Notice

The company reserves the right to revise this publication or to change its contents without notice. Information contained herein is for reference only and does not constitute a commitment on the part of the manufacturer or any subsequent vendor. They assume no responsibility or liability for any errors or inaccuracies that may appear in this publication nor are they in anyway responsible for any loss or damage resulting from the use (or misuse) of this publication.

This publication and any accompanying software may not, in whole or in part, be reproduced, translated, transmitted or reduced to any machine readable form without prior consent from the vendor, manufacturer or creators of this publication, except for copies kept by the user for backup purposes.

Brand and product names mentioned in this publication may or may not be copyrights and/or registered trademarks of their respective companies. They are mentioned for identification purposes only and are not intended as an endorsement of that product or its manufacturer.

©December 2002

Trademarks

This product incorporates copyright protection technology that is protected by method claims of certain U.S. patents and other intellectual property rights owned by Macrovision Corporation and other rights owners. Use of this copyright protection technology must be authorized by Macrovision Corporation, and is intended for home or other limited viewing uses only unless otherwise authorized by Macrovision Corporation. Reverse engineering or disassembly is prohibited.

Intel and Pentium are registered trademarks of Intel Corporation.
FCC Statement
(Federal Communications Commission)
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. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

• Re orient or relocate the receiving antenna.
• Increase the separation between the equipment and receiver.
• Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
• Consult the service representative or an experienced radio/TV technician for help.

Warning
Use only shielded cables to connect I/O devices to this equipment.
You are cautioned that changes or modifications not expressly approved by the manufacturer for compliance with the above standards could void your authority to operate the equipment.
IMPORTANT SAFETY INSTRUCTIONS

When using your telephone equipment, basic safety precautions should always be followed to reduce the risk of fire, electric shock and injury to persons, including the following:

1. Do not use this product near water, for example near a bath tub, wash bowl, kitchen sink or laundry tub, in a wet basement or near a swimming pool.
2. Avoid using a telephone (other than a cordless type) during an electrical storm. There may be a remote risk of electrical shock from lightning.
3. Do not use the telephone to report a gas leak in the vicinity of the leak.
4. Use only the power cord and batteries indicated in this manual. Do not dispose of batteries in a fire. They may explode. Check with local codes for possible special disposal instructions.

CAUTION

Always disconnect all telephone lines from the wall outlet before servicing or disassembling this equipment.

TO REDUCE THE RISK OF FIRE, USE ONLY NO. 26 AWG OR LARGER, TELECOMMUNICATION LINE CORD
Instructions for Care and Operation

The notebook computer is quite rugged, but it can be damaged. To prevent this, follow these suggestions:

1. **Don't drop it, or expose it to shock.** If the computer falls, the case and the components could be damaged.

   - Do not expose the computer to any shock or vibration.
   - Do not place it on an unstable surface.
   - Do not place anything heavy on the computer.

2. **Keep it dry, and don’t overheat it.** Keep the computer and power supply away from any kind of heating element. This is an electrical appliance. If water or any other liquid gets into it, the computer could be badly damaged.

   - Do not expose it to excessive heat or direct sunlight.
   - Do not leave it in a place where foreign matter or moisture may affect the system.
   - Don't use or store the computer in a humid environment.
   - Do not place the computer on any surface which will block the vents.
3. **Avoid interference.** Keep the computer away from high capacity transformers, electric motors, and other strong magnetic fields. These can hinder proper performance and damage your data.

4. **Follow the proper working procedures for the computer.** Shut the computer down properly and don’t forget to save your work. Remember to periodically save your data as data may be lost if the battery is depleted.

<table>
<thead>
<tr>
<th>Do not turn off the power until you properly shut down all programs.</th>
<th>Do not turn off any peripheral devices when the computer is on.</th>
<th>Do not disassemble the computer by yourself.</th>
<th>Perform routine maintenance on your computer.</th>
</tr>
</thead>
</table>

5. **Take care when using peripheral devices.**

| Use only approved brands of peripherals. | Unplug the power cord before attaching peripheral devices. |
Power Safety

The computer has specific power requirements:

- Only use a power adapter approved for use with this computer.
- Your AC adapter may be designed for international travel but it still requires a steady, uninterrupted power supply. If you are unsure of your local power specifications, consult your service representative or local power company.
- The power adapter may have either a 2-prong or a 3-prong grounded plug. The third prong is an important safety feature; do not defeat its purpose. If you do not have access to a compatible outlet, have a qualified electrician install one.
- When you want to unplug the power cord, be sure to disconnect it by the plug head, not by its wire.
- Make sure the socket and any extension cord(s) you use can support the total current load of all the connected devices.
- Before cleaning the computer, make sure it is disconnected from any external power supplies (i.e. AC adapter or car adapter).

<table>
<thead>
<tr>
<th>Do not plug in the power cord if you are wet.</th>
<th>Do not use the power cord if it is broken.</th>
<th>Do not place heavy objects on the power cord.</th>
</tr>
</thead>
</table>
Battery Precautions

• Only use batteries designed for this computer. The wrong battery type may explode, leak or damage the computer.
• Recharge the batteries using the notebook’s system. Incorrect recharging may make the battery explode.
• Do not try to repair a battery pack. Refer any battery pack repair or replacement to your service representative or qualified service personnel.
• Keep children away from, and promptly dispose of a damaged battery. Always dispose of batteries carefully. Batteries may explode or leak if exposed to fire, or improperly handled or discarded.
• Keep the battery away from metal appliances.
• Affix tape to the battery contacts before disposing of the battery.
• Do not touch the battery contacts with your hands or metal objects.

Battery Disposal

The product that you have purchased contains a rechargeable battery. The battery is recyclable. At the end of its useful life, under various state and local laws, it may be illegal to dispose of this battery into the municipal waste stream. Check with your local solid waste officials for details in your area for recycling options or proper disposal.

Caution

Danger of explosion if battery is incorrectly replaced. Replace only with the same or equivalent type recommended by the manufacturer. Discard used battery according to the manufacturer’s instructions.
Preface

Cleaning
Do not apply cleaner directly to the computer, use a soft clean cloth.
Do not use volatile (petroleum distillates) or abrasive cleaners on any part of the computer.

Servicing
Do not attempt to service the computer yourself. Doing so may violate your warranty and expose you and the computer to electric shock. Refer all servicing to authorized service personnel. Unplug the computer from the power supply. Then refer servicing to qualified service personnel under any of the following conditions:

- When the power cord or AC/DC adapter is damaged or frayed.
- If the computer has been exposed to rain or other liquids.
- If the computer does not work normally when you follow the operating instructions.
- If the computer has been dropped or damaged (do not touch the poisonous liquid if the LCD panel breaks).
- If there is an unusual odor, heat or smoke coming from your computer.
Travel Considerations

Packing
As you get ready for your trip, run through this list to make sure the system is ready to go:

1. Check that the battery pack and any spares are fully charged.
2. Power off the computer and peripherals.
3. Close the display panel and make sure it’s latched.
4. Disconnect the AC adapter and cables. Stow them in the carrying bag.
5. The AC adapter uses voltages from 100 to 240 volts so you won’t need a second voltage adapter. However, check with your travel agent to see if you need any socket adapters.
6. Put the notebook in its carrying bag and secure it with the bag’s straps.
7. If you’re taking any peripherals (e.g. a printer, mouse or digital camera), pack them and those devices’ adapters and/or cables.
8. Anticipate customs - Some jurisdictions may have import restrictions or require proof of ownership for both hardware and software. Make sure your “papers” are handy (it may be useful to have the computer in a sleep mode before going through customs).
On the Road

In addition to the general safety and maintenance suggestions in this preface, and Chapter 8: Troubleshooting, keep these points in mind:

**Hand-carry the notebook:** For security, don’t let it out of your sight. In some areas, computer theft is very common. Don’t check it with “normal” luggage. Baggage handlers may not be sufficiently careful. Avoid knocking the computer against hard objects.

**Beware of Electromagnetic fields:** Devices such as metal detectors & X-ray machines can damage the computer, hard disk, floppy disks, and other media. They may also destroy any stored data - Pass your computer and disks around the devices. Ask security officials to hand-inspect them (you may be asked to turn it on). **Note:** Some airports also scan luggage with these devices.

**Fly safely:** Most airlines have regulations about the use of computers and other electronic devices in flight. These restrictions are for your safety, follow them. If you stow the notebook in an overhead compartment, make sure it’s secure. Contents may shift and/or fall out when the compartment is opened.

**Get power where you can:** If an electrical outlet is available, use the AC adapter and keep your battery(ies) charged.

**Keep it dry:** If you move quickly from a cold to a warm location, water vapor can condense inside the computer. Wait a few minutes before turning it on so that any moisture can evaporate.
Developing Good Work Habits

Developing good work habits is important if you need to work in front of the computer for long periods of time. Improper work habits can result in discomfort or serious injury from repetitive strain to your hands, wrists or other joints. The following are some tips to reduce the strain:

- Adjust the height of the chair and/or desk so that the keyboard is at or slightly below the level of your elbow. Keep your forearms, wrists, and hands in a relaxed position.
- Your knees should be slightly higher than your hips. Place your feet flat on the floor or on a footrest if necessary.
- Use a chair with a back and adjust it to support your lower back comfortably.
- Sit straight so that your knees, hips and elbows form approximately 90-degree angles when you are working.
- Take periodic breaks if you are using the computer for long periods of time.

Remember to:

- Alter your posture frequently.
- Stretch and exercise your body several times a day.
- Take periodic breaks when you work at the computer for long periods of time. Frequent and short breaks are better than fewer and longer breaks.
Lighting
Proper lighting and comfortable display viewing angle can reduce eye strain and muscle fatigue in your neck and shoulders.

• Position the display to avoid glare or reflections from overhead lighting or outside sources of light.
• Keep the display screen clean and set the brightness and contrast to levels that allow you to see the screen clearly.
• Position the display directly in front of you at a comfortable viewing distance.
• Adjust the display viewing angle to find the best position.
Contents

Notice ................................................................. I
Trademarks ......................................................... I
FCC Statement .................................................. II
Instructions for Care and Operation ................ IV
Power Safety ................................................... VI
Battery Precautions ...................................... VII
Cleaning ........................................................ VIII
Servicing .......................................................... VIII
Travel Considerations .................................... IX

Introduction ........................................ 1-1
Overview ........................................................ 1-1
Advanced Users .............................................. 1-1
Beginners and Not-So-Advanced Users ........... 1-1
Warning Boxes ............................................... 1-2
Not Included .................................................... 1-2
System Software ............................................. 1-2
Quick Start Guide ........................................... 1-3
System Map .................................................... 1-4
Getting to Know Your Computer ..................... 1-4
Model Types .................................................... 1-5
Mobile or Desktop CPU ................................. 1-5
USB Port Type ................................................ 1-5

Top View ......................................................... 1-7
Top View with LCD Panel Open .................... 1-8
LCD Panel .................................................... 1-9
Microphone .................................................... 1-9
Close Cover Switch ....................................... 1-9
LED Status Indicators .................................... 1-9
Hot-Key Buttons ........................................... 1-10
Power Button ................................................ 1-10
Keyboard ...................................................... 1-11
Stereo Speakers .............................................. 1-11
TouchPad & Buttons ...................................... 1-11
LED Power Indicators .................................... 1-11

Left Side View ............................................... 1-12
S/PDIF Out Port / Microphone-In Jack ............ 1-12
Headphone-Out Jack ..................................... 1-13
Volume Control Knob ..................................... 1-13
PC Card Slot ................................................ 1-14
Infrared Transceiver ...................................... 1-14
3.5" FDD (Floppy Disk Drive) ......................... 1-14

Right Side View .............................................. 1-15
Security Lock Slot .......................................... 1-15
CD Device Bay .............................................. 1-15

Rear View ...................................................... 1-17
DC-In Jack .................................................... 1-17
PS/2 Type Port .............................................. 1-18
Preface

Printer/Parallel Port ......................................1-18
RJ-11 Phone Jack .........................................1-18
Vent ..............................................................1-18
External Monitor (CRT) Port .......................1-19
2 * USB Ports ...............................................1-19
S-Video-Out Port ..........................................1-19
IEEE 1394 Port .............................................1-20
RJ-45 LAN Jack ...........................................1-20
Bottom View ..........................................................1-21
Vent ..............................................................1-21
Battery ..........................................................1-21

Using The Computer  .........................2-1
Overview .........................................................2-1
The Power Sources ...................................................2-2
   AC Adapter .........................................................2-2
   Battery ..........................................................2-2
   Recharging the Battery with the AC Adapter ....2-3
   Proper handling of the Battery Pack ........2-3
Turning on the Computer .........................................2-4
LED Indicators ..............................................2-5
   LED Status & Power Indicators ...........2-6
The Hard Disk Drive ........................................2-7
The Floppy Disk Drive (FDD) ......................2-8
   Inserting/Removing Floppy Disks ..........2-8
   The CD/DVD Device ........................................2-9
      Loading Discs ............................................2-9
      Handling CDs or DVDs .......................2-10
      DVD Regional Codes ..................................2-11
      Changing DVD Regional Codes ..........2-12
The PC Card Slot ...........................................2-13
      Inserting and Removing PC Cards ..........2-13
Hot-Keys .........................................................2-14
   Hot-Key Buttons ...........................................2-14
   Programming the Hot-Keys .................2-14
Function Keys and Numeric Keypad ..........2-16
   Function Keys ............................................2-16
   Numeric Keypad ...........................................2-16
TouchPad and Buttons/Mouse .............2-18
   Configuring the TouchPad and Buttons ...2-18
Adding a Printer .............................................2-20
   USB Printer ..............................................2-20
      Install Instructions: .........................2-20
   Parallel Printer ...........................................2-21
      Install Instructions: .........................2-21

Advanced Controls  .........................3-1
Overview .........................................................3-1
Advanced Video Controls ..................3-2
   Opening the LCD .................................3-2
Preface

Processor ............................................................. A-1
Core Logic ........................................................... A-1
Structure .............................................................. A-2
Security .............................................................. A-2
Memory ............................................................... A-2
BIOS ................................................................. A-2
Display ............................................................... A-2
LCD Options ....................................................... A-3
Storage Devices ................................................... A-3
Audio ................................................................. A-3
Keyboard ............................................................. A-3
PC Card ............................................................... A-3
Interface ............................................................. A-4
Communication ................................................... A-4
Power Management ............................................. A-4
Power ................................................................. A-5
Indicators ............................................................ A-5
Environmental Spec ............................................ A-5
Physical Dimensions ........................................... A-5
Weight ............................................................... A-5
Optional ............................................................. A-5
Preface
Chapter 1: Introduction

Overview
This manual refers to the hardware and essential software required to run your notebook computer. Depending on how your system is configured, some or all of the features described may already be set up. This chapter covers:

- The Manual — how to use it
- System Map — navigating around your computer

Advanced Users
If you are an advanced user you may skip over most of this manual. However you may find it useful to refer to the “What to Install” on page 4 - 2, “BIOS Utilities” on page 5 - 1 and “Upgrading The Computer” on page 6 - 1. You may also find the notes marked with a of interest to you.

Beginners and Not-So-Advanced Users
If you are new to computers (or do not have an advanced knowledge of them) then you should try to look through all the documentation. Do not worry if you do not understand everything the first time. Keep this manual nearby and refer to it to learn as you go. You may find it useful to refer to the notes marked with a as indicated in the margin.
Warning Boxes
No matter what your level please pay careful attention to the warning and safety information indicated by the symbol. Also please note the safety and handling instructions as indicated in the Preface.

Not Included
Operating Systems (e.g. Windows 2000 Professional, Windows XP etc.) have their own manuals, as do applications (e.g. word processing, spreadsheet and database programs). If you have questions about the operating systems or programs then please consult the appropriate manuals.

System Software
Your computer may already come with system software pre-installed. Where this is not the case, or where you are re-configuring your computer for a different system, you will find this manual refers to the following operating systems:

- Microsoft Windows 2000
- Microsoft Windows XP
Quick Start Guide

This guide assumes that you are already familiar with computers and can tell at a glance what and where all the key components are. If you are not that comfortable with this type of device, then please refer to the following pages, which give an overview of the system.

It is still best to review these steps, before taking any action. If there is anything you are not sure about, then please refer to the appropriate chapter before continuing.

Unless you need to install an operating system, your computer should be ready to work right out of the box. Before you begin please follow the safety instructions in the Preface.

1. Remove all packing materials, CDs/DVDs, floppy disks, and any PC Cards.
2. Securely attach any peripherals you want to use with the notebook (e.g. keyboard and mouse) to their ports.
3. Attach the AC adapter to the DC-in jack at the rear of the computer (see “Rear View” on page 1 - 17), then plug the AC power cord into an outlet, and connect the AC power cord to the AC adapter.
4. Raise the lid/LCD to a comfortable viewing angle.
5. Press the power button to turn “on”.

Peripheral Devices

Please note that peripherals (printers, digital cameras, etc.) which attach to your computer by either USB or IEEE1394 ports may be connected after Windows is up and running. All other peripherals must be connected before you turn on the system.
System Map
Your computer has a lot of built-in features. Most of these are enabled by your operating system. Further explanations of the various subsystems are covered in the chapter or pages indicated.

Getting to Know Your Computer
The following graphics will help you to become familiar with the basic functions, and to learn the location of the various ports and components of your computer.
Model Types

In addition to the two external designs mentioned on page 1-4, this notebook series includes three model types according to their specifications (a total of six different combinations). Table 1 - 1 on page 1 - 6 will help you identify your model type:

Mobile or Desktop CPU

The computer designs incorporate both mobile and desktop CPUs. To tell if you have a mobile or desktop CPU model, look at the DC output rating on the bottom of the AC adapter:

- Mobile: DC-Output 20V, 3.25A, 65w
- Desktop: DC-Output 20V, 4.5A, 90w

(You can also check the heat sink type as pictured in Figure 6 - 2b of “HDD Removal” on page 6 - 5 to differentiate between the desktop and mobile CPU models.)

USB Port Type

Only Model A supports USB 2.0 and requires the driver to be installed (see “Install Procedure” on page 4 - 3), while Models B & C are USB 1.1 compliant.

AC Adapter Warning

The AC adapter rated at 90w (for desktop CPU) will power a mobile CPU. However, the AC adapter rated at 65w (for mobile CPU) will NOT power a desktop CPU.
### Table 1 - 1
Model Differences

<table>
<thead>
<tr>
<th>Feature</th>
<th>Model A</th>
<th>Model B</th>
<th>Model C</th>
</tr>
</thead>
<tbody>
<tr>
<td>CPUs Supported</td>
<td>Mobile or Desktop</td>
<td>Mobile or Desktop</td>
<td>Mobile or Desktop</td>
</tr>
<tr>
<td>USB Port Type</td>
<td>2.0 (install drivers - see Table 4 - 1 on page 4 - 3 )</td>
<td>1.1</td>
<td>1.1</td>
</tr>
<tr>
<td>IEEE 1394 Port</td>
<td>Yes</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>PC Card Port</td>
<td>Yes (install drivers - see Table 4 - 1 on page 4 - 3 )</td>
<td>Yes (install drivers - see Table 4 - 1 on page 4 - 3 )</td>
<td>No</td>
</tr>
<tr>
<td>3.5” FDD</td>
<td>Yes</td>
<td>Yes</td>
<td>Optional</td>
</tr>
<tr>
<td>Infrared Transceiver</td>
<td>Yes</td>
<td>Yes</td>
<td>No</td>
</tr>
</tbody>
</table>
To open the LCD display:

1. Place the computer on a stable surface.
2. Move the LCD latch to the right, and hold it to release the top cover.
3. Lift the top cover to reveal the LCD panel and keyboard.
4. Adjust the LCD panel to a comfortable viewing angle.
Introduction

Figure 1 - 3
Top View with LCD Panel Open

1. LCD Panel
2. Built-In Microphone
3. Close Cover Switch
4. LED Status Indicators
5. Hot-Key buttons
6. Power Button
7. Keyboard
8. Speakers
9. TouchPad and Buttons
10. LED Power Indicators

1 - 8 Top View
LCD Panel
The computer comes with a 13.3" OR a 14.1" TFT (Liquid Crystal Display) screen, depending upon the configuration purchased. See “LCD Options” on page A - 3 for details.

Microphone
Record on your notebook computer with the built-in microphone.

Close Cover Switch
This switch acts as a sensor to tell when the LCD Panel is closed. When this LCD cover sensor is activated the default setting of your operating system’s power scheme sends the computer into a power saving state (see Figure 3 - 14 on page 3 - 22).

LED Status Indicators
These display the system’s operational status. Refer to “LED Status & Power Indicators” on page 2 - 6 for more information on what the lights mean.
Hot-Key Buttons
The three hot-keys allow you instant access to your default Internet browser, default e-mail program, and an application of your choice. To learn how to set the buttons, see “Hot-Keys” on page 2 - 14.

Power Button
Press this button to turn your computer on or off (see “Turning on the Computer” on page 2 - 4). This button may also be used as a suspend/resume key, once configured as such in the power management control panel of your operating system (see “Configuring the Power Button” on page 3 - 22).

Shutdown
Please note that you should always shut your computer down by choosing the Shut Down/Turn Off Computer command from the Start menu in Windows. This will help prevent hard disk or system problems.

Forced Off
If the system “hangs”, and the Ctrl + Alt + Del key combination doesn’t work, press the power button for 4 seconds to force the system to turn itself off.
Keyboard
The computer has a “Win Key” keyboard including a numeric keypad. It has the same features as a full-sized desktop keyboard and can easily be replaced with a different language keyboard should you desire.

Stereo Speakers
Two built-in speakers provide rich, stereo sound.

TouchPad & Buttons
The pointing device features a sensitive glide pad for precise movements. It functions the same way as a two-button mouse. The right TouchPad button is the same as the right mouse button; the left TouchPad button is the same as the left mouse button (see “Configuring the TouchPad and Buttons” on page 2-18).

LED Power Indicators
These indicators display the system power status, and battery status of the computer.
You can use this port for S/PDIF (Sony/Philips Digital Interface Format) output, and to record on your notebook computer with an external microphone. The S/PDIF Out Port allows you to connect your DVD-capable PC to a Dolby AC-3 compatible receiver for “5.1” or ‘dts’ surround sound. **You must use the Y-cable provided to enable these functions** (S/PDIF connection is to the longer end of the cable).
Headphone-Out Jack
Headphones may be connected through this jack. **Note:** Set your system’s volume to a reduced level before connecting to this jack.

Volume Control Knob
Adjust the audio volume with this knob. The audio volume can also be adjusted in the operating system.

---

**Sound Volume Adjustment**
How high the sound volume can be set using the volume control knob depends on the setting of the volume control within *Windows*. Click the *Speaker* icon on the taskbar to check the setting.

All peripherals must be connected before you turn on the system.
PC Card Slot

For Models A & B only - This is a Type-II 3.3V/5V PC card slot (also previously referred to as PCMCIA) supporting CardBus. Refer to “The PC Card Slot” on page 2-13 for more information.

Infrared Transceiver

For Models A & B only - The infrared transceiver enables communication between the computer and another similarly equipped device, and is 4M bps FIR, IrDA 1.1 compliant. For further information please refer to the manual of the device you wish to connect (see “Configuring the Infrared Settings for FIR” on page 3-25).

3.5" FDD (Floppy Disk Drive)

Optional for Model C - Your computer comes with a fixed 1.44 MB, 3.5" floppy disk drive module (see “Left Side View” on page 1-12). For more information, please refer to “The Floppy Disk Drive (FDD)” on page 2-8.
Right Side View

Security Lock Slot
To prevent possible theft, a Kensington-type lock can be attached to this slot. Locks can be purchased at any computer store.

Vent
This enables airflow to prevent the notebook from overheating.

CD Device Bay
A 5.25" CD-ROM drive, or DVD-ROM drive, or CD-RW, or Combination CD-RW and DVD-ROM Drive (12.7mm height) is standard depending on the model you purchased. For more information on using the drive please refer to “The CD/DVD Device” on page 2 - 9.

Overheating
To prevent your computer from overheating make sure nothing blocks the vent while the computer is in use.
CD Emergency Eject

If you need to manually eject a CD/DVD (e.g. due to an unexpected power interruption) you may push the end of a straightened paper clip into the emergency eject hole. Do not use a sharpened pencil or similar object that may break and become lodged in the hole.

Figure 1 - 6
CD Device

1. CD device label to indicate which type
2. Open button
3. Busy Indicator
4. Emergency eject hole
Rear View

DC-In Jack
Plug the supplied AC adapter into this jack to power your notebook.

Overheating
To prevent your computer from overheating make sure nothing blocks the vent/fan outlet while the computer is in use.
**Introduction**

**PS/2 Type Port**
Connect an external PS/2 type mouse or keyboard to this port. You can use a “Y” splitter if you want to attach both.

**Printer/Parallel Port**
This port supports ECP (Extended Capabilities Port) and EPP (Enhanced Parallel Port) 1.7/1.9 modes.

**RJ-11 Phone Jack**
This port connects to the built-in modem. You may plug the telephone line directly into this RJ-11 telephone connection.
*Note*: Broadband (e.g. ADSL) modems usually connect to the LAN port.

**Vent**
This enables airflow to prevent the notebook from overheating.
External Monitor (CRT) Port
Connect an external VGA monitor (CRT) to this port to allow dual video or simultaneous display on the LCD and external VGA monitor (see “Display Devices” on page 3 - 8).

2 * USB Ports
Depending on the model you purchase, the USB ports which come with your notebook can be either **USB 1.1** compatible or **USB 2.0** compatible. USB 1.1 is for low-speed peripherals such as keyboards, mice or scanners while USB 2.0 is for high-speed peripherals such as external HDDs, digital video cameras or high-speed scanners and all USB 1.1 compliant devices. Both support device hot-pluggability (Devices can be plugged into the computer, and unplugged from the computer, without the need to turn the system off). **Only Model A type computers in this series of notebooks support USB 2.0.** For help on identifying your model of computer, see “Model Differences” on page 1 - 6. You may need to install a driver for USB 2.0 (see “What to Install” on page 4 - 2).

S-Video-Out Port
Connect your television to your computer and view DVDs, VCDs or anything else your computer can display. You will need an S-Video cable to make the connection. Enable this port from the video driver controls (see “TV Display” on page 3 - 16).
IEEE 1394 Port

*For Models A & B only* - This allows high speed connection to various peripheral devices, e.g. external disk drives and digital cameras (*see note below*).

IEEE 1394

The IEEE 1394 port only supports **SELF POWERED** IEEE 1394 devices.

RJ-45 LAN Jack

This port supports LAN (Network) functions.

*Note:* Broadband (e.g. ADSL) modems usually connect to the LAN port.
Bottom View

Vent
This enables airflow to prevent the notebook from overheating.

Battery
See “Battery” on page 2 - 2 for instructions on battery use and care.

Figure 1 - 8

Bottom View

1. RAM Cover
2. Vent
3. Battery

CPU
The CPU is not a user serviceable part. Opening the CPU compartment, or accessing the CPU in any way, may violate your warranty.

Overheating
To prevent your computer from overheating make sure nothing blocks the vent while the computer is in use.
Introduction
Chapter 2: Using The Computer

Overview
To learn more about using your computer, please read this chapter.

This chapter includes:

- The Power Sources
- Turning on the Computer
- The LED Indicators
- The Hard Disk Drive
- The Floppy Disk Drive
- The CD/DVD Device
- The PC Card Slot
- The Hot-Keys
- The Function Keys & Numeric Keypad
- The TouchPad & Buttons/Mouse
- Printer (general guidelines)
The Power Sources

The computer can be powered by either an AC adapter or a battery pack.

**AC Adapter**

Use only the AC adapter that comes with your computer. The wrong type of AC adapter will damage the computer and its components.

1. Attach the AC adapter to the DC-in jack at the rear of the computer.
2. Plug the AC power cord into an outlet, then connect the AC power cord to the AC adapter.
3. Raise the lid/LCD to a comfortable viewing angle.
4. Press the power button to turn “on”.

**Battery**

The battery allows you to use your notebook computer while you are on the road or an electrical outlet is unavailable. Battery life varies depending on the applications and the configuration you're using. To increase battery life, let the battery discharge completely before recharging.

We recommend leaving the battery inside the notebook at all times. For more information on the battery, please refer to “Battery Information” on page 3 - 23.
Recharging the Battery with the AC Adapter
The battery pack automatically recharges when the AC adapter is attached and plugged into an electrical outlet. If the computer is powered on, and in use, it will take several hours to fully recharge the battery. When the computer is turned off but plugged into an electrical outlet, battery charge time is less (refer to “LED Indicators” on page 2-5 for information on the battery charge status).

Proper handling of the Battery Pack
- DO NOT disassemble the battery pack under any circumstances
- DO NOT expose the battery to fire or high temperatures, it may explode
- DO NOT connect the metal terminals (+, -) to each other (for more information on how to maintain the battery pack, refer to “Battery Information” on page 3-23)

Low Battery Warning
When the battery is critically low, immediately connect the AC adapter to the computer or save your work, otherwise, the unsaved data will be lost when the power is depleted.
Turning on the Computer

Now you are ready to begin using your computer. To turn it on simply press the power button on the front panel.

When the computer is on, you can use the power button as a Standby/Hibernate/Shutdown hot-key button when it is pressed for less than 4 seconds (pressing and holding the power button for longer than this will shut the computer down). Use Power Options in the Windows control panel to configure this feature.

Forced Off

If the system "hangs" and the Ctrl + Alt + Del key combination doesn’t work, press the power button for 4 seconds, or longer, to force the system to turn itself off.

Figure 2 - 1
Power Button

Shutdown

Always shut your computer down by using the Shut Down/Turn Off Computer command from the Start menu in Windows.
LED Indicators

There are two sets of LED indicators (LED Status Indicators 1 and LED Power Indicators 2) on your computer that will display helpful information about the current status of the computer. The LED Power Indicators are also visible when the top of your computer is closed.

Figure 2 - 2
LED Indicators

Num Lock
For more information on the number lock feature see “Function Keys and Numeric Keypad” on page 2 - 16.
### LED Status & Power Indicators

<table>
<thead>
<tr>
<th>Icon</th>
<th>Color</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>![Floppy Disk Drive Icon]</td>
<td>Green</td>
<td>Floppy Disk Drive is being accessed</td>
</tr>
<tr>
<td>![Hard Auto Icon]</td>
<td>Green</td>
<td>Hard disk/CD Device is being accessed</td>
</tr>
<tr>
<td>![Number Lock Icon]</td>
<td>Green</td>
<td>Number Lock is activated</td>
</tr>
<tr>
<td>![Caps Lock Icon]</td>
<td>Green</td>
<td>Caps Lock is activated</td>
</tr>
<tr>
<td>![Scroll Lock Icon]</td>
<td>Green</td>
<td>Scroll Lock is activated (to activate press Fn &amp; ScrLk)</td>
</tr>
<tr>
<td>![Computer Power Icon]</td>
<td>Green</td>
<td>The computer is turned on</td>
</tr>
<tr>
<td>![Suspend Mode Icon]</td>
<td>Blinking Green</td>
<td>The system has entered the configured suspend mode</td>
</tr>
<tr>
<td>![Battery Icon]</td>
<td>No Light</td>
<td>Battery power is being used</td>
</tr>
<tr>
<td>![Battery Icon]</td>
<td>Yellow</td>
<td>AC power is plugged in and battery power is full</td>
</tr>
<tr>
<td>![Battery Icon]</td>
<td>Blinking Yellow</td>
<td>The battery is being charged</td>
</tr>
<tr>
<td>![Battery Icon]</td>
<td>No Light</td>
<td>Battery power is being used</td>
</tr>
<tr>
<td>![Battery Icon]</td>
<td>Yellow</td>
<td>Battery power is full</td>
</tr>
<tr>
<td>![Battery Icon]</td>
<td>Blinking Yellow</td>
<td>Battery power is critically low</td>
</tr>
</tbody>
</table>
The Hard Disk Drive

The hard disk drive is used to store your data in the computer. The hard disk is mounted in a removable case and can be taken out to accommodate other 2.5" IDE hard disk drives with a height of 9.5/12.7 mm. The system supports DMA mode 2 / PIO mode 4 / ATA-33/66/100.

The hard disk is accessible from the keyboard of your computer. Further details on removing and inserting the hard disk are available in “Upgrading the Hard Disk Drive” on page 6 - 4.
The Floppy Disk Drive (FDD)

Optional for Model C - The computer is equipped with a fixed 1.44 MB, 3.5" floppy disk drive module. By default it is drive “A:” and can be used as a boot device if properly set in the BIOS (refer to “Boot Menu” on page 5 - 16).

Inserting/Removing Floppy Disks
When using the floppy drive, always insert your floppy diskette with the label-side facing up. To remove the inserted diskette, press the eject button on the top-right corner of the floppy drive.

Media Warning
Don’t try to remove a floppy disk while the system is accessing it. This may cause the computer to “crash” and damage your data.
The CD/DVD Device

There are bays for a combination of a CD-ROM, or DVD-ROM, or CD-RW, or Combination CD-RW and DVD-ROM drive depending on the model you purchased. You may alternatively have a hard disk or IP sharing module in the modular drive bay (Bay Two). The CD Device is usually labeled drive D: and may be used as a boot device if properly set in the BIOS ("Boot Menu" on page 5 - 16).

Loading Discs

To insert a CD/DVD, press the open button and carefully place a CD/DVD onto the disc tray with label-side facing up (use just enough force for the disc to click onto the tray’s spindle). Gently push the CD/DVD tray in until its lock "clicks" and you are ready to start. The Busy Indicator will light up while data is being accessed, or while an audio/video CD, or DVD, is playing. If power is unexpectedly interrupted, insert an object such as a straightened paper clip into the emergency eject hole to open the tray.

Sound Volume Adjustment

How high the sound volume can be set depends on the setting of the volume control within Windows. Click the Speaker icon on the taskbar to check the setting.

All peripherals must be connected before you turn on the system.
Handling CDs or DVDs
Proper handling of your CDs/DVDs will prevent them from being damaged. Please follow the advice below to make sure that the data stored on your CD-ROMs/DVD-ROMs can be accessed.

Remember to:
• Hold the CD or DVD by the edges; do not touch the surface of the disc.
• Use a clean, soft, dry cloth to remove dust or fingerprints.
• Do not write on the surface with a pen.
• Do not attach paper or other materials to the surface of the disc.
• Do not store or place the CD or DVD in high-temperature areas.
• Do not use benzene, thinner, or other cleaners to clean the CD or DVD.
• Do not bend the CD or DVD.
• Do not drop or subject the CD or DVD to shock.

CD Emergency Eject
If you need to manually eject a CD (e.g. due to an unexpected power interruption) you may push the end of a straightened paper clip into the emergency eject hole. However please do NOT use a sharpened pencil or similar object that may break and become lodged in the hole.
DVD Regional Codes

DVD region detection is device dependent, not OS-dependent. You can select your module’s region code 5 times. The fifth selection is permanent. This cannot be altered even if you change your operating system or you use the module in another computer.

Figure 2 - 4

DVD Regional Codes (Windows XP)
Using The Computer

Changing DVD Regional Codes
Go to the Control Panel in Windows XP/Windows 2000 and double-click System > Hardware (tab), click Device Manager, then click the + next to DVD/CD-ROM drives. Double-click on the DVD-ROM device to bring up the Properties menu, and select the DVD Region (tab) to bring up the control panel as seen in “DVD Regional Codes (Windows XP)” on page 2 - 11.

<table>
<thead>
<tr>
<th>Region</th>
<th>Geographical Location</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>USA, Canada</td>
</tr>
<tr>
<td>2</td>
<td>Western Europe, Japan, South Africa, Middle East &amp; Egypt</td>
</tr>
<tr>
<td>3</td>
<td>South-East Asia, Taiwan, South Korea, The Philippines, Indonesia, Hong Kong</td>
</tr>
<tr>
<td>4</td>
<td>South &amp; Central America, Mexico, Australia, New Zealand</td>
</tr>
<tr>
<td>5</td>
<td>N Korea, Russia, Eastern Europe, India &amp; Most of Africa</td>
</tr>
<tr>
<td>6</td>
<td>China</td>
</tr>
</tbody>
</table>
The PC Card Slot

Only Models A & B are equipped with a PCMCIA 3.3V/5V slot for one Type II PC Card. Make sure you install the driver for the PC Card (see “What to Install” on page 4-2).

Inserting and Removing PC Cards

- Align the PC Card with the slot 1 and push it in until it locks into place.
- To remove a PC Card, simply press the eject button 2 next to the slot.

Figure 2-5
PC Card Slot
Using The Computer

2 - 14 Hot-Keys

Hot-Keys

The computer has three Hot-Key buttons on the computer, and the function key combinations on the keyboard.

Hot-Key Buttons

These keys access the internet, e-mail or a user-defined application with one quick button press. To use the “user-defined Hot-Key”, you must install the hot-key driver. Refer to "What to Install" on page 4 - 2 for driver installation steps.

Programming the Hot-Keys

<table>
<thead>
<tr>
<th>Hot-Key</th>
<th>Function</th>
</tr>
</thead>
<tbody>
<tr>
<td>☭</td>
<td>Activate the default e-mail program</td>
</tr>
<tr>
<td>☭</td>
<td>Activate the default Internet browser</td>
</tr>
<tr>
<td>☭</td>
<td>Activate the user specified application e.g. Microsoft Word or Excel</td>
</tr>
</tbody>
</table>

After installing the Hot-Key driver (see “What to Install” on page 4 - 2), you can configure or change the settings.

Table 2 - 3
Hot-Keys

Non-Default E-Mail and Browser Programs

It is possible to configure both the email and browser Hot-Keys to open non-default mail and browser programs. Follow the procedure outlined on page 2 - 15 but highlight either the Browser or Email in step 2. Choose Custom to browse to the program of your choice as per the remaining instructions. The Hot-Key will now open this program.
To configure and specify an application for **Application 1** (the default **Hot-Key** setting is for the **CD Player** application), you must follow the instructions below.

1. **Right click** the Hot-Key driver icon on the **taskbar** and the following menu will appear.

2. **Select Setup** from the menu and scroll to **Application 1** and press **Enter**.

3. An **Open** dialog box will appear on the screen.
4. **Browse** to the directory where the desired application.exe (see the sidebar) program exists.
5. **Double-Click** on the program file or choose **Open**.
6. The Hot-Key is now set to execute that program.

---

**Application.exe**

You will need to locate the actual **application executable (.exe) file**, not just the **shortcut**. To find the application right-click its **shortcut** on the desktop and click **Properties**. Click the **shortcut** (tab) and see where the executable file is located by clicking the **Find Target** (button).
Function Keys and Numeric Keypad

Function Keys

On the bottom-left of the keyboard is the **Fn** key or Function key. The **Fn** key allows you to change operational features instantly. To use the functions press and hold the **Fn** key, then press the appropriate function key (F3, F5, etc.) located on your keyboard (see “Function Keys & Numeric Keypad” on page 2 - 17).

Numeric Keypad

The keyboard has an embedded numerical keypad for easy numeric data input (see “Keyboard” on page 2 - 17). The numeric keys are highlighted by a blue typeface.

Activate the **Number Lock** feature by pressing the **Num Lock** key at the top right of the keyboard. You may check if **Num Lock** is enabled or not by looking at the LED status indicators (see “LED Indicators” on page 2 - 5). If **Num Lock** is enabled, you do not need to hold the **Fn** key down to type a number from the numeric keypad.

Activate **Scroll Lock** by pressing and holding the **Fn key**, then press the **Scr-Lk** key at the top right of the keyboard.
### Using The Computer

#### Function Keys and Numeric Keypad

<table>
<thead>
<tr>
<th>Keys</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Fn</td>
</tr>
<tr>
<td>2</td>
<td>Fn + Esc</td>
</tr>
<tr>
<td>3</td>
<td>Fn + F3</td>
</tr>
<tr>
<td>4</td>
<td>Fn + F5</td>
</tr>
<tr>
<td>5</td>
<td>Fn + F6</td>
</tr>
<tr>
<td>6</td>
<td>Fn + F9</td>
</tr>
<tr>
<td>7</td>
<td>Fn + F10</td>
</tr>
</tbody>
</table>

**Figure 2 - 6**

*Keyboard*

**Special Characters**

Some software applications allow the number-keys to be used with **Alt** to produce special characters. These special characters can only be produced by using the numeric keypad. Regular number keys (in the upper row of the keyboard) will not work. Make sure that **Num Lock** is on.

**Table 2 - 4**

*Function Keys & Numeric Keypad*
Using The Computer

TouchPad and Buttons/Mouse

The TouchPad is a device for pointing (controlling input positioning) on the computer’s display screen by sensing finger movement, and downward pressure. It is an alternative to the mouse, however, you can also add a mouse to your computer either through the PS/2 interface, or one of the USB ports.

The TouchPad buttons function in much the same way as a two-button mouse (see “Mouse Properties” on page 2 - 19 for screen examples).

Configuring the TouchPad and Buttons

Once you have installed the TouchPad drivers (see “What to Install” on page 4 - 2) you can configure the functions by double-clicking the TouchPad driver icon in the taskbar, or by going to the Mouse control panel in Windows (Start menu and point to Settings and click Control Panel, then double-click the Mouse icon). In Windows XP the Mouse control panel is in the Printers and Other Hardware Category.

Right-click the taskbar icon and select Easy Launcher to run programs from this menu. To add programs to the menu, see “Easy Launcher” on page 2 - 19 for details.
Easy Launcher

You can add programs to the menu from the Others tab in the Mouse control panel.

Click on Settings for Easy Launcher to get the settings options.

Click the New button and browse to any programs you wish to add to the menu.

Restart the computer and run Easy Launcher by right-clicking the icon in the taskbar.

Click Close or Minimize to quit the menu.

Figure 2 - 7
Mouse Properties
Adding a Printer

The most commonly used peripheral is a printer. The following conventions will help you to add a printer, however it is always best to refer to the printer manual for specific instructions and configuration options.

USB Printer

Most new printers have a USB interface connection. You may use any of the USB ports on your computer to connect the printer.

Install Instructions:
1. Set up the printer according to its instructions (unpacking, paper tray, toner/ink cartridge etc.).
2. Turn ON the computer.
3. Turn ON the printer.
4. Connect the printer’s USB cable to one of the USB ports on the computer.
5. Windows will identify the printer and either load one of its own drivers or ask you to supply one. Follow the on-screen instructions.
**Parallel Printer**

This is still the most common type of printer.

**Install Instructions:**

1. Set up the printer according to its instructions (unpacking, paper tray, toner/ink cartridge etc.).
2. Attach the parallel cable to the printer.
3. Connect the printer’s parallel cable to the parallel port at the rear of the computer (see “Rear View” on page 1 - 17).
4. Turn ON the printer.
5. Turn ON the computer.
6. *Windows* will identify the printer and either load one of its own drivers or ask you to supply one. Follow the on-screen instructions.
Chapter 3: Advanced Controls

Overview

This chapter covers:

- Advanced video controls
- Power and battery management features

Note: All operating system pictures in this manual are from the Microsoft Windows XP OS.

Drivers

You are unable to use most advanced controls until the necessary drivers and utilities are properly installed. If your system hasn't been properly configured (your service representative may have already done that for you), refer to “What to Install” on page 4-2 for installation instructions.
Advanced Video Controls

This section is about making adjustments for the LCD, and switching display devices.

Opening the LCD

As you open the lid, adjust it so you can look at the screen straight on, without any glare. If necessary, adjust the brightness controls (Fn + F9/F10).

Figure 3 - 1
Brightness Controls
Video Driver Controls

The video interface lets you change the screen resolution and color output to whatever is most comfortable/efficient for you. This is a matter of hardware, video memory and the driver for your operating system. The driver interface shows the available options (see “Display” on page A - 2 for the LCD options).

You can switch display devices from the Display Properties control panel in Windows as long as the video driver is installed (see “What to Install” on page 4 - 2).

Making Adjustments for the Display

The higher the resolution you set the LCD for, the more information the LCD can display on screen. To change the LCD’s resolution and color depth go to the Display Properties control panel:

1. Click Start, point to Settings and click Control Panel (if you are in Category View choose Appearance and Themes).
2. Double-click Display (icon).
3. In the Display Properties dialog box, click Settings (tab).
4. In Screen area/resolution, move the slider to the preferred setting for resolution (see 1 in Figure 3 - 2 on page 3 - 4).
5. In Colors/Color quality, click the arrow and scroll to the preferred setting for color depth (see 2 in Figure 3 - 2 on page 3 - 4).

Screen Resolution/Screen Area Note

You may set the resolution to a higher setting than the panel supports, however this will require you to pan (scroll) around the screen as the display area will be larger than what you can see on the LCD.
When the **Display Properties** control panel is open, click the **Advanced** (button) to bring up the options tabs. Clicking through these tabs allows you to make any video adjustments you require.
SiS Utility Tray/Manager

With the video driver installed additional control panels are available. To get to the control panels do the following:

1. Click Start, point to Settings and click Control Panel (if you are in Category View choose Appearance and Themes).
2. Double-click Display (icon).
3. In the Display Properties dialog box, click Settings (tab).
4. Click Advanced (button), and click SiS Utility Manager (tab).
5. Choose the setting you wish to change.

OR

1. Right-Click the SiS Utility Tray icon in the taskbar.
2. Point to Display Property and choose the setting you wish to change.

Figure 3 - 3
SiS Utility Tray/Manager
Advanced Controls

You may make changes to the Driver Mode Settings, Video Settings, Gamma Correction Settings and view General Information by clicking the appropriate tab and adjusting the setting. Some screen examples are shown below.

Figure 3 - 4
SiS Utility Tray/Manager Setting Tabs

3 - 6 Video Driver Controls
Video Memory

The computer does not have dedicated video memory. It makes use of a portion of system memory as video memory. By default, the video memory is set to 32MB. You may also set it to 16MB or 64MB (maximum) in the BIOS (see “Embedded Share Memory (Advanced Menu>Advanced Chipset Control)” on page 5 - 11). Bear in mind that the more overall memory is used as video memory, the less is available as system memory. This memory is allocated from your system memory e.g. if your computer has 128MB of memory (RAM), then 32MB will be allocated to video leaving the system with 96MB of RAM.
Display Devices

Besides the built-in LCD, you can also use an **external VGA monitor** (CRT) or TV as your display device. A VGA monitor connects to the external monitor (CRT) port ①, a TV to the S-Video out port ②, as seen in Figure 3 - 5. The display options are as follows:

1. The built-in LCD (**Single**).
2. A VGA monitor connected to the external monitor (CRT) port at the rear of the computer (**Single**).
3. A TV connected to the S-Video out port at the rear of the computer (**Single**).
4. The built-in LCD and a VGA monitor showing the same image (**Mirror**).
5. The built-in LCD and a TV showing the same image (**Mirror**).
6. The built-in LCD and a VGA monitor showing different images (**Multimonitor**).
7. The built-in LCD and a TV showing different images (**Multimonitor**).
8. A VGA monitor and a TV showing different images (**Multimonitor**) - see sidebar note.

The table on the following page shows the available options.

---

**Figure 3 - 5**

External Monitor & S-Video Out Ports
## Display Options

<table>
<thead>
<tr>
<th>Display Mode</th>
<th>Windows XP</th>
<th>Windows 2000</th>
</tr>
</thead>
<tbody>
<tr>
<td>Single</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Mirror</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Multimonitor</td>
<td>✓</td>
<td>Not Available</td>
</tr>
</tbody>
</table>

**Table 3 - 1: Display Options**

- **Single** - Either the LCD, VGA monitor or TV as a display device.
- **Mirror** - The LCD, VGA monitor or TV outputting the same view.
- **Multimonitor** - The LCD, VGA monitor or TV outputting a different view (*not available in Windows 2000*).

---

**Multiple Display Modes & DVD Playback**

In **Mirror** mode DVD movies must be displayed in the **primary device** - see “Switching/Enabling Displays (Driver)” on page 3 - 11.

DVD playback is not supported in **Multimonitor** mode.
Switching/Enabling Displays (Keyboard)
To simply switch display devices, or enable other devices, with the **Fn + Display (F6)** toggle do the following:

1. Plug the VGA monitor or TV into the appropriate port.
2. Press and hold the **Fn** key, while simultaneously pressing the **F6** key.
3. You may toggle through the options to display the LCD only, the LCD and the external display together, and the external display alone (make sure you allow time for the screens to refresh as you toggle through).

**Note:** If you only use the keyboard toggle to switch through the display options you will not have all the configuration options available to you. If you want to use the options listed in “Display Options” on page 3 - 9 then use the driver control panel to configure the settings as per “Switching/Enabling Displays (Driver)” on page 3 - 11.
Switching/Enabling Displays (Driver)

With the **video driver installed** (see "What to Install" on page 4 - 2), you can use its built-in controls to switch between the displays as follows:

1. Plug the VGA monitor or TV into the appropriate port.
2. Following the instructions in "**SiS Utility Tray/Manager**" on page 3 - 5, and choose **Driver Mode Setting**.
3. If the device list box doesn’t show any plugged in devices, uncheck the **Auto** option.

See the following pages for instructions on enabling **Mirror** and **Multi-monitor** modes.
Mirror Mode

In this mode the display of the two devices is the same. Mirror mode simply shows an exact copy of the Primary display desktop on the Secondary display. This mode will drive multiple displays with the same content. Use this feature to display the screen through a projector for a presentation etc.

Setting Mirror Mode
1. Follow the instructions in “Switching/Enabling Displays (Driver)” on page 3 - 11 (make sure Auto is unchecked).
2. Choose the Mirror option from the Driver mode drop box.
3. Choose a device to be Primary, and one to be Secondary.
4. Click OK > OK to apply the settings (you may need to give your VGA monitor a few seconds to refresh).
5. Click Yes to keep the settings.
Multimonitor

This mode allows a desktop to span the displays to act as a large work area, thus creating a lot more screen area for display.

Setting Multimonitor Mode

1. Follow the instructions in “Switching/Enabling Displays (Driver)” on page 3 - 11 (make sure Auto is unchecked).
2. Choose the Multimonitor option from the Driver mode drop box.
3. Choose which device is to be Display_1, and which is to be Display_2 (the VGA option for the external monitor may only be set to Display_2).
4. Click OK >Yes to restart your computer.
Configuring Multimonitor Displays
You can reconfigure the displays in Multimonitor mode from the Display Properties > Settings control panel (see “Multimonitor Setting” on page 3 - 13). Make sure you have checked the “Extend my Windows desktop onto this monitor.” check box as illustrated in Figure 3 - 8.

Use the Display Properties control panel to drag the monitors to match the physical arrangement you wish to use. In the example shown in Figure 3 - 8 the primary monitor 1 is on the left, the secondary display is on the right.

With the Extended Desktop Mode enabled drag any icons or windows across to the other display desktop. It is therefore possible to have one program visible in one of the displays, and a different program visible in the other display.
Adjusting Monitor Settings

If you prefer to use a VGA monitor (CRT) you may change the vertical refresh rate from the following control panel. Double-click on the VGA monitor icon (in the example below it is the icon as the VGA is set for Display_2).

Double-Click on the VGA Monitor icon and select the Monitor (tab)

**Vertical Refresh Rate**

The vertical refresh rate of your CRT is important. If it is too low and/or you’re using fluorescent lighting, the screen will appear to flicker. To reduce flickering on a CRT, use faster refresh rates (we recommend a refresh rate of 72Hz or more). But first check your monitor’s documentation to make sure it can support the rates listed by the video driver. The default refresh rate for VGA monitors (without drivers) is 60Hz.

*Figure 3 - 9 Monitor Properties*
TV Display

To display desktop images on a TV display, connect the TV to your computer by using an S-Video cable from the TV to the port at the rear of the computer. Follow the instructions in “Switching/Enabling Displays (Driver)” on page 3 - 11 to switch to a TV display.

VGA Monitor and TV Display Setting

If you intend to use a TV and VGA monitor as your display devices, the TV must be set as the primary Display_1, and the VGA monitor as the secondary Display_2 (see Figure 3 - 10).

Figure 3 - 10
VGA Monitor and TV Display
Power Management Features

To conserve power, especially when using the battery, your notebook computer uses the ACPI power management system. Power management conserves power by controlling individual components of the computer (the monitor and hard disk drive) or the whole system.

Advanced Configuration and Power Interface (ACPI)

The ACPI interface provides the computer with enhanced power saving techniques and gives the operating system (OS) direct control over the power and thermal states of devices and processors. For example, it enables the OS to set devices into low-power states based on user settings and information from applications. ACPI is available in Windows 2000 and Windows XP.

OS Note

Power management functions will vary slightly depending on your operating system. For more information it is best to refer to the user's manual of your operating system.

(Note: All pictures used on the following pages are from the Windows XP OS.)
Enabling Power Options

Power Options are enabled through the control panel in your Windows system (Power Options). With other operating systems you may have power management available, so check your documentation.

You may conserve power through individual components or throughout the whole system.
Conserving Power (Individual Components)

Turn off Monitor
To conserve power, you can set the monitor to turn off after a specified time.

Turn off Hard Disk
The computer's hard disk motor will be turned off if the hard disk drive has not been accessed for a specified period of time. If the system reads or writes data, the hard disk motor will be turned back on.

Resuming Operation
The system can resume from Monitor or Hard Disk Standby by pressing a key on the keyboard.

Figure 3 - 12
Power Schemes
Conserving Power (System)
With this function you can stop the notebook’s operation and restart where you left off. This system features Standby and Hibernate sleep mode levels (Hibernate mode will need to be enabled by clicking the option in the Hibernate tab in the Power Options control panel - Figure 3 - 13 on page 3 - 21).

Hibernate Mode vs. Shutdown
Hibernate mode and Shutdown are the same in that the system is off and you need to press the power button to turn it on. Their main difference is:

When you come back from hibernation, you can return to where you last left off (what was on your desktop) without reopening the application(s) and file(s) you last used.

You can use either method depending on your needs.

Standby Mode vs. Hibernate Mode
If you want to stay away from your work for just a while, you can put the system on standby instead of in hibernation. It takes a longer time to wake up the system from Hibernate mode than from Standby mode.
Standby
Standby saves the least amount of power, but takes the shortest time to return to full operation. During Standby the hard disk is turned off, and the CPU is made to idle at its slowest speed. All open applications are retained in memory. When you are not using your computer for a certain length of time, which you specify in the operating system, it will enter Standby mode to save power.

Hibernate
Hibernate uses no power and saves all of your information on a part of the HDD before it turns the system off. Although it saves the most power it takes the longest time to return to full operation. You can set your notebook to automatically enter Hibernate mode when the battery power is almost depleted. You will need to enable Hibernate mode from the Hibernate tab in the Power Options control panel. The system will resume from Hibernate mode by pressing the power button.

System Resume
The system can resume from Standby mode by:
- Pressing the power button
- Pressing the key combination Fn + Esc
- An alarm resume that is enabled and expires
- An incoming call received on the modem

Figure 3 - 13
Enable Hibernation
Advanced Controls

Configuring the Power Button
The power button may be set to send the computer in to either Standby or Hibernate mode (Figure 3 - 14). In Standby mode, the LED will flash green. In Hibernate mode the LED will be off. If you are in a power saving mode set to save power through individual components (e.g. hard disk, monitor), the LED will remain green.

Figure 3 - 14
Power Options
(Advanced - Power Buttons)
Battery Information

Please follow these simple guidelines to get the best use out of your battery.

New Battery
Always completely discharge, then fully charge, a new battery before using it (see “Battery FAQ” on page 3 - 24 for instructions on how to do this).

Battery Life
Your notebook computer’s battery life is dependent upon many factors, including the programs you are running, and peripheral devices attached. Power Options settings in the OS will help prolong the battery life if configured appropriately.

Battery life may be shortened through improper maintenance. To optimize the life and improve its performance, fully discharge and recharge the battery at least once every 30 days.

We recommend that you do not remove the battery yourself. Please consult your service representative should you need to remove the battery for any reason.

Caution
Danger of explosion if battery is incorrectly replaced.
Replace only with the same or equivalent type recommended by the manufacturer. Discard used battery according to the manufacturer’s instructions.
Battery FAQ

How do I completely discharge the battery?
Use the computer with battery power until it shuts down due to a low battery. Don’t turn off the computer by yourself even when you see a message that indicates the battery is critically low, just let the computer use up all of the battery power and shut down on its own (it is best to disable the Power Options functions in the Control Panel). As the battery nears the end of its life close any critical files.

How do I fully charge the battery?
When charging the battery, don’t stop until the LED charging indicators stop flashing.

How do I maintain the battery?
Completely discharge and charge the battery at least once every 30 days or after about 20 partial discharges.

Conserving Battery Power
The LCD display consumes a lot of power, so lowering the brightness level will save power. Different applications and external devices consume battery power even when they are not being used (see the sidebar note for further recommendations on battery conservation).
Configuring the Infrared Settings for FIR

For Models A & B only - Users will need to change the settings for the infrared device in the BIOS (see “I/O Device Configuration (Advanced Menu)” on page 5 - 12) to enable the FIR setting support.

To configure your computer for Fast Infrared (FIR) communication follow these steps:

1. Click Start, point to Settings and click Control Panel.
2. Double-click Wireless Link icon.
3. Click Hardware (tab), then click Properties (button).
4. Select Advanced (tab).
5. Select “Infrared Transceiver A” and change the Value to “HP HSDL-2300/3600”.
6. Click OK > OK.

For further information, please refer to the manual of the device you wish to connect.
Chapter 4: Drivers & Utilities

Overview

This chapter deals with installing the drivers and utilities essential to the operation or improvement of some of the computer’s subsystems. The system takes advantage of some newer hardware components for which the latest versions of most available operating systems haven’t built in drivers and utilities. Thus, some of the system components won’t be auto-configured with an appropriate driver or utility during operating system installation. Instead, you need to manually install some system-required drivers and utilities. In this chapter, we group driver and utility installation instructions by operating system. The following operating systems are covered.

- *Windows 2000 Professional*
- *Windows XP*
Drivers & Utilities

What to Install

The *Device Drivers & Utilities + User’s Manual CD-ROM* contains the drivers and utilities necessary for the proper operation of the computer. *Table 4-1 on page 4-3* lists what you need to install manually according to your choice of the operating system. Install the drivers in the following order:

1. Audio
2. Modem
3. LAN
4. Video

All other drivers may follow in any order you wish, however it is very important that these drivers are installed in the order indicated above.

---

**Navigate (Browse..) to D:**

You will notice that many of the instructions for driver installation require you to **Navigate (Browse) to “D:”**.

In this case D: is the drive specified for your CD device. Not all computers are setup the same way, and some computers have the CD listed under a different drive letter - e.g. if you have two hard drives (or hard disk partitions) one may be designated as drive C: and the other as D: In this case the CD device may be designated as drive E: - Please make sure you are actually navigating to the correct drive letter for the CD device.

When you click the **Browse** (button) after clicking **Run** in the **Start** menu you will see the “Look in:” dialog box at the top of the **Browse** window. Click the scroll button to navigate to **My Computer** to display the devices and drive letters.
Drivers & Utilities

Authorized Driver Message
If you receive a message telling you that the driver you are installing is not authorized (Digital Signature Not Found), just click Yes or Continue Anyway to ignore the message and continue the installation procedure.

You will receive this message in cases where the driver has been released after the version of Windows you are currently using. All the drivers provided will have already received certification for Windows.

Version Conflict Message
During driver installation if you encounter any “file version conflict” message, please click Yes to choose to keep the existing (newer) version.

<table>
<thead>
<tr>
<th>Feature</th>
<th>Windows 2000</th>
<th>Windows XP</th>
</tr>
</thead>
<tbody>
<tr>
<td>Audio</td>
<td>page 4 - 4</td>
<td>page 4 - 7</td>
</tr>
<tr>
<td>Modem</td>
<td>page 4 - 4</td>
<td>page 4 - 7</td>
</tr>
<tr>
<td>LAN</td>
<td>page 4 - 5</td>
<td>page 4 - 8</td>
</tr>
<tr>
<td>Video</td>
<td>page 4 - 5</td>
<td>page 4 - 9</td>
</tr>
<tr>
<td>USB 2.0</td>
<td>page 4 - 6</td>
<td>page 4 - 9</td>
</tr>
<tr>
<td>Hot-Key</td>
<td>page 4 - 6</td>
<td>page 4 - 9</td>
</tr>
<tr>
<td>TouchPad</td>
<td>page 4 - 6</td>
<td>page 4 - 10</td>
</tr>
</tbody>
</table>

Table 4 - 1
Install Procedure

Service Pack 3
Make sure you have installed Windows 2000 Service Pack 3.
Drivers & Utilities

Windows 2000 Professional

This section covers driver and utility installation instructions for Windows 2000 Professional.

Audio (Win2000)
1. Click Start (menu) > Run...
2. Navigate (Browse..) to D:\Drivers\Audio\Setup.exe and click Open > OK > Next.
3. Click Finish to restart your computer.
4. Go to the Sounds and Multimedia control panel (Start menu and point to Settings and click Control Panel then double-click the Sounds and Multimedia icon).
5. Click the Audio tab.
6. Click Advanced in the Sound Playback menu.
7. Under Speaker Setup select 5.1 Surround Speakers from the pull-down menu and click OK > OK to close.
8. In addition to the Sounds and Multimedia control panel, you can click the icon in the taskbar to go to the AC97 Audio Configuration window for further configuration options.

Modem (Win2000)
1. Click Start (menu), point to Settings and click Control Panel. Double-click System (icon) and then click Hardware (tab) > Device Manager (button).
2. Click “+” next to Other devices (if its sub-items are not shown).
3. Double-click PCI Device, click Driver (tab) and Update Driver (button).
4. When the Upgrade Device Driver Wizard appears, click Next.
5. When Install Hardware Device Drivers appears, select “Search for a suitable driver for my device (recommended)” and click Next.
6. When Locate Driver Files appears, select ONLY “Specify a location” and click Next.
7. Navigate (Browse...) to D:\Drivers\Modem\win2000 and select the visible file by clicking it.
8. Click Open (button) and click OK (button), then click Next.
9. Click Finish, and close the open windows.
10. The modem is ready for dial-up configuration.

- **Modem Country Selection**
  Be sure to check if the modem country selection is appropriate for you (Control Panel > Phone and Modem Options and select a Country).

LAN (Win2000)

1. Click Start (menu), point to Settings and click Control Panel. Double-click System (icon) and then click Hardware (tab) > Device Manager (button).
2. Click “+” next to Network Adapters (if its sub items are not shown).
3. Double-click Realtek RTL8139(A)-based PCI Fast Ethernet Adapter and click Driver (tab).
4. Click Update Driver (button).
5. When the Upgrade Device Driver Wizard appears, click Next.
6. When Install Hardware Device Drivers appears, select “Search for a suitable driver for my device (recommended)” and click Next.
7. When Locate Driver Files appears, select ONLY “Specify a location” and click Next.
8. Navigate (Browse...) to D:\Drivers\LAN\Win2000 and select the visible file by clicking it.
9. Click Open (button) and click OK (button), then click Next.
10. Click Finish and close the open windows.
11. The network adapter is now ready for configuration.

Video (Win2000)

1. Click Start (menu) > Run...
2. Navigate (Browse..) to D:\Drivers\VIDEO\Win2K&XP\SETUP.EXE and click Open > OK.
3. When the Welcome screen appears click Next > Next > Next > Next.
4. Click Finish to restart the computer.
5. See “Advanced Video Controls” on page 3 - 2 for details on adjusting the video settings.
Drivers & Utilities

**USB 2.0 (Win2000)**
The USB 2.0 driver is only required for Model A (see “USB Port Type” on page 1 - 5).

1. Click Start (menu) > Run...
2. Navigate (Browse...) to D:\Drivers\USB20\USB20.exe and click Open > OK.
3. Click Yes > Accept.
4. Click Yes to restart the computer.

**Hot-Key (Win2000)**
1. Click Start (menu) > Run...
2. Navigate (Browse..) to D:\Drivers\HOTKEY\CNK001.exe and click Open > OK.
3. Choose the language you prefer, and click OK.
4. Click Next.
5. Click Finish to restart your computer.
6. You may then configure your Hot-key Buttons as outlined in “Hot-Keys” on page 2 - 14.

**TouchPad (Win2000)**
1. Click Start (menu), point to Settings and click Control Panel. Double-click System (icon) and then click Hardware (tab) > Device Manager (button).
2. Click “+” next to Mice and other pointing devices (if its sub-items are not shown).
3. Double-click PS/2 Compatible Mouse and click Driver (tab).
4. Click Update Driver (button) and click Next.
5. When the Install Hardware Device Drivers window appears, select “Search for a suitable driver for my device (recommended)” and click Next.
6. Select ONLY (make sure the other boxes do not have a tick inside them) “Specify a location”, and click Next.
7. Navigate (Browse...) to D:\Drivers\TOUCHPAD\WIN2000.
8. Click Open > OK > Next.
9. Click Finish and close the open windows.
10.Click Yes to restart your computer.
11.You may then configure your TouchPad as outlined in “Configuring the TouchPad and Buttons” on page 2 - 18.
Windows XP

This section covers driver and utility installation instructions for Windows XP.

Audio (WinXP)
1. Click Start (menu) > Run...
2. Navigate (Browse..) to D:\Drivers\Audio\Setup.exe and click OK > Next.
3. Click Finish to restart your computer.
4. Go to the Sounds and Audio Devices control panel (Start menu and point to Settings and click Control Panel then double-click the Sounds and Audio Devices icon).

Note: If you are in the Category View choose Sounds, Speech, and Audio Devices > Sounds and Audio Devices.
5. Click the Audio tab.
6. Click Advanced in the Sound playback menu.
7. Under Speaker Setup select 5.1 Surround Speakers from the pull-down menu and click OK > OK to close.
8. In addition to the Sounds and Audio Devices control panel, you can click the icon in the taskbar to go to the AC97 Audio Configuration window for further configuration options.

Modem (WinXP)
1. If you can see the My Computer icon on your desktop (if you cannot see the My Computer icon go to step 2) click on it once to select it, then right-click it to make the sub-menu appear and scroll down to Properties and click on it (go to step 3).
2. If you cannot see the My Computer icon, click Start (menu), then point to (but don’t click just highlight it) My Computer. Right-click it to make the sub-menu appear and scroll down to Properties and click on it (go to step 3).
3. Click the Hardware (tab), then click Device Manager (button).
4. Click “+” next to Other Devices (if its sub-items are not shown).
5. Double-click PCI Modem and click Driver (tab).
6. Click Update Driver (button).
7. When the Hardware Update Wizard appears, click “Install from a list or specific location (Advanced)” then click Next.
8. Select “Search for the best driver in these locations:” and select ONLY “Include this location in the search:”.
9. Navigate (Browse...) to D:\Drivers\Modem\WINXP and click OK (button), then click Next.
10. Click Finish and close the open windows.
11. Your modem is now ready for dial-up configuration.

**Modem Country Selection**

You can change the modem country selection in the control panel (Control Panel > Phone and Modem Options (icon) and select a Country).

---

**LAN (WinXP)**

1. If you can see the My Computer icon on your desktop (if you cannot see the My Computer icon go to step 2) click on it once to select it, then right-click it to make the sub-menu appear and scroll down to Properties (go to step 3) and click on it.
2. If you cannot see the My Computer icon click Start (menu), then point to (but don’t click just highlight it) My Computer. Right-click it to make the sub-menu appear and scroll down to Properties (go to step 3) and click on it.
3. Click the Hardware (tab), then click Device Manager (button).
4. Click “+” next to Network Adapters (if its sub items are not shown).
5. Double-click Realtek RTL8139 Family PCI Fast Ethernet NIC and click Driver (tab).
6. Click Update Driver (button).
7. When the Hardware Update Wizard appears, click “Install from a list or specific location (Advanced)”, then click Next.
8. Select “Search for the best driver in these locations:” and select ONLY “Include this location in the search:”.
9. Navigate (Browse...) to D:\Drivers\LAN\WINXP and click OK (button), then click Next.
10. Click Finish and close the open windows.
11. The network settings can now be configured.

**Video (WinXP)**
1. Click Start (menu) > Run...
2. Navigate (Browse..) to D:\Drivers\VIDEO\Win2K&XP\SETUP.EXE and click Open > OK.
3. When the Welcome screen appears click Next > Next > Next.
4. Click Finish to restart the computer.
5. See “Advanced Video Controls” on page 3 - 2 for details on adjusting the video settings.

**USB 2.0 (WinXP)**
The USB 2.0 driver is only required for Model A (see “USB Port Type” on page 1 - 5).

**Hot-Key (WinXP)**
1. Click Start (menu) > Run...
2. Navigate (Browse..) to D:\Drivers\HOTKEY\CNK001.exe and click Open > OK.
3. Choose the language you prefer, and click OK.
4. Click Next.
5. Click Finish to restart your computer.
6. You may then configure your Hot-Key Buttons as outlined in “Hot-Keys” on page 2 - 14.
Drivers & Utilities

**TouchPad (WinXP)**

1. If you can see the **My Computer** icon on your desktop (if you cannot see the **My Computer** icon go to step 2) click on it once to select it, then right-click it to make the sub-menu appear and scroll down to **Properties** and click on it (go to step 3).
2. If you cannot see the **My Computer** icon click **Start** (menu), then point to (but don’t click just highlight it) **My Computer**. Right-click it to make the sub-menu appear and scroll down to **Properties** and click on it (go to step 3).
3. Click the **Hardware** (tab), then click **Device Manager** (button).
4. Click “+” next to **Mice and other pointing devices** (if its sub-items are not shown).
5. Double-click **PS/2 Compatible Mouse** and click **Driver** (tab).
6. Click **Update Driver** (button).
7. When the Hardware Update Wizard appears, click “Install from a list or specific location (Advanced)” then click Next.
8. Select “Search for the best driver in these locations.” and select ONLY “Include this location in the search:”.
9. Navigate (Browse...) to D:\Drivers\TOUCHPAD\WINXP and click OK > Next.
10. Click **Finish** and close the open windows.
11. Click **Yes** to restart your computer.
12. You may then configure your TouchPad as outlined in “Configuring the TouchPad and Buttons” on page 2 - 18.
Chapter 5: BIOS Utilities

Overview

This chapter gives a brief introduction to the computer’s built-in software:

**Diagnostics:** The *POST* (Power-On Self Test)

**Configuration:** The *Setup* utility

If your computer has never been set up, or you are making important changes to the system (e.g. hard disk setup), then you should review this chapter first and note the original settings found in *Setup*. Even if you are a beginner, keep a record of the settings you find and any changes you make. This information could be useful if your system ever needs servicing.

There is one general rule: *Don’t make any changes unless you are sure of what you are doing.* Many of the settings are required by the system, and changing them could cause it to become unstable or worse. If you have any doubts, consult your service representative.

**Warning:** Incorrect settings can cause your system to malfunction. To correct mistakes, return to *Setup* and restore the *Setup Defaults* with \(<\text{F9}>\).
Important BIOS Settings

Generally speaking you should not have to adjust any of the BIOS settings as they will already be set for your computer. However the following is a quick reference to the most important settings you may need to change at some point.

<table>
<thead>
<tr>
<th>Option</th>
<th>Page #</th>
<th>Purpose</th>
</tr>
</thead>
<tbody>
<tr>
<td>Installed OS</td>
<td>5 - 11</td>
<td>Tells the computer which type of operating system you are using.</td>
</tr>
<tr>
<td>Embedded Share Memory</td>
<td>5 - 11</td>
<td>Specify’s the amount of total memory to be allocated to video memory.</td>
</tr>
<tr>
<td>Boot Order</td>
<td>5 - 16</td>
<td>Specify’s the order of the devices on which the computer searches for an operating system as it starts up.</td>
</tr>
</tbody>
</table>
The Power-On Self Test (POST)

Each time you turn on the computer, the system takes a few seconds to conduct a POST, including a quick test of the on-board RAM.

As the POST proceeds, the computer will tell you if there is anything wrong. If there is a problem which prevents the system from booting, it will display a system summary and prompt you to run Setup.

If there are no problems, the Setup prompt will disappear and the system will load the operating system. Once that starts, you can’t get into Setup without rebooting.

POST Screen

1. BIOS information
2. CPU type
3. Memory status
4. HDD identification notice
5. Enter Setup prompt appears only during POST

Note: The POST screen as pictured is for guideline purposes only. The POST screen on your computer may appear slightly different.

Figure 5 - 1
POST Screen
Failing the POST
Errors can be detected during the POST. There are two categories, “fatal” and “non-fatal”.

Fatal Errors
These stop the boot process and usually indicate there is something seriously wrong with your system. Take the computer to your service representative or authorized service center as soon as possible.

Non-Fatal Errors
This kind of error still allows you to boot. You will get a message identifying the problem (make a note of this message!) followed by the prompt:

- Press <F1> to resume
- <F2> to enter Setup

Press F1 to see if the boot process can continue. It may work, without the correct configuration.

Press F2 to run the Setup program and try to correct the problem. If you still get an error message after you change the setting, or if the “cure” seems even worse, call for help.
The Setup Program

The Phoenix Setup program tells the system how to configure itself and manage basic features and subsystems (e.g. port configuration).

Entering Setup

To enter Setup, turn on the computer and press F2 during the POST. The prompt (“Press F2 to Enter Setup”) seen in Figure 5-1 is usually present for a few seconds after you turn on the system. If you get a “Keyboard Error” (usually because you pressed F2 too quickly) just press F2 again.

If the computer is already on, reboot using the Ctrl + Alt + Delete combination and then hold down F2 when prompted. Setup’s main menu will appear.
Setup Screens

The following pages contain additional advice on portions of the Setup. The Setup interface looks like a Windows screen:

Along the top of the screen is a menu bar with five (5) menu headings. When you select a heading, a new screen appears. Scroll through the features listed on each screen to make changes to Setup.

Instructions on how to navigate each screen are in the box along the bottom of the screen. If these tools are confusing, press F1 to call up a General Help screen. Then use the arrow keys to scroll up or down this page.

The “Item Specific Help” on the right side of each screen explains the highlighted item and has useful messages about its options.

If you see an arrow ▶ next to an item, press Enter to go to a sub-menu on that subject. The sub-menu screen which appears has a similar layout but the Enter key may execute a command.
System Time & Date (Main Menu)
The hour setting uses the 24-hour system (i.e., ØØ = midnight; 13 = 1 pm). If you can change the date and time settings in your operating system, you will also change these settings. Some applications may also alter data files to reflect these changes.
Legacy Diskette A: (Main Menu)
This control “enables” the floppy disk drive.

Primary Master (Main Menu)
Pressing Enter under opens the sub-menu to show the configuration of the HDD which fits into the computer’s HDD bay. These items are configured automatically for you.

Secondary Master (Main Menu)
Pressing Enter under opens the sub-menu to show the configuration of the CD device. These items are configured automatically for you.

Switching Hard Disks
Every time you install a different hard disk in the computer, it will be (re)configured automatically.
### Advanced Menu

**PhoenixBIOS Setup Utility**

<table>
<thead>
<tr>
<th>Main</th>
<th>Advanced</th>
<th>Security</th>
<th>Boot</th>
<th>Exit</th>
</tr>
</thead>
</table>

**Setup Warning**

Setting items on this menu to incorrect values may cause your system to malfunction.

- Installed O/S: ** ACPI OS**

**Advanced Chipset Control**

**I/O Device Configuration**

- Reset Configuration Data: [No]
- QuickBoot Mode: [Enabled]
- CPU Throttle: [50%]
- Battery Low Beep Warning: [Enabled]
- Embedded Modem Device: [Enabled]

**Item Specific Help**

- Select the operating system installed on your system which you will use most commonly.
- Note: An incorrect setting can cause unexpected behavior.

**Setup Warning**

Setting items on this menu to incorrect values may cause your system to malfunction.

- Installed O/S: ** ACPI OS**

**Advanced Chipset Control**

**I/O Device Configuration**

- Reset Configuration Data: [No]
- QuickBoot Mode: [Enabled]
- CPU Throttle: [50%]
- Battery Low Beep Warning: [Enabled]
- Embedded Modem Device: [Enabled]

**F1** Help  
**Esc** Exit  
**Enter** Select Menu  
**F9** Setup Defaults  
**F10** Save and Exit
**Figure 5 - 4**
Advanced Menu
(Mobile CPU model)

<table>
<thead>
<tr>
<th>PhoenixBIOS Setup Utility</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Main</strong></td>
</tr>
<tr>
<td>Setup Warning</td>
</tr>
</tbody>
</table>
Setting items on this menu to incorrect values may cause your system to malfunction.
Installed O/S: [ ]

★Advanced Chipset Control
★I/O Device Configuration

Reset Configuration Data: [No]
QuickBoot Mode: [Enabled]
Mobile CPU SpeedStep: [Auto]
Battery Low Beep Warning: [Enabled]
Embedded Modem Device: [Enabled]

★Item Specific Help★
Select the operating system installed on your system which you will use most commonly.
Note: An incorrect setting can cause some operating systems to display unexpected behavior.

### Setup Warning

Setting items on this menu to incorrect values may cause your system to malfunction.

### Installed O/S

- [ ] ACPI OS

### Advanced Chipset Control

- [ ] Reset Configuration Data
- [ ] QuickBoot Mode
- [ ] Mobile CPU SpeedStep
- [ ] Battery Low Beep Warning
- [ ] Embedded Modem Device

### I/O Device Configuration

- [ ] Item Specific Help

---

**5 - 10 Advanced Menu**
**Installed O/S: (Advanced Menu)**
This item tells the computer what kind operating system you’re using: *Windows 2000, Windows XP* use the same default setting *ACPI OS*.

**Embedded Share Memory (Advanced Menu>Advanced Chipset Control)**
This item tells the computer how much system memory can be shared to become available as video memory. By default, the video memory is set to 32MB. Bear in mind that the more overall memory is used as video memory, the less is available as system memory. This memory is allocated from your system memory e.g. if you computer has 128MB of memory (RAM), then 32MB will be allocated to video leaving the system with 96MB of RAM.

**Graphics Aperture (Advanced Menu>Advanced Chipset Control)**
The AGP aperture is an area of system RAM reserved for use by the AGP card for storing textures if it needs to. The RAM is available for use by the system as normal if not used by the graphics card. The recommended setting is 64MB, and this is the default setting. This setting should not be set lower than 32MB.

**TV System (Advanced Menu>Advanced Chipset Control)**
This item allows you to switch between NTSC and PAL TV systems when connecting a TV to the S-Video Out port.
TV Scan Mode (Advanced Menu>Advanced Chipset Control)
This item allows you to change the TV Scan Line Mode Option for a TV connected to the S-Video Out port (check your TV manual if you are unsure of the setting).

I/O Device Configuration (Advanced Menu)
The sub-menus under this line include options to configure the Parallel (Printer) port and Serial Port B (Infrared). These can be left to the default settings, however you may wish to use certain devices (e.g. a printer) which require settings to be adjusted accordingly. Check the documentation for any such devices to see what settings are required.

Reset Configuration Data (Advanced Menu)
This item should be set to "No" as default. You can change the setting to "Yes" if you have installed a new add-on which has reconfigured the system, resulting in such a serious system conflict that the operating system is unable to boot.

QuickBoot Mode: (Advanced Menu)
If enabled the system will skip certain tests as it starts up, thus decreasing the time to boot up.
**CPU Throttle (Advanced Menu - Desktop CPU model only)**
If you are running off the internal battery power, without the AC adapter plugged in, this function can be enabled to increase the battery life by setting the CPU clock to run only part of the time (you can set the percentage of time the clock will run). Refer to “Advanced Menu (Desktop CPU model)” on page 5 - 9.

**Mobile CPU SpeedStep (Advanced Menu - Mobile CPU model only)**
The system can dynamically monitor and adjust the CPU’s speed. The default setting is “Auto” (“Advanced Menu (Mobile CPU model)” on page 5 - 10).

**Battery Low Beep (Advanced Menu)**
Choose “Enabled” to set the audible warning when your PC battery is low.

**Embedded Modem Device (Advanced Menu)**
This item allows you to disable the modem device, should you need to do so.
Security Menu

The changes you make here affect the access to the Setup utility itself, and also access to your machine as it boots up after you turn it on. These settings do not affect your machine or network passwords which will be set in your software OS.
Set Supervisor Password: (Security Menu)
Set a password for access to the Setup utility (this will not affect access to the computer OS, only the Setup utility).

Password on boot: (Security Menu)
After setting the supervisor password, you can choose Enabled to set a password (the supervisor password) for booting the computer. Only users who enter a correct password can boot the system (see “Warning” in the sidebar).

Password Warning
If you choose to set a boot password (Password on boot is “Enabled”), NEVER forget your password. The consequences of this could be serious. If you cannot remember your boot password you must contact your vendor and you may lose all of the information on your hard disk.
Boot Menu

When you turn the computer on it will look for an operating system (e.g Windows 2000) from the devices listed in this menu, and in this order. If it cannot find the operating system on that device, it will try to load it from the next device in the order specified in the Boot Menu.
Boot devices usually are hard drives, floppy drives, CD-ROMs and network cards.

When you specify a device as a boot device on the Boot Menu, it requires the availability of an operating system on that device. Most home computers come with an operating system already installed on drive “C:”.

If you wish to boot from a CD-ROM you will need to add it to the boot order. As a general rule the order below is recommended:

1. Removable Devices (usually floppy disks)
2. CD-ROM Drive
3. Hard Drive
4. Network Boot

In everyday use you will usually boot from the hard drive, however there may be occasions when it is advantageous to boot from a floppy disk or CD-ROM.

To boot from the network see “Enabling Network Boot” on page 5 - 18.
BIOS Utilities

Configuring the Network Boot Protocol
The system supports booting from FDD, HDD, CD or LAN. To boot from a network, set Network Boot as the first item in the boot order. Follow the full instructions in the sidebar to configure the network boot protocol.

Enabling Network Boot
Go to the Boot Menu.
Set the Network Boot option to the first priority in the list.
Save the changes and exit.
At startup, press and hold the Shift and F10 keys.
Configure the network protocol.
Save the settings to automatically boot from the network.

Figure 5 - 7
Boot Agent Menu
Exit Menu

Choosing to **Discard Changes**, or **Exit Discarding Changes**, will wipe out any changes you have made to the **Setup**. You can also choose to restore the original **Setup Defaults** which will return the **Setup** to its original state, and erase any previous changes you have made in a previous session.
BIOS Utilities
Chapter 6: Upgrading The Computer

Overview
This chapter contains information on upgrading the computer. Follow the steps outlined to make the desired upgrades. If you have any trouble or problems you can contact your service representative for further help. Before you begin you will need:

- A small crosshead or Phillips screwdriver
- A small regular screwdriver
- An antistatic wrist strap

Before working with the internal components you will need to wear an antistatic wrist strap to ground yourself because static electricity may damage the components.

The chapter includes:

- Replacing the Battery
- Replacing the HDD
- Upgrading the System Memory

Please make sure that you review each procedure before you perform it.

Warranty Warning
Please check with your service representative before undertaking any upgrade procedures to find out if this will VOID your warranty.
Upgrading The Computer

When Not to Upgrade

These procedures involve opening the system’s case, adding and sometimes replacing parts.

You should not perform any of these upgrades if:

• your system is still under warranty or a service contract
• you don’t have all the necessary equipment
• you’re not in the correct environment
• you doubt your abilities

Under any of these conditions, contact your service representative to purchase or replace the component(s).

Power Safety Warning

Before you undertake any upgrade procedures, make sure that you have turned off the power, and disconnected all peripherals and cables (including telephone lines). It is advisable to also remove your battery in order to prevent accidentally turning the machine on.
Removing the Battery

If you are confident in undertaking upgrade procedures yourself, then for safety reasons, it is best to remove the battery. Under normal circumstances we recommend that you do not remove the battery.

Battery Removal Process
1. Turn the computer off, and turn it over.
2. Remove the two screws holding the battery cover in place, and remove the cover.
3. Carefully disconnect the battery cable from the computer and slide the battery out as indicated by the arrow.
4. Just reverse the removal procedure to install the new battery.

Warranty Warning
Please check with your service representative before undertaking any upgrade procedures to find out if this will VOID your warranty.
Upgrading the Hard Disk Drive

The hard disk drive is mounted in a removable case and can be taken out to accommodate other 2.5" IDE hard disk drives with a height of 9.5/12.7mm (h) (see “Storage Devices” on page A - 3). Follow your operating system’s installation instructions, and install all necessary drivers and utilities as outlined in “What to Install” on page 4 - 2, when setting up a new hard disk.

Hard Disk Upgrade Process

1. Turn off the computer, and turn it over.
2. Remove the keyboard by pushing the four keyboard latches at the top of the keyboard to elevate the keyboard from its normal position as in Figure 6 - 2a (you may need to use a small screwdriver, or paper clip, to do this).
3. Carefully raise and set the keyboard aside and locate the HDD module (Figure 6 - 2b).
4. Remove screws 1 - 3 (Figure 6 - 2c) which secure the HDD module to the computer.
5. Lift the HDD module out of the computer by pulling on the HDD tab (Figure 6 - 2d).
6. Remove screws 6 - 11 (Figure 6 - 2e) and separate the HDD from the cover, and disconnect the HDD connector board.
7. Reverse the process to install a new hard disk.
Upgrading The Computer

a.

b. Desktop CPU Model

Mobile CPU Model

c.

d.

Figure 6 - 2
HDD Removal
Upgrading the System Memory (RAM)

The computer has two memory sockets for 200 pin Small Outline Dual In-line Memory Modules (SO-DIMM) supporting DDR 266 MHz. The main memory can be expanded up to 1024MB. The SO-DIMM modules supported are 128Mb, 256Mb, and 512Mb in size. The total memory size is automatically detected by the POST routine once you turn on your computer.

Memory Upgrade Process
1. Turn the computer off, and turn it over.
2. Remove screw 1 and the RAM cover 2.
3. Locate the memory socket.
4. If there is a module currently installed which needs to be upgraded/replaced then remove it.
5. Gently pull the two release latches (1 & 2 in Figure 6 - 4) on the sides of the memory socket toward the sides of the computer.

6. The module 3 will pop-up, and you can remove it.
7. Repeat the process for the second module if necessary.
8. Insert a new module holding it at about a 30° angle and fit the connectors firmly into the memory slot.
9. The module will only fit one way as defined by its pin alignment. Make sure the module is seated as far into the slot as it will go. DO NOT FORCE IT; it should fit without much pressure.

Contact Warning
Be careful not to touch the metal pins on the module’s connecting edge. Even the cleanest hands have oils which can attract particles, and degrade the module’s performance.

Figure 6 - 4
Removing/Installing a RAM Module (part I)
Upgrading The Computer

10. Press the module down towards the mainboard until the slot levers click into place to secure the module.
11. Replace the RAM cover and the screw (see Figure 6 - 3).
12. Restart the computer.
13. The BIOS will register the new memory configuration as it starts up.

Figure 6 - 5
Removing/Installing a RAM Module (part II)
Upgrading the Processor

If you want to upgrade your computer by replacing the existing processor with a faster/new one you will need to contact your customer service representative. We recommend that you do not do this yourself, since if it is done incorrectly you may damage the processor or mainboard.

Warranty

The CPU is not a user serviceable part. Opening the CPU compartment, or accessing the CPU in any way, may violate your warranty.
Upgrading The Computer
Chapter 7: Troubleshooting

Overview

Should you have any problems with your computer, before consulting your service representative, you may want to try to solve the problem yourself. This chapter lists some common problems and their possible solutions. This can’t anticipate every problem, but you should check here before you panic. If you don’t find the answer in these pages, make sure you have followed the instructions carefully and observed the safety precautions in the preface. If all else fails, talk to your service representative. You should also make a record of what happened and what remedies you tried.

Of course, if something goes wrong, it will happen at the most inconvenient time possible, so you should preview this section just in case. If, after you’ve tried everything, and the system still won’t cooperate, try turning it off for a few minutes and then rebooting. You will lose any unsaved data, but it may start working again. Then call your service representative.
Basic Hints and Tips

Many of the following may seem obvious but they are often the solution to a problem when your computer appears not to be working.

- **Power** - Is the computer actually plugged into a working electrical outlet? If plugged into a **power strip**, make sure it is actually working. Check the **LED Power Indicators** (see “LED Status & Power Indicators” on page 2 - 6) to see the computer’s power status.

- **Connections** - Check all the **cables** to make sure that there are no **loose connections** anywhere.

- **Power Savings** - Make sure that the system is not in **Hibernate** or **Standby** mode by pressing the **power button** or **Fn + Esc** key combination, to wake-up the system.

- **Brightness** - Check the brightness of the screen by pressing the **Fn + F9/F10** keys to adjust the brightness (see “Advanced Video Controls” on page 3 - 2).

- **Display Choice** - Press **Fn + F6** to make sure the system is not set to “external only” display (see “Switching/Enabling Displays (Keyboard)” on page 3 - 10).

- **Boot Drive** - Make sure there are no **floppy disks** in the drive when you start up your machine (this is a common cause of the message “**Invalid system disk - Replace the disk, and then press any key**”).
Backup and General Maintenance

- Always backup your important data, and keep copies of your OS and programs safe, but close to hand. Don’t forget to note the serial numbers if you are storing them out of their original cases, e.g. in a CD wallet.

- Run maintenance programs on your hard disk and OS as often as you can. You may schedule these programs to run at times when you are not using your computer. You can use those that are provided free with your OS, or buy the more powerful dedicated programs to do so.

- Write down your passwords and keep them safe (away from your computer). This is especially important if you choose to use a Startup password for the BIOS (see “Security Menu” on page 5 - 14).
Troubleshooting

- Keep copies of vital **settings files** such as network, dialup settings, mail settings etc. (even if just brief notes).

**Viruses**

- Install an **Anti-Virus** program and keep the **definitions file** (the file which tells your program which viruses to look for) up to date. New computer viruses are discovered daily, and some of them may seriously harm your computer and cause you to lose data. **Anti-Virus** programs are commercially available and the **definitions file updates** are usually downloadable directly from the internet.

- Be careful when opening e-mail from sources you don’t know. **Viruses** are often triggered from within **e-mail attachments** so take care when opening any attached file. You can configure most **Anti-Virus** programs to check all **e-mail attachments**. **Note**: You should also beware of files from people you know as the virus may have infected an **address book** and been automatically forwarded without the person’s knowledge.

---

**Warranty**

The CPU is not a user serviceable part. Opening the CPU compartment, or accessing the CPU in any way, may violate your warranty. Unauthorized tampering with the HDD may also violate your warranty.
• Keep a “Boot Floppy Disk” (this disk provides basic information which allows you to startup your computer) handy. You may refer to your OS’s documentation for instructions on how to make one, and many Anti-Virus programs will also provide such a disk (or at least instructions on how to make one).

Upgrading and Adding New Hardware/Software

• Do not be tempted to make changes to your Windows Registry unless you are very sure of what you are doing, otherwise you will risk severely damaging your system.

• Don’t open your computer or undertake any repair or upgrade work if you are not comfortable with what you are doing.

• Read the documentation. We can assume, since you are reading this that you are looking at the notebook’s manual, but what about any new peripheral devices you have just purchased? Many problems are caused by the installation of new hardware and/or software. Always refer to the documentation of any new hardware and/or software, and pay particular attention to files entitled “READ ME” or “READ ME FIRST”.

Troubleshooting
Troubleshooting

- When installing a new device always make sure the device is powered on, and in many cases you will need to restart the computer. Always check that all the cables are correctly connected.

- Make sure you have installed the drivers for any new hardware you have installed (latest driver files are usually available to download from vendor’s websites).

- Thoroughly check any recent changes you made to your system as these changes may affect one or more system components, or software programs. If possible, go back and undo the change you just made and see if the problem still occurs.

- Don’t over complicate things. The less you have to deal with then the easier the source of the problem may be found; Example - if your computer has many devices plugged into its ports, and a number of programs running, then it will be difficult to determine the cause of a problem. Try disconnecting all of the devices and restarting the computer with all the peripheral devices unplugged. A process of elimination (adding and removing devices and restarting where necessary) will often find the source of a problem, although this may be time consuming.
## Troubleshooting

### Power

<table>
<thead>
<tr>
<th>Problem</th>
<th>Possible Cause - Solution</th>
</tr>
</thead>
<tbody>
<tr>
<td>You turned on the power but it doesn’t work.</td>
<td><em>Battery missing / incorrectly installed.</em> Check the battery bay, make sure the battery is present and seated properly (the design of the battery only allows it to go in one way). Make sure there’s nothing interfering with the battery contacts.</td>
</tr>
<tr>
<td>The LED power indicator, <img src="led.png" alt="led" />, is blinking green.</td>
<td><em>Low Battery.</em> Plug in the AC power source. If the computer doesn’t start up immediately, turn it off then on again.</td>
</tr>
<tr>
<td>The various LEDs are lit, but no picture appears.</td>
<td><em>The suspend/resume key combination, <em>F</em>nt + Esc</em>, or other configured key combination, has been toggled.* Press <em>F</em>nt + Esc*, or other configured key combination. Wait a few moments before trying this control again.</td>
</tr>
<tr>
<td>You are losing battery power too quickly.</td>
<td><em>The system is using too much power.</em> If your OS has a Power Options scheme (see “Enabling Power Options” on page 3 - 18) check its settings. You may also be using a PC card device that is drawing a lot of power.</td>
</tr>
<tr>
<td>The notebook feels too hot.</td>
<td>Make sure the notebook is properly ventilated and the fan port is not blocked. If this doesn’t cool it down, put the system into Hibernate mode or turn it off for an hour. Make sure the vents aren’t blocked and the computer isn’t sitting on a thermal surface (see “Overheating” on page 1 - 17). Make sure you’re using the correct adapter.</td>
</tr>
</tbody>
</table>
## Troubleshooting

<table>
<thead>
<tr>
<th>Problem</th>
<th>Possible Cause - Solution</th>
</tr>
</thead>
<tbody>
<tr>
<td>The battery pack will not charge.</td>
<td><em>The battery pack is exposed to an excessively hot or cold environment.</em> Place the battery in a suitable environment and after it returns to normal temperature try again. The battery may be bad and may need to be replaced, contact your service center for more details.</td>
</tr>
<tr>
<td>The battery pack will not charge and the charge indicator light is off.</td>
<td><em>The battery is already fully charged and the indicator light is broken.</em></td>
</tr>
<tr>
<td>A beeping sound is heard and the low-battery indicator is on.</td>
<td><em>The battery power is nearly used up.</em> Connect the AC adapter to your computer.</td>
</tr>
<tr>
<td>A beep isn’t heard when the low-battery indicator turns on, or the gauge indicates power is less than 10%.</td>
<td><em>The battery power is nearly used up and the volume control may be turned down.</em> Adjust the volume control and connect the computer with the AC adapter.</td>
</tr>
</tbody>
</table>
| Actual battery operating time is shorter than expected. | *The battery has not been fully discharged before being recharged.* Make sure the battery is fully discharged and recharge it completely before reusing (see “Battery Information” on page 3 - 23).  
*Power Options have been disabled.* Go to the Control Panel in Windows and re-enable the options.  
*A peripheral device or PC Card is consuming a lot of power.* Turn off the unused device to save power. |

---

7 - 8 Power
## Display

<table>
<thead>
<tr>
<th>Problem</th>
<th>Possible Cause - Solution</th>
</tr>
</thead>
</table>
| Nothing appears on screen.       | The system is in a power saving mode. Toggle the suspend/resume key combination, **Fn + Esc** (see “Function Keys and Numeric Keypad” on page 2 - 16).  
The screen controls need to be adjusted. Toggle the screen control key combinations **Fn + F9/F10** (see “Opening the LCD” on page 3 - 2). If you’re connected to an external monitor, make sure it’s plugged in and turned on. You should also check the monitor’s own brightness and contrast controls.  
The computer is set for a different display. Toggle the screen display key combination, **Fn + F6** (see “Switching/Enabling Displays (Keyboard)” on page 3 - 10). If an external monitor is connected, turn it on.  
The screen saver is activated. Press any key or touch the TouchPad.                                                                                     |
## Troubleshooting

<table>
<thead>
<tr>
<th>Problem</th>
<th>Possible Cause - Solution</th>
</tr>
</thead>
</table>
| The screen is flickering, or the images aren’t clear. | *The vertical refresh rate is insufficient on your external monitor.* Avoid using the simultaneous display mode. Use LCD only or CRT only. Switch to a lower resolution and/or fewer colors, and adjust the refresh frequency in the display controls (see “Vertical Refresh Rate” on page 3 - 15).  
*The viewing angle of the LCD is bad.* Adjust the position of the LCD. LCD’s are designed to be viewed “straight on”. If the angle is wrong, you may see glare from the screen’s backlight.  
*The screen is dirty.* Clean the screen using a soft, clean dry cloth. Many cleaning solutions can damage the LCD surface so you should follow the precautions outlined in the Preface. Try to avoid touching the screen itself. Even the cleanest hands can leave oils which attract contaminants. |
| No image appears on the external monitor I have plugged in and powered on. | You haven’t used the key combination to switch the display options. Press the Fn + F6 key combination to toggle through the options.  
You haven’t installed the video driver and configured it appropriately from the Control Panel. See “What to Install” on page 4 - 2 for instructions on installing the driver, and see “Making Adjustments for the Display” on page 3 - 3 for instructions on configuring the video driver. |
## Troubleshooting

### Hard Disk & Boot Password

<table>
<thead>
<tr>
<th>Problem</th>
<th>Possible Cause - Solution</th>
</tr>
</thead>
<tbody>
<tr>
<td>The computer takes longer during Startup.</td>
<td>Data saved on the hard disk drive may be lost or damaged. Operate the scan disk or disk defragmenter to check for any lost or damaged data. The computer is waking up from the <em>Hibernate</em> mode.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Problem</th>
<th>Possible Solution</th>
</tr>
</thead>
<tbody>
<tr>
<td>You forget the boot password.</td>
<td>If you forget the password, you may have to discharge the battery of the CMOS. Contact your service representative for help.</td>
</tr>
</tbody>
</table>
## Troubleshooting

### Floppy Disk Drive

<table>
<thead>
<tr>
<th>Problem</th>
<th>Possible Cause - Solution</th>
</tr>
</thead>
</table>
| The floppy disk drive will not write data to disk. | *The floppy disk is not formatted.* Format the disk (you may do this by right-clicking the disk icon in *My Computer* in *Windows* and choosing *Format* from the menu). Bear in mind that this will **erase all data** contained on the floppy disk.  
*Note:* Floppy disks were never intended for long-term data storage, and have a finite life span. **Do not** store important files you wish to keep for a long time on floppy disks. As a general rule it is worth reformatting floppy disks regularly.  
*The floppy disk is write-protected.* Undo the protection by moving the write-protect tab on the disk down until it clicks.  
*There is not enough unused space available on the disk.* Use a new disk or delete any unneeded data. |

| The message “**Invalid system disk - Replace the disk, and then press any key**” appears. | *The computer is trying to boot from an incorrect floppy disk.* Remove the floppy and insert a correct one, or boot from your hard disk or CD. You will need to restart the computer. |
# Troubleshooting

## Audio & CD Device

<table>
<thead>
<tr>
<th>Problem</th>
<th>Possible Solution</th>
</tr>
</thead>
<tbody>
<tr>
<td>The sound cannot be heard or the volume is very low.</td>
<td><em>The volume might be set too low.</em> Check the volume control in the <strong>Volume Control</strong> panel in the <strong>Windows</strong> taskbar, or use the key combination <strong>Fn + F5</strong> (see “<strong>Function Keys and Numeric Keypad</strong>” on page 2 - 16) to adjust. &lt;br&gt;&lt;br&gt;*The headphone is plugged into the wrong jack. It should be plugged into the headphone-out jack (see “<strong>Headphone-Out Jack</strong>” on page 1 - 13).</td>
</tr>
<tr>
<td>The compact disc cannot be read.</td>
<td><strong>The compact disc is dirty.</strong> Clean it with a CD-ROM cleaner kit.</td>
</tr>
<tr>
<td>The compact disc tray will not open when there is a disc in the tray.</td>
<td><strong>The compact disc is not correctly placed in the tray.</strong> Gently try to remove the disc using the eject hole (see “<strong>Loading Discs</strong>” on page 2 - 9).</td>
</tr>
<tr>
<td>The DVD regional codes can no longer be changed.</td>
<td><strong>The code has been changed the maximum 5 times.</strong> See “<strong>DVD Regional Codes</strong>” on page 2 - 11.</td>
</tr>
</tbody>
</table>
## Troubleshooting

<table>
<thead>
<tr>
<th>Problem</th>
<th>Possible Solution</th>
</tr>
</thead>
<tbody>
<tr>
<td>A music compact disc can be read while a data disc can not.</td>
<td><em>There may be a problem with the disc hardware or software.</em> Refer to your operating system manual for more information on the software and make sure you have the correct software installed for running video compact discs. If the proper software is installed and a problem still exists, contact your service center about a possible hardware problem.</td>
</tr>
</tbody>
</table>
| All compact discs cannot be read.                                      | *The Windows system does not recognize the CD-ROM drive, or the CD-ROM drive is not compatible with other devices.* Make sure you have the CD-ROM drive properly installed and configured.  
*The CD-ROM drive is dirty.* Clean it with a CD-ROM cleaner kit.  
*There may be a problem with the disc hardware or software.* If the correct software is properly installed, contact your service center about a hardware problem. |

### Media Warning

When manually ejecting a CD/DVD disc, **DO NOT** use a sharpened pencil or similar object which may break, and become lodged in the hole.
PC Card

<table>
<thead>
<tr>
<th>Problem</th>
<th>Possible Cause - Solution</th>
</tr>
</thead>
</table>
| The system cannot recognize the PC Card. | **The PC Card is not inserted into the socket or inserted incorrectly.** Remove the card and re-insert it aligning the PC Card with the slot. Push the card in until it locks into place.  
**The PC Card or card driver is not compatible with the computer.** Check “Communication” on page A - 4 to check the compatibility of the card.  
**The PC Card driver is not installed.** Install the driver (see “What to Install” on page 4 - 2).  
**The system cannot access the card after it is installed.** Please read the documentation which comes with any new external device. Make sure you install any drivers, if they are supplied with it, as this will allow you to access any extra functions which come with the device. |
## Troubleshooting

### Keyboard and Mouse

<table>
<thead>
<tr>
<th>Problem</th>
<th>Possible Cause - Solution</th>
</tr>
</thead>
<tbody>
<tr>
<td>Unwelcome numbers appear when typing.</td>
<td><em>If the LED ( \text{Num Lock} ) is lit, then Num Lock is turned ON.</em> Press and release the <strong>Num Lock</strong> key.</td>
</tr>
<tr>
<td>I have installed a new external Keyboard or mouse but cannot use all of the listed functions.</td>
<td><em>You have not installed the driver to enable any extra functions.</em> Make sure you read the documentation which comes with any new external device, and make sure you install the driver for it as this will allow you to access any extra functions which come with your device.</td>
</tr>
</tbody>
</table>

### Other Keyboards

If your keyboard is damaged or you just want to make a change, you can use any standard PS/2 or USB keyboard. The system will detect and enable it automatically. However special functions/hot keys unique to the system’s regular keyboard may not work.
## Troubleshooting

### Printer

<table>
<thead>
<tr>
<th>Problem</th>
<th>Possible Cause - Solution</th>
</tr>
</thead>
</table>
| The printer cannot be added to the system or will not work. | The printer is not turned on, is not correctly connected to the computer, or has an internal problem. Make sure the printer is on. Check all connections and cables and then try to reinstall the driver. You may refer to the printer's manual for instructions on printing a “self-test” page (a “self-test” page will print regardless of computer connections and is a means of ensuring that the printer is actually working).

*There is no paper in the printer, or the paper is incorrect for the settings designated in your software.* Put more paper in the printer (also fan the paper to make sure it doesn’t stick together and cause a paper jam) and check the paper size matches your software’s “print” settings.

*The printer driver is not installed or is configured incorrectly.* Check that the printer is properly installed and configured (correct port etc.). Also check that you have installed the latest driver compatible with your OS (updated drivers are usually available for download from the printer manufacturer’s website).

*The printer is a network printer and it is not properly connected to the network.* All networks are configured differently so please check with your network administrator to get the correct setup. |
# Troubleshooting

## Operation

<table>
<thead>
<tr>
<th>Problem</th>
<th>Possible Cause - Solution</th>
</tr>
</thead>
<tbody>
<tr>
<td>The system freezes or the screen goes dark.</td>
<td><em>The system’s power saving features have timed-out.</em> Use the AC adapter, press the Suspend/resume (\texttt{Fn + Esc}) key combination, or press the power button if no LEDs are lit.&lt;br&gt;&lt;br&gt;<em>A software conflict made the system “crash”.</em> Consult your OS manual. As a last resort, since you will lose any unsaved data, try to reboot the system or if that doesn’t work, turn the computer off and on again.</td>
</tr>
<tr>
<td>The system never goes into Hibernate mode.</td>
<td>Make sure you have enabled \textbf{Hibernate} in the Power Options control panel in your OS (see “\textit{Hibernate} on page 3 - 21”).</td>
</tr>
<tr>
<td>The system does not go into a power saving mode when the battery is low.</td>
<td>No power saving options are enabled. Use one of the Power Options presets.</td>
</tr>
</tbody>
</table>
| The Infrared device does not work. | *The drivers (if supplied with the device) are not loaded.* Read the documentation which comes with any new external device. Make sure you \textbf{install the driver (if one is required)} for it as this will allow you to access any extra functions which come with your device.<br><br>*The FIR settings are not configured correctly.* See “\textit{Configuring the Infrared Settings for FIR} on page 3 - 25.” You may need to change the settings for the infrared device in the \textbf{BIOS} to enable the FIR setting support.<br><br>*The Infrared transceiver is blocked.* Make sure nothing is between your system’s infrared transceiver and the destination’s transceiver. Infrared transceivers operate on a “Line of Sight”.

---

7 - 18 Operation
Appendix A. Specifications

Mobile or Desktop CPU
The computer designs incorporate both mobile and desktop CPUs. To tell if you have a mobile or desktop CPU model, look at the DC output rating on the bottom of the AC adapter:

- Mobile: DC-Output 20V, 3.25A, 65w
- Desktop: DC-Output 20V, 4.5A, 90w

Processor

Desktop Model
- Intel Pentium 4 Processor - (478-pin) FC-PGA2 package
  (μ0.13) 0.13 Micron Process Technology, 512KB L2 Cache & 400MHz FSB - 1.8/2.0 GHz
- Intel Celeron Processor - (478-pin) FC-PGA2 package
  (μ0.13) 0.13 Micron Process Technology, 256KB L2 Cache & 400MHz FSB - 2.0 GHz

Mobile Model
- Mobile Intel Pentium 4 Processor - (478-pin) uFCPGA package
  (μ0.13) 0.13 Micron Process Technology, 512KB L2 Cache & 400MHz FSB - 1.4~2.2 GHz
- Mobile Intel Celeron Processor - (478-pin) uFCPGA package
  (μ0.13) 0.13 Micron Process Technology, 256KB L2 Cache & 400MHz FSB - 1.4~2.0 GHz
(You can also check the heat sink type as pictured in Figure 6-2b of “Upgrading the Hard Disk Drive” on page 6-4 to differentiate between the desktop and mobile CPU models.)

Core Logic
- SIS 650
**Structure**

- PC99 compliant
- ACPI 1.0B Compliant

**Security**

- Security (Kensington® Type) Lock
- BIOS Password

**Memory**

- 64-bit data bus system memory
- Memory expandable up to 1GB (depending on 128/256/512MB SODIMM Modules)
- Two 200-pin DDR SODIMM sockets, supporting DDR SDRAM SODIMMs (2.5V) - DDR 266 compliant

**BIOS**

- One 4MB Flash ROM
- Phoenix BIOS with Smart Battery, Plug-and-Play (1.0a), ACPI 1.0B

**Display**

- UMA Architecture with 16/32/64 MB System Memory sharable as Display Memory
- UltraAGP™
- Integrated 128-bit 2D/3D graphics engine
- Motion compensation and IDCT accelerator for DVD content playback
- Fully DirectX8 compliant graphic engine
- CRT Resolution up to 1920 * 1200 * 16M

**Video Memory**

The system allocates or "shares" a portion of system memory for video use. "Shared" memory is user-configurable via the Setup. The default setting is set to 32MB, and in addition, may be adjusted to 16MB or 64MB (see “Embedded Share Memory (Advanced Menu>Advanced Chipset Control)” on page 5 - 11).
**LCD Options**
- 13.3" XGA TFT (1024*768)
- 14.1" XGA TFT (1024*768)

**Storage Devices**
- 3.5" 3-mode **Floppy Disk Drive** *(optional for Model C)*
- Easy changeable 2.5" 9.5 mm (h) **Hard Disk Drive**
  - Supports DMA mode 2
  - Supports PIO mode 4 / ATA-33/66/100
- 12.7mm(h) **Device Bay** for **ONE** of the following drive configuration options:
  - CD-ROM
  - DVD-ROM
  - CD-RW
  - Combo (DVD-ROM + CD-RW)

**Audio**
- AC'97 2.1 compliant interface
- Compatible with Sound-Blaster PRO™
- Advanced Wavetable Synthesizer
- DirectSound™ 3D Accelerator
- Full-duplex
- Virtual AC3
- Built-in microphone
- 2 built-in speakers

**Keyboard**
- “Win Key” keyboard

**PC Card**
- One Type II PCMCIA 3.3V/5V socket supporting CardBus (PC Card95) - *for Models A & B only*
Interface
• Built-in TouchPad (PS/2)
• Dual USB ports (only Model A has USB 2.0 compliant ports - see “USB Port Type” on page 1 - 5)
• One IEEE 1394 port (for Models A & B only)
• One parallel port (LPT1), supporting ECP / EPP 1.7 and 1.9
• One external CRT monitor port
• One external keyboard/mouse (through Y cable) PS/2 port
• One speaker-out/headphone-out jack
• One infrared transceiver (for Models A & B only), supporting IrDA 1.1/FIR/ASKIR
• One S/PDIF-out port/ microphone-in jack
• One RJ-11 jack for modem
• One RJ-45 jack for 100M/10M LAN
• One DC-in jack

Communication
• 10/100Mb Ethernet LAN built-in
• 56K MDC modem V.90 & V.92 compliant (V.92 upgradeable by S/W Driver)
• Wireless Infrared transfer IrDA 1.1, 1cm~1M operating distance, 4Mbps FIR (for Models A & B only)

Power Management
• Supports ACPI v1.0b
• Supports APM v1.2
• Supports Hibernate mode
• Supports Standby mode
• Supports Battery low sleep
• Supports resume from alarm time
Power

Desktop Model
- Full range AC adapter
  Input: 100~240V, 47~63Hz
  Output: 20V, 4.5A, 90W
- Supports smart Lithium-Ion battery

Mobile Model
- Full range AC adapter
  Input: 100~240V, 47~63Hz
  Output: 20V, 3.25A, 65W
- Supports smart Lithium-Ion battery

Indicators
- LED indicators (HDD, Power status, FDD status, Num Lock, Caps Lock, Scroll Lock, AC-In, Battery Charging/Battery Full)

Environmental Spec
- Temperature
  Operating: 5°C ~ 35°C
  Non-Operating: -20°C ~ 60°C
- Relative Humidity
  Operating: 20% ~ 80%
  Non-Operating: 10% ~ 90%

Physical Dimensions
- 308 (w) x 254 (d) x 37.5 (h) mm

Weight
- 2.9 ~ 3.25 kg with battery

Optional
- DVD-ROM Drive
- CD-RW Drive
- Combination Drive (DVD-ROM and CD-RW, 12.7mmH)
- Software DVD player
- Smart Lithium-Ion battery pack