Chapter **9**

TROUBLESHOOTING

This chapter describes locating and solving problems that you may encounter while using your computer.

Locating a Problem

Problems with your computer can be caused by something as minor as an unplugged power cord – or as major as a damaged hard disk. The information in this chapter is designed to help you find and solve minor problems. If you try all the suggested solutions and you still have a problem, make a list of what steps you have taken to correct the problem and contact your dealer.

Successful troubleshooting is the result of careful observation, deductive reasoning, and an organized approach to solving the problem.

The problems that you will encounter can be divided into two basic categories: hardware problems and software problems. Hardware problems can be further divided into electrical and mechanical problems. You will know you have a hardware problem if the screen is dark, the computer cannot read the disk drives, or you get an error message during the Power-On Self Test (POST).

Software errors can occur at several levels. The ROM BIOS and the operating system can give you a large number of error messages. On top of this, each application software package has its own set of error messages. It is important to determine whether the software error message you are getting is from the application or the operating system. Once you know this, you can look in the respective manual for a solution to the problem.

Checking Cables and Connections

Start by performing a careful visual inspection of the exterior of the computer. If no LEDs are illuminated, make sure that your computer and its peripherals are getting power and communicating with each other properly.

To check the power cables, and connections:

1. If you have been using battery power, connect the Notebook to an external power source and make sure that the battery has a charge.

7. If you are using the Notebook with the AC adapter, check the power outlet, the power cord, and any power switches that may affect your computer.

8. Check the wall outlet or power strip with an item that you know is functioning properly. A lamp or radio is a convenient item for checking the power. You may also need to check the fuses and breakers in your electric box.

9. If the outlet is controlled by a wall switch, make sure that the switch is on.

10. If the outlet is controlled by a dimmer switch, use a different outlet.

11. If your computer is plugged into a power strip with an On/Off switch, make sure the switch is on.

12. With the computer's power switched off, check all cable connections. If the computer is connected to any peripheral devices, look for loose or disconnected cables.

If the computer is too close to a wall, a cable connection may be loose or the cables may be crimped.

 Do not substitute cables for different devices (other than the manufacturer recommended cables) even if they look exactly alike. The wiring inside the cable may be different.

13. When you are certain that you have power available and all connections are good, turn the computer on again. If the computer still does not start, you may have a hardware problem.

The Power-On Self Test

The Power-On Self Test (POST) runs every time you turn on or reset the Notebook. The POST checks memory, the main system board, the display, the keyboard, the disk drives, and other installed options.

A few seconds after you turn on your computer, a copyright message appears on your display screen. A memory test message appears next; as the test continues, memory size increases until all installed memory is tested. Normally, the only test routine visible on the screen will be the memory test.

Two classifications of malfunctions can be detected during the POST:

- Error messages that indicate a failure with either the hardware, the software, or the *Basic Input/Output System* (BIOS). These *critical malfunctions* prevent the computer from operating at all or could cause incorrect and apparent results. An example of a critical error is microprocessor malfunction.
- Messages that furnish important information on the power-on and boot processes (such as memory status). These *non-critical malfunctions* are those that cause incorrect results that may not be readily apparent. An example of a non-critical error would be a memory chip failure.

In general, if the POST detects a system board failure (a critical error), the computer halts and generates a series of beeps. If failure is detected in an area other than the system board (such as the display, keyboard, or an adapter card) an error message is displayed on the screen and testing is stopped. It is important to remember that the POST does not test all areas of the computer, only those that allow it to be operational enough to run diagnostic programs.

If your system does not successfully complete the POST, but displays a blank screen, emits a series of beeps, or displays an error code, consult your dealer.

General Hardware Problems

A few common hardware problems and suggested solutions are presented in the table below:

Problem: Failure in the installation of the Audio driver.

Solution: Be sure to first remove the current audio device from your system. Please follow the instruction on the installation of audio driver.

Problem: The display screen is dark

Solution: Make sure that the computer is not in Suspend mode. Check the Brightness controls for the screen. If the controls are turned too far down, the screen will be dark.

Problem: An incorrect date and time are displayed.

Solution: Correct the date and time using the DOS DATE and TIME commands or the options in the Setup Utility. If the date and time become incorrect after a short time, your CMOS battery may be depleted. Contact your dealer to change the battery.

Problem: You hear irregular beeps during operation of the Notebook and the system halts.

Solution: The problem is beyond the scope of this manual. Contact technical support.

Problem: An unidentified message is displayed.

Solution: Reboot the computer and run the BIOS system setup. Confirm the Setup parameters. If the same message is displayed after booting up again, contact technical support for assistance.

Problem: The system cannot access the CD-ROM/DVD-ROM drive.

Solution: Check that a CD is properly inserted in the drive. Make sure that you are using the correct program for that kind of CD. For example, the system cannot read a data CD using an audio program.

Problem: You cannot operate the printer.

Solution: Check the printer cable connection. Ensure that the printer power switch is turned on. Confirm that the printer is on-line.

Problem: You cannot use the mouse.

Solution:

- Check the cable connection.
- Check the mouse with another application to see if there is a software incompatibility problem.
- If possible, check the mouse with another computer to see if it works. If it doesn't operate on a different system, the mouse might be broken.

Contacting Your Dealer

If you still have a problem after reading the preceding sections, the next step is to contact your dealer. Your dealer can determine if the problem is something that requires the computer to be taken to the shop. Before you call your dealer, however, prepare the following information:

- How is your computer configured? Your dealer needs to know what peripheral devices you are using.
- What messages, if any, are on the screen?
- What software were you running at the time?
- What have you done already to try to solve the problem? If you have overlooked a step, your dealer may be able to solve the problem over the phone.

UPGRADING YOUR SYSTEM

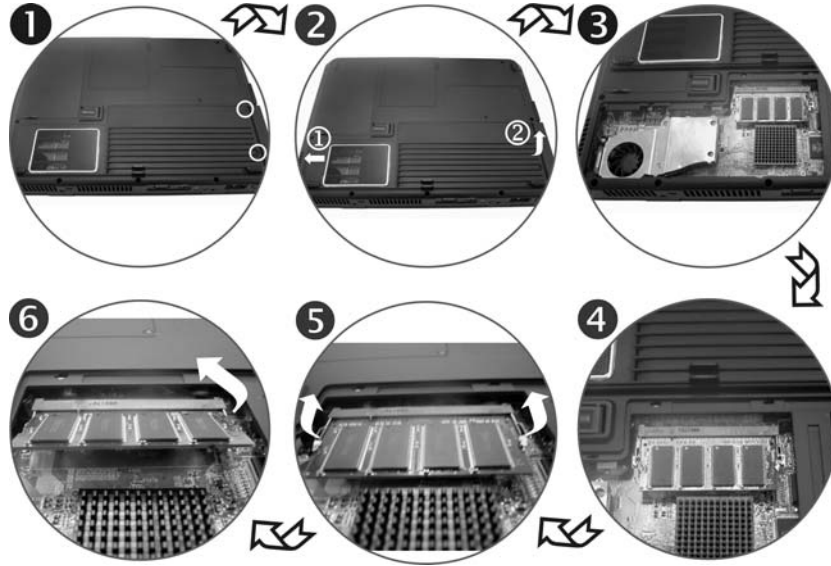## Upgrading your System CPU

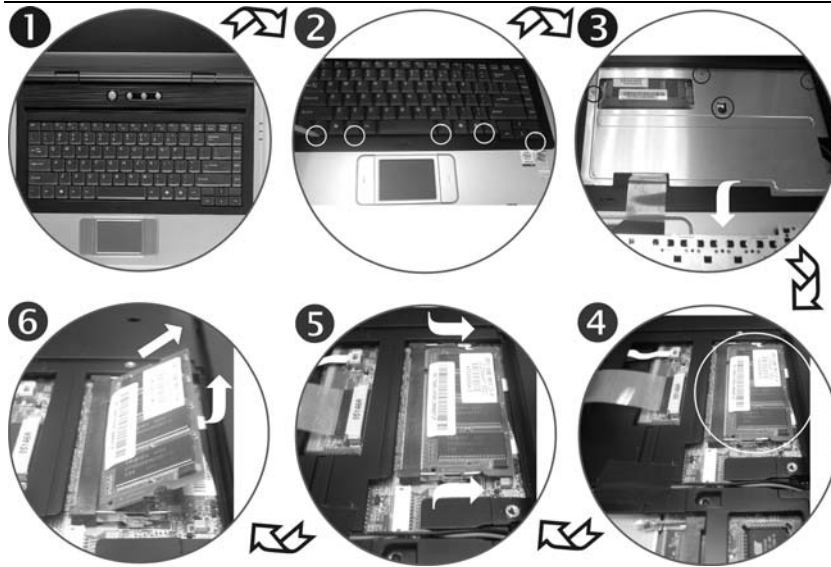Refer to the following illustration on upgrading your notebook's CPU
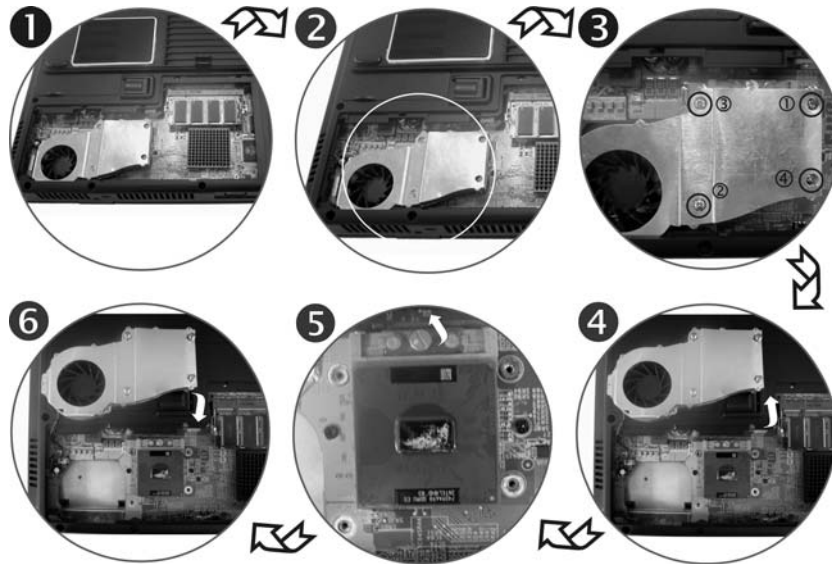
WARNING

Be sure to loosen all the screws first before removing it totally to release the heatsink. Failure to do so will cause a major damage to the heatsink.
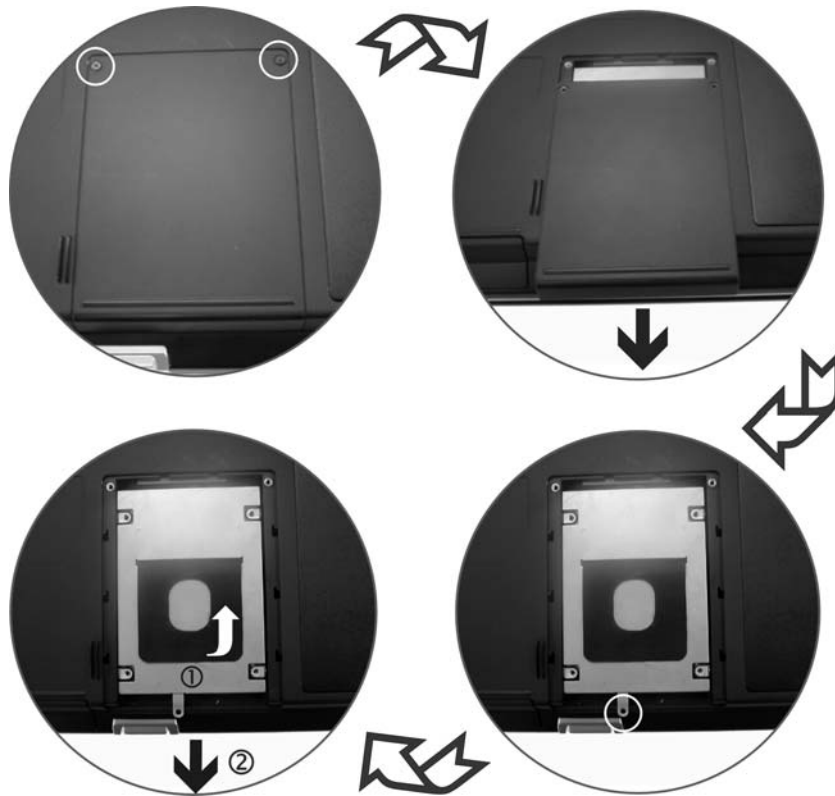
Upgrading your Memory (1)

Upgrading your Memory (2)

The Easy to Upgrade HDD Module

The hard drive in your notebook computer is made to be easily swapped out for upgrading.

To upgrade your Hard Drive

Appendix A

SPECIFICATION

Detailed Notebook Specifications

Processor

- Intel® Pentium® M L2 cache=2MB on die, FSB=533MHZ
- Intel® Celeron® M L2 cache=1MB on die, FSB=400MHZ
- 479 pin uFC-PGA2 package

Operating System Compliance

- Microsoft® Windows® XP Professional Edition
- Microsoft® Windows® XP Home Edition

Core Logic

- ATI RC410MB+SB450

Memory

- Expansion 2 slots of 200pin DDR2 SO-DIMM SDRAM module, 2GB total memory capacity
- Support DDR2 533 Module

LCD Display

- 15.4" WXGA/15"XGA TFT LCD display

Video & Graphics

- Integrated graphic controller: ATI RC410MB
- SMA up to 128MB DDR SDRAM

Hard Drive

- 2.5" 9.5mm height, ATA133/100/66 support

Optical Drive

- 5.25" 12.7 mm height CD-ROM, DVD-ROM, Combo Drive (DVD-ROM + CD-RW), DVD Dual (DVD+/-RW), Super Multi (DVD-RAM+DVD+/-RW)

AV Feature Built-in	**TV Tuner**
	• Mini PCI TV Tuner (optional) w/ Coaxial connector, support PAL, NTSC, SECAM
	• Support capture function to record the TV programs into Hard Disk
	Remote Control
	• Multi-function remote control to enjoy TV program (optional)

Pointing Device

• Synaptics touchpad

Application Launch Key

• WLAN, Email, Internet, Power

LED Status Indicator

• Power, Suspend/Resume, Battery Charging Status, Hard Disk Access, NumLock mode, CapsLock mode, ScrollLock mode

Keyboard

• 3.0mm travel, inverted-T, 88 keys with windows key

Audio

• Codec (AC97) Realtek ALC655, with S/PDIF cable output for 6 channel chamber, AC'97 Rev. 2.3 compatible
• Built-in two high quality stereo speakers

AC Adapter

• Input: 100-240V AC, 50-60Hz, 1.5A, Universal
• Output: 19V DC, 3.4A, 65W

Battery

• 6 cell Li-ion battery pack
• 8 cell Li-Ion battery pack

Battery Charge

• 3 hrs charge time to 100% capacity while system off
• (TBD)
• 4 hrs charge time to 100% capacity while system on
• (TBD) (Based on 8-cell battery pack)

BIOS

• AMI
• Support PnP, password

Card Reader

- 3-in-1 card reader (Support SD/MS/MMC) (optional)

Communication

- 10/100/1000 Base-T LAN on board
- Built-in MDC 56Kbps FAX/Modem
- 802.11g MiniPCI WLAN card (optional) (AxureWave AW-GA100)

Power Management

- ACPI 2.0 compliance
- Support Stand-by, Suspend to Disk, Suspend to RAM

Security

- Kensington Lock, BIOS password protection

Size

- 355.0(W) x 273.0(D) x 40.0(H)mm

Weight

- 2.85 kg with 15.4" panel, 6 cell battery and Optical Drive installed

Remark

- Battery life will vary depending on your specific hardware and software configuration
- Spec subject to change without notice