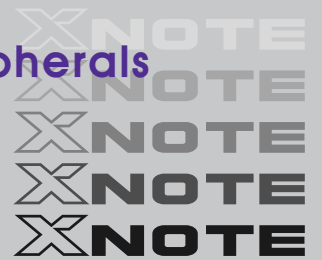


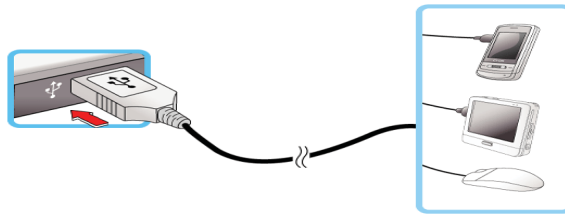
## Chapter 5. Connecting Peripherals



## 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 **Fn + F7** keys to rotate the display mode between LCD only, Monitor only, and LCD + Monitor both in order.

	<ul style="list-style-type: none"> <li>■ Ensure the monitor power is off before connect external monitor to the notebook pc.</li> </ul>
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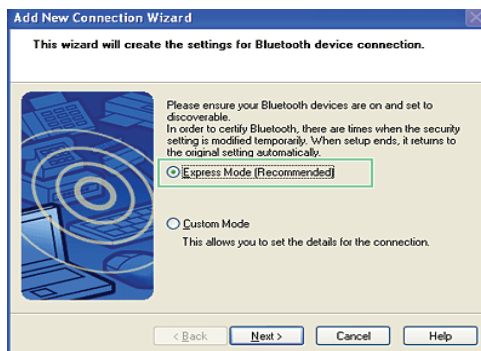
## 5-3. Using Bluetooth device

Bluetooth allows the MS Windows user to access wirelessly various devices such as camera, cell phone, headset, printer, and GPS receiver that support Bluetooth.

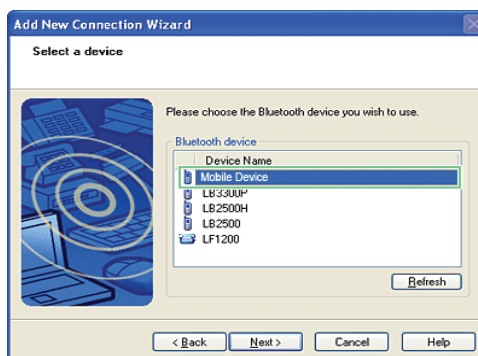
- ※ **Optional Bluetooth** **Optional Web Camera** is optional, and so it may not be installed in some models.
- ※ The images and contents of Using Bluetooth may differ depending on the Windows version.
- ※ For more information, refer to the Help of the Bluetooth setup program.

### ▶ Searching for and Using Bluetooth Device

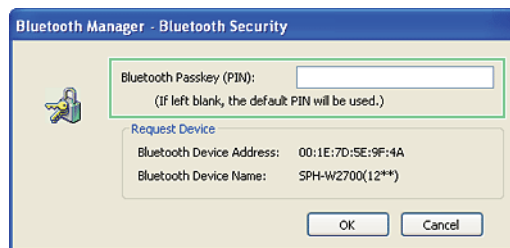
1. Double-click the "My Bluetooth neighborhood" icon on the desktop or the Bluetooth icon on the right side of the task bar to run the Bluetooth Setup program.
2. When the following [Add New Connection wizard] appears, select [Fast Mode] and click [Next].



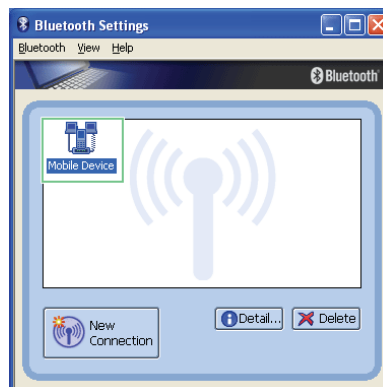
3. The following screen appears after searching for all Bluetooth devices. Select the device you want to use and click [Next].



4. When the following **[Bluetooth Manager–Bluetooth Security]** window appears, enter the password for the **Bluetooth** device.
  - ※ For a password, you can use the password provided by the **Bluetooth** device manufacturer or you can set it yourself.



5. When you added and connected the **Bluetooth** device, the corresponding icon and device name are displayed in the **Bluetooth Setup** program as follows:

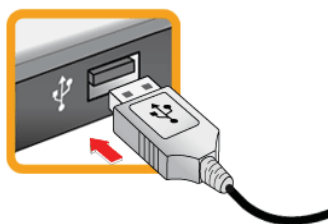


## 5-4. Using External Drive (LGPC-ODD)

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

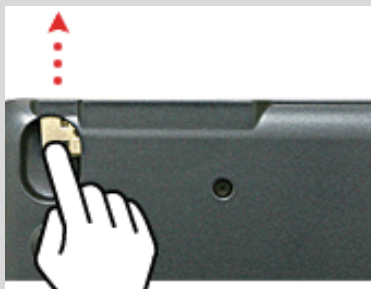
### ▶ Connecting External Drive

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



### Tip

- 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.

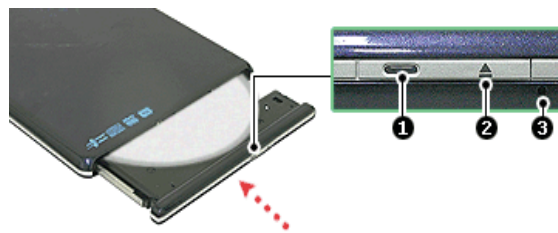


- If you want to insert the USB cable back to the external drive, first insert the cable and then insert the USB connector as shown in the following figure.



### ▶ Inserting/Ejecting CD

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 CD at the center of the tray.  
 ※ (With brand name facing upward.)



1. Operation lamp
  2. Open Disk Tray button
  3. Emergency Eject
3. Push the tray in.
  4. If you want to take out the CD, press the Open Disk Tray button and take out the CD when the tray is ejected.



Caution

■ **LGPC-ODD** works only in **LG X100, P100, X110, X120, X130, P300, P310, S215 Series.**

### Tip

- Use the external drive on a leveled place, if possible. On a tilted place, the CD-ROM, CD-RW, or DVD-ROM may not function normally.
- The external drive installed in the notebook PC is X24 speed. When a CD is inserted, the motor will rotate at a high speed resulting in slight vibration.
- When you hold an optical disk such as CD/DVD, be careful not to smear the surface.
- Do not use benzene or thinner to clean a CD.
- Do not write anything on the readable surface of a CD.
- Do not bent a CD.
- Be sure not to drop or smash a CD.
- Do not expose a CD to the sun.
- To clean a CD or DVD, rub with smooth cloth from the center to the outer edge.
- Do not remove the CD when the CD Operation lamp is on.





## Chapter 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].



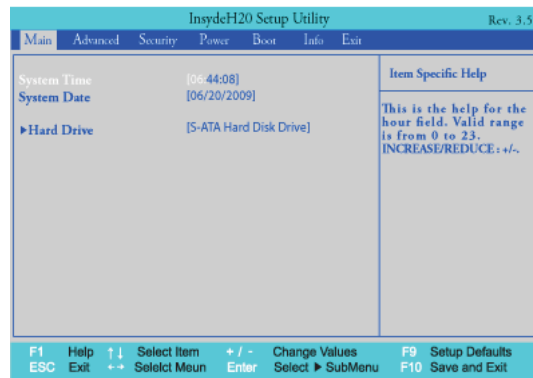
Caution

- 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. Press **F2** key while the "Press F2 for System Utilities" appears on the bottom of the LG logo screen.




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




### ► Keys Used in System Setup

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



**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.



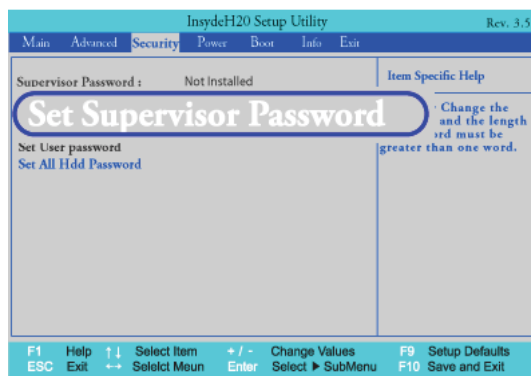
Caution

- 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.

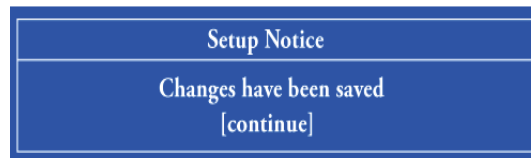
1. After opening the system setup screen, use the arrow keys to move to **Security**.
2. When the following screen appears, select **Set Supervisor Password** with the arrow keys and press **[Enter]**.



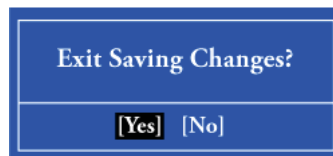
3. When the following message appears, input the password and press **[Enter]**. The password must not exceed 8 characters of letter (A ? Z), number (0 ? 9) or their combination.



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



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



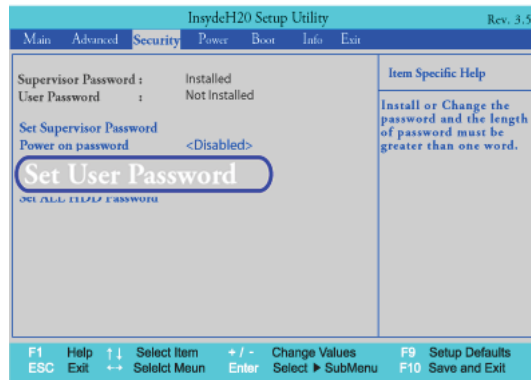
- With **Supervisor Password**, you are authorized to set all items in the **CMOS** setup menu and to set **Power on Password**. In case other people also use the notebook PC, it is recommended to set the **Set User Password**.

### ► 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.

- 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.

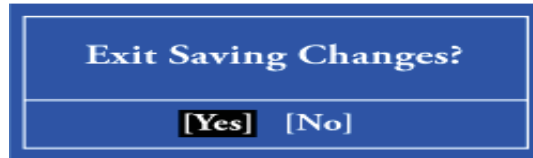


4. When the following message appears, press **[Enter]**.



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

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

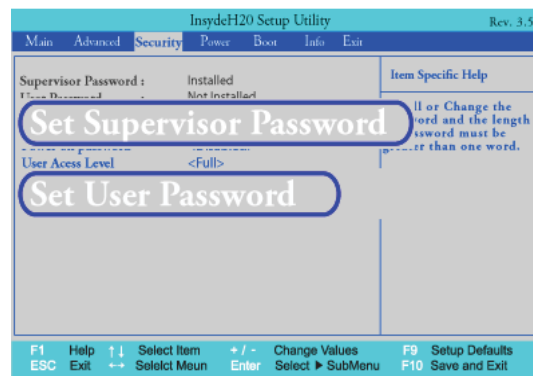


- **UserPassword** allows limited access to the items in **CMOS** setup compared to the **Supervisor Password** item.

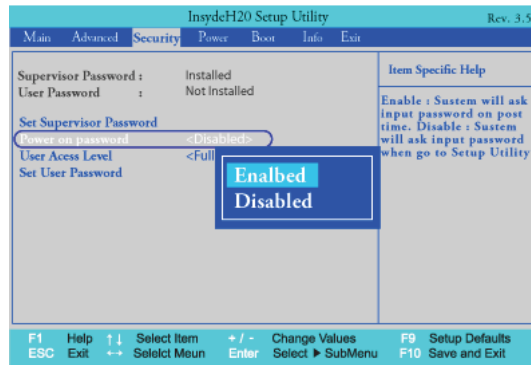
### ► Power on password

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

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



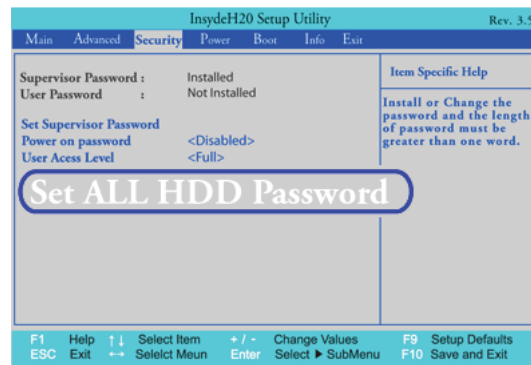
3. Select **Power on password** and press **Enter** to display a pop-up window. Select **[Enable]** and press **Enter** to set **Power on password**.



### ► 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 HddPassword**

Please type in your new password [  ]

Please confirm your new password [  ]

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


**Setup Notice**

Changes have been saved  
[continuc]

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

**Exit Saving Changes?**

**[Yes]** [No]

	<p><b>Caution</b></p> <p><b>Without the HDD Password, it is impossible to recover the HDD.</b></p> <ul style="list-style-type: none"> <li>■ The replacement of HDD due to the forgotten <b>HDD Password</b> is not covered by the warranty.</li> </ul>
---	--

## 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]** .



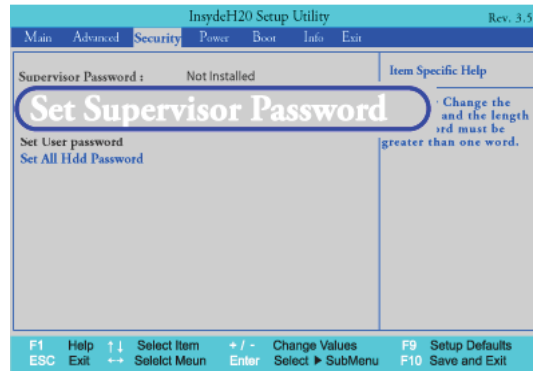
2. Change the password in the same way as setting one.

### ▶ Deleting the Password

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



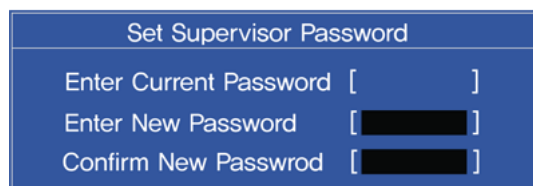
- After opening the system setup screen, use the arrow keys to move to the **Security** menu. Then select **Set Supervisor Password** and press **Enter**.



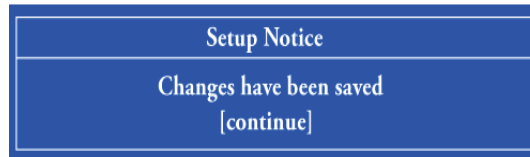
- When the following message appears, enter the current password in the **Please type in your password** field.



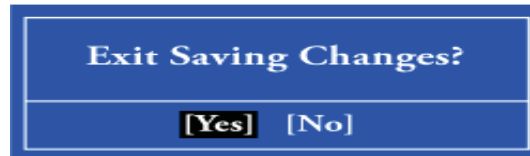
- Press **[Enter]** in **Please type in your new password** and **Please confirm your new password**.



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



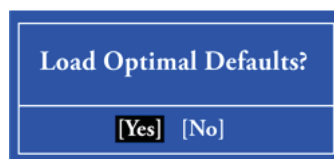
6. To save the changes in system setup, press **[F10]**.
7. When the following message appears, select **[Yes]** and press **[Enter]** . The notebook PC will restart.



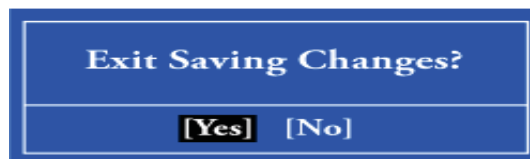
## 6-4. Restore the Default Settings

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**.



## Chapter 7. Using LG Smart Recovery



## 7-1. LG Smart Recovery System Backup

LG Smart Recovery helps you safely install and recover Windows XP.

※ 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 **Backup Location** and **Compression Method** and click **Next**.  
※ The backup locations may vary depending on product specifications.

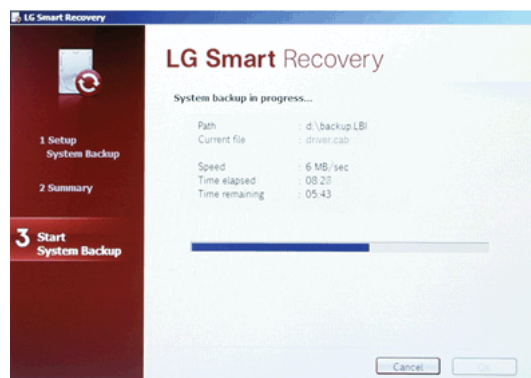




- When the following screen appears, click **OK** to restart the system.



- When the system finishes rebooting, system backup is performed as follows:



- When system backup is completed, the system reboots automatically after 10 seconds or when you press **OK**.

## 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 XP** does not operate normally, the computer restarts and shows "**PRESS F11 TO RUN LG RECOVERY.**" message on the screen during the booting process. Press **F11** button to start the **LG Smart Recovery**.
  - ※ Backup important data by using **Tools** menu before starting the System Restoration process.
2. Click the **System Restoration** button.



3. When the system restoration screen appears, select **Factory Image** or the file you backed up and click **Next**.
  - ※ **Factory Image** is displayed only if you performed system backup when you ran the **LG Smart Recovery** for the first time.
4. Select

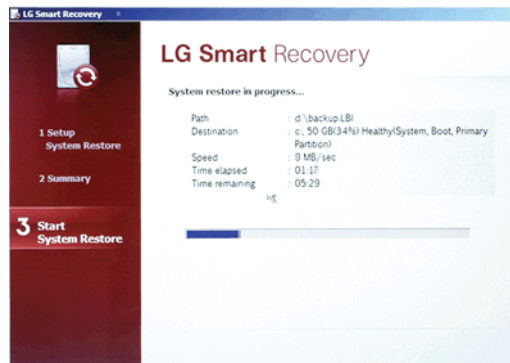
※ **Factory Image** if you want to restore the system to the factory default state,



5. Check the settings and click **OK** to reboot the system.



- When the system finishes rebooting, system restoration is performed as follows:



- When system restoration is completed, the system reboots automatically after 10 seconds or when you press **OK**.

## 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 restoration.



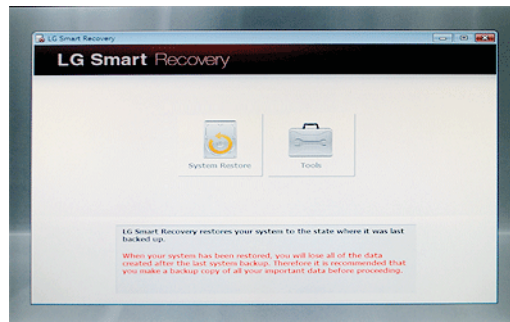
## Chapter 8. Using LG Smart Recovery Center



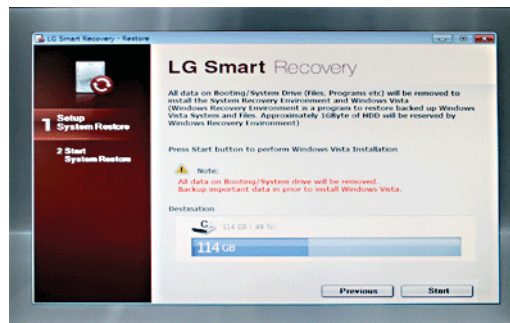
## 8-1. LG Smart Recovery Center

※ **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 XP** by using the **LG Smart Recovery Center**.

1. **LG Smart Recovery Center** Insert 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 Restoration 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.

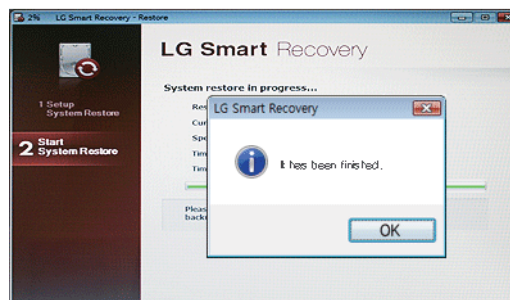




- When prompted to confirm to start the System Restoration, click OK.



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



- 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.



## Chapter 9. Reinstalling the Driver

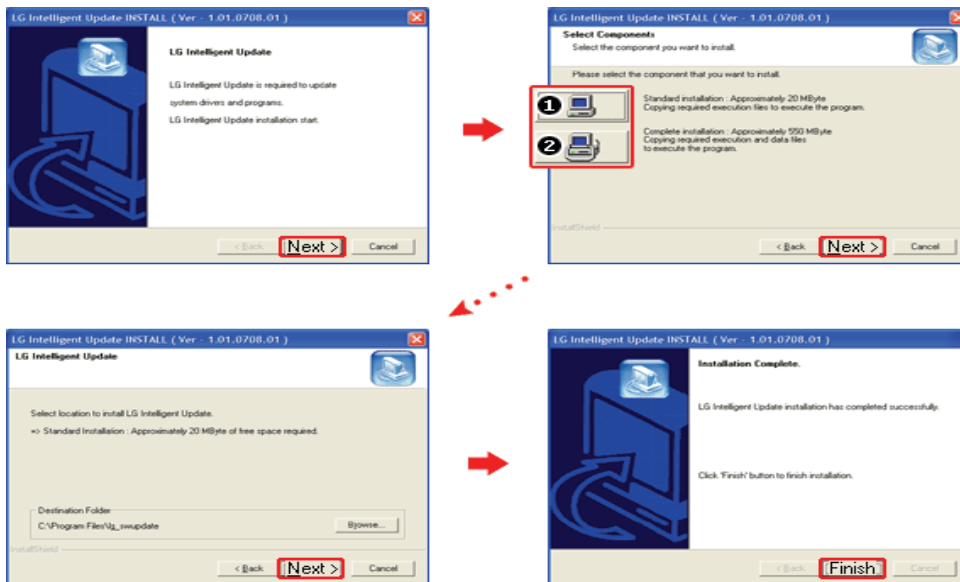


## 9-1. Reinstalling the Driver

- ※ The user can download drivers at [www.lgepc.co.kr](http://www.lgepc.co.kr).
- ※ The driver installation is recommended in **Windows XP SP3** or above.
- ※ The screen layout may differ by model type.

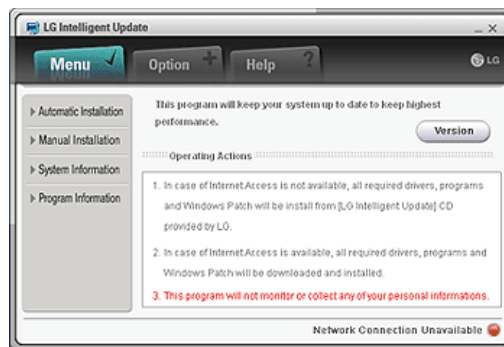
### ► Installation

1. Insert the **LG Intelligent Update** CD into the optical disk drive.
2. When the installation screen appears, click **Next > Next > Next > Finish** or press **Enter** to install.



1. **Standard Installation:** Copy the files which will be needed only for execution to the hard disk.
2. **Full Installation:** Copy the entire CD to the hard disk. Drivers can be installed out of the copy without the CD.

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



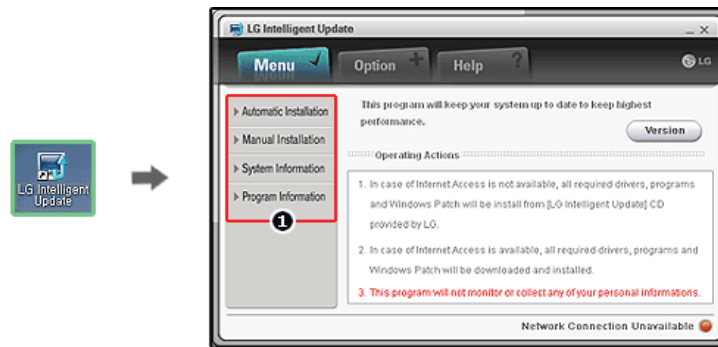
### ▶ Execution

1. Insert the **LG Intelligent Update** CD in the optical disk drive. Then, the program will start automatically.
  - ※ If the **LG Intelligent Update** program is not installed, the **LG Intelligent Update** installation screen will come up.
2. Select **Start > All Programs > LG Software > LG Intelligent Update** to continue.




3. Double-click **LG Intelligent Update** icon on the desktop to run the program.

※ For more details, refer to Help.



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



- The items that the user must install are automatically displayed on the Software Installation Wizard screen. Read the screen carefully before installation.

## Chapter 10. Using the Internet



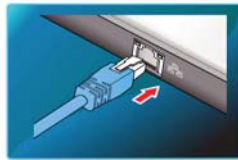
## 10-1. Using the Internet

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

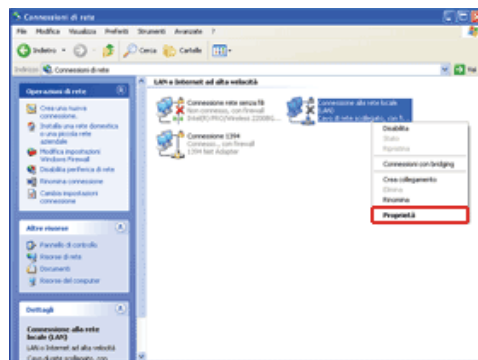
### ► Using LAN

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

1. Connect LAN cable to the LAN port. On the taskbar, click **Start** | **Control Panel** | **Switch to Classic View** | **Network Connection**.

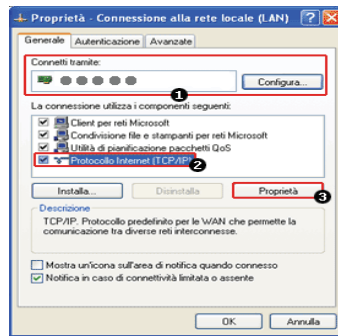


2. When the following screen appears, right-click Local Area Connection and click **Properties** in the list.

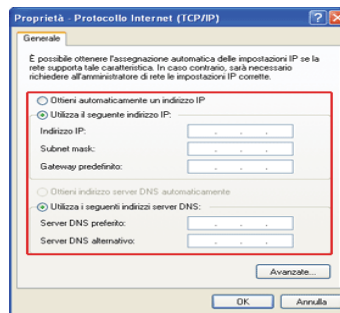




- When the following screen appears, on the **General** tab, check if the **Realtek RTL8102E/RTL8103E Family PCI-E Fast Ethernet NIC driver** is installed in the ① [Connect using:] menu, and select ② Internet Protocol (TCP/IP), and then click ③ **Properties**.



- On **Properties** | **General** tab, click Obtain an IP address automatically.



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

- For IP address registration, contact the network administrator or local network service engineer.
- **IP Operator** provides a user-friendly environment to manage wired/wireless network setup. The provided **IP Operator** makes networking easy and convenient.

## ► Using Wireless LAN

- ※ **Optional** The Wireless LAN card is optional.

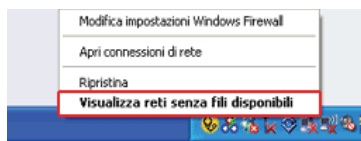
Wireless LAN supports multi-terminal networking at home and office.

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.

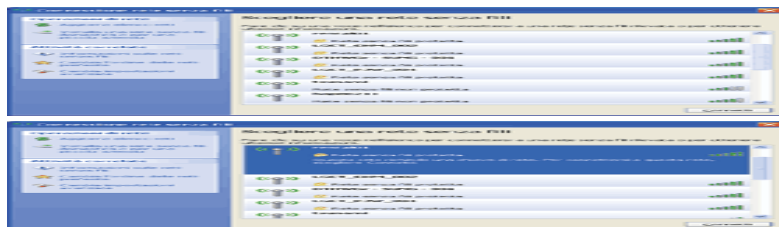
※ By default, this computer is set for wireless network on the **Windows**.

► **Connecting Wireless Network By Using the Icon**

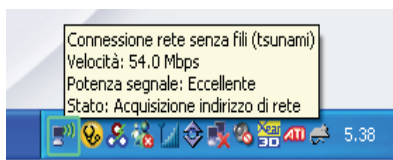
1. On the taskbar, right-click the connection icon and click **View Available Wireless Networks**.




2. Select an **Access point (AP)** and click **Connect**.




3. To see the connection status, place the cursor over Wireless Network Connection icon on the taskbar.





- If no network key is set for the selected **AP**, click "Allow me to connect to the selected wireless network, even though it is not secure."
- Click **Advanced** button to check **Connection Properties**, if needed.



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







## 10-2. Using IP Operator

**IP Operator** provides a user-friendly environment to manage wired/wireless network setup. The IP Operator stores the network setting in the system and analyzes the network so that the user does not need to set the **TCP/IP**. The IP Operator also supports all **IEEE 802.11a, b, g, n** wireless network specifications to set the optimal wireless network environment and to automatically switch the network environment.

- ※ LG **X130** Series support **IEEE 802.11b/g/n 1-stream**-compliant wireless network.
- ※ For more information, refer to **IP Operator Help**.

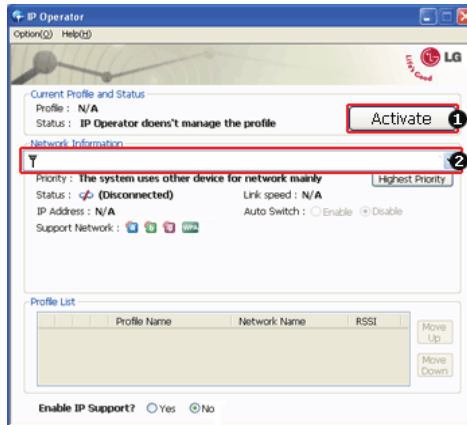
### ▶ Using IP Operator

Depending on the network status of the system, the **IP Operator** icon is displayed as follows:

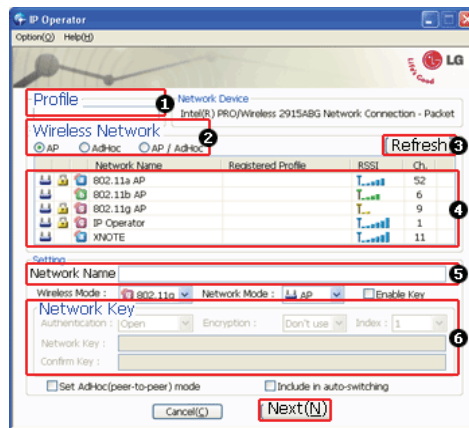
Icon	Description
	<b>IP Operator</b> is starting. (Blue)
	<b>IP Operator</b> is not available. (Grey)
	The network cable is connected.
	The network cable is not connected.
	The wireless network is not connected.
	The signal strength of the current wireless network.

1. Right-click the **IP Operator** icon on the taskbar and select **Open IP Operator**.

- When the following screen appears, click No, ① **Activate administration feature** button to make the wireless network available. When a different screen appears, select the right wireless network device from No. ② **Device Name** drop-down list.

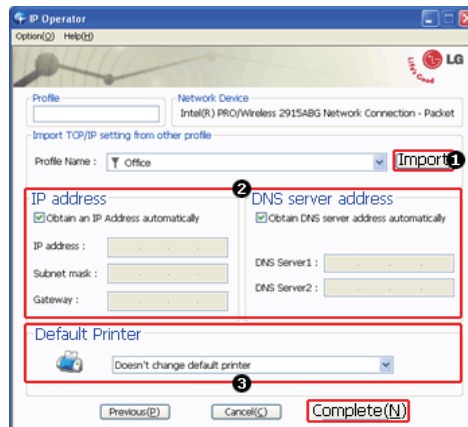


- Click **Add** button and click **Next** when the settings have completed as shown below.

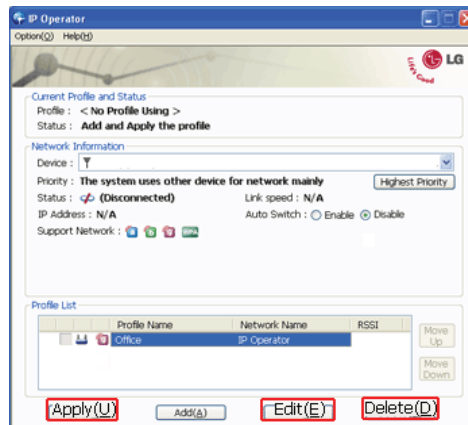


- Type the profile name.
- Select the wireless network type to search.
- Click to search the wireless network again.
- Select one of the searched wireless networks.
- Type the name of the wireless network.
- Type the wireless network key, if necessary.

4. Set the **TCP/IP** address and printer for the profile and click **Finish**.



1. To refer to the existing settings for **TCP/IP** and printer, select the profile and click the **Import** button.
  2. Set IP and DNS addresses.
  3. Select a default printer to apply the profile.
5. Select a profile to use. The user can edit or delete the selected profile, or can apply the selected profile to the system by clicking **Apply** button.

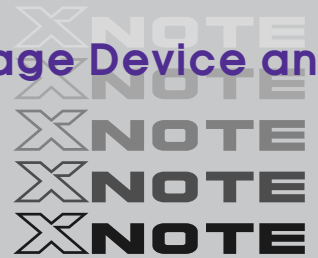




**New features provided by IP Operator are as follows:**

- 802.3 Automatic Switching: Analyzes the network when the network cable is connected and automatically searches the optimal profile for the system. (Must be set in the Option menu.)
- Automatic Wireless Network Switching: Automatically searches for the most suitable wireless network when there are more than one wireless networks.
- IP Supporting: Helps TCP/IP setup when another program, other than **IP Operator**, tries to set the wireless network, or when the selected wireless network already exists in the profile.
- Device Prioritizing: Prioritizes devices for more convenient use of multiple devices in the system.

## Chapter 11. Secondary Storage Device and



## Memory

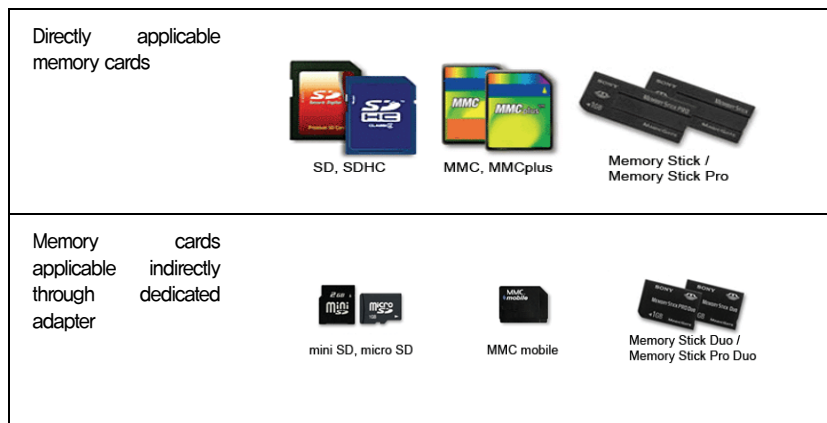


## 11-1. Using Memory Card

### ▶ Checking Available Memory Cards

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

To use a Memory Stick Duo card, Memory Stick Pro Duo card, mini SD card, micro SD card, or an MMC mobile card, mount it on the dedicated adapter and insert the adapter into the multi-card slot.



(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.





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



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. LG disclaims any responsibility for damage resulting from uncertified service or arbitrary disassembly.


### ► About Memory

This system uses a 200-pin, SO-DIMM (Small Outline Dual In-Line Memory Module)-type **DDR2 SDRAM**.


LG X130 Series provides 1 memory slot, and the maximum capacity of the main board is 1GB.



- When expanding the memory, add a memory with the same specification (**DDR2 SDRAM** for 1.8V). (Subject to change depending on model type)
- The **DDR2** memory provides greatly improved transmission rate than existing memories, and is differently shaped.



**DDR2 SDRAM**



**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**

- **PC2-6400S(800Mhz) DDR2 SDRAM SO-DIMM**

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

### ► Preparing Memory

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

1. Rated Capacity: **PC2-6400S(800Mhz) DDR2 SDRAM SO-DIMM**
2. Speed: **800Mhz (400Mhz x 2)**
3. Type: **512MB, 1024MB**

▶ **Adding 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. Insert the memory into the memory socket as shown in the figure,



3. Insert the memory until you hear a "click."



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



5. 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.





Chapter12.Appendix

XNOTE  
XNOTE  
XNOTE  
XNOTE  
XNOTE

## 12-1. Specifications of the Notebook PC

### ▶ Available Processors

Intel Atom Processor (L2 Cache Size: 512KB ) is supported.

※ The user must not replace or expand the CPU capacity arbitrarily. The CPU capacity differs depends on model type.

### ▶ Main Memory

Main memory supports both 512 MB and 1024 MB, and provides 1 memory slot.

※ Memory types and specifications may differ depending on the model.

### ▶ Secondary Storage Devices

2,5" Hard Disk Drive (SATA)

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

External Optical Disk Drive

※  The external **Optical Disk Drive** is optional, and so it may not be available in some models.

### ▶ LCD

10,1" WSVGA+ LED (1024 x 600) TFT 컬러 LCD

※ Some models are equipped with the Glare-type LCD featuring enhanced sharpness. This type of LCD appears to glare more than other types, but it is a normal phenomenon in the Glare type.

※ The size and the resolution rate of the LCD depend on the notebook PC model.

### ▶ Authentication for Anticopy Technology


U.S Patent Nos. 4,631,603; 4,577,216; 4,819,908; 4,907,093; 5,315,448; and 6,516,132. Patent number of **Macrovision**.

This product includes the technologies that are possessed by **Macrovision** and corresponding companies and protected by the US Patent Law and other related laws. Use of all technologies subject to the copyrights must be approved by **Macrovision** in advance. Otherwise, the technologies may only be used for internal display. Do not disassemble or remodel the product.

### ▶ Bluetooth

Broadcom BCM92070MD\_REF

Ver2.1 Bluetooth Module + EDR

※  Bluetooth is optional, and so it may not be installed in some models.

### ▶ Web Camera

1.3 Mega pixels USB camera module

UVC (USB Video Class) driver supported

※ **Optional** Web Camera is optional, and so it may not be installed in some models.

### ▶ External I/O Interface

External VGA Monitor Port: 1

Microphone: 1

Microphone Input Port (Mic in): 1

Headphone Port: 1

USB 2.0 Ports: 3

Multi-card Slot: 1

RJ 45 (LAN) Port: 1

USIM Card Slot: 1

※ **Optional** USIM card slot may not be provided depending on the model.

### ▶ Video

**Mobile Intel Graphic Media Accelerator 950 (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(ALC262)**

Built-in Stereo Speakers

### ▶ Modem

**Ericsson F3607gw (HSPA Modem)**

※ **Optional** The wireless data modem is optional, and so it may not be available in some models.

**▶ LAN**

Realtek RTL8102E/RTL8103EL Family PCI-E Fast Ethernet NIC (10/100Mbps)

RJ 45 Jack

※ Specifications may differ by model type.

**▶ Wireless LAN**

Ralink RT3090

※ Wireless LAN specifications may differ by model type and cannot be arbitrarily changed by the user.

**▶ Weight**

Full Installation: Approx. 1,14kg (3-cell battery pack) / 1,27kg (6-cell battery pack) / 1,54kg (9-cell battery pack)

Battery: Approx. 180g (3 cells) / 310g (6 cells) / 470g (9 cells)

※ Weight descriptions may differ by model type.

## 12-2. Power Supply and Environments

### ▶ AC Adapter (Free Voltage)

Power Capacity: 40W

※ Input: AC 100V ? 240V, 1.7A, 50Hz ? 60Hz

※ Output: DC 20V, 2.0A

※ Caution: Use a legitimate AC adapter suitable for the model.

### ▶ Battery (Li-Ion)

Rated Capacity: 10.8V/11.1V

Battery Make-up: 3-cell, 6-cell or 9-cell battery pack (the battery make-up may differ depending on the model.)

※ Charging Hours: At room temperature (0°C ? 40°C) and power turned off – less than 3 hours (9-cell battery pack: less than 4 hours)

※ 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% RH ? 80% RH

Storage Temperature: -10°C ? 60°C

Storage Humidity: 10% RH ? 80% RH

### ▶ Power Consumption

Operating Conditions	Approximately 20W	When running moving image media
Standby mode (Idle state)	Approximately 10W	In Display Off mode
Power Saving mode (Sleep Mode)	1.1W or lower	In S3(Suspend)
Off Mode (Standby(off) Mode)	0.8W or lower	When terminating the system

※ 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 power supply completely, disconnect the power cord from the power outlet.