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# **Upgrade Guide**

## Evo D510 e-pc

Document Part Number: 305513-001

**August 2002**

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**WARNING:** Text set off in this manner indicates that failure to follow directions could result in bodily harm or loss of life.

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**CAUTION:** Text set off in this manner indicates that failure to follow directions could result in damage to equipment or loss of information.

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Upgrade Guide  
Evo D510 e-pc  
First Edition August 2002

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# Contents

## For Your Safety and Comfort

### Upgrading and Replacing Hardware

General Precautions . . . . .	3
Opening the e-pc . . . . .	3
Internal Components . . . . .	5
Upgrading or Replacing Memory . . . . .	6
Replacing the Hard Drive . . . . .	7
Replacing the Optical Drive . . . . .	10
Configuring an IDE Device After Installation . . . . .	12
Removing or Replacing the System Board . . . . .	13
Replacing the Processor . . . . .	15
Replacing the Power Supply Unit . . . . .	18
Replacing the Battery . . . . .	19

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# For Your Safety and Comfort



**WARNING:** Misuse of your personal computer or failure to establish a safe and comfortable work environment may result in discomfort or serious injury. Refer to the *Safety & Comfort Guide*, included in the documentation provided with your computer and available on the Web site at <http://www.compaq.com/comfortguide>, for more information on choosing a workspace and creating a safe and comfortable work environment.

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. For more information, refer to *Safety & Regulatory Information*, also included in the documentation provided with your computer.

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# Upgrading and Replacing Hardware

This guide describes how to upgrade or replace hardware components, such as memory, hard drive, optical drive, processor, system board, battery, and power supply.

If you want to find out about accessories available for your e-pc, refer to the following Web site:

<http://www.compaq.com/products/desktops/options/index.html>

## General Precautions

Before upgrading or replacing components, be sure to carefully read all of the applicable instructions, cautions, and warnings in this guide.



**WARNING:** To reduce the risk of personal injury from electrical shock and/or hot surfaces, be sure to disconnect the power cord from the wall outlet, and allow the internal system components to cool before touching.



**CAUTION:** Static electricity can damage the electronic components of the personal computer or optional equipment. Before beginning these procedures, ensure that you are discharged of static electricity by briefly touching a grounded metal object.

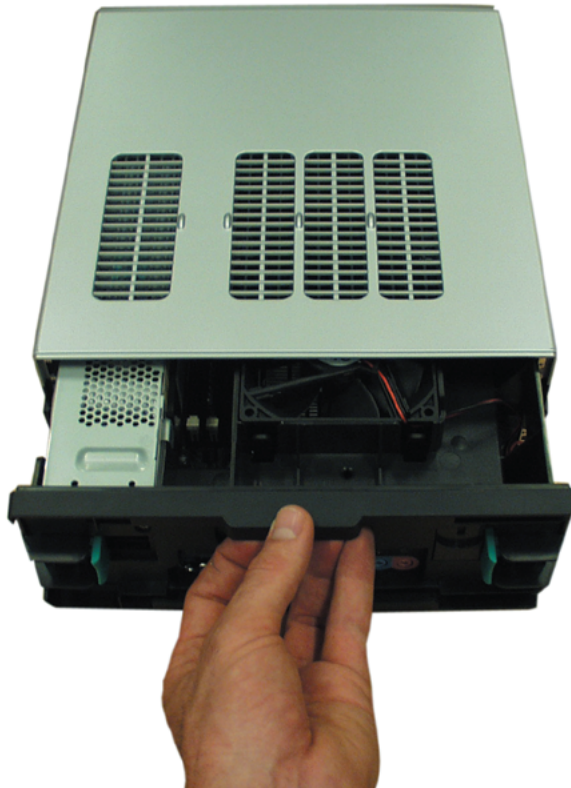
## Opening the e-pc

1. Exit all software applications, shut down the operating system software, turn off the personal computer and any external devices, then disconnect the power cord from the power outlet.
2. Unlock the e-pc and remove the port control system (if fitted).

3. Disconnect all cables from the computer.
4. Push the two green latches inward.

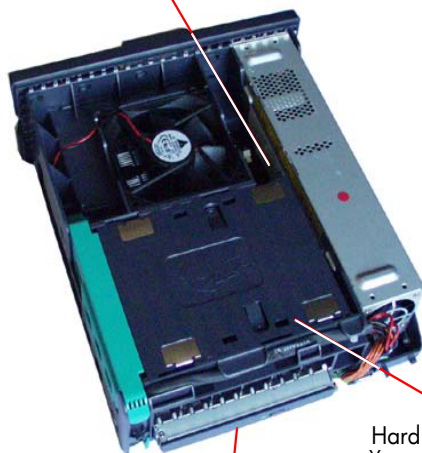


5. Slide out the chassis from the enclosure.



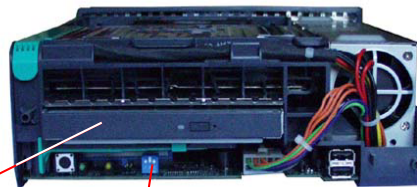
## Internal Components

Main Memory Modules:  
(266MHz DDR SDRAM)  
2 sockets for 128 MB, 256 MB, 512  
MB or 1GB modules up to 2 GB  
maximum



Hard Drive  
You can replace hard drive with a  
larger one

One Front-Access Device Shelf  
CD-ROM drive, CD-RW drive or DVD drive



One Front-Access Device Shelf  
CD-ROM drive, CD-RW drive or DVD drive

Switch block



## Upgrading or Replacing Memory



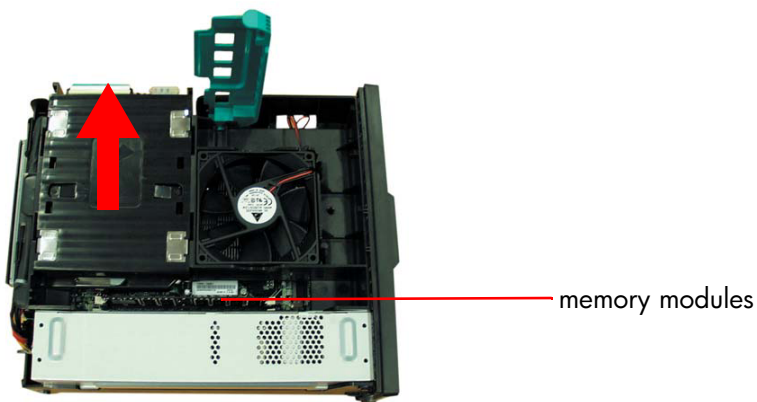
Use only memory modules provided for your e-pc model. The use of other memory modules is not supported. For information about supported accessories, connect to <http://www.compaq.com>. 32 MB and 64 MB modules are not supported. Install 128 MB, 256 MB, 512 MB or 1 GB non-ECC DDR SDRAM modules.

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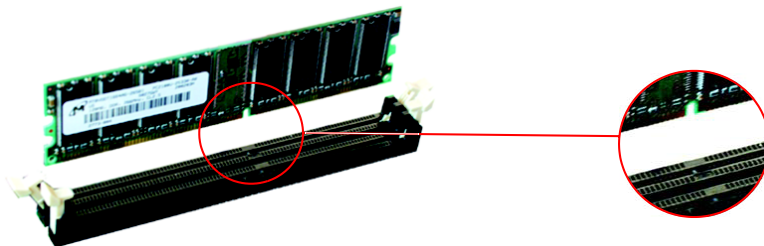
1. Open the e-pc as shown in “Opening the e-pc” on page 3.
2. Lift up the hard drive retaining bracket.



3. Slide out the drive tray to gain access to the memory modules.



4. There are two memory sockets. Align the notches on the bottom of the module with the corresponding marks on the socket and push it firmly into place. The clips close automatically.



5. Replace the chassis in the enclosure.

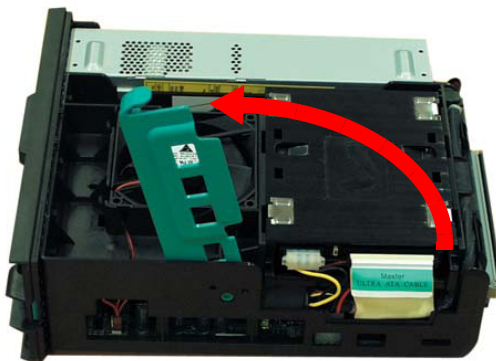
## Replacing the Hard Drive



**WARNING:** For your safety, disconnect the power cord and all external cables.

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1. Open the e-pc as shown in “Opening the e-pc” on page 3.
2. Lift up the hard drive retaining bracket.



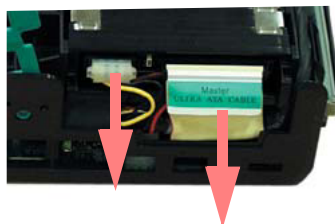
3. Detach the data and power cables from the hard drive.



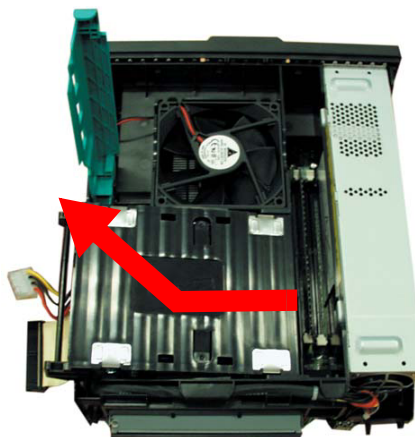
To prevent damage to the data and power cables, pull on the tab or connector instead of the cable itself.

To prevent damage to the hard drive, handle it with care and do not drop it.

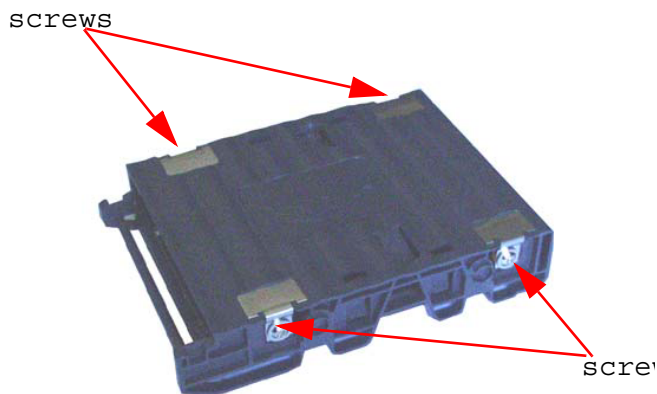
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4. Lift the drive tray clear of the e-pc.



5. Remove the four screws securing the old hard drive to the tray and pull the drive out of the tray.



6. Insert a new drive in the tray and install the four drive-retaining screws.
7. Insert the drive tray in the e-pc (the drive will only fit into the tray one way).
8. Reattach the data and power cables.
9. Replace the chassis in the enclosure.
10. Verify the new configuration by checking the Summary screen. To access the Summary Screen, press **F8** immediately after startup, then press **Esc**.



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To reinstall the operating system and drivers on the newly-installed hard drive, use the *Restore Plus!* CD and operating system CD provided with the e-pc. In addition, you can find the most up-to-date versions of drivers on the support site at <http://www.compaq.com/support>.

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## Replacing the Optical Drive

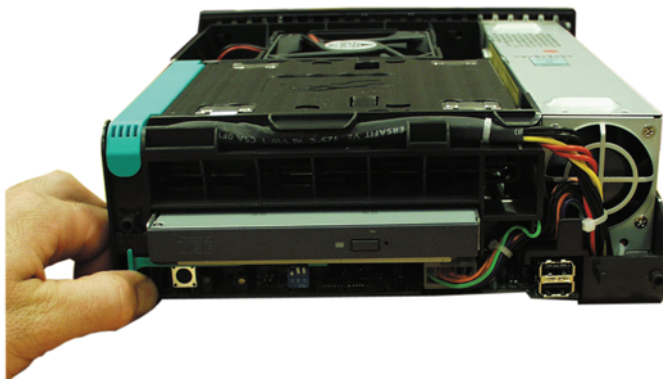


**WARNING:** Do not operate controls, make adjustments, or perform procedures to a laser device other than those specified in the operators manual or in the laser device installation guide.

Allow only Compaq authorized service technicians to repair the laser equipment.

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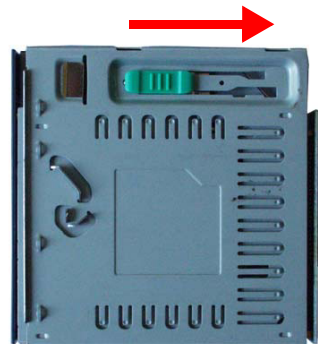
1. Open the e-pc as shown in [“Opening the e-pc”](#) on page 3.
2. Pull on the plastic latch below the optical drive to release it.



3. Slide the optical drive tray out the front of the chassis and detach the cable at the back of the drive.



4. Release the catch holding the old drive in place and remove the old drive from the tray.



5. Place the new drive in the tray and secure with the sliding catch.
6. Attach the cable to the new drive and slide the drive tray back into the e-pc until it clicks into place.
7. Replace the chassis in the enclosure.
8. Verify the new configuration by checking the Summary screen. Restart the computer. When the Compaq logo is displayed, press **F8**, then press **Esc**.

## Configuring an IDE Device After Installation

After installing any device, you can check via the Summary Screen that your e-pc has correctly identified the new configuration. To view the Summary screen, restart the computer. When the Compaq logo is displayed, press **F8**, then select **Summary** from the list of options.

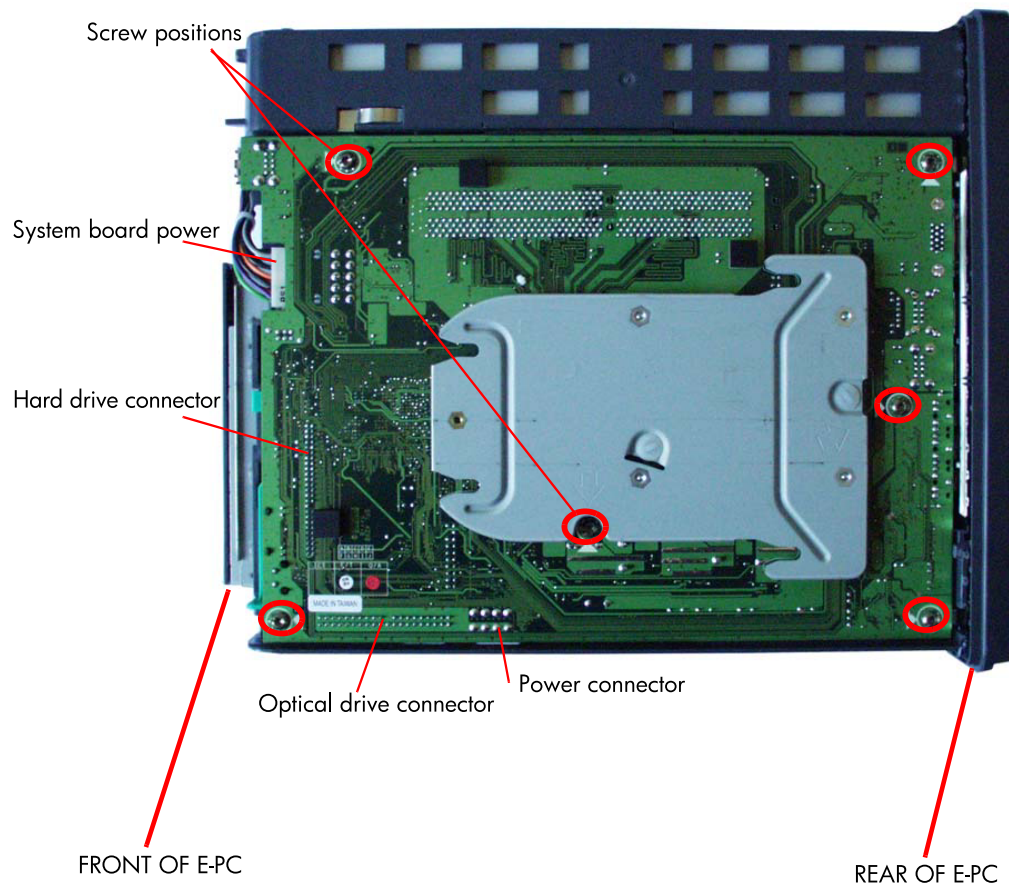
If the configuration is not correct, run the Setup program to configure the device. To enter the Setup program, To access Computer Setup, restart the computer. When the Compaq logo is displayed, press **F8**, then select **Setup** from the list of options.

IDE drives are automatically detected by the Setup program. However, a newly installed device may require that you install an appropriate device driver. Refer to your operating system documentation for details. You can obtain the latest drivers from the support Web site at <http://www.compaq.com/support>.

The IDE cables in your e-pc are cable select. You must, therefore, set the jumpers on any IDE devices you install to cable select. See the documentation for the device for more information.

## Removing or Replacing the System Board

1. Open the e-pc as shown in “Opening the e-pc” on page 3.
2. Remove all cables from the old system board.
3. Turn the chassis over and remove the six screws that secure the system board to the chassis.

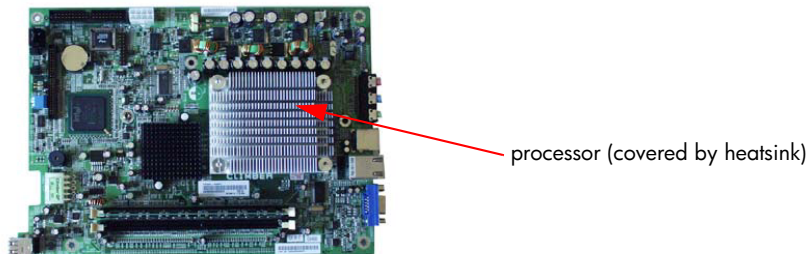




4. Remove the old system board from the chassis.
  - a. Lift up the board at the front side of the chassis.
  - b. Carefully disengage the rear connectors and lift the board out of the chassis.
5. If you are replacing the system board, remove the memory modules, heatsink, and processor from the old system board and install them on the new system board. (Refer to [“Upgrading or Replacing Memory”](#) on page 6 and [“Replacing the Processor”](#) on page 15 for instructions.)
6. Insert the system board. Line up the rear connectors carefully, then reconnect the four cables. Lower the front end of the board into position and fasten the screws to secure the board.
7. Replace the chassis in the enclosure.

## Replacing the Processor

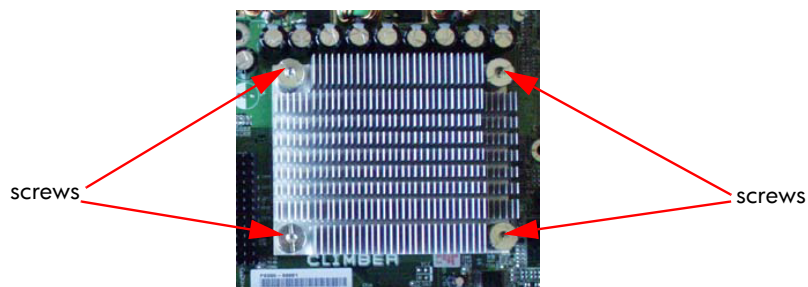
1. Open the e-pc as shown in “Opening the e-pc” on page 3.
2. Remove the system board as shown in “Removing or Replacing the System Board” on page 13.
3. Locate the processor (it is covered by a heatsink).



4. Unscrew the screws that secure the heatsink to the system board and remove the heatsink.



**CAUTION:** If the processor is stuck to the heatsink, twist the heatsink to break the seal. Never attempt to pry the heatsink from the processor as doing so may pull the processor from its socket and irreparably damage it.

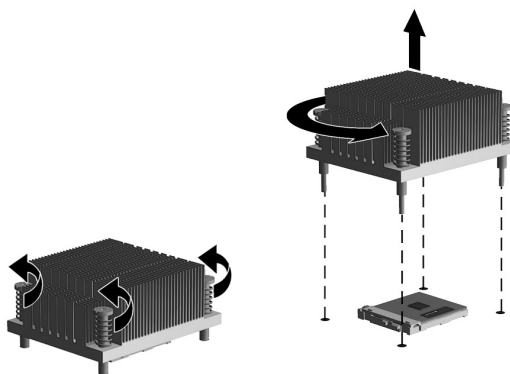


5. Lift the processor socket lever and remove the old processor. Carefully insert the new processor, then lower the lever back into place while pressing lightly down on the processor to ensure that it seats properly.



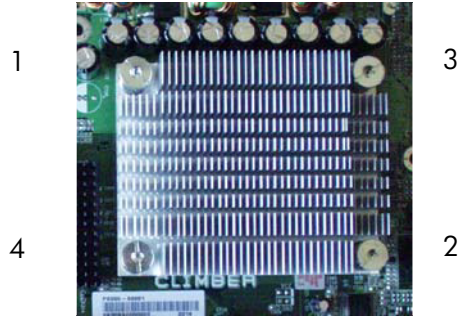
**CAUTION:** Insert the processor carefully, making sure that the orientation is correct. It can go in one way only; do not apply excessive force.

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6. Remove all old thermal interface material from the underside of the heatsink by using the alcohol wipe that is provided with the processor kit.
7. Squeeze the contents of the thermal grease syringe onto the top of the processor.
8. Place the heatsink on top of the processor.

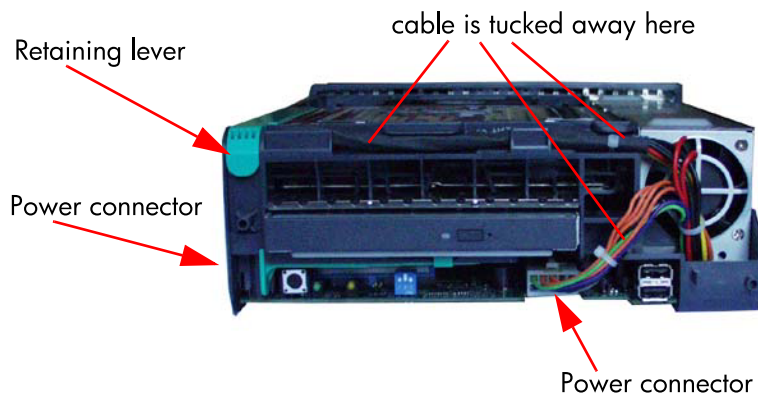
- Secure the heatsink using the springs and screws. Attach the screws in the order shown, first with just a few turns and then, once all four are in place, screwing them in fully.



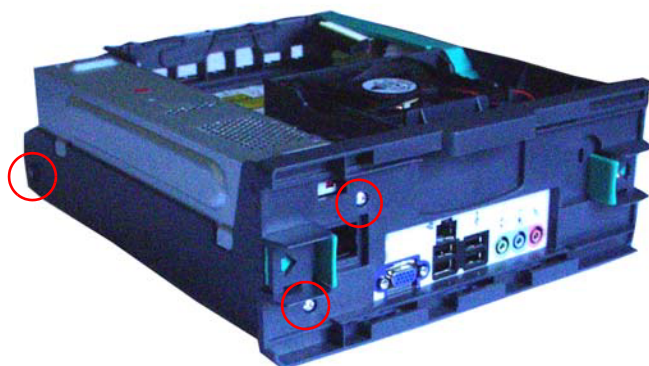
- Replace the system board in the chassis.
- Replace the chassis in the enclosure.
- Ensure that the latest version of BIOS is installed on your e-pc. To learn which version of BIOS is currently installed on your e-pc, restart the e-pc. When the Compaq logo is displayed, press **F8**, then select **Summary** from the list of options. To get the latest BIOS version for your e-pc, connect to the support Web site at <http://www.compaq.com/support>.

## Replacing the Power Supply Unit

1. Open the e-pc as shown in “Opening the e-pc” on page 3.
2. Remove the two internal power supply connectors. Lift the retaining lever and free the cable from the tabs that hold it in place.



3. Remove the three external screws securing the power supply to the chassis.



4. Slide the old power supply away from the rear of the chassis and lift it out.
5. Insert the new power supply, ensuring that it has engaged correctly.
6. Replace the three screws to secure the power supply and route the cable carefully in the space provided at the front of the chassis.
7. Reconnect both internal power supply connectors.
8. Replace the chassis in the enclosure.
9. Select the correct voltage setting for your country.

## Replacing the Battery

The battery that comes with your computer provides power to the real-time clock and has a minimum lifetime of about three years. When replacing the battery, use a battery equivalent to the battery originally installed on your computer. Your computer comes with a 3-volt lithium coin cell battery.



The lifetime of the lithium battery can be extended by plugging the computer into a live AC wall socket. The lithium battery is only used when the computer is NOT connected to AC power.

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**WARNING:** Your computer contains an internal lithium manganese dioxide battery. There is a risk of fire and burns if the battery is not handled properly. To reduce the risk of personal injury:

- Do not attempt to recharge the battery.
  - Do not expose to temperatures higher than 60°C (140°F).
  - Do not disassemble, crush, puncture, short external contacts, or dispose of in fire or water.
  - Replace the battery only with the Compaq spare designated for this product.
- 



**CAUTION:** Before replacing the battery, it is important to back up the computer CMOS settings. When the battery is removed or replaced, the CMOS settings will be cleared. Refer to the *Computer Setup Guide* for information on backing up the CMOS settings.

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Batteries, battery packs, and accumulators should not be disposed of together with the general household waste. In order to forward them to recycling or proper disposal, please use the public collection system or return them to Compaq, their authorized partners, or their agents.

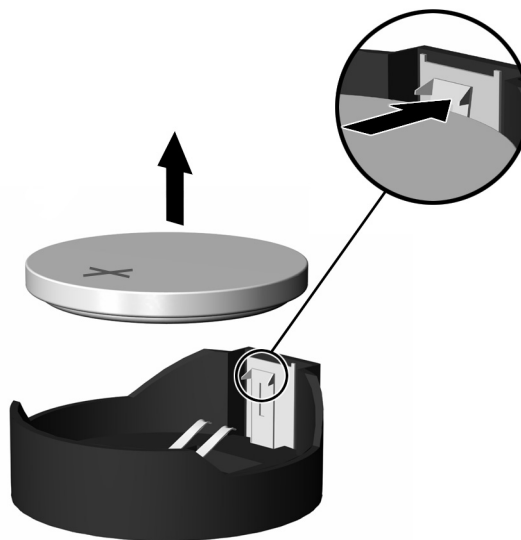
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**CAUTION:** Static electricity can damage the electronic components of the computer or optional equipment. Before beginning these procedures, ensure that you are discharged of static electricity by briefly touching a grounded metal object.

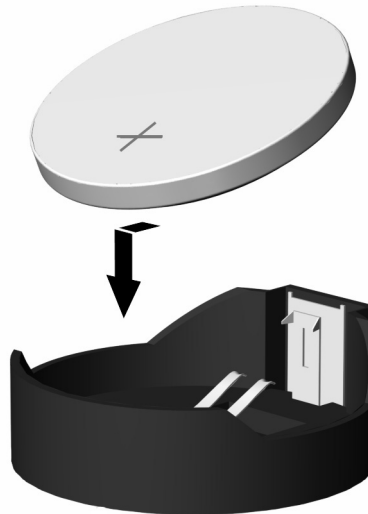
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1. Open the e-pc as shown in [“Opening the e-pc” on page 3.](#)
2. Remove the hard drive and CD-ROM drive.
3. Locate the battery and battery holder on the system board.
4. To release the battery from its holder, squeeze the metal clamp that extends above one edge of the battery.
5. When the battery pops up, lift it out.



***Removing a Coin Cell Battery***

6. To insert the new battery, slide one edge of the replacement battery under the holder's lip with the positive side up. Push the other edge down until the clamp snaps over the other edge of the battery.



#### *Replacing a Coin Cell Battery*

7. Replace the CD-ROM drive and the hard drive, and then close the cover.
8. Plug in the computer and turn on power to the computer.

Reset the date and time, your passwords, and any special system setups, using Computer Setup. To access Computer Setup, restart the computer. When the Compaq logo is displayed, press **F8**.