



Lenovo G460/G560

User Guide v1.0



Read the safety notices and important tips in the included manuals before using your computer.

Notes

- Before using this information and the product it supports, be sure to read Important safety information on page ii and Notices in Appendix E first.
- Some instructions in this guide may assume that you are using Windows® 7. If you are using other Windows operating system, some operations may be slightly different. If you are using other operating systems, some operations may not apply to you, and thus shouldn't affect your use of this computer.
- The features described in this guide are common to most models. Some features may not be available on your computer and/or your computer may include features that are not described in this user guide.
- The illustrations used in this manual show the Lenovo G560 with one-piece touchpad unless otherwise stated.
- The illustrations in this manual may differ from the actual product. Please refer to the actual product.

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Dear user,

Thank you for purchasing your new Lenovo notebook computer! Before using this product, make sure to read this user guide carefully.

We are pleased that you have chosen Lenovo for your mobile computing needs. To help you master the usage of your new computer quickly, we have prepared this user guide. In this manual you will find information on the system configuration, basic operating instructions, and important notices. We have done our best to avoid any errors in making sure that the information provided in this manual is accurate and reliable. However, due to the short length of the user guide it is impossible to cover all topics in great depth. For this reason, we apologize for any omissions you might find.

Lenovo is always trying to improve the performance and reliability of its products. For that reason, the hardware and software components shown within the user guide might not perfectly match those of your system. However, any inconsistencies between what is described in the user guide and the operations of your computer should not substantially affect your use.

Thank you for your cooperation.

Explanation of hard disk capacity

Dear user,

While using your computer, you may find that the nominal hard disk capacity indicated is somewhat different from the disk capacity displayed by the operating system. For example, a nominal 40GB hard disk will appear as less than 40GB in the operating system. This discrepancy is not an error in hard disk installation nor any other problem, but a normal phenomenon for computers. This phenomenon is primarily due to the following reasons:

I. Different standards used by the manufacturer and operating system when calculating hard disk capacity

Hard disk manufacturers use a radix of 1000, i.e., 1G = 1,000MB, 1MB = 1,000KB, 1KB = 1,000 bytes. However, when identifying hard disk capacity, operating systems use a radix of 1024, i.e. 1GB = 1,024MB, 1MB = 1,024KB, 1KB = 1,024 bytes. The standard adopted by your computer is that of the hard disk manufacturers. Since the standards adopted by the hard disk manufacturer and operating system are different, the hard disk capacity displayed by the operating system will be different from the nominal hard disk capacity.

For example, if the hard disk is nominally X G, even when it is completely empty, the capacity displayed by the operating system will be:

$$X \times 1000 \times 1000 \times 1000 / (1024 \times 1024 \times 1024) \approx X \times 0.931 \text{ G}$$

In addition, if a portion of the hard disk space has been used for some specific purpose, then the capacity indicated by the operating system will be even less than $X \times 0.931 \text{ G}$.

II. A portion of the hard disk space is used for specific purposes

Lenovo computers may come with preinstalled OneKey Rescue system, so the hard disk has a special portion partitioned before delivery, which is used to store hard disk mirror and OneKey Rescue system program files. The size of the reserved space for this partition varies according to the model, operating system and software of the computer. For the sake of safety, this partition is not apparent, which is commonly referred to as a "hidden partition".

In addition, after the hard disk is partitioned or formatted, the system will assign a certain amount of hard disk space for the system files.

For the above reasons, the available hard disk space indicated by the operating system is always less than the computer's nominal hard disk capacity.

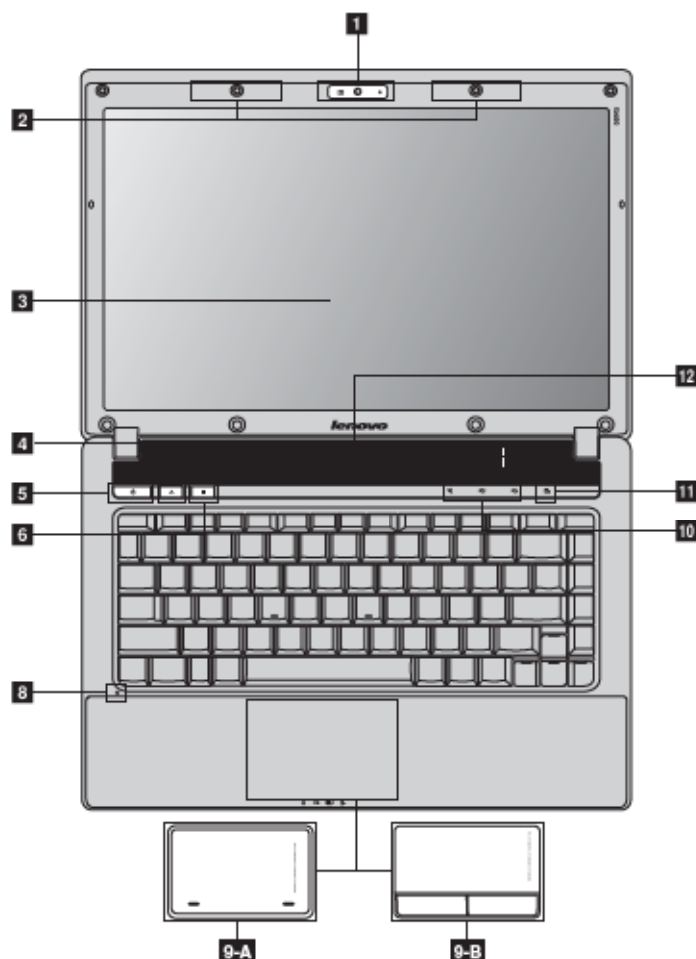
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Chapter 1. Getting to know your computer

■ ■ Top view

■ Lenovo G460

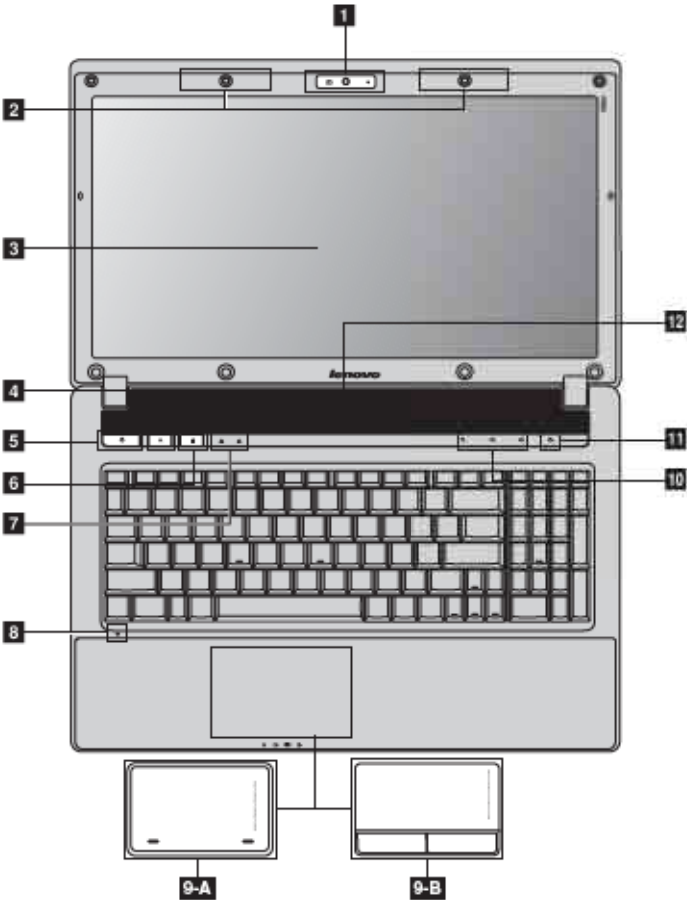


Note: The illustrations in this manual may differ from the actual product. Please refer to the actual product.

© Attention:

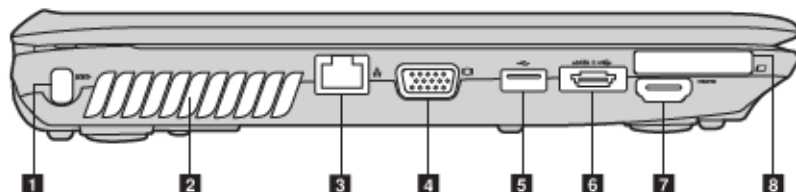
- Do NOT open the display panel beyond 130 degrees. When closing the display panel, be careful NOT to leave pens or any other objects in between the display panel and the keyboard. Otherwise, the display panel may be damaged.

■ Lenovo G560



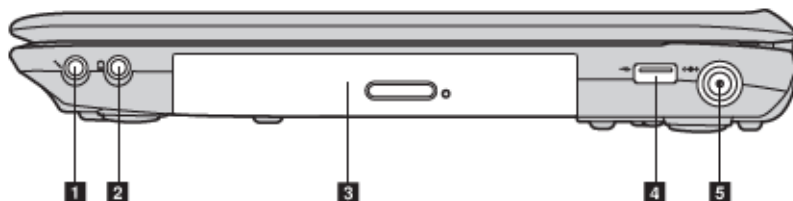
- 1 Integrated camera (select models only)** Use the camera for video communication.
- 2 Wireless module antennas (select models only)** The built-in antennas ensure optimal reception of wireless radio.
- 3 Computer display** The LCD display with LED backlight provides brilliant visual output.
- 4 OneKey Rescue system button** Press this button to open OneKey Rescue system (If OneKey Rescue system has been preinstalled) when the computer is powered off.
Note: For details, see “Chapter 4. OneKey Rescue system” on page 25.
- 5 Power button** Press this button to turn on the computer.
- 6 Energy Management button** Press this button to open Lenovo Energy Management software.
Note: For details, see “Energy Management button” on page 15.
- 7 System status indicators** For details, see “System status indicators” on page 16.
- 8 Built-in microphone** The built-in microphone (with noise reduction) can be used for video conferencing, voice narration, or simple audio recordings.
- 9-A One-piece touchpad** The touchpad functions as a conventional mouse with built-in left-click and right-click buttons.
- 9-B Touchpad** The touchpad functions as a conventional mouse.
Note: For details, see “Using the touchpad” on page 12.
- 10 Volume buttons (select models only)** Use these buttons to adjust volume.
- 11 OneKey Theater (select models only)** Open OneKey Theater to select Normal mode or Movie mode as preferred.
- 12 Speakers** The stereo speakers provide rich and powerful sound.

■ ■ Left-side view



- | | |
|--|---|
| 1 Kensington slot | Attach a security lock (not supplied) here. |
| Note: For details, see “Attaching a security lock (not supplied)” on page 17. | |
| 2 Fan louvers | Dissipate internal heat. |
| Note: Make sure that none of the fan louvers are blocked or else overheating of the computer may occur. | |
| 3 RJ-45 port | The port connects the computer to an Ethernet network. |
| Note: For details, see “Wired connection” on page 20. | |
| 4 VGA port | Connect to external display devices. |
| 5 USB port | Connect to USB devices. |
| Note: For details, see “Connecting a universal serial bus (USB) device” on page 18. | |
| 6 USB port or eSATA/
USB combo port | Connect to eSATA or USB devices. |
| Note: For details, see “Connecting a universal serial bus (USB) device” on page 18. | |
| 7 HDMI port (select
models only) | Connect to devices with HDMI input such as a TV or a display. |
| Note: Press Fn+F3 to open the interface for the display device switch to select this notebook or an external display. | |
| 8 ExpressCard® slot
(select models only) | Insert ExpressCard device here. |
| Note: For details, see “Inserting an ExpressCard/34 device” on page 19. | |

■ ■ Right-side view



1 Microphone jack Connect to an external microphones.

2 Headphone jack Connect to an external headphones.

Ⓢ **Attention:**

- Listening to music at high volume over extended periods of time may damage your hearing.

3 Optical drive Read/Burn optical disks.

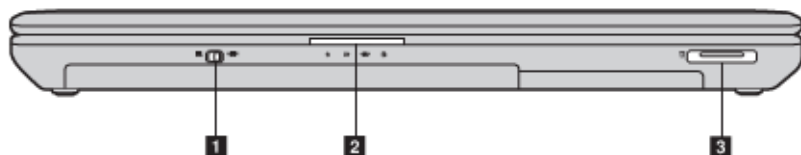
4 USB port Connect to USB devices.

Note: For details, see "Connecting a universal serial bus (USB) device" on page 18.

5 AC power adapter jack Connect the AC adapter here.

Note: For details, see "Using AC adapter and battery" on page 11.

■ ■ Front view

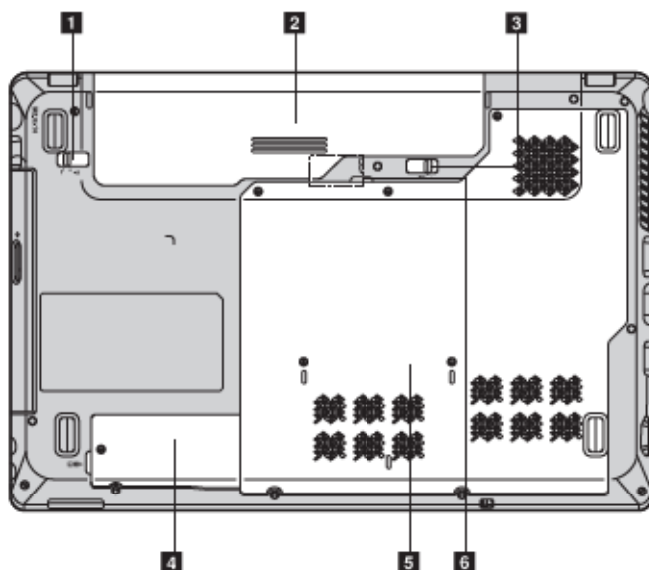


- | | |
|--|---|
| 1 Integrated wireless device switch | Use this switch to turn on/off the wireless radio of all wireless devices on your computer. |
| 2 System status indicators | For details, see “System status indicators” on page 16. |
| 3 Memory card slot (select models only) | Insert memory cards (not supplied) here. |

Note: For details, see “Using memory cards (not supplied)” on page 18.

■ ■ Bottom view

■ Lenovo G460



1 Battery latch - manual

The manual battery latch is used to keep the battery pack secured in place.

2 Battery pack

For details, see "Using AC adapter and battery" on page 11.

3 Battery latch - spring loaded

The spring-loaded battery latch keeps the battery pack secured in place.

4 Mini PCI Express Card slot compartment

5 Hard disk drive (HDD)/Memory/CPU (Central processing unit) compartment

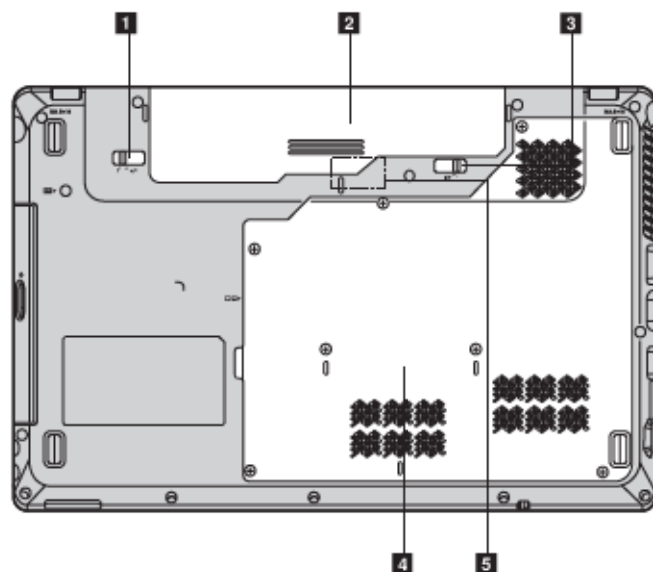
6 SIM card slot (select models only)

Insert a SIM card (not supplied) for using Mobile Broadband.

Notes:

- After removing the battery pack, you can insert a SIM card into this slot.
- For details, see "Using Mobile Broadband (select models only)" on page 22.

■ Lenovo G560



1 Battery latch - manual

The manual battery latch is used to keep the battery pack secured in place.

2 Battery pack

For details, see "Using AC adapter and battery" on page 11.

3 Battery latch - spring loaded

The spring-loaded battery latch keeps the battery pack secured in place.

4 Hard disk drive (HDD)/Memory/CPU (Central processing unit)/Mini PCI Express Card slot compartment

5 SIM card slot (select models only)

Insert a SIM card (not supplied) for using Mobile Broadband.

Notes:

- After removing the battery pack, you can insert a SIM card into this slot.
- For details, see "Using Mobile Broadband (select models only)" on page 22.

Chapter 2. Learning the basics

■ ■ First use

■ Read the manuals

Read the supplied manuals before using your computer.

■ Connect to the power

The supplied battery pack is not fully charged at purchase.

To charge the battery and begin using your computer, insert the battery pack and connect the computer to an electrical outlet. The battery is automatically charged while the computer is running on AC power.

Install the battery pack

Refer to the supplied *Setup Poster* to install the battery pack.

Connect the computer to an electrical outlet

- ❶ Connect the power cord to the AC adapter.
- ❷ Connect the AC adapter to the AC power adapter jack of the computer.
- ❸ Plug the power cord into an electrical outlet.

■ Turn on the computer

Press the power button to turn on the computer.

■ Configure the operating system

You may need to configure the operation system when it is first used. The configuration process may include the procedures below.

- Accepting the end user license agreement
- Configuring the Internet connection
- Registering the operating system
- Creating a user account


■ Putting your computer into sleep state or shutting it down

When you finish working with your computer, you can put it into sleep state or shut it down.

Putting your computer into sleep state

If you will be away from your computer for only a short time, put the computer into sleep state. When the computer is in sleep state, you can quickly wake it to resume use, and bypass the startup process.

To put the computer into sleep state, do one of the following.

- Click  and select **Sleep** from the Start menu.
- Press **Fn + F1**.


Note: Wait until the power indicator light starts blinking (indicating that the computer is in sleep state) before you move your computer. Moving your computer while the hard disk is spinning can damage the hard disk, causing loss of data.

To wake the computer, do one of the following.

- Press the power button.
- Press any key on the keyboard.

■ Shutting down your computer

If you are not going to use your computer for a day or two, shut it down.

To shut down your computer, click  and select **Shut down** from the Start menu.

■ ■ Using AC adapter and battery

■ Checking battery status

You can determine the percentage of battery power remaining by checking the battery icon in the notification area.

Note: As each computer user has different habits and needs, it is difficult to predict how long a battery charge will last. There are two main factors:

- The amount of energy stored in the battery when you commence work.
- The way you use your computer: for example, how often you access the hard disk drive and how bright you make the computer display.

■ Charging the battery

When you find that the battery power is low, you need to charge the battery or replace it with a fully charged one.

You need to charge the battery in any of the following situations:

- When you purchase a new battery
- If the battery status indicator starts blinking
- If the battery has not been used for a long time

Notes:

- You are advised to insert the battery pack when using your computer to prevent small particles from entering the inside of your computer.
- To increase the life of the battery pack, the computer does not start recharging the battery immediately after it drops from fully charged.
- Charge the battery at a temperature between 50 °F and 80 °F (10 °C-30 °C).
- Full charge or discharge is not required.

■ Removing the battery pack

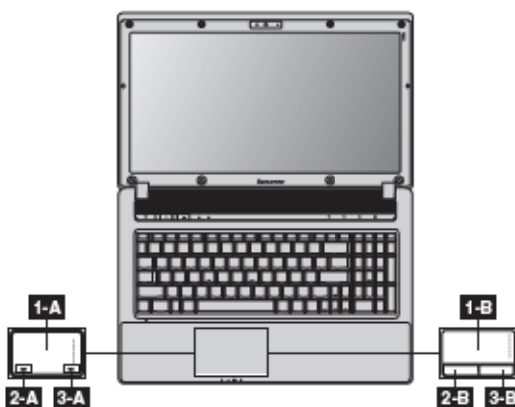
If you are not going to use the computer for an extended period of time, or if you need to send your computer to Lenovo for service, etc. remove the battery pack from the computer. Before removing the battery pack, make sure the computer has been shut down.

■ Handling the battery

If the rechargeable battery pack is replaced with an incorrect type, there may be danger of an explosion. The battery pack contains a small amount of harmful substances. To avoid possible injury and detriment to the environment, pay attention to the following points:

- Replace only with a battery of the type recommended by Lenovo.
- Keep the battery pack away from fire.
- Do not expose the battery pack to water or rain.
- Do not attempt to disassemble the battery pack.
- Do not short-circuit the battery pack.
- Keep the battery pack away from children.
- Do not put the battery pack in trash that is disposed of in landfills. When disposing of the battery, comply with local ordinances or regulations and your company's safety standards.

■ ■ Using the touchpad



1-A	One-piece touchpad	To move the cursor on the screen, slide your fingertip on the pad in the direction in which you want the cursor to move.
1-B	Touchpad	
2-A	Bottom left area	The function corresponds to that of the left mouse button on a conventional mouse, which can be implemented by clicking this area.
2-B	Left click button	The function corresponds to that of the left mouse button on a conventional mouse.
3-A	Bottom right area	The function corresponds to that of the right mouse button on a conventional mouse, which can be implemented by clicking this area.
3-B	Right click button	The function corresponds to that of the right mouse button on a conventional mouse.

Notes:

- You can enable/disable the touchpad using Fn+F6.
- The touchpad may be disabled beyond the designated area when manipulated with two fingers together.

■ ■ Using the keyboard

■ Numeric keypad

G460

The keyboard has keys that, when enabled, work as a 10-key numeric keypad.

To enable or disable the numeric keypad, press **Fn+F8**.



G560

The keyboard has a separate numeric keypad. To enable or disable the numeric keypad, press the **Num Lock** key.



Note: The indicator will light on if the numeric keypad is enabled.

■ Function key combinations

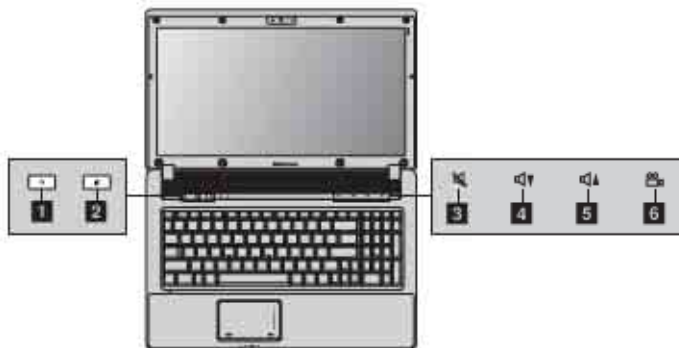
Through the use of the function keys, you can change operational features instantly. To use this function, press and hold **Fn** **1**; then press one of the function keys **2**.



The following describes the features of each function key.

Fn + Esc:	Turn on/off the integrated camera.
Fn + F1:	Enter sleep mode.
Fn + F2:	Turn on/off the backlight of the LCD screen.
Fn + F3:	Open the interface for the display device switch to select this notebook or an external display.
Fn + F4:	Open the interface for display resolution settings.
Fn + F5:	Open the interface for integrated wireless devices settings (on/off).
Fn + F6:	Enable/Disable the touchpad.
Fn + F8 (G460):	Enable/Disable the numeric keypad.
Fn + F9:	Start/Pause playback of Windows Media Player.
Fn + F10:	Stop playback of Windows Media Player.
Fn + F11:	Skip to the previous track.
Fn + F12:	Skip to the next track.
Fn + Insert (G560):	Enable/Disable the scroll lock.
Fn + PgUp (G460):	
Fn + PrtSc:	Activate the system request.
Fn + Home:	Activate the pause function.
Fn + End:	Activate the break function.
Fn + PgDn (G460):	Activate the insert function.
Fn + +/=:	Increase/Decrease display brightness.
Fn + +/=:	Increase/Decrease sound volume.

■ ■ Special keys and buttons



OneKey Rescue system button (1)

- When the computer is powered-off, press this button to enter the OneKey Rescue system if Lenovo OneKey Rescue system has been preinstalled.
- In Windows operating system, press this button to start Lenovo OneKey Recovery.

Note: For details, see “OneKey Rescue system” on page 25.

Energy Management button (2)

Lenovo Energy Management provides you control over the performance and power consumption for each component of your notebook through the collaboration of software and hardware, thus extends battery life and improves battery runtime.

Volume buttons (3 ~ 5) (select models only)

- 3** Mute/Unmute
- 4** Volume down
- 5** Volume up

OneKey Theater button (6) (select models only)

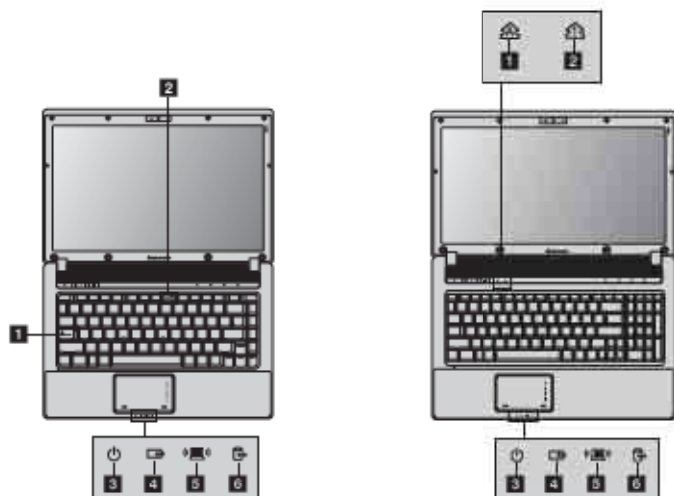
Open OneKey Theater to select Normal mode or Movie mode as preferred.

■ ■ System status Indicators

These indicators inform you of the computer status.

G460

G560



1 Caps lock indicator

G460: •

G560:

2 Num lock indicator

G460: •

G560:

3 Power status indicator

4 Battery status indicator

5 Wireless communication indicator

6 Hard disk indicator

■ ■ Securing your computer

This section provides information about how to help protect your computer from theft and unauthorized use.

■ Attaching a security lock (not supplied)

You can attach a security lock to your computer to help prevent it from being removed without your permission. For details on installing the security lock, please refer to the instructions shipped with the security lock that you have purchased.

Refer to the “Left-side view” on page 4 for the location of the Kensington slot.

Notes:

- Before purchasing any security product, verify that it is compatible with this type of security keyhole.
- You are responsible for evaluating, selecting, and implementing the locking devices and security features. Lenovo offers no comment judgement or warranty regarding the function, quality or performance of locking devices and security features.

■ Using VeriFace™

VeriFace is a face recognition software which takes a digital snapshot, extracts key features of your face, and creates a digital map that becomes the system’s “password”.

If you want to activate VeriFace for the first time, click the VeriFace icon on the desktop to register your facial image.

Notes:

- The face registration and verification works best in an environment with steady and even light.
- You can determine whether to use this function when you log on the system.

For more details on VeriFace, see the software help.

■ Using passwords

Using passwords helps prevent your computer from being used by others. Once you set a password and enable it, a prompt appears on the screen each time you power on the computer. Enter your password at the prompt. The computer cannot be used unless you enter the correct password.

Note: This password can be from one to seven alphanumeric characters in any combination.

For details about how to set the password, see the help to the right of the screen in BIOS Setup Utility.

Note: To enter BIOS Setup Utility, press F2 when the Lenovo logo appears on the screen while the computer is starting up.

■ ■ Connecting external devices

Your computer has a wide range of built-in features and connection capabilities.

■ Using memory cards (not supplied)

Your computer supports the following types of memory cards:

- Secure Digital (SD) card
- MultiMediaCard (MMC)
- Memory Stick (MS)
- Memory Stick PRO (MS PRO)
- xD-Picture Card (xD)

Notes:

- Insert **ONLY** one card in the slot at a time.
- This card reader does not support SDIO devices (e.g. SDIO *Bluetooth*, etc.).

Inserting a memory card

- ➊ Push the dummy card until you hear a click. Gently pull the dummy card out of the memory card slot.
- ➋ Slide the memory card in until it clicks into place.

Note: The dummy card is used for preventing dust and small particles from entering the inside of your computer when the memory card slot is not in use. Retain the dummy card for future use.

Removing a memory card

- ➊ Push the memory card until you hear a click.
- ➋ Gently pull the memory card out of the memory card slot.

Note: Before removing the memory card, disable it by Windows Safely Remove Hardware and Eject Media utility to avoid data corruption.

■ Connecting a universal serial bus (USB) device

Your computer comes with two USB ports and an eSATA/USB port compatible with USB devices or three USB ports compatible with USB devices.

Note: When using a high power consumption USB device such as USB ODD, use the external device's power adapter. Otherwise, the device may not be recognized, and system shut down may result.

■ Connecting an ExpressCard device (select models only)

Your computer comes with an ExpressCard/34 slot used for connecting ExpressCard devices.

Note: Only use the ExpressCard/34 devices.

Inserting an ExpressCard/34 device

- ❶ Push the dummy card until you hear a click. Gently pull the dummy card out of the ExpressCard slot.
- ❷ Slide the ExpressCard device in with the front label facing upward until it clicks into place.

Removing an ExpressCard/34 device

- ❶ Push the ExpressCard device until you hear a click.
- ❷ Gently pull the ExpressCard device out of the ExpressCard slot.

Notes:


- Before removing the ExpressCard/34 device, unplug it by Windows Safely Remove Hardware and Eject Media utility.
- The dummy card is used for preventing dust and small particles from entering the inside of your computer when the ExpressCard slot is not in use. Retain the dummy card for future use.

■ **Connecting a *Bluetooth* enabled device (select models only)**

If your computer has an integrated *Bluetooth* adapter card, it can connect to and transfer data wirelessly to other *Bluetooth* enabled devices, such as laptop computers, PDAs and cell phones. You can transfer data between these devices without cables and up to 10 meters range in open space.

Note: The actual maximum range may vary due to interference and transmission barriers. To get the best possible connection speed, place the device as near your computer as possible.

Enabling *Bluetooth* communications

- ❶ Slide the integrated wireless device switch to .
- ❷ Press Fn + F5 to make configuration.

Notes:

- When you do not need to use the *Bluetooth* function, turn it off to save battery power.
- You need to pair the *Bluetooth* enabled device with your computer before you can transfer data between them. Read the documentation supplied with the *Bluetooth* enabled device for details on how to pair the device with your computer.

Chapter 3. Using the Internet

As a global network, the Internet connects computers worldwide, providing services such as e-mailing, information searching, electronic commerce, Web browsing and entertainment.

You can connect the computer to the Internet in the following ways:

Wired connection: use physical wiring to connect.

Wireless network technology: connect without wiring.

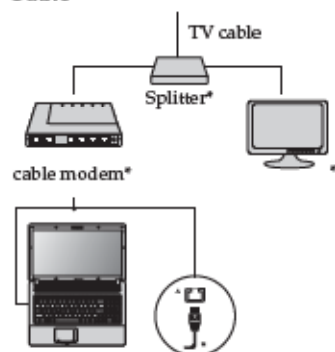
■ ■ Wired connection

Wired connections are a reliable and safe way to connect the computer to the Internet. Generally, the following two accessing methods are widely used.

Cable	Cable Internet service uses a cable modem connected to the residential cable TV line.
DSL	DSL is a family of related technologies that bring high-speed network access to homes and small businesses over ordinary telephone lines.

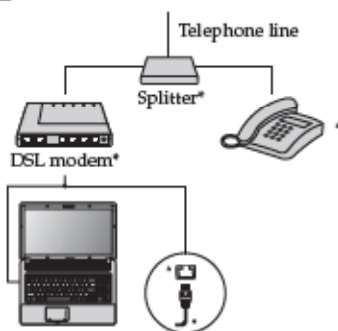
■ Hardware connection:

Cable



* Not supplied.

DSL



Note: The above diagrams are for reference only. Actual connection method may vary.

■ Software configuration

Ask your Internet Service Provider (ISP) for details on how to configure your computer.

■ Wireless connection

Wireless connections provide a mobile access to the Internet, allowing you to stay online anywhere the wireless signal covers.

Wireless connection to the Internet can be built by the following methods.


Wi-Fi	Wi-Fi networks cover a small physical area, like a home, office, or small group of buildings. An access point (ex. wireless router) is necessary for the connection.
WiMAX	WiMAX networks connect several Wireless LAN systems to cover a metropolitan area, providing high-speed broadband access without the need for cables.
Mobile Broadband	The Mobile Broadband network provides Internet access to computers, cell phones and other devices over a large geographic area. Mobile networks are used for data transmission, and access is usually provided by a mobile network operator. A Mobile Broadband SIM card is necessary for the connection.

Note: Your computer may not support all wireless connection methods.

■ Using Wi-Fi/WiMax (select models only)

Enabling wireless connection

To enable wireless communications, do the following:

- 1 Slide the integrated wireless device switch to .
- 2 Press **Fn + F5** to make configuration.

Hardware connection



* Not supplied.

■ Software configuration

Consult your Internet Service Provider (ISP) for details on how to configure your computer.

■ Using Mobile Broadband (select models only)

Before getting started with Mobile Broadband, you first need to choose a mobile network operator and make sure you are in the coverage area of the network. After that, you also need:

- To activate the Mobile Broadband service through your local mobile network operator. You will get a Subscriber Identity Module (SIM) card after activation. For instructions on inserting the SIM card, refer to “Inserting the SIM card” on page 22.

Notes:

- Various standards are in use by mobile operators to provide Mobile Broadband services. The Lenovo Mobile Broadband module may support one or more of the following standards:
 - GSM (Global System for Mobile Communications)
 - TD-SCDMA (Time Division-Synchronous Code Division Multiple Access)
 - SCDMA (Synchronous Code Division Multiple Access)
 - EV-DO (Evolution Data Optimized)
 - HSPA (High Speed Packet Access)
 - Mobile Broadband is a subscription service. Refer to your local mobile network operator for availability, cost and other information.
 - A SIM card is a type of smart card used by mobile network operators to identify their service subscribers on the mobile network. You will get the SIM card from your mobile network operator after you have activated the Mobile Broadband service.
- A connection management utility to connect/disconnect to your Mobile Broadband network.

Note: In general, your mobile service provider provides this utility.

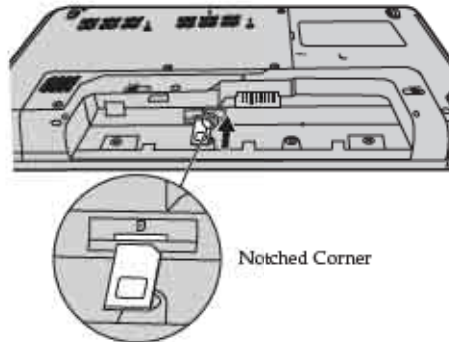
Inserting the SIM card

To insert the SIM card:

- ❶ Turn off the computer; then disconnect the AC adapter and all cables from the computer.
- ❷ Close the computer display and turn it over.
- ❸ Remove the battery.

- ④ Insert the SIM card in the card slot as shown in the illustration.

Note: Inserting the SIM card in the wrong direction may damage the SIM card slot.



- ⑤ Put the battery back in place. Turn the computer over and reconnect the cables.

Removing the SIM card

To remove the SIM card:

- ❶ Turn off the computer, then disconnect the AC adapter and all cables from the computer.
- ❷ Close the computer display and turn it over.
- ❸ Remove the battery.
- ❹ Push the SIM card until you hear a click.
- ❺ Gently pull the SIM card out of the card slot.



- ❻ Put the battery back in place. Turn the computer over and reconnect the cables.

Note: Never insert or remove the SIM card while the computer is on. Doing so may cause permanent damage to the SIM card as well as the SIM card reader.

Chapter 4. OneKey Rescue system

■ ■ OneKey Rescue system

■ Introduction

The Lenovo OneKey Rescue system is an easy-to-use application that can be used to back up the data on your system partition (C drive) for easy restore when required. You can run Lenovo OneKey Recovery under the Windows operating system, and the OneKey Rescue system without starting the Windows operating system.

© Attention:

In order to utilize the features of the OneKey Rescue system, your hard disk already includes a hidden partition by default to store the system image file and OneKey Rescue system program files. This default partition is hidden for security reasons and is the reason the available disk space is less than it claims. The exact available hard disk space depends on the file size of the mirror image file (based on the size of operating system and preinstalled software).

■ Using Lenovo OneKey Recovery (Within Windows operating system)

In Windows operating system, double click the OneKey Recovery System Icon on the desktop to launch Lenovo OneKey Recovery.

Within the program, you can back up the system partition on the hard disk drive, other storage devices, or by creating recovery discs.


Notes:

- The backup process and creation of recovery discs may take some time, connect the AC adapter and battery pack to your computer.
- After the recovery discs are burned, please number them so that you can use them in the correct order.
- Computers without an integrated optical drive support the creation of recovery discs; however an appropriate external optical drive is needed to physically create the recovery discs.

For more instructions, see the help file of Lenovo OneKey Recovery.

■ Using Lenovo OneKey Rescue system (Without Windows operating system)

In the event that the operating system cannot be loaded, follow the steps below to access OneKey Rescue system.

- Shut down your computer.
- Press the  key to launch OneKey Rescue system.

Within the program, you can choose to restore your system partition to the original factory status, or to a previously generated backup.

Note: The recovery process is irreversible. Make sure to back up any critical data before using the recovery feature.

Chapter 5. Troubleshooting

■ ■ Frequently asked questions

This section lists frequently asked questions and tells where you can find detailed answers. For details about each publication included in the package with your computer, see *Lenovo G460/G560 Setup Poster*.

What safety precautions should I follow when using my computer?

See "Important safety information" on page ii of this guide.

How can I prevent problems with my computer?

See "Appendix B. Use, and care information" on page 42 of this guide. More tips can be found in Chapter 1 and 2.

What are the main hardware features of my new computer?

More information can be found in Chapter 1 and 2.

Where can I find the detailed specifications for my computer?

See <http://consumersupport.lenovo.com>.

I need to upgrade a device or I need to replace one of the following: the hard disk drive, memory, or the keyboard.

See "Appendix D. Customer replaceable units (CRUs)" on page 55 of this guide.

Where are the recovery discs?

Your computer did not come with a recovery disc. For an explanation of the alternative recovery methods offered by Lenovo, see "Chapter 4. OneKey Rescue system" on page 25.

How can I contact the customer support center?

See "Appendix A. Getting help and service" on page 39 of this guide.

Where can I find warranty information?

For the warranty applicable to your computer, including the warranty period and type of warranty service, see "Appendix C. Lenovo limited warranty" on page 48.

How can I install the device drivers?

A compatible device driver is a requirement to ensure correct operation and performance of each component in your computer. If your computer is pre-installed with an operating system, Lenovo provides all drivers that you need in your hard disk.

What can I do if the backup process fails?

If you can start the backup feature without a problem, but it fails during the backup process, please try the following steps:

- ❶ Close other applications, then restart the backup process.
- ❷ Check if the destination media is damaged, try to select another path and then try again.

When do I need to restore the system to the factory status?

You can use this feature when your system fails or you need to re-install your operating system. This will restore your computer back to the initial status when you first booted up your computer after receiving it from the store. If there is critical data on your current partition, back it up before you run this recovery feature.

■ ■ Troubleshooting

If you do not find your problem here, see Chapter 2. The following section only describes problems that might negate the need to refer to the more comprehensive information in Chapter 2.

Display problems

When I turn on the computer, nothing appears on the screen.

- If the screen is blank, make sure that:
 - The battery is installed correctly.
 - The AC adapter is connected to the computer and the power cord is plugged into a working electrical outlet.
 - The computer power is on. (Press the power button again for confirmation.)
 - The memory is installed correctly.
- If these items are properly set, and the screen remains blank, have the computer serviced.

When I turn on the computer, only a white cursor appears on a blank screen.

- Restore backed-up files to your Windows environment or the entire contents of your hard disk to the original factory contents using OneKey Recovery. If you still see only the cursor on the screen, have the computer serviced.

My screen goes blank while the computer is on.

- Your screen saver or power management may be enabled. Do one of the following to exit from the screen saver or to resume from sleep or hibernation mode:
 - Touch the touchpad.
 - Press any key on the keyboard.
 - Press the power button.
 - Press Fn+F2 to confirm whether the LCD screen has been turned off.

A Password problem

I forgot my password.

- If you forget your user password, you must take your computer to a Lenovo authorized servicer or a marketing representative to have the password changed.
- If you forget your HDD password, a Lenovo authorized servicer cannot reset your password or recover data from the hard disk. You must take your computer to a Lenovo authorized servicer or a marketing representative to have the hard disk drive replaced. Proof of purchase is required, and a fee will be charged for parts and service.
- If you forget your supervisor password, a Lenovo authorized servicer cannot reset your password. You must take your computer to a Lenovo authorized servicer or a marketing representative to have the system board replaced. Proof of purchase is required, and a fee will be charged for parts and service.

Keyboard problems

A number appears when you enter a letter (G460).

- The numeric lock function is on. To disable it, press Fn + F8.

Sleep or hibernation problems

The critical low-battery error message appears, and the computer immediately turns off.

- The battery power is getting low. Connect the AC adapter to the computer, or replace the battery with a fully charged one.

The computer enters sleep mode immediately after Power-on self-test (POST).

- Make sure that:
 - The battery is charged.
 - The operating temperature is within the acceptable range. See "Appendix B. Use, and care information" on page 42.

Note: If the battery is charged and the temperature is within range, have the computer serviced.

The computer does not return from sleep mode and the computer does not work.

- If the computer does not return from sleep mode, it may have entered hibernation mode automatically because the battery is depleted. Check the power indicator.
- If your computer is in sleep mode, connect the AC adapter to the computer, then press any key or the power button.
- If your computer is in hibernation mode or power-off state, connect the AC adapter to the computer, then press the power button to resume operation.

Note: If the system still does not return from sleep mode, your system has stopped responding, and you cannot turn off the computer; reset the computer. Unsaved data may be lost. To reset the computer, press and hold the power button for 4 seconds or more. If the computer is still not reset, remove the AC adapter and the battery.

Computer screen problems

The screen is blank.

- Do the following:
 - If you are using the AC adapter, or using the battery, and the battery status indicator is on, press Fn + ⬆ to make the screen brighter.
 - If the power indicator is in blinking, press the power button to resume from the sleep mode.
 - If the problem persists, follow the solution in the following problem "The screen is unreadable or distorted."

The screen is unreadable or distorted.

- Make sure that:
 - The display device driver is installed correctly.
 - The screen resolution and color quality are correctly set.
 - The monitor type is correct.

Incorrect characters appear on the screen.

- Did you install the operating system or application program correctly? If they are installed and configured correctly, have the computer serviced.

A message, "Unable to create overlay window," appears when you try to start DVD playback.
-or-

You get poor or no playback of video, DVD or game applications.

- Do either of the following:
 - If you are using 32-bit color mode, change the color depth to 16-bit mode.
 - If you are using a desktop resolution over the optimum, reduce the display resolution and the color depth.

Sound problems

No sound can be heard from the speaker even when the volume is turned up.

- Make sure that:
 - The Mute function is off.
 - The headphone jack is not used.
 - Speakers are selected as the playback device.

Battery problems

Your computer shuts down before the battery status indicator shows empty.

-or-

Your computer operates after the battery status indicator shows empty.

- Discharge and recharge the battery.

The operating time for a fully charged battery is short.

- For details, see “Handling the battery” in Chapter 2.

The computer does not operate with a fully charged battery.

- The surge protector in the battery might be active. Turn off the computer for one minute to reset the protector; then turn on the computer again.

The battery does not charge.

- For details, see “Handling the battery” in Chapter 2.

A hard disk drive problem

The hard disk drive does not work.

- In the **Boot** menu in **BIOS Setup Utility**, make sure that the hard disk drive is included in the **Boot Device Priority** correctly.

A startup problem

The Microsoft® Windows operating system does not start.

- Use the OneKey Rescue system to help solve or identify your problem. For details about OneKey Rescue system, see “Chapter 4. OneKey Rescue system” on page 25.

OneKey Rescue system problems

Backup cannot be made.

- You are not currently using a Windows operating system.
- There is not enough space to store the backed up data. You will need to free more hard disk space on your system partition (C drive).

Fail to restore system partition to factory default.

- The system partition, such as the partition size or the drive capacity of C, has been modified.

Other problems

- | | |
|---|---|
| Your computer does not respond. | <ul style="list-style-type: none"> • To turn off your computer, press and hold the power button for 4 seconds or more. If the computer still does not respond, remove the AC adapter and the battery. • Your computer might lock when it enters sleep mode during a communication operation. Disable the sleep timer when you are working on the network. |
| The computer does not start from a device you want. | <ul style="list-style-type: none"> • See the Boot menu of the BIOS Setup Utility. Make sure that the Boot Device Priority in the BIOS Setup Utility is set so that the computer starts from the device you want. • Also make sure that the device from which the computer starts is enabled. In the Boot menu in the BIOS Setup Utility, make sure that the device is included in the Boot Device Priority list. |
| The connected external device does not work. | <ul style="list-style-type: none"> • Do not connect or disconnect any external device cables other than USB while the computer power is on; otherwise, you might damage your computer. • When using a high power consumption external devices such as an external USB optical disk drive, use external device power adapter. Otherwise, the device may not be recognized, or system shut down may result. |

Chapter 6. Upgrading and replacing devices

Notes:

- The illustrations used in this chapter are of the Lenovo G560, unless otherwise stated.
- The following steps about upgrading and replacing devices are the same for the G460 and G560.

■ Replacing the battery

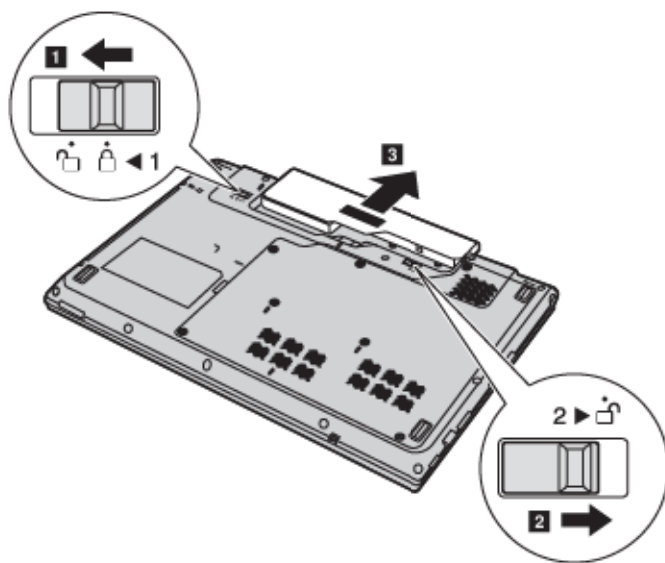
Note: Use only the battery provided by Lenovo. Any other battery could ignite or explode.

To replace the battery

- 1 Turn off the computer, or enter hibernation mode. Disconnect the AC adapter and all cables from the computer.

Note: If you are using an ExpressCard device, the computer might not be able to enter hibernation mode. If this happens, turn off the computer.

- 2 Close the computer display, and turn the computer over.
- 3 Unlock the manual battery latch **1**. Holding the spring-loaded battery latch in the unlocked position **2**, remove the battery pack in the direction shown by the arrow **3**.



- 4 Install a fully charged battery.
- 5 Slide the manual battery latch to the locked position.
- 6 Turn the computer over again. Connect the AC adapter and the cables to the computer again.

■ Replacing the hard disk drive

You can increase the storage capacity of your computer by replacing the hard disk drive with one of greater capacity. You can purchase a new hard disk drive from your reseller or Lenovo marketing representative.

Notes:

- Replace the hard disk drive only if you upgrade it or have it repaired. The connectors and bay of the hard disk drive were not designed for frequent changes, or drive swapping.
- The preinstalled softwares are not included on an optional hard disk drive.

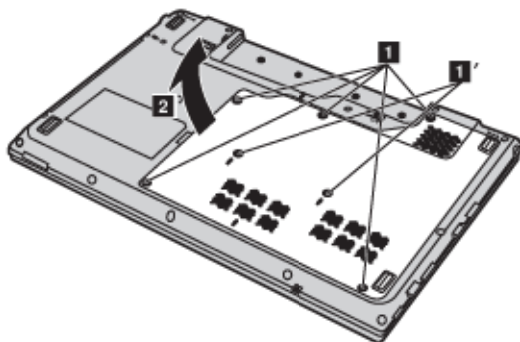
Handling a hard disk drive

- Do not drop the drive or subject it to physical shocks. Put the drive on a material, such as soft cloth, that absorbs the physical shock.
- Do not apply pressure to the cover of the drive.
- Do not touch the connector.

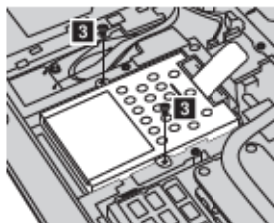
The drive is very sensitive. Incorrect handling can cause damage and permanent loss of data on the hard disk. Before removing the hard disk drive, make a backup copy of all the information on the hard disk, and then turn the computer off. Never remove the drive while the system is operating, in sleep mode, or in hibernation mode.

To replace the hard disk drive, do the following:

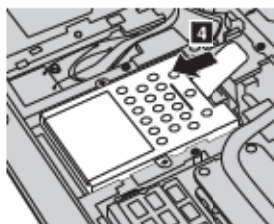
- 1 Turn off the computer; then disconnect the AC adapter and all cables from the computer.
- 2 Close the computer display, and then turn the computer over.
- 3 Remove the battery pack.
- 4 Remove the Hard disk drive (HDD)/Memory/CPU (Central processing unit)/Mini PCI Express Card slot compartment cover:
 - a. Loosen **1** and remove **1'** the screws that secure the compartment cover.
 - b. Remove the compartment cover **2**.



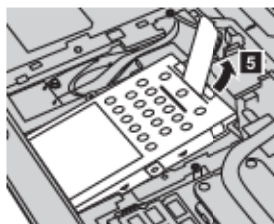
- 6 Remove the frame fixing screws 3.



- 6 Pull the tab in the direction shown by arrow 4.



- 7 Take out the hard disk drive secured in a metal frame 5.



- 8 Remove the screws and detach the metal frame from the hard disk drive.
9 Attach the metal frame to a new hard disk drive; then tighten the screws.
10 Put the hard disk drive gently into the hard disk drive bay with the tab facing upwards and the connectors facing each other; then push it firmly into space.
11 Reinstall the frame fixing screws.
12 After aligning the attachment clips with their matching gaps, reinstall the compartment cover.
13 Tighten and reinstall the screws.
14 Reinstall the battery pack.
15 Turn the computer over again. Connect the AC adapter and the cables to the computer again.

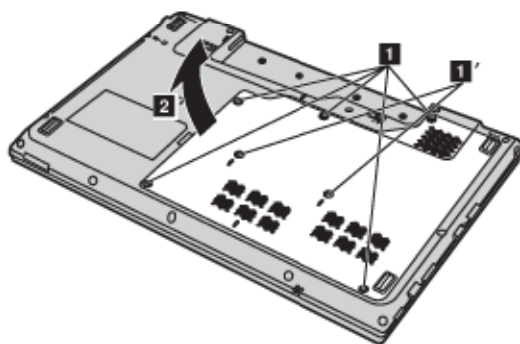
■ ■ Replacing memory

You can increase the amount of memory in your computer by installing a double data rate (DDR 3) small outline dual inline memory module (SO-DIMM)-available as an option-in the memory slot of your computer. SO-DIMMs are available in various capacities.

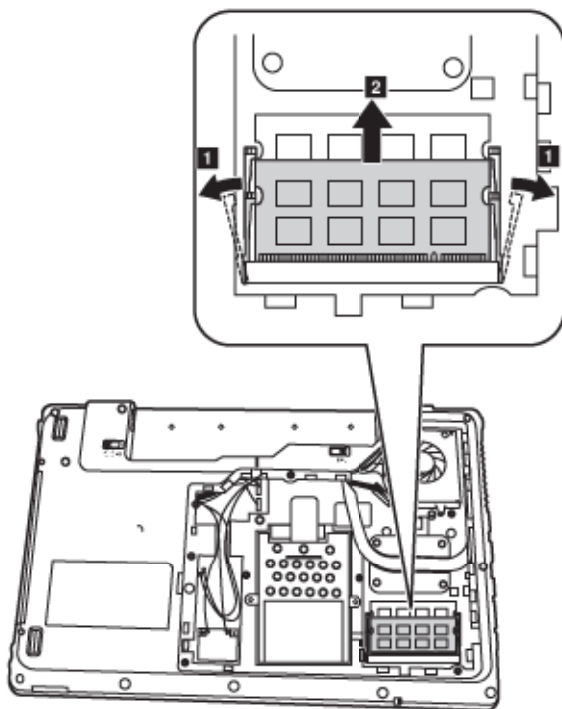
Note: Use only the memory types supported by your computer. If you incorrectly install the optional memory or install an unsupported memory type, a warning beep will sound when you try to start the computer.

To install an SO-DIMM, do the following:

- ❶ Touch a metal table or a grounded metal object to reduce any static electricity in your body, which could damage the SO-DIMM. Do not touch the contact edge of the SO-DIMM.
- ❷ Turn off the computer. Disconnect the AC adapter and all cables from the computer.
- ❸ Close the computer display, and turn the computer over.
- ❹ Remove the battery pack.
- ❺ Remove the Hard disk drive (HDD)/Memory/CPU (Central processing unit)/Mini PCI Express Card slot compartment cover.
 - a. Loosen ❶ and remove ❶' the screws that secure the compartment cover.
 - b. Remove the compartment cover ❷.

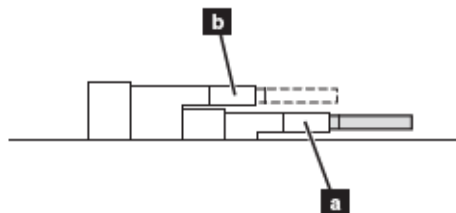


- 6 Press outwards on the latches on both edges of the socket at the same time, remove the SO-DIMM. Be sure to save the old SO-DIMM for future use.



- 7 Insert the notched end of the DIMM into the socket. Press the DIMM firmly, and pivot it until it snaps into the place. Make sure that it is firmly fixed in the slot and does not move easily.
- 8 After aligning the attachment clips with their matching gaps, reinstall the compartment cover.
- 9 Tighten and reinstall the screws.
- 10 Reinstall the battery.
- 11 Turn the computer over again. Connect the AC adapter and the cables to the computer again.

Note: If only one DIMM is used on the computer you are servicing, the card must be installed in SLOT-0 (**a**: lower slot), but not in SLOT-1 (**b**: upper slot).



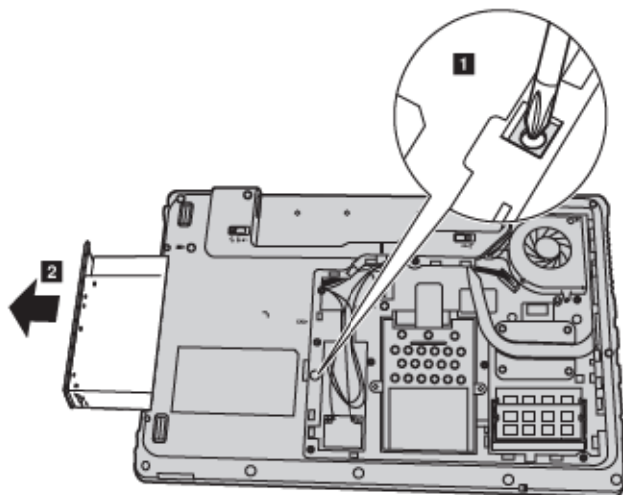
To make sure that the SO-DIMM is installed correctly, do as follows:

- ❶ Turn the computer on.
- ❷ Hold F2 during startup. The BIOS Setup Utility screen opens. The **System Memory** item shows the total amount of memory installed in your computer.

■ ■ Removing the optical drive

To remove the optical drive, do the following:

- ❶ Remove the Hard disk drive (HDD)/Memory/CPU (Central processing unit)/Mini PCI Express Card slot compartment cover.
- ❷ Remove the screw shown in the illustration **1**.
- ❸ Gently pull the optical drive out **2**.



Chapter 6. Upgrading and replacing devices

The following table provides a list of CRUs (Customer Replaceable Units) for your computer and tells where to find the replacement instructions.

	Setup Poster	User Guide
Self-service CRUs		
AC adapter	O	
Power cord for AC adapter	O	
Battery	O	O
Bottom access doors		O
Hard disk drive		O
Memory		O
Optical drive		O

Appendix D. Customer replaceable units (CRUs)

Customer Replaceable Units (CRUs) are computer parts that can be upgraded or replaced by the customer. There are two types of CRUs: *internal* and *external*. External CRUs are easy to install, whereas internal CRUs require some technical skills and in some cases might require tools such as a screwdriver. However, both internal and external CRUs are safe for removal by the customer.

Customers are responsible for replacing all external CRUs. Internal CRUs can be removed and installed by customers or by a Lenovo service technician during the warranty period.

Your computer contains the following types of external CRUs:

- **External CRUs (pluggable):** These CRUs unplug from the computer. Examples of these types of CRUs include the AC adapter and power cord.
- **External CRUs with latches:** These CRUs include a latch to help you remove and replace the part. Examples of these types of CRUs include the notebook main battery, an optical drive, a hard-disk drive, and an extended battery.

Your computer contains the following types of internal CRUs:

- **Internal CRUs (located behind an access panel):** These CRUs are isolated parts within the computer that are concealed by an access panel that is typically secured by either one or two screws. Once the access panel is removed, only the specific CRU is visible. Examples of these types of CRUs include memory modules and hard disk drives.
- **Internal CRUs (located within the product):** These CRUs are accessible only by opening the computer's outer case. Examples of these CRUs include PCI Express Mini Cards and the integrated keyboard.

Appendix G. Features and specifications

Model Name: Lenovo G460
Lenovo G560

Machine Type • 20041, 0677
• 20042, 0679

Note: Information of the specifications may contain technical inaccuracies or typographical errors. Lenovo reserved the right to improvements and/or changes at this specifications at any time without notice.

	G460	G560
Form Factor		
Size	Appr. 340 mm × 231.8 mm × 17.2~34.4 mm	Appr. 376.8 mm × 249.8 mm × 17.3~34.9 mm
Weight	Appr. 2.2 kg with 6 cell battery	Appr. 2.6 kg with 6 cell battery
System		
CPU	Intel processor	Intel processor
Memory	DDR3, 2 × SODIMM	DDR3, 2 × SODIMM
LCD	14" W-LED HD	15.6" W-LED HD
HDD	2.5 SATA HDD	2.5 SATA HDD
Keyboard	6-row Lenovo Keyboard	6-row Lenovo Keyboard
Integrated Camera (select models only)	0.3 or 1.3 mega pixel camera	0.3 or 1.3 mega pixel camera
Battery	48Wh, 6 cells Li-ion battery	48Wh, 6 cells Li-ion battery
AC Adapter	20 V/65 W	20 V/65 W
I/O Ports		
HDMI (select models only)	HDMI × 1	HDMI × 1
USB	USB 2.0 port × 2, eSATA/USB port × 1 or USB 2.0 port × 3	USB 2.0 port × 2, eSATA/USB port × 1 or USB 2.0 port × 3
Communication	10/100 Mb or 10/100/1000 Mb (select models only)	10/100 Mb or 10/100/1000 Mb (select models only)
Audio	Headphone/Mic-In jack	Headphone/Mic-In jack
Video	VGA × 1	VGA × 1
ExpressCard Slot (select models only)	34mm width × 1	34mm width × 1
Media Slot (select models only)	5 in 1 slot × 1 (MMC/ SD/ MS/ MS PRO/xD)	5 in 1 slot × 1 (MMC/ SD/ MS/ MS PRO/xD)
Others		
Kensington slot	Yes	Yes

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