Drives

User Guide

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1 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 to another, 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.

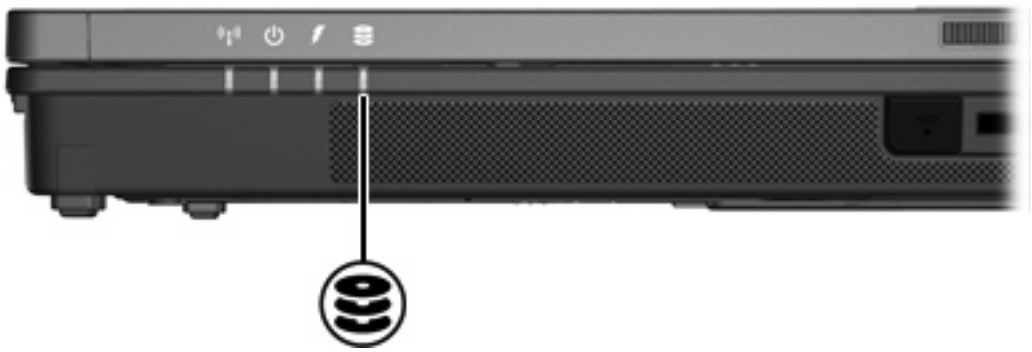
Remove media from a drive before removing the drive from the drive bay, or traveling with, shipping, or storing a drive.

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.

2 Drive light

The drive light blinks when either the primary hard drive or an optical drive is being accessed. The drive light changes to amber when the computer is dropped or moved while on battery power. The amber color indicates that the hard drive has been temporarily parked by HP Mobile Data Protection 3D.



3 Hard drives

HP Mobile Data Protection 3D with digital accelerometer

HP Mobile Data Protection 3D with digital accelerometer protects the hard drive by parking the drive and halting I/O requests when you

- Drop the computer.
- 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 Mobile Data Protection 3D returns the hard drive to normal operation.

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

For more information, refer to the HP Mobile Data Protection 3D online Help.

HP Mobile Data Protection 3D status

The drive light on the computer changes to an amber color to show that the drive is parked. You can use Mobility Center to check whether drives are currently protected and whether a drive is parked:

- 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.

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

- It will not shut down.
- It 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 Mobile Data Protection 3D allows the computer to initiate Hibernation.

- It 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 completely or initiate Sleep or Hibernation.

HP Mobile Data Protection 3D software

The HP Mobile Data Protection 3D software enables you to perform the following tasks:

- Enable and disable HP Mobile Data Protection 3D.

NOTE Depending on your user privileges, you may not be able to enable or disable HP Mobile Data Protection 3D.

- Determine whether a drive in the system is supported.

To open the software and change settings:

1. In Mobility Center, click the hard drive icon to open the HP Mobility Data Protection System window.
2. Click the appropriate button to change settings.
3. Click **OK**.

Replacing the hard drive

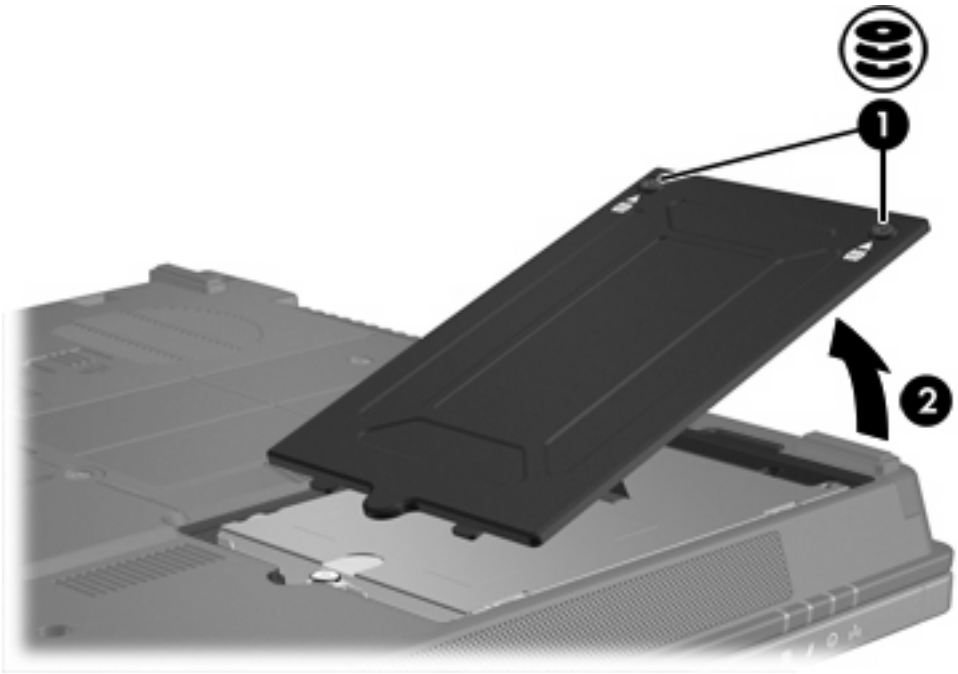
CAUTION To prevent system lockup and loss of information:

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.

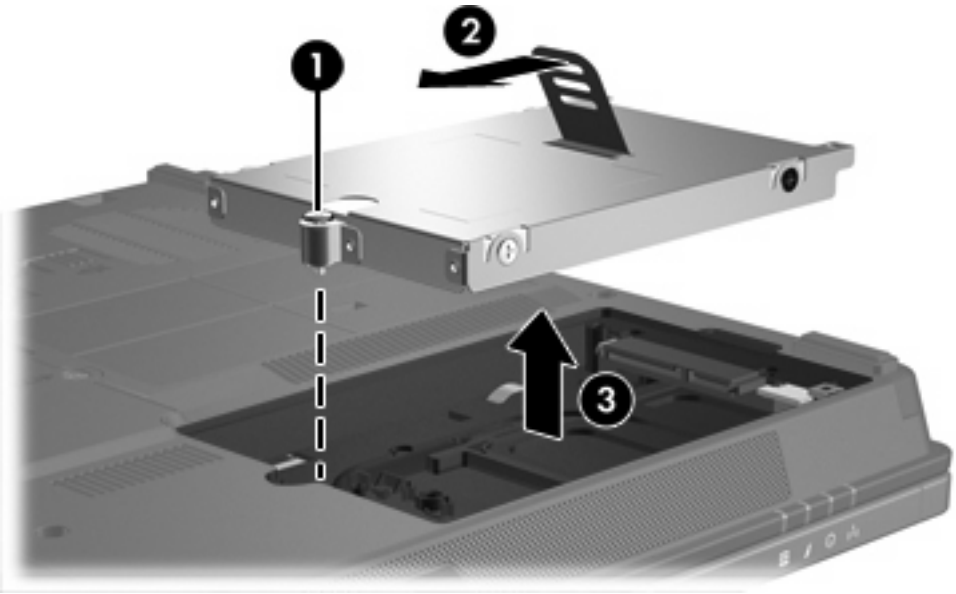
To remove the hard drive:

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



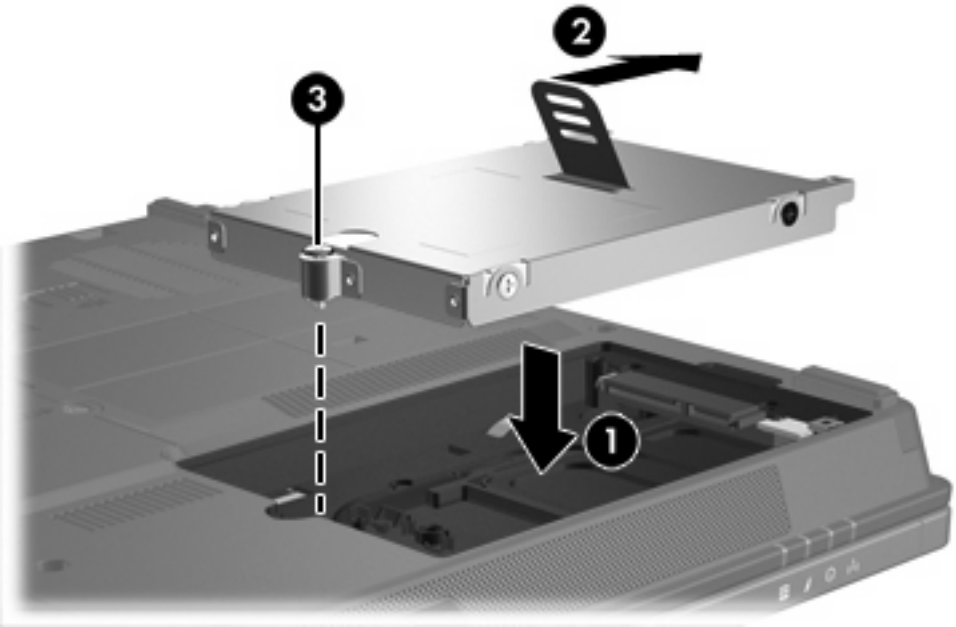
9. Loosen the hard drive screw **(1)**
10. Pull the hard drive tab **(2)** to the left to disconnect the hard drive.

11. Lift the hard drive **(3)** from the computer.



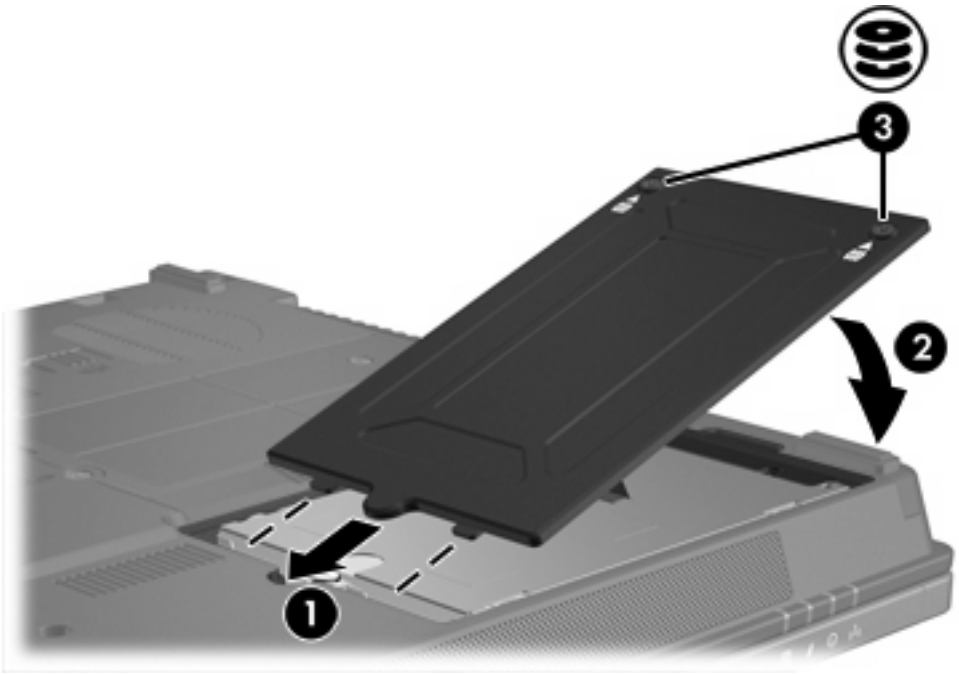
To install a hard drive:

1. Insert the hard drive into the hard drive bay **(1)**.
2. Pull the hard drive tab **(2)** to the right 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. Close the cover **(2)**.

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



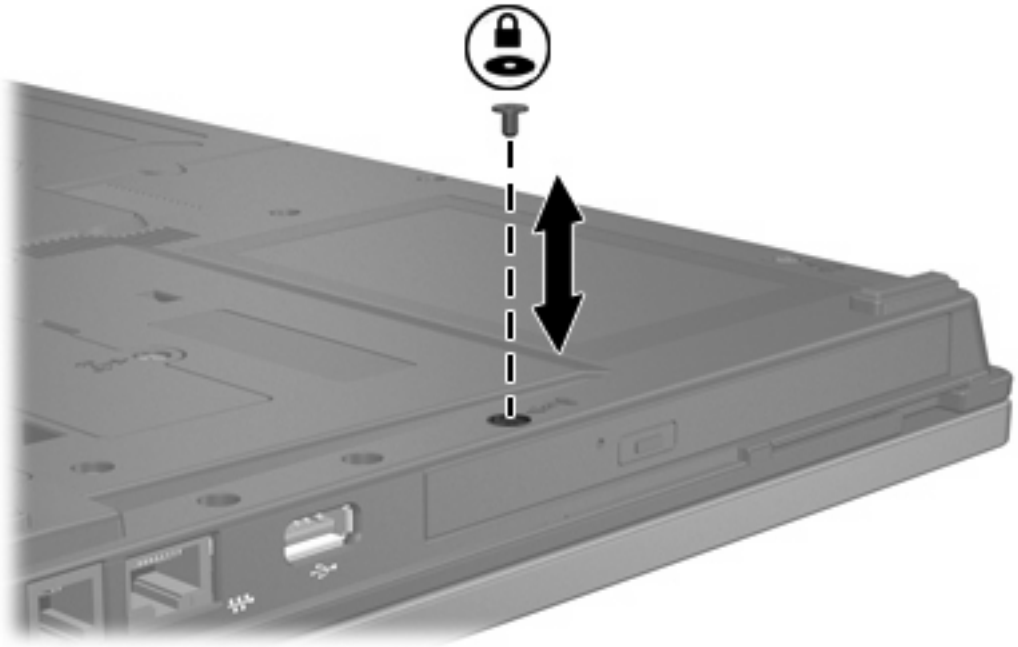
4 MultiBay II Drive

The MultiBay II accepts an optional hard drive module (with an adapter) as well as an optional optical drive.

MultiBay II Security Screw

To enhance the security of your MultiBay II drive, a MultiBay II security screw has been installed on the bottom of the notebook beneath the MultiBay II. The security screw must be installed for shipping, but can be removed for normal use.

NOTE The security screw must be removed before you remove a drive from or insert a drive into the MultiBay II.

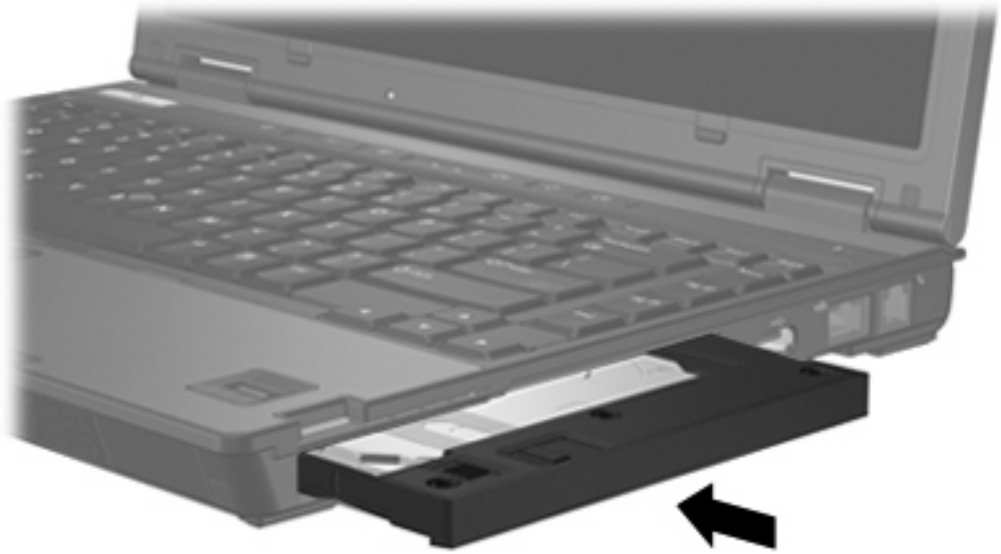


MultiBay II Hard Drive

The MultiBay II accepts optional hard drive modules that include a hard drive attached to an adapter.

Inserting a Hard Drive Module

To insert a hard drive module into the MultiBay II, gently slide the hard drive module into the MultiBay II until it is seated, pressing the right side of the module.



Removing a Hard Drive Module

To remove a hard drive from the MultiBay II:

1. Save your work and close any open applications.
2. Double-click the **Safely Remove Hardware** icon in the notification area, at the far right of the taskbar.
3. Click the drive listing, and then click **Stop**. Click **OK** again when the “Safe to Remove Hardware” message is displayed.
4. Gently press in on the right side of the hard drive module **(1)** to unlock it.
5. Slide the hard drive module **(2)** from the MultiBay II.

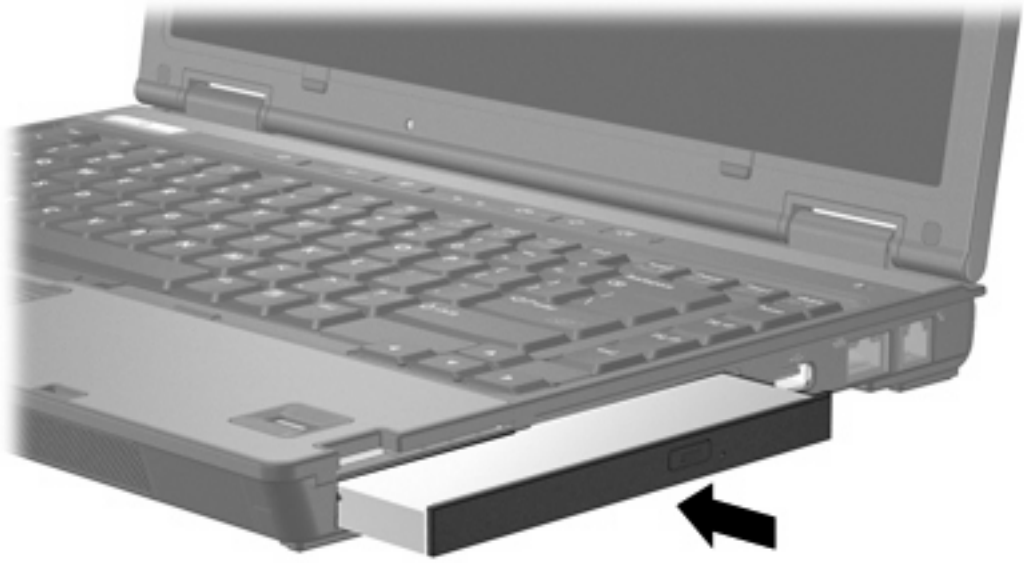
1
2

MultiBay II Optical Drive

This section provides information on using optical discs (such as CDs or DVDs) in the MultiBay II.

Inserting an Optical Drive

To insert an optical drive into the MultiBay II, gently slide the drive into the MultiBay II until it is seated, pressing on the right side of the drive.



Removing an Optical Drive

To remove an optical drive from the MultiBay II:

1. Save your work and close any open applications.
2. Double-click the **Safely Remove Hardware** icon in the notification area, at the far right of the taskbar.
3. Click the drive listing, and then click **Stop**. Click **OK** again when the “Safe to Remove Hardware” message is displayed.
4. Gently press the right side of the optical drive **(1)** to unlock it.
5. Slide the optical drive **(2)** from the MultiBay II.

1
2

5 Optical drives

The computer can read or write to optical drives as described in the following table.

Type of Optical Drive	Read CD and DVD-ROM	Write to CD-RW	Write to DVD ±RW/R	Write to DVD +RW DL
DVD-ROM Drive	Yes	No	No	No
DVD/CD-RW Combo Drive	Yes	Yes	No	No
DVD±RW and CD-RW Combo Drive with Double Layer Support	Yes	Yes	Yes	Yes
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.				

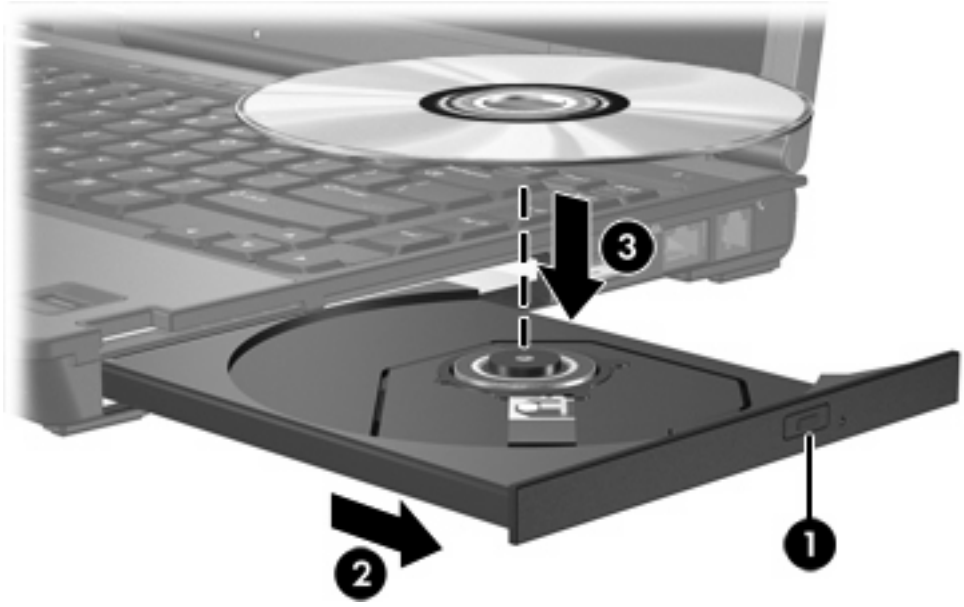
An optical drive, such as a DVD-ROM drive, supports optical discs (CDs and DVDs). These discs are used to store or transport data and to play music and movies. DVDs have a higher capacity than CDs.

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.



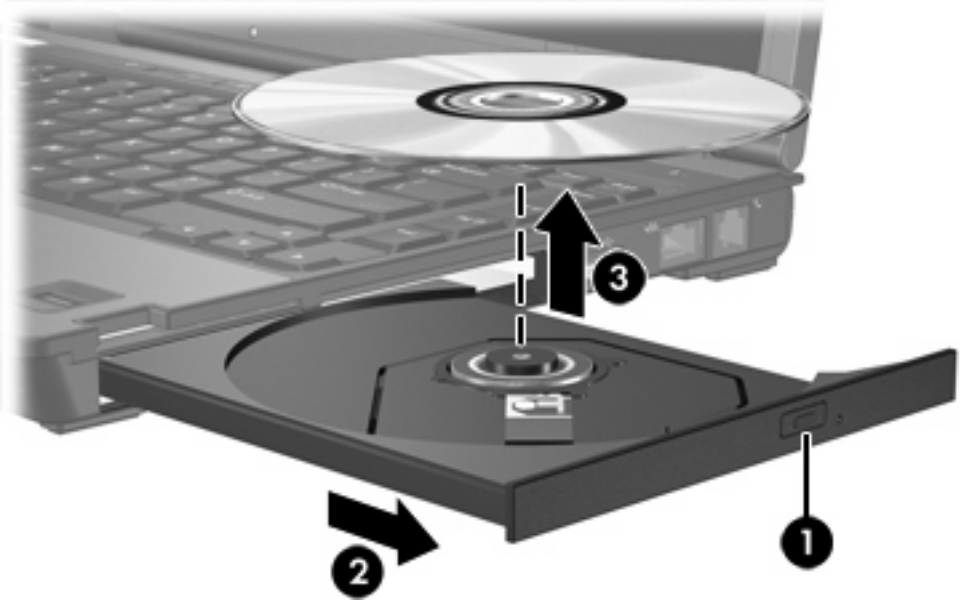
6. Close the media tray.

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.

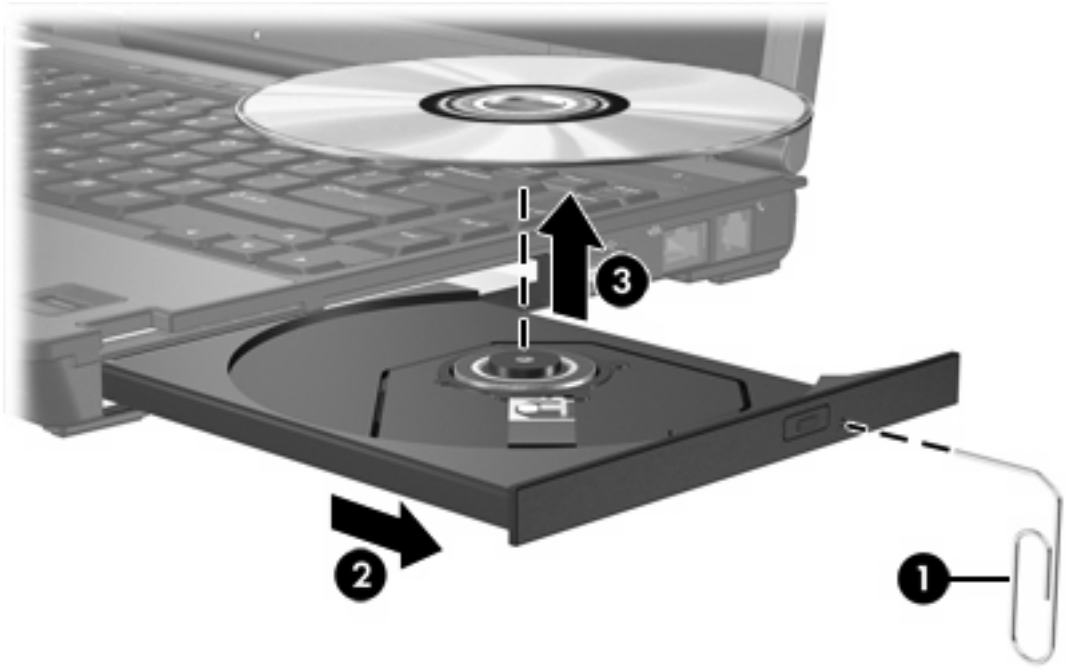


3. Close the media tray and place the disc in a protective case.

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.

Avoiding the Sleep state or Hibernation

CAUTION To prevent possible audio and video degradation, or loss of audio or video playback functionality, do not initiate Sleep or Hibernation while reading 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 drive media (such as a CD or DVD), the computer will behave in one of the following ways:

- 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.

6 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.

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 a standard external device to the computer:

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

To disconnect a standard external device from the computer, turn off the device, and then disconnect it from the computer.

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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