

Getting Started



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User Guides

HP is committed to reducing the environmental impact of our products. As part of this effort, we provide user guides and learning centers on your computer hard drive in Help and Support. Additional support and updates to the user guides are available on the Web.

Windows Users



Looking for more user guides? They are on your computer. Click: **Start > Help and Support > User Guides**

Linux Users



Looking for more user guides? You can find them on the *User Guides* disc that came with your computer.

Subscription Services for Business Notebook



E-mail Alert

Keep this product up to date with the latest drivers, patches, and notifications. Sign up now at www.hp.com/go/alerts to receive e-mail alert notifications.

End User License Agreement (EULA)

BY INSTALLING, COPYING, DOWNLOADING, OR OTHERWISE USING ANY SOFTWARE PRODUCT PRE-INSTALLED ON THIS PC, YOU AGREE TO BE BOUND BY THE TERMS OF THE HP EULA. IF YOU DO NOT ACCEPT THESE LICENSE TERMS, YOUR SOLE REMEDY IS TO RETURN THE ENTIRE UNUSED PRODUCT (HARDWARE AND SOFTWARE) WITHIN 14 DAYS FOR A REFUND SUBJECT TO THE REFUND POLICY OF YOUR PLACE OF PURCHASE. For any further information or for requesting a full refund of the PC, please contact your local point of sale (the seller).

Contacting Customer Support

If the information provided in your User Guide or Learning Center does not address your questions, you can contact HP Customer Support at:

www.hp.com/go/contactHP

Here you can:

- Chat online with an HP technician.



When technical support chat is not available in a particular language, it is available in English.

- E-mail HP Customer Support.
- Find HP Customer Support worldwide telephone numbers.
- Locate an HP service center.

Serial Number Label Information

The serial number label, located on the bottom of the computer, provides important information that you may need when contacting technical support.



①	Product name	④	Warranty period
②	Serial number	⑤	Model description (select models)
③	Product number		

Warranty Information

You may find the expressly provided HP Limited Warranty applicable to your product in the start menu on your PC and/or in the CD/DVD provided in the box. Some countries/regions may provide a printed HP Limited Warranty in the box. In countries/regions where the warranty is not provided in printed format, you may request a printed copy from www.hp.com/go/orderdocuments or write to:

North America:

Hewlett Packard, MS POD, 11311 Chinden Blvd, Boise, ID 83714, USA

Europe, Middle East, Africa:

Hewlett-Packard, POD, Via G. Di Vittorio, 9, 20063, Cernusco s/Naviglio (MI), Italy


Asia Pacific:

Hewlett-Packard, POD, P.O. Box 200, Alexandra Post Office, Singapore 911507

Please include your product number, warranty period (found on your serial number label), name and postal address.


Basic Setup

1 Unpack the box

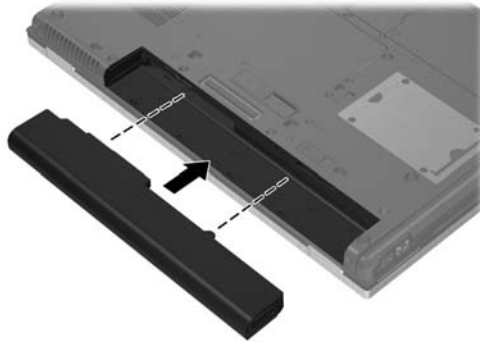
 Computer color, features, and options may vary by computer model. The illustrations in this guide may look slightly different from your computer.



Component	Component
❶ AC adapter	❸ Battery
❷ Computer	❹ Power cord

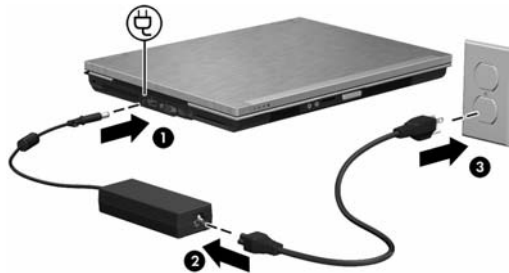
 Batteries and power cords vary in appearance by country or region.

2 Insert the battery



WARNING: To reduce potential safety issues, use only the AC adapter or battery provided with the computer, a replacement AC adapter or battery provided by HP, or a compatible AC adapter or battery purchased as an accessory from HP.

3 Connect the computer to external power



WARNING: To reduce the risk of electric shock or damage to your equipment, observe these practices:

- Plug the power cord into an AC outlet that is easily accessible at all times.
 - Disconnect power from the computer by unplugging the power cord from the AC outlet (not by unplugging the power cord from the computer).
 - If provided with a 3-pin attachment plug on your power cord, plug the cord into a grounded (earthed) 3-pin outlet. Do not disable the power cord grounding pin, for example, by attaching a 2-pin adapter. The grounding pin is an important safety feature.
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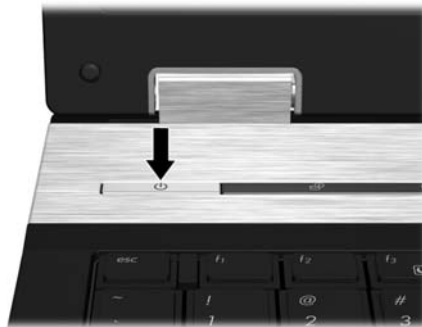
Leave the computer connected to external power until the battery is fully charged and the battery light turns off.

- ✎ A partially charged new battery can run the computer after software setup is complete, but battery charge displays will not be accurate until the new battery has been fully charged. The battery light (on the front of the computer) remains amber when the battery is charging and turns turquoise when the battery is close to full charge.
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4 Open the computer



5 Turn on the computer



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- ✎ If the computer does not start up, be sure that the power cord and AC adapter connections are secure.
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6 Set up the software

After the computer is turned on, the software setup process begins. The on-screen instructions guide you through setting up and registering your computer. After you respond to the setup prompt, you must complete the entire setup process without interruption.




Select your language carefully. On some models, the languages you do not choose are deleted from the system and cannot be restored during software setup.

What's Next?

Locating the electronic manuals


For detailed information about your computer, such as power management, drives, memory, security, and other features, click **Start**, click **Help and Support**, and then click **User Guides**. You do not need to connect to the Internet to access the user guides in Help and Support.



 A *User Guides* disc may have also been included with your computer.

Finding more information

In Help and Support, you can find information about the operating system, drivers, troubleshooting tools, and technical support. To access Help and Support, click **Start**, and then click **Help and Support**. For country- or region-specific support, go to <http://www.hp.com/support>, select your country or region, and follow the on-screen instructions.

 **WARNING:** To reduce the risk of serious injury, read the *Safety & Comfort Guide*. It describes proper workstation setup and proper posture, health, and work habits for computer users. The *Safety & Comfort Guide* also provides important electrical and mechanical safety information. To access this document, click **Start**, click **Help and Support**, and then click **User Guides**, or refer to the *User Guides* disc included with some models. The *Safety & Comfort Guide* is also available on the Web at <http://www.hp.com/ergo>.

For more safety and regulatory information, and for battery disposal information, refer to the *Regulatory, Safety and Environmental Notices*. To access the notices, click **Start**, click **Help and Support**, and then click **User Guides**, or refer to the *User Guides* disc included with some models.

Backing up and recovering

To protect your information, use the Backup and Restore Center to back up individual files and folders, back up your entire hard drive (select models only), or create system restore points. In case of system failure, you can use the backup files to restore the contents of your computer.

The Backup and Restore Center provides the following advanced backup and recovery options:

- Backing up individual files and folders
- Backing up the entire hard drive (select models only)
- Scheduling automatic backups (select models only)
- Creating system restore points
- Recovering individual files
- Restoring the computer to a previous state
- Recovering information using recovery tools




For instructions on these procedures, go to Help and Support.



Backing up

Recovery after a system failure is as complete as your most current backup. You should create your initial backup immediately after software setup. As you add new software and data files, you should continue to back up your system on a regular basis to maintain a reasonably current backup.

Note the following when backing up:


- Store personal files in the Documents folder, and back it up regularly.
- Back up templates that are stored in their associated programs.
- Save customized settings that appear in a window, toolbar, or menu bar by taking a screen shot of your settings. The screen shot can be a time-saver if you have to reset your preferences.
- When backing up to discs, use any of the following types of discs (purchased separately): CD-R, CD-RW, DVD+R, DVD+R DL, DVD-R, DVD-R DL, or DVD±RW. The discs you use will depend on the type of optional external optical drive you use.
 -  DVDs and DVDs with double-layer (DL) support store more information than CDs, so using them for backup reduces the number of repair discs required.
- When backing up to discs, number each disc before inserting it into the optional external optical drive.


To create a backup using Backup and Restore Center, follow these steps:


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-  Be sure that the computer is connected to AC power before you start the backup process.
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-  The backup process may take over an hour, depending on file size and the speed of the computer.
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1. Click **Start**, click **All Programs**, click **Maintenance**, and then click **Backup and Restore Center**.
 2. Follow the on-screen instructions to back up your entire computer (select models only) or your files.


Recovering

In case of system failure or instability, use the **f11** recovery tool to recover your original hard drive image. The image includes the Windows® operating system and software programs installed at the factory.

 **CAUTION:** Using **f11** completely erases hard drive contents and reformats the hard drive. All files you have created and any software installed on the computer are permanently removed. The **f11** recovery tool reinstalls the operating system and HP programs and drivers that were installed at the factory. Software not installed at the factory must be reinstalled. Personal files must be restored from a backup.

1. If possible, back up all personal files.
2. If possible, check for the presence of the HP Recovery partition. To find the partition, click **Start**, and then click **Computer**.
 -  If the HP Recovery partition is not listed, you must recover your operating system and programs using the Windows Vista operating system DVD and the *Driver Recovery* disc (both purchased separately). For additional information, contact customer support. Refer to the “Contacting Customer Support” section in the back of this guide.
3. If the HP Recovery partition is listed, restart the computer, and then press **esc** while the “Press the ESC key for Startup Menu” message is displayed at the bottom of the screen.
4. Press **f11** while the “Press <F11> for recovery” message is displayed on the screen.
5. Follow the on-screen instructions.

-  Windows Vista® provides additional recovery tools through the operating system. For additional information, go to Help and Support.

-  If you are unable to boot (start up) your computer, you must purchase a Windows Vista operating system DVD to reboot the computer and repair the operating system. For additional information, contact customer support. Refer to the “Contacting Customer Support” section in the back of this guide.

Updating software

Updated versions of the software provided with your computer are available either through the HP Software Update utility or on the HP Web site.

The Software Update utility automatically checks for software updates from HP. The utility runs at a specified interval and provides a list of support alerts, such as security enhancements, and optional software and driver updates.

You can manually check for updates at any time. Click **Start**, click **Help and Support**, and then click **Software, Drivers, and BIOS updates**. Follow the on-screen instructions.


Most software on the HP Web site is packaged in compressed files called *SoftPaqs*. Some BIOS updates may be packaged in compressed files called *ROMPaqs*.

Some download packages contain a file named *Readme.txt*, which contains information about installing and troubleshooting the file. (*Readme.txt* files included with *ROMPaqs* are provided in English only.)

To update the software using the HP Web site, follow these steps:

1. Identify your computer model, product category, and series or family. Prepare for a system BIOS update by identifying the BIOS version currently installed on the computer. For details, refer to “Determining the BIOS version,” later in this chapter.

If you connect your computer to a network, consult the network administrator before installing any software updates, especially system BIOS updates.

 The computer system BIOS is stored on the system ROM. The BIOS initializes the operating system, determines how the computer will interact with the hardware devices, and provides for data transfer among hardware devices, including the time and date.

2. Open your Web browser, and go to <http://www.hp.com/support>.
3. Select your country or region.
4. Click the option for software and driver downloads, and then type your computer model number in the product box.
5. Press **enter**.
6. Follow the on-screen instructions.

Updating the BIOS

To update the BIOS, first determine what BIOS version you currently have, and then download and install the new BIOS.


Determining the BIOS version


BIOS version information (also known as *ROM date* and *System BIOS*) can be displayed in Computer Setup.

1. Turn on or restart the computer, and then press **esc** while the “Press the ESC key for Startup Menu” message is displayed at the bottom of the screen.
2. Press **f10** to enter BIOS Setup.
3. Use the arrow keys to select **File**, and then select **System Information**.

4. Press **esc** to return to the **File** menu.
5. Using the arrow keys, select **Ignore Changes and Exit**, and then press **enter**.
6. Follow the instructions on the screen.


Downloading a BIOS update

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-  **CAUTION:** To prevent damage to the computer or an unsuccessful installation, download and install a BIOS update only when the computer is connected to reliable external power using the AC adapter. Do not download or install a BIOS update while the computer is running on battery power, docked in an optional docking device, or connected to an optional power source. During the download and installation, follow these instructions:
- Do not disconnect power from the computer by unplugging the power cord from the AC outlet.
 - Do not shut down the computer or initiate Sleep or Hibernation.
 - Do not insert, remove, connect, or disconnect any device, cable, or cord.
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-  HP posts BIOS updates only as needed. A newer BIOS update may not be available for your computer. It is recommended that you check the HP Web site periodically for BIOS updates.
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To download a BIOS update:

1. Open your Web browser, go to <http://www.hp.com/support>, and then select your country or region.
2. Click the option for software and driver downloads, type your computer model number in the product box, and then press **enter**.
3. Click your specific product from the models listed.
4. Click your operating system.
5. Follow the on-screen instructions to access the BIOS update you want to download. Make a note of the download date, name, or other identifier. You may need this information to locate the update later, after it has been downloaded to your hard drive.
6. At the download area, perform these steps:
 - a. Identify the BIOS update that is newer than the BIOS version currently installed on your computer, as described in the “Determining the BIOS version” section.
 - b. Follow the instructions on the screen to download your selection to the hard drive. Make a note of the path to the location on your hard drive where the BIOS update will be downloaded. You will need to access this path when you are ready to install the update.

-  If you connect your computer to a network, consult the network administrator before installing any software updates, especially system BIOS updates.
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BIOS installation procedures vary. Follow any instructions that are displayed on the screen after the download is complete. If no instructions are displayed, follow these steps:

1. Click **Start**, and then click **Computer**.
2. Double-click your hard drive designation. The hard drive designation is typically Local Disk (C:).
3. Using the hard drive path you recorded earlier, open the folder on your hard drive that contains the update.
4. Double-click the file that has an .exe extension (for example, *filename.exe*).
The BIOS installation begins.
5. Complete the installation by following the instructions on the screen.



After a message on the screen reports a successful installation, you may delete the downloaded file from your hard drive.

Updating programs and drivers

1. Open your Web browser, go to <http://www.hp.com/support>, and select your country or region.
2. Click the option for software and driver downloads, type your computer model number in the product box, and then press **enter**.
3. Click your specific product in the models listed.
4. Click your operating system.
5. When the list of updates is displayed, click an update to open a window containing additional information.
6. Click **Download**.
7. Click **Run** to install the updated driver without downloading the file.
– or –
Click **Save** to save the file to your computer. When prompted, select a storage location on your hard drive.
After the file is downloaded, navigate to the folder where the file was stored, and double-click the file to install the update.
8. If prompted to do so, restart your computer after the installation is complete.

Turning off the computer

1. Save your work and close all programs.
2. Click **Start**, click the arrow next to the Lock button, and then click **Shut Down**.

Product Information and Troubleshooting


Input power

The power information in this section may be helpful if you plan to travel internationally with the computer.

The computer operates on DC power, which can be supplied by an AC or a DC power source. Although the computer can be powered from a standalone DC power source, it should be powered only with an AC adapter or a DC power source supplied and approved by HP for use with this computer.

The computer can operate on DC power within the following specifications.

Input power	Rating
Operating voltage	19.5 V dc
Operating current	10.3 A or 11.8 A

 This product is designed for IT power systems in Norway with phase-to-phase voltage not exceeding 240 V rms.

Operating environment

The operating environment information in the following table may be helpful if you plan to use or transport the computer in extreme environments.


Factor	Metric	U.S.
Temperature		
Operating (not writing to optical disc)	0°C to 35°C	32°F to 95°F
Operating (writing to optical disc)	5°C to 35°C	41°F to 95°F
Nonoperating	-20°C to 60°C	-4°F to 140°F
Relative humidity (noncondensing)		
Operating	10% to 90%	10% to 90%
Nonoperating	5% to 95%	5% to 95%
Maximum altitude (unpressurized)		
Operating	-15 m to 3,048 m	-50 ft to 10,000 ft
Nonoperating	-15 m to 12,192 m	-50 ft to 40,000 ft

Traveling with the computer


The computer is built to go with you for work and play. For best results, follow these traveling and shipping tips:

- Prepare the computer for traveling or shipping:
 1. Back up your information.
 2. Remove all external media cards, such as digital cards.
 - △ To reduce the risk of damage to the computer, damage to a drive, or loss of information, remove the media from a drive before removing the drive from a drive bay, and before shipping, storing, or traveling with a drive.
 3. Turn off and then disconnect all external devices.
 4. Shut down the computer.
- Take along a backup of your information. Keep the backup separate from the computer.
- When traveling by air, carry the computer as hand luggage, and do not check it in with the rest of your bags.
 - △ Avoid exposing a drive to magnetic fields. Security devices with magnetic fields include airport walk-through devices and security wands. The airport security devices that check carry-on luggage, such as conveyor belts, use X-rays instead of magnetism and will not damage a drive.
- In-flight computer use is at the discretion of the airline. If you plan to use the computer during a flight, check with the airline in advance.
- If the computer will be unused and disconnected from external power for more than 2 weeks, remove the battery and store it separately.
- If you are shipping the computer or a drive, use suitable protective packaging and label the package “FRAGILE.”
- If the computer has a wireless device or a cell phone device installed, such as an 802.11b/g device, a Global System for Mobile Communications (GSM) device, or a General Packet Radio Service (GPRS) device, the use of these devices may be restricted in some environments. Such restrictions may apply onboard aircraft, in hospitals, near explosives, and in hazardous locations. If you are uncertain of the policy that applies to the use of a particular device, ask for authorization to use it before you turn it on.
- If you are traveling internationally, follow these suggestions:
 - Check the computer-related customs regulations for each country or region on your itinerary.
 - Check the power cord and adapter requirements for each location in which you plan to use the computer. Voltage, frequency, and plug configurations vary.
 - ⚠ To reduce the risk of electric shock, fire, or damage to the equipment, do not attempt to power the computer with a voltage converter kit sold for appliances.

Routine care


 **CAUTION:** To prevent dust or lint from blocking airflow through the vents, periodically inspect them. Use a soft brush or cloth to remove any dust or lint.

Cleaning the display

 **CAUTION:** To prevent permanent damage to the computer, never spray water, cleaning fluids, or chemicals on the display.

To remove smudges and lint, frequently clean the display with a soft, damp, lint-free cloth. If the screen requires additional cleaning, use premoistened antistatic wipes or an antistatic screen cleaner.

Cleaning the keyboard


 **WARNING:** To reduce the risk of electric shock or damage to internal components, do not use a vacuum cleaner attachment to clean the keyboard. A vacuum cleaner can deposit household debris on the keyboard surface.

Clean the keyboard regularly to prevent keys from sticking and to remove dust, lint, and particles that can become trapped beneath the keys. A can of compressed air with a straw extension can be used to blow air around and under the keys to loosen and remove debris.

Troubleshooting resources

If you experience computer problems, perform these troubleshooting steps in the order provided until the problem is resolved:

1. Refer to “Quick troubleshooting,” the next section in this chapter.
2. Access Web site links and additional information about the computer through Help and Support. Click **Start**, and then click **Help and Support**.


 Although many checkup and repair tools require an Internet connection, other tools, like Help and Support, can help you fix a problem when the computer is offline.

Quick troubleshooting

The computer is unable to start up

If the computer does not turn on when you press the power button, adequate power may not be available to the computer.

The following suggestions may help you determine why the computer will not start up:

- If the computer is plugged into an AC outlet, unplug the computer and then plug another electrical device into the outlet to be sure that the outlet is providing adequate power.
 -  Use only the AC adapter provided with the computer or one approved by HP for this computer.
- If the computer is running on battery power or is plugged into an external power source other than an AC outlet, plug the computer into an AC outlet using the AC adapter. Be sure that the power cord and AC adapter connections are secure.

The computer screen is blank

If the screen is blank but the computer is on and the power lights are on, the computer may not be set to display the image on the computer screen. To transfer the image to the computer screen, press **fn+f4**.

Software is functioning abnormally

Follow these suggestions if the software becomes unresponsive or responds abnormally:

- Restart the computer. Click **Start**, click the arrow next to the Lock button, and then click **Restart**.

If you cannot restart the computer using this procedure, refer to the next section, “The computer is on but is not responding.”
- If you have antivirus software installed on your computer, run the virus scan. Refer to the antivirus software Help for more details.

The computer is on but is not responding

If the computer is on but is not responding to software or keyboard commands, try the following emergency shutdown procedures in the sequence provided, until shutdown occurs:




CAUTION: Emergency shutdown procedures will result in the loss of unsaved information.


- Press and hold the power button on the computer for at least 5 seconds.
- Disconnect the computer from external power and remove the battery.

The computer is unusually warm

It is normal for the computer to feel warm to the touch while it is in use. But if the computer feels *unusually* warm, it may be overheating because a vent is blocked.

If you suspect that the computer is overheating, turn off the computer to allow it to cool to room temperature. Then be sure to keep all vents free from obstructions while you are using the computer.

 **WARNING:** To reduce the possibility of heat-related injuries or of overheating the computer, do not place the computer directly on your lap or obstruct the computer air vents. Use the computer only on a hard, flat surface. Do not allow another hard surface, such as an adjoining optional printer, or a soft surface, such as pillows or rugs or clothing, to block airflow. Also, do not allow the AC adapter to contact the skin or a soft surface, such as pillows or rugs or clothing, during operation. The computer and the AC adapter comply with the user-accessible surface temperature limits defined by the International Standard for Safety of Information Technology Equipment (IEC 60950).

 The fan in the computer starts up automatically to cool internal components and prevent overheating. It is normal for the internal fan to cycle on and off during routine operation.

An external device is not working


Follow these suggestions if an external device does not function as expected:

- Turn on the device according to the manufacturer's instructions.
- Be sure that all device connections are secure.
- Be sure that the device is receiving electrical power.
- Be sure that the device, especially if it is older, is compatible with the operating system.
- Be sure that the correct drivers are installed and updated.

The wireless network connection is not working

If a wireless network connection is not working as expected, follow these suggestions:

- Be sure that the wireless lights on the computer are blue.
- Be sure that the computer wireless antennas are free from obstructions.
- Be sure that the DSL or the cable modem and its power cord are properly connected and that the power lights are on.
- If applicable, be sure that the wireless router (access point) is on and properly connected to the DSL or the cable modem.
- Disconnect and then reconnect all cables, and turn the power off and then back on.

 For more information on wireless technology, refer to the relevant help topics and Web site links in Help and Support.
