User's Guide

Notebook Computer

Preface

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While reasonable efforts have been made to ensure the accuracy of this manual, the manufacturer and distributor assume no liability resulting from errors or omissions in this manual, or from the use of the information contained herein.

Notices

Federal Communications Commission Radio Frequency Interference Statement

NOTE

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 instruction manual 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 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 TV technician for help.

IMPORTANT

Changes or modifications not expressly approved by the party responsible for compliance could void the user' s authority to operate the equipment. Shielded interface cables and a non-shielded AC power cord must be used in order to comply with emission limits.

This equipment is to be used with power supply:
I/P: 100-240 Vac, 50-60Hz, 1.5A
O/P: 19Vdc, 3.16A
There is no internal power supply.

Canadian DOC Notice For Class B Computing Devices

This Class B digital apparatus meets all requirements of the Canadian Interference - Causing Equipment Regulations.

Cet appareil numerique de la classe B repecte toutes les exigences du Règlement sur le matèriel brouilleur du Canada.

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Chapter 1

Before you Start

Conventions of This Manual

Use this manual will help you get the most from your notebook computer.

- If you are an experienced user of computers and/or Microsoft's Windows operating systems, you might find it useful to read the Quick Start Guide that comes along with your accessories.
- If you are a less experienced user, you should through the manual carefully before using your system.

Whether or not you are an experienced user, you should consult on the Troubleshooting Chapter if you encounter any problems with your notebook.

Safety Precautions

This section is designed to assist you in identifying potentially unsafe conditions while working with this product. Required safety features have been installed in the computer to protect you from injury. However, you should use good judgment to identify potential safety hazards:

1. Please read these safety instructions carefully.
2. Please keep this User's Manual for later reference.
3. Please disconnect this equipment from AC outlet before cleaning. Don't use liquid or sprayed detergent for cleaning. Use moisture sheet or cloth for cleaning.
4. For pluggable equipment, that the socket-outlet shall be installed near the equipment and shall be easily accessible.
5. Please keep this equipment from humidity.

6. Lay this equipment on a reliable surface when installed. A drop or fall could cause injury.
7. Make sure to use the right voltage for the power source when connecting the equipment to the power outlet.
8. Place the power cord in such a way that people can not step on it. Do not place anything on top of the power cord.
9. All cautions and warnings on the equipment should be noted.
10. If the equipment is not use for a long time, disconnect the equipment from the main power outlet to avoid being damaged by transient overvoltage.
11. Never pour any liquid into the opening, this could cause fire or electrical shock.
12. Never open the equipment. For safety reason, the equipment should only be opened by a qualified service personnel.
13. If on the following situations arises, get the equipment checked by a service personnel:
    a. The Power cord or plug is damaged.
    b. Liquid has penetrated into the equipment.
    c. The equipment has been exposed to moisture.
    d. The equipment has not worked well or you cannot get it work according to the user's manual.
    e. The equipment has dropped and damaged.
    f. If the equipment has obvious sign of breakage.
14. Do not leave this equipment in an environment unconditioned, storage temperature above 60°C (140°f), it may damage the equipment.
15. The unit can be operated at an ambient temperature of max. 35°C.
16. The sound pressure level at the operators position according to IEC 704-1: 1982 is equal or less than 70 dB(A).
17. Power Cord Requirements
    The power cord set used with the AC adaptor must meet the requirements of the country where you use the AC adaptor, whether it is 100-120 or 200-240 Vac. The following information explains the requirements for power cord set selection.

- The cord set must be approved for the country in which it is used.
- The appliance coupler must have a configuration for mating with a CEE22/EN6032/IEC 320 appliance inlet.

A. For U.S. and Canada:

- The cord set must be UL Listed and CSA Certified.
- The minimum specifications for the flexible cord are No. 18 AWG.

B. For Japan:

- All components of the cord set must bear a “PSE” or “ T ” mark and registration number in accordance with the Japanese Dentori Law.
- The minimum specifications for the flexible cord are .75m m^2 conductors.

C. For Other Countries:

- The cord set fittings must bear the certification mark of the agency responsible for evaluation in a specific country.
- The flexible cord must be of a HAR (harmonized) type H03VV-F.
- The cord set must have a current capacity of a least 2.5 Amperes and voltage rating of 125 or 250 Vac.

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

- Do not use this product near water, for example, near a bathtub, washbowl, kitchen sink or laundry tub, in a wet basement or near a swimming pool.
- Avoid using a telephone (other than a cordless type) during an electrical storm. There may be a remote risk of electric shock from lightning.
- Do not use the telephone to report a gas leak in the vicinity of the leak.
- Use only the power cord indicated in this manual.

19. Do not use the AC adapter near open water or other liquids. Never spill liquid into the AC adapter.

20. Laser Warning: Laser Class I Product Caution - Invisible laser radiation when open avoid exposure to beam.

21. Danger of explosion if battery is incorrectly replaced. Replace only with the same or equivalent type

recommended by the manufacturer. Dispose of used batteries according to the manufacturer's instructions. Never remove the battery pack while the power is on as this may result in data loss when the system loses power.

22. The input receptacle is used as the main disconnecting device.

Wichtige Sicherheitshinweise

1. Bitte lesen Sie diese Hinweis sorgfältig durch.

2. Heben Sie dirse Anleitung für den späteren Gebrauch auf.

3. Vor jedem Reinigen ist das Gerät vom Stromnetz zu trennen. Versenden Sie Keine Flüssig- oder Aerosolreiniger. Am besten eignet sich ein angefeuchtetes Tuch zur Reinigung.

4. Die Netzanschluâsteckdose soll nahe dem Gerät angebracht und leicht zugänglich sein.

5. Das Gerät ist vor Feuchtigkeit zu schützen.

6. Bei der Aufstellung des Gerätes ist auf sicheren Stand zu achten. Ein Kippen oder Fallen könnte Beschädigungen hervorrufen.

7. Beachten Sie beim Anschluß an das Stromnet die Anschlußwerte.

8. Verlegen Sie die Netzanschlußleitung so, daß niemand darüber fallen kann. Es sollte auch nichts auf der Leitun abgestellt werden.

9. Alle Hinweise und Warnungen, die sich am Gerät befinden, sind zu beachten.

10. Wird das Gerät üeinen längeren Zeitraum nicht benutzt, sollten Sie es vom Stromnetz trennen. Somit wird im Falle einer Überspannung eine Beschädigung vermieden.

11. Durch die Lüftungsöffnungen dürfen niemals Gegenstände oder Flüssigkeien in das Gerät gelangen. Dies könne einen Brand bzw. Elektrischen Schlag auslösen.

12. Öffnen Sie niemals das Gerät. Das Gerät darf aus Gründen der elektrischen Sicherheit nur von authorisiertem Servicepersonal geöffnet werden.

13. Wenn folgende Situationen auftreten ist das Gerät vom Stromnetz zu trennen und von einer qualifizierten Servicestelle zu Überprüfung.:

- ***a.*** Netzlabel oder Netzstecker sind beschädigt.
- ***b.*** Flüssigkeit ist in das Gerät eingedrungen.

c. Das Gerät war Feuchtigkeit ausgesetzt.

d. Wenn das Gerät nicht der Bedienungsanleitung entsprechend funktioniert oder Sie mit Hilfe dieser Anleitung keine Verbesserung erzielen.

e. Das Gerät ist gefallen und/oder das Gehäuse ist beschädigt.

f. Wenn das Gerät deutliche Anzeichen eines Defektes aufweist.

14. **VORSICHT**: Explosiongsgetahr bei unsachgemäßen Austausch der Batterie. Ersatz nur durch denselben oder einem vom Hersteller empfohlenem ähnlichen Typ. Entsorgung gebrauchter Batterien nach Angaben des Herstellers.

15. Dieses Schaltnetzteil kann bis zu einer Außentemperatur von maximal 35º C.

16. Die Ausgangswerte dürfen nicht die auf dem Label angegebenen Werte überschreiten.

17. Anforderungen an das Stromkabel
Das Kabel-Set, das an das Netzteil angeschlossen wird, muss den Anforderungen des Landes, in dem Sie das Netzteil einsetzen, genügen, je nachdem, ob die Netzspannung 100-120 oder 200-240V Wechselspannung beträgt.

- Das Kabel-Set muss für das Land, in dem es eingesetzt wird, zugelassen sein.
- Der Gerätestecker des Kabels muss in eine CEE22/ EN603/ IEC 320 Buchse passen.

A. Für die USA und Kanada:

- Das Kabel-Set muss UL-gelistet und CSA zertifiziert sein.
- Die Minimalanforderungen für das Kabel entsprechen No. 18 AWG.

B. Für Japan:

- Alle Teile des Kabel-Sets müssen entsprechend dem japanischen Dentori Law mit einem „PSE“ or „T”-Symbol markiert sein
- Die Minimalanforderungen für das Kabel sind .75m m^2 Leiter.

C. Für andere Länder:

- Die Zubehörteile des Kabel-Sets müssen das Prüfsiegel derjenigen Stelle, die in dem jeweiligen Land für die Sicherheitsprüfung zuständig ist, tragen.
- Das Kabel muss vom HAR (harmonisierten) Typ H03VV-F sein.
- Das Kabel-Set muss eine Stromkapazität von mindestens 2,5 Ampere haben und Spannungen von

125 oder 250 V Wechselstrom gestatten.

18. Bei der Benutzung Ihres Telefongerätes sollten Sie immer die grundlegenden Sicherheitsmaßnahmen beachten, um das Risiko von Feuer, Stromschlägen und Verletzungen zu minimieren. Zu beachten sind u.a. folgende Punkte:

- Benutzen Sie das Gerät nicht in der Nähe von Wasser, wie zum Beispiel Badewanne, Waschbecken, Spülbecken, Waschbottich, in feuchten Kellerräumen oder in der Nähe von Schwimmbecken.
- Benutzen Sie kein Telefon (ausgenommen schnurlose Modelle) während eines Gewitters. Es besteht das geringe Restrisiko eines Blitzschlages.
- Benutzen Sie das Telefon nicht um ein Gasleck zu melden, falls es sich in der Nähe des Lecks befindet.
- Benutzen Sie nur solch ein Stromkabel, wie in dieser Anleitung beschrieben.

19. Benutzen Sie das Netzteil nicht in unmittelbarer Nähe zu Wasser oder anderen Flüssigkeiten. Gießen Sie nie Flüssigkeiten über das Netzteil.

20. Achtung Laser: Laser Produkt der Klasse I. Achtung - Unsichtbarer Laserstrahl, vermeiden Sie Kontakt mit dem Strahl bei offenem Gehäuse.

21. Es besteht Explosionsgefahr, wenn der Akku nicht ordnungsgemäß ersetzt wird. Ersetzen Sie den Akku nur durch einen Akku gleichen oder äquivalenten Typs, der vom Hersteller empfohlen wird. Entsorgen Sie Akkus entsprechend den Anweisungen des Herstellers. Entfernen Sie den Akku auf keinen Fall bei eingeschaltetem Notebook, da hierdurch Daten verloren gehen könnten.

22. Der Netzeingabeanschluss dient als Hauptschalter des Geräts.

Things you must remember before working on your computer

Let your computer acclimate itself

Your notebook can easily stand temperature extremes but it doesn't like rapid changes in temperature, like going from the cold outdoors to a warm office. Rapid changes in temperature can cause water droplets to condense inside your case, threatening to damage the electronic parts inside. After receiving your notebook when it's hot or cold outside, try not to power up the computer immediately, let the computer adjust to the room temperature gradually at least for three to four hours.

WARNING

If your system arrives in cold weather, do not apply power to the computer or monitor until they have been allowed to come to room temperature.

Heat, Cold, Humidity, and Glare

Find a suitable place for your computer that's not too hot, too cold, too dark, or too bright. Glare can make it hard to read the screen.

- Try to avoid the computer components from being destroyed if it is over heated, so try to allow plenty of room for air to circulate around the case.
- Do not block the ventilation opening.
- Do not place your computer in direct sunlight.

Suitable place to work

Your computer will run well wherever you're comfortable but extremes of temperature and humidity can be challenging to your system's parts. There are some things you can tolerate that the computer can't – things like static electricity, dust, water, steam and oil. A lithium-ion battery pack will be available when you are traveling. If you are running your system for the first time on battery power, remove the battery from the package, install it into the system and recharge the battery to fully prepare for service.

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Chapter 2

Introduction

WARNING

There are more and more people spending large amounts of time in front of computer monitors now that scientists from many fields including anatomy, psychology, and occupational safety are involved in the study of ergonomically sound work environments.

A few tips to help you work effectively without a lot of physical discomfort:

- Purchase a chair with armrests and good back support. Don't slouch when sitting; keep your back straight.
- Try to place the LCD panel or external monitor so that there is little glare from the sun on the monitor.
- Walk around the room every hour.
- Every half hour look away from the computer screen for a few minutes.
- Place everything that you need to work within easy reach.

Welcome to the Notebook PC

Congratulations on your purchase of the Notebook PC. Your Notebook features the latest advances in portable computing technology. The Notebook's modular design provides maximum expandability without compromising portability. The high-performance CPU and enhanced IDE hard drive provides you with extra processing power for handling complex graphics and running large programs.

Opening the LCD Panel

At the front of the Notebook you will find a retaining latch on the display panel that locks the display in closed position when the Notebook is not in use.

WARNING

To avoid damage to the display panel:
1. Try not to slam the display upon closing it.
2. Try not to place any object on top when it is closed or open.
3. Be sure the system is turned off or in suspend mode before you close the display panel.

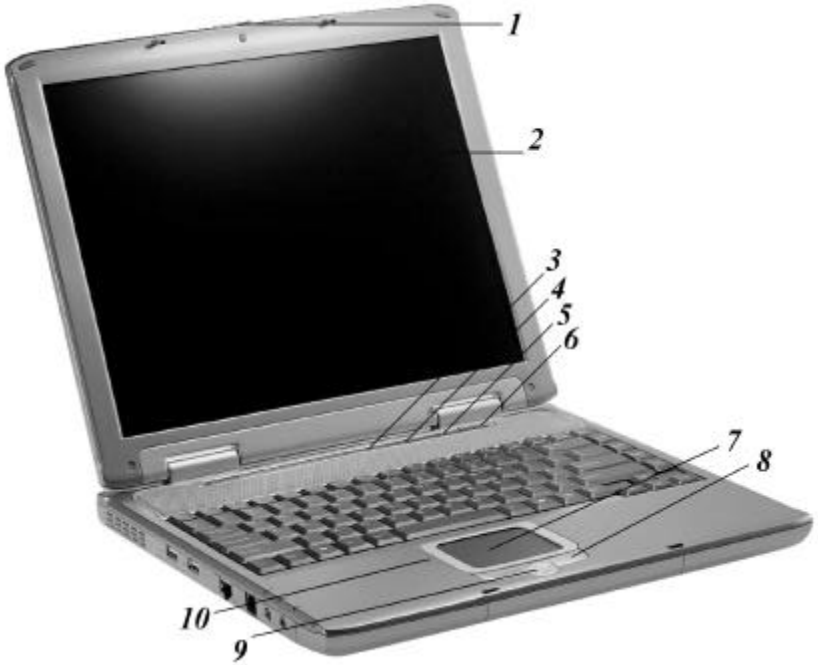
CAUTION

To shutdown the system in non-Windows (DOS mode, System POST, Setup Menu or Quick Boot Menu) based environment, enable the lid switch. This will prevent the system from damaged if it exceeds the temperature limit. Windows will control the lid switch in windows environment.

With the LCD screen open, you will see several features important for operating your Notebook computer.

Each of these features is briefly described below.

1. **LCD Cover Release Latch**
2. **LCD Screen**
3. **Internet Explorer Button**
4. **Wireless LAN Button**
5. **System Status Indicator Panel**



HDD - Indicates that the computer is accessing the hard disk drive.

Numeric Lock - Indicates that the keyboard is in Num Lock mode.

Caps Lock - Indicates when the keyboard is in Caps Lock mode. In this mode, the keyboard produces uppercase text when you press a key. When you press the Caps Lock key again, the indicator goes off and the keyboard produces lowercase text.

Scroll Lock - Indicates when the keyboard is in Scroll Lock mode. Some applications will move information across the screen differently when Scroll Lock is on.

Wireless - Indicates when the system LAN is functioning.

6 **Power/Resume Button**

7 **TouchPad**

8 **TouchPad Buttons**

9 **Scroll Button**

10 **The Built-in Microphone**

The Left Side

1 **Ventilation Opening**

2 3 **USB Ports**

4 **The LAN Port**

NOTE

When using a LAN, please use an EMI Shielding Cable to minimize an inteference when transmitting.

5 **The Modem Port**

NOTE

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.

6 **Microphone Jack**

7 **Audio Line Out Jack**

LED Indicators

These three LED indicators are separately program for the following functions: Power On, Suspend Mode and Battery Charge.

1. **Power On**
2. **Battery Charge**
3. **Suspend Mode**

The Right Side

1. **The CD-ROM/DVD-ROM or DVD CD-RW Combo (Option)**
2. **DC IN Connector**

The Rear

1. Ventilation Opening
2. Kensington Lock
3. S-Video Port
4. Parallel Port
5. External CRT Port
6. USB Ports

The Bottom Panel

1. MiniPCI/Wireless LAN/Modem Combo Compartment (Option)
2. Expansion Compartment
3. Battery Release Latch
4. Battery
5. Hard Disk Drive

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Connecting to a Power Source

Connecting the AC Adapter

A universal AC adapter is provided to supply your computer with power and also charge the computer's battery pack. The adapter's AC input voltage can range covering the standard voltages available in almost every country. The power cord for the AC adapter requires a three-hole grounded AC outlet. To connect the computer to an external power source:

WARNING

The best kind of AC power source to connect your Notebook to is a UPS (Uninterruptible Power Supply). Lacking this, use a power strip with a built-in surge protector. Do not use inferior extension cords as this may result in damage to your Notebook. The Notebook comes with its own AC adapter. Do not use a different adapter to power the computer and other electrical devices.

Whenever possible, keep the AC adapter plugged into the Notebook and an electrical outlet to recharge the battery.

WARNING

Never turn off or reset your Notebook while the hard disk is in use and the HDD status icon is lit; doing so can result in loss or destruction of your data. Always wait at least 5 seconds after turning off your Notebook before turning it back on; turning the power on and off in rapid succession can damage the Notebook' s electrical circuitry.

Turning On Your Notebook Computer

Turn on your Notebook by pressing the power button. Hold the button down for a second or two and release. The Power-On Self Test (POST) runs automatically.

After the POST is completed, the computer reads the operating system from the hard disk drive into computer memory (this is commonly referred to as "booting" a computer). If your OS (Operating System such as Windows XP.…etc) is installed, it should start automatically.

To turn the Notebook off, save your work and close all open applications, click on Start, then select the "Turn off the computer". A selection box will be displayed and click on the "Turn Off" button to shut down your computer.

NOTE

When your computer hangs up, press the power button for 4-6 seconds to shut down the computer

Operating on Battery Power

Your computer comes with a rechargeable battery pack that lets you operate the computer without an external power source. When the battery pack is fully charged, you can operate the computer for approximately 2 hours under the following conditions:

- The battery pack initially has a full charge.
- No peripheral devices are installed.
- The disk/CD-ROM drives run no more than 10% of the time.

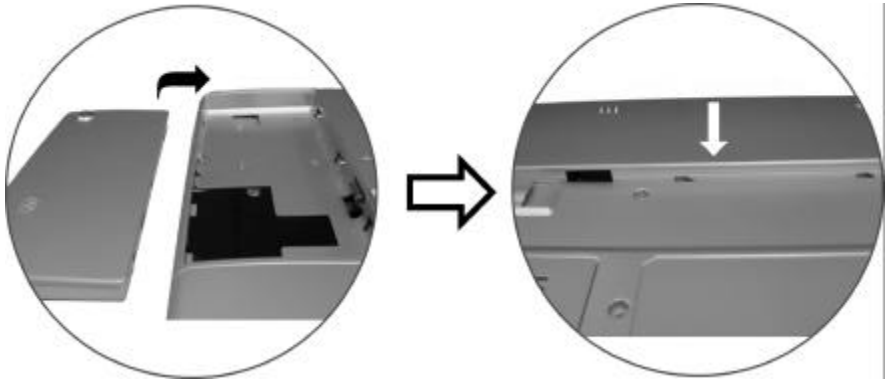
NOTE

Only use batteries that are approved by an authorized dealer. All batteries are not the same and therefore should not be treated as such. Using the wrong battery could cause serious damage to your computer and yourself through toxic emissions.

Inserting and Removing the Battery Pack

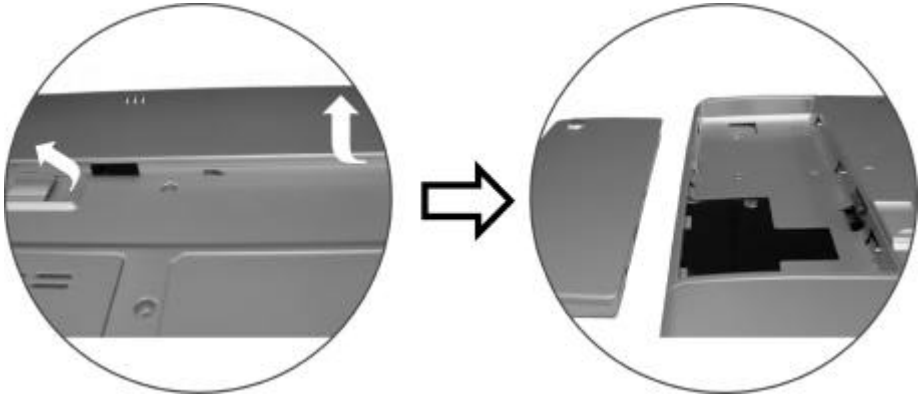
The battery pack should already be inserted in your Notebook computer when you unpack it. If not inserted, follow these directions:

1. Turn over the notebook with the front of the unit facing you and place it on a solid, flat surface.
2. Angle the battery into the bay. The front edge of the battery should slide into the grooves in the system case.
3. Gently lower the battery into the bay and push it until it clicks securely in the bay.



To remove the battery pack:

- Turn off the notebook, and disconnect the AC adapter. Close the LCD panel and turn it over and place it on a solid, flat surface.
- Lift the release latch to release the battery from the bay. At this time the battery will now be angled slightly out of the bay.
- Hold the battery at the finger grip and lift it out of the compartment.



Charging the Battery Pack

The installed battery pack charges automatically any time the computer is connected to the AC adapter and an external power source.

It is a good idea to occasionally discharge the battery pack fully to preserve its operating performance.

Adjusting the LCD Screen Display

The LCD screen display can be adjusted by the following key combinations.

KEYS	FUNCTIONS
[Fn] + [F7]	Decreases the brightness level.
[Fn] + [F8]	Increases the brightness level.
[Fn] + [F12]	This key combination toggles the display between the LCD, CRT, simultaneous LCD/CRT. This function will be disabled when the system is in Overlay (playing video) or Extended Desktop mode.

LCD Care

LCD screens are delicate devices that need careful handling. Please pay attention to the following precautions:

- When you are not using the computer, keep the LCD screen closed to protect it from dust.
- If you need to clean your LCD screen, use a soft tissue to gently wipe the LCD surface.
- Do not put your fingers or sharp objects directly on the surface and never spray cleaner directly onto the display.
- Do not press on, or store any objects on the cover when it is closed. Doing so may cause the LCD to break.

External CRT Display

You can hook up an external monitor through the 15-pin CRT connector. Configurations are available:

- LCD only
- CRT only
- Simultaneous display of the LCD screen and CRT monitor

You can switch between these display configurations by pressing the key combination **[Fn]** + **[F12]**.

A Tour of the Notebook' s Keyboard

The Notebook' s keyboard uses a standard QWERTY layout with the addition of special function keys and an embedded numeric keypad for number intensive data entry. Your keyboard supports Windows by incorporating the two Windows specific keys. With the two Windows keys you will be able to access and take advantage of many of the timesaving features of Windows software.

The function keys (F1-F12) on the top row of the keyboard, serve different purposes and carry out different tasks depending on the application you are running. The cursor (arrow) keys (which are all located in the lower right corner of your keyboard) and the [PgUp], [PgDn], [Home] and [End] keys (which are located along the right edge of the keyboard) allow you to move the active cursor of the computer to various locations on the screen or within the document.

The embedded numeric keypad consists of 15 keys that make number intensive input more convenient. Like the [Num Lock] key, these keys are labeled in blue on the keycaps. Numeric assignments are located at the upper right of each key.

When the numeric keypad is engaged, the NumLock icon will appear in the System Window. The keypad is activated by pressing the [Fn] + [NumLk] key. If an external keyboard is connected, pressing the NumLock key on either the Notebook or external keyboard will enable/disable NumLock of both keyboards in unison.

To disable the Notebook numeric keypad while keeping the keypad on an external keyboard activated, use the [Fn] + [NumLk] hot key on the Notebook keyboard.

The Notebook' s Hot Key Controls

KEYS	FUNCTION(S)
Power Button	Press this button once to power on or enter the suspend/resume mode. Press this button for more than 4 seconds to power off the system.
Internet Button	Open Internet WWW Home short-cut key
Wireless LAN On/Off Button	Open Email Reader short-cut key
[Fn] + [F2]	This key combination turns on/off the volume.
[Fn] + [F3]	Decreases the speaker volume.
[Fn] + [F4]	Increases the speaker volume.
[Fn] + [F7]	Decreases the brightness level.
[Fn] + [F8]	Increases the brightness level.
[Fn] + [F12]	This key combination toggles the display between the LCD, CRT, simultaneous LCD/CRT. This function will be disabled when the system is in Overlay (playing video) or Extended Desktop mode.

The TouchPad

The touchpad is a rectangular electronic panel located just below your keyboard. You can use the static-sensitive panel of the touchpad and slit it to move the cursor. You can use the buttons below the touchpad as left and right mouse buttons.

TouchPad Precautions

The TouchPad is a pressure sensitive device. Please take note of the following precautions.

- Make sure the TouchPad does not come into contact with dirt, liquids or grease.
- Do not touch the TouchPad if your fingers are dirty.
- Do not rest heavy objects on the TouchPad or the TouchPad buttons.

You can use the TouchPad with Microsoft Windows as well as non-Windows applications.

Connecting an External Tracking Devices

The system will only enables you to use one tracking device whether it is an internal or external tracking device.

Data Storage and Retrieval

Data storage and retrieval are two of the most fundamental tasks you will perform when working with your computer. The Notebook is equipped with a hard disk drive (HDD). The HDD is removable allowing for easy upgrades.

The CD-ROM/DVD-ROM/Combo Drive

Precautions for Handling CD-ROM/DVD-ROM/Combo Drive

- Always hold the disc by the edges, avoid touching the surface.
- Use a clean, dry, cloth to remove dust, smudges, or fingerprints. Wipe from the center outward.
- Do not write or place objects on the surface of the disc.
- Store discs in a cool dry place not to damage the disc.
- Do not use benzene, thinners, or cleaners with detergent. Only use CD-ROM/DVD-ROM cleaning kits.
- Do not bend or drop the discs.

Loading a Disc

To play a CD disc, follow the instructions listed below.

1. Push the CD-ROM/DVD-ROM/Combo Drive eject button on the CD drive door. Gently pull the tray all the way out.
2. Carefully lift the CD-ROM/DVD-ROM/Combo Drive by the edges and make sure the shiny surface is face down (the side with no writing on it). Carefully insert the CD-ROM onto the tray. Push the CD-ROM/DVD-ROM/Combo Drive down gently so that it snaps onto the center ring.
3. Push the tray back into the drive.

To remove a disk, do the following:

1. Check the LED display and make sure that the computer is not accessing the CD-ROM/DVD-ROM/Combo Drive.
2. Push the eject button and pull the tray all the way out.

3. Carefully pick up the CD disk by the edges and – while pressing down on the center ring – remove the CD-ROM/DVD-ROM/Combo from the tray.

NOTE

Do not insert any foreign objects into the disc tray. If you experience difficulty when ejecting the CD disk tray, stretch a paper clip (or use a pin or a thin metal rod) and insert it into the emergency eject hole located on the right side of the front panel. The CD disk tray should eject immediately. This procedure can also be used to remove a CD from the drive when the Notebook is powered off.

Power Saving Modes

This section contains information on the Notebook's power system, including the AC Adapter, the battery system, recharging the battery, and tips for conserving battery power.

The power system is comprised of two parts, the AC Adapter and the battery system. The AC Adapter converts AC power from a wall outlet to the DC power required by the computer.

The Battery Power System

A fully charged pack will provide approximately 2 hours of battery life depending on your system configuration application it runs. Before using the computer on battery power for the first time, check the battery status icon on the Windows Toolbar to make sure the battery is fully charged.

See Battery Status later in this section for a description and explanation of the Windows Battery icon. Charging the battery takes about 3 hours to charge when the system is in off state. If possible, always charge the battery completely.

Removing the Battery Pack

To remove the battery pack from its compartment, please refer to Chapter 3, ***Inserting and Removing the Battery Pack***.

Preparing the Battery Pack for Use

Before using the battery pack for the first time, the Smart Battery IC within the battery pack should be calibrated in order to get accurate reporting of remaining battery life status.

To calibrate the battery pack follows the instructions below:

1. Insert the battery into the battery compartment and turn on the Notebook. If the battery is completely without power go to the next step.

   Otherwise, let the battery run down until the battery low-low warning beeps are heard.
   The system will automatically enter Suspend mode.
2. Turn the Notebook off. Connect the AC adapter and let the battery fully recharge. When the battery charge indicator turns off, the battery is fully charged.
3. Turn On the notebook, let the battery run down until the battery is in low-low state and you hear a warning beeps. The system will automatically enter the Suspend mode. You can now connect the AC adapter.
4. The battery pack is now calibrated properly.

In general, using the battery until the low-low battery-warning indicator appears and fully recharges the battery each time (full discharge/charge cycle) will ensure the accurate reporting of the battery gauge status.

Automatic Battery Pack Charging Function

You can automatically charge the battery pack by using the AC Adapter. The charge time is about three hours when the Notebook power is turned off. The following table summarizes the charging modes:

Charge Mode	Charge Time
Fast	3 hours with the system off or in Suspend mode. The temperature must be 25°C or below room temperature.
Pre-Charge	A pre-charge is supplied to the Li-Ion battery pack.

Battery Status

Windows XP has an applet in the Control Panel that will display an icon in the Windows taskbar indicating when the Notebook is running on battery power or is attached to the AC adapter. This applet also displays a meter that indicates how much charge is remaining in the battery.

Battery Low Warning

When the pack initially reaches the “Battery Low” state approximately 10 ~ 15 minutes of the usable battery life is left. You will hear an audible beep signal every 1.5 seconds alerting you to the “Battery Low” status. When the battery power reaches the “Battery Low Low” status the beeping sound will accelerate. Your battery now has 1 ~ 2 minutes of battery charge remaining. You must save your data or connect AC power immediately; otherwise, you may lose your data.

Sound	Meaning
Continuous beeping every 1.5 seconds	**Battery Low:** Indicates that there is 7 to 10 minutes charge remaining.
Beeping accelerates	**Battery Low Low:** Indicates that there is 1 to 2 minutes of battery charge remaining. Save your work and turn off the Notebook, or connect the AC adapter.

Small Battery for the Real Time Clock

There is a small built-in battery pack that supplies power to the system in order to maintain certain system information while the power is off. If the Notebook is left without a power source for long period of time, this battery will be exhausted and system information will be lost.

Danger of explosion if battery is incorrectly replaced. Replace only with the same or equivalent type recommended by the manufacturer. Dispose of used batteries according to the manufacturer's instructions. Never remove the battery pack while the power is on as this may result in data loss when the system loses power.

Resetting the System

After installing a software application package, you may be prompted to reset the system to load the changed operating environment.To reset the system, or "**reboot**," press the **[Ctrl] + [Alt] + [Delete]** keys simultaneously. This is known as "**warm boot**." This key combination acts as "**software**" reset switch when you encounter hardware or software problems, which lock up the Notebook.

If this key combination does not shut down the Notebook, you can reset the Notebook by using the Notebook's power button. Should the Notebook lock up for some reason, pressing this button powers the Notebook off.

Adjusting the Brightness

To adjust the brightness on the LCD screen, press and hold down the **[Fn]** key in the lower left hand corner of the keyboard and press the **[F7]** key to reduce the brightness or **[F8]** to increase the brightness.

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Chapter 5

Desktop Operation

Your notebook is capable of providing you with efficient and productive mobile computing, it also has the speed and capacity to service as a desktop system. This chapter discusses those functions of your notebook that are typical of desktop systems.

Audio

The Multimedia Sound System

The Notebook's built-in audio capabilities allow you to take advantage of a wide range of education and entertainment multimedia software. The Notebook is equipped with internal stereo speakers, a microphone, and input audio ports for external audio units.

An external microphone can be connected to the microphone jack. External speakers or headphones can be connected to the Notebook's audio-out jack.

External audio devices can be connected to the Line in jack. All audio features are software controlled. The Notebook's multimedia sound system includes the following features:

- Supports Windows Sound System compatibility
- Full Duplex operation
- Dynamic filtering reduces noise and distortion rate
- 16-bit digitized audio playback
- A built-in microphone for convenient recording
- Built-in stereo speakers

- Digitized audio recording through the Notebook's built-in microphone or any external source

Audio Volume Control

The Notebook is equipped with hot-key volume controls: Pressing the **[Fn] + [F3]** hot-key combination decreases the audio output volume, press the **[Fn] + [F4]** hot-key combination increases the audio output volume.

Audio Software

Your notebook comes equipped with an integrated sound system capable of providing you with quality audio sound through the built-in speakers or through external speakers connected via the system ports.

Sound Recording

Your system allows you to record sounds and store them as files using the microphone via the microphone jack on the rear of the notebook computer. Check the Windows Help and Support Center in Windows for information on using the various elements in sound recording.

NOTE

For a high-quality sound, click on the "Volume Control" at the lower right end of your screen. From the Volume Control windows, click on the "Advanced" tab, click and select the "Microphone Boost" item.

Playing Sound Files

Your notebook can play audio files stored in MIDI, WAVE or MP3 file format. Check the Help and Support Center in Windows for information on the functions of the Media Player.

External Speakers and Microphone

The sound system is capable in providing high-quality sound to external speakers and receiving and processing sounds from an external microphone or external sound source.

Connecting Peripheral Devices

To expand your computing capabilities, you can add a variety of external devices to your computer. You may, for example, want to add a mouse, modem, or a printer. The computer is equipped with several interface ports, including an enhanced parallel (printer) port, a serial port, and USB ports. These are provided as a means of connecting peripheral devices to the computer.

Connect peripheral devices to the computer's interface ports as shown below:

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Chapter 6

Internet Connection

There are numerous ways to connect to the Internet. This may vary from the user's working environment as well as system specifications.

- Using a modem and a telephone line
- Using a wired LAN
- Using a wireless LAN

Using a modem for Connection to Internet

- Use a telephone line to connect to the modem port of your computer. Do not use a digital telephone line.
- Please apply to an Internet Service Provider (ISP) for Internet service in order for you to connect the modem to the Internet and use e-mail.

NOTE

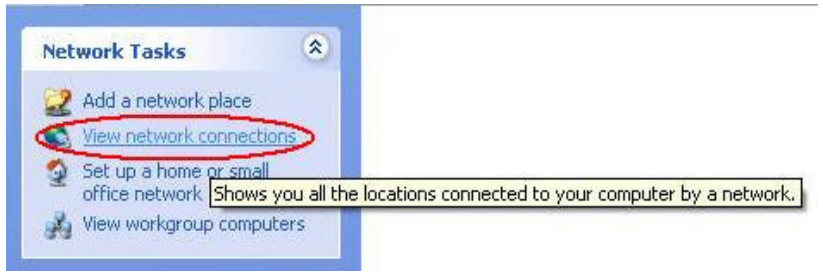
For more detail on the Network key, please refer to your local ISP provider and follow the procedures describe in the "ISP Installation Guide" to proceed with the installation.

Using a wired LAN for Connection to Internet

For you connect to the Internet, a wired LAN environment normally uses the company's LAN or a broadband modem.

1. Use the network (LAN) cable to connect to the LAN port of the system.

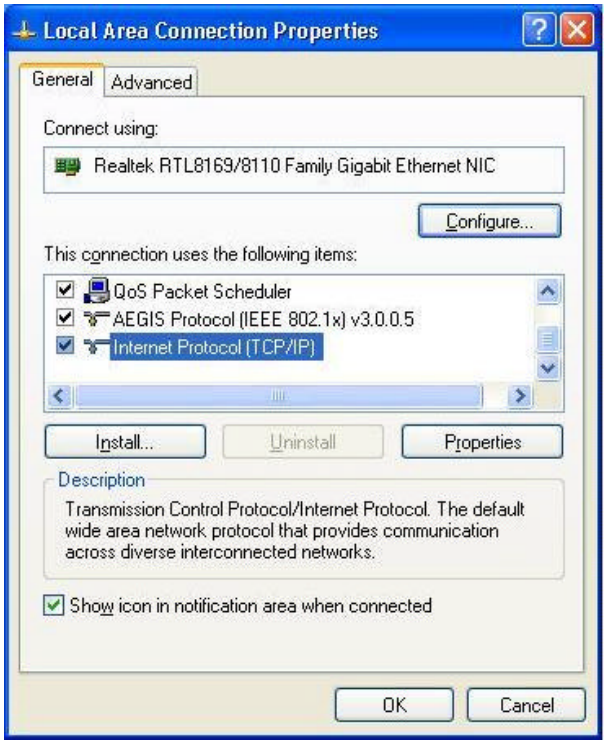
2. Select on “My Network Places” and click on the “View Network Connection” in the “Control Panel” window.



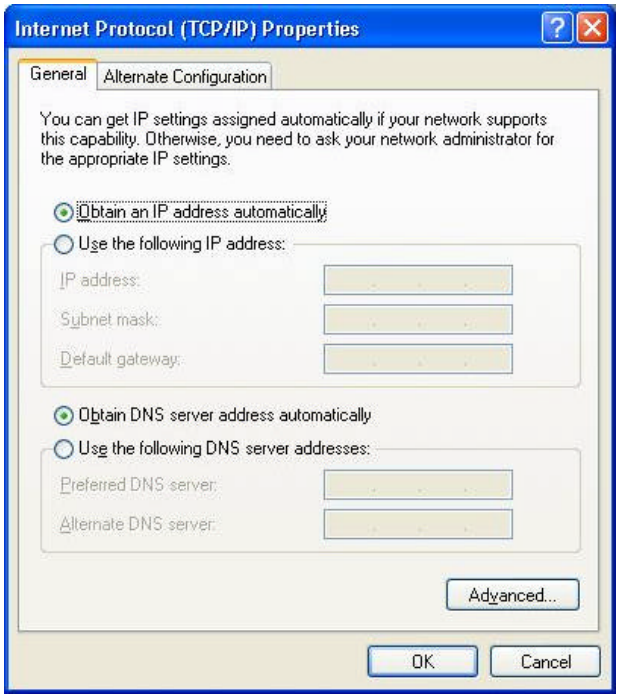
3. In the “Network Tasks” window, use your mouse pointer to click on the “Local Area Connection”.

4. Select “Properties” from the popup menu that appears

5. In the “This connection uses the following items” field, select “Internet Protocol (TCP/IP), and click “Properties”.



6. Enter the system' s IP and DNS server addresses on the General tab of the "Internet Protocol (TCP/IP) Properties" window. If DHCP is used, click "Obtain an IP address automatically" and "Obtain DNS server address automatically" on the General tab.



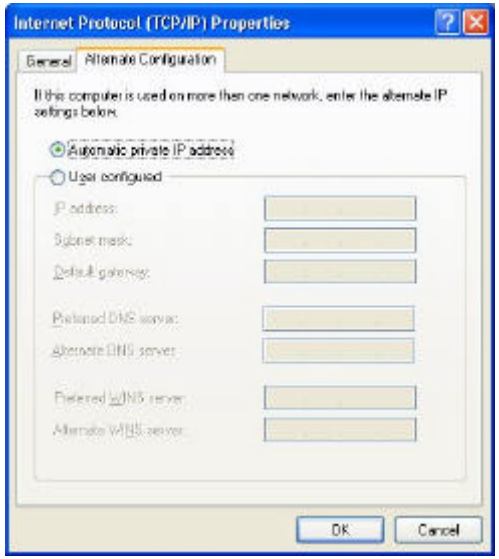
7. After all the all the information are correctly entered in the "Internet Protocol (TCP/IP) Properties" window, click "OK" to finish.

Using Both DHCP and Static IP for Connection to Internet

When you are alternatively using networks with either DHCP or static IP addressing, you can use alternative settings that enable simultaneous configurations of DHCP and static IP to use both of the network connects without reconfiguring.

1. Follow the steps mentioned when you are using wired LAN connection from 1 to 7.

2. Click on the “User configured” and enter the appropriate values in the “Alternate Configuration” tab.



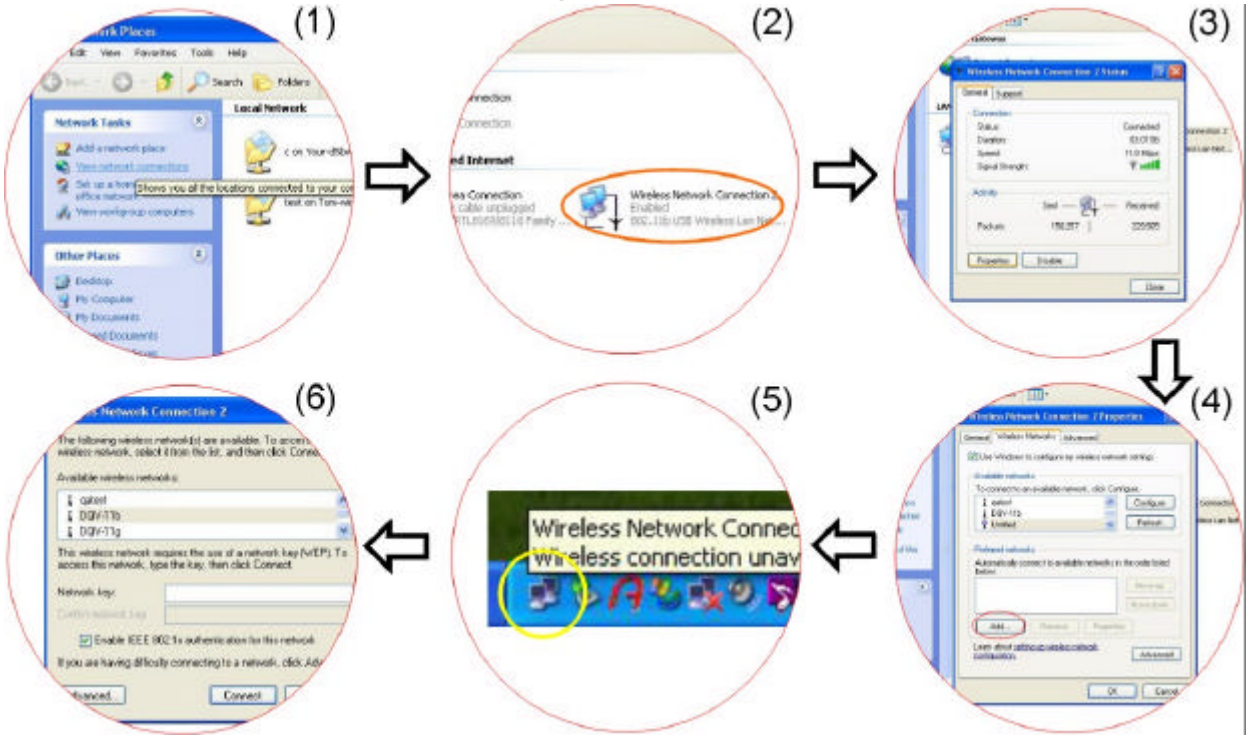
3. When you have completed the entire configuration, click “OK”.

Using Wireless LAN Network for Connection to Internet (Microsoft’ s Service Pack 1)

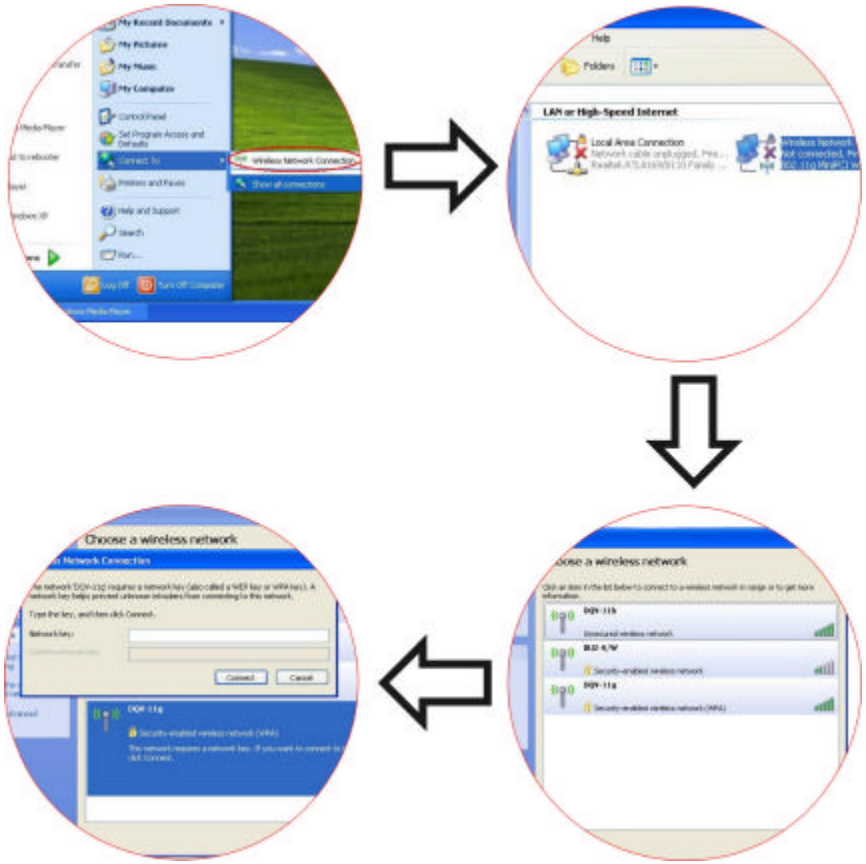
1. From Start, click on the "My Network Places" icon and click the "View Network Connection".
2. Select the “Wireless Network Connection” item from the “Network Connections” display window.
3. From the “Wireless Network Connection Status” display window, click on the “Properties” button.
4. Select the “Wireless Networks” tab and enable the “Use Windows to configure my wireless network Settings”. Click “OK”.
5. A small icon will display on your lower right end of the Windows display.
6. Click on the icon and select the setting for the available network shown on the list and click on the “Connect” button.

NOTE

For more detail on the Network key, please refer to your local ISP provider and follow the procedures describe in the "ISP Installation Guide" to proceed with the installation.



Using Wireless LAN Network for Connection to Internet (Microsoft' s Service Pack 2)



Chapter 7

Running BIOS Setup

Introduction

The BIOS (Basic Input and Output System) Setup program is a menu driven utility that enables you to make changes to the system configuration and tailor your system to reflect installed hardware or alter system performance. When the Notebook is turned back on, the system is configured with the values stored in CMOS. With easy-to-use menus, you can configure such items as:

- Hard drives and peripherals
- Bootup Drive Sequence
- Password protection

The settings made in the BIOS Setup program intimately affect how the Notebook performs.

Navigating through BIOS Setup

The Setup program has been designed to make it as easy to use as possible. If you accidentally make a setting and don't know which one to switch back to, the Setup program has a hot key that allows you to return to the previous value.

Accessing the BIOS Setup Program

To access the BIOS Setup program, press the DEL key after the Notebook has run through its POST.

Item Specific Help

On the right side of the Setup screen is an area labeled Item Specific Help. This area will list navigation key shortcuts and information that is specific for the item that you are currently editing.

The Menu Bar

The top of the screen has a menu bar with the following selections:

Main - Use this menu to make changes to the basic system configuration.

Advanced - Use this menu to enable and make changes to the advanced features available on your system, such as enabling the FIR module.

Security - Use this menu to set a password. The password allows bootup and controls access to the BIOS setup menu.

Boot - Use this menu to configure the default system device used to locate and load the Operating System and for booting up the Notebook.

Exit - Use this menu to exit the current menu or specify how to exit the Setup program.

To access the menu bar items, press the right or left arrow key on the keyboard until the desired item is highlighted.

The Legend Bar

At the bottom of the Setup screen you will notice a legend bar. The keys in the legend bar allow you to navigate through the various setup menus. The following table lists the keys found in the legend bar with their corresponding alternates and functions.

Legend Key	Alternate Key	Function
F1		Displays the General Help window. It can be enabled from anywhere in the BIOS.

Esc		Jumps to the Exit menu or returns to the Main menu from a submenu.
←		Selects the menu item to the left.
→		Selects the menu item to the right.
↑ or ↓	Keypad arrow keys	Moves the cursor up and down between fields.
Tab	Enter	Moves the cursor to the next position available in the field.
Minus key (-)		Scrolls backward through the values for the highlighted field.
Plus key (+)		Scrolls forward through the values for the highlighted field.
Home	PgUp	Moves the cursor to the field at the top of the window.
End	PgDn	Moves the cursor to the field at the bottom of the window.
F9		Sets the parameters for the current menu to their *default* values.
F10		Save and Exit.
Enter		Will select a sub menu or show a range of options for a field.

Launching Submenus

Note that a right pointer symbol ▶ appears to the left of certain fields. This pointer indicates that a submenu can be launched from this field. A submenu contains additional options for a field parameter. To call up a submenu, simply move the cursor to highlight the field and press the [**Enter**] key. Use the [**Esc**] key to return to the Main menu.

General Help

In addition to the Item Specific Help window, the BIOS Setup program also provides a General Help screen can be called up from any menu by simply pressing [**F1**]. Use the [**PgUp**] and [**PgDn**] keys or the up and down arrow keys (- ¯) to scroll through the entire help document.

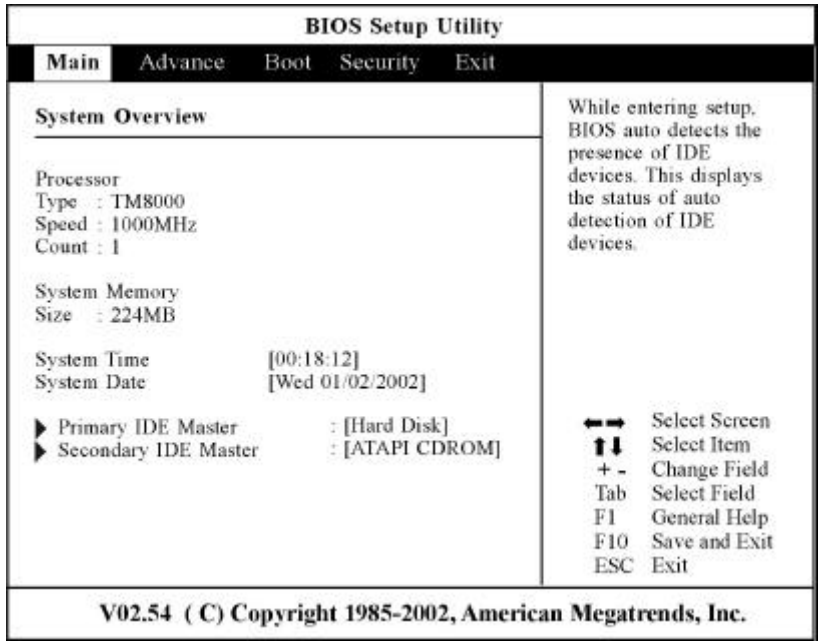
Press the Home key to display the first page, press End to go to the last page. To exit the help window, press the [**Enter**] or the [**Esc**] key.

Save Changes and Exit the Setup Program

Refer to the Exit menu section of this chapter for detailed information on saving changes and exiting the setup program.

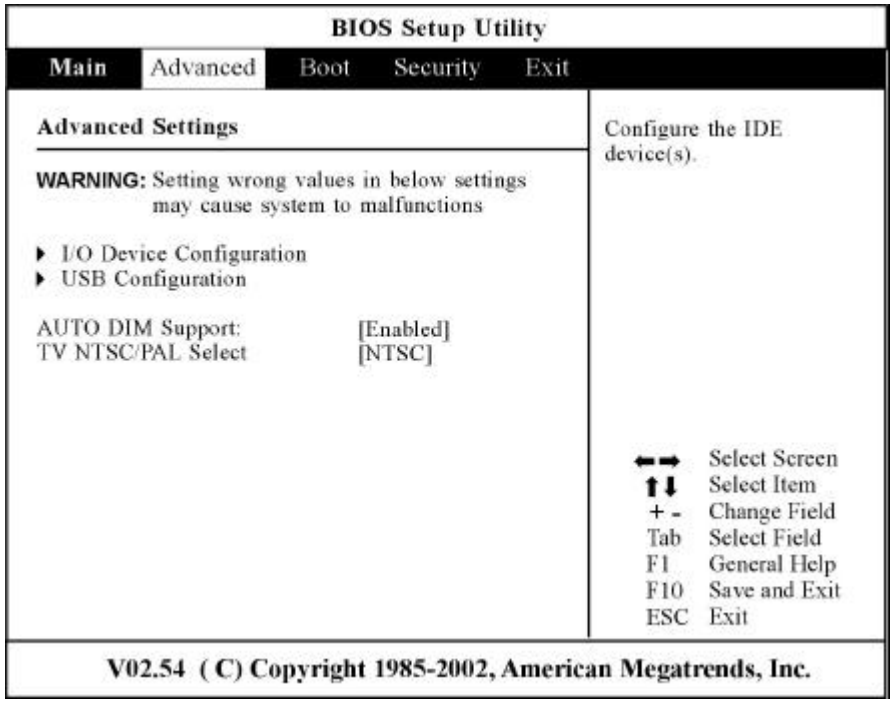
The Main Menu

When the Setup program is accessed, the following screen appears:



The Advanced Menu

Selecting *Advanced* from the menu bar displays the Advanced menu:



BIOS Setup Utility

Advanced

Parallel Port Address	[378]	Allows BIOS to Select Parallel Port Base Address
Parallel Port Mode	[Normal]	
Parallel Port IRQ	[IRQ7]	
PS/2 Mouse Support	[Auto]	

←→	Select Screen
↑↓	Select Item
+ -	Change Field
Tab	Select Field
F1	General Help
F10	Save and Exit
ESC	Exit

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BIOS Setup Utility

Advanced

USB Configuration

USB Devices Enabled:
None

Legacy USB Support	[Enabled]
USB Beep Message	[Disabledl]

Enables support for legacy USB. Auto option disables legacy support if no USB devices are connected.

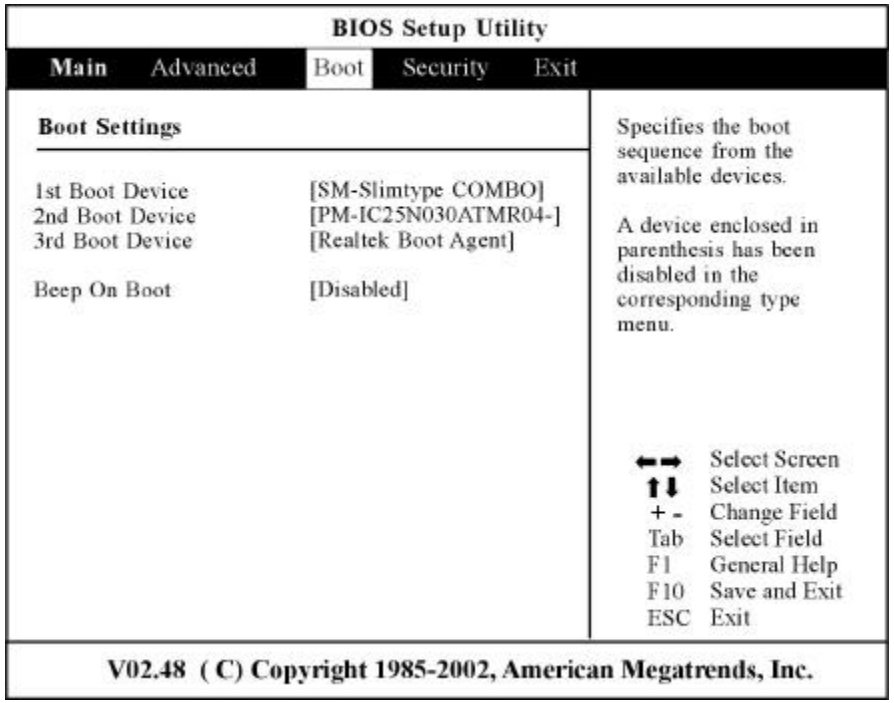
← →	Select Screen
↑ ↓	Select Item
+ -	Change Field
Tab	Select Field
F1	General Help
F10	Save and Exit
ESC	Exit

V02.54 (C) Copyright 1985-2002, American Megatrends, Inc.

The Boot Menu

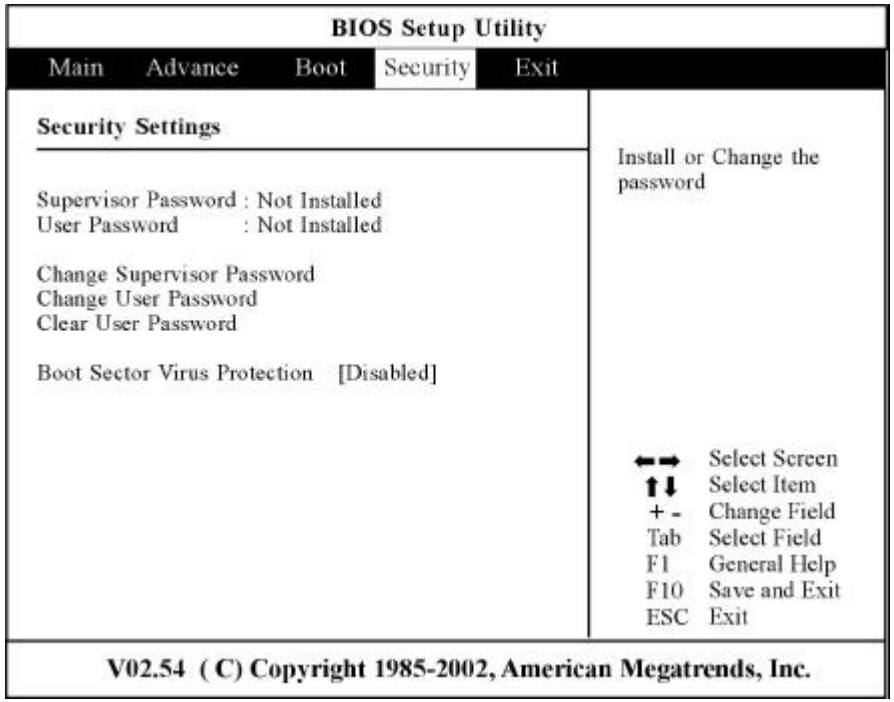
The Boot menu allows the user to specify the order in which the Notebook is to check for a device to boot the system. You can also configure the way that the system will boot up.

To make changes, select *Boot* from the menu bar. The following screen appears:



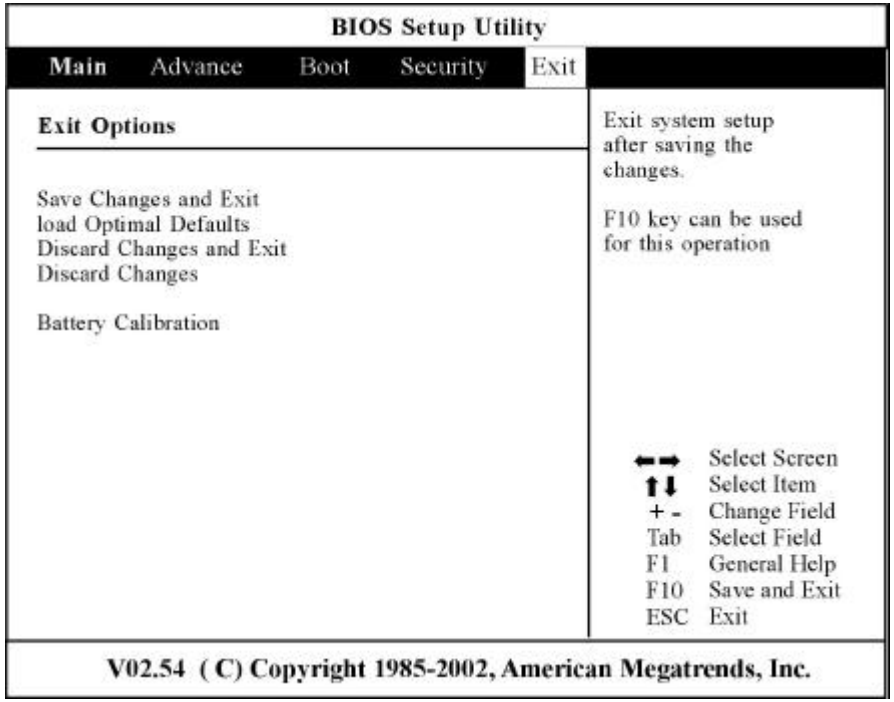
The Security Menu

The Notebook's advanced system of security allows you to set a password to prevent unauthorized access to system resources, data, and the BIOS Setup Program.



The Exit Menu

Once you have made all of your selections from the various menus in the Setup program, you should save your changes and exit Setup. Select *Exit* from the menu bar to display the following menu:



Chapter 8

The Software Utilities Disks

Installing the Drivers

To make installation of the drivers easier, we offer an auto installation method for the Microsoft Windows system.

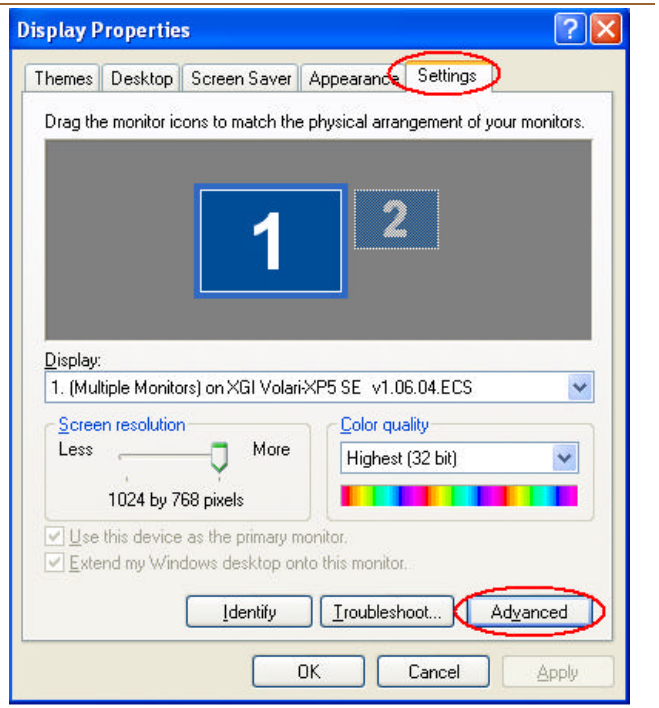
To install the driver for the system, the attached CD disk contains the driver installation, users manual. Follow the step-by-step procedures to execute the "AutoRun" application by selecting the topic of "Driver Installation".

Select the drivers that you desired and follow the instructions on the screen. The drivers will be installed in the system automatically. During the installation, it is very normal that the system may restart.

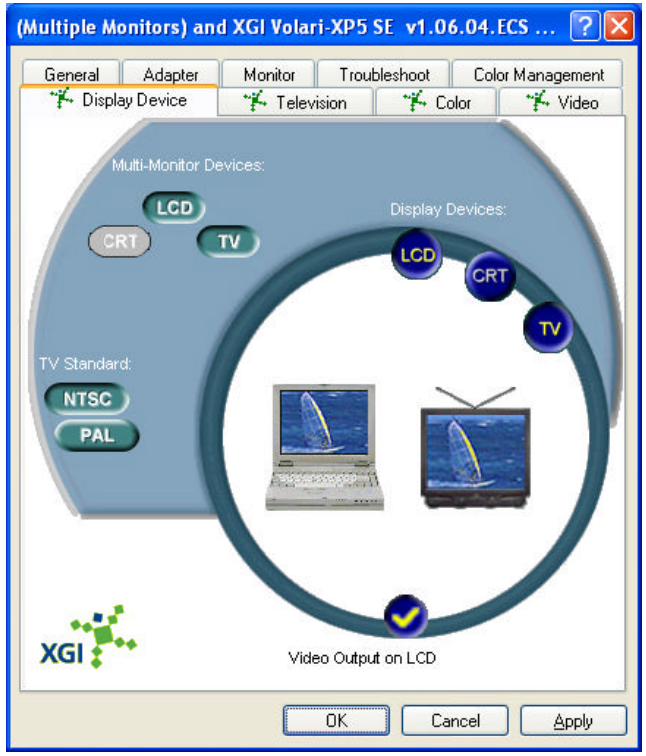
VGA Utilities

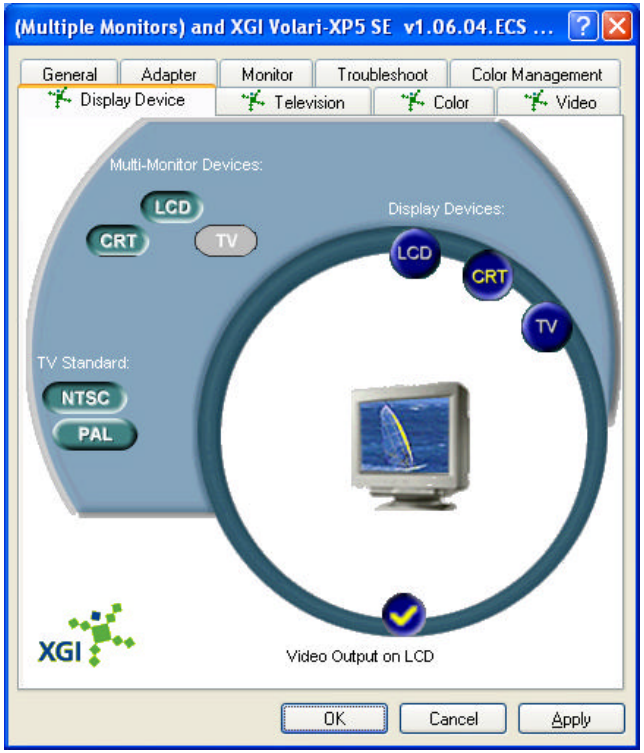
After you have restarted Windows, open the "Control Panel" and double click on the "Display" icon.

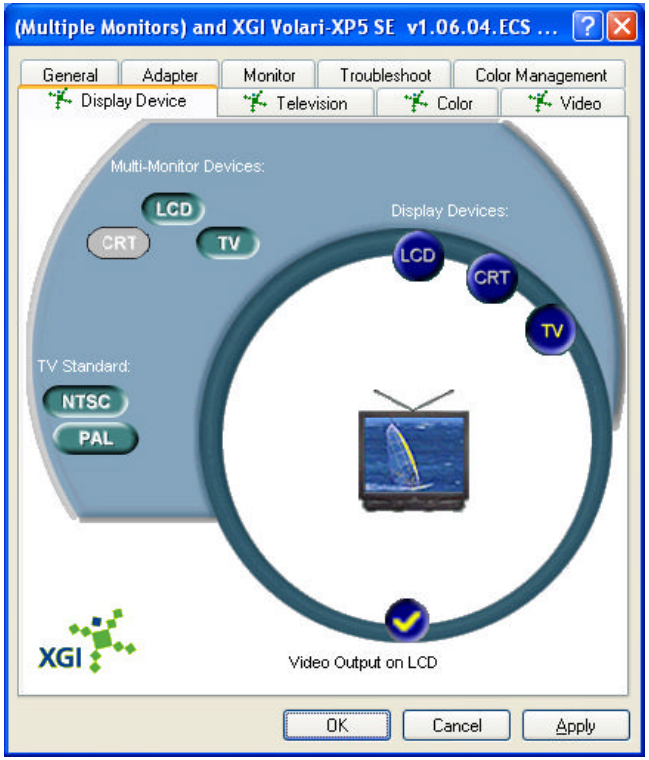
From the "Display Properties" window, select the "Settings" tab and click on the "Advanced" tab.



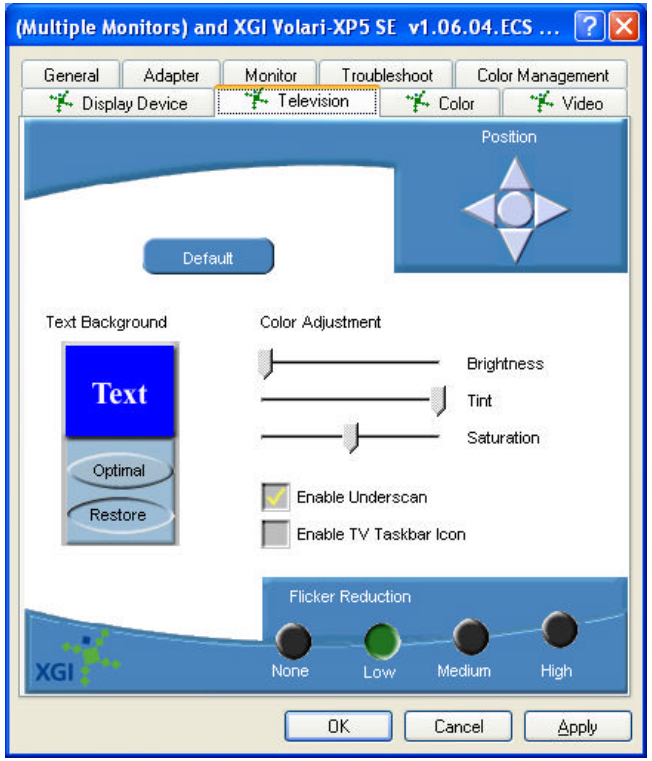
Display Device Setting



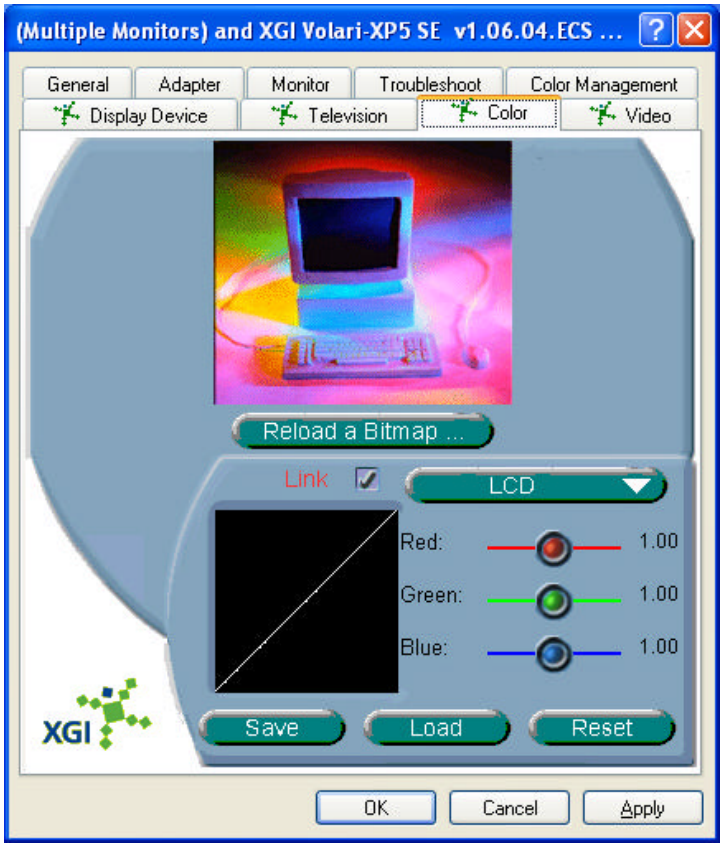


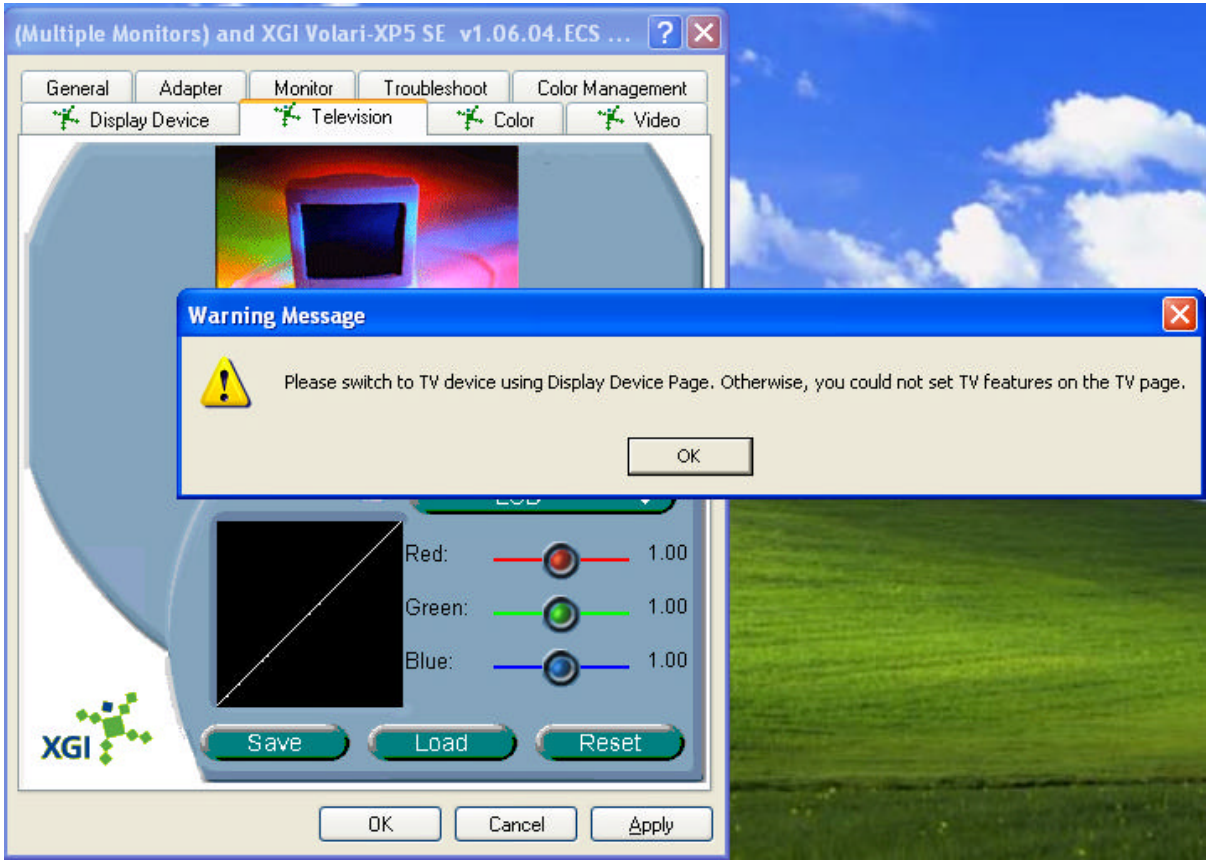

(Multiple Monitors) and XGI Volari-XP5 SE v1.06.04.ECS ...
General
Adapter
Monitor
Troubleshoot
Color Management
Display Device
Television
Color
Video
Multi-Monitor Devices:
LCD
CRT
TV
Display Devices:
LCD
CRT
TV
TV Standard:
NTSC
PAL
XGI
Video Output on LCD
OK
Cancel
Apply

Television Setting

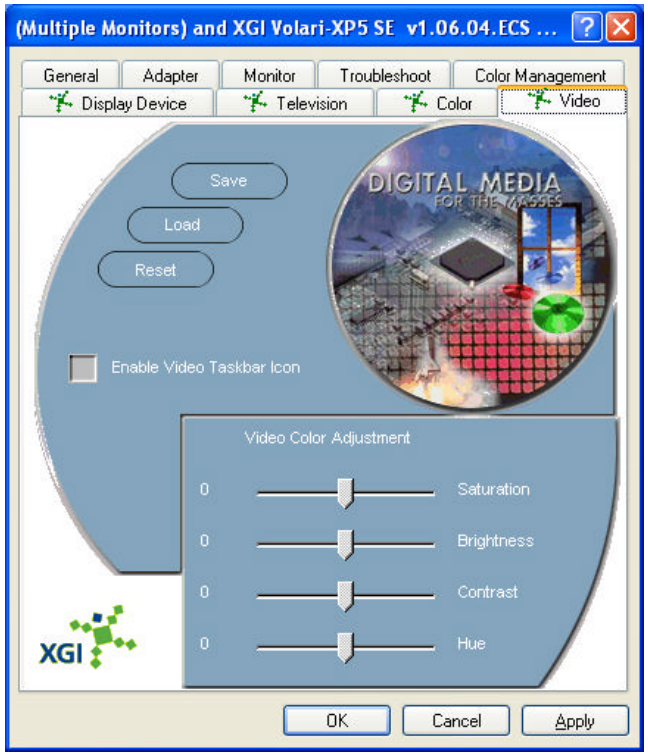


Color Setting




(Multiple Monitors) and XGI Volari-XP5 SE v1.06.04.ECS ...
General
Adapter
Monitor
Troubleshoot
Color Management
Display Device
Television
Color
Video
Warning Message
Please switch to TV device using Display Device Page. Otherwise, you could not set TV features on the TV page.
OK
Red:
1.00
Green:
1.00
Blue:
1.00
XGI
Save
Load
Reset
OK
Cancel
Apply

Video Setting



Chapter 9

Troubleshooting

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

Locating a Problem

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

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

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

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

Checking Cables and Connections

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

To check the power cables, and connections:

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

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

- Check the wall outlet or power strip with an item that you know is functioning properly. A lamp or radio is a convenient item for checking the power. You may also need to check the fuses and breakers in your electric box.
- If the outlet is controlled by a wall switch, make sure that the switch is on.
- If the outlet is controlled by a dimmer switch, use a different outlet.
- If your computer is plugged into a power strip with an On/Off switch, make sure the switch is on.

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

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

WARNING

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

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

The Power-On Self Test

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

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

Two classifications of malfunctions can be detected during the POST:

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

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

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

General Hardware Problems

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

Problem: Failure in the installation of the Audio driver.

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

Problem: The display screen is dark

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

Problem: An incorrect date and time are displayed.

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

Problem: The message: **"**Invalid system disk, Replace the disk, and then press any key**"** appears during boot.

Solution: Check and make sure that you do not have a non-bootable floppy diskette inserted in your floppy drive. If your USB FDD is empty, you may not have an operating system installed on your drive. Contact technical support for assistance.

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

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

Problem: An unidentified message is displayed.

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

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

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

Problem: You cannot operate the printer.

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

Problem: You can' t save data to disk.

Solution: Ensure that the disk has been formatted.
Consult your operating system manual for information on formatting floppy diskettes.

Problem: The diskette is write-protected.

Solution: Eject the diskette, remove the write protection, and try again.

Problem: The diskette if full.

Solution: Try using another diskette or free up some space on the diskette. The disk drive is not operating. Contact your dealer for support.

Problem: You cannot use the mouse.

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

Contacting Your Dealer

If you still have a problem after reading the preceding sections, the next step is to contact your dealer.

Your dealer can determine if the problem is something that requires the computer to be taken to the shop.

Before you call your dealer, however, prepare the following information:

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

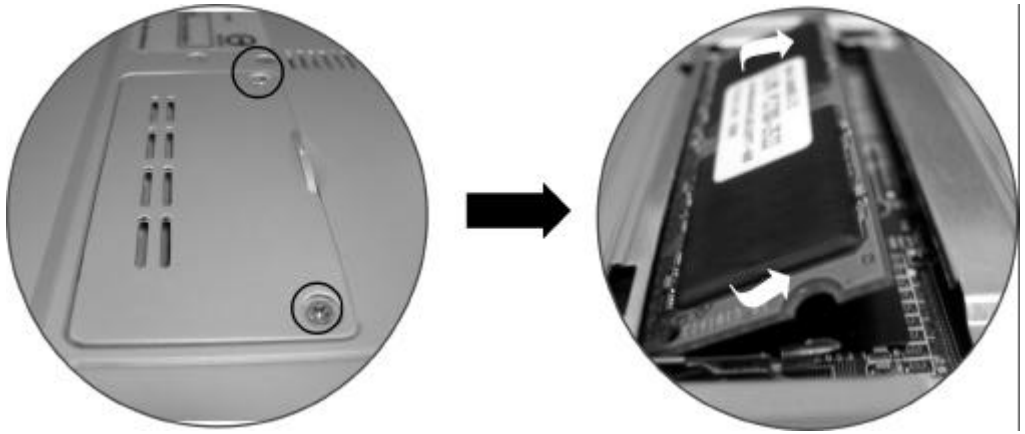
Chapter 10

Upgrading your System

Upgrading your Memory

Refer to the following instructions and illustration for information on upgrading your notebook's memory.

- Turn off the computer and disconnect the AC adapter and all peripherals.
- Turn the notebook over so that the rear ports are facing you and locate the memory module compartment.
- Remove the screws that secure the RAM module compartment cover and set it aside in a safe place.
- Remove the compartment cover and then angling it up and out.
- If you need to install a higher capacity module, gently push the edge clips on both sides to release the module. Angle the card slightly upward and gently slide it from its edge connector slot. Store the card in the anti-static bag that contains your new module(s).
- To install the new memory card, hold the card with its gold edge connector toward the edge connector slot of the compartment. To help you orient the cards, the edge connector has been made with two unequal-length sections. You will only be able to insert the card in one direction.
- Insert the edge connector into the slot. The gold edge connector of the card should not be visible when the card is fully inserted.
- Press the card downward where you should hear an audible click as the latches of the connector secure the card in place.
- Once the module is properly seated, you can replace the cover on this compartment.
- Replace and tighten the screw.



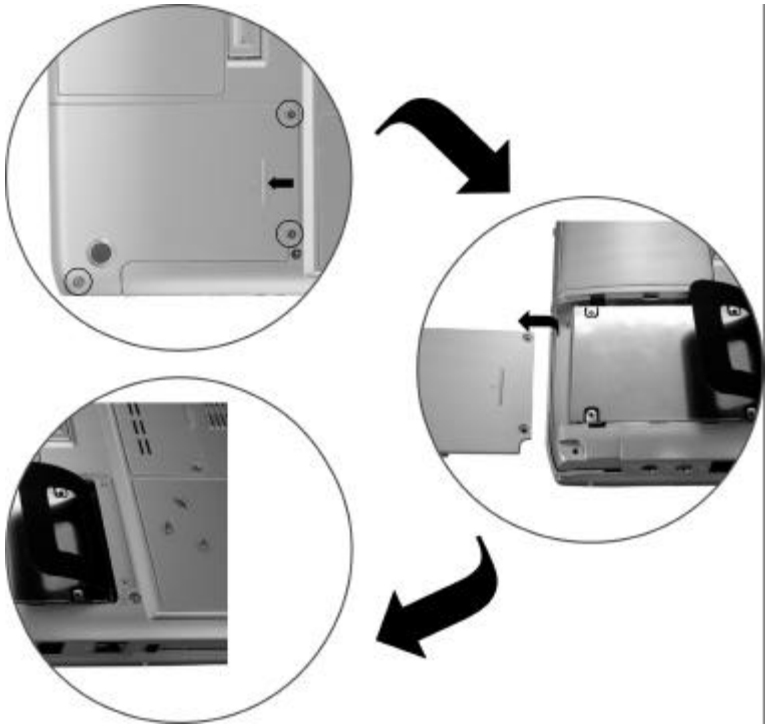
The Easy to Upgrade HDD Module

The hard drive in your notebook computer is made to be easily swapped out for upgrading. You should back up your hard drive before attempting o change the hard drive. Make sure that before you install a new drive, all the files in your system should be backed up.

To upgrade your Hard Drive

- Power down the system completely. Turn the system over with the front of the unit facing you.
- Remove the three screws that secure the compartment cover and set them in a safe place.
- Slide the HDD cover away from the compartment.
- The drive is attached to a special bracket that secures it to the notebook computer. There are 4 screws hold the bracket. Remove the screws and set them in a safe place.
- Push the HDD slightly in the direction of the arrow as shown in the illustration to release it from the pins of the drive.
- Gently hold the grip of the HDD, lift it up to release from its compartment.

- To install the new HDD, you will need to align the tabs on the drive bracket with the slots on the bay. Press down gently on the drive bracket until it engages with the system. Do not force the drive into place this can bend the pins on the hard drive.

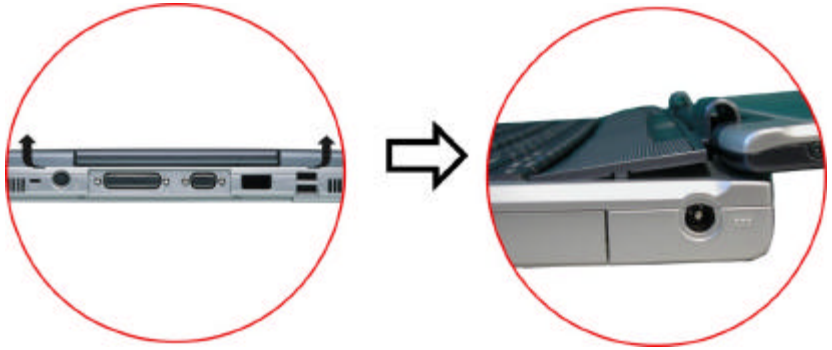


- Slide the compartment cover into place and be sure the screw holes on the cover align completely with the screw holes in the case.
- Secure the cover with the three screws.

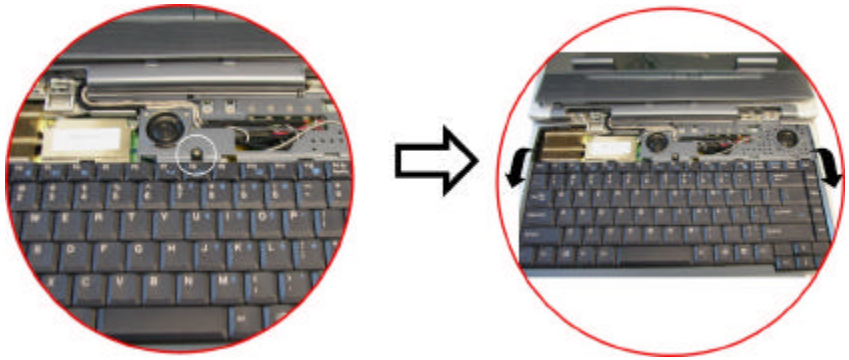
Upgrading your System CPU

Refer to the following instructions and illustration for information on upgrading your notebook's CPU

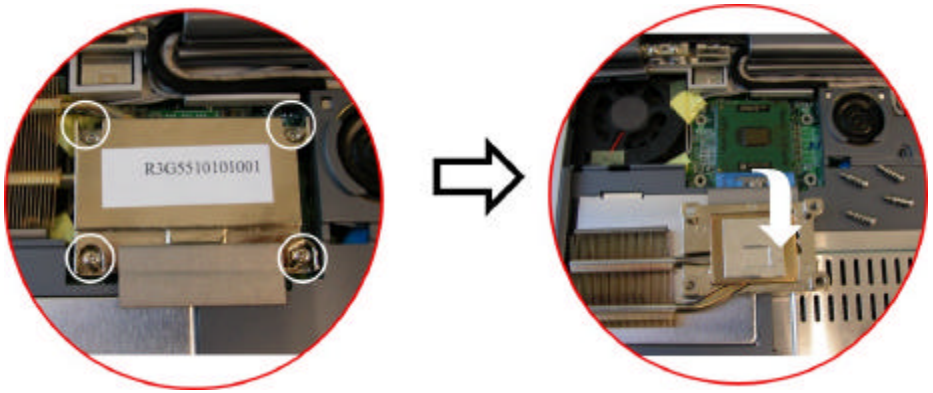
- Turn off the computer and disconnect the AC adapter and all peripherals. From the rear side of your notebook, use your index finger to lift up the hinge cover attached to the LCD screen.



- Bend your LCD screen into 90 degree angle then carefully lift up the hinge cover.
- Remove the screen that is attached to the keyboard in order to remove the heatsink on top of the CPU.



- Remove all the screws attached to the heatsink.
- Before removing the screws, there are certain measures to followed in removing the heatsink



- To remove the heatsink, first loosen the screw carefully.
- After loosening one screw, be certain that the next to be loosen should be the screw on its adjacent side as shown on the illustration.

WARNING

Be sure to loosen all the screws first before removing it totally to release the heatsink. Failure to do so will cause a major damage to the heatsink.

- Now you can totally remove all the screws also in that order when you first loosen the screw.

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Appendix A

Specification

Detailed Notebook Specifications

Processor	➢	On board Transmata® Efficeon TM-8600 1.0GHz, TM-8800 1.4GHz / 1.6GHz with 1MB L2 cache on die
	➢	783pin PC-OBGA package
Operating System Compliance	➢	Microsoft® Windows® XP Professional Edition
	➢	Microsoft® Windows® XP Home Edition
Core Logic	➢	Embedded in Transmata® CPU on board+ ULi® M1563M
Memory	➢	Expansion 2 slot of 200pin DDR SO-DIMM DDR Module, expandable up to 2GB system memory
	➢	Supports DDR 266 / 333 module
LCD Display	➢	14.1” XGA / 15” XGA (1024 x 768) TFT LCD display
Video & Graphics	➢	Graphic Memory: 32MB DDR-SDRAM on board
	➢	AGP interface, XGI XP5 discrete high performance graphic chip
	➢	128bit bus interface to external DDR SDRAM
Hard Drive	➢	2.5" 9.5mm height, ATA 33 / 66 / 100 support
Optical Drive	➢	5.25” 12.7 mm height CD-ROM, DVD-ROM, Combo Drive (DVD-ROM + CD-RW), DVD Dual (DVD+/-RW), Super Multi (DVD+/-RW + DVD-RAM)

Pointing Device		➢ Synaptic touchpad with 4 way scrolling button
Application Launch Key		➢ WLAN, Internet hot key
LED Status Indicator		➢ Power on, Battery Charge, Suspend Mode
Keyboard		➢ 3.0mm travel, inverted-T, 88 keys with windows key
Interface Ports	**Left**	➢ USB 2.0 port * 2, Modem port, Audio line out, LAN port, Mic-in
	Right	➢ DC in jack
	Rear	➢ Kensington Lock, Parallel Port, USB 2.0 port* 2, TV out (S Video) port, VGA port
Audio		➢ Built in chipset Audio Controller, Audio Codec: Realtek ALC655
		➢ AC' 97 2.3 compliant, with SPDIF cable output for 5.1 channel decoder chamber
		➢ built-in two stereo speakers
AC Adapter		➢ Input:100-240V AC, 1.5A, 50-60Hz, Universal
		➢ Output:19V DC, 3.16A, 60W
Battery		➢ 4 / 8 cell Li-Ion battery pack
Battery Charge		➢ 4 cell: approximately 2hours charging time to 100% capacity while system off
		➢ 8 cell: approximately 3.5hours charging time to 100% capacity while system off
Battery Life		➢ More than 1.5hours for 4 cell battery pack
		➢ More than 3.0hours for 8 cell battery pack
BIOS		➢ ACPI and DMI supported, Plug & Play, password
		➢ Bootable from USB FDD and Optical Device
		➢ Smart Battery System support

Communication		➢ 10/100/1000Mbps Gigabit Ethernet on board ➢ MDC 56Kbps V.92 Fax/Modem on board ➢ 802.11b / g WLAN
Power Management		➢ APCI 2.0 compliance ➢ Support Stand-by, Suspend to Disk, Suspend to RAM
Security		➢ Kensington Lock, BIOS password protection
Size		➢ 326 (W) x 258(D) x 25mm(H)/32mm(front/ back)
Weight		➢ 2.7kg with 14.1" panel, 8-cell battery and DVD-ROM drive installed
Accessories	**Packing Accessories**	➢ Quick Guide, Support CD (Driver, Utility, Manual), AC Adapter, Power Cord, Battery Pack, Phone card
	Factory Option	➢ Optical Device: CD-ROM, DVD-ROM, Combo Drive (DVD-ROM + CD-RW), DVD Dual (DVD+/-RW), Super Multi (DVD+/-RW + DVD-RAM) ➢ 802.11b / g WLAN, MiniPCI interface ➢ MDC 56Kbps V.92 Modem combo on board, ➢ Battery pack: 8-cell battery

IMPORTANT

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