Memory Modules
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 Adding or replacing memory modules

The computer has one memory module compartment, which is located under the keyboard. The memory capacity of the computer can be upgraded by adding a memory module to the vacant expansion memory module slot or by upgrading the existing memory module in the primary memory module slot.

⚠ **WARNING!** To reduce the risk of electric shock and damage to the equipment, unplug the power cord and remove all batteries before installing a memory module.

△ **CAUTION:** Electrostatic discharge (ESD) can damage electronic components. Before beginning any procedure, touch a grounded metal object to be sure that you are discharged of static electricity.

NOTE: To use a dual-channel configuration when adding a second memory module, be sure that both memory modules are the same size.

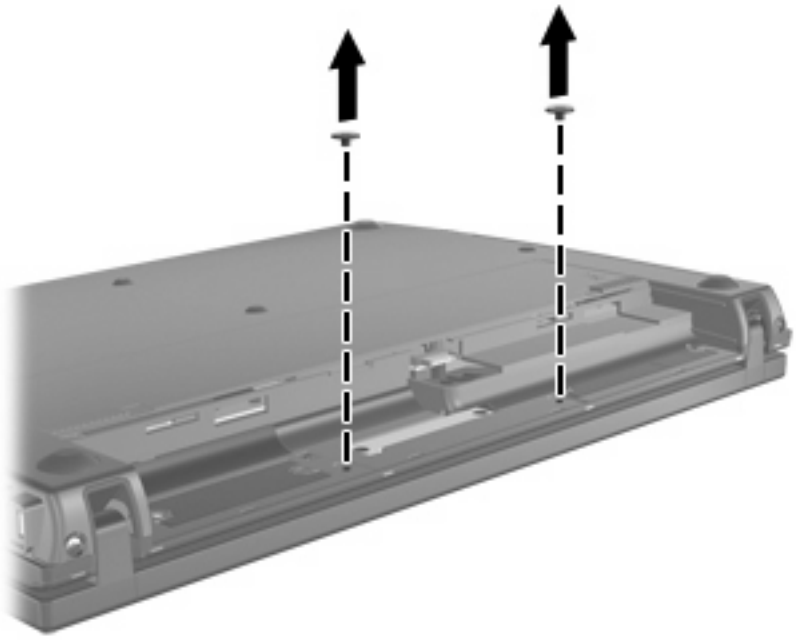
To add or replace a memory module:

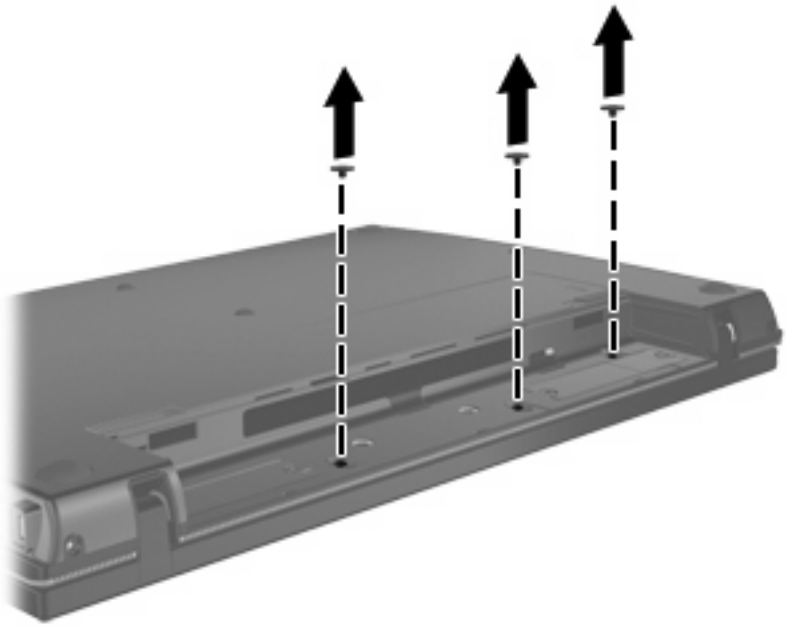
1. Save your work.
2. Shut down the computer and close the display.

   If you are not sure whether the computer is off or in Hibernation, turn the computer on by briefly press the power button. Then shut down the computer through the operating system.
3. Disconnect all external devices connected to the computer.
4. Unplug the power cord.
5. Turn the computer upside down on a flat surface, with the battery bay toward you.
6. Remove the battery from the computer.

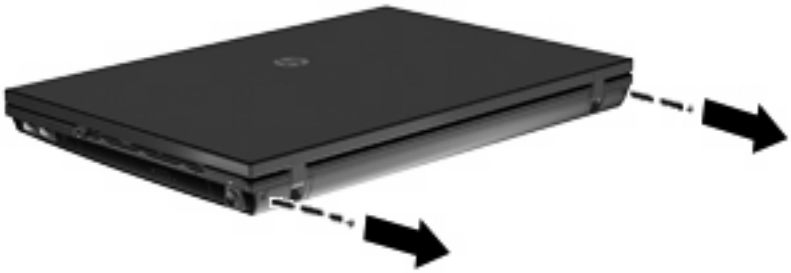
7. Remove the screws from the battery area. Your computer has either 2 or 3 screws that need to be removed.

NOTE: Refer to the illustration that most closely matches your computer.





8. Turn the computer display-side up, and then remove the 2 screws from the back edge of the computer.

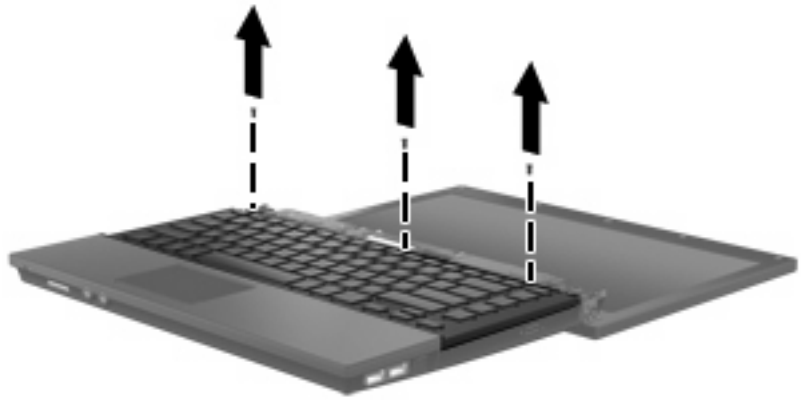


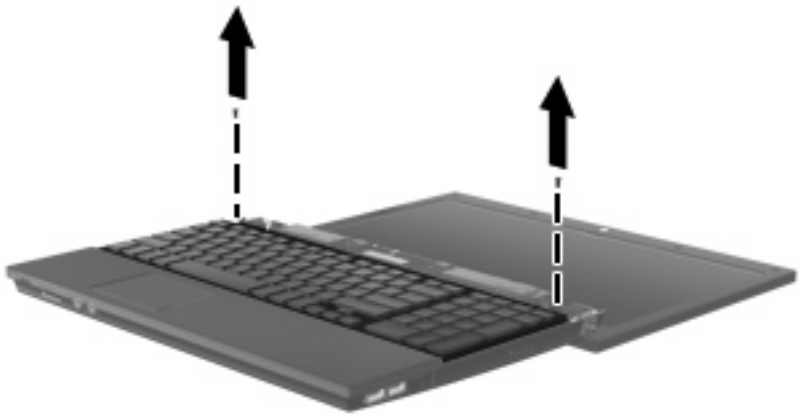
9. Open the computer as far as possible.

10. Slide the switch cover straight back towards the display, and then remove the switch cover.

11. Remove the screws from the keyboard. Your computer has either 2 or 3 screws that need to be removed.

NOTE: Refer to the illustration that most closely matches your computer.





12. Slide the keyboard **(1)** towards the display assembly, and then turn the keyboard upside down **(2)** to expose the memory compartment.

13. If you are replacing a memory module, remove the existing memory module:

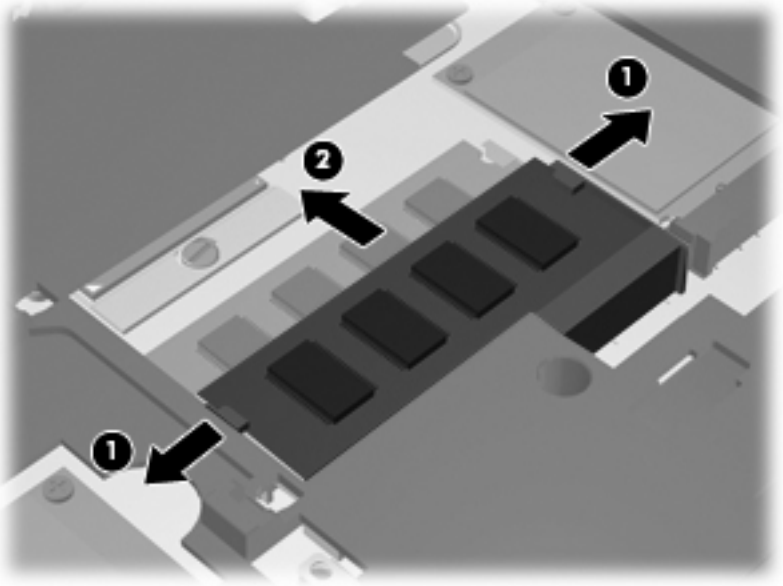
CAUTION: To prevent damage to the memory module, hold the memory module by the edges only. Do not touch the components on the memory module.

a. Pull away the retention clips **(1)** on each side of the memory module.

The memory module tilts up.

b. Grasp the edge of the memory module **(2)**, and gently pull the module out of the memory module slot.

To protect a memory module after removal, place it in an electrostatic-safe container.



14. Insert a new memory module:

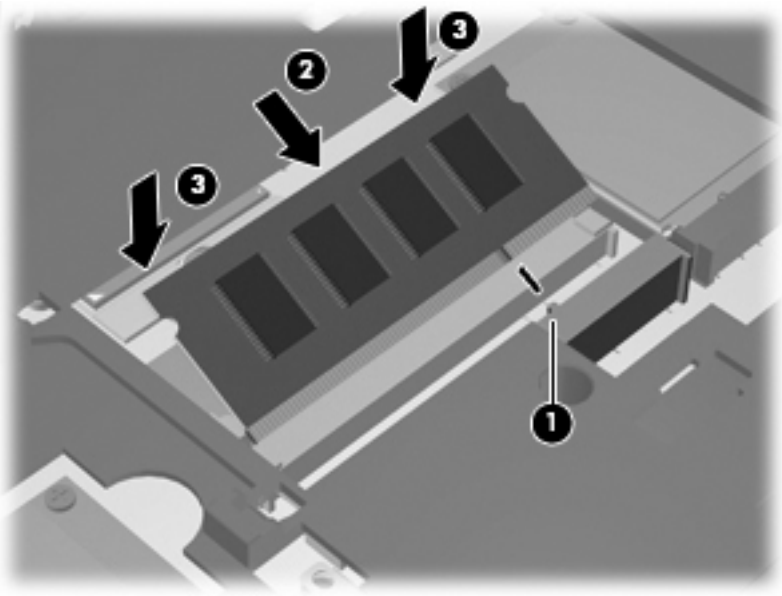
△ **CAUTION:** To prevent damage to the memory module, hold the memory module by the edges only. Do not touch the components on the memory module.

a. Align the notched edge **(1)** of the memory module with the tab in the memory module slot.

b. With the memory module at a 45-degree angle from the surface of the memory module compartment, press the module **(2)** into the memory module slot until it is seated.

△ **CAUTION:** To prevent damage to the memory module, do not bend the memory module.

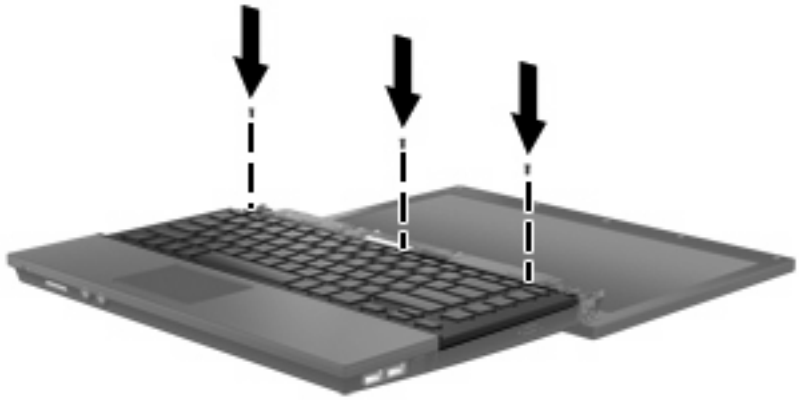
c. Gently press the memory module **(3)** down, applying pressure to both the left and right edges of the memory module, until the retention clips snap into place.

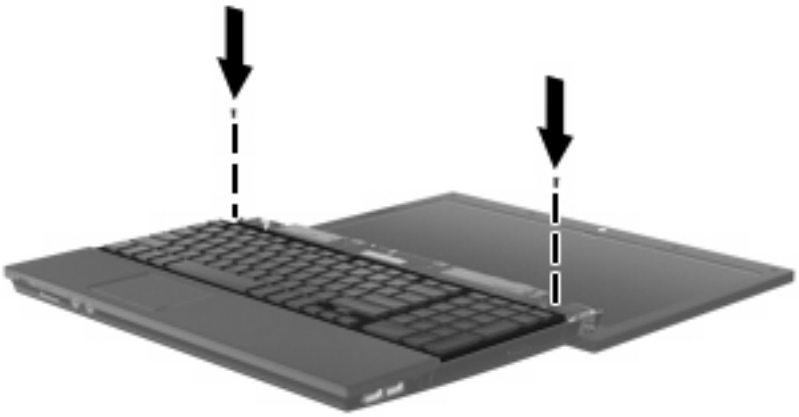


15. Turn over the keyboard **(1)** into the keyboard tray, and then slide the keyboard into place **(2)**.

16. Replace the screws on the keyboard. Your computer has either 2 or 3 screws that need to be replaced.

NOTE: Refer to the illustration that most closely matches your computer.

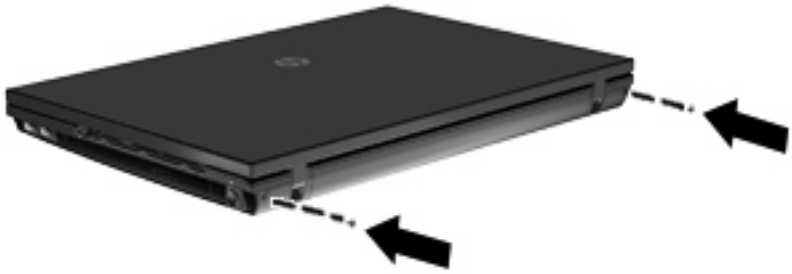




17. Slide the switch cover into place.

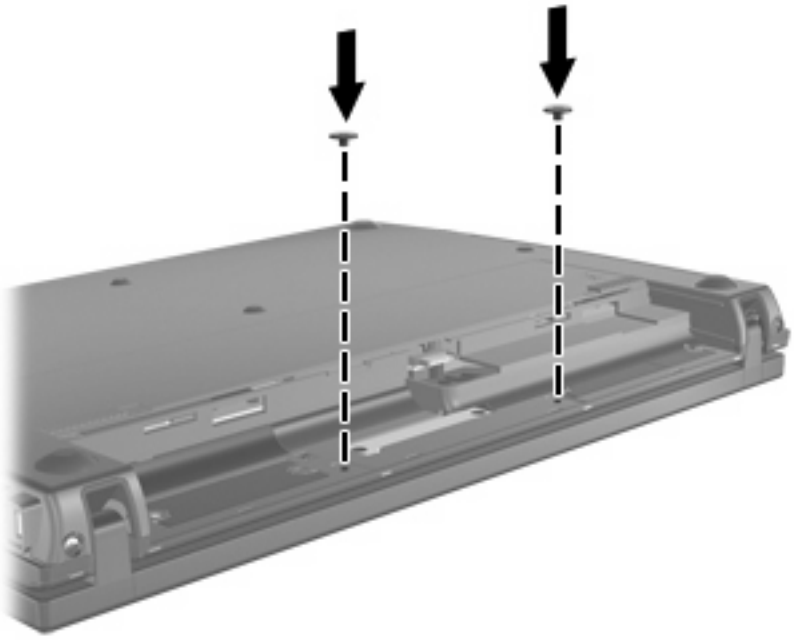
18. Close the computer display.

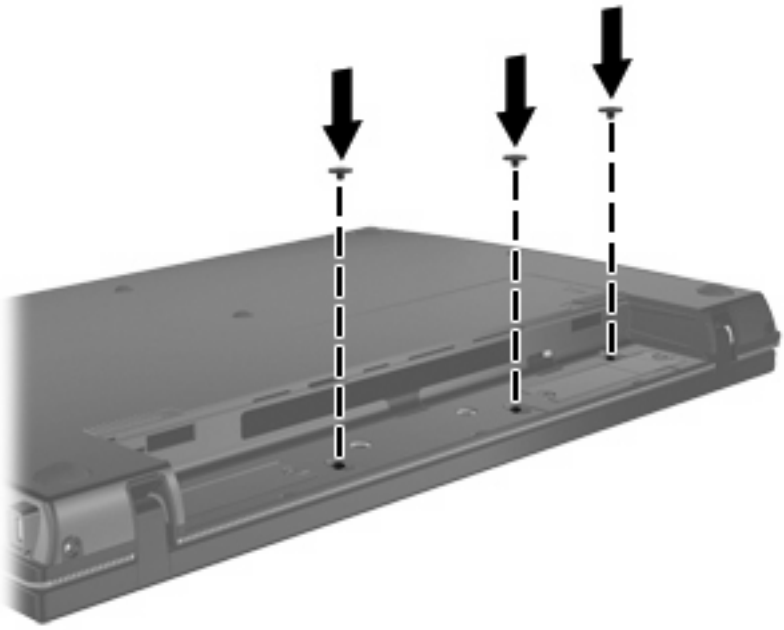
19. Replace the 2 screws on the back edge of the computer.



20. Replace the screws in the battery area. Your computer has either 2 or 3 screws that need to be replaced.

NOTE: Refer to the illustration that most closely matches your computer.





21. Turn the computer upside down on a flat surface, and then replace the battery.
22. Reconnect external power and external devices.
23. Turn on the computer.

2 Increasing hard drive space for the Hibernation file

When Hibernation is initiated, the operating system stores your information to a Hibernation file on the hard drive and then turns off the computer. The operating system reserves space on the hard drive to store the Hibernation file based on the amount of system memory. When you increase the memory, the operating system increases the hard drive space reserved for the Hibernation file.

If you experience problems with Hibernation after increasing memory, be sure that the amount of free space on the hard drive is larger than the space required by the Hibernation file.

To display the amount of free space on the primary hard drive:

1. Select **Start > My Computer**.
2. Right-click the primary hard drive listing, and then click **Properties**.

▲ To display the amount of hard drive space required by the Hibernation file, select **Start > Control Panel > Performance and Maintenance > Power Options > Hibernate** tab.

If the free space on the hard drive is less than the space required by the Hibernation file, increase the amount of free space on the hard drive:

▲ Select **Start > Help and Support > Performance and Maintenance > Freeing up disk space** and follow the on-screen instructions.

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