ejected.

## Installing/Removing the CD drive

- 1 Shutdown the system, close the LCD panel and place the computer upside down on a flat surface.
- 2 Pull the **CD drive separation latch**  outward, then remove the CD drive.



- 3 To install the CD drive again, slide the CD drive separation latch into the system. The **CD drive separation latch** move inward and fix the CD drive automatically.



Check if the **CD drive separation latch** has been moved inward.

The ExpressCard slot can be regarded as the next generation PCMCIA card specification and supports LAN, TV Tuner and Sound cards.

This computer's slot supports the Express Card/34 specification.



- If a slot protection dummy card is inserted into your computer, remove the dummy card before using the computer.
- This slot is a ExpressCard slot. You cannot connect a PCMCIA card here.
- Since these descriptions are written on the basis of the latest operating system, Windows 7, some of the content and the figures of the descriptions may differ depending on the operating system. Since the procedures for other Windows operating systems are similar, use the computer referring to these descriptions.

## To insert a card

- 1 Insert a card into the slot on the side of the computer.



ExpressCard slot

- 2 If you insert a card into the slot, Windows recognizes the card automatically or a message telling you to install a driver appears.

If the card is not automatically recognized, install the device driver supplied with the card.



If a window asking whether you want to scan and change appears, click on **Continue Without Scan**.

This will proceed to Step 2 above.

## To remove a card

- 1 Click the **Safely Remove Hardware** icon  on the task bar.
- 2 Click Remove **ExpressCard**.
- 3 You can remove the express card when the **Safely Remove Hardware** message appears.
- 4 Push the card in the slot lightly.  
Then the card pops up.
- 5 Eject the card.

Using the multi card slot, you can read and write data to cards.

You can use a card as a removable disk and conveniently exchange data with digital devices such as a digital camera, digital camcorder, MP3, etc..



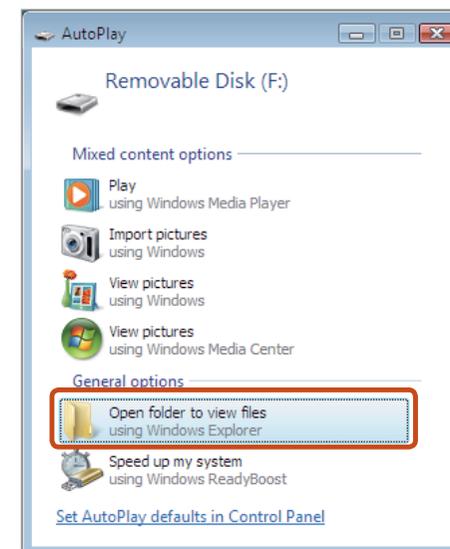
- Depending on the model, up to 7 types of cards can be supported: MS, MS Pro, SD, SDHC, SDXC, MMC, or xD.
- You have to additionally purchase a multi card with the necessary capacity depending on your requirements.
- You can use a multi card just like any data storage device. A copyright protection function is not supported.
- Since you can lose or damage a card when moving the computer, keep the card separately.
- The figures used for the description are of a representative model. Therefore the figures may differ from the real ones.
- If a slot protection dummy card is inserted into your computer, remove the dummy card before using the computer.
- These descriptions are written based on Windows 7, the latest operating system. Therefore, some descriptions and figures may differ from your operating system. But as the usage is similar to other Windows operating systems, you can use these descriptions for reference.

## Using the card

- 1 Insert the card into the multi card slot in the indicated direction.



- 2 The card drive appears. Click **Open folder and view files**. If the window does not appear, click **Start > Computer**.



 If a window asking to scan and change appears, click **Continue Without Scanning**. This will proceed to Step 2 above.

- 3** You can save, move and delete data by double-clicking the corresponding drive.  
You can only use the card after formatting it.



 The device name of the card drive may differ depending on your computer model.

## Using a Mini SD and RS-MMC

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Since the above cards are too small, you cannot insert the cards into the slot directly.

Insert the card into the dedicated adapter (available from most electronic retailers) and then insert the adapter into the multi card slot.

However, depending on the adapter's body material, some RS-MMC cards may not be recognized properly. Samsung recommend that you check the card is recognized correctly prior to purchasing.

## To remove a memory card

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Take hold of the end of the card and remove the card.

## To format a memory card

When using the memory card for the first time, you must format the card before using it.

 Formatting a card deletes all data saved on the card. If the card includes data, backup the data before formatting it.

- 1 Click **Start** > **Computer**.
- 2 Right-click over a card drive with the touchpad and select **Format**.
- 3 Click **Start** to the formatting.

-  To use a card to exchange data with a digital device such as a digital camera, formatting the data using the digital device is recommended.
- When you try to use a card, which is formatted in the computer, in another digital device, you may have to format the card again in the device.
- You cannot format, write or delete data from a SD, or SDHC card with a write protection tab when it is in the Lock position.
- Inserting and removing a memory card repeatedly may damage the memory card.

If you connect an external display device such as a monitor, TV, projector, etc., you can view the picture on the wider screen of the external device when you give a presentation or watch a video or movie.

The computer provides an analog monitor port (RGB) and a digital video/audio port (HDMI).

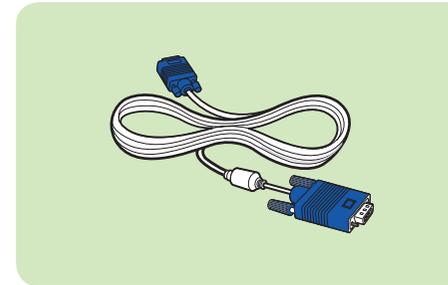
The visual quality is sharper when a display device is connected through the HDMI port rather than the analog monitor port (RGB) port. Therefore, when multiple ports are supported, connect a display device to a port that provides the better visual quality.



- Before you start, check the port and cable of the external display device and then connect the display device to the computer.
- Due to restrictions of the operating system the DualView function is not supported for Windows 7 Starter.

## About the connection cable

Users should additionally purchase the necessary connection cables.



Analog Monitor (RGB) Cable



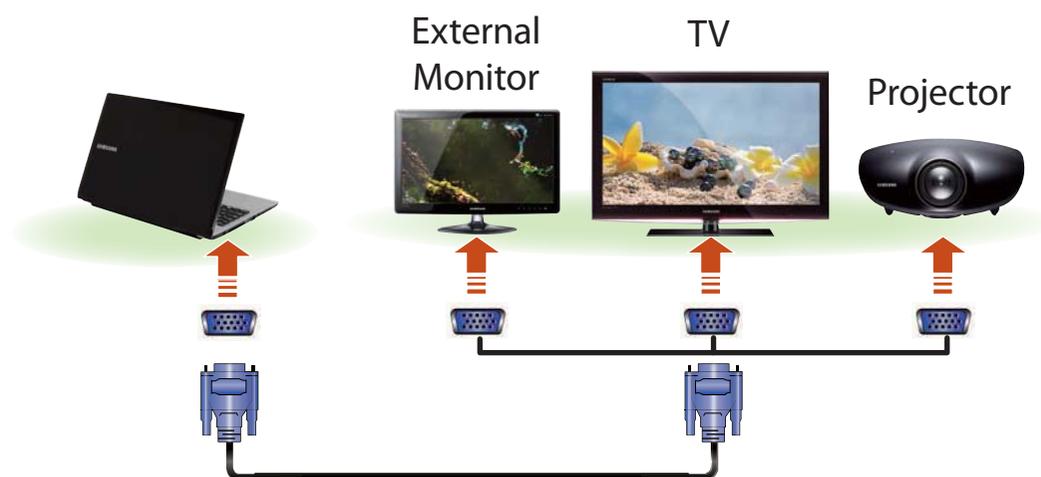
HDMI Cable

## Connecting to the monitor port

You can experience a wider screen by connecting the computer to a monitor, TV or projector with a monitor port.

You can give better presentations by connecting the computer to a projector.

- 1 Connect the RGB port of the computer and the port of the monitor or TV with the monitor cable (15 pin).



- 2 Connect the power cord of the connected monitor, TV or projector and turn the power on.

- 3 Press the **Fn + F4** key combination once. Then the Easy Display Manager screen appears where you can select a display device.

Since pressing the **F4** key while holding down the **Fn** key changes the selection, select a display device.



- If the screen is not switched even if you press the **Fn + F4** key combination, you have to install the **Easy Display Manager** program.
- External Monitor / TV is not supported in the DOS Command Prompt window.

LCD		
CRT		
LCD+CRT Clone		
LCD+CRT Dual View		



- Simultaneous output to the notebook LCD+RGB+HDMI is not allowed.
- **Alternatively, to set up Dual View:** Open the **Display Settings** window in the Control Panel, select **Monitor 2** and select the **Expand to fit to this monitor** checkbox to set dual view. For more detailed information, refer to the Windows online help.

## ► When Multi View is supported (Optional)

LCD Only		
External Display Only		
Multi View		



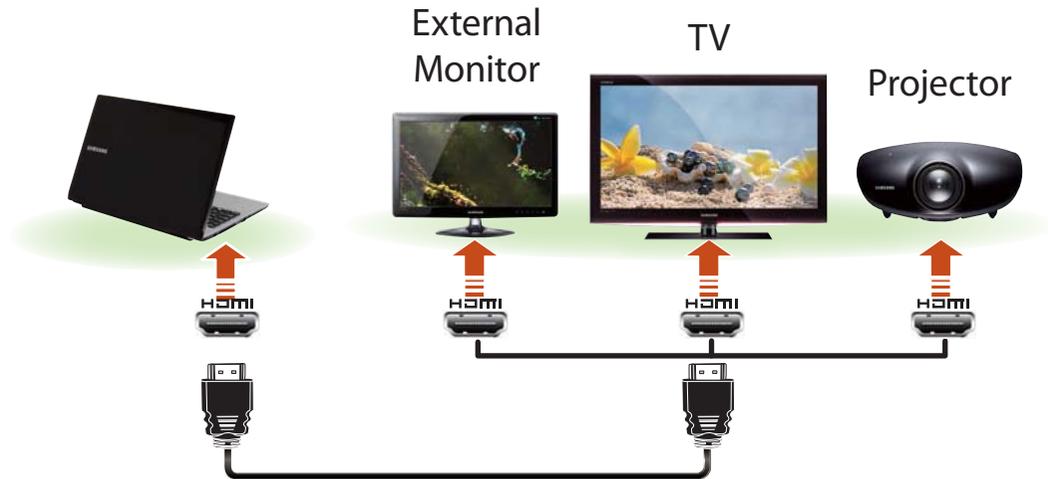
- **What is Multi View?**  
This refers to the mode that outputs the screen to the notebook LCD and the additionally connected monitors (RGB+HDMI) at the same time.
- **To configure Multi View**  
Select **NVIDIA Control Panel > Multi Display Setting**, select the additionally connected monitor and select the **Extend the Desktop to this display** option.

## Connecting through the HDMI port (Optional)

By connecting the computer to a TV with a HDMI port, you can enjoy both a high visual quality and a high sound quality.

After connecting a TV through HDMI, you have to configure the screen and sound.

- 1 Connect the HDMI cable to the HDMI port of the TV.



- This is only supported for models that support a TV output port (HDMI).
- When a TV provides more than one HDMI port, connect the computer to the **DVI IN** port.
- When connecting the computer to a TV, switch the external input mode of the TV to **HDMI**.

- 2 Press the **Fn + F4** key combination once. Then the Easy Display Manager screen appears where you can select a display device.

Since pressing the **F4** key while holding down the **Fn** key changes the selection, select a display device.



- If the screen is not switched even if you press the **Fn + F4** key combination, you have to install the **Easy Display Manager** program.
- External Monitor / TV is not supported in the DOS Command Prompt window.

HDMI		
LCD+HDMI Clone		
LCD+HDMI Dual View		



- Simultaneous output to the notebook LCD+RGB+HDMI is not allowed.
- **Alternatively, to set up Dual View:** Open the **Display Settings** window in the Control Panel, select **Monitor 2** and select the **Expand to fit to this monitor** checkbox to set dual view. For more detailed information, refer to the Windows online help.

## ▶ When Multi View is supported (Optional)

LCD Only		
External Display Only		
Multi View		



- **What is Multi View?** This refers to the mode that outputs the screen to the notebook LCD and the additionally connected monitors (RGB+HDMI) at the same time.
- **To configure Multi View** Select **NVIDIA Control Panel > Multi Display Setting**, select the additionally connected monitor and select the **Extend the Desktop to this display** option.

## Setting up HDMI TV video (Optional)

If the Desktop screen displayed on the TV does not fit to the TV screen, configure it as follows depending on the graphics card.



- You can view the graphics card type by selecting **Device Manager > Display adapters** and then clicking the + symbol.
- The screen images and terms may differ from actual product depending on the computer model and driver version.

## ► For Intel graphics cards

1 Right-click over the Desktop and select **Graphics Properties**.



If a window appears where you can select the mode, select **Basic Mode** and click **OK**.

2 Click **Display > General Settings**, select **Customize Aspect Ratio** in the **Scaling** field, fit the Desktop to the TV screen and click **OK**.



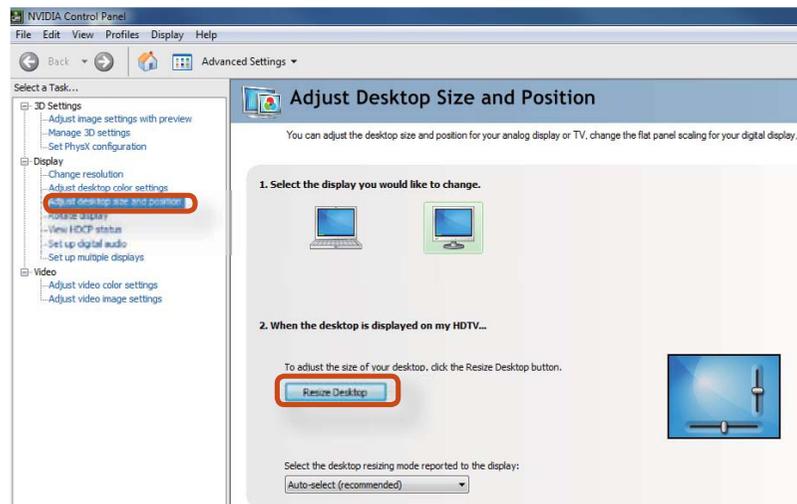
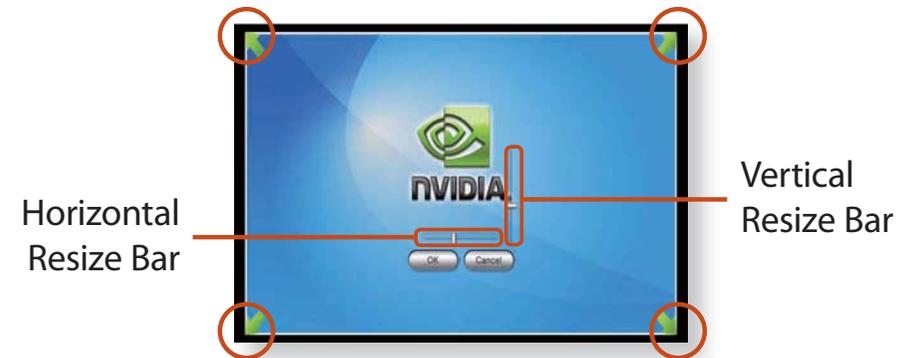
## ► For NVIDIA graphics cards



This function is not provided in the **Optimus** specifications.

- 1 Right-click over the Desktop and select **NVIDIA Control Panel**.
- 2 In the **Select a Task** window in the left panel, select the **Display > Adjust Desktop Size and Position** item and then click **Resize Desktop**.

- 3 Resize the Desktop using the resize bars so that the four arrows at the corners of the Desktop are placed in the corners of the TV and then click **OK**.



## Setting up HDMI TV audio (Optional)

You can configure the sound of the computer to be played through the HDMI TV.

You have to configure the sound device in the Control Panel whenever you connect the HDMI TV in order to hear sound from the computer on the TV.

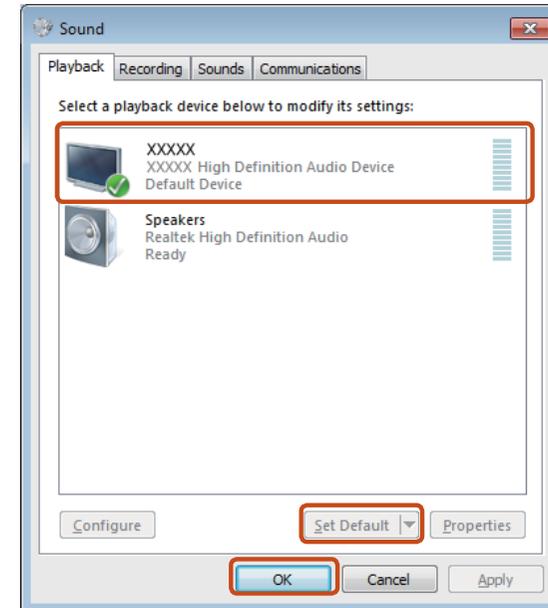


The screen images and terms may differ from actual product depending on the computer model.

**1** Right-click over the **Volume** Control icon  in the notification area at the bottom right of the Desktop and select **Playback Devices**.

(Alternatively, click the **Control Panel > Hardware and Sound > Sound**.)

**2** Change the setting to Digital Audio (HDMI), HDMI Device or Digital Output Device, click **Set Default** and click **OK**.



HDMI Output Device may not appear on the playback device list depending on the computer model.

In this case, turn on the TV, connect the TV to the computer using a HDMI cable and then switch to HDMI or LCD+HDMI Clone or LCD+HDMI DualView mode using the Shortcut Key (**Fn + F4**).



To listen to sound on the computer after disconnecting the HDMI TV, you have to set the Playback Device to Speakers.

## Using graphics more efficiently (optional)

**NVIDIA Optimus** is a function that enables automatic selection and usage of the internal or external graphics chipsets depending on the currently running software.

For example, the internal graphics chipset can be used for Internet surfing or word processing to minimize battery power consumption and the high-performance external graphics graphic chipset can be used for gaming or video processing to deliver a more realistic experience.



- The NVIDIA Optimus model supports Windows 7 only.
- This function is only available in models that support the NVIDIA Optimus technology.

## Registering programs to be executed by the external graphics chipset

To run a program using the external graphics graphic chipset, you have to register the program in the NVIDIA Panel.

Some programs are pre-registered. To register more programs (e.g. 3D games, etc.), complete the following steps.

**1** Right-click over the Desktop and select **NVIDIA Panel**.

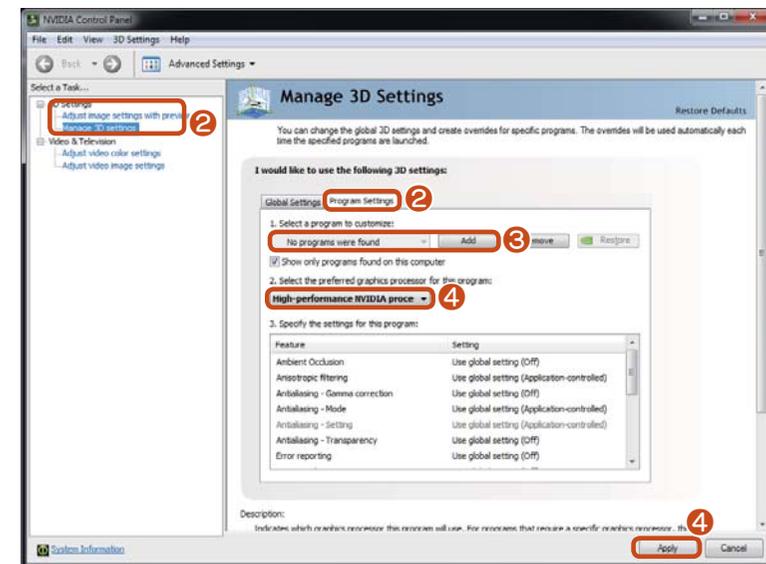
**2** Select **3D Settings > Manage 3D settings** in the left pane and select the **Program Settings** tab.

**3** In the **Select a program to customize(S)** field, click the **Add** button to register the software.



You can register executable files (EXE) only.

**4** In the **Select the preferred graphics processor for this program (O)** field, select **High-performance NVIDIA processor** and click the **Apply** button.



**5** The 3D game has been registered. Then, when the registered 3D game is executed, the game is executed by using the external graphics chipset.

You can save a file stored on a device onto the computer by connecting a digital device such as a camera, camcorder or mobile phone to the computer and using the file management functions.

## Connecting and using a camera or camcorder

If a digital device such as a camera or camcorder is connected with the computer, it is recognized as a removable disk so that you can copy or move the files on the device.

**1** Connect the USB port of the notebook computer and the USB port of the digital device such as a camera using the USB cable.

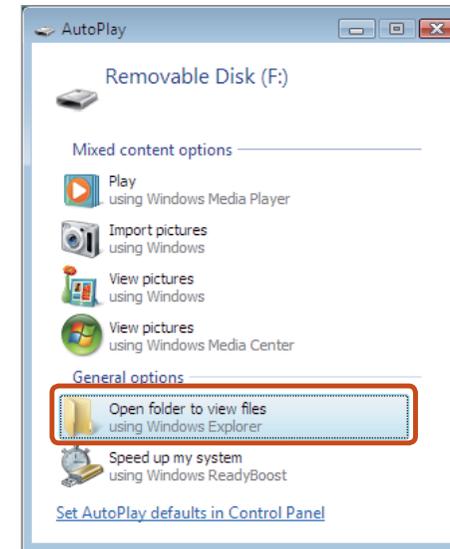


- Both the computer and the digital device must be turned on.
- You have to additionally purchase the USB cable necessary to connect the computer and the device.



**2** The **Auto run** window appears. Click **Open folder and view files**.

If the window does not appear, click **Start > Computer**.



**3** Double-click the corresponding drive. You can then save, move or delete data.



The device name of the card drive may differ depending on the model.

You can adjust the volume using the keyboard and the volume control program.

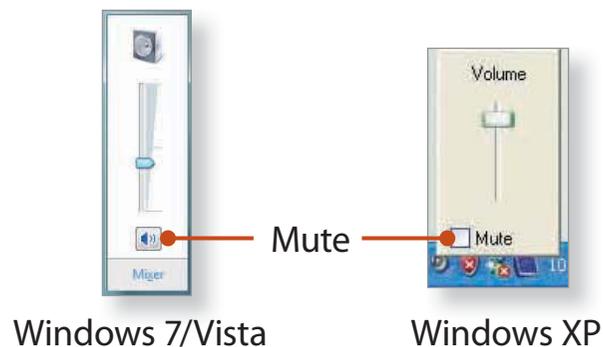
## Adjusting the Volume using the Keyboard



Alternatively, press the **Fn** + **F9** (with speaker icon) key combination to turn the volume on or off.

## Adjusting the Volume using the Volume Adjustment Program

Click the Volume icon  on the taskbar and slide the volume control bar to adjust the volume.

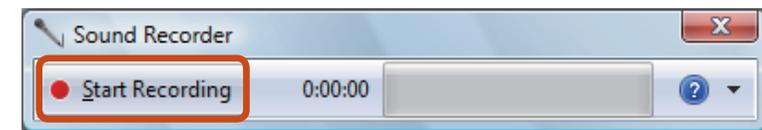


## Using the Sound Recorder

The procedures to record sound using the Windows Recorder are described below.

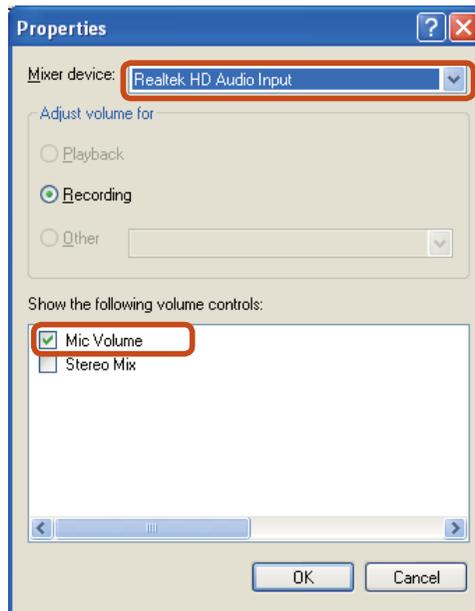
### ► For Windows 7/Vista

- 1 Connect a microphone to the microphone jack. You can also use the internal MIC.
- 2 Right-click over the **Volume** icon  on the taskbar and select **Recording Device**.
- 3 Check if the microphone is set as the default recording device. If this is the case, it is already set as the default device. If not, right-click over the microphone and select **Set default**.
- 4 Click **Start > All Programs > Accessories > Sound Recorder** and click **Start recording** to start a recording.



## ► For Windows XP

- 1 Connect a microphone to the microphone jack.  
You can also use the internal MIC.
- 2 Click **Start > Control Panel > Sounds, Speech, and Audio Devices > Sounds and Audio Devices**.
- 3 Click **Advanced** from Volume and then, click **Options > Properties**.
- 4 Select **Realtek HD Audio input** from the mixer device to select **Recording** from **Adjust Volume for**.



- 5 Select **Mic Volume** from **Show the following volume controls** and click **OK**.
- 6 When **Recording Control** window appears, check the **Select** checkbox.  
Increase the **recording** volume to increase the recording sensitivity and close the window.
- 7 Click **Start > All Programs > Accessories > Entertainment > Sound Recorder**.
- 8 Click the **Record** button to perform recording.



The default recording duration of Windows is 60 seconds. Download a dedicated recording program from the Internet to record audio data for a long time.

## Using SoundAlive

The SoundAlive function enables you to experience more stereophonic sound using stereo speakers.



- SoundAlive is only supported in Windows 7.
- The software programs provider may vary, depending on your computer model.
- In addition, some pictures may differ from actual product depending on the computer model and software version.

- 1 Right-click over the **Volume Control** icon  in the notification area at the bottom right of the Desktop and select **Playback Devices**. (Alternatively, click the **Control Panel > Hardware and Sound > Sound**.)
- 2 Right-click over the **Speakers** and select **Properties**.
- 3 Select the **SoundAlive** tab and select one of the modes.

### ► Basic Mode

<b>Music</b>	Select this mode to listen to music.
<b>Movie</b>	Select this mode to watch a movie.
<b>Speech</b>	Emphasizes voice over other sounds.
<b>Silver</b>	Silver mode is for people who have difficulty in hearing.

### ► Advanced Mode

Finely tuned 25 presets are arranged on a square according to their relative sound characteristics.

### ► User Mode

You can control a variety of sound effects.

## Connecting and using a headphone or microphone

### Using the headphone jack

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- 1 Right-click over the **Volume Control** icon  in the notification area at the bottom right of the Desktop and select **Playback Devices**. (Alternatively, click the **Control Panel** > **Hardware and Sound** > **Sound** > **Playback** tab.)
- 2 Select the **Speakers**, click **Set Default** and click **OK**.

### Using the microphone jack

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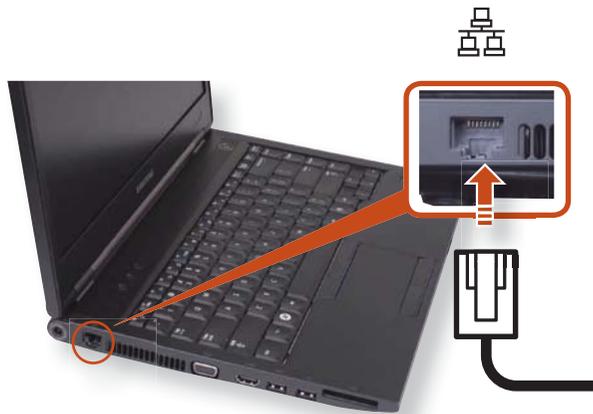
- 1 Right-click over the **Volume Control** icon  in the notification area at the bottom right of the Desktop and select **Recording Devices**. (Alternatively, click the **Control Panel** > **Hardware and Sound** > **Sound** > **Recording** tab.)
- 2 Select the **Microphone**, click **Set Default** and click **OK**.

A wired network is a network environment used for a company network or broadband internet connection at home.



- Since these descriptions are written on the basis of the latest operating system, Windows 7, some of the content and the figures of the descriptions may differ depending on the operating system. Since the procedures for other Windows operating systems are similar, use the computer referring to these descriptions.
- The figures used for the description are of a representative model. Therefore the figures may differ from the real ones.

**1** Connect a LAN cable to the computer's LAN port.



**2** ► **For Windows 7**

Click **Start > Control Panel > Network and Internet > Network and Sharing Center** and click on **Change adapter settings** in the left menu pane.



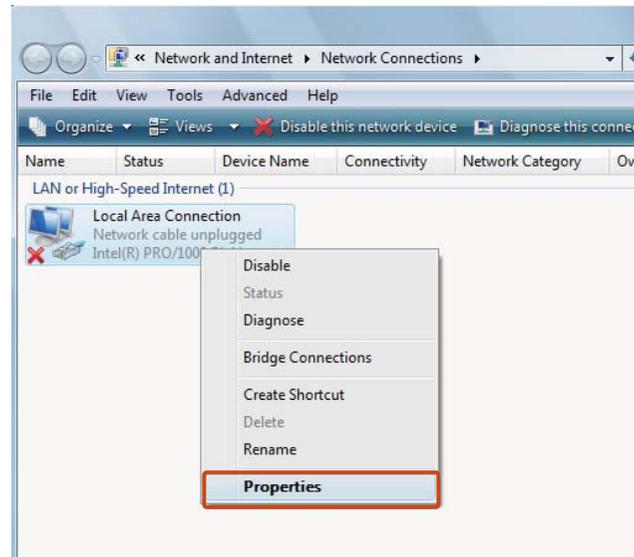
► **For Windows Vista**

Click **Start > Control Panel > Network and Internet > Network and Sharing Center** and click **Manage Network Connections** in the left menu pane.

► **For Windows XP**

Click **Start > Control Panel > Network and Internet Connections > Network Connection**.

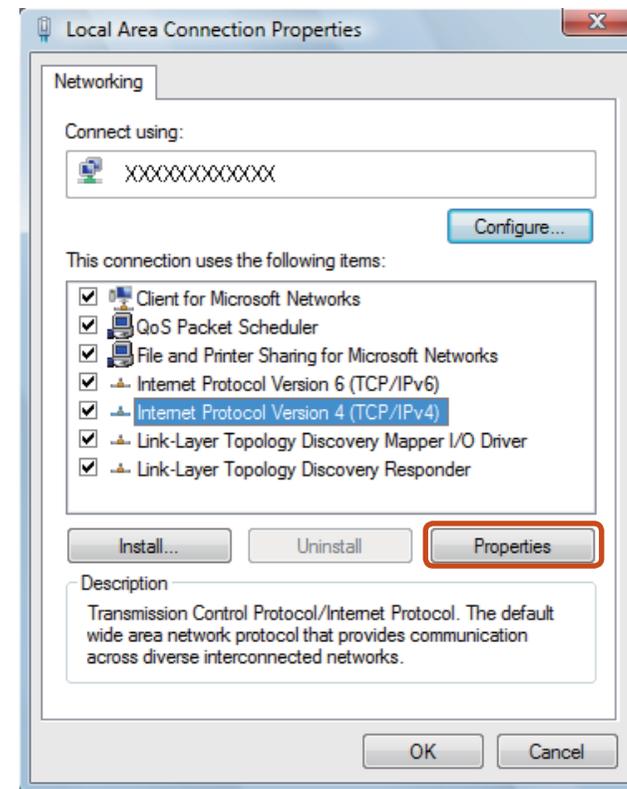
- 3 Select **Local Area Connection** and click the right button of the touch pad and select **Properties**.



 The LAN Device name may differ depending on your computer's Network Device.

## 4 ► For Windows 7/Vista

Select **Internet Protocol Version 4(TCP/IPv4)** from the list of Network Components and click **Properties**.



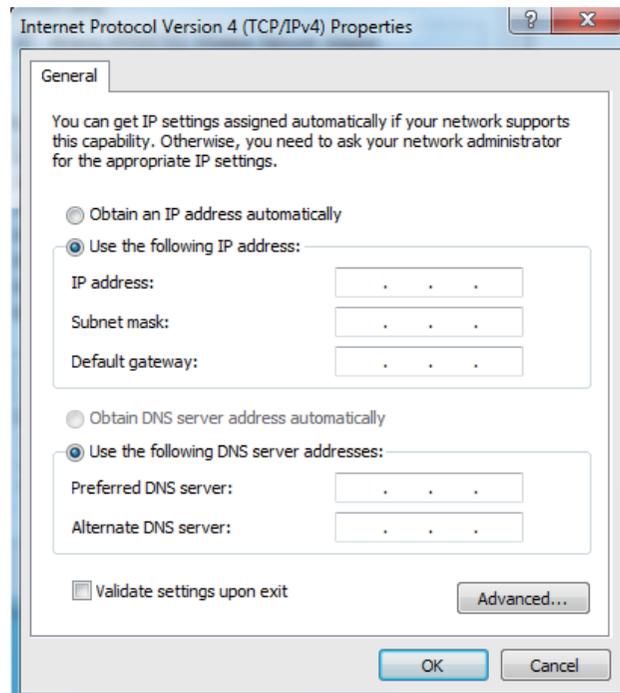
## ► For Windows XP

Click **General** tab and select a LAN driver from **Connect using:**. Select **Internet Protocol(TCP/IP)** and click **Properties**.

-  The Network Component name may differ depending on the Operating System Installed.
- To add a network component, click Install in the screen shown in the figure above. You can add clients, services, and protocols.

**5** Configure the IP settings.

When using DHCP, select **Obtain an IP address automatically**. To use a static IP address, select **Use the following IP address**, and set the IP address manually.



When not using DHCP, ask your network administrator for the IP address.

**6** When you have completed the settings, click the **OK** button. The network settings have been completed.

## Using the WOL (Wake On LAN) function

<Wake On LAN> is a function that activates the system from Sleep mode when a signal (such as a ping or magic packet command) arrives over the network (wired LAN).

### 1 ► For Windows 7

Click **Start > Control Panel > Network and Internet > Network and Sharing Center** and click on **Change adapter settings** in the left menu pane.

### ► For Windows Vista

Click **Start > Control Panel > Network and Internet > Network and Sharing Center** and click **Manage Network Connections** in the left menu pane.

### ► For Windows XP

Click **Start > Control Panel > Network and Internet Connections > Network Connection**.

**2** Right-click on the **Local Area Connection** and select **Properties**.

**3** Click **Configure > Power Management** tab. **Select Allow this device to bring the computer out of standby**, then click **OK**. Restart the system.

- If the system wakes up from Sleep mode even though there is no received signal, use the system after disabling the <Wake On LAN> function.
- The LAN LED may not be turned off if System is shutdown without disabling the WOL (Wake on LAN) option.
- Connecting a wired LAN while using a wireless LAN may not activate the <Wake On LAN> function. Set the Wireless LAN to **Disable** to use the <Wake On LAN> function.
- <Wake On LAN> feature may not work while using Hybrid power saving feature.



For Win7, Wake On LAN is not supported by Ping.



When connected to a 100Mbps/1Gbps wired LAN and the computer exits Sleep/hibernation mode, a message appears informing you of a connection to a 10Mbps/100Mbps wired LAN. This happens because when the computer exits standby/hibernate mode, restoring the network takes about 3 seconds. When the network is restored, it operates at 100Mbps/1Gbps.



When system is running on battery, some time it takes about 20sec after inserting LAN cable to be able to connect to internet. This symptom happen as a result of power saving feature to reduce battery consumption.



When system is running on battery, the Wired LAN speed is decreased automatically to reduce battery consumption. In such case, a 1Gbps /100Mbps LAN would function at 100Mbps/10Mbps speed.