

Lenovo 3000 G430/ G530 User Guide v2.0

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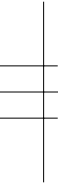
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Note

- Before using this information and the product it supports, be sure to read the following:
- Chapter 6. Safety, Use, and Care Information on page 62.
 - Appendix D. Notices on page 110.
 - OneKey Rescue System User Guide included in the package with this publication.

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**If your product is not working correctly,
DO NOT RETURN IT TO THE STORE.**

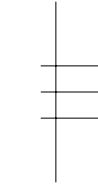
For technical assistance, contact a Lenovo support specialist 24 hours a day by calling toll free **1-877-4 LENOVO (1-877-453-6686)**.

Additionally, you can find support information and updates on the Lenovo Web site located at **<http://consumersupport.lenovo.com>**.

* Only for the users from the United States.

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ENERGY STAR model information



ENERGY STAR[®] is a joint program of the U.S. Environmental Protection Agency and the U.S. Department of Energy aimed at saving money and protecting the environment through energy efficient products and practices.

Lenovo is proud to offer our customers products with an ENERGY STAR compliant designation. Lenovo computers of the following machine types, if the ENERGY STAR mark is affixed, have been designed and tested to conform to the ENERGY STAR 4.0 program requirements for computers.

- 20003, 4153
- 20004, 4151

By using ENERGY STAR compliant products and taking advantage of the power-management features of your computer, you reduce the consumption of electricity. Reduced electrical consumption contributes to potential financial savings, a cleaner environment, and the reduction of greenhouse gas emissions.

For more information about ENERGY STAR, visit <http://www.energystar.gov>.
 Lenovo encourages you to make efficient use of energy an integral part of your day-to-day operations. To help in this endeavor, Lenovo has preset the following power-management features to take effect when your computer has been inactive for a specified duration:

Table 1. ENERGY STAR power-management features, by operating system

Windows XP	Windows Vista
<ul style="list-style-type: none"> • Turn off monitor: After 10 minutes • Turn off hard disks: After 30 minutes • System standby: After 20 minutes • System hibernates: After 2 hours 	Power plan: Balanced <ul style="list-style-type: none"> • Turn off the display: After 10 minutes • Put the computer to sleep: After 25 minutes • Advanced power settings: <ul style="list-style-type: none"> - Turn off hard disks: After 20 minutes - Hibernate: After 1 hour

To awaken your computer from a Sleep or System Standby mode, press any key on your keyboard. For more information about these settings, refer to your Windows Help and Support information system.

Explanation of Hard Disk Capacity

Dear user,

While using your computer, you may discover that the nominal hard disk capacity indicated is somewhat different from the disk capacity displayed by the operating system. For example, a nominal 80GB hard disk will appear as less than 80GB in the operating system. This discrepancy is not an error in hard disk installation nor any other problem, but a normal phenomenon of 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:

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

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 $X \times 0.931$ G.

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

Lenovo computers 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 evident, 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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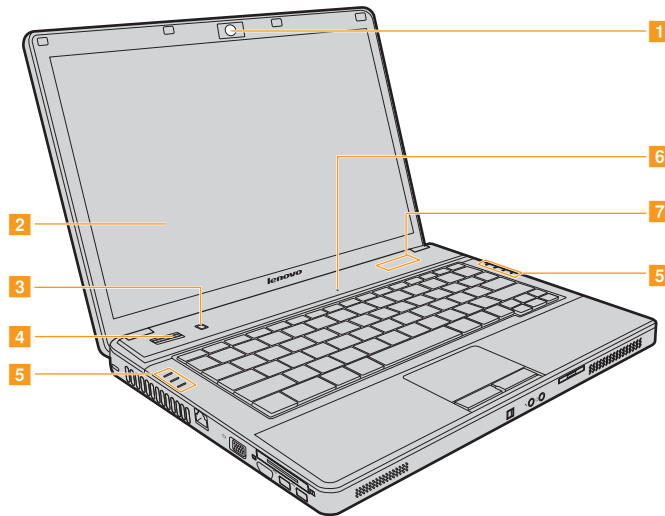
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Chapter 1. Getting to Know Your Computer

■ ■ Top View



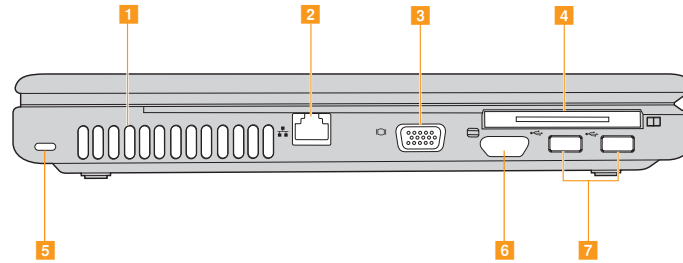
* The illustrations in this manual may differ from the actual product.

Chapter 1. Getting to Know Your Computer

- 1 Integrated camera (Specific model only)..... 19**
- 2 Computer display**
The color display with TFT technology provides clear and brilliant text and graphics.
- 3 OneKey Rescue System button..... 16**
- 4 Power button**
Use the Power button to turn on the computer.
- 5 System status indicators**
The system status indicators show the current status of your computer.
- 6 Microphone (built-in)**
The built-in microphone can be used for video conferencing, voice narration, or simple audio recordings.
- 7 Custom and volume buttons..... 15**

Chapter 1. Getting to Know Your Computer

■ ■ Left-side View



Chapter 1. Getting to Know Your Computer

1 Fan louvers

The fan louvers allow heated air to exit the computer.

➤ Important:

Make sure that paper, books, clothing, cables or other objects do not block any of the fan louvers otherwise, overheating of the computer may occur.

2 LAN port..... 20

3 VGA port 40

4 PCI Express card slot 38

5 Security keyhole

Your computer comes with a security keyhole. You can purchase a security cable and lock to fit this keyhole.

❖ Note:

Before purchasing any security product, verify that it is compatible with this type of security keyhole.

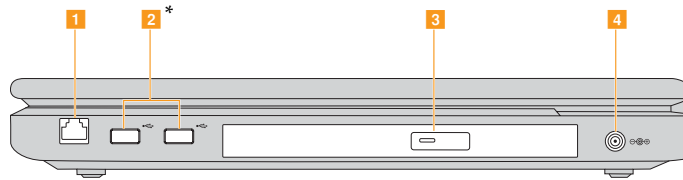
6 HDMI port (Specific model only)..... 41

Use this connector to connect HDMI devices.

7 USB 2.0 port 37

Chapter 1. Getting to Know Your Computer

■ ■ Right-side View



* G430 has one USB port here.

1	Modem Port (Specific model only)	22
2	USB 2.0 port	37
3	Optical drive	17
4	AC power adapter jack	

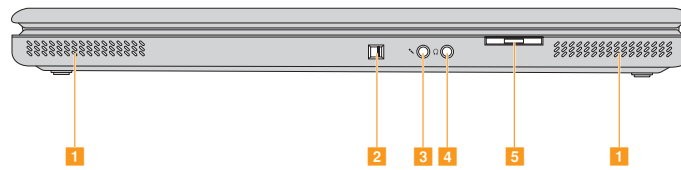
Connect the power adapter here to supply power to the computer and charge the internal battery.

❖ **Note:**

To prevent damage to the computer and battery pack, use the supplied AC adapter only.

Chapter 1. Getting to Know Your Computer

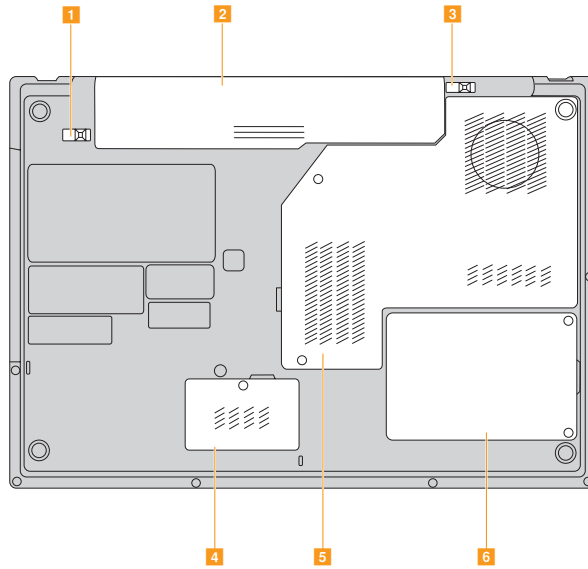
■ ■ Front View



- 1 Speakers**
Built-in speakers for rich powerful sound.
- 2 Wireless device switch (Specific model only)**
Use this switch to simultaneously turn on or turn off Wireless LAN and Bluetooth devices.
- 3 Microphone jack (external)..... 43**
- 4 Headphone (external) 42**
- 5 Multi-media reader slot (Specific model only) 18**

Chapter 1. Getting to Know Your Computer

■ ■ Bottom View



7

Chapter 1. Getting to Know Your Computer

1 Battery latch - manual

The manual battery latch is used to keep the battery pack secured. Move the manual battery latch to the unlocked position to insert or remove the battery pack. Move the manual latch to the locked position after inserting the battery pack.

2 Battery pack 32

3 Battery latch - spring loaded

The spring-loaded battery latch keeps the battery pack secured in place. When you insert a battery pack, this latch automatically secures the battery in place. To remove the battery, hold this latch in the unlocked position.

4 WLAN and WWAN cards compartment

The wireless network cards (Specific model only) can be secured in this compartment for easy access.

5 Central Processor Unit (CPU)/ Memory (RAM) compartment

▪ Central Processor Unit (CPU)

The CPU compartment provides space for the CPU and the radiator.

Chapter 1. Getting to Know Your Computer

➤ Important:

Do not replace the CPU! Visit an authorized service center or retailer for replacement.

▪ Memory (RAM) compartment

The memory compartment provides expansion capabilities for additional memory. The BIOS automatically detects the amount of memory in the system and configures CMOS accordingly during the Power-On Self-Test (POST) process. There is no hardware or software (including BIOS) setup required after the memory is installed.

❖ Note:

- (1) Only purchase expansion modules from authorized retailers of this computer to ensure maximum compatibility and reliability.
- (2) If you only insert one memory card in the compartment, plug it into the slot near the mainboard.

6 Hard Disk Drive compartment

The hard disk drive is secured in this compartment.

➤ Important:

Do not disassemble or replace the hard disk drive! If you should ever need to, ask a Lenovo authorized service center or dealer to provide this service.

Chapter 2. Using Your Computer

■ ■ Putting Your Computer to Sleep or Shutting It Down -

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

■ Putting Your Computer to Sleep

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

To put the computer to sleep, do one of the following.

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

➤ **Warning:**

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.

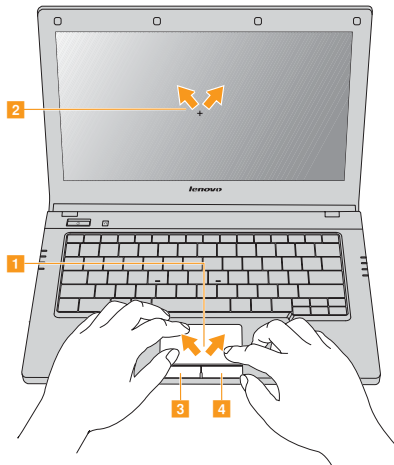
■ Shutting Down Your Computer

If you are not going to use your computer for a day or two, shut it down. To shut down your computer, click **Start** and select **Shut down** from the Start menu.

Chapter 2. Using Your Computer

■ ■ Using the Touch Pad

The touch pad consists of a pad **1** and two click buttons at the bottom of the keyboard. To move the cursor **2** on the screen, slide your fingertip over the pad in the direction in which you want the cursor to move. The functions of the left **3** and right **4** click buttons correspond to those of the left and right mouse buttons on a conventional mouse.



Chapter 2. Using Your Computer

◆ **Note:**

You can also attach and use a USB mouse through the USB connector. For details, see “Connecting a Universal Serial Bus (USB) Device” on page 37.

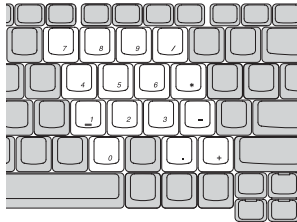
■ Using the Keyboard

Your computer has a numeric keypad and function keys incorporated in the standard keyboard.

■ Numeric Keypad

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

To enable or disable the numeric keypad, press **Fn+Insert/NmLk**.

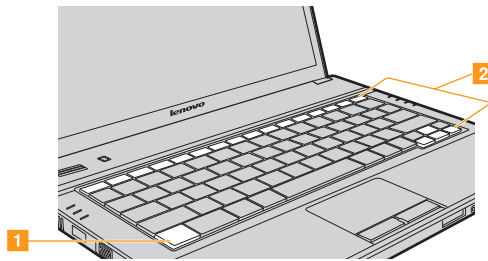


* The illustrations in this manual may differ from the actual product.

Chapter 2. Using Your Computer

■ Function Key Combinations

Through the use of the function keys, perform useful operations more efficiently. To use this feature, press and hold the **Fn** key **1**, then press one of the function keys **2**.



Chapter 2. Using Your Computer

The following describes the features of each function key.

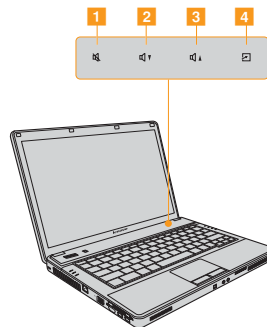
- Fn + F1:** Put your computer in sleep mode.
- Fn + F2:** Turn off/on the LCD screen back light.
- Fn + F3:** Shift to other connected display devices.
- Fn + F4:** Switch between wide screen and normal mode.
- Fn + F5:** Enable/disable the built-in wireless device feature.
- Fn + F8:** Enable/disable the touch pad.
- Fn + F9:** Play/pause Media Player playback.
- Fn + F10:** Stop Media Player playback.
- Fn + F11:** Skip to the previous track.
- Fn + F12:** Skip to the next track.
- Fn + Insert/NmLk:** Enable/disable the Numeric keypad.
- Fn + Delete/ScrLk:** Enable/disable Scroll Lock.
- Fn + PrtSc/SysRq:** System request.
- Fn + up/down arrow:** Increase/decrease display brightness.
- Fn + right/left arrow:** Increase/decrease computer volume.
- Fn + PgUp:** Move the cursor to the head of the line.
- Fn + PgDn:** Move the cursor to the end of the line.

Chapter 2. Using Your Computer

Special Keys and Buttons

Your computer has several special keys and buttons.

Custom and volume buttons



* The illustrations in this manual may differ from the actual product.

- 1 Mute/unmute the sound.
- 2 Volume down
- 3 Volume up
- 4 Open user define utility.

Chapter 2. Using Your Computer

■ OneKey Rescue System button

Press the **OneKey Rescue System** button to enter the main interface of **OneKey Rescue System** while the power is off.

⦿ Attention:

When you press **OneKey Rescue System** button to turn on the computer, please ensure that your computer is not connected with other peripherals (such as USB storage device, etc.), otherwise the system may not operate properly.

For details, see "OneKey Rescue System User Guide".

❖ Note:

When your computer is running Windows Vista[®], and if you have the OneKey Recovery application installed, you can start the application by pressing the **OneKey Rescue System** button.

Chapter 2. Using Your Computer

■ ■ Using the Optical Drive

■ Playing CDs/DVDs Disc Media

You can play your CDs/DVDs with various applications, such as Windows Media Player, Windows Media Center, etc.

■ Copying files to CDs/DVDs Discs (Specific model only)

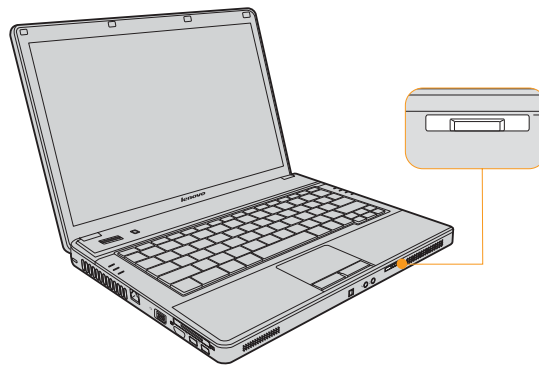
You can copy files to your CDs/DVDs Discs with Power2Go, a software for burning data, music, videos and photos onto CDs, DVDs.

For instructions on Power2Go, see the help file on your software.

Chapter 2. Using Your Computer

■ ■ Using Memory Cards (Specific model only) —

Your computer comes with one Multi-media Reader slot (Specific model only) used to insert a memory card, such as a SD Card, a Multi-media card, a Memory Stick or a Memory Stick Pro card.



❖ **Note:**

Only use memory cards of the type listed above; for more information about the usage, read the instructions supplied with the memory card.

Chapter 2. Using Your Computer

■ Inserting a Memory Card

- 1 Push the slot cover in and remove the cover.
- 2 Slide the memory card in until it clicks into place.

■ Removing a Memory Card

- 1 Push the memory card until you hear a click.
- 2 Gently pull the memory card out of the Multi-media reader slot.

■ Using the Integrated Camera (Specific model only)

With the built-in camera, you can take photos or movies and use with various applications, such as EasyCapture, MSN or Yahoo! Messenger, and so on.

❖ Note:

If you use Windows Vista, you need to install a separate third party dedicated application, because Vista does not include a program for taking pictures or movies with the integrated camera.

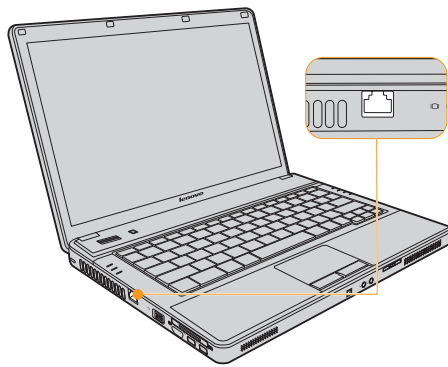
Chapter 2. Using Your Computer

■ ■ Using the Internet

Your computer comes with a LAN port for high-speed DSL/cable modem connection and local area network (LAN), wireless LAN for wireless connection and modem port for dial-up connection.

■ Using LAN Port

The LAN port accepts a standard RJ-45 connector, and allows you to connect the computer to a high-speed DSL/cable modem connection and local area network (LAN).



Attention:

As the voltage of a telephone connection is higher than that of a network, do not attempt to connect a telephone cable to the LAN port as a short circuit in the computer might occur.

Using wireless LAN (Specific model only)

A isotropic antenna system is built into the display for optimal reception, enabling wireless communication wherever you are.

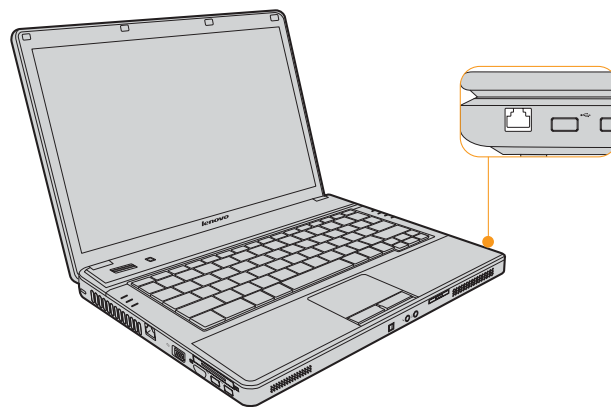
To enable wireless communications, do the following:

- 1 Slide the Wireless device switch latch (Specific model only) to the right.
- 2 Press **Fn + F5**, set Wireless to **Enable**.

Chapter 2. Using Your Computer

■ Using Modem Port (Specific model only)

The modem port accepts a standard telephone cable with one RJ-11 connector, and allows dial up access to an Internet service provider (ISP).



⚠ Important:

Do not connect the modem port to a digital circuit cable, as the current in the digital circuit may damage the modem.

Chapter 2. Using Your Computer

■ ■ Securing Your Computer

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

■ Attaching a Mechanical Lock (Optional)

You can attach a mechanical lock to your computer to help prevent it from being removed without your permission.

Attach a mechanical lock to the keyhole of the computer. Then secure the chain provided on lock to a stationary object. Refer to the instructions shipped with the mechanical lock.

Refer to "Left-side View" on page 3 for the location of the security keyhole.

❖ **Note:**

You are responsible for evaluating, selecting, and implementing locking devices and security features. Lenovo offers no comments, judgement, or warranty regarding the function, quality, or performance of any locking device related security features.

Chapter 2. Using Your Computer

■ 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.

Make sure that only authorized individuals access your computer. Establishing different kinds of passwords requires that other possible users know the proper passwords in order to access your computer or your data.

As many as three different passwords can be used for your computer: the Supervisor password, the User password, and the Hard disk drive (HDD) password. When the Supervisor password is set, only the Supervisor password entitles you full control of the computer.

- Supervisor password
With a Supervisor password, you have full control of the computer. When you enter the BIOS Setup Utility with a Supervisor password, you are entitled to set all of the options.
- User password
If a User password is set and **Password on boot** is set to **Enabled**, a password prompt appears when you turn on the computer. Unauthorized users cannot get access to configuration data. You can also use the User password to enter the BIOS Setup Utility, but only a part of the options can be set.

Chapter 2. Using Your Computer

- Hard disk drive (HDD) password
Once an HDD password is set, you will need to enter it in order to access the hard disk. You can set the HDD password with **Set HDD user password** in **Security**.

To Set a Supervisor Password:

Only a system administrator will be able to perform this procedure.

- 1 Turn on your computer. Press **F2**, while the initial screen is displayed. The BIOS Setup Utility screen opens.
- 2 Select **Security**, using the cursor directional keys.
- 3 Select **Set Supervisor Password**, and press the **Enter** key. The Set Supervisor Password window opens.
- 4 Choose your Supervisor password, which can be from one to eight alphanumeric characters in any combination. Type it in the **Enter New Password** field.
- 5 Press the **Enter** key once to move to the **Confirm New Password** field. Retype the password you just entered to verify it.
- 6 Commit your password to memory, and press the **Enter** key.
- 7 Press **F10** to exit.
- 8 Select **Yes** in the Setup Confirmation window.

Chapter 2. Using Your Computer

Changing or Removing the Supervisor Password

To change the password, do the following:

- 1 Select **Set Supervisor Password**, and press the **Enter** key. The Set Supervisor Password window opens.
- 2 Choose your Supervisor password, which can be from one to eight alphanumeric characters in any combination. Select **Enter Current Password** and type in the correct password. Then press the **Enter** key once to move to the **Enter New Password** field, type in a new supervisor password.
- 3 Press the **Enter** key once to move to the **Confirm New Password** field. Retype the password you just entered to verify it.
- 4 Commit your password to memory, and press the **Enter** key.

To remove password, do the following:

- 1 Select **Set Supervisor Password**, and press the **Enter** key.
- 2 Select **Enter Current Password** and type in the correct password, and finally press the **Enter** key thrice.

❖ **Note:**

Make sure **Password on boot** is set to **Enabled** if you desire password protection at power on.

Chapter 2. Using Your Computer

To set a User Password:

- 1 Turn on your computer. Press **F2**, while the initial screen is displayed. The BIOS Setup Utility screen opens.
- 2 Select **Security**, using the cursor directional keys.
- 3 Select **Set User Password**, and press the **Enter** key. The Set User Password window opens.
- 4 Choose your user password, which can be from one to eight alphanumeric characters in any combination. Type it in the **Enter New Password** field.
- 5 Press the **Enter** key once to move to the **Confirm New Password** field. Retype the password you just entered to verify it.
- 6 Commit your password to memory, and press the **Enter** key.
- 7 Press **F10** to exit.
- 8 Select **Yes** in the Setup Confirmation window.

❖ Note:

You can set the User Password only when the Supervisor Password have been set.

Chapter 2. Using Your Computer

Changing or Removing the User Password

To change the password, do the following:

- 1 Select **Set User Password**, and press the **Enter** key. The Set User Password window opens.
- 2 Choose your user password, which can be from one to eight alphanumeric characters in any combination. Type the correct password in the **Enter Current Password** field. Press **Enter** key once to move to the **Enter New Password** field, then type in a new user password in.
- 3 Press the **Enter** key once to move to the **Confirm New Password** field. Retype the password you just entered to verify it.
- 4 Commit your password to memory, and press the **Enter** key.

To remove the password, do the following:

- 1 Select **Set User Password**, and press the **Enter** key.
- 2 Type the correct user password in **Enter Current Password**, and finally press the **Enter** key thrice.

❖ **Note:**

Make sure **Password on boot** is set to **Enabled** if you desire password protection at power on.

Chapter 2. Using Your Computer

HDD Passwords

Hard disk passwords help protect the information stored on the hard disk. You need to set a HDD user password, or even a HDD master password (for some model), as the Hard Disk Password. Either of the passwords can be used to access the hard disk. Any change to, or removal of the master password deletes the user password.

To Set a HDD Password:

- 1 Turn on your computer. Press **F2**, while the initial screen is displayed. The BIOS Setup Utility screen opens.
- 2 Select **Security**, using the cursor directional keys.
- 3 Select the **Set HDD User Password**, and press the **Enter** key.
- 4 Choose your HDD User Password, which can be from one to eight alphanumeric characters in any combination. Type it in the **Enter New Password** field.
- 5 Press the **Enter** key once to move to the **Confirm New Password** field. Retype the password you just entered to verify it.
- 6 Commit any password to memory, and press the **Enter** key.
- 7 Press **F10** to exit.
- 8 Select **Yes** in the Setup Confirmation window.

Chapter 2. Using Your Computer

For some models, you may select **User+Master** mode in the **Built-in HDD1 Password Select** to set both the HDD master and user password. The next time you turn on your computer, you will have to enter the HDD user or master password to get access to your operating system.

Changing or Removing the HDD Passwords

To change or remove the HDD password, do as follows:

- To change the HDD password, select **Set HDD User Password**, or **Set HDD Master Password** if the HDD master password have been set, and type the correct HDD password in the **Enter Current Password** field, and press the **Enter** key to move to the **Enter New Password** field and type in a new HDD password, and then retype it in the **Confirm New Password** field.
- To remove the HDD password, select **Set HDD User Password**, or **Set HDD Master Password** if the HDD master password have been set, and type the correct HDD password in the **Enter Current Password** field, and then finally press the **Enter** key thrice.

❖ **Note:**

- (1) Remove the HDD password will disable your hard disk password protection.
- (2) The default mode HDD password is User Only.

■ ■ Installing Device Drivers

A compatible device driver is a requirement to ensure correct operation and performance of each component in your computer. Lenovo provides all the drivers you need in your Disk "D:". (This assumes current OS is Windows Vista®.)

◆ **Notes:**

Most installations require a reboot to update the driver, otherwise the system's stability and audio or video may be compromised, or you even have to reinstall the operating system.

Chapter 2. Using Your Computer

■ ■ Using the Battery and AC Adapter

When using a computer away from electrical outlets, battery power is required to keep your computer running. Different computer components consume power at different rates. The more you use power-intensive components, the faster you consume battery power.

■ Your Computer Batteries

Your computer batteries enable you to do more, save more, and spend more time away from the confines of an electrical outlet. Mobility has revolutionized business by enabling you to take your work wherever you go. With computer batteries, you can work anywhere, without the need to be tied to an electrical outlet.

❖ Note:

The operating system may run slower when using the battery mode.

ⓘ Attention:

Any use of the battery other than the original or Lenovo battery will result in "burning" or "fire".

Dispose of the used battery depending on the instructions.

■ Checking Battery Status

You can determine the percentage of battery power remaining by using Windows Power options.

Chapter 2. Using Your Computer

The amount of battery power you use determines how long you can use your computer between charges. As computer users' habits and needs will vary, 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 from the time you start using your computer.
- The way you use your computer: for example, how often you access the hard disk drive and how bright you make the computer display.

■ Using the AC Adapter

The power to run your computer can come either from the lithium-ion (Li-ion) battery pack provided with it, or from AC power through the AC adapter. While you use AC power, the battery charges automatically.

The AC adapter that comes with your computer has two basic components:

- 1 The transformer pack that converts AC power for use with the computer.
- 2 The power cord that plugs into the AC outlet the transformer pack.

⦿ Attention:

Using an improper power cord could cause severe damage to your computer. To use the AC adapter, do the following. Be sure to take these steps in the order in which they are given here.

- 1 Connect the power cord to the transformer pack.

Chapter 2. Using Your Computer

- ② Plug the power cord into an electrical outlet.
 - ③ Connect the AC adapter to the AC power adapter jack of the computer.
- You can check the status of your battery at any time by looking at the battery meter at the bottom of your display.

❖ Notes:

- When you do not use the AC adapter, disconnect it from the electrical outlet.
- Do not wrap the power cord tightly around the AC power transformer pack when it is connected to the transformer.
- You can charge the battery when the AC adapter is connected to the computer and the battery is installed. You need to charge it in any of the following conditions:
 - When you purchase a new battery
 - If the battery status indicator (amber) starts blinking
 - If the battery has not been used for a long time

Before you charge the battery, make sure that its temperature is at least 10 degrees Celsius (50 degrees Fahrenheit).

■ Charging the Battery

When you check the battery status and find that the battery is low, you need to charge the battery or replace it with a charged battery.

If an AC outlet is convenient, first, connect the power cord to the transformer pack; second, plug the power cord into an electrical outlet; and then connect the AC adapter to the power jack of the computer.

Chapter 2. Using Your Computer

The charging time is affected by the physical environment.

❖ **Note:**

To increase the life of the battery, the computer does not start recharging the battery if the remaining power is no less than 95 percent.

■ Handling the Battery

✱ **Danger:**

Do not attempt to disassemble or modify the battery pack.

Attempting to do so can cause an explosion, or liquid leakage from the battery pack.

A battery pack other than the one specified by Lenovo, or a disassembled or modified battery pack is not covered by the warranty.

✱ **Danger:**

If the rechargeable battery pack is incorrectly replaced, there is danger of an explosion. The battery pack contains a small amount of harmful substances. To avoid possible injury:

- 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.

*** Danger:**

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.

*** Danger:**

There is a danger of an explosion if the backup battery is incorrectly stored. The lithium battery contains lithium and can explode if it is not properly handled, or disposed of. Replace only with a battery of the same type. To avoid possible injury or death, *Do not:* (1) throw or immerse into water, (2) allow it to heat to more than 100 degrees C (212 degrees F), or (3) attempt to repair or disassemble it. Dispose of it as required by local ordinances or regulations and your company's safety standards.

Chapter 3. Using External Devices

Your computer has many built-in features and connection capabilities.

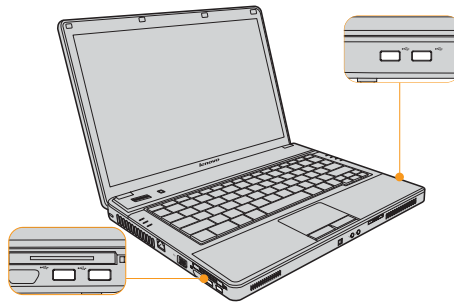
ⓘ **Attention:**

Do not connect or disconnect any external device cables other than USB cables while the computer power is on; otherwise, you might damage your computer. To avoid possible damage to attached devices, wait at least five seconds after the computer is shut down to disconnect external devices.

■ **Connecting a Universal Serial Bus (USB) Device** —

Your computer comes with four* Universal Serial Bus compatible with USB 2.0 or USB 1.1 devices such as a keyboard, mouse, camera, hard disk drive, printer, and scanner. USB allows devices to be connected and disconnected without rebooting the computer (hot swapping), and allows specific classes of hardware to be used without requiring individual device drivers to be installed.

*G430 has 3 USB ports



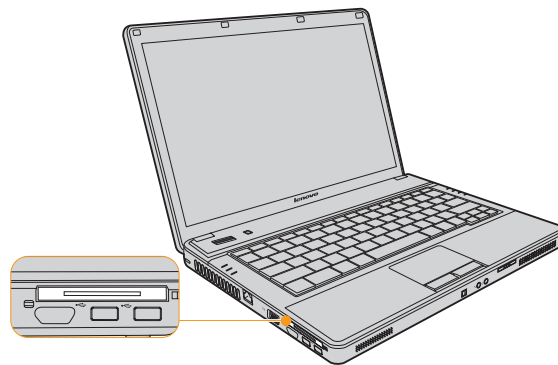
Chapter 3. Using External Devices

Attention:

When using a high power consumption USB device such as USB ODD, use an external device power adapter to avoid possible system shut down.

Connecting a PC Card Device

Your computer comes with PCI Express card slot used for connecting PC card devices.



Chapter 3. Using External Devices

■ Inserting a PCI Express card

- ➊ Push the slot cover in and then remove the cover.
- ➋ Slide the PCI Express card in until it clicks into place.

■ Removing a PCI Express card

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

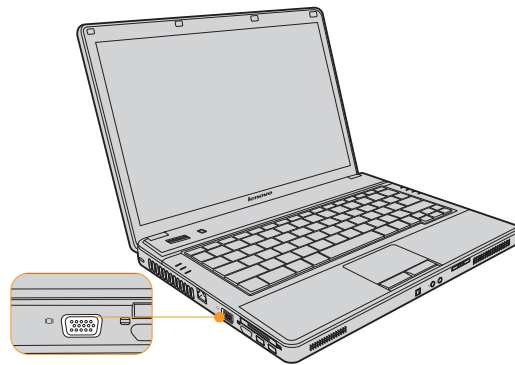
Chapter 3. Using External Devices

■ Connecting an External Display

You can connect an external display to your computer, such as VGA monitor and DVI monitor (Specific models only)

■ Connecting a VGA monitor

You can connect a VGA monitor by using a VGA port. To connect a VGA monitor plug the display cable to VGA port on your computer. Press **Fn + F3** to switch to the external display.



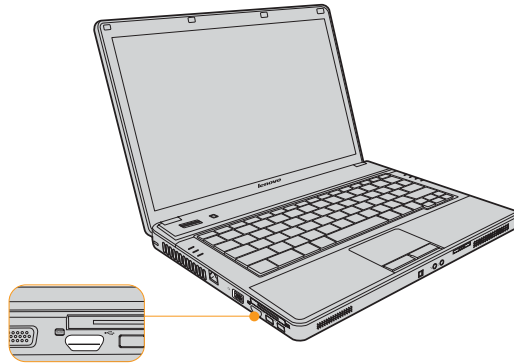
Chapter 3. Using External Devices

■ Connecting a DVI monitor (Specific models only)

You can connect a DVI monitor by using a HDMI port (Specific models only). To connect a DVI monitor, use HDMI to DVI-D cable (not supplied) to connect DVI monitor to the HDMI connector on your computer. To shift to other connected display devices, press Fn + F3.

To set your HDMI audio, do the following:

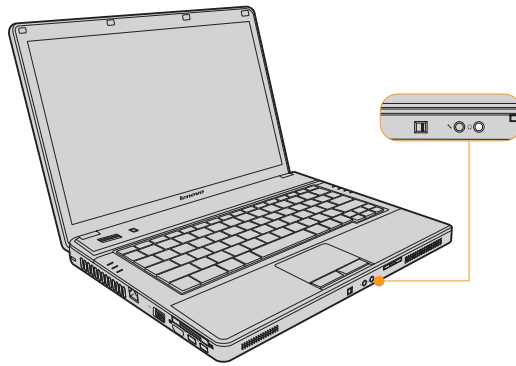
- 1 Right-click the Sound icon at the bottom-right corner of the task bar and select **Playback Devices** from the pull down menu.
- 2 When all players are turned off, select **Digital Output Device (HDMI)** and click **Set Default** button.
- 3 Click the **OK** button to save the settings.



Chapter 3. Using External Devices

■ ■ Connecting a Headphone and Audio Device

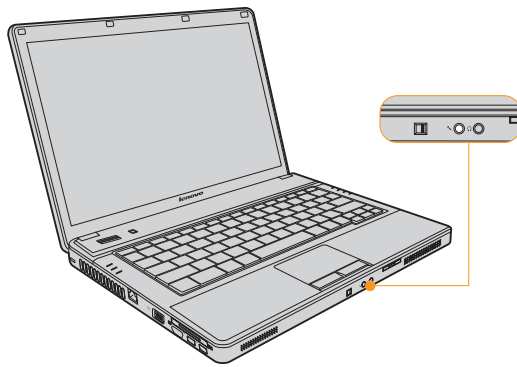
Your computer comes with one headphone jack used for connecting headphones, speakers, and audio devices.



Chapter 3. Using External Devices

■ ■ Connecting an External Microphone

Your computer comes with an external microphone jack for connecting an external microphone.



Chapter 3. Using External Devices

■ ■ Connecting a Bluetooth Device (Specific model only)

Your computer can connect to and transfer data wirelessly to Bluetooth devices, such as computers, PDAs, and cell phones.

■ Enabling Bluetooth communications

- 1 Slide the Wireless device switch latch to the right.
- 2 Press **Fn + F5**, set the Bluetooth device to **Enable**.

❖ **Note:**

If you do not need to use the Bluetooth function, turn it off to save battery power.

Chapter 4. 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 3000 G430/G530 Setup Poster*.

What safety precautions should I follow when using my computer?

See "Chapter 6. Safety, Use, and Care Information" for detailed information about safety.

How can I prevent problems with my computer?

See "Chapter 6. Safety, Use, and Care Information" on page 62 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: the hard disk drive, memory, or the keyboard.

See "Appendix B. Customer Replaceable Units (CRUs)" on page 107 of this guide.

My computer is not operating properly.

Study the relevant information in Chapter 2.

How can I contact the Customer Support Center?

See "Chapter 5. Getting Help and Service" on page 57 of this Guide. For the phone numbers of the Customer Support Center nearest to you, See "Lenovo Warranty Service Telephone Numbers" on page 105.

Where can I find warranty information?

For the warranty applicable to your computer, including the warranty period and type of warranty service, see "Appendix A. Lenovo Limited Warranty" on page 94.



Chapter 4. Troubleshooting

■ Troubleshooting

If you do not find your problem here, see Chapter 2. The following section only outlines simpler solutions, which may 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.

❖ **Note:**

If you are using an external monitor, see “Computer Screen Problems” on page 51.

- If a user password is set, enter the correct password and press **Enter**.
- If the user password prompt does not appear, the brightness level might be set to minimum brightness. Adjust the brightness level by pressing **Fn + ↑**.
- If the screen still remains 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.)
- 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 touch pad.
- Press any key.
- Press the **Power** button.

Chapter 4. Troubleshooting

■ A Password Problem

I forgot my password.

- If you forgot your user password, you may clear it by removing the supervisor password. See “Changing or Removing the Supervisor Password” on page 26.
- If you forget your HDD password, 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, 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.

The numeric lock function is on. To disable it, press **Fn + Insert/NmLK**.

All or some of the keys on the external numeric keypad do not work.

Make sure that the external numeric keypad is correctly connected to the computer.

Chapter 4. Troubleshooting

■ Sleep or Hibernation Problems

The computer enters sleep mode unexpectedly.

If the processor overheats, the computer automatically enters sleep mode to allow the computer to cool and to protect the processor and other internal components. Check the settings for sleep mode.

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 "Specifications" on page 108.

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

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 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.

Chapter 4. Troubleshooting

- If the sleep indicator is on, your computer is in sleep mode. Connect the AC adapter to the computer, then press any key or the **power** button.
- If the sleep indicator is off, your computer is in sleep/hibernation mode or power-off state. Connect the AC adapter to the computer; then press the **power** button to resume operation.

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 (is blue), press **Fn + ↑** to make the screen brighter.
- If the Power indicator is in blinking blue, press any key or the Power button to resume from the sleep mode.
- If you still have the problem, do the Solution in the following problem "The screen is unreadable or distorted."

Chapter 4. Troubleshooting

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.

To check these settings, do as follows:

- ➊ Right-click on the desktop, and select **Personalize** from the pull down menu.
- ➋ Click **Display Settings** and check whether the screen resolution and color quality are correctly set.
- ➌ Click the **Advanced Settings** button.
- ➍ Click the **Adapter** tab.
- ➎ Make sure that the correct device driver name is shown in the adapter information window.

❖ **Note:**

The device driver name depends on the video chip that has been installed on your computer.

- ➏ Click the **Properties** button. If you are prompted for an administrator password or confirmation, enter the password or provide confirmation. Check the "Device status" box and make sure the device is working properly. If not, click the **Troubleshoot** button.
- ➐ Click the **Monitor** tab.
- ➑ Make sure the information is correct.
- ➒ Click the **Properties** button or the **Troubleshoot** button.

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.

Missing, discolored, or bright dots appear on the screen every time you turn on your computer.

This is an intrinsic characteristic of the TFT technology. Your computer's display contains multiple thin-film transistors (TFTs). A small number of missing, discolored, or bright dots on the screen might exist all the time.

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

-or-

You get poor or no playback while running video playback, DVD playback, 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 size of 1920×1200 or larger, reduce the desktop size and the color depth.

Chapter 4. Troubleshooting

■ 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 is selected as a playback device.

■ Battery Problems

The battery cannot be fully charged by the power-off method in the standard charge time for your computer.

For details, See "Checking Battery Status" in Chapter 2.

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.

Chapter 4. Troubleshooting

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 priority order 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 *OneKey Rescue System User Guide*.

■ **Other Problems**

Your computer does not respond.

- 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.



Chapter 4. Troubleshooting

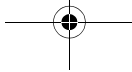
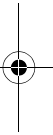
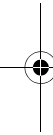


- Your computer might lock when it enters sleep mode during a communication operation. Disable the sleep timer when you are working on the network.

The computer does not start from a device you want.

See the Boot menu of the BIOS Setup Utility. Make sure that the startup sequence 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 priority order" list.



Chapter 5. Getting Help and Service

■ Getting Help and Service

If you need help, service, technical assistance, or just want more information about Lenovo computers, you will find a wide variety of sources available from Lenovo to assist you. This section contains information about where to go for additional information about Lenovo computers, what to do if you experience a problem with your computer, and whom to call for service should it be necessary.

Microsoft Service Packs are the latest software source for Windows product updates. They are available by means of a Web download (connection charges may apply) or from a disc. For more specific information and links, go to the Microsoft Web site at <http://www.microsoft.com>. Lenovo offers Up and Running technical assistance with installation of, or questions related to, Service Packs for your Lenovo-preinstalled Microsoft Windows product.

Chapter 5. Getting Help and Service

■ ■ Getting Help on the Web

The Lenovo Web site on the World Wide Web has up-to-date information about Lenovo computers and support. The address for the Lenovo home page is <http://consumersupport.lenovo.com>.

You can find support information for your Lenovo computer at <http://consumersupport.lenovo.com>. Research this Web site to learn how to solve problems, find new ways to use your computer, and learn about options that can make working with your Lenovo computer even easier.

■ ■ Calling the Customer Support Center

If you have tried to correct the problem yourself and still need help, during the warranty period, you can get help and information by telephone through the Customer Support Center. The following services are available during the warranty period:

- Problem Determination - Trained personnel are available to assist you with determining if you have a hardware problem and deciding what action is necessary to fix the problem.
- Lenovo hardware repair - If the problem is determined to be caused by Lenovo hardware under warranty, trained service personnel are available to provide the applicable level of service.

Chapter 5. Getting Help and Service

- Engineering change management - Occasionally, there might be changes that are required after a product has been sold. Lenovo or your reseller, if authorized by Lenovo, will make selected Engineering Changes (ECs) available that apply to your hardware.

The following items are not covered:

- Replacement or use of parts not manufactured for or by Lenovo or non warranted parts
- Identification of software problem sources
- Configuration of BIOS as part of an installation or upgrade
- Changes, modifications, or upgrades to device drivers
- Installation and maintenance of network operating systems (NOS)
- Installation and maintenance of application programs

To determine if your Lenovo hardware product is under warranty and when the warranty expires, go to <http://consumersupport.lenovo.com>, and click **Warranty**, and follow the instructions on the screen.

Refer to your Lenovo hardware warranty for a full explanation of Lenovo warranty terms. Be sure to retain your proof of purchase to obtain warranty service.

If possible, be near your computer when you make your call in case the technical assistance representative can help you resolve a problem immediately. Please ensure that you have downloaded the most current drivers and system updates, and recorded information before you call. When calling for technical assistance, please have the following information available:

- Machine type and model
- Serial numbers of your computer, monitor, and other components, or your proof of purchase
- Description of the problem
- Hardware and software configuration information for your system

Telephone numbers for your Customer Support Center location can be found in "Appendix A. Lenovo Limited Warranty" on page 94.

❖ **Note:**

Telephone numbers are subject to change without notice. For the latest list of Customer Support Center telephone numbers and hours of operation, visit the Support Web site at <http://consumersupport.lenovo.com>. If the number for your country or region is not listed, contact your Lenovo reseller or Lenovo marketing representative.

Chapter 5. Getting Help and Service

■ ■ Getting Help Around the World

If you travel with your computer or relocate it to a country where your Lenovo machine type is sold, your computer might be eligible for International Warranty Service, which automatically entitles you to obtain warranty service throughout the warranty period. Service will be performed by service providers authorized to perform warranty service.

Service methods and procedures vary by country, and some services might not be available in all countries. Service centers in certain countries might not be able to service all models of a particular machine type. In some countries, fees and restrictions might apply at the time of service.

To determine whether your computer is eligible for International Warranty Service and to view a list of the countries where service is available, go to <http://consumersupport.lenovo.com>, click Warranty, and follow the instructions on the screen.

Chapter 6. Safety, Use, and Care Information

■ Important Safety Information

This information can help you safely use your notebook personal computer. Follow and retain all information included with your computer. The information in this document does not alter the terms of your purchase agreement or the Lenovo™ Limited Warranty. For more information, See “Appendix A. Lenovo Limited Warranty” on page 94.

Customer safety is important. Our products are developed to be safe and effective. However, personal computers are electronic devices. Power cords, power adapters, and other features can create potential safety risks that can result in physical injury or property damage, especially if misused. To reduce these risks, follow the instructions included with your product, observe all warnings on the product and in the operating instructions, and review the information included in this document carefully. By carefully following the information contained in this document and provided with your product, you can help protect yourself from hazards and create a safer computer work environment.

❖ **Note:**

This information includes references to power adapters and batteries. In addition to notebook computers, some products (such as speakers and monitors) ship with external power adapters. If you have such a product, this information applies to your product. In addition, computer products contain a coin-sized internal battery that provides power to the system clock even when the computer is unplugged, so the battery safety information applies to all computer products.

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