Drives

User Guide

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Product notice

This user guide describes features that are common to most models. Some features may not be available on your computer.

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1 Identifying installed drives

To view the drives installed on the computer, select **Start > Computer**.

2 Handling drives

Drives are fragile computer components that must be handled with care. Refer to the following cautions before handling drives. Additional cautions are included with the procedures to which they apply.

CAUTION: To reduce the risk of damage to the computer, damage to a drive, or loss of information, observe these precautions:

Before you move a computer or external hard drive from one location, initiate Sleep, and allow the screen to clear.

Before handling a drive, discharge static electricity by touching the unpainted metal surface of the drive.

Do not touch the connector pins on a removable drive or on the computer.

Handle a drive carefully; do not drop a drive or place items on it.

Before removing or inserting a drive, shut down the computer. If you are unsure whether the computer is off or in Hibernation, turn the computer on and then shut it down through the operating system.

Do not use excessive force when inserting a drive into a drive bay.

Do not type on the keyboard or move the computer while the optical drive is writing to a disc. The write process is sensitive to vibration.

When the battery is the only source of power, be sure that the battery is sufficiently charged before writing to media.

Avoid exposing a drive to temperature or humidity extremes.

Avoid exposing a drive to liquids. Do not spray the drive with cleaning products.

Remove media from a drive before removing the drive from the drive bay, or traveling with, shipping, or storing a drive.

If a drive must be mailed, place the drive in a bubble-pack mailer or other suitable protective packaging and label the package “FRAGILE.”

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.

3 Improving hard drive performance

Using Disk Defragmenter

As you use the computer, files on the hard drive become fragmented. Disk Defragmenter consolidates the fragmented files and folders on the hard drive so that the system can run more efficiently.

To run Disk Defragmenter:

1. Select **Start > All Programs > Accessories > System Tools > Disk Defragmenter**.
2. Click **Defragment now**.

For additional information, access the Disk Defragmenter online Help.

Using Disk Cleanup

Disk Cleanup searches the hard drive for unnecessary files that you can safely delete to free up disk space and help the computer to run more efficiently.

To run Disk Cleanup:

1. Select **Start > All Programs > Accessories > System Tools > Disk Cleanup**.
2. Follow the on-screen instructions.

4 HP 3D DriveGuard (select models only)

Under either of the following conditions, HP 3D DriveGuard protects the hard drive by parking the drive and halting I/O requests:

- You drop the computer.
- You move the computer with the display closed while the computer is running on battery power.

A short time after the end of one of these events, HP 3D DriveGuard returns the hard drive to normal operation.

NOTE: Internal hard drives and optional MultiBay II hard drives (select models only) are protected by HP 3D DriveGuard. Hard drives that are in an optional docking device or connected to a USB port are not protected.

For more information, refer to the HP 3D DriveGuard online Help.

HP 3D DriveGuard status

The drive light on the computer changes to an amber color to show that the drive is parked. To determine whether drives are currently protected or whether a drive is parked, use Mobility Center:

- If the software is enabled, a green check mark is superimposed over the hard drive icon.
- If the software is disabled, a red X is superimposed over the hard drive icon.
- If the drives are parked, a yellow moon is superimposed over the hard drive icon.

NOTE: The icon in the Mobility Center may not show the most up-to-date status on the drive. For immediate updates after a change in status, you need to enable the notification area icon.

To enable the notification area icon:

1. Select **Start > Control Panel > HP 3D DriveGuard**.
2. Under **Icon in System Tray**, click **Visible**.
3. Click **Apply**.

If HP 3D DriveGuard has parked the drive, the computer will behave in the following ways:

- The computer will not shut down.
- The computer will not initiate Sleep or Hibernation, except as noted below.

NOTE: If the computer is running on battery power and reaches a critical battery level, HP 3D DriveGuard allows the computer to initiate Hibernation.

- The computer will not activate battery alarms set on the Alarms tab in Power Options properties.

Before you move the computer, HP recommends that you either shut it down or initiate Sleep or Hibernation.

HP 3D DriveGuard software

The HP 3D DriveGuard software enables you to perform the following tasks:

- Enable and disable HP 3D DriveGuard.

  NOTE: Depending on your user privileges, you may not be able to enable or disable HP 3D DriveGuard. Additionally, members of an Administrator group can change the privileges for non-Administrator users.

- Determine whether a drive in the system is supported.

To open the software and change settings, follow these steps:

1. In Mobility Center, click the hard drive icon to open the HP 3D DriveGuard window.

   – or –

   Select **Start > Control Panel > HP 3D DriveGuard**.

2. Click the appropriate button to change settings.
3. Click **OK**.

5 Replacing a hard drive

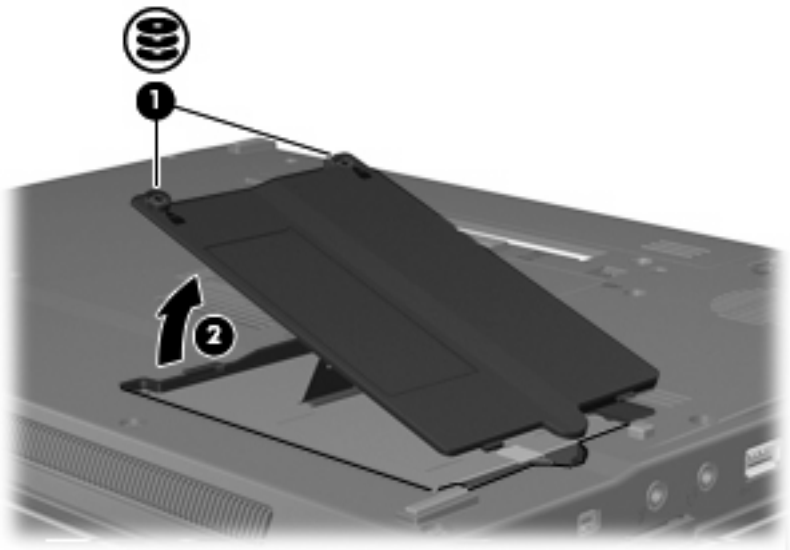
CAUTION: To prevent information loss or an unresponsive system:

Shut down the computer before removing the hard drive from the hard drive bay. Do not remove the hard drive while the computer is on, in the Sleep state, or in Hibernation.

If you are not sure whether the computer is off or in Hibernation, turn the computer on by pressing the power button. Then shut down the computer through the operating system.

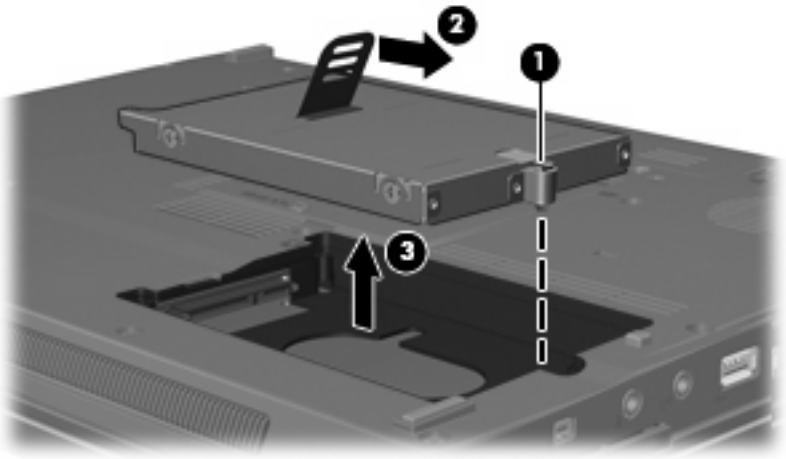
To remove a hard drive:

1. Save your work.
2. Shut down the computer and close the display.
3. Disconnect all external hardware devices connected to the computer.
4. Unplug the power cord from the AC outlet.
5. Turn the computer upside down on a flat surface, with the hard drive bay toward you.
6. Remove the battery from the computer.
7. Loosen the 2 hard drive cover screws **(1)**.
8. Lift the hard drive cover away from the computer **(2)**.



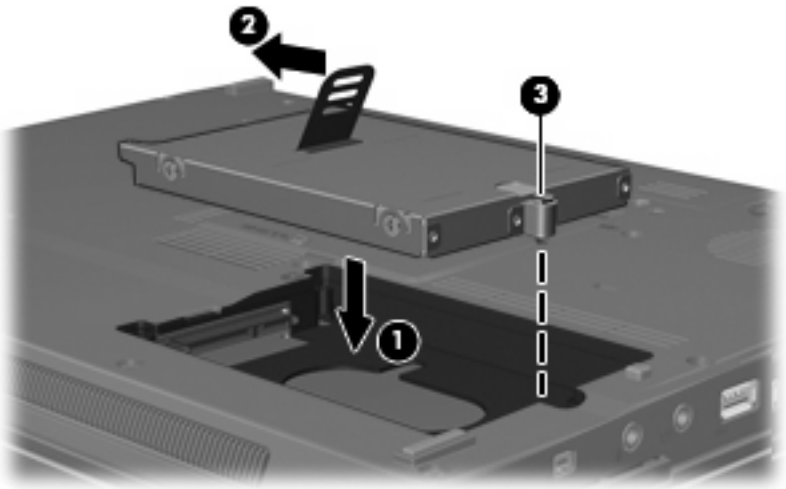
9. Loosen the hard drive screw **(1)**.

10. Pull the hard drive tab **(2)** to the right to disconnect the hard drive.
11. Lift the hard drive **(3)** out of the hard drive bay.



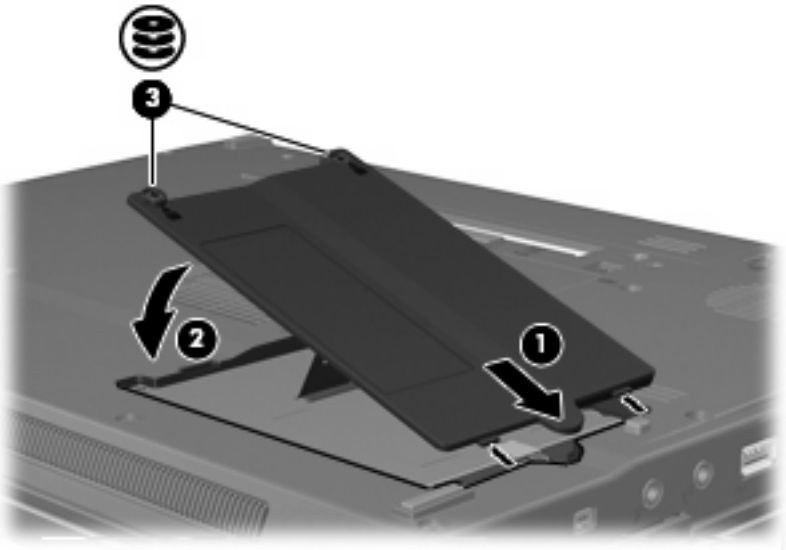
To install a hard drive:

1. Insert the hard drive into the hard drive bay **(1)**.
2. Pull the hard drive tab **(2)** to the left to connect the hard drive.
3. Tighten the hard drive screw **(3).**



4. Align the tabs **(1)** on the hard drive cover with the notches on the computer.
5. Replace the cover **(2)**.

6. Tighten the hard drive cover screws **(3)**.



6 Using an optical drive

An optical drive, such as a DVD-ROM drive, supports optical discs (CDs and DVDs). These discs store or transport information and play music and movies. DVDs have a higher storage capacity than CDs.

All optical drives can read from optical media and some drives can also write to optical media, as described in the following table.

Optical drive type	Read from CD and DVD-ROM media	Write to CD-RW media	Write to DVD ±RW/R media	Write to DVD +RW DL media	Write label to LightScribe CD or DVD ±RW/R	Write to DVD-RAM media
DVD-ROM Drive	Yes	No	No	No	No	No
DVD±RW/R and CD-RW Combo Drive	Yes	Yes	Yes	No	No	No
DVD±RW/R and CD-RW Combo Drive with Double-Layer support	Yes	Yes	Yes	Yes	No	Yes
LightScribe DVD±RW/R and CD-RW Combo Drive with Double-Layer support	Yes	Yes	Yes	Yes	Yes	Yes

NOTE: Some of the optical drives listed may not be supported by your computer. The listed drives are not necessarily all of the supported optical drives.

CAUTION: To prevent possible audio and video degradation, or loss of audio or video playback functionality, do not initiate Sleep or Hibernation while reading from or writing to a CD or DVD.

To prevent loss of information, do not initiate Sleep or Hibernation when writing to a CD or DVD.

If Sleep or Hibernation is initiated during playback of a disc, you may experience the following behaviors:

- Your playback may be interrupted.
- You may see a warning message asking if you want to continue. If this message is displayed, click **No**.
- You may need to restart the CD or DVD to resume audio and video playback.

Inserting an optical disc

1. Turn on the computer.
2. Press the release button **(1)** on the drive bezel to release the media tray.
3. Pull out the tray **(2)**.
4. Hold the disc by the edges to avoid touching the flat surfaces and position the disc label-side up over the tray spindle.

   NOTE: If the tray is not fully accessible, tilt the disc carefully to position it over the spindle.

5. Gently press the disc **(3)** down onto the tray spindle until the disc snaps into place.

6. Close the media tray.

NOTE: After you insert a disc, a short pause is normal. If you have not selected a media player, an AutoPlay dialog box opens. It prompts you to select how you want to use the media content.

Removing an optical disc when running on battery or external power

1. Press the release button **(1)** on the drive bezel to release the media tray, and then gently pull out the tray **(2)** until it stops.
2. Remove the disc **(3)** from the tray by gently pressing down on the spindle while lifting the outer edges of the disc. Hold the disc by the edges and avoid touching the flat surfaces.

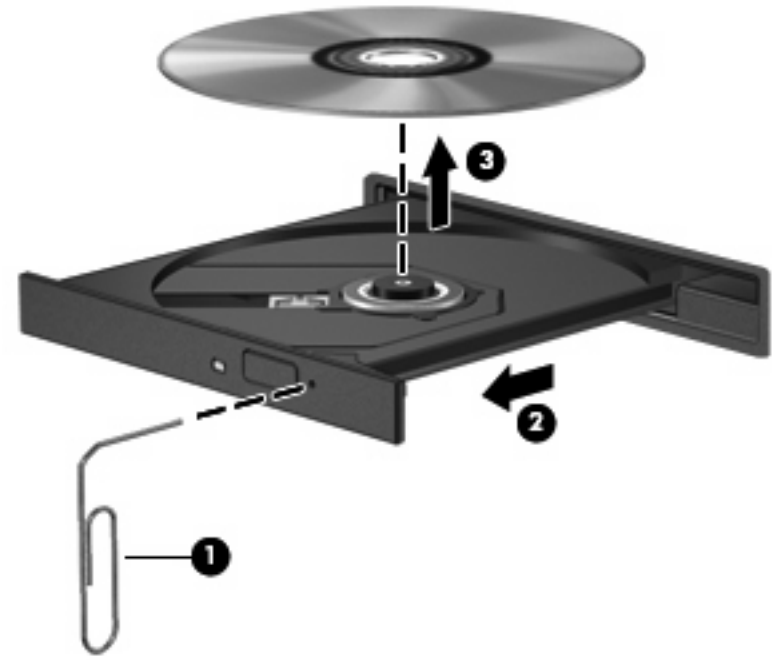
NOTE: If the tray is not fully accessible, tilt the disc carefully as you remove it.

3. Close the media tray and place the disc in a protective case.

Removing an optical disc when no computer power is available

1. Insert the end of a paper clip **(1)** into the release access in the front bezel of the drive.
2. Press in gently on the paper clip until the tray is released, and then pull out the tray **(2)** until it stops.
3. Remove the disc **(3)** from the tray by gently pressing down on the spindle while lifting the outer edges of the disc. Hold the disc by the edges and avoid touching the flat surfaces.

NOTE: If the tray is not fully accessible, tilt the disc carefully as you remove it.



4. Close the media tray and place the disc in a protective case.

7 Using external drives

Removable external drives enable you to store and access information.

A USB drive can be added by connecting the drive to a USB port on the computer or on an optional docking device (select models only).

An external MultiBay or MultiBay II supports any MultiBay or MultiBay II device, including the following:

- 1.44-megabyte diskette drive
- Hard drive module (a hard drive with an adapter attached)
- DVD-ROM Drive
- DVD/CD-RW Combo Drive
- DVD+RW/R and CD-RW Combo Drive
- DVD±RW/R and CD-RW Combo Drive

Optional external devices

NOTE: For information about required software, drivers, and which port on the computer to use, refer to the documentation included with the device.

To connect an external device to the computer:

NOTE: If you are connecting a powered device, be sure to turn off the device and unplug the AC power cord.

1. Connect the device to the computer.
2. If you are connecting a powered device, plug the device power cord into a grounded AC outlet.
3. Turn on the device.

To disconnect an unpowered external device, turn off the device, and then disconnect it from the computer. To disconnect a powered external device, turn off the device, disconnect it from the computer, and then unplug the AC power cord.

Optional External MultiBay and External MultiBay II

An external MultiBay or MultiBay II connects to a USB port on the computer and enables you to use MultiBay and MultiBay II devices.

For more information about the external MultiBay, refer to the documentation that is included with the device.

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