PRESTIGIO 350

Notice

The information in this user's manual is subject to change without notice.

THE MANUFACTURER OR RESELLER SHALL NOT BE LIABLE FOR ERRORS OR OMISSIONS CONTAINED IN THIS MANUAL AND SHALL NOT BE LIABLE FOR ANY CONSEQUENTIAL DAMAGES, WHICH MAY RESULT FROM THE PERFORMANCE OR USE OF THIS MANUAL.

The information in this user's manual is protected by copyright laws. No part of this manual may be photocopied or reproduced in any form without prior written authorization from the copyright owners.

Microsoft and Windows are registered trademarks of Microsoft Corporation. DOS, Windows 95/98/ME/2000/NT/XP are trademarks of Microsoft Corporation.

Product names mentioned herein may be trademarks and/or registered trademarks of their respective owners/companies.

The software described in this manual is delivered under a license agreement. The software may be used or copied only in accordance with the terms of the agreement.

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

Preface

Using This Manual

This User's Manual contains general information about the hardware and software setup, troubleshooting, and technical specifications of the notebook computer.

Symbols and Conventions

The following conventions and symbols are used in this manual:

When keys are to be pressed at the same time, a plus (+) symbol is used. For instance, Fn+F7 means holding Fn and F7 keys at the same time.

When a series of clicking actions is needed in Windows O/S, [ ] and > symbols are used. For instance, [Start > Settings > Control Panel > Display] means clicking the Start icon first, then the Settings, then the Control Panel, then the Display icon.

When you need to make a selection with the touch pad (or mouse), you will be asked to 'select' or 'click' or 'double-click', 'right-click' the item.

> **Note: Text in this format and symbol means specific instructions, commentary, sidelights, or any additional information or notes that you should be aware of.**
>
> **Warning: Text in this format and symbol means that failures to comply with the given instructions or information could result in damage to your computer or could cause bodily harm or loss of life.**

Protecting Your Computer - Avoid Abusive Handling and Adverse Environment

Follow the advice below will help ensure that you get the most out of your Investment.

Your computer will serve you well if you take good care of it.
Do not expose the computer to direct sunlight or place it near sources of heat.
Do not subject it to temperatures below 0ºC (32ºF) or above 35ºC (95ºF).
Do not expose the computer to magnetic fields.
Do not expose the computer to moisture or rain.
Do not spill water or liquid on the computer.
Do not subject the computer to adverse shock and vibration.
Do not expose the computer to dust and dirt.
Do not place objects on top of the computer to avoid damaging the computer.
Do not place the computer on rocky surfaces.

Here are some ways of taking care of your AC adapter.
Do not connect the adapter to any devices other than your computer.
Do not let water get into the adapter.
Do not block the ventilation airway of the adapter.

Keep the adapter in a cool and ventilated place.
Do not step on the power cord or place heavy objects on top of it.
Carefully tuck away the power cord and any cables away from pedestrian traffic.
When unplugging the power cord, do not pull on the cord itself but pull on the plug.
Keep the adapter away from children.
The total ampere ratings of the equipment plugged in should not exceed the ampere rating of the cord if you are using an extension cord.
The total current rating of all equipment plugged into a single wall outlet should not exceed the fuse rating.
Do not connect other AC adapter to your notebook. This Notebook uses exclusively the AC adapter: Lishin 0335C2065 (65W), EPS F10652-A (65W).

When cleaning the computer, observe these steps:
1. Power off the computer and remove the battery pack.
2. Disconnect the AC adapter.
3. Use a soft cloth dampened with water. Do not use liquid or aerosol cleaners.

Contact your dealer or see your service technician if any of the following occurs:
Computer has been dropped or the body has been damaged.
Liquid has been spilled into the product.
The computer does not operate normally.

Cleaning the Ventilation Grills:
It is suggested that you clean the ventilation grills regularly to maintain optimal thermal regulation of the notebook. To do this, you may use a soft brush or a vacuum cleaner (with appropriate head adapter) to remove the dust buildup on the ventilation grills.

GETTING TO KNOW THE BASICS

This chapter introduces the features and components of the computer.

Performance Features

High Performance Processor with ATI Radeon Xpress 200M Chipset

The notebook PC is equipped with a powerful Mobile Intel Celeron M processor. Together with the ATI chipset and integrated graphic technologies, the system offers very advanced PC performances.

Wide-Screen LCD Display

The computer is equipped with a wide-screen 15.4-inch TFT high-resolution display panel for the best cinematic viewing experience.

Battery Performance Technology

The system uses a unique power management technology that allows user to enjoy extended battery life without sacrificing performance.

Mobile 3G Telecom Module (Optional Device)

The optional 3G communication module allows you to receive digital entertainment services on your notebook computer via the 3G telecom networks.
(Please go to the end of this chapter to learn how to install the SIM card and how to use the 3G Internet connection software.)

ExpressCard Technology

ExpressCard (type II, 54mm) is the next-generation of the PC Card standard. The bus interface is based on the two standards: PCI Express for high-performance I/O and USB2.0 for variety of devices.

Expandability

The system offers upgradeable hard disk drive and 2 DDRII SDRAM sockets for expansion, allowing the user to easily increase the storage and system capacities as the need arises.

Built-in Multiple Card Reader

There is built-in 4-in-1 card reader to access many of the portable media formats (SD Card, MS Card, MMC Card, and MS-Pro Card).

Ethernet Port

The system provides built-in 10/100Mbps Ethernet network adapter for high bandwidth network connection.

Firewire (IEEE1394 / 1394a) and USB2.0 ports

In addition to a full array of built-in I/O ports, the computer offers IEEE1394 for ultra high-speed connection to high bandwidth digital video devices and USB2.0 ports to connect to any USB-based peripheral devices.
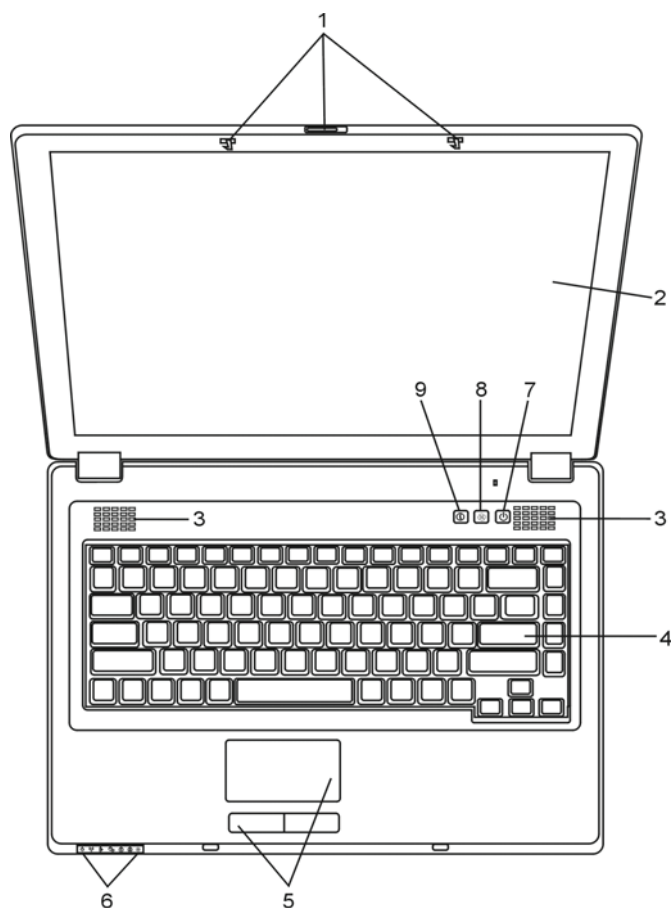
Wireless LAN

The internal Wireless LAN module allows your notebook to connect wirelessly to other 802.11-enabled systems, devices, or network.

System At A Glance

Top View

1. LCD Latch

The LCD latches lock / unlock the LCD panel.

2. LCD Display

ENG

The panel is where the system content is displayed.

3. Built-in Stereo Speakers

The built-in speakers output the sound in stereo.

4. Keyboard

The keyboard is used to enter data. (See Keyboard Section for details.)

5. Touch Pad

The touch pad is a built-in pointing device with functions similar to a mouse.

6. LED Status Indicator

The LED Status indicators reveal the status of these functions: Numeric keypad, cap lock, silent mode, WLAN module enabling and disabling and also the ODD, HDD activities. (See the LED Status Indicator Section for details.)
The LED Status indicators also reveal the status of the system power state and battery-charging state. See the LED Status Indicator Section for details.

7. Power / Suspend Button

The power/suspend button turns the notebook on and off and it also acts as a system suspend key. Press momentarily to turn on the system. Press and hold for at least 4 seconds to turn off the system. How this key behaves can be defined in [Start > Settings > Control Panel > Power Options > Advanced] menu. Press the power / suspend button again to return from the suspend mode. (See Chapter 3 for more details on system suspend function.)

When the system is in Suspend Mode, the ⏻ LED status indicator shows blinking green light.

8. Silent Mode Button

Pressing the key enables the system to lower its power usage; therefore the fan speed is reduced to achieve lowest operating noise.

When Silent Mode is enabled, the 🌀 LED status indicator shows steady green light.

9. Internet Explorer Quick Key

Pressing the button launches Internet Explorer in Windows.

Front View

Warning: Do not place any heavy objects on the top of notebook. This may damage the display

1. Wireless On/Off Switch

Use the Switch to disable or enable the Wireless function.

When Wireless LAN function is enabled, the LED status indicator shows steady green light.

2. Microphone/Audio Line-in Jack

The microphone/Audio Line-in jack (3.5-mm diameter) is where you connect a microphone or an external audio input source such as a CD Player..

3. Stereo Headphone/SPDIF-out Jack

The stereo headphone jack (3.5-mm diameter) is where you connect the headphones or external speakers. Alternatively, you may connect the S/PDIF output to an external DTS, AC3, or PCM sound processor / decoder in your home stereo system.

Side Views
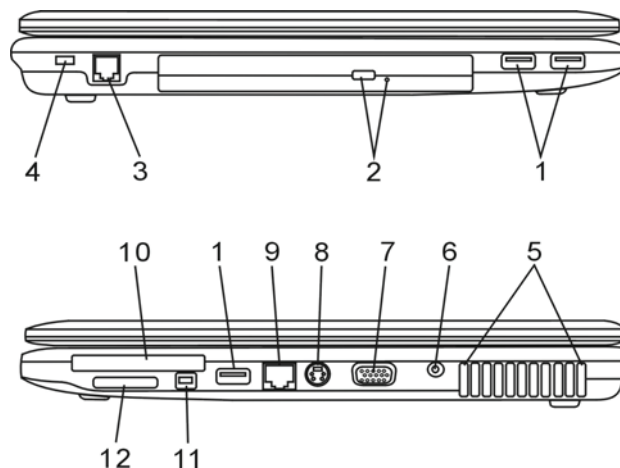
Warning: Do not place any heavy objects on the top of notebook. This may damage the display

1. USB2.0 Port (x3)

The Universal Serial Bus (USB2.0-compliant) port allows you to connect a wide variety of devices to your computer at a rate of up to 480 Mbps. This port conforms to the latest USB2.0 plug-and-play standards.

2. Optical Drive and Disk Eject Button and Manual Eject Key Hole

If your computer comes with the Combo drive, DVD-Dual or Super-Multi drive, you may save data onto a CD-R / CD-RW or DVD RW disc. Press the eject button to eject the disk tray. The manual eject keyhole allows you to manually eject a jammed disk.

3. Modem Port

This is where you plug the phone jack (RJ-11) for fax/modem functions.

4. Kensington Lock Key Hole

A Kensington-type security lock latches to this keyhole for anti-theft purpose.

5. Ventilation Grill

The fan grill is where air is exchanged to dissipate the internal heat. Do not block this airway completely.

6. Power Jack (DC-in)

The DC-out jack of the AC Adapter connects here and powers the computer.

7. External VGA Port

The VGA video output port is for connecting the external LCD monitor or projector.

8. TV (S-Video) Port

The S-Video port permits you to redirect the screen output to a television set or any analog video playback device. This TV Port is copyright protected; when DVD movie is played, the output is scrambled to prevent analog recording.

9. Ethernet / LAN Port

The port connects to a network hub via the RJ-45 cable and also conforms to 10/100Base-TX transmission protocol.

10. ExpressCard Slot

The slot is where ExpressCard (TypeII, 54mm) is inserted. ExpressCard Type 54 allows insertion of either 54mm or 34mm cards. ExpressCard integrates both the PCI-Express bus technology and USB2.0 interface.
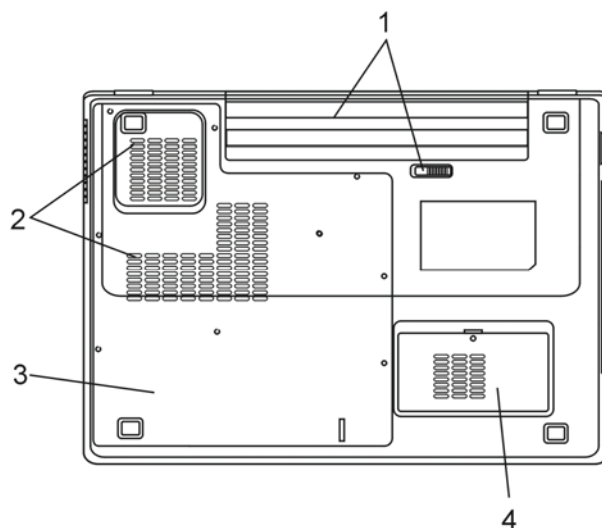
11. Firewire / IEEE1394 / 1394a Port

This is a high-speed serial data port. You may connect any Fire-wire-ready device to this port.
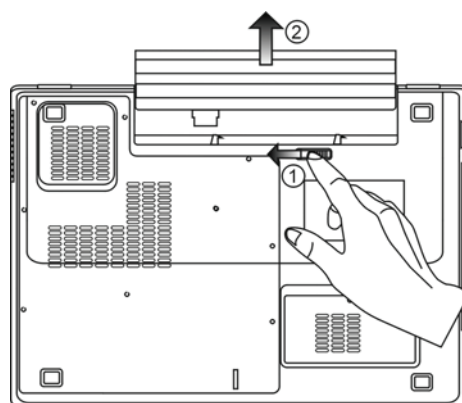
12. 4-in-1 Card Reader

The 4-in-1 Card Reader supports SD Card, MS Card, MMC Card, and MS-Pro Card.

Bottom View

1. Battery Pack and Battery Latch

The battery pack is a built-in power source for the notebook. Slide the battery latch to release the battery pack.

2. Ventilation Grill

The fan grill is where air is exchanged to dissipate the internal heat. Do not block this airway completely.

Warning: Do not block the Fan Grill outlet. Place the machine on hard surface only. The bottom case may get very hot.

3. System Device Cover

The system's processor with cooler assembly, Wireless LAN module, HDD, and DDR memory module are located under the case cover. The system memory can be upgraded to a larger capacity. (See Chapter 4 for instructions on the memory and HDD upgrade.)

4. 3G Telecom Module Cover (Optional)

The optional 3G Telecom module is installed underneath the cover. You need to open the cover to install the SIM card. (Please go to the end of this chapter to learn how to install the SIM card and how to use the 3G Internet connection software.)

AC Adapter
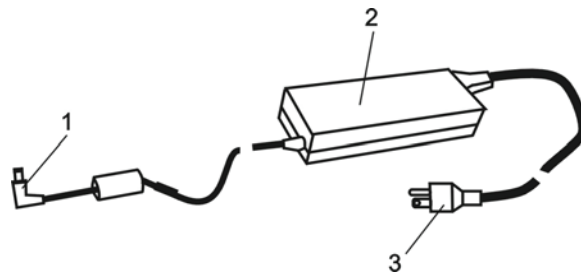
1. DC-out Connector

The DC-out connector docks to the power jack (DC-in) on the computer.

2. Adapter

The adapter converts alternating current into constant DC voltage for the computer.

3. AC Plug

The AC plug plugs to the AC wall outlet.

> **Warning: Make sure you are using a standard 3-prong AC wall socket with a ground pin. If not, you may feel a slight tingling sensation on any of the computer's metal parts such as the I/O ports. This is caused by leakage current when the AC adapter is not properly grounded (via the ground pin). However, the amount of leakage current is within the safety regulation and is not harmful to human body.**

LED Status Indicator

The LED Status Indicator displays the operating status of your notebook. When a certain function is enabled, an LED will light up. The following section describes its indication.

System & Power Status Indicators

LED Graphic Symbol	Indication
⏻	Green light indicates the system is ON. Blinking green light indicates the notebook is in the suspend mode.
((•))	Green light indicates the WLAN module is active.
(fan)	Persistent green light indicates the Silent Mode is enabled.
(battery)	Blinking orange light indicates the battery is being charged. Blinking red light indicates the battery power is low when the system is turned ON. Persistent green light indicates the battery is Full and AC power is plugged in.
(drive)	Green light indicates the hard drive and/or optical drive is being accessed.
1	Green light indicates the numeric keypad is activated.
A	Green light indicates the cap-lock is activated.

Keyboard Features

Function Keys (Quick Keys)

Graphic Symbol	Action	System Control
(moon)	Fn + F1	Enters Suspend Mode.
3G	Fn + F2	Turns on the telecom 3G functions.
(battery)	Fn + F3	Turns the battery warning beep off or on.
(display)	Fn + F4	Changes Display Mode: LCD-only, CRT-only and LCD&CRT.
◀))	Fn + F5	Turns Speaker Volume up.
◀)))	Fn + F6	Turns Speaker Volume down.
☼+	Fn + F7	Increases Display Brightness.
☼−	Fn + F8	Decreases Display Brightness.
	Fn+Num Lk	Enables the embedded keypad to work in numeric mode. The keys act like numeric keypads in a calculator. Use this mode when you need to do a lot of numeric data entry. An alternative would be to connect an external numeric keypad.

Fn+Scroll Lock	**Press the Scroll Lock key and then press ^or vto move one line up or down.**

For various system controls, press the Fn (Function) key and the Fx key simultaneously.

Windows Keys

Your keyboard also has two Windows keys:

1. Start Key
**This key allows you to pull up the Windows Start Menu at the bottom of the taskbar.**

2. Application Menu Key
This key brings up the popup menu for the application, similar to a click of the right mouse button.

Embedded Numeric Keypad

Press Fn+NumLk to enable the embedded numeric keypad. The numbers are printed in upper right corner of a key, in a color different from the alphabets. This key pad is complete with arithmetic operators (+, -, * , /).

Press Fn+NumLk to revert to normal character keys.
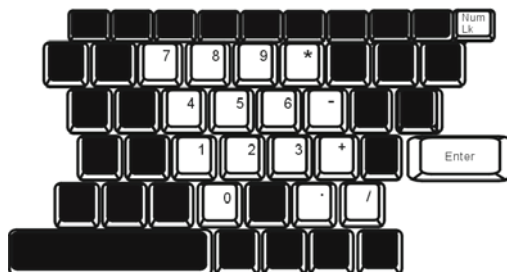
Touch Pad

The built-in touch pad, which is a PS/2-compatible pointing device, senses movement on its surface. As you move your fingertip on the surface of the pad, the cursor responds accordingly.

The following items teach you how to use the touch pad:
1. Move your finger across the touch pad to move the cursor.
2. Press buttons to select or execute functions. These two buttons are similar to the left and right buttons on a mouse. Tapping on the touch pad twice produces is similar to clicking the left button of a mouse.

Function	Left Button	Right Button	Equivalent Tapping Action
Execution	Click twice quickly		Tap twice (at the same speed as double-clicking the mouse button)
Selection	Click once		Tap once
Drag	Click and hold to drag the cursor		Tap twice quickly and on the second tap hold finger to the touch pad to drag the cursor
Access Context Menu		Click once	

Move One Page Up or Down

Tips on Using the Touch Pad:

1. The double-click speed is timed. If you double-click too slowly, your notebook responds as if you single-clicked twice.

2. Keep your fingers dry and clean when using the touch pad. Also keep the surface of touch pad clean and dry to prolong its life.

3. The touch pad is sensitive to finger movements. Hence, the lighter the touch, the better the response. Heavy touch does not produce better response.

Graphic Subsystem

Your computer uses a high performance 15.4-inch active matrix TFT panel with high resolution and multi-million colors for comfortable viewing. The ATI Radeon Xpress 200M integrated video graphics accelerator, which is Microsoft DirectX 9 compatible, performs graphic rendering at a lighting-fast speed.

Adjusting the Display Brightness

The notebook uses special key combinations, called hot keys, to control brightness.
Press Fn+F7 to increase the brightness.
Press Fn+F8 to decrease the brightness.

Note: To maximize your battery operating time, set the brightness to the lowest comfortable setting, so that the internal backlight uses less power.

Extending the Life of the TFT Display Device

Observe the following guidelines to maximize the life of the backlight in the display.

1. Set the brightness to the lowest comfortable setting (Fn+F8).
2. When working at your desk, connect your notebook to an external monitor and disable the internal display Fn+ F4.
3. Do not disable the suspend time-outs.
4. If you are using AC power and have no external monitor attached, change to suspend mode when not in use.

Opening and Closing the Display Panel

To open the display, push the LCD latch to the right and lift up the lid. Then tilt it to a comfortable viewing position. The LCD panel has a maximum opening of 135 degrees. Do not push it down forcibly.
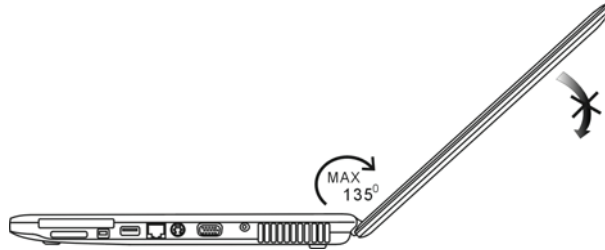
To close the display cover, fold it down gently.

Warning: To avoid damaging the display, do not slam it when closing. Do not place any object on top of the computer when the display is closed

Audio Subsystem

Your computer's audio subsystem is Sound Blaster Pro-compatible.

Adjusting the Volume Manually

To increase the volume, press Fn+F5.
To decrease the volume, press Fn+F6.

Adjusting the Audio Volume in Windows

1. Click the speaker symbol in the task tray in Windows.
2. Drag the volume control bar up or down to adjust the volume.
3. To temporarily silence the speaker without changing the volume setting, click Mute.

Voice Recording

You need to connect to an external microphone and use Microsoft Sound Recorder to record sound.

Modem

Your computer comes with a 56K V.92 internal fax/modem and a phone jack (RJ-11), which is located on the left side of your computer.
Use a telephone cable to connect the computer to the telephone wall outlet.

Connecting the Modem

1. Plug one end of the phone line into the modem port located on the rear side of the computer. (For EMI compliance, you need to clip the included EMI CORE to the phone line.)
2. Plug the other end of the line into the analog phone wall outlet.

Depending on where your computer is used, you may need to change settings in the modem. Correct setting will allow you to maintain a stable connection in a country where its telecommunication system may be different to others.

To change the modem setting, do the following:

1. Go to [Start > Settings > Control Panel > Phone and Modem Options]. Go to Dialing Rules and Edit My Location. In the Country/Region pull-down menu, select the appropriate country setting. You will see a similar dialog box.
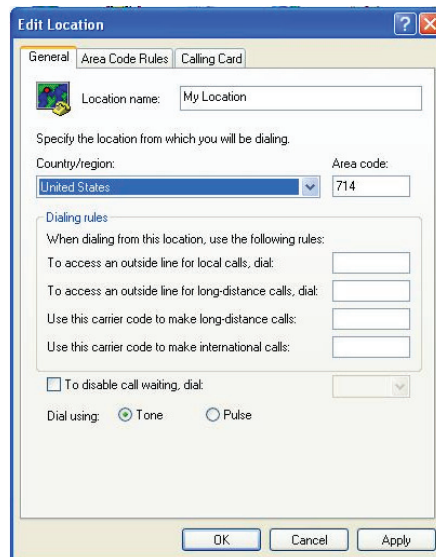
2. Click on the pull-down menu and select the country where it is applicable. Click on OK to exit.

Ethernet

Your computer is equipped with a 10/100Base-TX Fast Ethernet network adapter. Connect the active LAN cable to the RJ-45 LAN port located on the right side of the computer. This allows you to access and transmit data in the local area network.

Connecting to the Network

Use Unshielded Twisted Pair (UTP) Ethernet cable only.
1. Insert one end of the UTP cable into the network connector until the connector snaps securely into the receptacle.
2. Either connect the other end of the cable to an RJ-45 jack wall outlet or to an RJ-45 port on a UTP concentrator or hub in the network.

Cabling Restriction for Networks

The following restrictions should be observed for 10/100BASE-TX networks:
. The maximum cable run length is 100 meters(m) (328 feet[ft]).

Note: Consult Windows manual and / or Novell Netware user's guide for the software installation, configuration, operation of the network.

Using the Optional 3G/GPRS Telecom Module

The optional 3G/GPRS communication module allows you to connect to the Internet via the telecom networks.
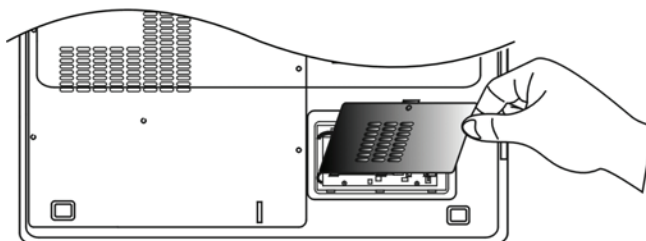
How to Insert the SIM Card

The SIM card is provided by your network carrier.

1. Turn OFF the computer. Unhook the AC cord and all cables/devices attached to the notebook. Remove the battery.

2. Place your hand on a large metal object momentarily to discharge any static electricity.

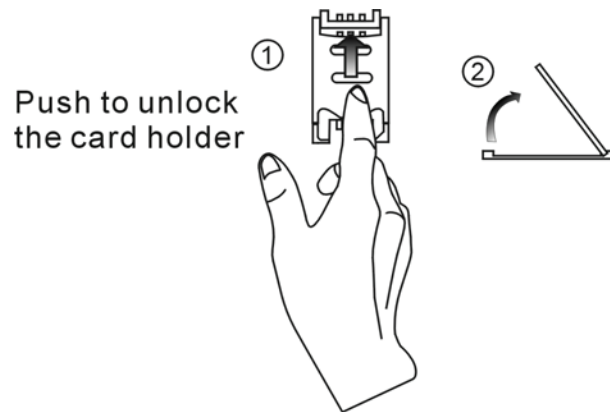3. Locate the 3G Module Cover on the bottom of the system.
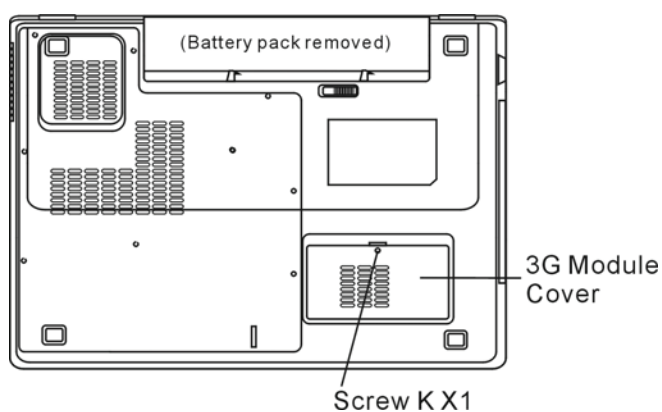
4. Remove Screw K and Cover.

5. Locate the SIM Card Socket. Push to unlock the card holder and open the card holder upright.
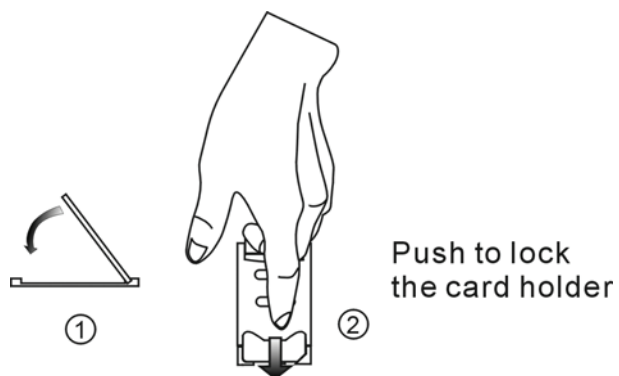
Push to unlock
the card holder

① ②
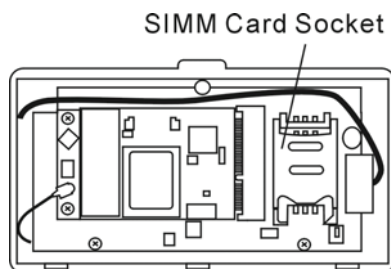
6. Insert the SIM card into the card holder.
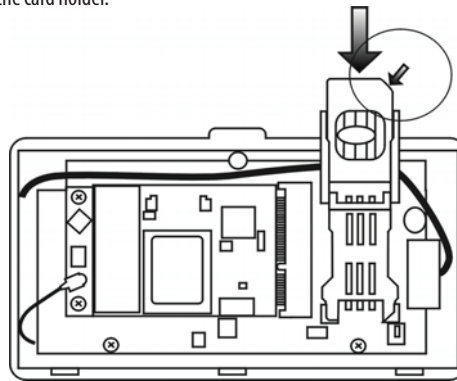
7. Close the card holder and push to lock the card holder. Note that if you install the card at a wrong orientation, the card holder will not close properly.

① ②

Push to lock
the card holder

8. Re-attach the Module Cover and Screw K. This completes the SIM card installation procedure.

How to Connect to the Internet

You need to obtain a 4-digit PIN Code as well as the APN network address from your carrier to complete the dial-up and setup process.

Note: The user interface diagrams or the steps shown below may appear slightly different than what you will see in your notebook because your computer may have a more updated software version.

1. Launch the Globe Trotter Mobility Manager on the Desktop or in the Program's list.

2. If this is your first-time using the 3G module, you need to create a new dialup profile. Click the Setup tab and the New (Profile) button. Once you have completed the profile setup, you will not need to repeat the steps 2~5 in the future.
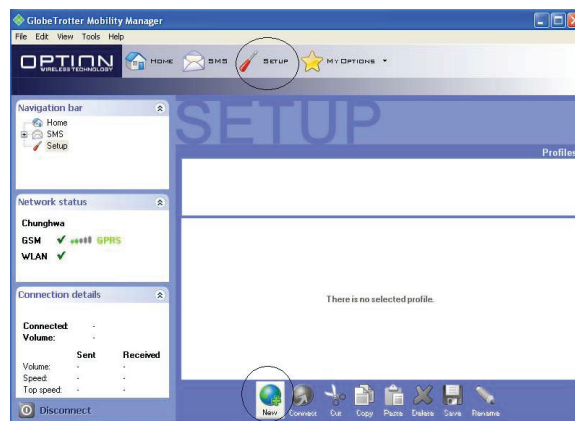
3. Select Set Up my profile manually and click Next.

4. Select 3G/GPRS and click Next.

5. Enter the APN address provided by your network carrier.
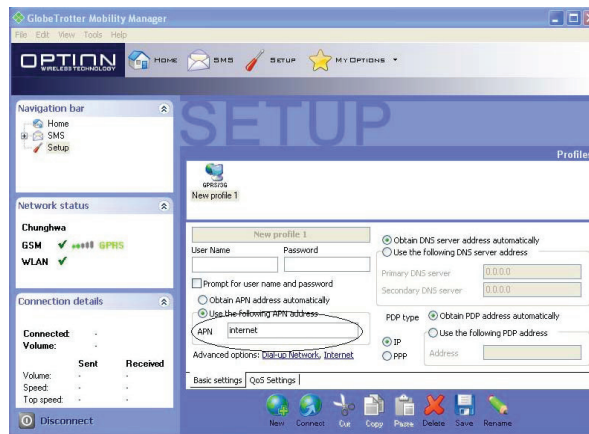
6. Go to the Home tab and click Connect on the profile that you have just created. You may be asked to enter a 4-digit PIN code.
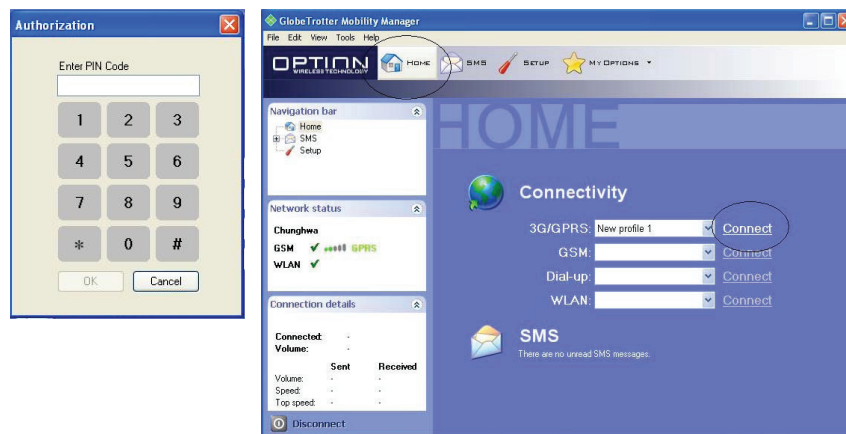
7. Once the network is connected. You will see a pop-up message from the task tray.

8. Launch the Explore browser and you are now ready to surf the Internet.

To disconnect from the network: Left-click the Globe Trotter icon and select Disconnect.

BIOS SETUP AND SECURITY FEATURE

In this chapter, you will learn how to enter the BIOS Setup Menu and manipulate various hardware control settings. You will also learn how to use the built-in security features.
The Setup Utility is a hardware configuration program built into your computer's BIOS (Basic Input/Output System). It runs and maintains a variety of hardware functions. It is a menu-driven software, which allows you to easily configure and change the settings.

The BIOS contains manufacture's default settings for the computer's standard operations. However, there are occasions when you may be required to modify the default settings in the BIOS.

The BIOS allows you to set up passwords to limit access to users. This is an important feature because a great deal of vital information is carried within the computer nowadays. Unauthorized access can be prevented. Later in this chapter, you will learn how to use this security feature.

> Note: The BIOS Setup Utility you see on your notebook may appear slightly different than what is shown in this manual, because your notebook may have newer BIOS version installed.

Entering the BIOS Setup Screen

First turn on the power. When the BIOS performs the POST (Power-On Self Test), press F2 key quickly to activate the Phoenix BIOS Setup Utility.

> Note: You may need to press F2 key fairly quickly. Once the system begins to load Windows, you may have to retry by cycle-power on again

Leaving the BIOS Setup Screen

When you have finished modifying the BIOS settings, exit the BIOS. It takes a few seconds to record changes in the CMOS.

BIOS Action Keys

Function Key	Command	Description
ESC	Exit	Leaves a sub-menu to return to the previous menu OR exits the BIOS setup while saving changes.
Enter	Go to Sub Screen	Shows the Sub Menu
F1	General Help	Shows the Help Screen
F9	Setup Defaults	Load default values
F10	Save and Exit	Saves changes and reboots the computer.
<Tab>	Select a field	Selects the next field.
Λ	Select an item	Selects the next upper item.
V	Select an item	Selects the next lower item.
-	Lower value	Selects the next value within a field.
+	Higher value	Selects the next value within a field.

Modifying the BIOS Settings

The Phoenix BIOS setup main menu is subdivided into sub-menus. Each menu item is described in this section.

Main Setup

Under this menu, you can change system time/date and view system memory and HDD information.

```
                         PhoenixBIOS Setup Utility
   Main        Info      Advanced   Security    Power      Boot       Exit
  System Time:                   [12:12:00]              Item Specific Help
  System Date:                   [02/12/2004]          <Tab>, <Shift-Tab>,
                                                        or <Enter> selects
  ➢    IDE Channel 0 Master      [None]                field.
  ➢    SATA Port 1               [None]

  Base Memory:                   640 KB
  Extended Memory:               1964032 KB


  F1 Help           ↑↓ Select Item      -/+ Change Values    F9 Setup Defaults
  Esc Exit          ◄ Select Menu       Select ► Sub-Menu    F10 Save and Exit
```

Note: Due to various configurations on this model, your system may show different information.

System Time: Type in the current time, in HH:MM:SS format.
System Date: Type in the current date, in MM/DD/YY format.

Info Setup

Under this menu, you can view basic processor and BIOS Version information.

```
                         PhoenixBIOS Setup Utility
   Main        Info      Advanced   Security    Power      Boot       Exit
  BIOS Information:                                       Item Specific Help
  BIOS Version:             0.03                        Information
  KBC   Version:            0.02


  Processor:
  CPU Type:                Intel ® Celeron M ® CPU
  CPU Info:                Intel Single Core CPU
  CPU Speed:               1.60 GHz


  F1 Help           ↑↓ Select Item      -/+ Change Values    F9 Setup Defaults
  Esc Exit          ◄ Select Menu       Select ► Sub-Menu    F10 Save and Exit
```

Note: Due to various configurations on this model, your system may show different information.

Advanced Setup

```
                        PhoenixBIOS Setup Utility
   Main        Info      Advanced    Security    Power     Boot        Exit
                      Setup Warning                      Item Specific Help

              Setting items on this menu to incorrect      The feature
              values may cause your system to malfunction. activates a CPU
                                                           support for the No
   Execute Disable Bit:           [Enabled]                Execution Memory
   POST Beep:                     [Disabled]               Protection that is
   LAN Remote Boot:               [Disabled]               available in some
   UMA Frame Buffer Size:         [Auto]                   O/S.

   F1 Help         ↑↓ Select Item     -/+ Change Values    F9 Setup Defaults
   Esc Exit        ◄ Select Menu     Select ► Sub-Menu     F10 Save and Exit
```

Execute Disable Bit: When enabled, this unique feature protects against certain type of virus that creates Buffer Overflow problem in the memory subsystem.
POST Beep: When enabled, the notebook will beep on POST.
LAN Remote Boot: When enabled, the system can support remote wake-up or boot on LAN.
UMA Frame Buffer Size: See Below.

Item	Selections / Sub-menu	Description
UMA	Auto	Select [Auto], the system will automatically set the
Frame	128 MB	appropriate shared memory size for the graphic engine.
Buffer Size	256 MB	Otherwise, you may choose a fixed size.

Security Setup

```
                        PhoenixBIOS Setup Utility
   Main        Info      Advanced    Security    Power     Boot        Exit
   Supervisor Password:       Not Installed            Item Specific Help

   User Password:             Not Installed            Supervisor
                                                       Password controls
   Set Supervisor Password:        [Press Enter]       access to the BIOS
   Set User Password:              [Press Enter]       setup


   Password on boot:               [Enabled]



   F1 Help         ↑↓ Select Item     -/+ Change Values    F9 Setup Defaults
   Esc Exit        ◄ Select Menu     Select ► Sub-Menu     F10 Save and Exit
```

Set Supervisor Password: Install or Change the Password.

Set User Password: Install or Change the Password.

Password on Boot: When enabled, the system will always ask for User Password on boot.

Using Password Protection

Two Levels of Password Protection are available. The BIOS provides both a Supervisor and a User password. If you try to activate both passwords, the Supervisor password must be set first.

The passwords activate two different levels of protection:

1. System always asks for password every time it is powered on.

2. System asks for password only when you attempt to enter BIOS utility.

The passwords are encrypted and stored in NVRAM. Make sure you write them down or memorize them. If you lost the passwords, the computer may need to be sent back to the factory or to an authorized service dealer to reset the passwords.

Power Setup

PhoenixBIOS Setup Utility						
Main	Info	Advanced	Security	Power	Boot	Exit
Power Button Mode: [ON/OFF]					Item Specific Help	
					Select Power Button Functionality. This functionality is only available in DOS Mode.	
F1 Help	↑↓ Select Item		-/+ Change Values		F9 Setup Defaults	
Esc Exit	◄ Select Menu		Select ► Sub-Menu		F10 Save and Exit	

Power Button Mode: See Below.

Item	Selections /Sub-menu	Description
Power Button Mode	On/Off Suspend	[On/Off]: When the power button is pressed, the system is turned off. [Suspend]: When the power button is pressed, the system enters the suspend mode.

Note: In Windows XP, suspend mode and settings are determined by settings in the Power Options Properties (Start > Control Panel > Power Options).

Boot Setup

```
                    PhoenixBIOS Setup Utility
   Main      Info     Advanced   Security   Power    Boot      Exit

Boot Priority Order:                              Item Specific Help

   1.   ALL USB KEY                               Keys used to view
                                                  or configure
   2.   IDE HDD: FUJITSU                          devices:
                                                  Up and Down
   3.   IDE CD: PHILIPS CD-RW/DVD-ROM             arrows select a
                                                  device.
   4.   PCI BEV: Realtek Boot Agent               <+> and <-> moves
                                                  the device up or
   5.                                             down.
                                                  <x> exclude or
   6.                                             include the device
                                                  to boot.
   7.

   8.

Excluded from boot order:


F1 Help            ↑↓ Select Item      -/+ Change Values    F9 Setup Defaults

Esc Exit           ◄ Select Menu       Select ► Sub-Menu    F10 Save and Exit
```

Note: IDE CD means the system's built-in optical drive. IDE HDD means the system's built-in HDD.
Note: When the BIOS performs POST, you may also press Enter Key to enable the Boot Device selection menu. You may choose CD/DVD, Hard Drive, or PCI BEV (Realtek Boot Agent) as the first storage device to boot from. If you have already connected a USB Floppy Disk Drive before powering up, it will appear as a USB FDC in the Boot Device selection menu.

Exit Setup

```
                    PhoenixBIOS Setup Utility
   Main      Info     Advanced   Security   Power    Boot      Exit

Save Changes & Exit                              Item Specific Help

Discard Changes & Exit                           Exit System Setup

Get Default Values                               and save your

Load Previous Values                             changes to CMOS.




F1 Help            ↑↓ Select Item      -/+ Change Values    F9 Setup Defaults

Esc Exit           ◄ Select Menu       Select ► Sub-Menu    F10 Save and Exit
```

Saves Changes and Exit: After you have completed the BIOS settings, select this item to save all settings, exit BIOS Setup utility, and reboot. New system settings will take effect on next power-up. F10 key can be used for this operation.
Discard Changes and Exit: Discards changes done so far to any of the setup questions and exit.
Get Default Values: Load Optimal Default value for all the setup questions. F9 key can be used for this operation.
Load Previous Values: Load settings that you made during the previous BIOS Setup session.

BATTERY POWER & POWER MANAGEMENT

In this chapter, you will learn the fundamentals of power management and how to use it to achieve longer battery life.

In this chapter, you will learn how to operate your notebook on battery power, how to handle and maintain the battery pack, and learn about the system's power saving features.

TFT display, central processor, hard disk drive are the major hardware subsystems that consume the most power. Power management deals how these key components should behave to conserve power. For example, you can have the system turn off its display after 2 minutes of inactivity to save power. Efficient power management can help you work longer sessions before having to recharge the battery.

The Battery Pack

Lithium-Ion Battery

Your notebook uses a four-cell (or six-cell) Lithium-Ion battery pack that provides power when you don't have access to an AC outlet.

> **Note: It is necessary that you charge the battery pack for at least 6 hours before using it for the first time.**
> **Note: In the Standby Suspend mode, a fully charged battery loses its power in roughly 1/2 day or less. When not being used, the battery's power will deplete in 1-2 month.**

Battery Low-Power Warning

1. Low Battery Warning

Low battery condition occurs when battery power is reduced to 6%. The red battery status LED indicator blinks and the system beeps once every 16 seconds or so.

2. Very Low Battery Warning

Very Low battery condition occurs at 3 % power remaining. The red battery status LED indicator blinks and the system beeps at 4-second interval.

When the notebook warns you of its low battery condition, you will have about 3-5 minutes to save your current work.

> **Warning: Do not expose battery packs to temperatures below 0 degree Celsius (32 degree F) or above 60 degree C (140F). This may adversely affect the battery pack.**
>
> **Note: Press Fn+F3 to turn off the battery warning beep.**

## Installing and Removing the Battery Pack

To Remove the Battery Pack:

1. Place the notebook bottom-side up on a flat and secured surface.
2. Push the latch and pull the battery's hard case away from the notebook.
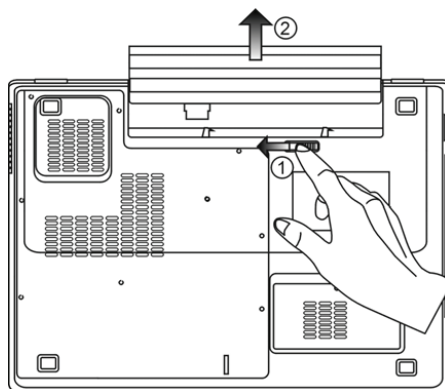
To Install the Battery Pack:

1. Place the notebook bottom-side up on a flat and secured surface.
2. Carefully insert the battery pack into the battery compartment of the notebook.
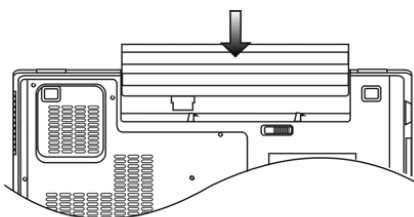
Charging the Battery and Charging Time

To charge the battery, while the battery pack is in the notebook, plug the AC adapter into the notebook and an electrical outlet.

The charging time is approximately 4-6 hours when the notebook is turned off and approximately 6-10 hours when the notebook is turned on.

When the battery is fully charged, the battery charge indicator becomes green.

> Note: If system runs at heavy loading or in a high temperature environment, the battery may not be fully charged. You need to continue to charge it with the AC adapter plugged in until the charging LED turns green.

Checking the Battery Level

You can check the remaining battery power in the Windows battery status indicator, which is located at the lower right-hand corner of the task bar. (If you do not see a battery or AC-in icon on the task tray, go to Power Options Properties box and click on the Advanced tab. Check off "Always show icon on the task bar".)

Alternatively, you can access the power meter by clicking the Power Options icon in the Windows Control Panel.

Prolonging the Battery's Life and Usage Cycles

There are ways you can do to prolong the use of battery.
.   Use the AC adapter wherever AC wall outlet is available. This will ensure uninterrupted computing.
.   Purchase additional battery pack.
.   Store the battery pack in room temperature. Higher temperature tends to deplete the battery's power faster.
.   Make good use of the power management function. Save To Disk (Hibernate) saves the most energy by storing current system contents in a hard disk space reserved for this function.
.   The life expectancy of the battery is approximately 300 recharges.
.   See the notices section in the beginning of the user manual on how to care for the battery pack.

> **Note: Read Section Protecting Your Notebook in the beginning of this manual for tips about how to maintain the battery pack.**
> **Note: To achieve optimal battery performance, you may need to do a battery calibration at a 3-month interval. To do this:**
> **1. Fully charge the battery.**
> **2. Then discharge the battery by entering the BIOS setup screen. (Press F2 key as soon as you turn on the computer. And let it remain at the setup screen until the battery runs out.**
> **3. Fully charge the battery again.**

Using Windows Power Options

Windows Power Management provides basic power saving features. In the Windows Power Options Properties [Start > Settings > Control Panel > Power Options] dialogue box, you may enter time-out values for display and hard disk drive. Windows power manager saves power by turning off hard drive after 1 minute of inactivity, for example.

Windows' Power Schemes

The power management control panel in Windows XP, known as Power Schemes, is designed to provide the user with an easy-to-use interface. The Power Schemes tab can be found in the Power Options Properties panel that is accessible via the control panel window.
Schemes are easy to understand, based on notebook usage scenarios, and control not only processor power usage but other system peripherals as well.
Go to [Start > Settings > Control Panel] and double-click the Power Options icon.

Always on mode puts the processor into maximum performance mode, which provides no power saving. The other schemes control processor performance based on demand. For example, Max Battery mode lowers the processor's speed and voltage to conserve power as much as possible.
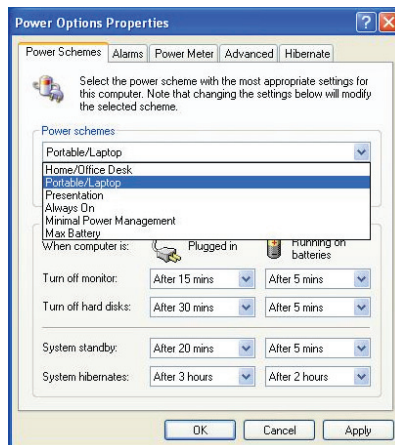
In this dialog box, you can manually set the LCD and hard drive's time-out values in the Plugged in column and in the Running on batteries column. Lower time-out values will save more battery power.

Note: Also consult Windows user guide for more information on how to use Windows power management functions.
Note: Actual dialogue box shown above may appear slightly different.

Suspend Mode

Standby Suspend

The system automatically enters this mode after a period of inactivity, which is set in the Power Schemes dialog box. In Standby mode, hardware devices, such as display panel and hard disk, are turned off to conserve energy.

Hibernate Suspend

In this mode, all system data are saved in the hard disk before powering down. When this mode is activated, all system state and contents are saved to the hard disk drive after a period of inactivity defined by the user. No power or very little power is drawn from the battery module under this mode.

However, depending on how much RAM that have been installed on your computer, the amount of time the system requires to restore all its previous contents can range from 5 to 20 seconds.

For Windows XP users, hibernation is handled by the operating system; therefore, no special disk partition or disk file is necessary.

If you wish to activate Hibernate mode, you need enable Hibernate Support in the Hibernate tab of the Power Options menu.
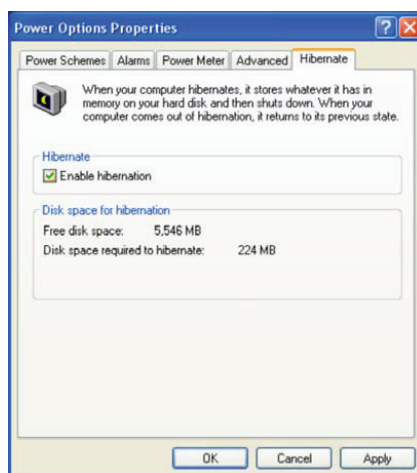
Note: Do not install or remove the memory module when the system is in the suspend mode.
Note: Actual dialogue box shown above may appear slightly different.

Power Button Action

The notebook PC's power button can be set to turn off the system or activate the suspend mode.

Go to [Start > Settings > Control Panel > Power Options] and click on the Advanced tab. In the pull-down menu, select how you wish the power button to work as.
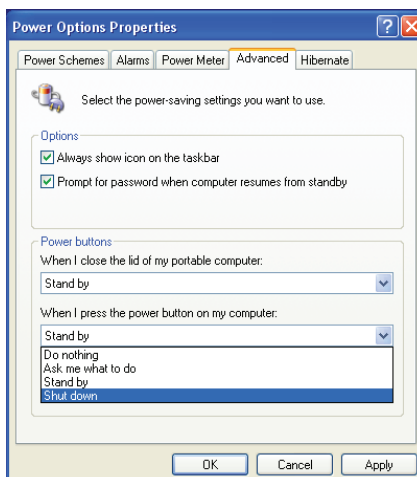
Note: Actual dialogue box shown above may appear slightly different.

Warning: In the When I close the lid of my portable computer pull-down menu, DO NOT select Do nothing – otherwise the system will still run at high speed while the processor's fan grill is fully blocked by the closed LCD panel. The heat will damage the LCD panel.

Low Battery Warning

You can define when and how the system warns you of its battery-low condition.

Go to the Alarms tab in the Power Options Properties box. If you wish to hear audible beeps, click on the Alarm Action button and put a check on Sound Alarm.
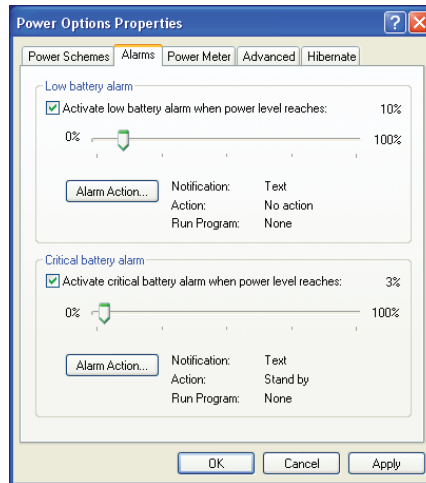
Note: Consult Windows user guide for more information on how to use Windows power management functions.
Note: Actual dialogue box shown above may appear slightly different.

Power Menu Quick Access

Instead of making specific selections in the Power Options Properties box, you can quickly and easily specify which pre-set power saving function you desire by clicking on the Battery icon at the lower right-hand corner of the task bar. (If you do not see a battery or AC-in icon, go to Power Options Properties box and click on the Advanced tab. Check off "Always show icon on the task bar".) Select Max Battery if you want the system to enter suspend mode more often. Or, select Always On if your notebook PC is plugged into an AC power source.

Note: Actual dialogue box shown above may appear slightly different.

UPGRADING YOUR COMPUTER

In this chapter, you will learn how to upgrade the DRAM, hard disk drive, and to install the optional wireless LAN mini-Card.

Warning: We strongly recommend that you return the notebook to the dealer or the shop for the hardware upgrade.
Before you perform the hardware upgrade, please turn off the system, unplug the AC adapter, remove the battery pack and also disconnect the LAN and Modem cables first for your safety.
When the hardware upgrade is completed, please be sure to fasten all the screws before turning on the notebook.

Upgrading the Hard Disk Drive

Replacing the original drive with one of larger capacity can increase the hard drive capacity of your computer. The computer uses a 9.5 mm (height), 2.5-inch Serial ATA type hard disk.

Be sure to make a backup copy of all your data before attempting this operation.

Warning: Hard drive upgrade is a delicate process. Please observe the following instructions carefully or have a qualified technician install it for you. Damages due to mishandling of this procedure are NOT covered by the manufacture's warranty.
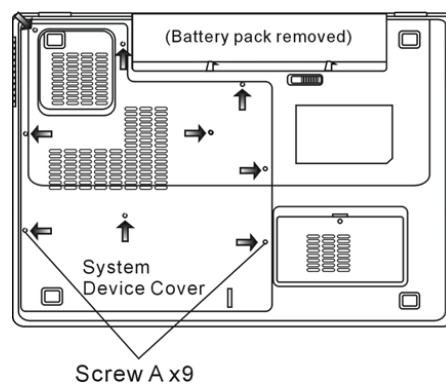
Warning: Apply care when handling the hard disk.
. Do not drop or apply any shock.
. Do not press on the cover.
. Do not touch the connector with your fingertips.
. Mishandling of the hard drive can result in permanent loss of data. Make a backup copy of the drive s content before you remove it.

Note: Certain models that come with the IBM-brand hard drive emit a clattering sound when it is being rattled. This is a normal condition.

Upgrading the Hard Disk Drive

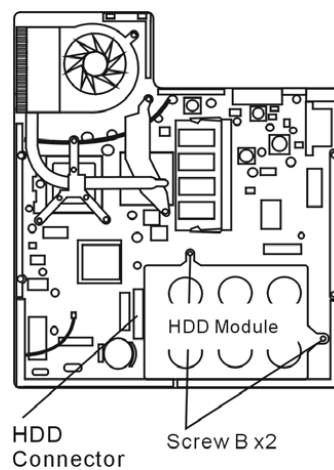To replace the hard disk drive, do the following:
1. Turn OFF the computer. Unhook the AC cord and all cables/devices attached to the notebook. Remove the battery.
2. Place your hand on a large metal object momentarily to discharge any static electricity.
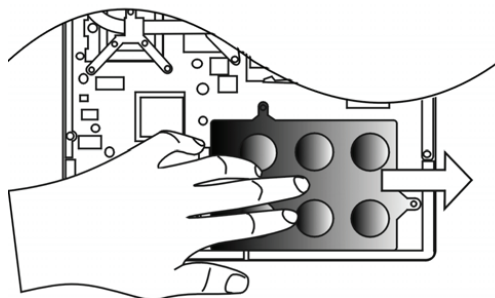3. Locate and remove 9 Screw A's.

(Battery pack removed)

System
Device Cover

Screw A x9

4. Remove the System Device Cover.

Battery pack removed)
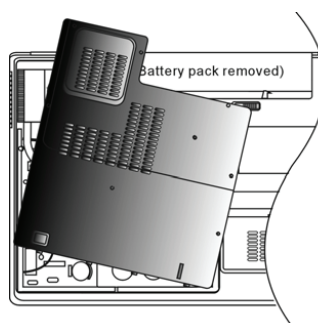
5. Locate and remove 2 Screw B's.

HDD Module

HDD
Connector
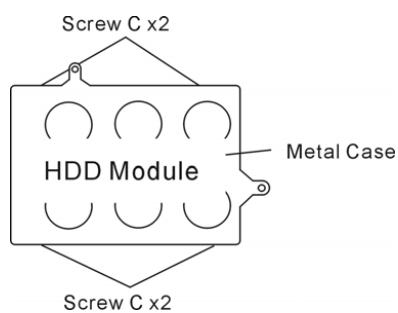
Screw B x2

6. Push the HDD module to the right and separate it from the connector. Lift the module away from the bay.
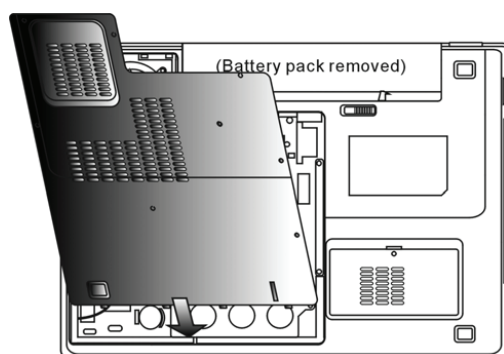
7. Locate and remove 4 Screw C's from the HDD module. Remove the metal case.

8. Re-attach the metal cover to the new hard drive and tighten 4 Screw C's.
9. Re-attach the HDD module to the HDD connector. And re-attach 2 Screw B's.
10. Put the System Device Cover back and re-attach 9 Screw A's.

Congratulations! You have now completed the hard drive upgrade. When you boot up the PC, you may need to create a primary HDD partition and reformat the new drive and re-install O/S, drivers, and all the necessary applications.

Upgrading the System Memory

Many applications will generally run faster when the computer's dynamic memory capacity is increased. The computer provides two DDR2 memory sockets. There is one located underneath the System Device Cover and another one located underneath the keyboard. You can increase the amount of memory by replacing the existing one with a dual inline memory module (commonly known as SO-DIMM) of a higher capacity. The SO-DIMM can be 256MB, 512MB, or 1024MB in capacity. The SO-DIMM is of type DDR2 SDRAM, has 200 pins and runs on 1.8V.

Warning: Memory upgrade is a delicate process. Please observe the following instructions carefully or have a qualified technician install it for you. Damages due to mishandling of this procedure are NOT covered by the manufacture's warranty.

Warning: Changing memory while your computer is in suspend or power-saving mode may cause permanent damage to the hardware. Make sure you turn off the power and unplug the AC cord before proceeding with a memory upgrade.

Warning: You should only use the DIMM module that is approved by the reseller or the manufacturer; otherwise the system may become unstable.

## Installing a memory module (DIMM) into the system

To install the DIMM under the System Device Cover, do the following:

1. Power OFF the notebook. Unplug the AC cord and all cables/devices attached to the notebook. Remove the battery.
2. Place your hand on a large metal object momentarily to discharge any static electricity. Place the notebook on a flat surface and fully close the LCD lid.
3. Locate and remove 9 Screw A's on the System Device Cover.
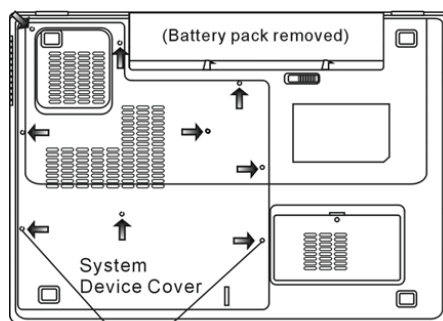
4. Remove the System Device Cover. The DIMM socket is now seen as shown below.
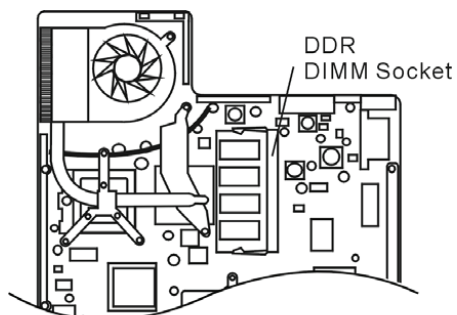
5. If you need to remove an old DIMM from the socket, press out on the latches located on both edges of the socket at the same time. The DIMM should pop up to an angle of 30 degree (see diagram below). Pull the DIMM module out of the memory socket. Store away the DIMM for the future use.
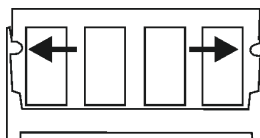

6. Install the new DIMM module into the memory socket. The DIMM will only fit in one orientation. Insert the DIMM at an angle of approximately 30 degrees into the empty memory socket. Then press it firmly so that the contact edge is driven into the receiving socket.
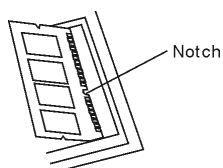
Notch

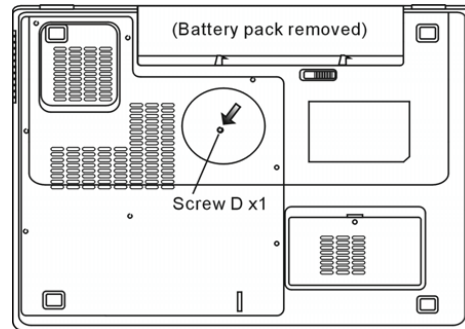7. Pivot the DIMM until the latches on both sides of the socket snap into place.

Note: Notice the notch on the DIMM. The notches should fit nicely with the socket.

8. Put the System Device Cover back and tighten 9 Screw A's.

(Battery pack removed)
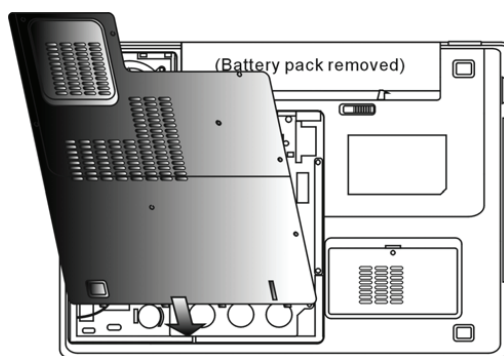
To install the DIMM under the keyboard, do the following:
1. Remove Screw D.

2. Find the keyboard latches near the edges of the keyboard. The latch is spring-loaded. It will retract when pressed and revert back to its original position when released. Use a small blade to press the latch inward. The keyboard tray should pop up slightly over the latch. If the keyboard tray does not pop up, try to gently lift it up slightly above the latch. Repeat this step for the other keyboard latches.
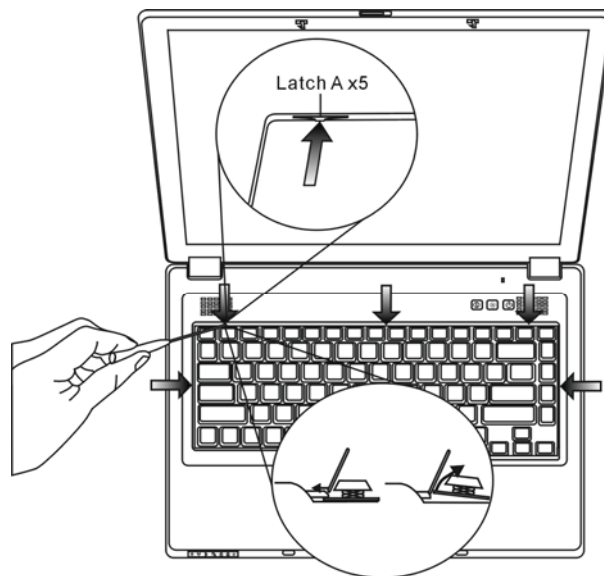
3. Carefully lift up the top edge and position the keyboard out of the way and the DDR DIMM Socket is revealed.
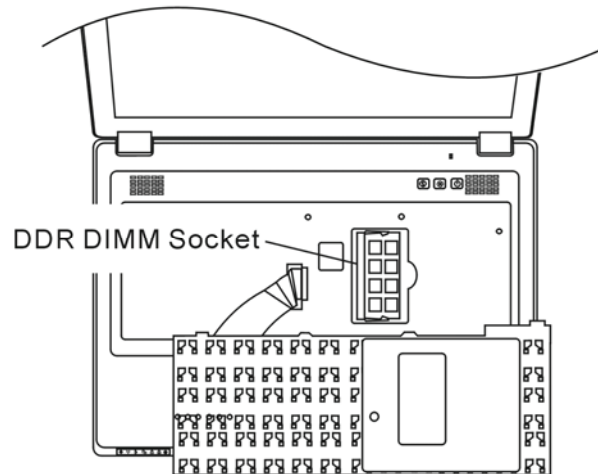
4. If you need to remove an old DIMM from the socket, press out on the latches located on both edges of the socket at the same time. The DIMM should pop up to an angle of 30 degree (see diagram below). Pull the DIMM module out of the memory socket. Store away the DIMM for the future use.

5. Install the new DIMM module into the memory socket. The DIMM will only fit in one orientation. Insert the DIMM at an angle of approximately 30 degrees into the empty memory socket. Then press it firmly so that the contact edge is driven into the receiving socket.
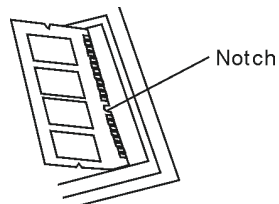
6. Pivot the DIMM until the latches on both sides of the socket snap into place.

Note: Notice the notch on the DIMM. The notches should fit nicely with the socket.
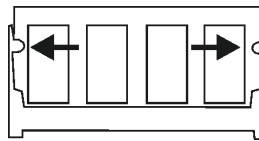
7. Put the keyboard back to its original position. Make sure the edge of the keyboard now resides under the spring-loaded latches.
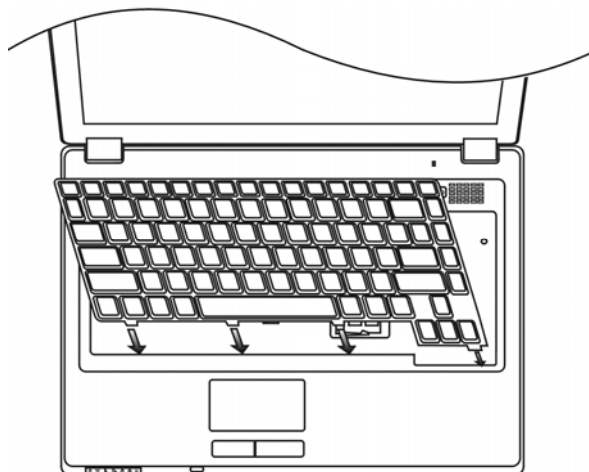
8. Re-attached Screw D.

Congratulations! You have just completed the memory upgrade. When you boot up the computer, you should expect to see an increase in DRAM capacity.

> **Note: Your computer has been tested with a wide range of DIMM on the market. However, not all memory modules are compatible. Check with your system vendor for a list of compatible DIMM for your computer.**

Adding the Mini-Card Type Wireless LAN Card (Optional Device)

Your computer comes with a unique Mini-Card socket, which is located underneath the System Device Cover. The socket allows the computer to add unique features such as wireless LAN (IEEE802.11x). Ask your dealer on the availability of the mini-card.

> **Warning: Installing a mini-card is a delicate process. Please observe the following instructions carefully or have a qualified technician install it for you. Damages due to mishandling of this procedure are NOT covered by the manufacture's warranty.**
>
> **Warning: Installing the mini-card while your computer is in suspend or power-saving mode may cause permanent damage to the hardware. Make sure you turn off the power and unplug the AC cord before proceeding with the card upgrade.**

Installing the Mini-Card into the System

To install a new Mini-card, do the following:

1. Follow steps in the previous section, Installing a memory module (DIMM) into the system, to access the Mini-Card Socket underneath the System Device Cover.

Mini Card
Socket

Antenna Cable
with Connector
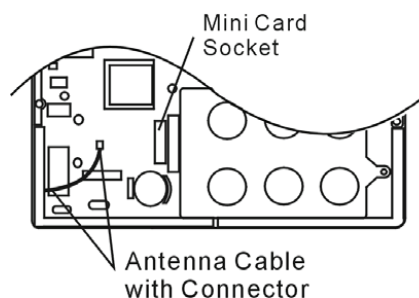
2. The mini-card will only fit in one direction. Align the small notch in the module with the socket on the connector and insert the card at an angle of approximately 30 degrees into the empty socket. Then press it firmly so that the contact edge is driven into the receiving socket. Pivot the mini-card and fasten 2 Screw-F's to hold the card down.

> **Note: If you want to remove the mini-card from the socket, remove 2 Screw-F's. The card should pop up to an angle of 30 degree.**

3. Locate the antenna cable with connector. Snap the cable onto the golden connector on the wirelss mini-card. (Note: The connector is fairly small! This may take some maneuvering. You may want to connect the antenna cable before inserting the wireless card into the socket.)

Wireless
Mini Card

Antenna
Cable

Mini-Card
Socket

Connector

Screw F x2
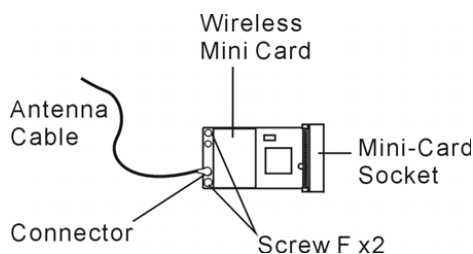
4. Replace the System Device Cover and 9 Screw A's.

Congratulations! You have now completed the wireless mini-card installation. During the next time the system boots to Windows, the system will prompt for driver location. Insert the Factory CD-ROM and point to the directory where the Wireless LAN driver can be found. In addition to installing the driver, you may also need to run a Setup.exe program to install the card's utility applications before it is fully operational.

TROUBLE SHOOTING

In this chapter, you will learn how to solve common hardware and software problems.

Your computer has been fully tested and complies with the system specifications before shipping. However, incorrect operations and/or mishandling may cause problems.

This chapter provides a reference for identifying and correcting common hardware and software problems that you may encounter.

When you encounter a problem, you should first try to go through the recommendations in this chapter. Instead of returning the computer and waiting for repair, you may easily solve the problems by considering the following scenarios and possible solutions. If the error continues, contact your reseller for service information.

Before taking further actions, consider the following suggestions:

- **Check to see if the problem persists when all the external devices are removed.**
- **Check to see that the green light indicator on the AC adapter is lit.**
- **Check to see the power cord is properly plugged to the wall outlet and to the computer.**
- **Check to see the power indicator of the computer is on.**
- **Check to see if your keyboard is operational by pressing and holding any key.**
- **Check for any incorrect or loose cable connections. Make sure the latches on the connectors latch securely on to the receptor end.**
- **Be sure you have not performed an incorrect setting on the hardware devices in the BIOS Setup utility. A faulty setting may cause the system to misbehave. If you are not sure of the changes you made, try to restore all the settings to factory defaults.**
- **Be sure all the device drivers are installed properly. For example, without the audio driver properly installed, the speakers and microphone will not work.**
- **If external devices such as USB camera, scanner, printer do not function correctly when connected to the system, it is usually the device's own problem. Consult the device's manufacturer first.**
- **Some software programs, which have not gone through rigorous coding and testing, may cause problems during your routine use. Consult the software vendor for problem solving.**
- **Legacy peripheral are not plug-and-play capable. You need to restart the system with these devices powered up and connected first.**
- **Be sure to go to BIOS SETUP and load DEFAULT SETTING after BIOS re-flash.**
- **Be sure the Quick Key Lockout Switch on the bottom of the computer is not engaged; otherwise the quick keys will not work.**

Audio Problems

No speaker output -
- Software volume control is turned down in Microsoft Sound System or is muted. Double-click the speaker icon on the lower right corner of the taskbar to see if the speaker has been muted or turned down all the way.
- Most audio problems are software-related. If your computer worked before, chances are software may have been set incorrectly.
- Go to [Start > Settings > Control Panel] and double-click the Sounds and Audio Devices icon. In the Audio page, make sure that Realtek HD Audio is the default playback device.

Sound cannot be recorded -
- • You will need to plug-in an external microphone to the microphone connector to record sound.
- • Double-click the speaker icon on the lower right corner of the taskbar to see if the microphone has been muted.
1. Click Options and select Properties.
2. Select Recording and click the OK button.
3. After Click OK button, the recording volume control panel will appear.
- • Go to [Start > Settings > Control Panel] and double-click the Multimedia icon (or Sounds and Audio Devices icon). In the Volume or Audio page, make sure that Realtek HD Audio is the default recording device.

Hard Disk Problems

The hard disk drive does not work or is not recognizable -
- • If you had just performed a hard disk upgrade, make sure the hard drive connector is not loose and the hard disk drive is also correctly seated. Remove it and reinsert it firmly, and restart your PC. (Refer to Chapter 4 for details.)
- • The new HDD may need to be partitioned and reformatted. O/S and drivers will need to be re-installed as well.
- • Check the hard disk indicator LED. When you access a file, the LED lamp should light up momentarily.
- • The new HDD may be defective or is not compatible.
- • If your computer has been subjected to static electricity or physical shock, you may have damaged the disk drive.

The hard drive is making abnormal whining noises -
- • You should back up your files as soon as possible.
- • Make sure the source of noise is indeed from the hard drive and not the fan or other devices.

The hard disk drive has reached its capacity -
- • Run Disk Cleanup utility in Windows. [Start > All Programs > Accessories > System Tools > Disk Cleanup] The system will prompt you for what to do.
- • Archive files or programs that you had no longer used by moving them to an alternative storage medium (floppy disk, optical record-able disk, etc.) or uninstall programs that no longer use.
- • Many browsers store files in the hard drive as a cache to speed up the performance. Check the program's Online Help for instructions on decreasing the cache size or on removing temporary Internet files.
- • Empty the Recycle Bin to create more disk space. When you delete files, Windows saves them to the Recycle Bin.

The hard disk takes longer to read a file -
- • If you have been using the drive for a period, the files may be fragmented. Go to [Start > Programs > Accessories > System Tools > Disk Defragmenter] to perform a disk defragmentation. This operation may take a while.
- • Interrupt requests or problems with other hardware devices may have occupied the CPU and therefore slows down the system performance.

The files are corrupted -
- • Run the Error-checking utility in Windows to check the HDD. Double-click My Computer. Right-click C: and select Properties. Click Check Now in Error-checking in Tools.

Optical Drive Problems

The optical drive does not work -
- Try rebooting the system.
- The disk is damaged or files are not readable.
- After you have inserted a CD-ROM disk, it may take a moment before you can access its content.

The drive dose not read any disks -
- The CD may not be properly seated in the tray. Make sure the disk is firmly seated onto the spindle.
- The disk is damaged or not readable.

The disk cannot be ejected -
- Normally, it takes a few seconds to eject the disk.
- If the disk cannot be ejected, it may be mechanically jammed. Straighten out a paper clip and insert it to a tiny hole next to the eject button. This should reject the disk tray. If not, return the unit for repair. Do not forcefully pull on the disk tray.

The Combo or DVD Dual or Supermulti drive (optional device) cannot record -
- You need to purchase and install a burner utility program to record files to a blank media.

Display Problems

The display panel is blank when the system is turned on -
- Make sure the computer is not in the Standby or Hibernate suspend modes. The display is turned off to conserve energy in these modes.

The screen is difficult to read -
- The display resolution should be set to at least 1024x768 for optimal viewing.
1. Go to [Start > Settings > Control Panel] and double-click the Display icon.
2. Under the Settings page, set screen resolution to at least 1024x768 and choose at least 256 colors.

The screen flickers -
- It is normal if the display flickers a few times during shutting down or powering up.

Keyboard and Mouse Problems

The built-in touch pad performs erratically -
- Make sure there is no excess perspiration or humidity on your hand when using the touch pad. Keep the surface of the touch pad clean and dry.
- Do not rest your palm or wrist on the surface of the touch pad while typing or using the touch pad.

The built-in keyboard accepts no input -
- If you are connecting an external keyboard to the system, the built-in keyboard may not work.
- Try restarting the system.

The characters on the screen repeat while I type.
- You may be holding the keys down too long while you're typing.

- Keep the keyboard clean. Dust and dirt under the keys could cause them to stick.
- Configure the keyboard to wait longer before the auto repeat feature starts. To adjust this feature, Go to [Start > Settings > Control Panel], and double-click the Keyboard icon. A dialogue box shows up with the adjustable settings for the keyboard.

CMOS Battery Problem

A message "CMOS Checksum Failure" displays during the booting process or the time (clock) resets when booting -
- Try to reboot the system.
- If the message "CMOS Checksum Failure" appears during the booting procedure even after rebooting, it may indicate failure of the CMOS battery. If so, you need to replace the battery. This battery normally lasts two to five years. The battery is of type CR2032 (3V). You may replace it by yourself. The battery is located under the System Device Cover on the bottom of the notebook. See Chapter 4 for more details.

Memory Problems

The POST does not show an increased memory capacity when you have already installed additional memory -
- Certain brands of memory module may not be compatible with your system. You should ask your vendor for a list of compatible DIMM.
- The memory module may not be installed properly. Go back to Chapter 4 to review the details of this operation.
- The memory module may be defective.

The O/S issues an insufficient memory error message during operation -
- This is often a software or Windows-related problem. A program is draining the memory resources.
- Close the application programs you're not using and restart the system.
- You need to install additional memory module. For instructions, go to Chapter 4 Upgrading Your Computer.

Modem Problems

The built-in modem does not respond -
- Make sure the modem driver is loaded properly.
- Go to [Start > Settings > Control Panel > Phone and Modem Options] and go to Modems tab. Make sure SmartLink 56K Voice Modem or Uniwill V.92 Modem is listed. Otherwise, click the Add button to add the modem drive, which is located in the factory CD-ROM (or floppy diskette).
- Go to [Start > Settings > Control Panel > System] and click Device Manager button in the Hardware page to check for possible resource or driver conflict. See Windows on-line help or manual for how to handle such problems.
- Make sure the phone line, which the computer is connected to, is working.

Connection difficulties -
- Be sure to disable Call Waiting on the phone line.
- Be sure to have the correct country setting where your computer is used. [Start > Settings > Control Panel > Modem Settings > Configuration] In the Country/Area pull-down menu, select the appropriate country setting.
- Excessive line noise might cause the connection to be dropped. To check this, put the regular phone handset on the line and placing a phone call. If you do hear abnormal noise, try to make the modem connection with a different line or contact your local telephony company for service.

- Make sure the cable connection is firm.
- Try a different receiver number and see if the problem persists.

Network Adapter / Ethernet Problems

The Ethernet adapter does not work -
- ? Go to [Start > Settings > Control Panel > System > Hardware > Device Manager]. Double-click on Network Adapters and check if Realtek RTL8169/8110 Family Gigabit Ethernet NIC appears as one of the adapters. If it does not exist, Windows has not detected the Realtek RTL8169/8110 Family Gigabit Ethernet NIC or the device driver has not been installed properly. If there is a yellow mark or red-cross on the network adapter, it may be a device or resource conflict. Replace or update the device driver from the factory CD-ROM disk or consult Windows manual on how to solve the resource conflict problem.
- Make sure the physical connections on both ends of the cable are good.
- The hub or concentrator may not be working properly. Check to see if other workstations connected to the same hub or concentrator is working.

The Ethernet adapter does not appear to operate in the 1000Mbps transmission mode -
- Make sure the hub you are using supports 1000Mbps operation.
- Make sure that your RJ-45 cable meets the 1000Base-TX requirements.
- Make sure the Ethernet cable is connected to the hub socket that supports 1000Base-TX mode. The hub may have both 100Base-TX and 1000Base-T sockets.

Performance Problems

The computer becomes hot -
- In a 35oC environment, the certain areas of the computer's back case are expected to reach 50 degrees.
- Make sure the air vents are not blocked.
- If the fan does not seem to be working at high temperature (50 degrees Celsius and up), contact the service center.
- Certain programs that are processor-intensive may increase the computer temperature to a degree where the computer automatically slows down its CPU clock to protect itself from thermal damage.

The program appears stopped or runs very slowly -
- Press CTRL+ALT+DEL to see if an application is still responding.
- Restart the computer.
- This may be normal for Windows when it is processing other CPU-intensive programs in the background or when the system is accessing slow-speed devices such the floppy disk drive.
- You may be running too many applications. Try to close some applications or increase system memory for higher performance.
- The processor may have been overheated due to the system's inability to regulate its internal heat. Make sure the computer's ventilation grills are not blocked.

Firewire (IEEE1394) and USB2.0 Problems

The USB device does not work -
- Windows NT 4.0 does not support USB protocols
- Check the settings in the Windows Control Panel.
- Make sure you have installed the necessary device drivers.
- Contact the device vendor for additional support.

The IEEE1394 port does not work -
- Go to [Start > Settings > Control Panel > System > Hardware > Device Manager]. You should see an entry which reads "Texas Instrument OHCI Compliant IEEE 1394 Host Controllers". If it does not exist, Windows has not detected the host controller or the device driver has not been installed properly. If there is a yellow mark or red-cross on the 1394 host controller, it may be a device or resource conflict. Replace or update the device driver from the factory CD-ROM disk or consult Windows manual on how to solve the resource conflict problem.
- Make sure the cable is fully connected.
- Make sure you have installed the necessary device drivers.
- Contact the device vendor for additional support.

PRODUCT SPECIFICATION

Processor and Core Logic

Processor
Mobile Intel Celeron M Processor (Yonah), up to 1.86GHz, 1MB L2 cache

Core Logic
ATI RC410MD + ATI SB460 chipset with graphic, audio, modem, and USB2.0 controllers integrated
533MHz Front Side Bus
533 / 667MHz DDR2 interface

System Memory

Memory Type
DDR2 SDRAM 533 / 667

Default
256 / 512 / 1024MB

Memory Expansion
Two 200-pin DIMM sockets, Max 2 GB

Display

LCD Panel
15.4-inch Wide-Viewing-Angle WXGA TFT Glare type LCD

Graphic Accelerator
ATI RC410MD Integrated Graphic Engine

Motion Playback
Hardware Motion Compensation and IDCT Supported for MPEG1/2 Playback

Other Features
DirectX compatible

Audio

Chipset
ATI SB460 integrated audio controller

Audio Codec
Realtek ALC883

Sound Capabilities
DirectSound 3D, EAX 1.0 & 2.0 compatible
A3D, I3DL2 compatible
AC97 V2.3 compatible
Azalia compatible
2 Stereo Speakers

Modem (Optional)

Module
ATI SB460 integrated Modem Controller with MDC card, support 56K MDC Modem Card with Azalia standard

Transmission Protocol
V.92 / V.90 / K56flex for download data speed up to 56Kbps.
V.34, V.17, V.29 protocol supported

Wireless LAN

Chipset
MSI (RALink) MS-6877 Card

Transmission Rate
Mini-Card Interface IEEE802.11B&G

LAN / Ethernet

Chipset
Realtak RTL8100CL Ethernet function for 10/100Base-TX network standards

PnP Function
Windows XP Plug and Play compatible

Flow Control
Automatic Jam and auto-negotiation for flow control
Auto Negotiation and Parallel detection for automatic speed selection (IEEE 802.3u)

Speed Selection
High performance 32-bit PCI bus master architecture with integrated DMA controller for low CPU and bus utilization

Other Features
Remote Wake-up Scheme supported
Hot Insertion supported

Firewire IEEE1394(a)

Chipset
02 Micro 0Z128 IEEE1394 OHCI Host Controller

Capabilities
Up to 400 Mbps
Expandable up to 63 devices in chains

Storage

Hard Drive
S-ATA 2.5-inch format hard disk drive

Combo Drive
5.25-inch format (12.7mm height) fixed module (Optional)
DVD-Dual or DVD-Multi Standards
5.25-inch format (12.7mm height) fixed module (Optional)

Keyboard & Touch pad

Keyboard
86/87-key QWERTY keyboard with numeric keypad and Windows keys, 19.05mm Pitch
Touch pad
Built-in Touch Pad

ExpressCard (NewCard) & Multiple Card Reader

Chipset
02 Micro 0Z128 (Card Reader)
Express Card / New Card
Single Slot, 54mm, type II supported
4-in-1 Card Reader Format Support
Multimedia Card (MMC), Secure Digital Card (SD), Memory Stick (MS), and MS Pro Card

Ports and Connectors

Mic-In/Audio-in Port
One Microphone-in / Line-in jack
Audio-Out / SPDIF
One Headphone / SPDIF-out jack
Firewire
One Firewire (IEEE1394) host connector
USB2.0 Port
Three USB2.0-compliant connectors
Ethernet
One standard network Ethernet connector (RJ-45)
Modem
One modem / phone connector (RJ11)
S-Video
One S-video (TV-out) output connector
Power-In
One DC-in connector
VGA Port
One 15-pin VGA connector
Card Reader
One 4-in-1 Card Reader slot
NewCard Slot
One NewCard Slot (type II)

Battery Pack / AC Adapter

Primary Battery Pack
Li-ion 4-Cell pack, 14.4V / 14.8 V x 2000 mAH
Feature
Low battery state with low battery warning beep
Uniwill SmartPower Power Management
Long Battery Life Mode and Silent Mode
Low battery warning beep
Adapter AC-Input / DC-Output
Autosensing AC-in 100~240V, DC-out 20V, 65W

BIOS

PnP Function
Phoenix PnP BIOS
Self Test
Power On Self Test
Auto Detection
DRAM auto-detection, auto-sizing
L2 Cache auto-detection
Hard disk type auto-detection
Power Management
APM 1.2 (Advanced Power Management) &
ACPI 2.0 (Advanced Configuration Power Interface)
Security
Two Level Password Protections
Other Features
32bit access, Ultra DMA, PIO5 Mode support
Multi-boot capability

Operating System

O/S
Compatible with Microsoft Windows XP Home Edition / Professional SP2

Physical Specification

Dimension
358 (W) x 258 (D) x 28~36 (H) mm
Weight
2.7KG / 6lbs (with 15.4" LCD, DVD-ROM Drive and 4-cell battery pack)
Environmental Limits
Operating Temperature: 5 to 35oC (41 to 95oF)
Operating Humidity: 20 to 80 percent RH (5 to 35oC)
Storage Temperature: -15 to 50oC (-5 to 122oF)

AGENCY REGULATORY NOTICES

Federal Communications Commission Notice

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:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and the receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio or television technician for help.

Modifications

The FCC requires the user to be notified that any changes or modifications made to this device that are not expressly approved by the Manufacture may void the user's authority to operate the equipment.

Connections to Peripheral Devices

Connections to this device must be made with shielded cables with metallic RFI/EMI connector hoods to maintain compliance with FCC Rules and Regulations.

Declaration of Conformity

This device complies with Part 15(CLASS B)/68 the FCC Rules. Operation is subject to the following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

European Notice

Products with the CE Marking comply with both the EMC Directive (89/336/EEC) and the Low Voltage Directive (73/23/EEC) and R&TTE Directive (1999/5/EC) issued by the Commission of the European Community.
Compliance with these directives implies conformity to the following European Norms:
EN55022 : 1998+A1: 2000+A2: 2003, CLASS B
EN61000-3-2 : 2000
EN61000-3-3 : 1995+A1: 2001
EN55024 : 1998+A1 : 2001+A1: 2003
IEC61000-4-2: 2001
IEC61000-4-3:2002+A1:2002
IEC61000-4-4:1995+A1:2000+A2:2001
IEC61000-4-5:2001
IEC61000-4-6:2001
IEC61000-4-8:2001

IEC61000-4-11:2001
EN50082 (IEC801-2, IEC801-3, IEC801-4) Electro-magnetic Immunity
EN 300 328-2, EN 300 328-1, EN 301 489-1, EN 301 489-17 (ETSI 300 328, ETSI 301 489) Electro-magnetic Compatibility and Radio Spectrum Matter.
TBR21 (ETSI TBR21) Terminal Equipment.
EN60950 (IEC60950) I.T.E. Product Safety

Canadian Notice
This digital apparatus does not exceed the Class B limits for radio noise emissions from digital apparatus as set out in the radio interference regulations of the Canadian Department of Communications.

Le present appareil numerique nemet pas de bruits radioelectriques depassant les limites applicables aux appareils numeriques de Classe B prescrites dans le reglement sur le brouillage radioelectrique edicte par le Ministere des Communications du Canada.

REN (Ringer Equivalent Numbers) Statement
"NOTICE: The Ringer Equivalence Number (REN) assigned to each terminal device provides an indication of the maximum number of terminals allowed to be connected to a telephone interface. The termination on an interface may consist of any combination of devices subject only to the requirement that the sum of the Ringer Equivalence Numbers of all the devices does not exceed 5."
IC ID: 3409A-M30EI0
Attachment Limitations Statement
"Notice: This equipment meets telecommunications network protective, operational and safety requirements as prescribed in the appropriate Terminal Equipment Technical Requirements document(s). This is confirmed by marking the equipment with the Industry Canada certification number. The Department does not guarantee the equipment will operate to the user's satisfaction.

Before installing this equipment, users should ensure that it is permissible to be connected to the facilities of the local telecommunications company. The equipment must also be installed using an acceptable method of connection. The customer should be aware that compliance with the above conditions may not prevent degradation of service in some situations.

Repairs to certified equipment should be coordinated by a representative designated by the supplier. Any repairs or alterations made by the user to this equipment, or equipment malfunctions, may give the telecommunications company cause to request the user to disconnect the equipment.

Users should ensure for their own protection that the electrical ground connections of the power utility, telephone lines and internal metallic water pipe system, if present, are connected together. This precaution may be particularly important in rural areas.

Caution: Users should not attempt to make such connections themselves, but should contact the appropriate electric inspection authority, or electrician, as appropriate."

Power Cord Requirement
The power cord supplied with the AC adapter should match the plug and voltage requirements for your local area. Regulatory approval for the AC adapter has been obtained using the power cord for the local area. However, if you travel

to a different area and need to connect to a different outlet or voltage, you should use one of the power cords listed below. To purchase a power cord (including one for a country not listed below) or a replacement ac adapter, contact your local dealer.

U.S. and Canada
 The cord set must be UL-Listed and CSA-Certified or C-UL Listed.
 The minimum specifications for the flexible cord are (1) No. 18 AWG, (2) Type SJ, and (3) 3-conductor.
 The cord set must have a rated current capacity of at least 10 A.
 The attachment plug must be an earth-grounding type with a NEMA 5-15P (15A, 125V) or NEMA 6-15P (15 A, 250V) configuration.

Japan
 All components of the cord set (cord, connector, and plug) must bear a 'PSE' mark and registration number in accordance with the Japanese Dentori Law.
 The minimum specification for the flexible cord are: (1) 0.75 mm^2 conductors, (2) Type VCT or VCTF, and (3) 3-conductor.
 The cord set must have minimum rated current capacity of 7 A.
 The attachment plug must be a two-pole, grounded type with a Japanese Industrial Standard C8303 (15 A, 125 VAC) configuration.

Other Countries
 The cord set fittings must bear the certification mark of the agency responsible for evaluation in a specific country. Acceptable agencies are:
BSI (UK)
OVE (Australia)
CEBEC (Belgium)
SEMKO (Sweden)
FIMKO (Finland)
DEMKO (Denmark)
NEMKO (Norway)
SETI (Finland)
EANSW (Australia)
SEV (Switzerland)
IMQ (Italy)
UTE (France)
CCC (China)
PSB (Singapore)
PSE (Japan)
BSMI (Taiwan)
B (Polish)
VDE (Germany)
SASO (Saudi Arabia)

 The flexible cord must be of a HAR (harmonized) type H05VV-F 3-conductor cord with a minimum conductor size of 0.03 square inches.

The minimum specification for the flexible cord for Class II product are: (1) 2X0.75 mm^2 conductors, (2) 2-conductor cord. The cord set must have a current capacity of at least 10 A and a nominal voltage rating of 125 / 250 VAC.

CAUTION: MODEL L51AIx IS DESIGNED TO USE WITH THE FLLOWING AC ADAPTER MODEL ONLY
Manufacture: LI SHIN INTERNATIONAL ENTERPRISE CORP.
Model: 0335C2065 (65W)
Manufacture: EPSF
Model: 10652-A (65W)

Telephone lines requirement

The appropriate utilization of 26AWG telephone line cord on unit.

CAUTION: Always disconnect all telephone lines from the wall outlet before servicing or disassembling this equipment.
CAUTION: To reduce the risk of fire, use only No. 26AWG or larger telecommunication line cord.

Battery Pack Safety

• The battery pack is intended to use only with this notebook.
• Do not disassemble the pack.
• Do not dispose of the battery pack in fire or water.
• To avoid risk of fire, burns, or damage to your battery pack, do not allow a metal object to touch the battery contacts.
• Handle a damaged or leaking battery with extreme care. If you come in contact with the electrolyte, wash the exposed area with soap and water. If it contacts the eye, flush the eye with water for 15 minutes and seek medical attention.
• Do not charge the battery pack if the ambient temperature exceeds 45°C(113°F).
• To obtain a replacement battery, contact your local dealer.
• Do not expose the battery pack to high storage temperatures (above 60°C, 140°F).
• When discarding a battery pack, contact your local waste disposal provider regarding local restrictions on the disposal or recycling of batteries.
• Use only supplied AC Adapter for charging.

CAUTION: Danger of explosion if battery is incorrectly replaced. Replace only with same or equivalent type recommended by the manufacturer. Discard used batteries according to the manufacturer's instructions or local laws.

VORSICHT! Explisionsgefahr bei unsachgernazen Austausch der Batterie. Ersatz nur durch denselben oder einem vom Hersteller empfohlenem ahnlichen Typ. Entsorgung gebrauchter Batterien navh Angaben des Herstellers.

Laser Safety

The optical drive used with this computer is certified as a Class 1 laser device according to the U.S. Department of Health and Human Services (DHHS) Radiation Performance Standard and International Standards IEC 825 / IEC 825-1 (EN60825 / EN60825-1). The device is not considered harmful, but the following precautions are recommended:

Do not open the unit.
Avoid direct exposure to the laser beam.
If the unit requires service, contact an authorized service center.
Ensure proper use by reading and following the instructions carefully.
Do not attempt to make any adjustment of the unit.

CLASS 1 LASER PRODUCT
APPAREIL A LASER DE CLASSE 1
LASERSCHUTZKLASSE 1 PRODUKT

Warning!

Do not attempt to disassemble the cabinet containing the laser. The laser beam used in this product is harmful to the eyes. The use of optical instruments, such as magnifying lenses, with this product increase the potential hazard to your eyes. For your safety, have this equipment serviced only by an authorized service provider.

Lithium battery warning / Bridge battery warning

This computer contains a lithium battery to power the clock and calendar circuitry.

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

When you see this symbol, be careful as this spot may be very hot. The heat is generated from the CPU.

CAUTION!
This part is hot. Be Careful.
VORSICHT!
Diese Flache wird sehr heiss.