



# User's Guide

Config Name: T290 Series

Some of the components may look different from the picture.

## **1.Important notice for user**





## 1-1. Read this carefully before using the Notebook PC.

### ► Regulatory Notices

#### 1-1 USA Notice

##### Federal Communications Commission

###### Notice

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular commercial installation, or if operated in a residential area.

If harmful interference with radio or television reception occurs when the device is turned on, the user must correct the situation at the user's own expense. The user is encouraged to try one or more of the following corrective measures:

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

**Modifications :** The FCC requires the user to be notified that any changes or modifications made to this device that are not expressly approved by LG Company may void the authority to operate the equipment.

**Cables :** Connections to this device must be made with shielded cables with metallic RF/EMI connector hoods in order to maintain compliance with FCC Rules and Regulations.

**RF Radiation Exposure Statement :** This equipment complies with FCC RF radiation exposure limits set forth for an uncontrolled environment. This device and its antenna must not be co-located or operation in conjunction with any other antenna or transmitter.

**Caution:** Regulations of the FCC and FAA prohibit airborne operation of radio-frequency wireless devices because their signals could interfere with critical aircraft instruments.



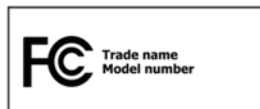
#### **Declaration of Conformity for products marked with the FCC logo**

This device uses, generates and radiates radio frequency energy. The radio frequency energy produced by this device is well below the maximum exposure allowed by the Federal Communications Commission (FCC).

This device complies with Part of FCC Rules and Regulations. Operation is subject to the following two conditions. (1) This device may not cause harmful interference, and (2) This device must accept any interference received, including interference that may cause undesired operation.

#### **Responsible Party :**

LG ELECTRONICS U.S.A., INC.  
1000 SYLVAN AVENUE  
ENGLEWOOD CLIFFS, NJ  
Telephone : 1-800-243-0000



#### **1-2.Canada Notice**

This Class B digital apparatus complies with Canadian ICES-003, Issue 4, and RSS-210, No. 4 (Dec. 2000) and No. 5(Nov. 2001).

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

Cet appareil numérique de la classe B est conforme à la norme NMB-003, No. 4, et CNR-210, No. 4 (Dec. 2000) et No. 5(Nov. 2001).

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

"Operation is subject to the following two conditions:

- (1) this device may not cause interference, and
- (2) this device must accept any interference, including interference that may cause undesired operation of the device."

### 1-3. European Union

This notebook PC may contain following RF modules.

**CE** ⓘ      for Ralink RT3090BC4  
**CE** 0168      for LG LUM850T, LUM900D

#### Translated Statements of Compliance

[English]

This product follows the provisions of the European Directive 1999/5/EC.

[Danish]

Dette produkt er i overensstemmelse med det europæiske direktiv 1999/5/EC

[Dutch]

Dit product is in navolging van de bepalingen van Europees Directief 1999/5/EC.

[Finnish] Tämä tuote noudattaa EU-direktiivin 1999/5/EC määräyksiä.

[French]

Ce produit est conforme aux exigences de la Directive Européenne 1999/5/EC

[German]

Dieses Produkt entspricht den Bestimmungen der Europäischen Richtlinie 1999/5/EC

[Greek]

Το προϊόν αυτό πληροί τις προβλέψεις της Ευρωπαϊκής Οδηγίας 1999/5/EC.

[Icelandic]

Þessi vara stenst reglugerð Evrópska Efnahags Bandalagsins númer 1999/5/EC

[Italian]

Questo prodotto è conforme alla Direttiva Europea 1999/5/EC.

[Norwegian]

Dette produktet er i henhold til bestemmelsene i det europeiske direktivet 1999/5/EC.

[Portuguese]

Este produto cumpre com as normas da Diretiva Europeia 1999/5/EC.

[Spanish]

Este producto cumple con las normas del Directivo Europeo 1999/5/EC.

[Swedish]

Denna produkt har tillverkats i enlighet med EG-direktiv 1999/5/EC.



#### **1-4. Brazil Notice**

Este equipamento opera em caráter secundário, isto é, não tem direito a proteção contra interferência prejudicial, mesmo de estações do mesmo tipo, e não pode causar interferência a sistemas operando em caráter primário.

#### **1-5. France Notice**

##### **Pour la France métropolitaine**

2.400 - 2.4835 GHz (Canaux 1 à 13) autorisé en usage intérieur  
2.400 - 2.454 GHz (canaux 1 à 7) autorisé en usage extérieur

##### **Pour la Guyane et la Réunion**

2.400 - 2.4835 GHz (Canaux 1 à 13) autorisé en usage intérieur  
2.420 - 2.4835 GHz (canaux 5 à 13) autorisé en usage extérieur

#### **1-6. Italy Notice**

A general authorization is requested for outdoor use in Italy.

The use of these equipments is regulated by:

1. D.L.gs 1.8.2003, n. 259, article 104 (activity subject to general authorization) for outdoor use and article 105 (free use) for indoor use, in both cases for private use.

2. D.M. 28.5.03, for supply to public of RLAN access to networks and telecom services.

L'uso degli apparati è regolamentato da:

1. D.L.gs 1.8.2003, n. 259, articoli 104 (attività soggette ad autorizzazione generale) se utilizzati al di fuori del proprio fondo e 105 (libero uso) se utilizzati

entro il proprio fondo, in entrambi i casi per uso private.

2. D.M. 28.5.03, per la fornitura al pubblico dell'accesso R-LAN alle reti e ai servizi di telecomunicazioni.

#### **1-7. Latvia Notice**

A license is required for outdoor use for operation in 2.4 GHz band.

## SAFETY REGULATION NOTICE

### Battery

If the backup battery is incorrectly replaced, there is danger of explosion. The lithium battery contains lithium and can explode if it is not properly handled or disposed of. Replace only with a battery of the type recommended by LG.

### Australia Notice

- The appliance is not intended for use by young children or infirm persons without supervision.
- Young Children should be supervised to ensure that do not play with appliance.
- If the appliance is supplied from a cord extension set or an electrical portable outlet device.
- The cord extension set on electrical portable outlet device must be positioned so that it is not subject to splashing or ingress of moisture.

## European \_ WEEE



### Disposal of your old appliances

1. When this crossed-out wheeled bin symbol is attached to a product it means the product is covered by the European Directive 2002/96/EC.
2. All electrical and electronic products should be disposed of separately from the municipal waste stream via designed collection facilities appointed by the government or local authorities.
3. The correct disposal of your old appliances will help prevent potential negative consequences for the environment and human health.
4. For more detailed information about disposal of your old appliances, please contact your city office, waste disposal service or the shop where you purchased the product.

### RJ 45 jack and RJ11 jack

#### Warning

To avoid electric shock, do not connect safety extra-low voltage (SELV) circuits to telephone-network voltage (TNV) circuits. LAN ports contain SELV circuits and WAN ports contain TNV circuits. Some LAN and WAN ports both use RJ-45 connectors. Use caution when connecting cables.

### Disconnect Device

- Plug and connector of the power supply cord
- Output jack of Power supply
- Main Battery Pack



## DECLARATION OF CONFORMITY

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

**Trade Name / Model :** LG / LGT28

**Responsible Party :** LG Electronics, Inc. / Product Safety & Compliance

**Address :** 1000 Sylvan Avenue Englewood Cliffs, NJ 07632. U.S.A.

**Contact Person :** Mr. J.C. Lee, General Manager  
Tel. No. 1-800-243-0000 For Technical Support  
Tel. No. 1-201-266-2420 For FCC Inquiry

Equipment Classification : FCC Class B Peripheral Device (JBP)

Type of Product (EUT) : Notebook PC

Manufacturer : LG Electronics Inc.

Address : 19-1, Cheongho-ri, Jinwi-myeon, Pyeongtaek-si,

Attention : Gyeonggi-do, 451-713, Korea

Mr. H.S. Lee - General Manager

Digital Media Standards Group

**We hereby declare that the equipment bearing the trade and model number specified above was tested conforming to the applicable FCC Rules under the most accurate measurement standards possible, and that all the necessary steps have been taken and are in force to assure that production units of the same equipment will continue to comply with the Commission's requirements.**



LG Electronics Inc.

*Signature*

June/11/2010

*Date*





## Declaration of Conformity LG Electronics

### Suppliers Details

Name LG Electronics Inc  
 Address LG Electronics Inc  
 19-1, Cheongho-ri, Jimwi-myeon, Pyeongtaek-si, Gyeonggi-do, 451-713, Korea

### Product Details

Product and Model Name Notebook PC LGT28  
 with the Accessory(ies) AC Power Adaptor ADP-65JH AB

### Applicable Regulation and Standards Details

#### 1. EMC Directives : 2004/108/EC

EN 55022: 2006  
 EN 55024: 1998 + A2:2003  
 EN 61000-3-2: 2006  
 EN 61000-3-3: 1995 + A2:2005

#### 2. R&TTE Directives : 1999/5/EC

ETSI EN 300 328 V1.7.1 : 2006, ETSI EN 301 908-1 V3.2.1 : 2007,  
 ETSI EN 301 511 3GPP TS 51.010-1  
 ETSI EN 300 489-1 V1.8.1 : 2008, ETSI EN 300 489-7 V1.3.1 : 2005  
 ETSI EN 300 489-17 V1.3.2 : 2008, ETSI EN 300 489-24 V1.4.1 : 2007

#### 3. Low Voltage Directives : 2006/95/EC

EN 60950-1 : 2001 + A11:2004

\* The year in which CE Marking was affixed: 2010

#### 4. ErP Directives : 2009/125/EC

Regulation: 1275/2008/EC Regulation: 278/2009/EC

EN 62301 : 2005

### Declaration

I hereby declare under our sole responsibility that the product mentioned above to which this declaration relates complies with the above mentioned standards, regulation and directives

Name	Issued Date
Seung Hyoun, Ji / Director	June. 11, 2010

LG Electronics Inc. - EU Representative  
 Veluwezoom 15, 1327 AE Almere, The Netherlands

  
 Signature of representative



▶ How to protect the human body from the hazardous RF energy exposure.

We recommend that the human body should be kept off at least 15 mm from the external antenna plug-in-radio-card or the internal antenna located in screen section during the operation or moving.

▶ Using **LG Intelligent Update**

To install a driver or application, use **LG Intelligent Update** provided by **LG Electronics**.

❖ **LG Intelligent Update** comes preinstalled in your system. You can also download the application from the website "[www.lg.com](http://www.lg.com)".

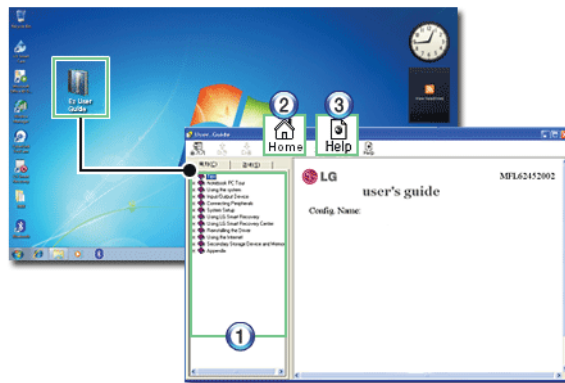


1. Guides you to configure the optimal environment for the system.
2. Provides you with an overview before use.

## ► Using Ez User's Guide/Ez Troubleshooting

For more convenient use of the machine, we provide you **Ez User's Guide/Ez Troubleshooting**.

Click **Help** button and refer to Tour to learn how to use **Ez User's Guide** and **Ez Troubleshooting**.



1. **Table of Contents**
2. **Home**
3. **Help:** Helps you to find the answers to your questions and solve problems.

## ► Ez User's Guide





Thank you for purchasing the **LG Electronics** product.

This machine is built on cutting-edge technology and has been tested reliably.

For the sake of convenient use, please read this manual in advance.










The below symbols are to inform you of dangers and safety concerns that you must be aware of. Read the symbol-indicated instructions with caution to avoid any possible mishap.



	<b>Warning</b>	Appears in the case of noncompliance with the instruction that may cause serious physical damage or fatal injuries.
	<b>Caution</b>	Appears in the case of noncompliance with the instruction that may cause minor damage to the body or the machine.
	<b>Tip</b>	Indicates that the following information is added to help the user utilize the machine more conveniently.
	<b>Optional</b>	The Optional symbol indicates that the concerned device is not included in the product package and thus has to be purchased separately, or the device may not be applied to the user's machine depending on model type.

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	SD logo is a registered trademark of Secure Digital Corporation.
	xD logo is a registered trademark of FUJIFILM Co., Ltd.
 	 and  is a trademark of SRS Labs, inc.. WOW HD and TruSurround HD technology is incorporated under license from SRS Labs, inc..

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Please be understanding that this manual may contain incorrect parts despite our dedicated efforts to

perfect it.

The exemplified figures in this manual may not exactly the same as the real products.

**LG Electronics Inc.** has rights to modify any part of this manual for the better without prior notice.

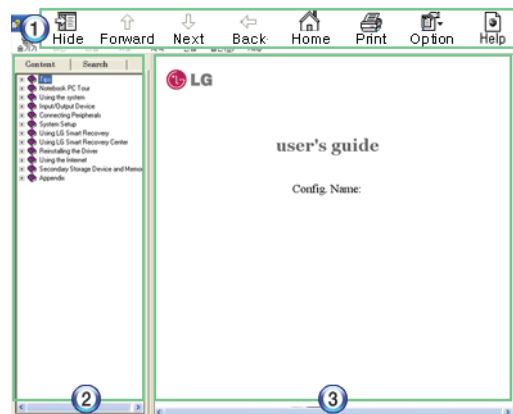
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Country of Origin: China

Manufacturer: Tech-Front (Shanghai) Computer Co., LTD

Company Identifier: LGE

## ► Ez User's Guide Tour



### 1. Toolbar

- ❖ **Hide/Show:** Hide or show the navigation window.
- ❖ **Previous:** Displays the previous page in the order of Table of Contents.
- ❖ **Next:** Displays the next page in the order of Table of Contents.
- ❖ **Back:** Displays the previous page in the navigation history.
- ❖ **Home:** Displays the Home page.
- ❖ **Print:** Prints the current page.
- ❖ **Option:** Displays options.
- ❖ **Help:** Mostly used for touring this guide.

### 2. Navigation Bar

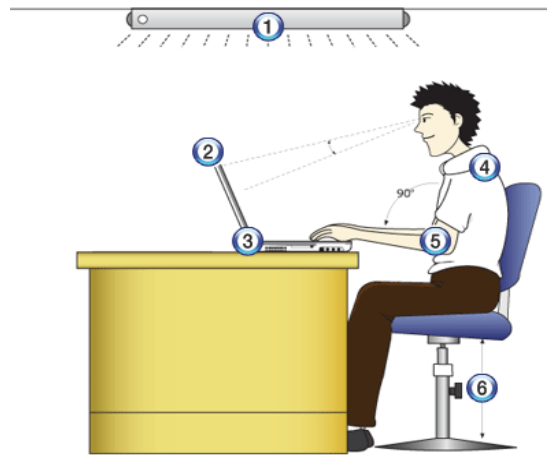
- ❖ **Index:** Displays a categorized list of subjects.
- ❖ **Search:** Allows users to type key words and search manually.

### 3. Description Pane



❖ Displays the explanation of the selected item.

▶ When using the computer, sit in the good posture as shown below.



1. Do not have light directly reflected on the monitor.
2. Set the upper part of the screen to be on the even level with or slightly lower level than your eyes.
3. Adjust the screen while avoiding illuminated reflection.
4. Stretch the neck and back straight.
5. Keep the hands, wrists, and arms horizontally.
6. Adjust the chair to set the hands and arms properly for the keyboard.



**Warning**

- Long time use of computer may cause physical fatigue.
- A 10 minutes break after 50 minute use is desirable. Avoid using the computer more than 2 hours a day.
- Take a rest regularly and stretch your body.

▶ Adjusting volume (headset and speakers)

Check the volume before listening to music.



- Before using the headset, check if the volume is too high.
- Do not use the headset too long.
- A headphone that has a resistance higher than 20  $\Omega$  can cause electromagnetic interference. Therefore, we recommend you to use a headphone that has a resistance less than 20  $\Omega$ .

### ▶ System Protection Feature

If the system becomes too hot, the system protection feature automatically stops battery recharging and switches the power mode to Maximum Power Saving or OFF.

The system may not be reactivated until it cools down enough.



## 1-2. Important safety information

Please avoid any undesirable environmental factor that shortens the machine's life span. Use the machine in a safe and stable place.

❖ The warranty does not cover any damage resulting from reckless use or use in undesirable environments.

### ► Installation



Warning



**Do not use the machine in damp places like a laundry room or bathroom.**

Moisture may cause a glitch or an electric shock.  
The desirable temperature and humidity ranges are from 10 to 35 °C and from 20 to 80 °C RH, respectively.



**Dispose of the desiccating agent and wrapping plastic properly.**

The desiccating agent and wrapping plastic may cause suffocation.



**Use the product in a dust-free environment.**

Otherwise, the system may not function properly.



**Do not leave any object nearer than 15 cm from the computer.**

Otherwise, lack of ventilation could overheat the machine from inside and you could get a burn from the heat.



Caution





**Place the machine in a safe place so that it does not fall.**

If dropped, the machine could be damaged and even cause an injury.



**Do not leave or use the computer near a magnetic object.**

Otherwise, the H/D and the system may be damaged and fail to operate properly.

**Never place the computer on a bag with magnetic objects including magnetic buttons.**

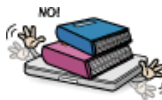
Otherwise, the H/D and the system may be damaged and fail to operate properly.



**Operate the product in a place without electromagnetic interference.**

Keep a proper distance between the computer and such electronic appliances as speakers that generate strong magnetic fields.

Otherwise, data may be lost from the hard disk or the LCD may show impaired coloration.



**Do not put any heavy object on the machine.**

If falling, the object could damage the machine and cause an injury.

► Using Battery



Warning



**Charge the battery only with the provided instrument.**

Otherwise, the battery may be damaged presenting a risk of fire.



**Do not throw or disassemble the battery.**

The resulting impairment may cause an injury, explosion, or fire.



**Use batteries certified and acknowledged by LG Electronic Inc.**  
Otherwise, an explosion or fire may occur.



**Prevent the battery from being contact with any metallic object like a car ignition key or a paper clip.**  
Otherwise, the battery may be overheated to be damaged resulting in a fire or an injury.



**Keep the battery away from heat.**  
Otherwise, an explosion or fire may occur.



**Do not short-circuit the battery.**  
Otherwise, it may explode.



**Do not dispose of a spent (backup) battery arbitrarily.**  
It may explode or cause a fire.  
Disposal methods may differ by country and region. Dispose of the spent battery in accordance with the laws and safety rules of the country and region.



**If you find leakage or smell bad odor from the battery, remove the battery and contact the local service center.**  
It may explode or cause a fire.



**Avoid humidity and heat above 60 °C as in cars or saunas.**  
It may explode or cause a fire.



**Keep the battery out of reach of children or pets.**

If damaged, it could cause an injury.



**Keep the battery from being pierced by a sharp object or a chew of your pet.**

It may explode or cause a fire.



**Do not sink the battery in water.**

Otherwise, the battery may be damaged presenting a risk of explosion.



**Ensure that the battery pack is locked to the machine after installation.**

Otherwise, the battery pack may be damaged.



**Do not use the laptop on top of carpet, blanket or bed. Also, do not put the adapter under the blanket.**

The product may malfunction, cause a fire or burn the user due to temperature rise.



**Read the directions printed on the battery pack carefully before use.**

Keep the battery at room temperature. Refer to other Tips and directions in this guide to store the battery properly.

► Using AC Adapter



Warning



**Do not use loose plugs or damaged power cords.**

An electric shock or fire may occur.



**Do not touch the power cord with your hands wet.**

Otherwise, an electric shock may occur.



**Pull the plug, not the cord, to disconnect the power.**

Otherwise, a fire may occur or the product may get damaged.



**Operate the product at the proper voltage.**

Excessive voltage may result in damage on the product, electric shock or fire.



**Use power outlets with an earth pin installed and proper supply of rated electricity.**

An electric leakage may cause an electric shock or fire.



**Plug the power cord tightly into the outlet.**

Loose connection of the power cord could cause a fire.



**In the case that a strange noise is heard from the cord or plug, disconnect the power cord from the outlet immediately and contact the service center.**

A fire or electric shock may occur.



**Never disassemble the power supply and adapter.**

A damaged power cord may cause an electric shock or fire.



**Use a socket with an earth pin equipped.**

If not earthed, the product may cause an electric shock and get damaged.



**Ensure that the power outlet is earthed before plugging in.**

Otherwise, an electric shock from power leakage may occur.



**Always keep the power cord and the outlet clean.**

A fire may occur.



**Do not impair the cord by bending or pressing it too hard. Keep children and pets from damaging the power cord.**

An impaired cord could damage computer parts causing a fire or electric shock.



**Disconnect the machine completely from others before cleaning it.**

Otherwise, an electric shock or impairment may occur.



**If the power circuit and machine are soaked, disconnect the battery, AC adapter, and all others before contacting the local service center.**

Otherwise, an electric shock may occur.

► Using Notebook PC



Warning



**Clean the computer with a proper agent and dry it completely before using it again.**

If the computer is wet while used, an electric shock or fire may occur.



**When lightning flashes in your area, disconnect the power, modem, LAN and other connections.**

An electric shock or fire may occur.



**Do not leave a cup or other containers filled with watery substance near the computer.**

If the machine is soaked, a fire or electric shock may occur.



**Do not connect the modem to a key telephone system.**

A fire may occur or the product may get damaged.



**If you have dropped or damaged the computer, disconnect the power and contact the local service center for a safety check.**

If a damaged computer is used continuously, an electric shock or fire may occur.



**Do not put a lit candle or live cigarette on the computer.**

A fire may occur.



**The fluorescent lamps on the LCD panel contains mercury.**

If you have contacted the liquid from the LCD panel, immediately wash the substance away with water. If you feel any slightest trouble, visit your doctor immediately.



**If you smell or see smoke from the computer, stop using the computer and disconnect the power before contacting the local service center.**

A fire may occur.



**Do not play computer games too much.**

Playing a computer game for an extensive time may cause a mental disorder. It could even inflict physical impairments on feeble people including children and the elderly.



You may hear noise while on 3D mode.



**Do not leave any object such as a pen on the keypad.**

You might break the LCD panel by unwittingly shutting it down with the object remaining on the pad.



**Do not press or scratch the LCD panel with a sharp object.**

It may cause an impairment.



**Ensure the power is off before shutting the panel.**

The machine may be deformed due to temperature rise.



The bottom of the computer gets hot when the system is working. Please avoid touching it and do not put it on your laps.



**Do not impose excessive force on the LCD panel or drop it.**

You could break the LCD glass panel.



**Do not forcibly open the LCD panel with one hand.**  
The machine may be twisted.



**To clean the LCD panel, use designated agents and soft cloth and rub the panel in one direction.**  
Too much force may damage the panel.



**When handling computer parts, follow the instructions in the manual.**  
Otherwise, damage may be inflicted.



**Do not put your finger or an object in the PC card slots.**  
An injury or electric shock may occur.



**Install a vaccine program on your computer and do not download illegal programs nor access any corruptive web site such as those pushing pornographic contents.**  
The system may be infected and impaired.



**Ask one of our engineers to run a safety check after your computer has been repaired.**  
Otherwise, an electric shock or fire may occur.



**For minors, we recommend a program that blocks access to illegal or pornographic web sites.**  
Minors' exposure to adult-only contents may inflict psychological instability or even trauma on them. Take an extra precaution for your children if the whole family is using this machine.





**Do not press the Eject button while the optical disk drive (CD/DVD/Blu-ray) is running.**

The data may be lost or the disk may spin out unexpectedly to cause an injury.



**Keep the machine away from heat-emitting devices such as a heater.**

The product may get deformed or catch on fire.



**Do not insert other devices than designated ones in the ports.**

Otherwise, the product may get damaged.



**Do not use damaged optical disk (CD/DVD/Blu-ray) or floppy diskette.**

It may cause product damage or physical injury.



**Prevent children from thrusting their finger into the optical disk drive (CD/DVD/Blu-ray) tray.**

The finger may be stuck in the tray and injured.



**To remove an optical disk (CD/DVD/Blue-ray) from the tray, turn off the program accessing the disk and wait until the disk drive lamp is turned off before pressing the Eject button.**

The optical disk spins fast inside the tray and may be ejected from the tray to cause bodily injury.



**Do not block the ventilation hole on the sides with any object.**

Otherwise, an electric shock may occur.



**Do not leave the machine in a car.**  
The battery may cause an explosion or fire.



**Avoid using a wireless LAN connection within the 5 m radius of a microwave or plasma lamp. If you have to use wireless LAN and a plasma bulb within the range, however, do it through a channel between 11 and 13.**  
The transmission rate may drop even if the connection is made.



**Turn off the computer if you are not going to use it for an extended time period.**  
It may overheat the battery.



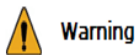
**As the adapter can be hot, do not touch it with bare skin while using the notebook.**



Memory

**Make sure that the memory cover is securely closed before turning on the machine.**  
Do not use the machine when the memory cover is open. It may damage the machine.

## ► Upgrading Notebook PC



### Warning



**To upgrade the machine, turn off the system and disconnect the power cord and the battery. Disconnect the telephone line linked to the modem, if any.**  
An electric shock or fire may occur.



**When you disassemble and upgrade the machine, prevent children from swallowing any parts including bolts.**

If a child swallowed a nut, they may get suffocated. In that case, see the doctor immediately.



**Please use parts certified by LG Electronics Inc.**

Otherwise, a fire or product damage may occur.



**Consult our service engineer before you use a peripheral device not manufactured by LG Electronics Inc.**

The product may get damaged.



**Do not disassemble or moderate the machine arbitrarily.**

You could get an electric shock and would not be able to receive the warranty service for that.



**Handle devices and parts of the machine with care.**

The product may get damaged.



**Ensure that everything including the case is reassembled completely before connecting the machine to the power.**

Any exposed part may give you an electric shock.



**Do not drop any part or device of the machine while disassembling it.**

If dropped, it may be damaged and cause an injury.



## ► Carrying Notebook PC



Caution



**To carry the machine, turn off the power and disconnect all the cables.**

Otherwise, you may trip over the wire, damaging the computer and getting an injury.



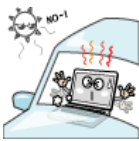
**During air traveling, follow the directions of flight attendants.**

Using a laptop during flight may cause an aircraft accident.



**Do not carry the machine with the LCD panel open.**

Otherwise, the product may get damaged.



**When leaving the machine in a car, keep it in shadow.**

The product may be deformed or caught on fire due to temperature rise.



**Protect the machine from any shock while carrying it.**

System damage or an injury may result.



**Carry the machine in a bag designed for it.**

Carrying it in an other type of bag may result in product damage.



**If the machine is not used for a long time, remove the battery pack and discharge electricity to store them.**

That way, the battery can maintain the optimal state.



**Do not leave the powered-on computer in a space without enough ventilation (i.e. bags) for an extended or repeated time.**

The battery may overheat and cause a fire.

## ► Safety Notes to Prevent Data Loss (HDD Management)



Caution



**Handle the computer with care to prevent a data loss.**

Since the hard disk is sensitive to shocks, please make a back-up file of important data all the time.

The manufacturer will not be responsible for any hard-disk data loss caused by your mistake.



**Hard disk damage and data loss may occur when:**

External shocks are inflicted on the machine while disassembling or installing it.

When the computer is abruptly reset (rebooted) due to power failure, the hard disk may get damaged.

The computer is infected with a virus, tainting the data irrecoverably.

Abrupt turning-off of the computer can damage the computer.

Moving, shaking or pounding the computer while the hard disk is running, and thus causing file damage or bad sectors.



**It is recommended to back up the data to minimize damage caused by hard disk damage.**

The manufacturer is not responsible for any data loss.

## ► Precautions When Installing Other Operating System



Caution



**We do not refund or replace the product that malfunctions due to the installation or use of an operating system other than the one provided by LG Electronics.**

Some software applications may not work properly in other operating systems. Such malfunctions are not covered by the warranty.



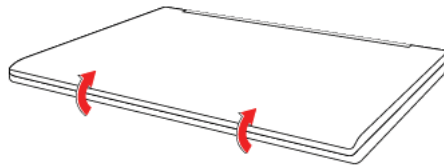
## 2. Notebook PC Tour





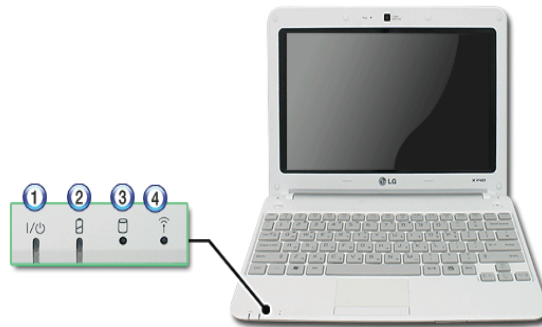
## 2-1. Opening/Closing Notebook PC

1. Raise the Notebook PC cover upward.
  - ❖ Adjust the angle for the best convenient position.
2. Be sure to close the computer after use.





## 2-2. Operation Status Lamps



### 1. Power Lamp:

- ❖Blinking: System Standby
- ❖On: The system is running on the AC power or battery.
- ❖Off: The system is turned off or in Hibernates.

### 2. AC Power and Battery Status Lamp

- ❖Off: The AC adapter is not connected.
- ❖On: The AC adapter is connected.
- ❖Blinking: The battery is charged less than 10 %.
- ❖If you try to turn on the system that has entered the Hibernates mode or been turned off after a low-battery alarm, the system will not be turned on but the lamp will blink three times.

### 3. Hard Disk Drive Lamp

- ❖The lamp is turned on when the HDD is running.
- ❖Do not turn off the power forcibly while the hard disk drive lamp is on. Otherwise, the data may get impaired.



### **3. Using the system**



### 3-1. Running on Battery

Notebook PC runs on AC power or battery. This section describes the procedure that the user should take initially for a new system. The provided AC adapter can be used from 100 V to 240 V. Charge the new battery with the AC adapter before use.

❖ Refer to [Charging Battery with AC Adapter] in User's Guide.

1. Turn the machine over to see the battery pack chamber and equip the pack.

❖ Insert the battery pack into the chamber as shown in the following figure and push it in the direction of the arrow until you hear a clicking sound.



2. Open the machine and turn the power on.

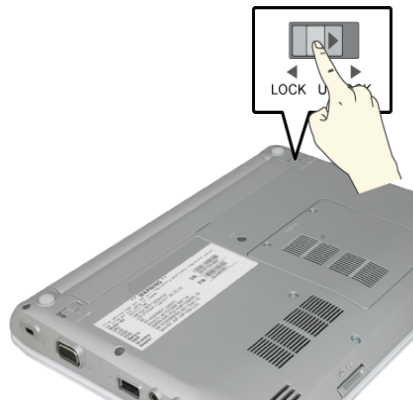
3. Check the battery state.

❖ When the battery status lamp is blinking, charge it fully with the AC adapter before using it.





4. Remove the battery pack as shown in the diagram below.



Caution

**Use batteries certified and acknowledged by LG Electronic Inc.**

- Uncertified batteries may explode.
- Ensure the power is off before changing the battery pack.

**Keep the battery pack removed when the machine is not in use.**

- Otherwise, a fire and product damage may result.



Warning

**For a safe and efficient use of battery, follow the below directions.**

- Do not short-circuit the battery.
- Keep the room temperature between 0 °C and 60 °C. Do not expose the machine to the heat hotter than 60 °C.
- Keep the battery out of reach of children.
- A visible swelling of the battery pack indicates a possible danger. When this occurs, contact your local vendor or service center immediately.
- Use only a certified and designated recharger.
- Keep the battery pack away from heat. (Never put it in a microwave.)
- Do not leave inside a car under the summer heat.
- Do not leave or use at a hot and humid place like a sauna.
- Do not use the machine placed on a heating blanket or other heat reserving materials.
- Do not leave the machine turned on inside a closed space.
- Make sure that the power ports are not touched by any metallic objects like a key, coin, necklace, and watch.
- Use only a lithium secondary battery certified and guaranteed by mobile device manufactures.
- Keep the machine dry.
- Do not disassemble or alter the battery pack.
- Before using this machine, read this guide carefully.



**For more efficient use of the battery, read the following carefully.**

- Natural discharge: The battery runs low naturally even if it is kept unused.
- Periodical full (dis)charge: Repeated recharge in midway shortens the running time gradually. To lengthen the span, charge and discharge the battery to the fullest once or twice. For optimal use, execute the full charge/discharge every 30 to 60 days. Still better, recharge the battery after it has run out.

**The battery capacity may change due to chemical reactions during charge and discharge.**

- The system checks the charge status of LG batteries frequently, and then calculates and indicates the actual battery duration on the current system setup.
- The battery is wearable goods and thus the life span may be getting shorter as used. The battery running time may also become shorter accordingly.
- When the battery is fully charged the machine stops recharging, and it resumes recharging when the battery charge rate drops below 95 %.
- When the temperature of the battery drops below 9.6, it is charged in a low current. In this case, charging time may stretched to 32 hours or longer.



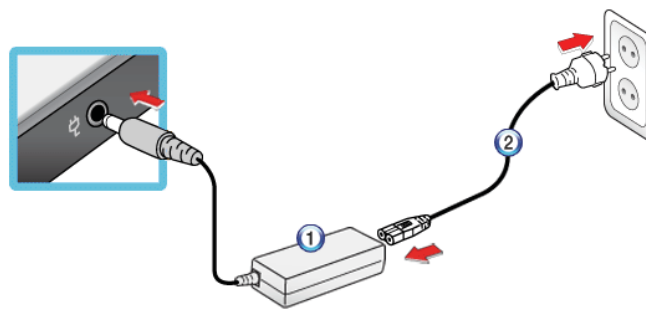
### 3-2. Charging Battery with AC Adapter

Notebook PC runs on AC power or battery.

This section describes the procedure that the user should take initially for a new system.

❖ The provided AC adapter can be used from 100 V to 240 V.

1. Connect the AC adapter to a power outlet with the power cable.
2. Connect the adapter to the machine.



1. AC Adapter
  2. Power cable
3. Adjust the LCD panel to the most comfortable angle.
  4. Press the power button to turn on the machine.



■ You need a different plug to use the AC adapter on 110 V. (The extra plug for 110 V is sold separately.)



#### **Caution**

**Do not leave a liquid container on the computer.**

- The system may be short-circuited and damaged.



#### **Warning**

**Please use an AC adapter certified by LG Electronics.**

- Otherwise, an explosion or fire may occur.
- It may cause a problem in battery charging or system operation.





### 3-3. Windows 7 Overview

**Windows 7** has many advantages in terms of information management and security, enhancing your productivity. **Windows 7** allows you to access information in your computer or in your corporate network more easily and provides better security for your data.

- ❖ **Virtual XP Mode** is supported only in **Windows 7 Professional Version** or above. Also this feature may not be supported in some CPU models.
- ❖ **Windows 7** and **Home Basic** do not support some functions such as **Aero** and **Flip 3D**.
- ❖ In some models, the **Windows Aero** or **Flip 3D** functions can reduce the system speed and hinder normal movie clip play.
- ❖ For detailed information about **Windows 7**, select **Start > Help and Support**.

#### ► Windows 7 Start Menu

**Windows 7** start menu shows you the new features of **Windows 7** and provides the basic tools for using **Windows 7**, such as Personalize **Windows** and **File Backup**.

1. Click **Start > [Start]** .
  - ❖ By clicking the arrow on the right of the **[Start]** button, you can select the menu you want to use.
2. Select an item to execute the task or view the information.
  - ❖ Items displayed on the **Windows 7** Start menu may differ depending on the product specifications.





## ► Windows 7 Desktop

❖ Desktop may differ by model type and software version.



### 1. Start button

❖ Unfolds **Start** menu when clicked.

### 2. Start menu

❖ Displays **Windows** programs that you can start directly from the menu.

❖ To find an application or a file from here, input search terms in the Instant Search field and start search.

### 3. Taskbar

❖ Shows all currently running programs.

### 4. Language bar

❖ Allows you to switch languages while typing.

### 5. Taskbar icons and clock

❖ Allows you to set up Volume, Power Management, Backup and other basic configurations.

### 6. Return to the Desktop

❖ If you place the mouse pointer on this menu, all the open windows become transparent (**Aero Peek**). If you click the menu, all the open windows become minimized to display the desktop.

### 7. Windows Gadgets

❖ The right side of the desktop displays mini-applications called **Gadgets**. You can download more **Windows 7** gadgets from the service website.

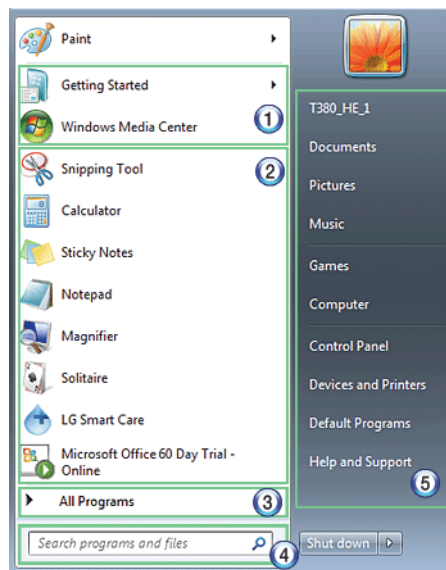
### 8. Recycle Bin

❖ Keeps dropped files and folders. **Empty Recycle Bin** deletes files and folders in **Recycle Bin** from the computer permanently. Deleted files and folders can not be restored.

## ► Start menu

Includes all programs needed to start **Windows**.

❖ Desktop and Start menu may differ by model type and software version.



1. Fixed Items

2. Recently Used Programs

❖ The order of the programs is subject to change.

3. All Programs

4. Instant Search Field

❖ Allows the user to search for a specific application, file, Internet favorite or many others. Type search words and start search to display the results by category.

5. Shortcut

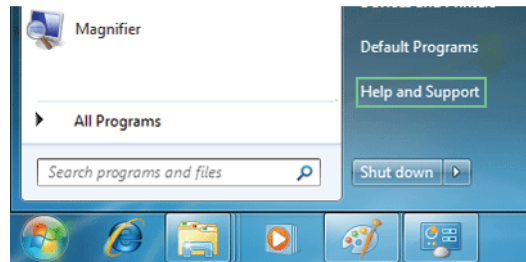
❖ Displays folder categories like Document, Picture and Music so that you can access to a specific file or folder directly from the list.

## ► Help and Support

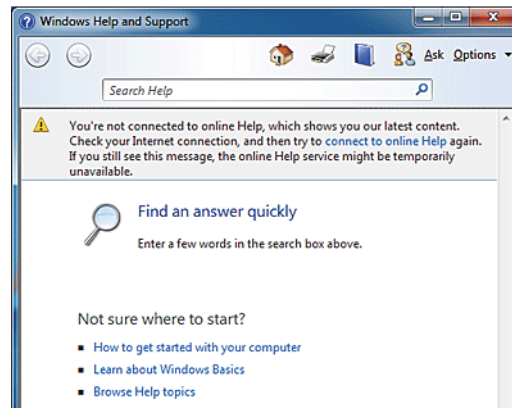
Allows you to learn about **Windows** use and get troubleshooting information and technical supports. Please read the menu before using the computer.



1. Click **Start** button and **Help and Support** on **Start** menu.



2. Follow the instructions on the screen to use **Help and Support**.



- ❖ Helps you with many such troubles as learning about the features of **Windows 7** and getting troubleshooting information through appropriate items.
- ❖ Fetches information provided by Microsoft.

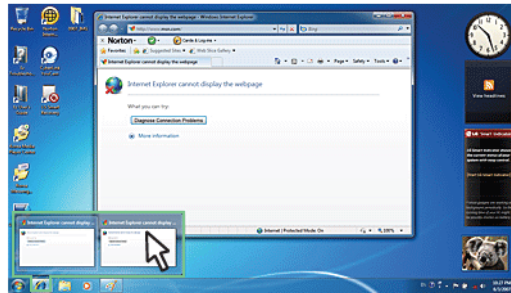
## ► Preview Workpane

**Windows 7** groups the windows such as Internet Explorer, My Computer and Windows Explorer and displays them as a single icon. You can minimize or maximize the windows on the screen conveniently using this menu.

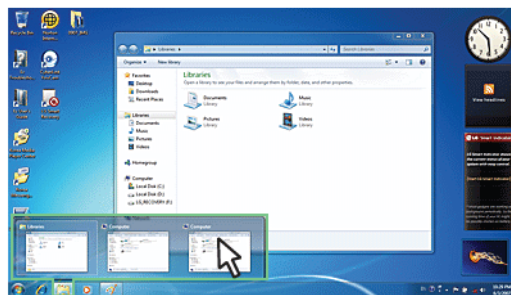
1. Preview Internet Explorer

- ❖ If you place the mouse pointer on the Preview window after clicking the workpane group icon, the corresponding

windows are displayed on the desktop. Click a window in the Preview to open the window.



## 2. Preview My Computer/Windows Explorer



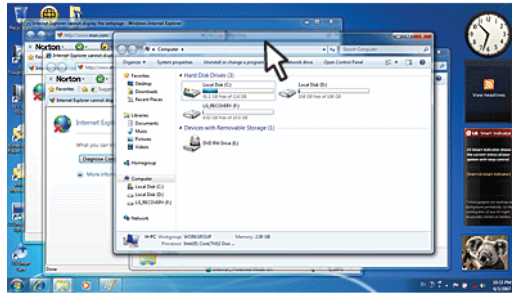
## ► Convenient Features of **Windows 7**

**Windows 7** is designed to help you use frequently used functions more easily. Utilize the following features to use your system more efficiently.

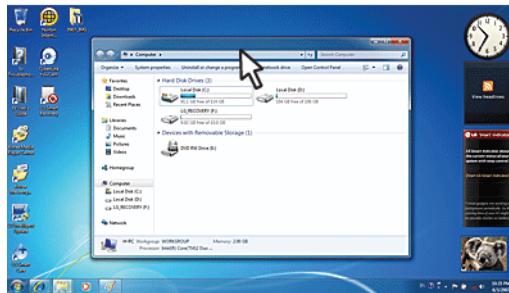
1. **Minimize Unnecessary Windows (Aero Shake):** Click and shake the title bar of the window you want to use to minimize other windows to the task bar.



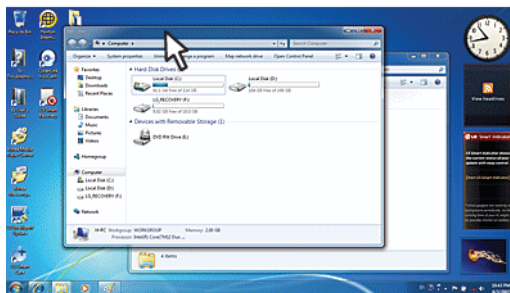
❖ If you want to display the windows again, click and shake the title bar of the open window again.



2. **Switch Window Mode Quickly** : Click the title bar of a window and drag it to the top of the screen to maximize it. Click the title bar of a window and drag it to the bottom of the screen to minimize it.



3. **Auto-align Two Windows** : Click the title bar of one of the two windows you want to use and drag it to the rightmost or leftmost side of the screen to make the window occupy one half of the screen.



## ► Changing User Account Control Settings

**User Account Control** prevents any unauthorized alteration to system configurations. When someone tries to change settings or install a program that could affect others' system use, **User Account Control** confirms his or her authority first.

We recommend that **User Account Control** not be disabled. If this feature is disabled, enable it immediately to protect the system.

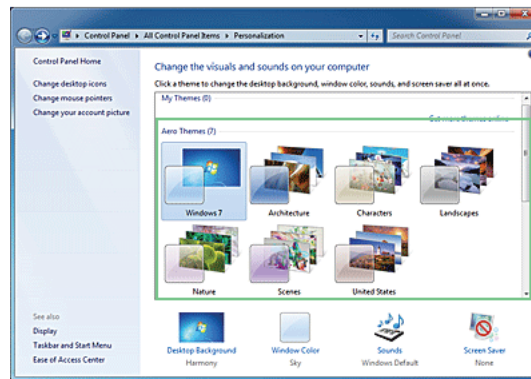
1. Select **Start > Control Panel > View By > Small Icon > User Account > Change User Account Control Settings**.
2. After changing User Account Control settings, click **[OK]**.
  - ❖ It is recommended to use the default settings for the security and safety of your system.

## ► Enable Windows Aero

**Windows Aero** delivers the exquisite visual effects of **Windows 7**. It presents window animations in new transparent and delicate visualization.

❖ **Windows Aero** may be enabled by default depending on model type and software version.

1. Right-click the desktop to display a popup window. Then click **[Personalize]**.
2. Once the **[Change Visual Effect and Sound]** screen appears, select the **Aero** theme you want to use.



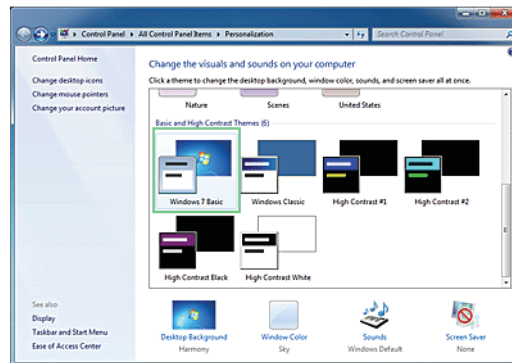
3. The **Aero** theme where the transparency feature is applied becomes enabled.

## ► Disable Windows Aero

1. Right-click the desktop to display a popup window. Then click **[Personalize]**.



2. When the Change Visual Effect and Sound window appears, select [**Windows 7 Basic**] in the [**Basic and High Contrast Theme**] menu.



3. The Aero theme is disabled.

## ► Windows Flip 3D Overview

**Windows Flip 3D** allows you to view all the open windows on the Desktop on one screen. **Flip 3D** displays all the open windows in 3D, stacked view.


❖ To use **Windows Flip 3D**, the **Windows Aero** feature must be enabled.

1. Press the **Windows logo** key () + **Tab** to enable or disable **Flip 3D**.




2. To flip through the open windows, hold down the **Windows logo** () key, and press **Tab** key or simply rotate the mouse wheel. To flip over the windows clockwise or anti-clockwise one by one, hold down the Windows logo key and press the Left or Right arrow key.



- When the intended window is displayed at the top, release the **Windows logo** () key. To display a window without flipping through the stack, hold down the Windows logo key and click the intended window.

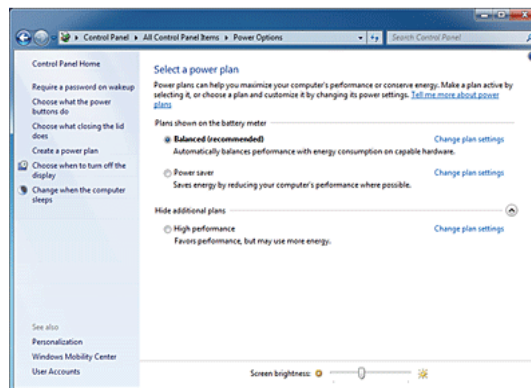


- If you want to display windows in the **Flip 3D** state constantly, press **Ctrl + Windows logo** () + **Tab** keys. In this state, to flip over the windows one by one, press **Tab**. In this state, to flip over the windows clockwise or anti-clockwise one by one, press the Left/Down or Right/Up arrow key. Press **Enter** to end the Flip 3D state and open the selected window.

## ► Windows 7 Power Management

**Windows 7** provides a more simple and reliable power management environment than that of previous **Windows**. With that, you can make Notebook PC consume power more effectively.

- Select **Start > Control Panel > View By > Small Icon > Power Options**.
- When the [Select a power plan] window appears, select one of the items displayed under **Battery Meter Plans**.
  - ❖ If the **High Performance** Settings tab is not displayed, click the down arrow on the right of [Display More Power Plans] to display it.



- ❖ **Balanced**: Ensures the maximum performance when needed and saves power when the system is not used.
- ❖ **Power saver**: Reduces system performance to save power. This plan maximizes battery life.
- ❖ **High performance**: Increases system performance and response time to their maximum. In this plan, the battery does not last long.

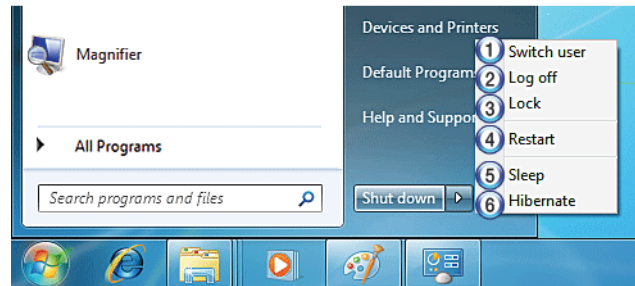
## ► System Termination Options

In **Windows 7**, you can use the shortcut menu to log off from user account, lock or restart the system



and switch users fast without logging off.

Click the arrow button on the right of the [Shutdown] button to display more shutdown options.



1. Switch User

❖ Logs on using another user account registered in the system.

2. Log Off

❖ Exits all programs and logs off from the user account.

3. Lock

❖ Locks the user account.

4. Start Again

❖ Exits all programs and reboots the system.

5. Sleep

❖ Turns off the devices you are not using to minimize the power consumption.

6. Hibernate

❖ Stores the user programs and turns off the system.



■ The sleep mode reduces the power consumption. If you use the sleep mode, you can go back to your work quickly. It is recommended to save all the data in all open programs before using this mode.

### 3-4. LG Smart Care

LG Smart Care is an application that allows you to diagnose and optimize the system conveniently.

- ❖ The figures herein are subject to change without prior notice.
- ❖ You can download and install LG Smart Care using the online update feature of LG Intelligent Update.
- ❖ LG Smart Care may not be available depending on the model.
- ❖ "Diagnostics and Repair" function of LG Smart Care needs network connection or LG Intelligent Update.
- ❖ Before using LG Smart Care, make sure to connect the system to the network or install LG Intelligent Update.

#### ► Using LG Smart Care

1. Double-click the LG Smart Care icon on the Desktop to run the program.
2. LG Smart Care Home Page appears as follows.



1. **Windows Button:** Switches to **Windows**.
2. **Settings Button:** Allows you to change the settings of the LG Smart Care program.
3. **Exit Button:** Exits the LG Smart Care program.
4. **Diagnostics and Repair:** Diagnoses the system and solves the problems diagnosed.
5. **Reinstall Windows:** Restores the system to the restoration point set by LG Smart Recovery or Windows.
6. **Utilities:** Provides various utilities (Internet connection, HDD defragmenter, system cleanup, etc.) that are needed for the system management.
7. **Indicator:** Displays the system preferences (display brightness, sound, power status, firewall, updates, etc.) and allows you to change the settings.
8. **Indicator Environment configuration:** Allows you to edit the indicator components displayed on the screen.
9. **Hide/Show Indicator Button:** Hides or shows the indicator window.




### 3-5. CyberLink YouCam

Cyberlink **YouCam** is the program that can take picture or moving images through the **Web Camera**.

- ❖ The figures herein are subject to change without prior notice.
- ❖ **Optional Web Camera** is optional, and so it may not be installed in some models.
- ❖ For more information about its operations, refer to the Help of **CyberLink YouCam**.


#### ► Using Cyberlink YouCam




1. Double-click the **CyberLink YouCam**  Icon on the Desktop to run the program.
2. **CyberLink YouCam** Home Page appears as follows.

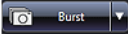
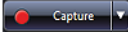
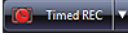
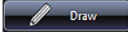







1. **Viewer**: Displays the **Webcam** screen.
2. **Image Gallery**: Use to record pictures and moving images, play back or delete those images.
3. **Animation Effect menu** Can add a frame and animation effect on the screen.
4. **Frame / Animation Effect menu** Can add a frame and animation effect on the screen.

#### ► Major Buttons

**Snapshot/Burst** and **Capture/Timed Recording** functions can be toggled by pressing  on the right of the corresponding menu icon.

1.  **Import Downloaded Emotion File**: Opens a downloaded emotion file.
2.  **Configure CyberLink YouCam Settings**: Configures the environment for **CyberLink YouCam**.
3.  **Snapshot**: Takes pictures.

4.  **Burst:** Takes pictures continuously.
5.  **Capture :** Records movie clips.
6.  **Timed Recording:** Records a movie clip at the date and time set by the user.
7.  **Draw:** Enables you to edit the pictures using a pen or stamp.
8.  **Upload Movie Clip to YouTube:** Uploads movie clips to **YouTube**.
9.  **Send Media File Using E-mail:** Sends the taken pictures or moving images through E-mail.
10.  **Print:** Prints the selected picture.
11.  **Recycle Bin:** Deletes the selected picture or movie clip.
12.  **Help:** Displays the help window for **CyberLink YouCam**.

## 4. Input/Output Device



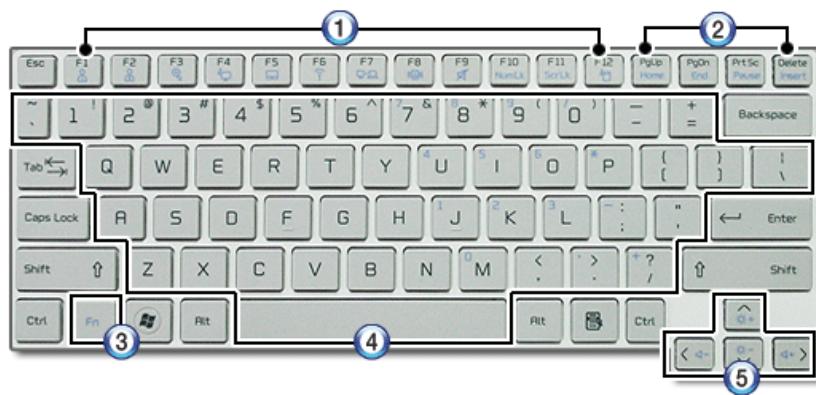
## 4-1. Using the Keyboard

The keyboard allows the user to input data or give commands.

❖ The keyboard may look different depending on model type.

### ► Keyboard Overview

The keyboard consists of character and numeric keys as well as function keys.



#### 1. Function keys (F1 - F12)

❖ The usage may differ by OS or applications types.

#### 2. Pg Up and Pg Dn keys:

❖ Moves a screened page up or down.

#### 3. Fn key:

❖ Works as part of hot keys if used with function keys.

#### 4. Character and Numeric Keys:

❖ Consists of keys, spacebar, numeric keys (0 - 9), and special symbol keys.

❖ **Spacebar**: Inserts a white space per hit while you type.

#### 5. Arrow keys:

❖ Moves the cursor and others in their respective directions.



## ► Using Special Keys



### 1. **Esc** key

- ❖ Terminates or stops a program.

### 2. **Caps Lock** key

- ❖ You can enter capital letters using the keyboard when this key is pressed. To type lowercase letters, press this key again.

### 3. **Shift** key

- ❖ used to type uppercase letters or as part of hot keys.

### 4. **Windows** key

- ❖ Allows you to select the **Windows** Start button and open the Start menu.

### 5. **Shortcut Menu Key:**

- ❖ Allows you to open the **Windows** shortcut menus. (The shortcut menus are the same as those you can see when right-clicking a file or folder.)

### 6. **Enter** key

- ❖ Used to inform the computer of the completion of one command or to change the line.

### 7. **Prt Sc** key (**Print Screen**)

- ❖ Prints or temporarily saves the current screen display.



#### Caution

- Spilling a watery substance like coffee or juice on the keyboard may cause a fault, malfunction, or electric shock.
- The keys may not work properly when you use several keys at the same time while playing a PC game. (Please change the key combination settings according to the combinations necessary for the game play.)





- Toggle **Caps Lock** key to turn the **Caps Lock** lamp ON or OFF. The on/off status is displayed through the lamp on the notebook PC body.
- To change the input mode temporarily, you can press the **Shift** key together with the letter you want to enter. By doing so, you can enter an uppercase letter when the Caps Lock key is not pressed and a lowercase letter when the Caps Lock key is pressed.

**For more convenient use of Windows, remember the following Windows key combinations:**

- Displays **Windows** Help.
- Displays "Search Result" window.
- Starts Flip 3D if **Windows 7 Aero** is running. Flip 3D is not executed if **Aero** is not running.
- Minimizes the current window.


6

► **Hot Keys:**

By pressing the following key combinations at the same time, you can immediately start the designated features (such as adjusting the screen brightness).

<b>Fn + F1</b>	<b>Customizable hot keys. (Configurable through OSD settings)</b>
<b>Fn + F2</b>	<b>Customizable hot keys. (Configurable through OSD settings)</b>
<b>Fn + F3</b>	<b>Magnifying hot keys</b>



<b>Fn + F4</b>	Windows Executes the mode defined in the Power Save Mode. (Example: Standby Mode, Maximum Power Saving Mode)
<b>Fn + F5</b>	When the user presses Fn + F5 keys, the touchpad mode toggles from Touchpad Disable, to Touchpad Auto-Disable (upon connection of external USB mouse), to Touchpad Enable in order. (Initialization takes 1 - 2 seconds. It is recommended to use after the initialization.)
<b>Fn + F6</b>	<p>Turns the wireless devices (incl. Wireless LAN and Bluetooth) on and off (Optional Bluetooth is optional, and so it may not be installed in some models.)</p> <p>Through hot key settings in the OSD Tray menu, the user can customize [Fn]+[F6] features. Default setting is, for all wireless devices (incl. Wireless LAN and Bluetooth), ON/Off.</p>
<b>Fn + F7</b>	<p>The following screen appears when you press Fn + F7 keys. (Windows 7 Starter does not support the Monitor Extension mode)</p>  <p>Select the mode you want to use and press [Enter] to switch the monitor.</p>
<b>Fn + F8</b>	Switches between the SRS Off, SRS WOW HD, SRS TruSurround HD modes for each pressing the Fn + F8 keys.
<b>Fn + F9</b>	MUTE (Sound ON / Sound OFF)
<b>Fn + F10</b>	indicating the embedded numeric keys are available. If you press [Fn] + [Num Lk] again, you can enter text characters.
<b>Fn + F11</b>	Works as [Scroll Lock].
<b>Fn + F12</b>	Hibernates (When OSD is installed)
<b>Fn + ▲</b>	Increases LCD brightness, which can have eight different levels.
<b>Fn + ▼</b>	Decreases LCD brightness, which can have eight different levels.
<b>Fn + ◀</b>	Turns down the volume.
<b>Fn + ▶</b>	Turns up the volume.
<b>Fn + PgUp</b>	Works as Home.
<b>Fn + PgDn</b>	Works as End.



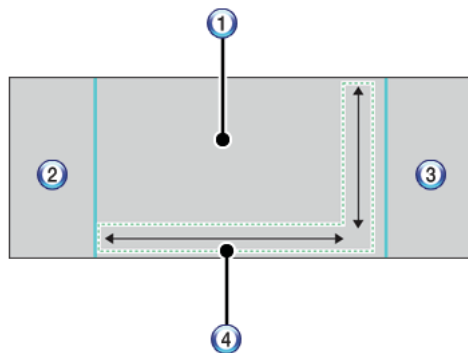
<b>Fn + Prt Sc</b>	<b>Works as Pause.</b>
<b>Fn + Delete</b>	<b>Works as Insert.</b>



## 4-2. Using the Touchpad (and Mouse)

The touch pad is equipped with the scroll feature and can function as a wheel mouse. The touchpad is compatible with the USB-type mouse in software. The touchpad functions same as the USB-type mouse and is very useful for a program supporting mouse use like the **Windows**.

- ❖ The touchpad and a USB-type mouse can be used together on the same system.
- ❖ **T290** Series provides not a touch type but a button type for users to left/right-click.
- ❖ The touchpad scroll function is not supported in the model that supports the gesture function.



1. Touchpad
  - ❖ Moves the cursor.
2. Left button
  - ❖ Used to select or execute programs.
3. Right button
  - ❖ Functions as the right button of a mouse in most cases. However, the usage may differ depending on programs.
4. Scrolling area

### ► Moving the Cursor (Pointer) on the Screen

Place a finger on the touchpad and glide the finger.



### ► Click (Select)

Press and release the left button swiftly. (Or tap the touchpad once.)

Do this, for example, to select a menu or icon and to place the cursor to type on a word processor file.

### ► Double-click (Execute)

Press and release the left button twice swiftly in a series. (Or tap the touchpad twice.)

Do this, for example, to run a program after selecting its execution file (or icon).



Caution

#### Notes on Using the Touchpad

- Do not use a sharp object such as a pen on the pad nor peel the cover. It may cause an impairment.
- Do not place more than one finger, and do not use while wearing a glove or when the hand is wet. The Touchpad will not work properly. Oil or dirt at the finger tip can also cause an impairment.
- The touchpad is sensitive. Do not give excessive load or maintain an uncomfortable position. Otherwise, a finger or wrist injury may be resulted in.



## ► Drag & Drop

To drag, click and hold an icon, for example, and move it to another location.

To drop, release the dragged icon in the location you want.

To move a file icon, for example, to another folder or to **Recycle Bin**, place the cursor (or the pointer) on the icon, press and hold the left button, and glide another finger on the touchpad until the icon reaches the aimed location. After reaching the destination, release the left button.

### 1. Drag

- ❖ Glide one finger on the pad with another finger pressing and holding the left button.

### 2. Drop

- ❖ Release the left button to drop. (By doing this, you could drop a file into **Recycle Bin**, if you want to.)

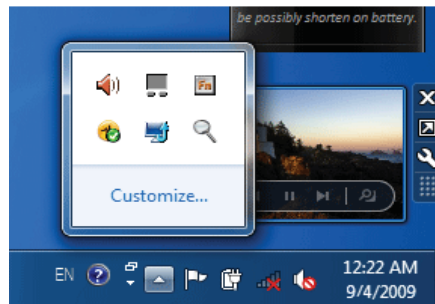


## ► Click-free Dragging

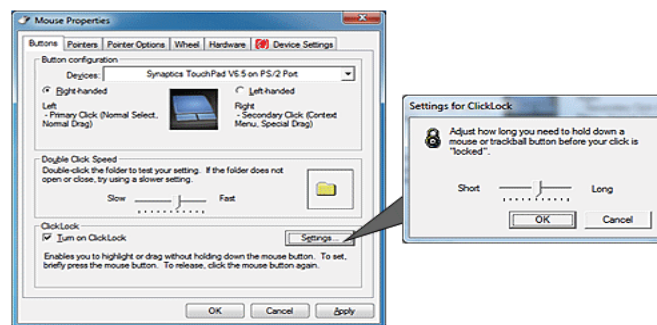
When activated, this feature allows you to drag an icon without pressing and holding the left button.

Do the following to activate the click-free dragging feature. If it has been done, pressing the left button for an extensive time replaces pressing and constant holding so that you can drag without holding the left button.

1. Click [Mouse Properties] icon in Notification Area.



2. Select Activate click-free dragging (T) and click [Setup] button to adjust the time span for which you should press the left button to execute the feature.



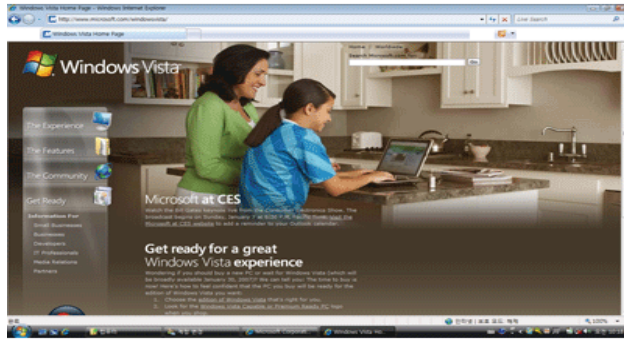
## ► Scrolling

The touch pad supports the scrolling feature.

To scroll vertically or horizontally, glide your finger along the right or bottom edge. Now the screen follows your finger movements if there is a scroll bar on either edge.



❖ Scroll area may differ by model type.





## 4-3. Using Touchpad Gesture

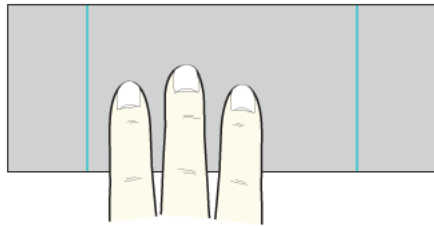
The touchpad gesture function allows you to use Windows programs more easily by utilizing different touching methods.

- ❖ The touchpad gesture function may not work in some applications that are not provided by Windows.
- ❖ The touchpad gesture function may not work in some models.

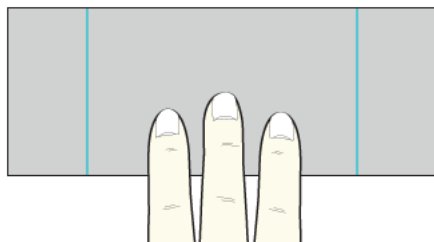
### ► Using Image Slide Show/ **Internet Explorer**

Select Start > My Computer and open the image file saved in the notebook PC or USB memory.

1. **Go to Next/Previous Image:** Place three fingers on the touchpad and move to the left or right to go to the previous or next image respectively. (In **Internet Explorer**, the previous or next page is displayed respectively).

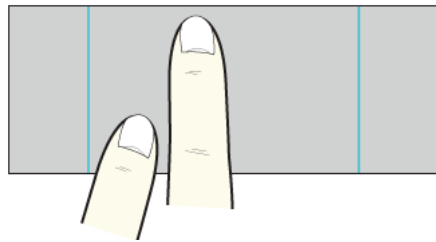


2. **Switch to Full Screen:** Place three fingers on the touchpad and move to the top or down to maximize the slide window or return to its original size respectively.

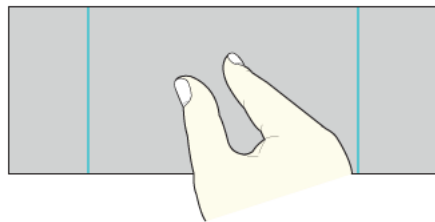




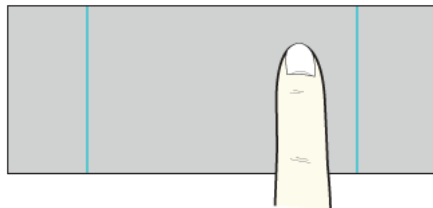
3. **Rotate Image:** Place the thumb on the bottom right of the touchpad and move another finger in a spiral pattern on the touchpad to rotate the slide.



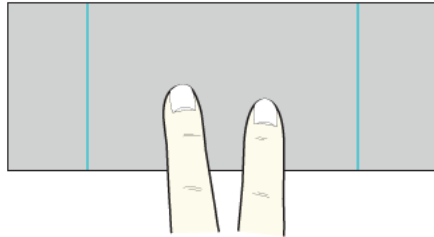
4. **Zoom an Image:** Place the thumb and index finger on the touchpad and increase or decrease the distance between the fingers to enlarge or reduce the image respectively, as shown in the figure.



5. **Scroll Using One Finger:** Place the index finger on the top right of the touchpad and move to the left or right in a circular pattern to scroll the screen down or up respectively.



6. **Scroll Using Two Fingers:** Place two fingers on the touchpad and move up/down/left/right to scroll the screen.



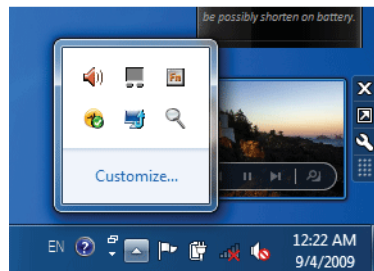
### ► Setting Touchpad Functions

You can change the touchpad functions or enable/disable the gesture function.

❖ The figures herein may differ by language selection and be subject to change without prior notice.

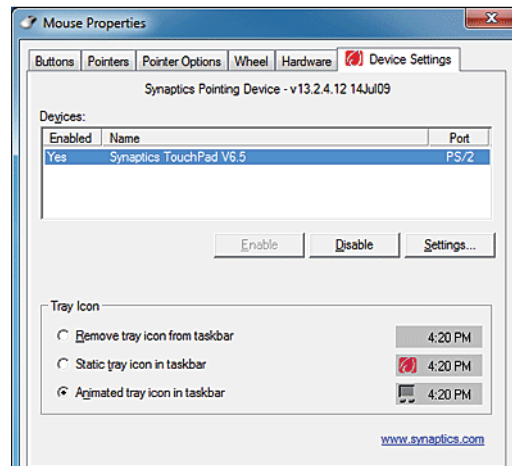
1. Click **[Mouse Properties]** icon in Notification Area.

❖ If you cannot find the Mouse Properties icon in Notification Area, Select **Start > Control Panel > View By > Small Icons > Mouse** menu.

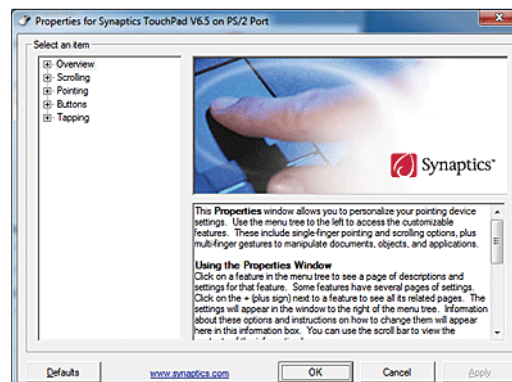




2. When the following screen appears, select the **[Device Settings]** tab and click **[Settings...]**.



3. When the following screen appears, change the settings as required and click **[OK]**.





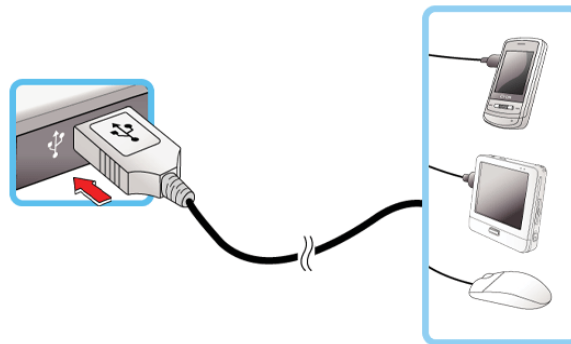
## 5. Connecting Peripherals



## 5-1. Connecting USB 2.0

Following peripherals can be connected to the Notebook PC.

❖ Those peripherals need to be purchased separately.



The notebook PC can be connected with other USB supporting devices such as USB keyboard, Hub, digital camera, etc.



## 5-2. Connecting Monitor



### Monitor Toggle Features (Converting the Screen Using the Shortcut Key)

❖ If you have an external monitor connected to the computer, press the Fn + F7 keys to rotate the display mode between LCD only, Monitor only, and LCD + Monitor both in order.



- Ensure the monitor power is off before connect external monitor to the notebook pc.

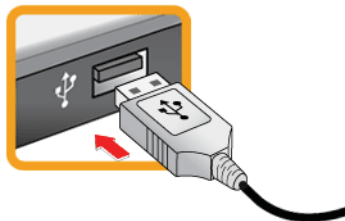


## 5-3. Using External Drive (LGPC-ODD)

❖ **Optional** External Drive is optional, and so it may not be installed in some models.

### ▶ Connecting External Drive

Connect the USB cable of the external drive to the USB port of the notebook PC.



- The USB cable is on the bottom side of the external drive. Insert your finger as shown in the following figure and pull out the USB cable.



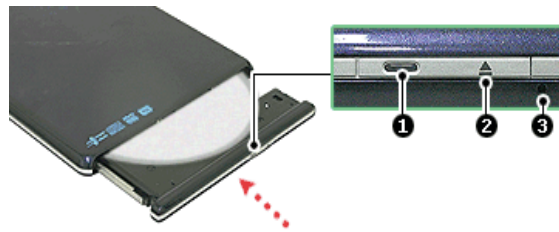
- If you want to insert the USB cable back to the external drive, first insert the cable and then insert the USB connector as shown in the following figure.





## ▶ Loading/Unloading an Optical Disk (CD/DVD)

1. Boot the system and press the **Open Disk Tray** button in front of the external drive.
2. When the tray is ejected, place the optical disk (CD/DVD, etc.) at the center of the tray.  
❖(With brand name facing upward.)



1. Operation lamp
2. Open Disk Tray button
3. Emergency Ejector

3. Push the tray in.
4. If you want to take out the optical disk (CD/DVD, etc.), press the Open Disk Tray button and take out the disk when the tray is ejected.



Caution

- LGPC-ODD works only in LG X100, X110, X120, X140, X200, P100, P300, P310, P510, T280, T380, T290 series.



- Use the external drive on a leveled place, if possible. On a tilted place, the drive may not work properly.
- The external drive installed in the notebook PC is X24 speed. When an optical disk is inserted, the motor will rotate at a high speed, resulting in slight vibration.
- Do not touch or scratch the surface of an optical disk such as CD/DVD when you handle the disk.
- Do not use benzene or thinner to clean an optical disk.
- Do not write anything on the readable surface of an optical disk.
- Make sure not to bend an optical disk.
- Be sure not to drop or smash an optical disk.
- Do not expose an optical disk to the sunlight.
- To clean a CD or DVD, rub with smooth cloth from the center to the outer edge.
- Do not take out an optical disk while the indicator lamp of the optical disk drive is on.

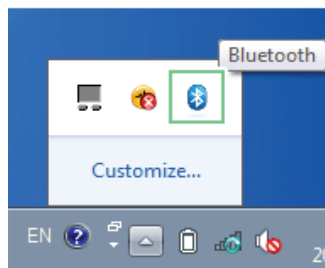
## 5-4. Using IVT BlueSoleil

**IVT BlueSoleil** is a **Windows**-based IVT software which establishes wireless connection between **Bluetooth**-enabled desktop or notebook PC and other **Bluetooth**-enabled devices. **IVT BlueSoleil** allows the user to access various Bluetooth-enabled digital devices such as camera, cell phone, headset, printer, GPS receiver, etc. It can also establish network and exchange data with other **Bluetooth**-enabled computer or PDA.

- ❖ **Optional Bluetooth** is optional, and so it may not be installed in some models.
- ❖ The figures herein may differ by language selection and be subject to change without prior notice.
- ❖ For more details about how to use **Bluesoleil**, refer to the corresponding help.

### ► Bluesoleil

1. Double-click the icon on the right bottom of the taskbar.



2. **Bluesoleil** screen appears.

- ❖ If Bluetooth is turned on, it searches the Bluetooth devices in the area and displays them on the screen.
- ❖ If a Bluetooth device is not displayed on the screen, press **[F5]** or **[Fn]+[F6]** to see if **Bluetooth** is turned on.



1. **Bluesoleil** Menu Button: Provides menus such as Find Device, Sorting Criteria, My Device and Help.
2. Minimize/Exit Button: Minimizes the **Bluesoleil** window or exits the program.



3. Available Services: Displays the list of services available for a **Bluetooth** device.
4. **Bluetooth** Device Status: Displays the **Bluetooth** device information and their status for the current notebook PC.



## 6. System Setup



## 6-1. Starting System Setup

System setup means storing the hardware configuration information of the computer in the **CMOS RAM**. Through system setup, the computer retrieves various information including current date and time, memory capacity, and hard disk capacity and type.

You setup the system when you set passwords, change the booting order, and add new peripheral devices to the machine.

❖ Items displayed on the Setup screen may differ by model type and spec.

- Refer to [Setting the Password].
- Refer to [Changing or Deleting the Password].
- Refer to [Restore the Default Settings].



Caution

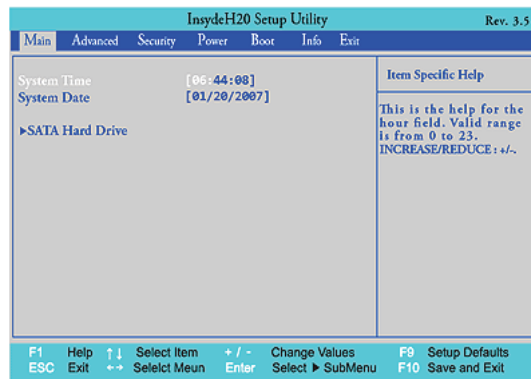
- Do not change the system setup unless necessary. Incorrect system setup may cause errors during system operation. Take caution when changing the system setup.
- For performance improvement, CMOS setup menu configuration and the initial setup status may be changed and may become different from images included in the user manual.

1. Turn on the notebook PC.
2. When the following logo screen appears, press [F2].






3. A while later, the system setup home screen appears.

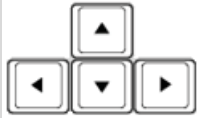


### ► Keys Used in System Setup

Keys	Function
<b>Enter</b>	<b>Selects the current item.</b>
<b>Esc</b>	<b>To deselect the current item or to move to the previous screen.</b>
<b>▲, ▼, ◀, ▶ (Arrow keys)</b>	<b>Moves the cursor up, down, left, and right.</b>
<b>+, -</b>	<b>Increases or decreases the item value.</b>
<b>Page Up</b>	<b>Moves the cursor up to the beginning.</b>
<b>Page Down</b>	<b>Moves the cursor down to the end.</b>
<b>F10</b>	<b>Stores new contents or ends the system setup.</b>

 **Cursor Keypad**

- These keys are used to move the cursors up, down, right, and left.





## 6-2. Setting the Password

This process is to set a password so that other people cannot use the notebook PC or change the settings. The user can set a password while booting the system or setting up the system.



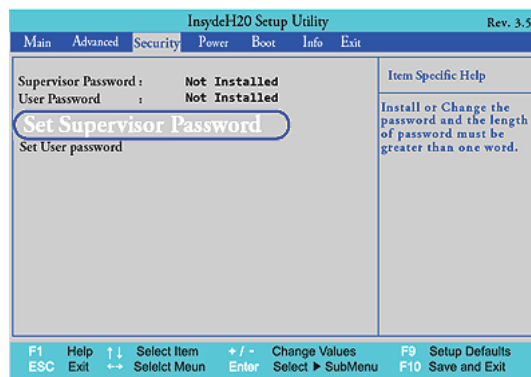
Caution

- Without the registered password, if any, access to the system will be denied. Write down and keep the password in a safe place.

### ► Set Supervisor Password

The password prevents unauthorized people from accessing the notebook PC. By default, no password is set for the machine. If an unauthorized person changes the password in the **CMOS Setup**, you will be unable to access the system.

- After opening the system setup screen, use the arrow keys to move to **Security**.
- When the following screen appears, select **Set Supervisor Password** with the arrow keys and press **[Enter]**.

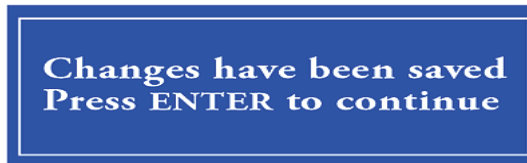


- When the following message appears, input the password and press **[Enter]**. The password must not exceed 8 characters of letter (A - Z), number (0 - 9) or their combination.



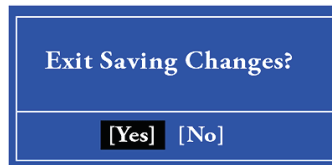


4. When the following message appears, press **[Enter]**.



5. To save the changes in system setup, press **[F10]**.

6. When the following message appears, select **[Yes]** and press **[Enter]**. The notebook PC will restart.



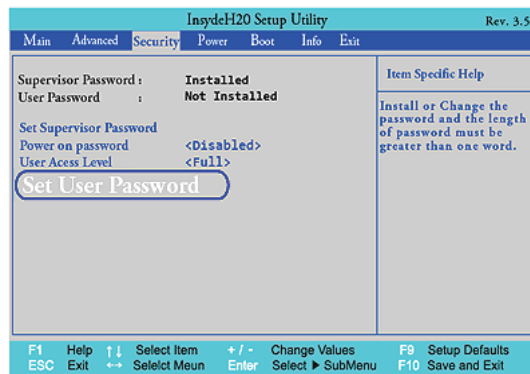
■ With **Supervisor Password**, you are authorized to set all items in the **CMOS** setup menu and to set **Power on Password**. In case other people also use the notebook PC, it is recommended to set the **Set User Password**.

### ► **Set User Password**

The password set by the **Set User Password** process is lower than that set by the **Set Supervisor Password** process, and so the user can use the **Set User Password** only after setting a password in the **Set Supervisor Password** menu.

1. After opening the system setup screen, use the arrow keys to move to **Security** .

2. When the following screen appears, select **Set User Password** with the arrow keys and press **[Enter]**.



3. When the following message appears, input the password and press **[Enter]**. The password must not exceed 8 characters of letter (A - Z), number (0 - 9) or their combination.



4. When the following message appears, press **[Enter]**.



5. To save the changes in system setup, press **[F10]**.



6. When the following message appears, select **[Yes]** and press **[Enter]**. The notebook PC will restart.

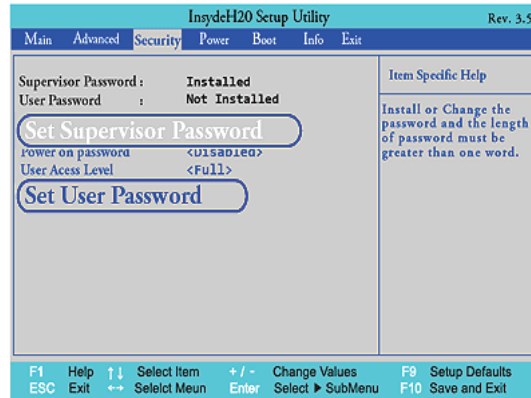


■ **UserPassword** allows limited access to the items in CMOS setup compared to the **Supervisor Password** item.

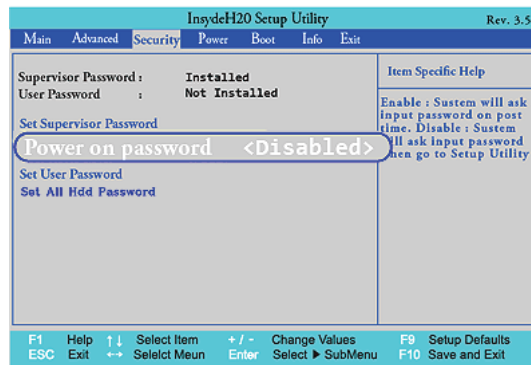
### ► Power on password

**Power on password** feature protects the system by requesting **Set Supervisor Password** or **Set User Password** during boot up.

1. After opening the system setup screen, use the arrow keys to move to **Security**.
2. When the following screen appears, set **Set Supervisor Password** only or both **Set Supervisor Password** and **Set User Password**.



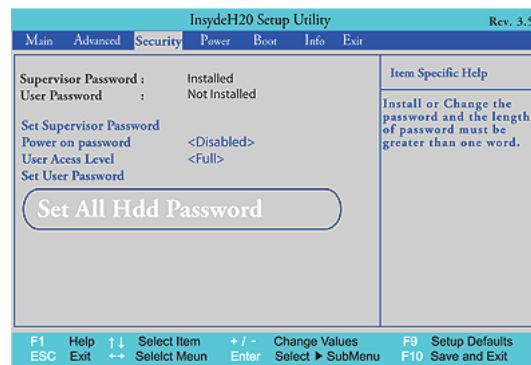
3. Select **Power on password** and press **Enter** to display a pop-up window. Select **[Enable]** and press **Enter** to set **Power on password**.



### ► Set ALL HDD Password

**HDD Password** is to set a password in the **HDD** separately from the **Supervisor Password**.

1. After opening the system setup screen, use the arrow keys to move to **Security**.
2. When the following screen appears, select **Set All HDD Password** with the arrow keys and press **[Enter]**.





- When the following message appears, input the password and press **[Enter]**. The password must not exceed 8 characters of letter (A - Z), number (0 - 9) or their combination.

Set HDD Password	
Enter New Password [	]
Confirm New Passwrod [	]

- When the following message appears, press **[Enter]**.

<b>Changes have been saved</b> <b>Press ENTER to continue</b>
--

- To save the changes in system setup, press **[F10]**.
- When the following message appears, select **[Yes]** and press **[Enter]**. The notebook PC will restart.

<b>Exit Saving Changes?</b>
<b>[Yes]</b> [No]



Caution

**Without the HDD Password, it is impossible to recover the HDD.**

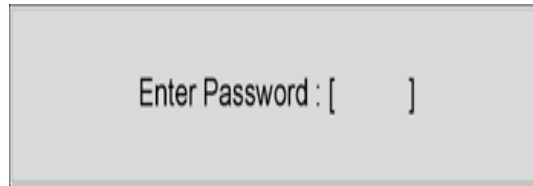
- The replacement of HDD due to the forgotten **HDD Password** is not covered by the warranty.

## 6-3. Changing or Deleting the Password

You can delete or change the password only after inputting the current password.

### ▶ Changing the Password

1. Execute the System Setup, enter the password, and press **[Enter]** .

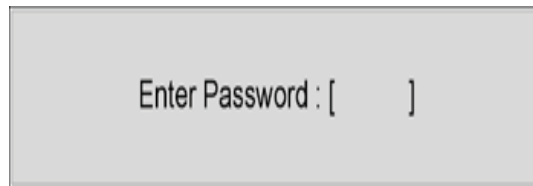


Enter Password : [    ]

2. Change the password in the same way as setting one.

### ▶ Deleting the Password

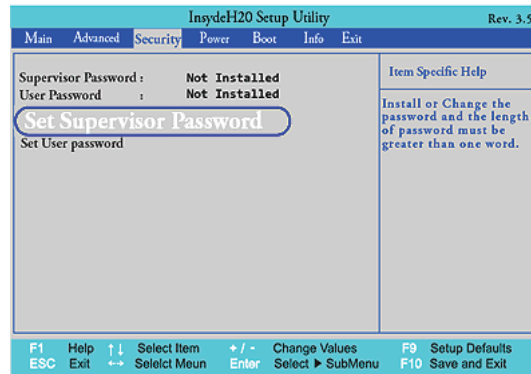
1. Execute the System Setup, enter the password, and press **[Enter]**.



Enter Password : [    ]



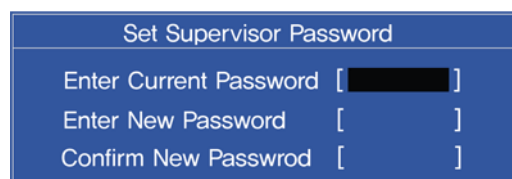
2. After opening the system setup screen, use the arrow keys to move to the **Security** menu. Then select **Set Supervisor Password** and press **Enter**.



3. When the following message appears, enter the current password in the **Please type in your password** field.



4. Press **[Enter]** in **Please type in your new password** and **Please confirm your new password**.





5. When the following message appears, select **[Continue]** and press **[Enter]**.



**Changes have been saved  
Press ENTER to continue**

6. To save the changes in system setup, press **[F10]**.

7. When the following message appears, select **[Yes]** and press **[Enter]** . The notebook PC will restart.



**Exit Saving Changes?**

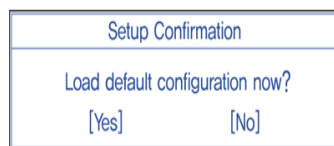
**[Yes]** **[No]**



## 6-4. Restore the Default Settings

If you have changed the system setup by mistake, you can restore the default settings.

1. After opening the system setup screen, use the arrow keys to move to **Exit**.
2. Use the arrow keys to select **Load Optimal Defaults**, and press **Enter**.
3. When the following message appears, select **[Yes]** and press **[Enter]**. The settings will be reset to their original defaults.



4. To save the changes in system setup, press **[F10]**.
5. When the following message appears, select **[Yes]** and press **[Enter]**. The notebook PC will restart.



- You may also press **[F9]** to use **Load Optimal Defaults**.



## 7.Using LG Smart Recovery



## 7-1. LG Smart Recovery System Backup

**LG Smart Recovery** helps you safely install and recover **Windows 7**.

❖ The figures herein may differ by language selection and be subject to change without prior notice.

1. Double-click the **LG Smart Recovery** icon to run **LG Smart Recovery**.
2. Click the **System Backup** icon.



3. When the following screen appears, select the location to back up.

❖ **DVD, CD, HD DVD, Blu-ray Disc** If you choose one among , a Media Disc for the restoration purpose will be generated, and you can restore system only by rebooting it with the Media Disc.

❖ The backup locations may vary depending on product specifications.



4. Choose Complete Backup or Partial Backup and click **Browse** button.

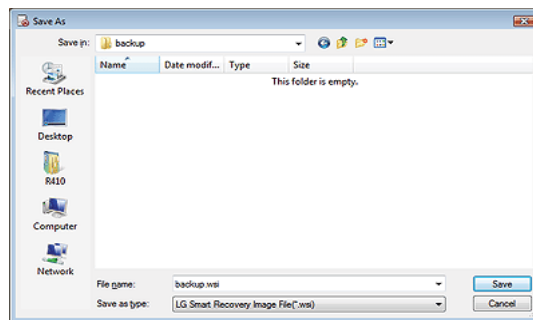
❖ You can select Incremental Backup only when you have previously run Full Backup and the system has complete



backup data.



5. Specify the location to save the backup file, type file name and click **Save** button.
  - ❖ If you have selected Incremental Backup, choose the existing Full backup data and click Open.

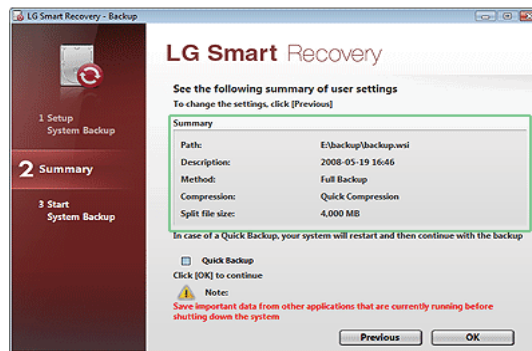


6. Once you complete the process to set the Complete Backup location, click **Next**.



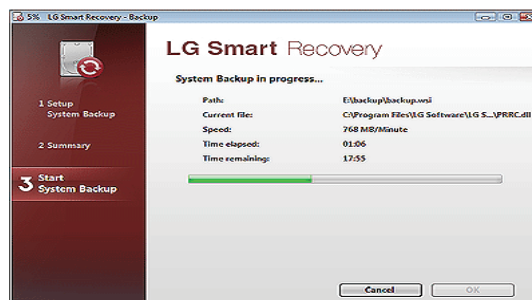
7. Check the system backup preferences you have selected and click **OK** button.

❖ Quick Backup reduces time required to backup the system.



8. The screen showing the progress of system backup appears.

❖ Depending on product specifications and backup file size, the system may need longer time to load the file. Do not turn off the power forcibly or reboots the system while it is loading the file.



9. After the system backup is complete, click **OK** to finish the process.





## 7-2. LG Smart Recovery System Restoration

You can restore the system by using the **LG Smart Recovery** backup data.

❖The figures and instructions herein are subject to change without prior notice.

1. Double-click the **LG Smart Recovery** icon to run **LG Smart Recovery**.

❖When **Windows 7** does not operate normally, restart the computer. When ""**PRESS F11 TO RUN LG RECOVERY..**"" appears on the screen during the booting process, press **F11** to start **LG Smart Recovery**.

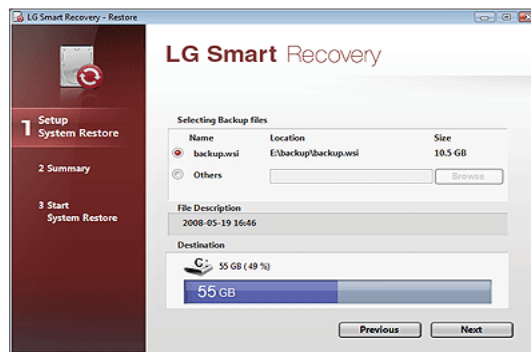
❖Backup important data by using **Tools** menu before starting the System Restore process.

2. Click the **System Restoration** button.





3. The System Restore Settings screen will appear.



4. Click the Protected Hard Disk Area or **Browse** to select a file you want to back up and click **Next**.

- ❖ The Protected Hard Disk Area option will be presented only if you have selected the **Safe Backup** when you run the **LG Smart Recovery** for the first time.
- ❖ If you select the Protected Hard Disk Area, the system will be restored to the initial status when you have bought it.



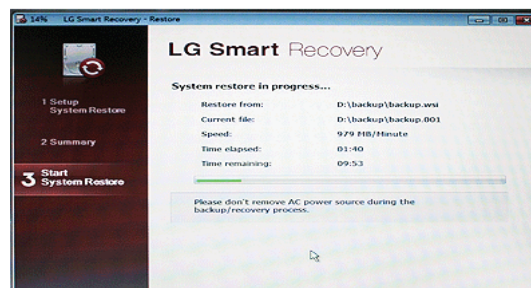


5. Confirm the restoration settings and click **OK**. The Restoration In Process message will appear.

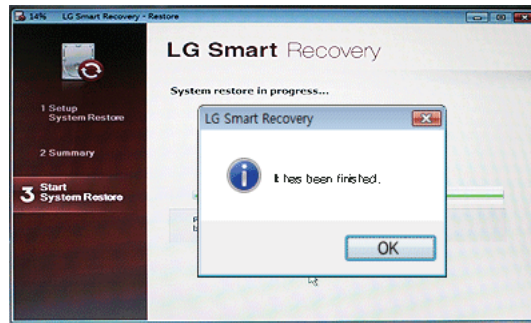


6. Click **OK**. The system will automatically restart in 1 minute and show the System Backup In Process screen.

❖ Depending on product specifications and backup file size, the system may need longer time to load the file. Do not turn off the power forcibly or reboots the system while it is loading the file.



7. Once the system restoration process completes, click **OK** and the system will automatically restart in 10 seconds.





## 7-3. LG Smart Recovery Tools Menu

LG Smart Recovery Tools menu provide useful tools to back up and restore the system efficiently.

❖The figures and instructions herein are subject to change without prior notice.



1. **Disk Management:** By using the Disk Management tool, you can perform disk-related tasks including creating partition and volume, formatting, and assigning drive letter.
2. **Explorer:** This tool shows drive disks and other hardware connected to the computer.
  - ❖By using the Explorer, you can back up user data before proceeding the system restore.
3. **Delete Disk:** You can delete rewritable disks.



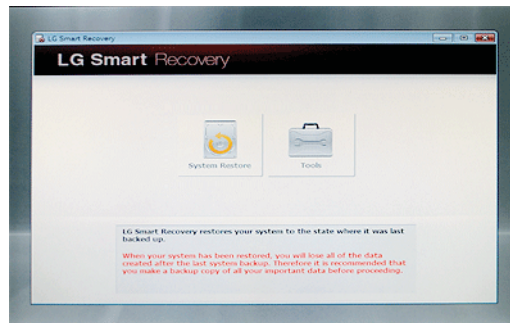
## **8.Using LG Smart Recovery Center**



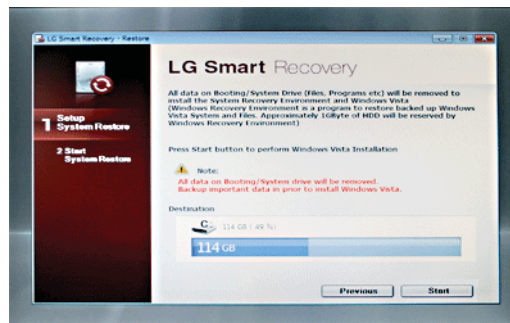
## 8-1. LG Smart Recovery Center

❖ **LG Smart Recovery Center DVD** may not be available depending on the model.  
When **LG Smart Recovery** fails to restore the system, you can reinstall **Windows 7** by using the **LG Smart Recovery Center**.

1. **LG Smart Recovery Center** Insert the **DVD** into the **DVD-ROM** and restart the system.
  - ❖ **LG Smart Recovery Center** If the **DVD** fails to boot the system, restart the computer and press **F2** to start the **BIOS SETUP** and change the Booting Order option.
2. When the booting completes, the System Restore screen will appear.
3. Click the **System Restoration** button.
  - ❖ Backup important data by using Tools menu before starting the System Restoration process.



4. Click **Start** button.

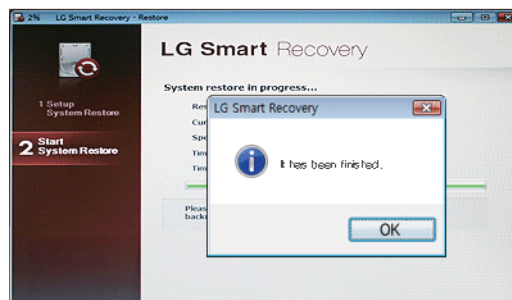




5. When prompted to confirm to start the System Restoration, click **OK**.



6. When it completes the restoration process, the system will present the Completed the Restoration message.



7. Click **OK** to restart the system automatically after 10 seconds.

❖ Remove the **LG Smart Recovery Center DVD** from the **DVD-ROM** once the System Restoration process completes.





## 9. Reinstalling the Driver



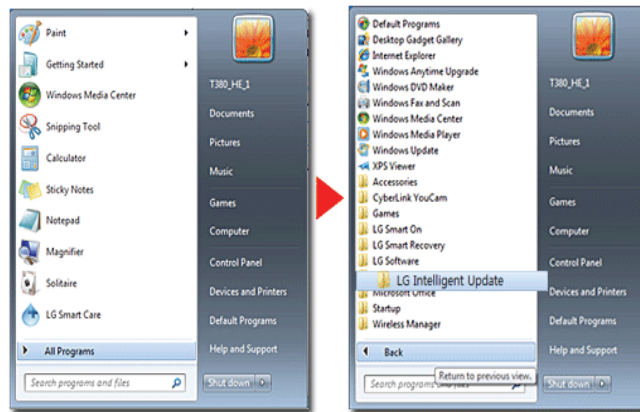
## 9-1. Reinstalling the Driver

❖ The figures herein may differ by language selection and be subject to change without prior notice.

### ► Reinstalling the Driver Using **LG Intelligent Update**

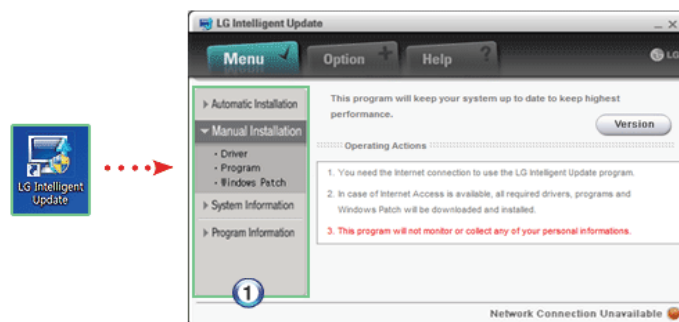
1. Select **Start > All Programs > LG Software > LG Intelligent Update** to continue.

❖ You can also double-click the **LG Intelligent Update** icon to run the program.



2. Select **[Automatic Installation]** or **[Manual Installation]** to reinstall the driver.

❖ For more details, refer to Help.



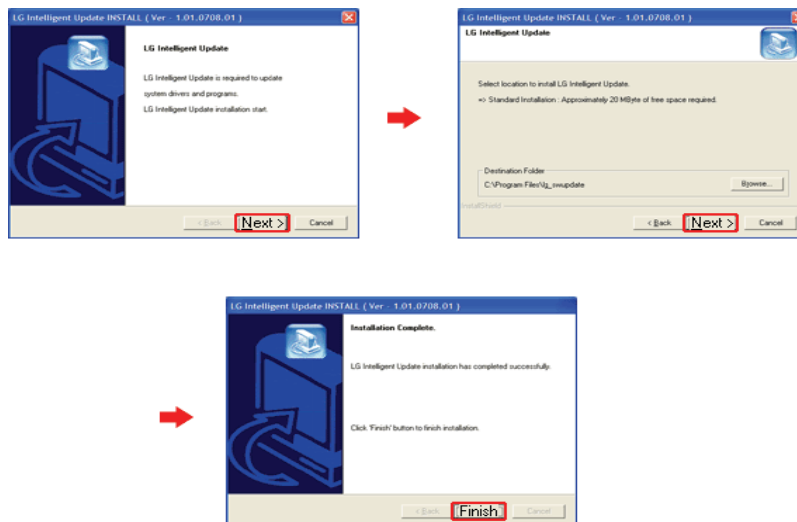
1. Now, you can install drivers and applications needed for the system.



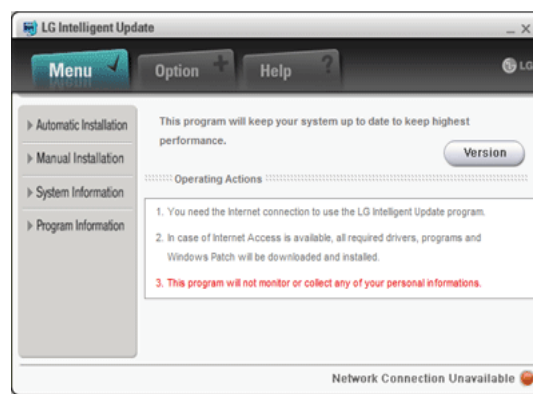
## ▶ Installing LG Intelligent Update

❖ **LG Intelligent Update** comes preinstalled in your system. You can also download the application from the Internet.

1. Go to "www.lg.com", download **LG Intelligent Update** and install the program.
2. When the installation screen appears, click **Next > Next > Finish** or press **Enter** to install the program.



3. **LG Intelligent Update** screen appears.





## 10. Using the Internet



## 10-1. Using the Internet

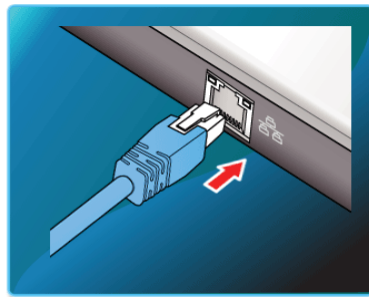
There are various methods to access the Internet. Choose the most desirable method for user environments and system specifications.

❖ Items displayed during the process may differ by model type and spec.

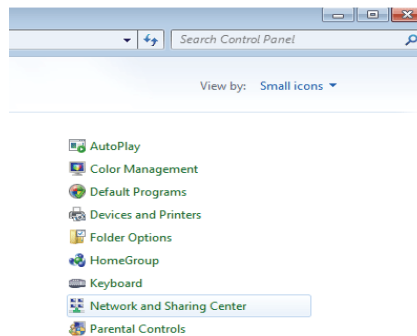
### ▶ Using LAN

LAN refers to high speed network environments linking companies and households.

1. Connect LAN cable to the LAN port.

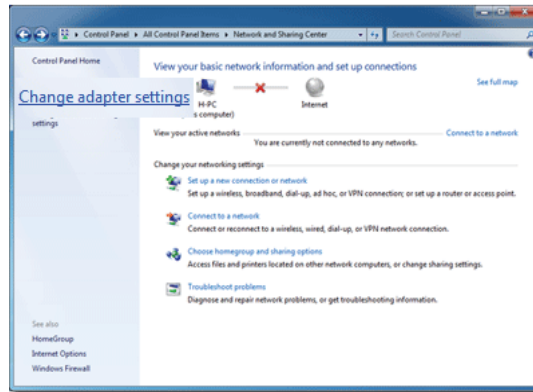


2. Select **Start > Control Panel > View By > Small Icon > Network and Sharing Center**.

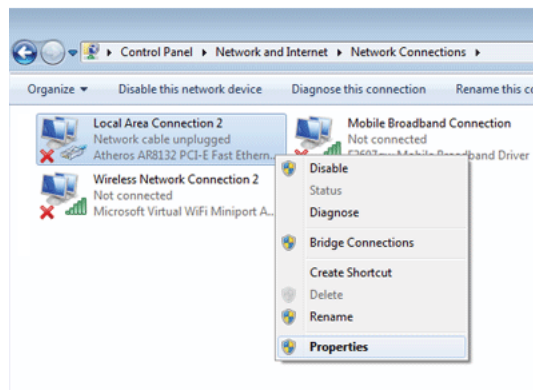




3. Click **Change Adapter Settings**.

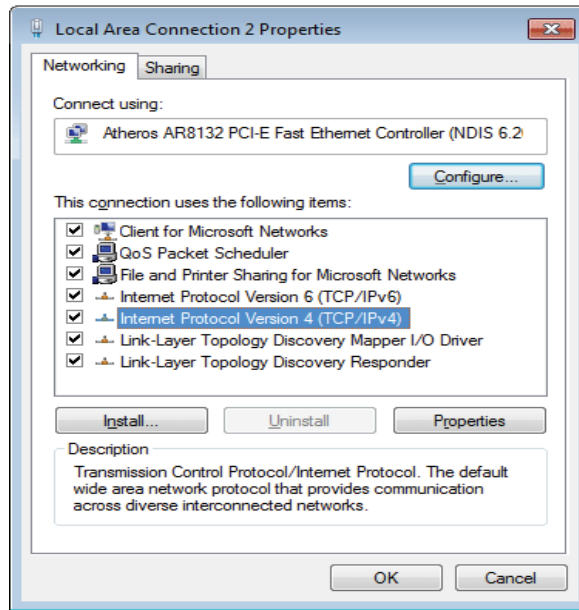


4. Right-click **Local Area Connections** and select **Properties**.

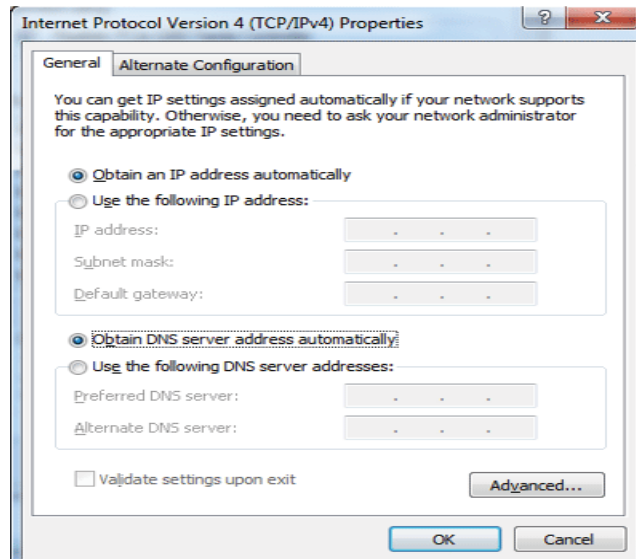




5. Select **Internet Protocol Version 4 (TCP/IPv4)** and click **Properties**.



6. On the **General** tab, select **Obtain an IP address automatically**.





7. Click the **OK** button when the Internet Protocol (**TCP/IP**) properties are set.

### ► Using Wireless LAN


❖ **Optional** The Wireless LAN card is optional, and so it may not be installed in some models.

Wireless LAN supports multi-terminal networking at home and office.


Wireless network offers general network features (e.g. sharing files, folders, and a printer) and allows a computer without the Internet connection in a small network to access the Internet through another terminal.

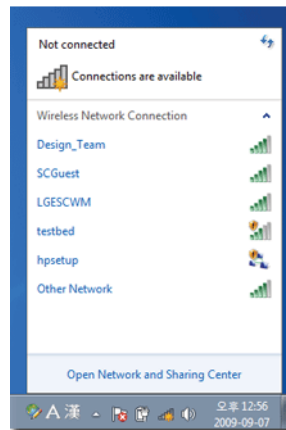
❖ By default, this computer is set for wireless network on the **Windows**.

### ► Setting Wireless LAN Environment

1. Click the  button to display the available wireless network list.

❖ When the wireless network list is not displayed, check if the wireless network device is turned on. Then click the

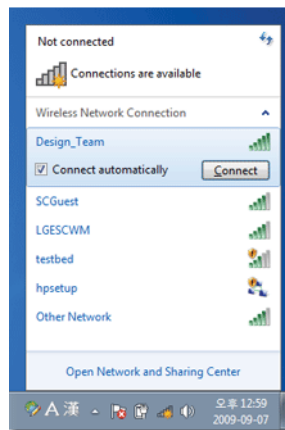
 button to search for the wireless network again.



2. Select the **Access Point** (wireless network) you want to use and click [**Connect**] to connect to the **Access Point**.



❖ If a password is set for the wireless network, the Enter Password window appears.



3. Click the  button to see if the **Access Point** is connected to the network.



**Caution**

- Ensure the network is secured to share the computer and be careful not to share confidential data.



## **11. Secondary Storage Device and Memory**



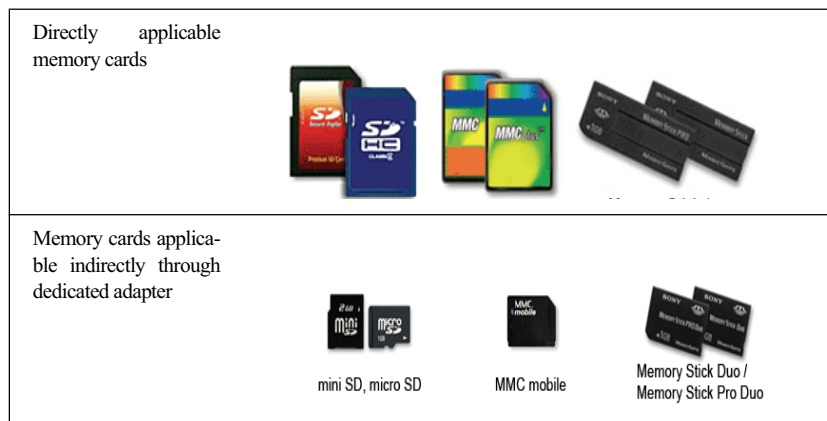
## 11-1. Using the Memory Card

### ▶ Checking Available Memory Card

❖ This product supports SD, MMC, **Memory Stick** memory cards.

**SD, MMC, Memory Stick** cards are mobile storage devices like a floppy disk, widely used in many digital products these days.

To use a **mini SD, micro SD** or **MMC mobile** card, mount it on the dedicated adapter and insert the adapter into the multi-card slot in the notebook PC.



(The available memory type and capacity may differ by the computer model type.)

❖ Check availability before buying a memory card.

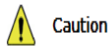
### ▶ Mounting and Using Memory Card

Insert the card into the multi-card slot to the fullest in the right direction.





- When the memory card is formatted, the data stored in the memory card will be deleted. Check whether there are important data before formatting the memory stick.
- To format a memory card, right-click the **memory card** drive and select Format. When Format window appears, click Start to continue.
- **Windows** The format feature may not be available on those **Windows** whose version is lower than **Windows Vista**. Format the card on other digital devices or format it after installing Memory Stick Formatter.
- If the writing prevention tab of memory card is locked, the user cannot format the memory stick nor write or delete the data.
- **SD, MMC** memory cards can be used only as storage devices and do not support the copyright protection function.



Caution

**When using an MMC card:**

- Place the MMC card with the arrow facing upward (▲), and insert it into the slot. Forcing the MMC card into the slot may cause an impairment.



- Some memory products manufactured by **Transcend** are made of metal and may cause a short circuit when contacting with the connection port in the multi-card slot. Avoid using metallic-surfaced memory products. They could offset the system performance.

**When using a memory card through dedicated adapter:**

- Use the dedicated adapter. Otherwise a short-circuit may occur, causing damage to the computer and the memory card.

► **Removing memory card**

Push the card as depicted in the following picture to make the card spring out of the slot. Pull the card out in the direction of the arrow.

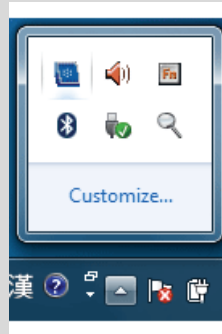






**To safely removing a memory card:**

1. Click **Safely Remove Hardware** icon on the taskbar.



2. Click **Safely Remove Hardware (S)**.
3. When **Safety Remove Hardware** window appears, click **Stop**.
4. When **Stop Hardware** window appears, click **OK**.



## 11-2. Expanding Memory Capacity

You may need to expand the notebook memory for better performance.

❖ For memory expansion, we recommend that you receive a paid service from a service center certified by LG Electronics. LG Electronics disclaims any responsibility for damage resulting from uncertified service or arbitrary disassembly.

### ► About Memory

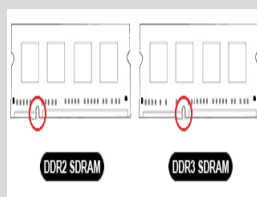
This system uses a 204-pin, **SO-DIMM (Small Outline Dual In-Line Memory Module)**-type **DDR3 SDRAM**.

❖ For **T290** Series models that are installed with 1 GB(1024 MB) memory, you can replace 1 GB memory with 2 GB(2048 MB) one.

❖ **T290** Series provides 1 memory slot, and we recommend 2 GB(2048 MB) memory for memory upgrade.



- When expanding the memory, add a memory with the same specification (**DDR3 SDRAM** for 1.5 V). (Subject to change depending on model type)
- The **DDR3** memory provides greatly improved transmission rate than existing memories, and is differently shaped.



#### Caution

**To upgrade the machine, turn off the system and disconnect the power cord and the battery.**

- Disconnect the telephone line linked to the modem, if any. An electric shock or fire may occur.

#### Supported Memory

- **PC3-8500S(1066 Mhz)/PC3-10600S(1333 Mhz) DDR3 SDRAM SO-DIMM**

❖ When you expand your memory capacity, make sure to use the memory from the same company.

❖ The model that has **DDR3** operates at 800 Mhz or 1066 Mhz. The speed depends on the notebook PC model.

### ► Preparing Memory

Before purchasing memory, study the specifications and features of the current memory.

1. Rated Capacity: **PC3-8500S(1066 Mhz)/10600S(1333 Mhz) DDR3 SDRAM SO-DIMM**

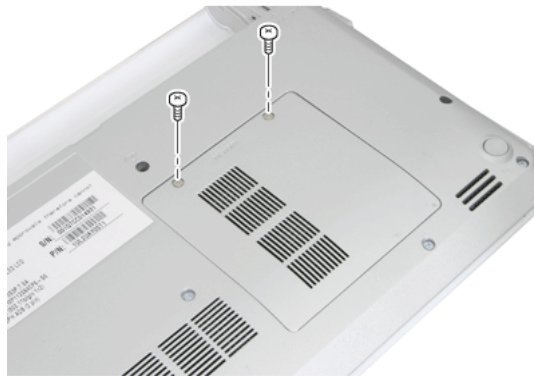
2. Speed: **1066 MHz (533 MHz x 2) / 1333 Mhz(667 Mhz x 2)**

3. Type: **2 GB(2048 MB)**

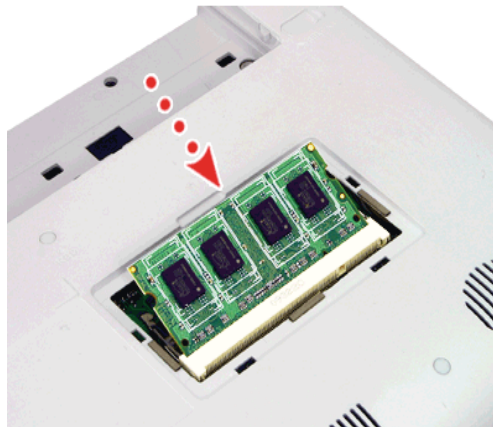
### ► Replacing the Memory

❖Main board configuration, memory socket and memory type may differ by model.

1. Loosen the screw on the rear side of the notebook PC to remove the cover.



2. Pull both side of the clip rims in the direction of the arrow, and then remove the existing memories.





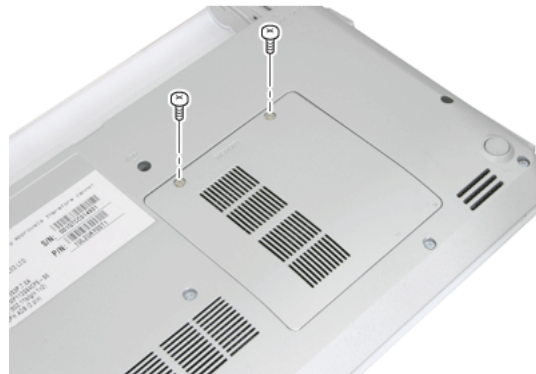
3. Insert the memories to be replaced into the memory socket.



4. Push the memory in the direction of the arrow until you hear a "click" sound.



5. After inserting the memory, fasten the cover with the screws.



6. If an error message related to the main memory capacity is displayed during booting after the memory is expanded, press **F2** key and save the settings.



- Before remove the PC cover, turn off the AC power, and remove the battery and all peripherals. Then, disconnect the cable.
- Push till the memory is completely fixed in the lock.
- Check the memory capacity during the second booting. If the memory capacity is not correct, install the main memory again.



**Caution**

- Use only the expandable main memory module manufactured by LG. Using a main memory module other than recommended products may cause malfunctioning of the notebook PC.

## 12. Appendix



## 12-1. Specifications

### ▶ Available Processors

**Intel Pentium / Intel Celeron / Intel Core i5 / Intel Core i3** processor (L3 cache memory: 2 MB / 3 MB) are supported.

- ❖ L3 cache memory size differs depending on the CPU, which in turn differs depending on the model.
- ❖ The user must not replace or expand the CPU capacity.

### ▶ Main Memory

One 1 GB(1024 MB) or two 1 GB(1024 MB) memories are provided as main memory. One memory slot is provided for the memory expansion.

- ❖ We recommend 2 GB(2048 MB) memory for the main memory upgrade.
- ❖ Memory types and specifications may differ depending on the model.

### ▶ Secondary Storage Devices

6.35 cm(2.5 inches) Hard DisK Drive(SATA)

- ❖ The hard disk capacity and the type depend on the notebook PC model.

External Optical Disk Drive (**CD/DVD/Blu-ray**)

- ❖ Optional It may not be provided depending on the model. Its specifications also differ depending on the model.

### ▶ LCD

**29.4 cm(11.6 inches) HD LED (1366 x 768) TFT Color LCD**

- ❖ Some models are equipped with Glare Type LCD. This model is enhanced the sharpness compare to the other types of LCD. So, it may appears glaring a lot but this is the normal status.
- ❖ The size and the resolution rate of the LCD depend on the notebook PC model.

### ▶ Bluetooth / Wireless LAN

**1 x 1 combo module: Ralink RT3090BC4**

**2 x 2 combo module: Broadcom BCM943225HMB**

- ❖ T290 series supports **Bluetooth 3.0** and provides **Bluetooth** + wireless LAN combo module. (**Bluetooth 2.1** is supported by default, and you can download the driver for **Bluetooth 3.0** later through **LG Intelligent Update**.)
- ❖ **Bluetooth** If you connect to both Bluetooth device and wireless LAN at the same time, the system may become slow.
- ❖ In order to use **Bluetooth 3.0**, the device you want to connect to should support **Bluetooth 3.0**.

Optional



## ▶ Web Camera

1.3 Web Camera module

## ▶ External I/O Interface

External VGA Monitor Port: 1

Microphone: 1

Microphone Input Port: 1

Headset Output Port: 1

USB 2.0 Ports: 3

Multi-card Slot: 1

RJ 45 (LAN) Port: 1 (Gender)

**HDMI Port: 1**

## ▶ Video

### **Mobile Intel HD Gfx (Dynamic Video Memory Technology)**

- ❖ The DVMT actively utilizes part of the system memory when processing large graphic data like 3D graphics. Therefore, the size of the graphic memory is displayed as the sum of the actual graphic memory size and the utilized amount of memory, which is decided by the size of system memory.
- ❖ Applications (graphics program, game, etc.) requiring strong graphic processing power may not work properly.
- ❖ Specifications may differ by model type.

## ▶ Sound

### **Realtek High Definition Audio Codec (ALC272)**

Built-in Stereo Speakers

## ▶ LAN

### **LAN J-Micron JMC261 (10 / 100 Mbps)**

RJ 45 Jack

- ❖ **Optional** The LAN specifications may differ depending on the model.

## ▶ HSPA modem

### **LG Electronics LUM850T or LUM900D HSAP Modem**

- ❖ **Optional** The HSPA modem is optional, and so it may not be available in some models.





## ► Weight

Full Installation: About 1.4 kg (including 6-cell battery) / 1.5 kg (including 9-cell battery)

Battery: Less than 310 g (6 cells) / 460 g (9 cells)

❖ Weight descriptions may differ by model type.



## 12-2. Power Supply and Environments

### ▶ AC Adapter (Free Voltage)

Power Capacity: 65 W

❖ Input: AC 100 to 240 V, 1.5 A, 50 / 60 Hz

❖ Output: DC 19 V, 3.42 A

❖ Caution: Use a rated and legitimate AC adapter, suitable for the model.

### ▶ Battery (Li-Ion)

Rated Capacity: 11.1 V

❖ Charging Hours: At room temperature (0 °C to 40 °C) and power turned off - Less than 3 hours (Time may differ by model type.)

❖ Not charged under 0 °C.

❖ The above temperatures are internal temperatures of the battery pack, and may be different from the actual room temperature.

### ▶ Operation and Storage Environments

Operating Temperature: 10 °C - 35 °C

Operating Humidity: 20% - 80% RH

Storage Temperature: -10 °C - 60 °C

Storage Humidity: 10% - 80% RH

### ▶ Power Consumption

Operating Conditions	Approximately 24 W	The system is running video clips.
Standby mode (Idle state)	Approximately 1 W	When the monitor display is off
Power Saving mode (Sleep Mode)	1.1 W or lower	In S3(Suspend)
Off Mode (Standby(off) Mode)	0.9 W or lower	The system is turned off.

❖ The above power consumption is calculated on the assumption that the battery is fully charged.

❖ Power consumption during operation or standby may differ depending on the programs the system is running and product specifications.

❖ Even when the system is turned off, it consumes a minute amount of power, if supplied. To cut off the power supply completely, disconnect the power cord from the power outlet.