

# Notices

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## Macrovision Statement

**If your computer has a DVD drive and an analog TV Out port, the following paragraph applies:**

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# Important Safety Information

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## Safety Instructions

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Your system is designed and tested to meet the latest standards for safety of information technology equipment. However, to ensure safe use of this product, it is important that the safety instructions marked on the product and in the documentation are followed.



Always follow these instructions to help guard against personal injury and damage to your system.

## Setting Up your System

- Read and follow all instructions marked on the product and in the documentation before you operate your system. Retain all safety and operating instructions for future use.
- Do not use this product near water or a heat source such as a radiator.
- Set up the system on a stable work surface.
- The product should be operated only with the type of power source indicated on the rating label.
- Ensure that the electrical outlet you are using to power your equipment is easily accessible in case of fire or short circuit.
- If your computer has a voltage selector switch, make sure that the switch is in the proper position for your area.
- Openings in the computer case are provided for ventilation. Do not block or cover these openings. Make sure you provide adequate space, at least 6 inches (15 cm), around the system for ventilation when you set up your work area. Never insert objects of any kind into the computer ventilation openings.
- Ensure that the fan vents on the bottom of the casing are clear at all times. Do not place the computer on a soft surface, doing so will block the bottom vents.
- If you use an extension cord with this system, make sure that the total ampere rating on the products plugged into the extension cord does not exceed the extension cord ampere rating.

## Care During Use

- Do not walk on the power cord or allow anything to rest on it.
- Do not spill anything on the system. The best way to avoid spills is to not eat or drink near your system.
- Some products have a replaceable CMOS battery on the system board. There is a danger of explosion if the CMOS battery is replaced incorrectly. Replace the battery with the same or equivalent type recommended by the manufacturer. Dispose of batteries according to the manufacturer's instructions. If the CMOS battery requires replacement insure that a qualified technician performs the task
- When the computer is turned off, a small amount of electrical current still flows through the computer. To avoid electrical shock, always unplug all power cables, remove the battery and modem cables from the wall outlets before cleaning the system.
- Unplug the system from the wall outlet and refer servicing to qualified personnel if:
  - The power cord or plug is damaged.
  - Liquid has been spilled into the system.
  - The system does not operate properly when the operating instructions are followed.
  - The system was dropped or the casing is damaged.
  - The system performance changes.

## Replacement Parts and Accessories

Use only replacement parts and accessories recommended by manufacturer.



To reduce the risk of fire, use only No. 26 AWG or larger telecommunications line cord.



Do not use this product in areas classified as hazardous. Such areas include patient care areas of medical and dental facilities, oxygen rich environments, or industrial areas.

## Battery Disposal

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Do not put rechargeable batteries or products powered by non-removable rechargeable batteries in the garbage.

Contact the Samsung Helpline for information on how to dispose of batteries that you cannot use or recharge any longer.

Follow all local regulations when disposing of old batteries.

## Laser Safety

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All systems equipped with CD or DVD drives comply with the appropriate safety standards, including IEC 825. The laser devices in these components are classified as “Class 1 Laser Products” under a US Department of Health and Human Services (DHHS) Radiation Performance Standard. Should the unit ever need servicing, contact an authorized service location.



### **Laser Safety Note:**

Use of controls or adjustments or performance of procedures other than those specified in this manual may result in hazardous radiation exposure. To prevent exposure to laser beams, do not try to open the enclosure of a CD or DVD drive.

## Power Cord Requirements

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The power cord set (wall plug, cable and AC adapter plug) you received with your computer meets the requirements for use in the country where you purchased your equipment.

Power cord sets for use in other countries must meet the requirements of the country where you use the computer. For more information on power cord set requirements, contact your authorized dealer, reseller, or service provider.

## General Requirements

**The requirements listed below are applicable to all countries:**

- The length of the power cord set must be at least 6.00 feet (1.8m) and a maximum of 9.75 feet (3.0m).
- All power cord sets must be approved by an acceptable accredited agency responsible for evaluation in the country where the power cord set will be used.
- The power cord set must have a minimum current capacity of 7 A and a nominal voltage rating of 125 or 250 volts AC, as required by each country's power system.
- The appliance coupler must meet the mechanical configuration of an EN 60 320/IEC 320 Standard Sheet C7 connector, for mating with appliance inlet on the computer.

# Regulatory Compliance Statements

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## Wireless Guidance

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Low power, Radio LAN type devices (radio frequency (RF) wireless communication devices), operating in the 2.4 GHz Band, may be present (embedded) in your notebook system. The following section is a general overview of considerations while operating a wireless device.

Additional limitations, cautions, and concerns for specific countries are listed in the specific country sections (or country group sections). The wireless devices in your system are only qualified for use in the countries identified by the Radio Approval Marks on the system rating label. If the country you will be using the wireless device in, is not listed, please contact your local Radio Approval agency for requirements. Wireless devices are closely regulated and use may not be allowed.

The power output of the wireless device or devices that may be embedded in your notebook is well below the RF exposure limits as known at this time. Because the wireless devices (which may be embedded into your notebook) emit less energy than is allowed in radio frequency safety standards and recommendations, manufacturer believes these devices are safe for use. Regardless of the power levels, care should be taken to minimize human contact during normal operation.

As a general guideline, a separation of 20 cm (8 inches) between the wireless device and the body, for use of a wireless device near the body (this does not include extremities) is typical. This device should be used more than 20 cm (8 inches) from the body when wireless devices are on and transmitting.

This transmitter must not be collocated or operate in conjunction with any other antenna or transmitter.

Some circumstances require restrictions on wireless devices. Examples of common restrictions are listed below:



Radio frequency wireless communication can interfere with equipment on commercial aircraft. Current aviation regulations require wireless devices to be turned off while traveling in an airplane. 802.11B (also known as wireless Ethernet or Wifi) and Bluetooth communication devices are examples of devices that provide wireless communication.



In environments where the risk of interference to other devices or services is harmful or perceived as harmful, the option to use a wireless device may be restricted or eliminated. Airports, Hospitals, and Oxygen or flammable gas laden atmospheres are limited examples where use of wireless devices may be restricted or eliminated. When in environments where you are uncertain of the sanction to use wireless devices, ask the applicable authority for authorization prior to use or turning on the wireless device.



Every country has different restrictions on the use of wireless devices. Since your system is equipped with a wireless device, when traveling between countries with your system, check with the local Radio Approval authorities prior to any move or trip for any restrictions on the use of a wireless device in the destination country.



If your system came equipped with an internal embedded wireless device, do not operate the wireless device unless all covers and shields are in place and the system is fully assembled.



Wireless devices are not user serviceable. Do not modify them in any way. Modification to a wireless device will void the authorization to use it. Please contact manufacturer for service.



Only use drivers approved for the country in which the device will be used. See the manufacturer System Restoration Kit, or contact manufacturer Technical Support for additional information.

#### 802.11b Restrictions:

- European standards dictate maximum radiated transmit power of 100mW EIRP and frequency range 2.400-2.4835GHz;
- In France, the equipment must be restricted to the 2.4465-2.4835GHz frequency range and must be restricted to indoor use.

## United States of America

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### **Unintentional Emitter per FCC Part 15**

This device complies with Part 15 of 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.



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 generate uses and can radiate radio frequency energy and if not installed and used in accordance with the instructions may cause harmful 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.

If necessary, the user should consult the dealer or an experienced radio/television technician for additional suggestions. The user may find the following booklet helpful: "Something About Interference." This is available at FCC local regional offices. Our company is not responsible for any radio or television interference caused by unauthorized modifications of this equipment or the substitution or attachment of connecting cables and equipment other than those specified by our company. The correction will be the responsibility of the user. Use only shielded data cables with this system.

### **Intentional emitter per FCC Part 15**

Low power, Radio LAN type devices (radio frequency (RF) wireless communication devices), operating in the 2.4 GHz Band, may be present (embedded) in your notebook system. This section is only applicable if these devices are present. Refer to the system label to verify the presence of wireless devices.

Wireless devices that may be in your system are only qualified for use in the United States of America if an FCC ID number is on the system label.

The FCC has set a general guideline of 20 cm (8 inches) separation between the device and the body, for use of a wireless device near the body (this does not include extremities). This device should be used more than 20 cm (8 inches) from the body when wireless devices are on. The power output of the wireless device (or devices), which may be embedded in your notebook, is well below the RF exposure limits as set by the FCC.

This transmitter must not be collocated or operate in conjunction with any other antenna or transmitter.

Operation of this device 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 of the device.



Wireless devices are not user serviceable. Do not modify them in any way. Modification to a wireless device will void the authorization to use it. Contact manufacturer for service.



**FCC Statement for Wireless LAN use:**

“While installing and operating this transmitter and antenna combination the radio frequency exposure limit of 1mW/cm<sup>2</sup> may be exceeded at distances close to the antenna installed. Therefore, the user must maintain a minimum distance of 20cm from the antenna at all times. This device can not be collocated with another transmitter and transmitting antenna.”

## FCC Part 68

This equipment complies with part of the FCC rules. On the back of this equipment is a label that contains, among other information, the FCC registration number and ringer equivalence number (REN) for this equipment. If requested, this information must be provided to the telephone company.

This equipment uses the following USOC jacks : RJ11C

An FCC compliant telephone cord and modular plug is provided with this equipment. This equipment is designed to be connected to the telephone network or promises wiring using a compatible modular jack which is Part 68 compliant. See Installation Instructions for details.

The REN is used to determine the quantity of devices which may be connected to telephone line. Excessive RENs on the telephone line may result in the devices not ringing in response to an incoming call. In most, but not all areas, the sum of RENs should not exceed five (5.0). To be certain of the number of devices that may be connected to a line, as determined by total RENs, contact the local telephone company to determine the maximum REN for the calling area.



If the terminal equipment causes harm to the telephone network, the Telephone Company will notify you in advance that temporary discontinuance of service may be required. But if advance notice is not practical, the telephone company will notify the customer as soon as possible. Also, you will be advised of your right to file a complaint with the FCC if you believe it is necessary.

The telephone company may make changes in its facilities, equipment, operations, or procedures that could affect the operation of the equipment. If this happens, the telephone company will provide advanced notice in order for you to make necessary modifications to maintain uninterrupted service.

If trouble is experienced with this equipment (Modem) for repair or warranty information, please contact your local distributor. If the equipment is causing harm to the telephone network, the telephone company may request that you disconnect the equipment until the problem is resolved.

The user must use the accessories and cables supplied by the manufacturer to get optimum performance from the product.

No repairs may be done by the customer.

This equipment cannot be used on public coin phone service provided by the telephone company. Connection to party line service is subject to state tariffs.

The Telephone Consumer Protection Act of 1991 makes it unlawful for any person to use a computer or other electronic device, including fax machines, to send any message unless such message clearly contains in a margin at the top or bottom of each transmitted page or on the first page of the transmission, the date and time it is sent and an identification of the business or other entity, or other individual sending the message and the telephone number of the sending machine or such business, other entity, or individual. (The telephone number provided may not be any number for which charges exceed local or long-distance transmission charges.)

In order to program this information into your fax machine, refer to your communications software user manual.

# Canada

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## Unintentional Emitter per ICES-003

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 Industry Canada.

Le présent appareil numérique n'émet pas de bruits radioélectriques dépassant les limites applicables aux appareils numériques de Classe B prescrites dans le règlement sur le brouillage radioélectrique édicté par Industrie Canada.

## Intentional Emitter per RSS 210

Low power, Radio LAN type devices (radio frequency (RF) wireless communication devices), operating in the 2.4 GHz Band, may be present (embedded) in your notebook system. This section is only applicable if these devices are present. Refer to the system label to verify the presence of wireless devices.

Wireless devices that may be in your system are only qualified for use in Canada if an Industry Canada ID number is on the system label.

As a general guideline, a separation of 20 cm (8 inches) between the wireless device and the body, for use of a wireless device near the body (this does not include extremities) is typical. This device should be used more than 20 cm (8 inches) from the body when wireless devices are on.

The power output of the wireless device (or devices), which may be embedded in your notebook, is well below the RF exposure limits as set by Industry Canada.

This transmitter must not be collocated or operate in conjunction with any other antenna or transmitter.

Operation of this device 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 of the device.



To prevent radio interference to licensed service, this device is intended to be operated indoors and away from windows to provide maximum shielding. Equipment (or its transmit antenna) that is installed outdoors is subject to licensing.



Wireless devices are not user serviceable. Do not modify them in any way. Modification to a wireless device will void the authorization to use it. Contact manufacturer for service.

## **Telecommunications per DOC notice (for products fitted with an IC-compliant modem)**

The Industry Canada label identifies certified equipment. This certification means that the equipment meets certain telecommunications network protective, operation, and safety requirements. The Department does not guarantee the equipment will operate to the users' satisfaction.

Before installing this equipment, users should make sure 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. In some cases, the inside wiring associated with a single-line individual service may be extended by means of a certified connector assembly. 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 made by an authorized Canadian maintenance facility 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 make sure, 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.




To avoid electrical shock or equipment malfunction do not attempt to make electrical ground connections by yourself. Contact the appropriate inspection authority or an electrician, as appropriate.

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.

## European Union

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The following information is only applicable to systems labeled with the CE mark .


### European Directives

This Information Technology Equipment has been tested and found to comply with the following European directives:

- EMC Directive 89/336/EEC with amending directives 92/31/EEC & 93/68/EEC as per
  - EN 55022 Class B
  - EN 61000-3-2
  - EN 61000-3-3
  - EN 55024
- Low Voltage Directive (Safety) 73/23/EEC as per EN 60950(A1/A2/A3/A4/A11)
- Radio and Telecom Terminal Equipment Directive 199/5/EC as per
  - CTR21 (if fitted with a modem device)
  - ETS 300 328 (if fitted with a 2.4 GHz band embedded wireless device)
  - ETS 301 489-1 (if fitted with a 2.4 GHz band embedded wireless device)
  - ETS 301 489-17 (if fitted with a 2.4 GHz band embedded wireless device)

### European Radio Approval Information (for products fitted with EU-approved radio devices)

This Product is a Notebook computer; low power, Radio LAN type devices (radio frequency (RF) wireless communication devices), operating in the 2.4 GHz band, may be present (embedded) in your notebook system which is intended for home or office use. This section is only applicable if these devices are present. Refer to the system label to verify the presence of wireless devices.

Wireless devices that may be in your system are only qualified for use in the European Union or associated areas if a CE mark  with a Notified Body Registration Number and the Alert Symbol is on the system label.

The power output of the wireless device or devices that may be embedded in your notebook is well below the RF exposure limits as set by the European Commission through the R&TTE directive.

**European States qualified under wireless approvals:**

**EU** Austria, Belgium, Denmark, Finland, France (with frequency restrictions), Germany, Greece, Ireland, Italy, Luxembourg, The Netherlands, Portugal, Spain, Sweden and the United Kingdom.

**Accept EU** Iceland, Liechtenstein, Norway and Switzerland

**European States with restrictions on use:**

**EU** In France, the frequency range is restricted to 2446.5-2483.5 MHz for devices above 10 mW transmitting power such as wireless LAN.

**Accept EU** No limitations at this time.

**European Telecommunication Information  
(for products fitted with EU-approved modems)**

Marking by the symbol **CE** indicates compliance of this equipment to the Radio and Telecom Terminal Equipment Directive 1999/5/EC. Such marking is indicative that this equipment meets or exceeds the following technical standards:

CTR 21 – Attachment requirements for pan-European approval for connection to the analogue Public Switched Telephone Networks (PSTNs) of TE (excluding TE supporting voice telephony services) in which network addressing, if provided, is by means of Dual Tone Multi-Frequency (DTMF) signaling.



Although this equipment can use either loop disconnect (pulse) or DTMF (tone) signaling, only the performance of the DTMF signaling is subject to regulatory requirements for correct operation. It is therefore strongly recommended that the equipment is set to use DTMF signaling for access to public or private emergency services. DTMF signaling also provides faster call setup.

This equipment has been approved to Council Decision 98/482/EEC—“CTR 21” for Pan-European single terminal connection to the Public Switched Telephone Network (PSTN).

However, due to differences between the individual PSTNs provided in different countries, the approval does not, of itself, give an unconditional assurance of successful operation on every PSTN termination point. In the event of problems, you should contact manufacturer Technical Support.

# Using Your Documentation

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Congratulations on your purchase of a notebook computer with the Windows® XP operating system. Whether you are new to using a portable computer or are an experienced user, this user's manual can help you get the most from your computer.

## Manual Documentation Conventions

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### Information Icons

Four icons and their associated messages appear in this manual. The information icons are placed before the step/information they apply to:



**Warning:**

Indicates the possibility of personal injury.



**Caution:**

Warns you of possible damage to equipment or data.



**Note:**

Informs you of special circumstances.



**Technical Information:**

Informs you of special requirements or limitations for use of item(s).

### Keyboard Conventions

Keys that you need to press to perform certain functions are displayed in the manual in brackets. For example:

<Ctrl> indicates the control key (**Ctrl** on the keyboard).

If you need to press two keys at the same time, the key names are shown joined by a plus sign. For example:

<Fn+F8> means that you should press the **Fn** key and hold it and then press the **F8** key.

## CD-ROM Device Naming Convention

In many installation programs you will have to get a program from the CD-ROM device. The program installation sequence assumes that the CD is drive d:\, however this is not always the case. The name of the CD-ROM drive is the letter following the letter assigned to your last HDD. For instance, if you have one HDD with two partitions, the HDD is drives C: and D: and the CD-ROM drive is then drive E.

## Touchpad Conventions

You may be asked to click or double-click on items on the display screen. As a general note the touchpad actions act much in the same way as a wheel mouse, any differences are explained fully.


The object that needs to be clicked upon will be displayed in **Bold** text or shown in a small figure such as the “**Start Button**” shown on the right => 

Table 1. Touchpad Click Conventions

Action	Process
Click	Depress the touchpad left button and release
Double-click	Quickly click the left touchpad button two times



### Windows Conventions:

Almost all “Windows” programs will display the name/function of a button or icon if you place the touchpad pointer on the item you want information about.

## Software User Documentation

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Your computer is shipped from the factory with several software programs installed. The software may include its own online or printed documentation. Refer to the documentation or the Help options in the software for more information.



The figures and illustrations in this manual may not be identical to those on your system.



### General Icon Note:

Some of the Icons used in Windows XP may be placed on the taskbar by selecting (**ex: Place the volume icon in the taskbar**) in the properties dialog box.

# Getting Started

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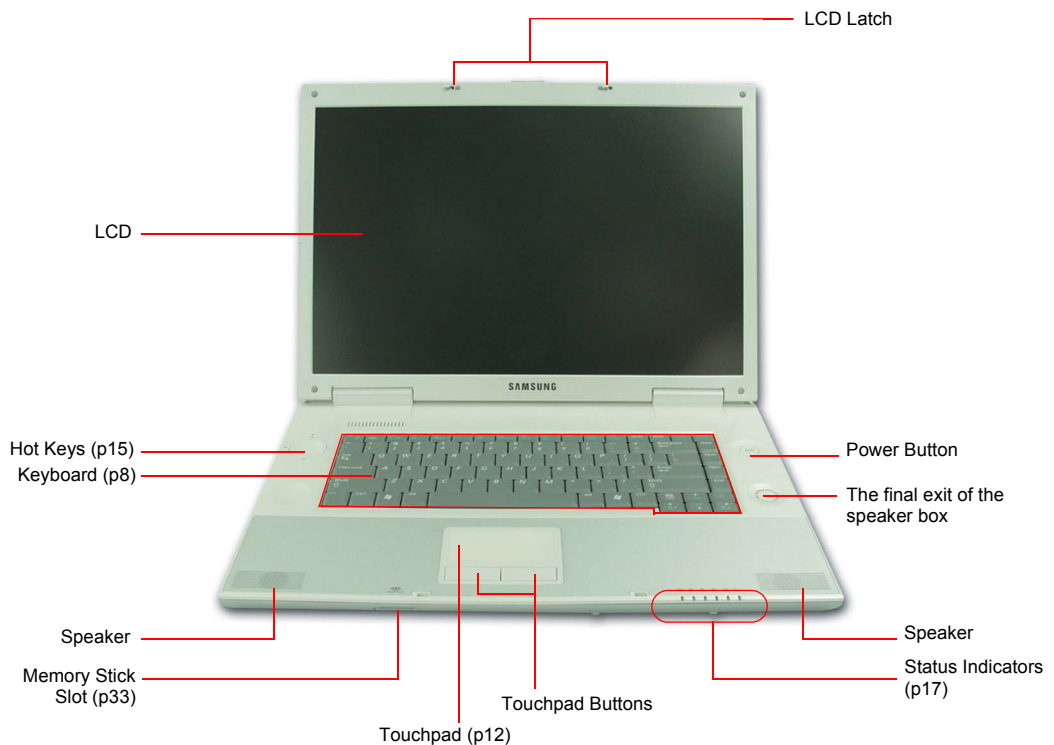
## Introducing Your Computer

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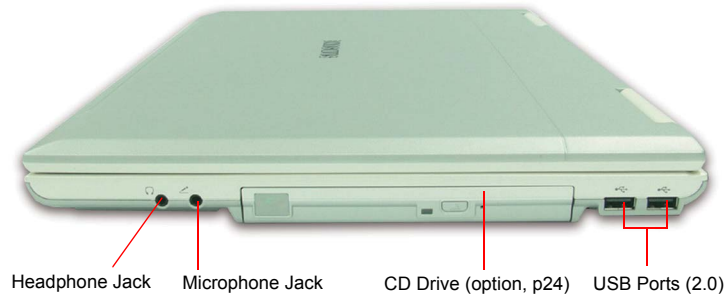
The photographs used in this user manual may be somewhat different in shape and colour to those of your computer depending on the model of your computer.

### Front View

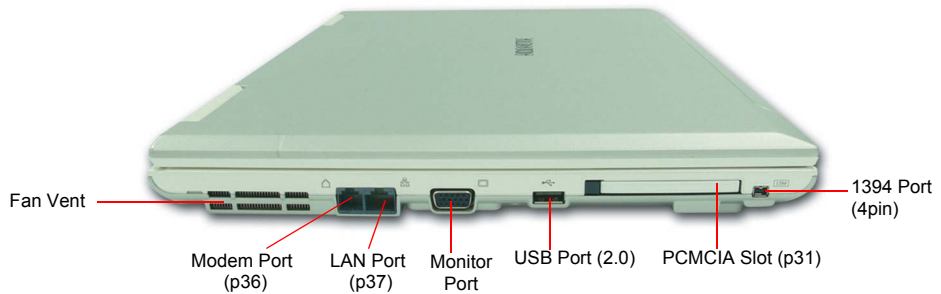




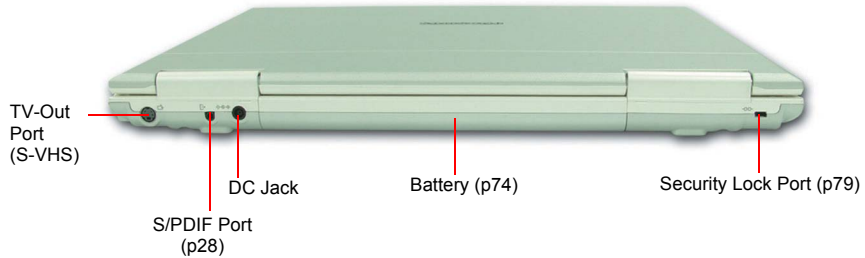
## Right View



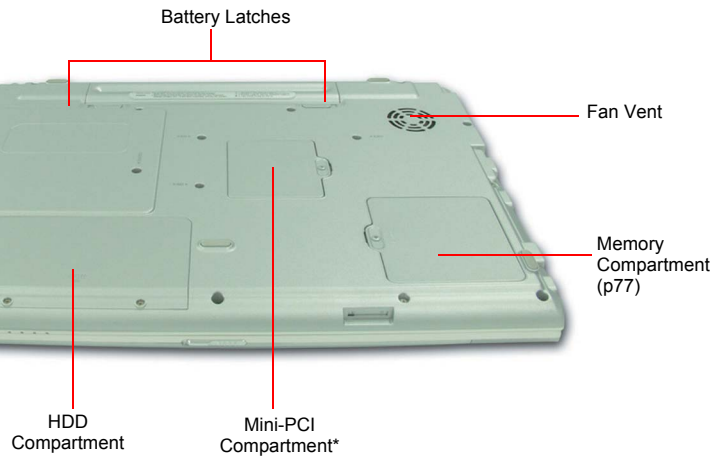
## Left View



## Back View



## Bottom View



Removing or disassembling the hard disk drive will void your warranty. To replace the hard disk drive, please contact your nearest Samsung Service Centre.

Wireless LAN module(optional) is installed in the mini PCI compartment.

# Turning the Computer On and Off

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## To turn on the computer

1. Insert the battery and connect the AC adapter according to the Installation Guide.
2. Slide the LCD latch to the right and open the LCD panel.
3. Press the power button.

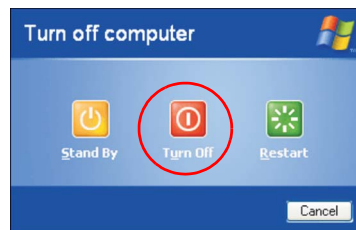


## To turn off the computer

1. Click the **start** button (  ) on the taskbar.
2. Click **Turn Off Computer**.



3. Click **Turn Off**.





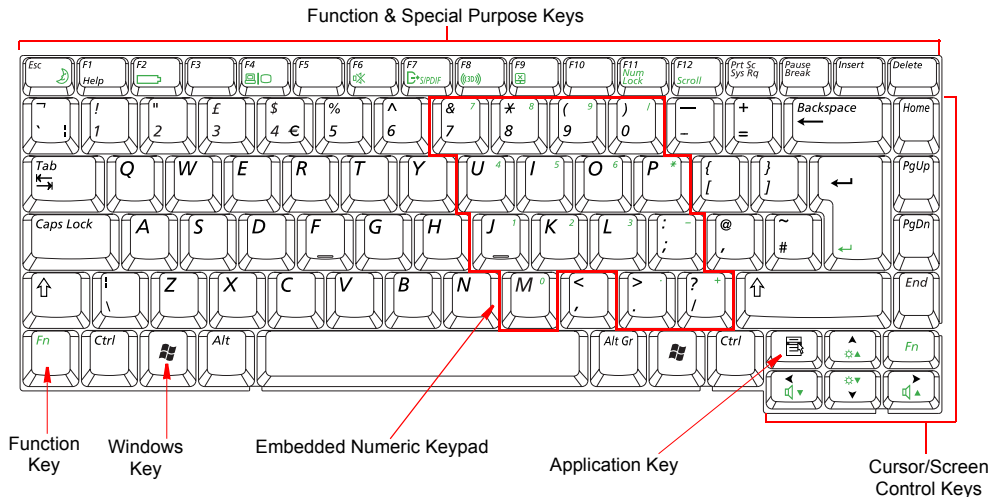
If the computer does not turn off properly due to a system error, press **<Ctrl>+<Alt>+<Delete>**. When [Windows Task Manager] dialog box appears, click **Shut Down > Turn Off** to turn off the computer. Your unsaved work may be lost/damaged.



If **<Ctrl>+<Alt>+<Delete>** keys do not operate either, press the power button for more than 4 seconds to turn off the computer. Your unsaved work may be lost/damaged. When you turn on the computer next time, it will perform a disk checking process.

# Using the Keyboard

Your computer has an 88/89-key keyboard. By pressing designated key combinations, you can have access to all the key functions of a full-sized keyboard.



Although the layout of the keys on your computer's keyboard is different from that on a desktop computer's keyboard, the keyboard feels like a full-sized keyboard when you use it.

## The keys on the keyboard can be grouped into the following categories:

- Full-sized Alphanumeric typewriter keys are arranged like a standard typewriter keyboard and are used for text entry. The Windows keys on either side of the spacebar open Windows menus and perform other special functions.
- Function keys, when pressed together with the <Fn> key, enable special functions.
- Cursor and Screen control keys move the cursor. They may perform other functions, depending on your software.

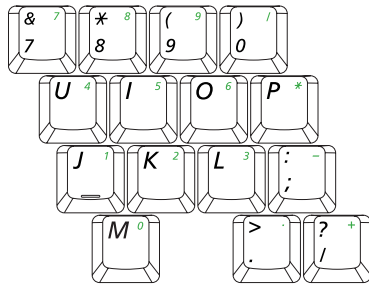
To clean the computer keyboard, use slightly damp cotton swabs. Scrub the keys and the surface around the keys.



Do not allow liquid to drip into the keyboard or you may damage the keyboard.

## Using the Numeric Keypad

Your keyboard includes a numeric keypad, which is a group of keys that you can set to type numbers and mathematical symbols, such as the plus sign. A number or symbol on the left corner of each keypad key shows its numeric function.



Num Lock LED















Press **<Fn>+<F11>** to turn on the embedded numeric keypad. The numeric functions of the keypad are enabled and the Num Lock LED turns on. (See "Reading the Status Indicators" on page 17 for the location of the Num Lock LED.)

While the numeric functions are enabled, you can temporarily return a key to its normal function by pressing the key and the **<Fn>** key. For example to type the letter *m*, press **<Fn>+<M>**, this operation displays the letter **m**.

To turn the numeric keypad off, press **<Fn>+<F11>** again. The Num Lock LED turns off.

## Using Special Function Keys

The function key activates special functions when it is pressed in combination with another key. Table 2 shows the special key combinations.



<Fn> Key Combinations	Key Name	Key Function
<Esc/  >	Rest	Puts the computer into suspended mode. To escape suspended mode, press the power button. (p70)
<F2/  >	Gauge	Displays the remaining battery charge (%). 
<F4/  >	LCD/CRT	Switches the display between the LCD and external display device when an external display device is connected. (p67)
<F6/  >	Mute	Turns the audio output on and off.
<F7/  >	S/PDIF	Turns the S/PDIF function on and off.  Turns S/PDIF on  Turns S/PDIF off
<F8/  >	3D sound	Extends the spatial sound of the stereo speakers so that the listener can experience even greater stereophonic sound.  Turns 3D sound on  Turns 3D sound off  Note. The 3D sound function is only supported through the internal speaker of the computer and the headphones. This function is not supported through the S/PDIF port. Note. When using the 3D function, even if the balance is turned completely to the left or right, some audio may still be heard through the other speaker.  Caution. Some distortion may be experienced when the 3D function is used, depending on the audio source.
<F9/  >	Touchpad	Turns the touchpad function on and off.  Turns Touchpad on  Turns Touchpad off

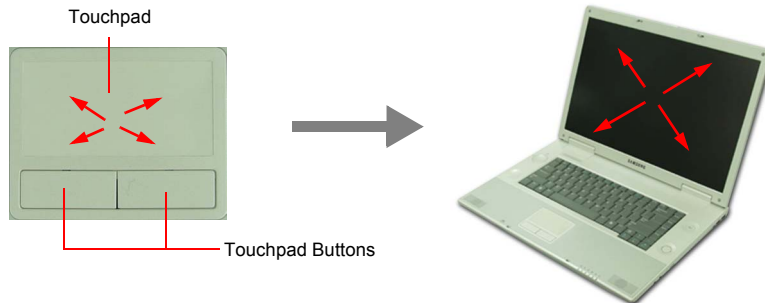
<F11/Num Lock>	Number Lock	Enables the numeric keypad. (p9)
<F12/Scroll>	Scroll Lock	Scrolls the screen up and down while the cursor position does not change in some applications.
< ↑ / ✨▲ >	Brightness Up	Makes the LCD screen brighter.
< ↓ / ✨▼ >	Brightness Down	Makes the LCD screen dimmer.
< ← / 🔊▼ >	Volume Down	Decreases the audio volume.
< → / 🔊▲ >	Volume Up	Increases the audio volume.



## Using the Touchpad

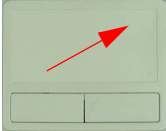




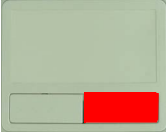

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In Windows, you always see a small graphical image on the screen that indicates the location where you can take the next action. This image is called a pointer, and is usually displayed in arrow shape (  ) or 'I' shape (  ).



The touchpad on your computer allows you to move the pointer on the LCD screen, just like a mouse that is used with a desktop computer. The touchpad buttons allow you to take actions with the pointer, such as selecting an item or executing a command.

You can perform various actions with your touchpad as described below.

Action	Function	Process
<b>Move</b> 	Move the pointer	Place your finger on the touchpad and slide your finger to a destination.
<b>Click</b>  	Select an object, open a menu, or execute a button	Place the pointer over an object, then press left touchpad button once.  Or, place the pointer over an object, then tap the touchpad once with your finger.
<b>Double-Click</b>  	Launch a program or open a file	Place the pointer over an object, then quickly press left touchpad button twice.  Or, place the pointer over an object, then quickly tap the touchpad twice with your finger.
<b>Right-Click</b> 	Display a short cut menu	Place the pointer over an object, then press right touchpad button once.
<b>Drag</b> 	Move an object, or select an area or multiple objects	Place the pointer over an object or on a starting location. While pressing the left touchpad button, press down on the touchpad and slide your finger to a destination or ending location.

Action	Function	Process
<b>Scroll</b> 	Display upper/lower/left/right part of the content within a window  (Applicable to certain programs only)	Place your finger on the right edge of the touchpad and move vertically.







Make sure to use your finger to move the pointer with the touchpad. Do not use any sharpened tool because it may damage your touchpad.

# Hot Keys

---



Icon	Name	Function
	<b>Internet Button</b>	Launches Internet Explorer.
	<b>E-Mail Button</b>	Launches Outlook Express.
	<b>User 1 Button</b>	Launches a user defined program.
	<b>WLAN Button</b>	Turns on and off the wireless LAN function for the models with wireless LAN function. Turns on and off the touchpad for models without a wireless LAN option.



## Using Wireless LAN Button


Loading or unloading wireless LAN driver takes about 5 seconds. Therefore, if you turn wireless LAN on/off using the wireless LAN button, the button does not work for 5 seconds. (For wireless LAN installed models)

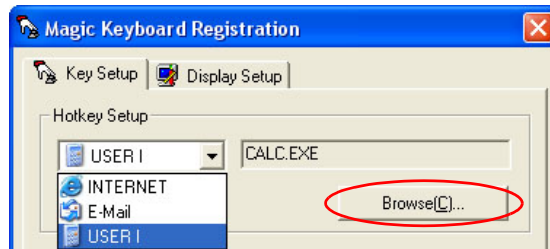
## The Status Indicator of Wireless LAN button

For models with the wireless LAN option, the status indicator is on when the wireless LAN is in operation. For models without the wireless LAN option, the status indicator is on when the touchpad is in operation.

## Changing the Hot Key Setting

You can change the program that will be launched when you press a hot key. As default, Windows Calculator is configured to launch when you press the User 1 button. You can set the program by completing the following procedure.

1. Double-click the **Magic Keyboard** icon (  ) on the taskbar.
2. Select USER 1 and then click **Browse**.









3. Select the desired program in [Open] dialog box, and click **Open**. (Example: Paint)
4. Click **OK** to save the changes.

## Reading the Status Indicators

---



LED	Name	Function
	<b>Num Lock</b>	Turns on when the numeric keypad is activated.
	<b>Caps Lock</b>	Turns on when the user has set the option for typing letters in upper case.
	<b>Scroll Lock</b>	Turns on when it is set to scroll the screen up and down while the cursor position does not change in some applications.
	<b>HDD</b>	Blinks when the hard disk drive is operating.
	<b>Battery</b>	Turns green - when the battery is fully charged, or when the battery is not installed. Turns amber - when the battery is being charged. Blinks - when the battery is not properly installed.
	<b>Power</b>	Turns on - when the computer is turned on. Blinks - when the computer is in Standby mode.

## Adjusting LCD Brightness

---

There are 8 levels of LCD brightness (1: Dimmest ~ 8: Brightest).

Press <Fn>+< ↓ / \*▼ > or <Fn>+< ↑ / \*▲ > keys from the keyboard to adjust LCD brightness. When changed, the current LCD brightness is displayed on the top left corner of the LCD screen for a few seconds.



Whenever you turn the system on or change the power source the brightness level changes according to the settings.

- when operating on AC power: Brightness Level 8
- when operating on battery power: Basically set level



### **Maintaining your LCD brightness settings after turning the system off and on**

1. Turn on the system, and press <F2> to enter Setup.
2. In the **Boot** menu, change the **Brightness Control Mode** option to **User Control**.
3. Save the settings and exit Setup.

### **To save the battery charge**

When your computer is operating on battery power, adjusting the LCD brightness level to a dimmer setting diminishes the battery power consumption.

### **Bad pixels in the LCD**

The limits of the LCD manufacturing technology allow a maximum of 10 abnormal or bad pixels, which do not affect system performance. This system may have the same level of abnormal or bad pixels as any other company's products.



### **Maintenance Instructions**

When cleaning the LCD panel, use only computer specific cleaners on a soft cloth, and lightly wipe in one direction.

## Adjusting the Volume

---

### To adjust using keyboard

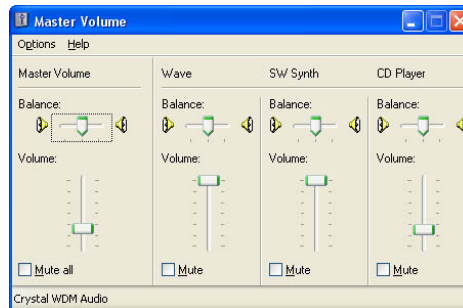
Press <Fn>+< ← / ⇩ > or <Fn>+< → / ⇧ > from the keyboard.

### To adjust using volume control program

Click the **Volume** icon (🔊) on the taskbar, and move the Volume slider to a desired level.



For advanced volume control options, double-click the **Volume** icon (🔊), and adjust the volume level in the volume control program.

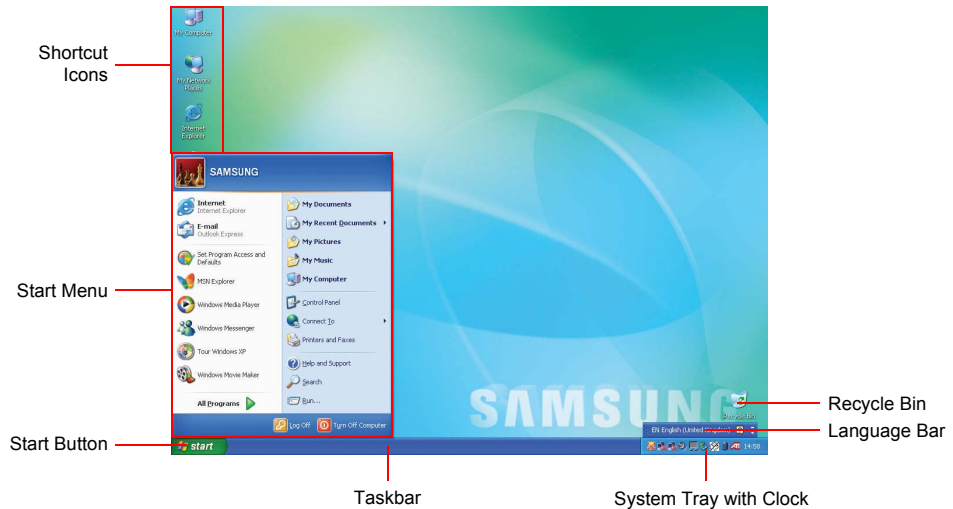







# Introducing Windows

## Understanding the Desktop

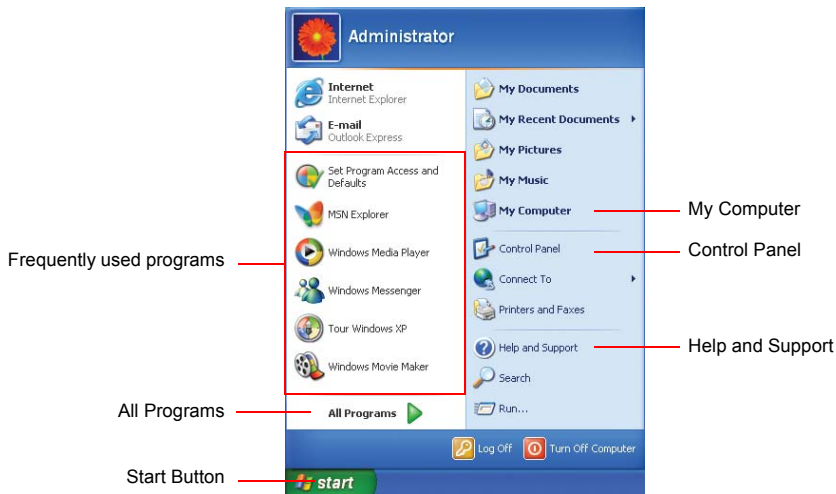
The desktop is the working area on the computer. It consists of the large workspace and a taskbar at the bottom.








<b>Start Button</b>		Opens the Start menu.
<b>Taskbar</b>		Displays programs that are currently running. Frequently used icons can be placed here.
<b>Recycle Bin</b>		Deleted files or folders are sent here.
<b>Language Bar</b>		Switches text input language.

# Understanding the Start Menu

The Start menu includes everything that is required to start Windows. From the Start menu it is possible to run a program, open a file, assign system users with Control Panel, receive support by clicking Help and Support, and search desired items from the computer or Internet by clicking Search.

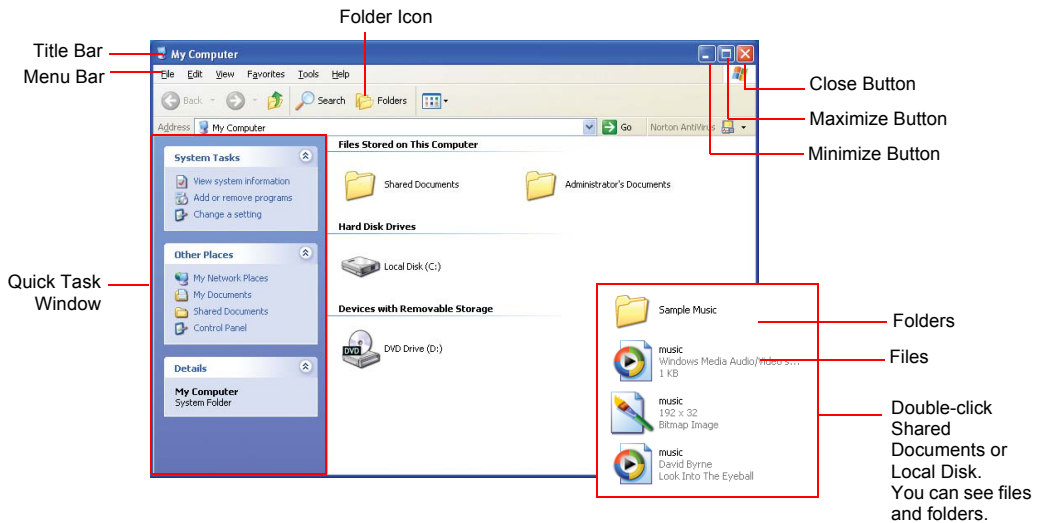


<b>My Computer</b>		Displays the contents of the hard disk, the CD-ROM drive, the network drive(s), and floppy disks. It can also be used to search and open files and folders.
<b>Control Panel</b>		Enables users to configure settings on the computer.
<b>Help and Support</b>		Provides on-line help, information on Windows and troubleshooting.
<b>Search</b>		Enables users to search for information in files or the Internet.
<b>Run</b>		Run programs or documents.

# Understanding a Window

A window is the basic component in working with the computer. The My Computer window, which is a window for the computer's hard drive, will be used as an example here to show the basic composition of a window.

Click **Start > My Computer**.



Double-click the hard drive (local disk) to view internal folders and files stored in it. If the contents do not appear, click **Show the contents of this folder**.



## What is a drive?

A storage device in which files and folders are saved in, and read from.

## What is a folder?

A folder is used to group and manage files systematically, and may include files in sub-folders. It is similar to a bookshelf.

## What is a file?

A file is a document or various kinds of material that is generated as a result of program operation. It is also called data.



## To view the entire structure of the drive

Click the Folder icon in the taskbar to view the entire structure. Click again to return to the Quick Task Window.

## Help and Support Center

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Help and Support Center provides references and troubleshooting information regarding computer use.

Click **Start > Help and Support**.

## Windows XP Tour

---

You can tour elementary functions provided by Windows XP.

Click **Start > Tour Windows XP**.

Or click **Start > All Programs > Accessories > Tour Windows XP**.

Click on the topics to find out about important functions of Windows XP.

# Using the Computer

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## Using the CD Drive

---

You have one of following drives installed in your computer.

<b>CD-ROM drive</b>	Reads a CD.
<b>CD-RW/DVD-ROM Combo drive</b>	Reads a CD/DVD and writes a CD.
<b>DVD Super Multi drive</b>	Reads CD/DVDs and writes data to CD/DVDs. Supported DVD types include DVD $\pm$ R, DVD $\pm$ RW and DVD-RAM.

### To insert a CD

1. Press the eject button on right side of the CD drive.
2. When the tray slides out, place a CD onto the tray with the label facing up, and push the CD down until it clicks.



3. Push the tray in gently until it clicks.

### To eject a CD

1. Stop any process that accesses the CD drive and ensure the CD access LED is turned off.
2. Press the eject button on right side of the CD drive.
3. When the tray slides out, remove the CD from the tray.
4. Push the tray in gently until it clicks.



If you remove the CD when the CD access LED is on, the disk and the data in it may be damaged.



### Emergency Eject Hole

To eject a CD when the CD drive is not working or the computer is turned off, unfold a paperclip, and insert the unfolded end of the clip into the emergency eject hole (located next to the eject button) and press until the CD tray opens.



### To clean a CD or DVD title

Clean the disc with a soft clean cloth by wiping from the center outwards.



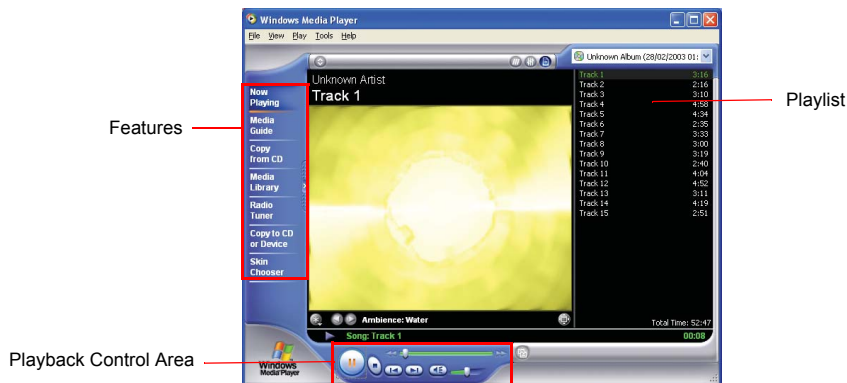
### To play a DVD

You have to install the DVD software provided on a separate CD to view a DVD title.

## To use the Windows Media Player

The Windows Media Player allows you to play audio and video files from the computer or the Internet.

To launch the Windows Media Player, click **Start > All Programs > Accessories > Entertainment > Windows Media Player**.



## To play a video CD

If a video CD does not run automatically, follow these steps.

1. Insert a video CD into the CD drive.
2. When the CD drive window appears, double-click the MPEGAV folder.
3. Double-click the .dat file.
4. When the [Caution] dialog box appears, click **Open With**.
5. Select “Select the program from a list” and click **OK**.
6. Select the **Windows Media Player**, and click **OK**. The video starts playing.



The above procedure only applies to the video CDs that have a .dat file as the execution file. Playing procedure may be different according to the video CD.

## To write data on a CD

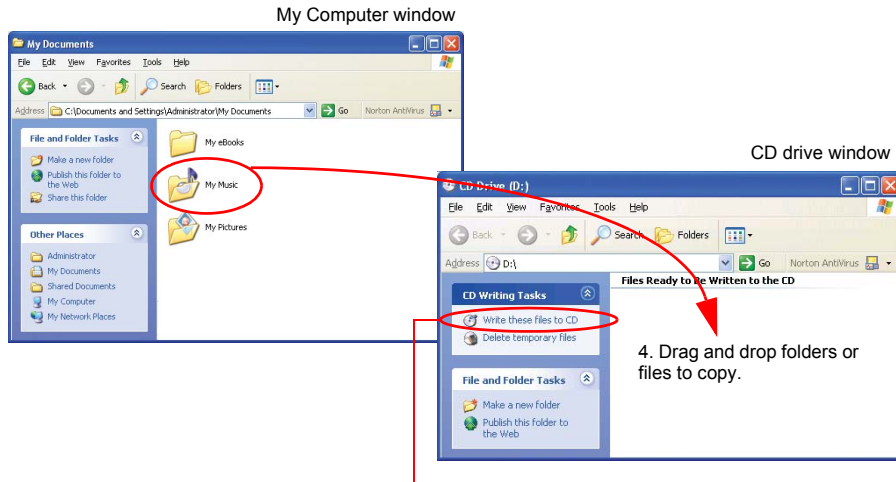
You can copy data to a blank CD or create an audio CD.



An additional CD writing program is supplied on an additional CD. For information about use, refer to the supplied manual.

1. Insert a blank CD into the CD drive.
2. In the [CD Drive] dialog box, select **Open Writable CD Folder** and click **OK**. The CD drive window appears.
3. Click **Start > My Computer**.

4. In My Computer window, select files and folders to copy, then drag and drop them onto the CD drive window.



5. Click **Write these files to CD**.

5. Click **Write these files to CD** in the CD drive window.
6. When the CD Writing Wizard appears, enter the CD label, and click **Next**. The data begins copying.
7. When copying is completed, a 'completed' message appears and the CD drive window opens automatically.



#### **For more information on writing CDs**

Click **Start > Help and Support**. Type "CD copy" in the search field, and click the **Search** icon (➔).



#### **For more information on creating an audio CD**

Run the Windows Media Player program, click the **Help > Help Topics**. Click **Using Windows Media Player > Using CDs > Creating your own CDs > To create your own CD**.



## Enjoying Home Theater (S/PDIF Port)

---

Your computer supports 5.1 channel output, which is a basic function for home theater systems, and DVD drive. It provides 3D surround sound and vivid screen.



### **What is a home theater system?**

Home theater system usually consists of a TV, DVD, 5.1 channel speaker, and a digital amp which provides a high-resolution screen (MPEG2) and 3D surround sound (Dolby 5.1 or DTS). With a home theater system, you can enjoy a vivid screen and sound in your home as if you are in a movie theater.

The following devices are required to enjoy a home theater system.

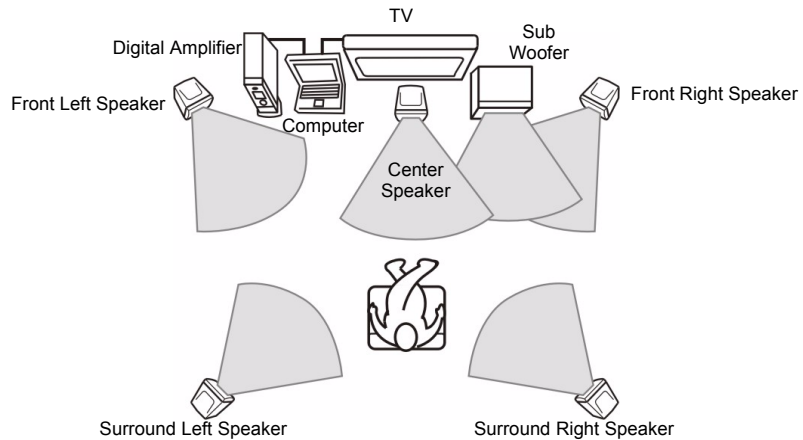
- 5.1 channel speaker system (amplifier, speakers, round-type optical connection cables that can connect to computer's S/PDIF jack) (Purchased separately)
- DVD drive and program (Optional)
- DVD title that supports 5.1 channel (Purchased separately)

To use home theater system, complete the following procedures:

- Step 1. Connect 5.1 channel speaker system to your computer
- Step 2. Configuring the digital sound output on the computer
- Step 3. Enable S/PDIF in the DVD program

## Step 1. Connect 5.1 channel speaker system to your computer

1. Connect an amplifier to the S/PDIF port on your computer.
2. Connect speakers to the amplifier. (Refer to the speaker system's manual.)
3. To watch through a TV, connect the TV, and change the display device to the TV in the Display Properties. (Refer to "Using External Display Devices" (p 67).)



## Step 2. Configuring the digital sound output on the computer


Press <Fn>+<F7 /  $\text{E}^{\text{S/PDIF}}$ > to output the audio signal through the S/PDIF port. If you press these keys again, the output sound signal is cancelled.



The S/PDIF setting also can be changed in the Sound and Audio Device properties. (Click **Start > Control Panel > Sounds, Speech, and Audio Devices > Sounds and Audio Devices**.) However, <Fn>+<F7 /  $\text{E}^{\text{S/PDIF}}$ > keys have priority.

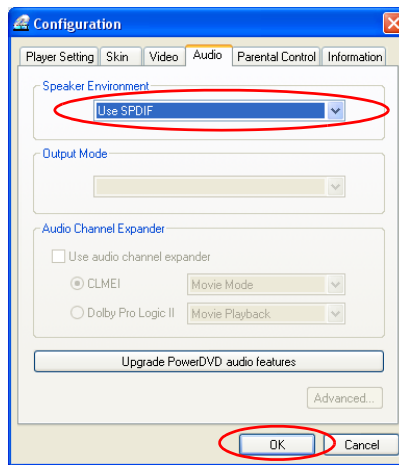
### Step 3. Enable S/PDIF in the DVD program

To use 5.1 channel speakers, you need to install the Power DVD program from the System Software CD provided with your computer, then change the settings as per the following.

1. Run Power DVD program and click the **Settings** icon (  ).



2. On the **Audio** tab, set the Speaker Environment setting to “Use SPDIF” and click **OK**.



Now, you can enjoy home theater using DVD titles.



To control volume for your 5.1 channel speaker, use the control on the digital amp. (Please refer to the speaker manual.)

## Using the PCMCIA Card Slot

---

Various different functions can be added by inserting PCMCIA cards into the system. This system supports 16/32 bit, type I or II PCMCIA card types.



The PCMCIA card slot does not support a ZV card or a PCMCIA III card.

### To insert a PCMCIA card



**Before using the PCMCIA slot, remove the slot protector.**

Push the eject button of the PCMCIA card slot once to pop it out. Push the button again to eject the slot protector.

1. Insert a PCMCIA card into the PCMCIA card slot on the side of the computer.




Ensure that the PCMCIA card is inserted the correct way, as incorrect insertion will damage the PCMCIA card slot.



2. Windows automatically installs the necessary driver for the card. If there is no available driver found by Windows, you have to install the driver using a disk supplied with the card.

## To remove a PCMCIA card

1. Double-click **Safely Removes Hardware** icon () on the taskbar.
2. On the [Safely Remove Hardware] dialog box, select the appropriate PCMCIA card and click **Stop**.
3. When [Stop a Hardware Device] dialog box appears, click **OK**.
4. Click **Close** to close the [Safely Remove Hardware] dialog box.
5. Push eject button of the PCMCIA card slot once, and the button pops out.
6. Push the button again to eject the PCMCIA card.

## Using the Memory Stick Slot

---

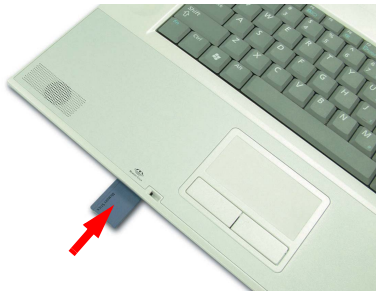
Memory Stick is popular as a removable storage device similar to a floppy diskette. It is widely used for many digital products like digital cameras, PDAs, etc. Users can easily install a memory stick to save and remove data on it.




### **Restrictions for using a Memory Stick/Memory Stick Pro**

Memory Sticks and Memory Sticks Pro (256MB ~ 1GB, about 1 MB/s data rate) can only be used as data saving devices. The copyright protection function is not supported for these memory sticks.

1. Carefully slide the memory stick into the slot with the logo side facing up.



2. Click **Start > My Computer**, and double-click the Memory Stick icon () to see the content.
3. To remove the memory stick, slightly push on the end of the memory stick. When the memory stick is ejected, pull it out.



### **To format a memory stick**

Right-click the memory stick drive in My Computer, and click **Format**. On the [Format] dialog box, click **Start**.

### **To use a memory stick in other digital devices**

If you want to use a memory stick with other digital devices, such as a digital camera, you are recommended to format the memory stick in the digital device. If you have formatted the memory stick in the computer, you may have to reformat it in the digital device.

### **To format a memory stick in Windows 98SE/Me/2000**

Install the Memory Stick Formatter program included in the System Software CD.

**To format Memory Stick Pro**

You cannot format Memory Stick Pro using Windows XP or Memory Stick Formatter. Format it in other digital devices.

**To protect data in a memory stick**

To prevent overwriting or deleting the data in the memory stick, move the slide lock to the "Lock" position.

**To remove a memory stick in Windows 2000**

Only remove a memory stick after at least 20 seconds after finishing a task, such as formatting, copying or deleting.

**To use a Memory Stick Duo**

Insert a Memory Stick Duo into the Memory Stick Duo adapter and insert the adapter into the Memory Stick slot of the computer.

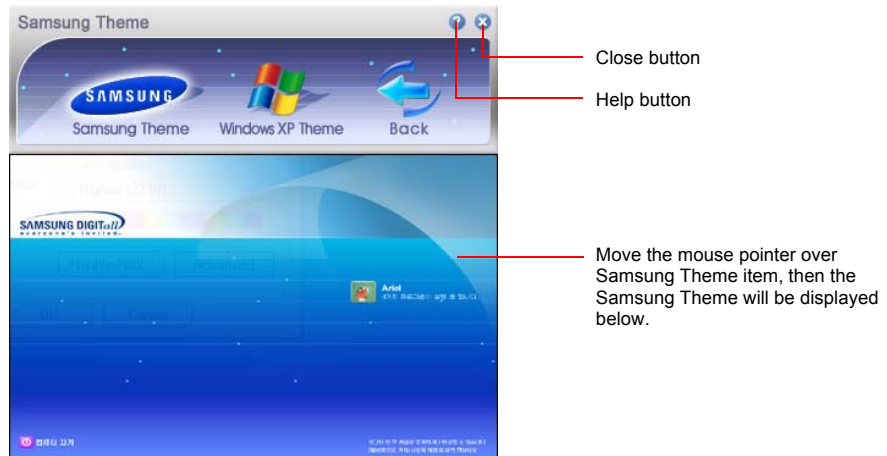
## Using Samsung Theme

---

Samsung Theme is a program that enables a user to easily switch a theme (desktop, logon screen and sound effect).

Double-click the **Samsung Theme** (  ) icon on the desktop.

(Or select **Start > All Programs > Samsung Software > Samsung Theme > Samsung Theme.**)



- **Samsung Theme:** Switches to Samsung Theme (desktop, logon screen and sound effects on booting).
- **Windows XP Theme:** Switches to the Windows XP default Theme.
- **Back:** Restores the theme to its previous status.



# Connecting to the Internet

---

## Connecting with a Modem

---

### Before Start:

- Prepare a telephone line that is not digital.
- Contact an internet service provider (ISP) for instructions on how to connect to and disconnect from the Internet.

1. Connect a telephone line to the computer's modem port.



2. Connect to the Internet according to the instructions provided by your ISP.



If the Internet connection is not disconnected properly, additional telephone charges may be imposed.

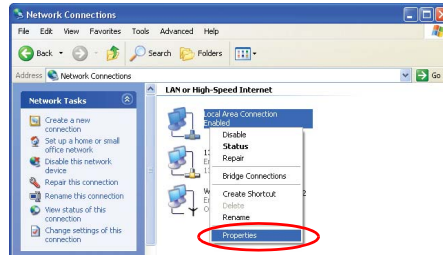
# Connecting Through a Wired LAN

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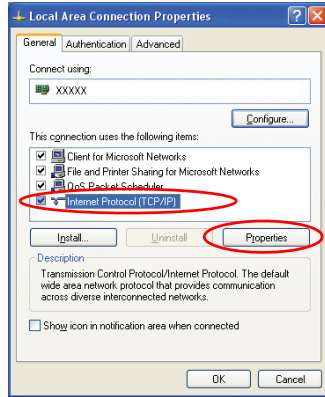
1. Connect a LAN cable to the computer's LAN port.



2. Click **Start > Control Panel**.
3. Click **Network and Internet Connections** in the [Control Panel] window.
4. Click **Network Connections** in the [Network and Internet Connections] window.
5. Right-click the **Local Area Connection** icon and click **Properties**.



6. On the **General** tab, select “Internet Protocol(TCP/IP)” and click **Properties**.



7. **To use DHCP:**

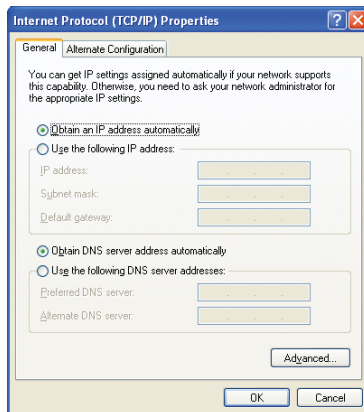
On the **General** tab, select “Obtain an IP address automatically” and “Obtain DNS server address automatically”. Click **OK**.

**To use a static IP:**

On the **General** tab, select “Use the following IP address” and fill in the IP address, Subnet mask, Default gateway, Preferred DNS server, and Alternative DNS server fields. Click **OK**.

**To use both DHCP and static IP simultaneously:**

On the **Alternate Configuration** tab, click **User configured** and fill in the fields. Click **OK**.



## Using Samsung Network Manager

Use Samsung Network Manager to configure network setting.

Using the program, you can do the following.

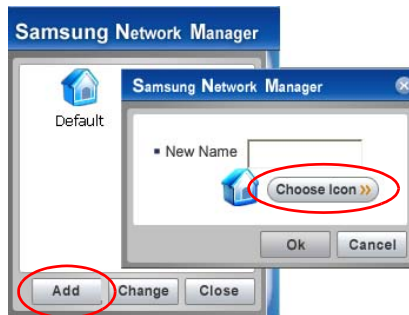
- You can save network settings (including IP address) according to network places such as office and home. When you change places, simply select a network place and the network settings will be automatically changed accordingly.
- You can easily find out your current IP.

### *To configure network setting*

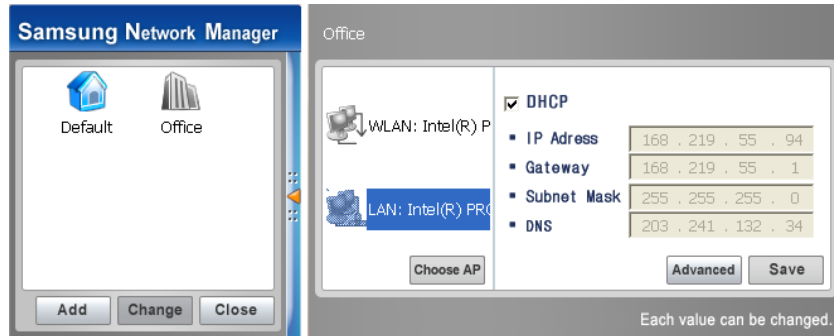
1. Connect LAN cable to the computer's LAN port.
2. Double-click **Samsung Network Manager** icon on the desktop.  
Or click **Start > All Programs > Samsung Network Manager > Samsung Network Manager**.
3. When you are using DHCP, available IP's are displayed in the status dialog box. Click **Change**.



4. Click **Add**, click **Choose Icon** and select an icon. Enter a place name in New Name field and click **Ok**.



5. New place icon is displayed and full dialog box appears. Check your IP and click **Close**. Network setting is saved.



To configure network setting of some place other than current place, click the place icon and configure each network device. If you are using DHCP, select 'DHCP' check box and click **Save**.

If you are using a static IP, clear 'DHCP' check box, enter appropriate network setting and click **Save**.

Ask ISP or network administrator for IP address.

### *To change network places*

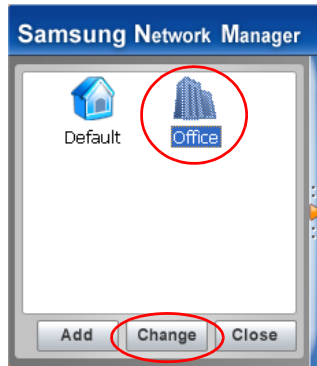
You can change network places as below.

1. Connect LAN cable to the computer's LAN port, and double-click **Samsung Network Manager** icon on the desktop.



If you used static IP in previous place, previous static IP is displayed in the status dialog box.

2. Click **Change**, select a place icon then click **Change**.



Example) changing to Office

3. On "Do you want to change the location setting?" dialog box, click **Ok**.
4. When the network place is changed, corresponding place icon is displayed in color and full dialog box appears. In the right area of full dialog box, network setting is displayed.
5. Click **Close** to close the dialog box.

## Connecting Through a Wireless LAN (Option)

---

A wireless network (Wireless LAN) environment is a network environment that enables communication between multiple computers at home or a small-size office through wireless LAN devices.

Using the wireless network connections between the systems, you can use normal network functions such as sharing of files, folders and printers. When a computer-to-computer network has been constructed, a computer that is not connected to the Internet can share the Internet by accessing another computer connected to the Internet. For details, see “Using Network Services” on page 54.



The description in this section concerns the Intel(R) PRO/Wireless LAN 2100 3B Mini PCI Adapter (hereafter referred to as a 2100 11b card) and the Intel(R) PRO/Wireless 2200BG Network Connection device (hereafter referred to as a 2200 11g card).

A wireless LAN interface is an optional device that you can select when you purchase this product. You can connect to the Internet over a wireless connection when your computer has a wireless LAN (WLAN) device.

To view the installed wireless LAN card, click **Start > Control Panel > System > Hardware tab > Device Manager**.

The images actually displayed may differ from the figures shown in this section according to the installed device and the connection state.



### **To turn off the Wireless LAN**

If the wireless LAN is turned on, the computer consumes more power, therefore shortening the amount of time you can run on battery. If you are not using the WLAN or if you are in an environment that does not provide WLAN, you are recommended to turn off the WLAN by pushing the WLAN button (p15) on the computer.

Wireless network connections can be classified into two categories.

### **1) Access Point (AP)**

You can connect to an AP to use the network. This is possible only in an environment equipped with an AP. For details, see “Connecting to an Access Point (AP)” on page 43.



### **What is an Access Point (AP)?**

An AP is a network device that bridges wired and wireless LANs, and corresponds to a wireless hub in a wired network. You can connect multiple wireless LAN installed computers to an AP.

## **2) Computer-to-computer (ad hoc)**

This is also called a peer-to-peer network.

In computer-to-computer wireless networks, you can wirelessly connect 2 or more computers that have wireless LAN modules. For details, see “Connecting to computer-to-computer networks (peer-to-peer or ad hoc)” on page 45.

## **Connecting to an Access Point (AP)**

This section describes how to connect to an AP. You can use the network when you are connected to an AP.



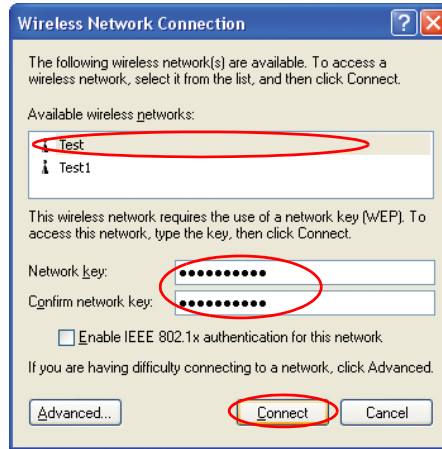
The connection setup is described for a computer running on Windows XP Service Pack 1. If you are using the Windows 2000 system, refer to “Wireless Network Setup Using the Wireless LAN Setup Program” (p 50). For more detailed information such as the network key (encryption key), ask your network administrator.

1. Right-click on the **Wireless Network Connection** () icon on the taskbar, and select **View Available Wireless Networks**.





2. Select your desired AP (e.g. Test) to connect, and enter the encryption key for the AP in the Network key field, and click **Connect**.




If the network key is not configured for the desired AP, select 'Allow me to connect to the selected wireless network, even though it is not secure'.

Now you are connected to the AP, and you can access the network.



### Checking the connection status

Move the mouse pointer over the Wireless Network Connection (  ) icon on the taskbar, and the connection status is displayed.



## Connecting to computer-to-computer networks (peer-to-peer or ad hoc)

In computer-to-computer wireless networks, you can wirelessly connect 2 or more computers that have wireless LAN modules. Using this method, a computer that is not connected to the Internet can share the Internet by accessing another computer connected to the Internet. (Refer to "Sharing an Internet connection through a wireless network" (p 59).)

You can connect by completing the following steps:

- Step 1. Set up a computer-to-computer network on a computer.
- Step 2. Connect to the configured computer from other computers.



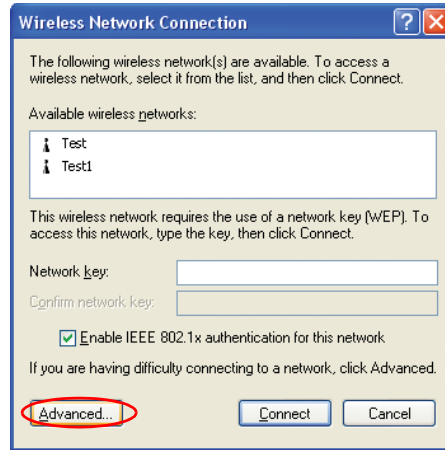
The connection setup is described for computers running Windows XP Service Pack 1. If you are using the Windows 2000 system, refer to "Wireless Network Setup Using the Wireless LAN Setup Program" (p 50).

### *Step 1. Setting up a computer-to-computer network*

1. Right-click on the **Wireless Network Connection**  icon on the taskbar, and select **View Available Wireless Networks**.

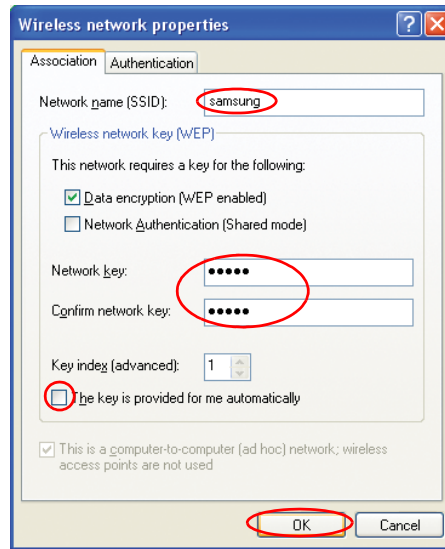


2. Click **Advanced**.



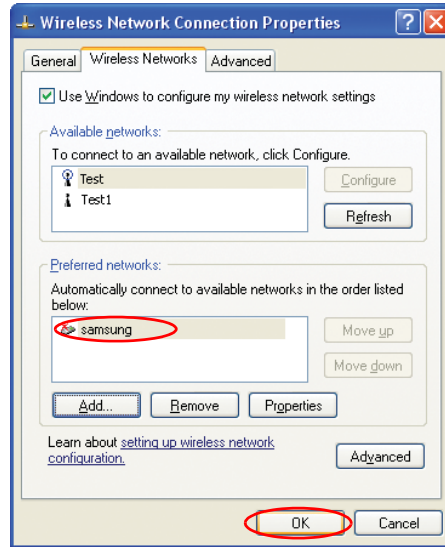
3. On the **Wireless Network** tab, click **Advanced**.
4. Clear 'Automatically connect to non-default network' check box, if it is selected. Select 'Computer-to-computer (ad hoc) networks only', and click **Close**.
5. In the **Wireless Networks** tab, click **Add**.

6. Enter the network name (e.g. samsung), and unselect 'The key is provided for me automatically'. Enter the encryption key in the Network key field, and click **OK**.




To prevent a network connection from an unauthorized user, it would be better to configure a network key (encryption key). A network key consists of 5 or 13 alphanumeric characters (e.g. magic), or of 10 or 26 hexadecimal numbers (a hexadecimal number is represented by numbers '0' to '9' or letters 'a' to 'f').

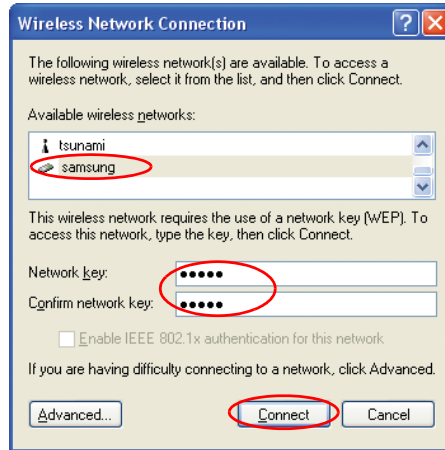
7. Check that the configured network name (e.g. samsung) is in the 'Preferred networks' item, and click **OK**.



Now your wireless network setup has been completed.

### *Step 2. Connecting to the configured computer*

1. Right-click on the **Wireless Network Connection** (  ) icon on the taskbar, and select **View Available Wireless Networks**.
2. Select the wireless network name (e.g. samsung) specified in "Connecting to computer-to-computer networks (peer-to-peer or ad hoc)" on page 45, enter the encryption key in the Network key field, and then click **Connect**.




If the network key is not configured in "Connecting to computer-to-computer networks (peer-to-peer or ad hoc)" on page 45, select 'Allow me to connect to the selected wireless network, even though it is not secure'.

The two computers are connected and are able to communicate with each other. When the computers are connected, the 'Wireless Network Connection' message is displayed for a short time over the Wireless Network Connection icon of the two computers.



### Checking the connection status

Move the mouse pointer over the Wireless Network Connection (  ) icon on the taskbar, and the connection status is displayed.



## Wireless Network Setup Using the Wireless LAN Setup Program

When the operating system of your computer is not Windows XP, you should setup the wireless network settings using an additional wireless LAN setup program (PROSet).

To use wireless network connection, complete the following procedures.

- Step1. Install the wireless LAN configuration program (PROSet).
- Step2. Configure wireless network settings through the wireless LAN configuration program.

### *Step 1. Installing the wireless LAN configuration program (PROSet)*

You can install the wireless LAN client administrator program following the instruction displayed automatically when you insert the system software CD. Insert the system software CD into the CD-ROM drive, and install the wireless LAN configuration program.



#### **To disable the 'Intel Configuration Service' window afterward**

After installing the wireless LAN configuration program, select "Do not show this again." check box, then click **Close**.

### *Step 2. Using the wireless LAN configuration program (PROSet)*

Double-click the **wireless LAN program** () icon on the taskbar.

(Or, click **Start > All Programs > Intel Network Adapters > Intel(R) PROSet for Wireless.**)



In some languages, some buttons on the window may not be displayed. If this is the case, resize the window to use the program.

Configure wireless network settings in PROSet following the procedures below.

### To connect to an Access Point:

To connect to an access point or existing computer-to-computer (Ad Hoc) network, refer to the following procedures. (To create a new computer-to-computer network, refer to the following "To create computer-to-computer (Ad Hoc) network" section.)

1. Click **Scan** in the **Networks** tab.
2. Select the name of desired access point or computer-to-computer network to connect from the searched available networks list, and click **Connect**.



If your desired network does not appear, click **Refresh**.



An access point is represented by the (🖨️) icon, and a computer-to-computer network is represented by the (💻) icon. An (🔒) icon is displayed in front of an access point or a computer-to-computer network with configured security settings.

3. Select "Yes, create a profile for this Network.", and click **OK**.
4. Enter **Profile Name** and click **Next**.
5. Enter the **network authentication**, **data encryption (WEP)**, **key index**, and **password** configured for the target access point or computer-to-computer network in the Security Settings window, and click **Finish**.



The network authentication, data encryption (WEP), key index, and password of a access point are configured in the access point management program. For information on the security information, check the security settings of the access point or ask your wireless network administrator.



To connect to an existing computer-to-computer (Ad Hoc) network, enter the password configured when creating the computer-to-computer network for the first time. You do not need to enter network authentication or key index.



#### **Security Settings**

- **Network authentication:** The network authentication option includes Open System and Shared Key. When you select Open System, no authentication is applied (however, encryption is supported). When you select Shared Key, a WEP key is used for authentication. The default setting is Open System.




- **Data encryption (WEP):** The IEEE 802.11 WEP (Wired Equivalent Privacy) standard defines two levels of encryption, a 64-bit key (this is sometimes represented by 40bits) and a 128-bit key.

- **Key index:** Select the current encryption key index used by the access point out of 1 to 4.

- **To use pass phrase:** Click **Use pass phrase** to activate, and enter 5 (for 64-bit) or 13 (for 128-bit) alphanumeric characters (represented by 0-9, a-z, or A-Z).

- **To use WEP key:** Click **Use WEP keys** to activate, and enter a hexadecimal number (represented by 0-9 and A-F) of 10 (for 64-bit) or 26 (for 128-bit) digits in the WEP key field.

When a wireless connection to an access point is established, the connection icon (  ) appears in front of the name of the connected profile.

### **To create a computer-to-computer (Ad Hoc) network:**

To create a new computer-to-computer (Ad Hoc) network or to connect to a hidden access point (Stealth/Closed Mode), refer to the following procedures.



A hidden access point is an access point that exists, but is configured not to be detected by the scan operation to prevent access attempts from unauthorized users.

1. Click **Add** in the **Networks** tab.
2. Enter **Profile Name** and **Network name (SSID)**, select **Operating Mode**, then click **Next**.



#### **What is a network name (SSID)?**

Network name (SSID) is a name that a wireless adapter uses for identifying connection. Enter the name of computer-to-computer network to create (e.g., samsung) or the name of access point to connect. The network name identifies cases. (capital and lowercase) For the name of access point, check the settings of the access point, or ask your wireless network administrator.

#### **Operating Mode:**

- **Infrastructure - Connect to an Access Point** - Select to connect to an access point.
- **Ad hoc - Connect directly to other computers** - Select to create a computer-to-computer (Ad Hoc) network.

3. Configure password setting to be used for computer-to-computer network connection in the Security Settings window.

To connect to an access point, enter the **network authentication**, **data encryption (WEP)**, **key index**, and **password** configured in the access point.




It is recommended to configure data encryption for security purposes when creating a computer-to-computer network connection profile. For more information on security settings refer to the security settings in Connecting to AP or Help.



When you are creating a computer-to-computer network connection profile, the network authentication setting is disabled.

4. When a profile creation is completed, the new created profile appears in the profiles list in the **Networks** tab. Select corresponding profile, and click **Connect** to connect to the created profile.

When a wireless connection to the created profile is established, the connection icon (  ) appears in front of the name of the connected profile.

## Using Network Services

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While the computer is connected to the network, you can use network services to share files, folders, and printers. Using computer-to-computer wireless networks, you can access the Internet through a computer that is connected to the Internet even if your computer is not directly connected to the Internet.



Network services are provided for the computers that are connected to the network through wired or wireless network connections. For details, see “Connecting Through a Wired LAN” on page 37 and see “Connecting Through a Wireless LAN (Option)” on page 42.

### Sharing files or folders

This section describes how to share files and folders between computers connected to the network.

To share files, complete the following procedures:

- Step 1. Configuring the sharing of files and folders on a computer.
- Step 2. Accessing shared files and folders from another computer.

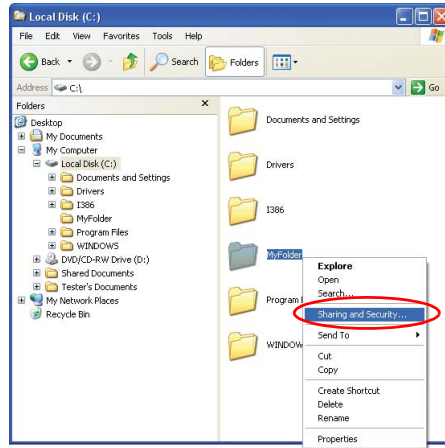


When a file or folder is shared, anyone connected to the network can open and delete the shared file or folder.

Configure a file sharing network only when the network is secure, and do not share important data.

## Step 1. Configuring Sharing

1. Right-click the target file or folder to share in My Computer, and select **Sharing and Security**.



2. Click 'IF you understand the security risks but want to share files without running the wizard, click here'.



It has the same security effect as that of the 'Network Setup Wizard'. This screen does not appear if Internet Sharing Network Wizard has been installed in the computer-to-computer wireless network environment.

3. Select 'Just enable file sharing', and click **OK**.
4. In the 'Network sharing and security' field, select 'Share this folder on the network', enter the share name, and click **OK**.



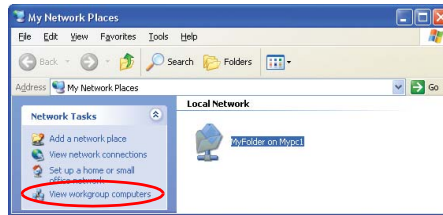
Be cautious when selecting 'Allow network users to change my files' since other network users can change the files in the shared folder.

The file and folder sharing configuration has been completed.

## Step 2. Using Shared Files or Folders

This section describes how to access shared files or folders if your computer is a member of the same workgroup.

1. Click **Start > My Computer**. Under Other Places, click **My Network Places** in your computer.
2. Click '**View workgroup computers**', and click the desired computer to access the shared file.



### **If your computer is a member of another workgroup:**

1. Click Other Places > Microsoft Windows Network.
2. Click the desired workgroup.
3. Click the desired computer to display the shared files or folders.

## Sharing Printers

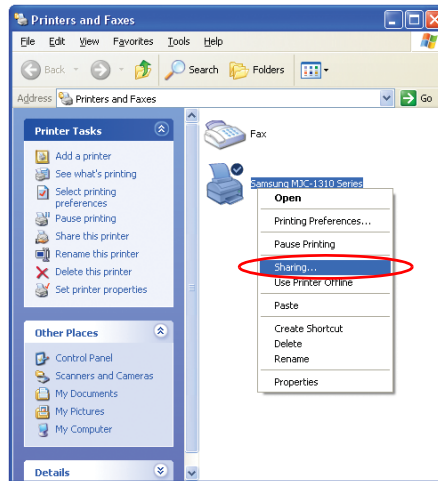
This section describes how to share a printer between computers connected to a network.

To share a printer, complete the following procedures:

- Step 1. Configure printer sharing in the computer connected to the printer.
- Step 2. Add and use the shared printer in other computers on the network.

## Step 1. Configuring Printer Sharing

1. From the computer connected to the printer, click **Start > Printers and Faxes**.
2. Right-click the printer you want to share, and click **Sharing**.



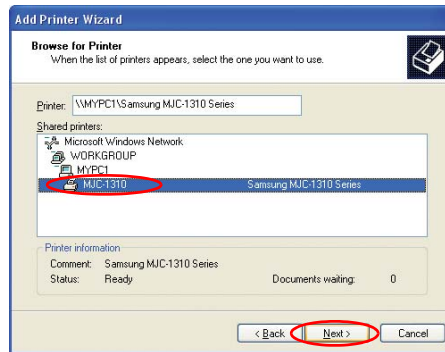
3. Select 'Share this printer', enter a share name for the shared printer, and click **OK**.
4. In the Printers and Faxes window, you will find the printer icon has been changed to another icon on a hand.



## Step 2. Adding and Using a Shared Printer.

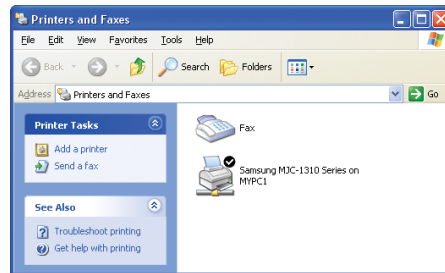
1. From a different computer that wants to use the shared printer, click **Start > Printers and Faxes**.
2. Click **Add a printer**.
3. In the Add Printer Wizard, click **Next**.
4. Select 'A network printer, or a printer attached to another computer', and click **Next**.

5. Select 'Browse for a printer', and click **Next**.
6. Select the workgroup or computer, select the desired printer, and click **Next**.



If you cannot find the desired printer, try again after a while.

7. Read the warning about a shared printer, and click **Yes** to install the shared printer.
8. Select **Yes** for 'Do you want to use this printer as a default printer?', and click **Next**.
9. Click **Finish**.
10. When the printer sharing configuration has been completed, the shared printer appears in the Printers and Faxes window.



Now you can print using the shared printer even if your computer is not directly connected to a printer.

## Sharing an Internet connection through a wireless network

By connecting your computer to another computer, which is connected to the Internet over a wired connection, through a wireless network (Peer-to- Peer), you can access the Internet from your computer.



To share an Internet connection, the computers should be connected to a computer-to-computer (peer-to-peer) wireless network. For details, see “Connecting to computer-to-computer networks (peer-to-peer or ad hoc)” on page 45.

Also, one of the computers has to be connected to the Internet (external network).

The description for Sharing Internet access is for the operating system Windows XP Service Pack 1.

To share an Internet connection, complete the following procedures:

- Step 1. Configuring a Internet connection sharing from the computer connected to the Internet.
- Step 2. After completing the shared Internet connection configuration, check that the other computers can access the Internet through the shared Internet connection.

### *Step 1. Configuring Internet Sharing.*

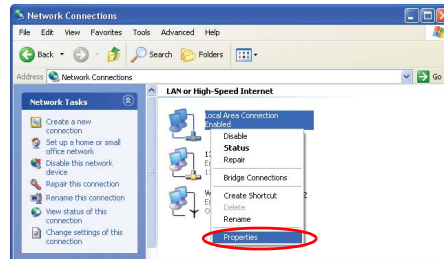
Configuring a shared Internet connection on the computer connected to the Internet.

1. Click **Start > Control Panel > Network and Internet Connections > Network Connections**.
2. Right-click on the device connected to the Internet, the external network, and select Properties.





If the computer is connected to the Internet through a wired LAN, select 'Local Area Connection'.



3. On the **Advanced** tab, select 'Allow other network users to connect through this computer's Internet connection', and click **OK**.

## Step 2. Checking the Shared Internet Connection.

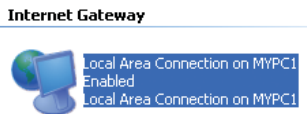
When the Internet connection sharing configuration has been completed, the network icon in the Network Connections window is displayed as follows:

Click **Start > Control Panel > Network and Internet Connections > Network Connections**.

- A computer connected to the Internet.



- A computer sharing the remote Internet connection (other computer).



If the icon does not appear after a long time, restart the computer.



Computers on the network can access the Internet through the shared Internet connection only when the computer connected to the Internet is turned on.

# Customizing Your Computer

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## Using System Setup

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The System Setup (BIOS) program enables you to configure your computer hardware and set security and power-savings options. The settings you choose are stored in battery-maintained CMOS memory that saves the information even when the computer's power is turned off. When your computer is turned back on, it is configured with the values found in this memory.

Run System Setup if you get a message prompting you to run the program. You may also want to run System Setup, particularly the first time you use your computer, to set the time and date, use security or power-management features, or alter the settings of other features.



**BIOS Caution:**

If you are not familiar with BIOS setup and what the parameters mean, seek help from a person who is knowledgeable. Incorrect settings may cause your system to malfunction or “Crash”.



Your computer's version of System Setup may not include all the fields listed here or may include additional fields. Field names and order of appearance can vary according to the version of the BIOS (basic input/output system) on your computer.

## Starting System Setup

To start System Setup, turn on your computer and then press <F2> and hold until the System Setup screen appears.

*Table 2. System Setup Menus*

<b>Menu</b>	<b>Function</b>
<b>Main</b>	Changes the basic system.
<b>Advanced</b>	Configures advanced features on your computer.
<b>Security</b>	Enables security features, including passwords.
<b>Boot</b>	Specifies the order of boot devices and configures boot features.
<b>Exit</b>	Specifies how to exit System Setup.

To open the menu you need to use, use the left or right arrow keys to select the menu name.

*Table 3. System Setup Navigation Keys*

<b>Navigation Key</b>	<b>Function</b>
<F1>	Displays the General Help window.
<Esc>	Exits the current menu.
< ↑ > or < ↓ >	Moves the cursor up and down between fields.
< ← > or < → >	Selects different menus. Pressing the <Esc> key at the Main menu brings you to the Exit menu.
<F5>	Scrolls backwards through the options for the highlighted field.
<F6>	Scrolls forward through the options for the highlighted field.
<F9>	Sets the parameters for the current menu to their default values.
<F10>	Save changes and exit system setup.
<Enter>	Executes commands or opens a submenu.

## Changing Booting Priority

---

You can select the booting priority among the devices such as the hard drive, CD-ROM drive, etc. The following example describes how to configure the hard drive as the first booting device when the CD-ROM drive is configured as the first booting device by default.

1. Select the **Boot** menu in System Setup.
2. Press <Enter> on **Boot Device Priority** item.
3. Use < ↓ > key to move to the **Hard Drive** item, and press <F6> until it is at the very top.
4. Press <F10> to save the changed configuration, and exit System Setup.  
Now you can boot the system with the hard disk drive as the first booting device.

## Configuring the Password

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### Setting the Supervisor Password

By configuring a supervisor password, you can restrict system access to authorized users only.



Do not lose or forget your password. If you have forgotten your password, contact the Samsung service center.

1. Select the Security menu in the System Setup. To enter System Setup, see “Starting System Setup” on page 62.
2. On the **Set Supervisor Password** item, press <Enter>.
3. Enter a password, press <Enter>, re-enter the password for confirmation, and press <Enter> again.
4. When a message confirming the password configuration appears in the [Setup Notice] window, press <Enter>.

### Setting the User Password

You can configure user passwords so that other users can use the system.



Before configuring a user password, a supervisor password must have been configured.

Users can start the system with their user password, but cannot enter into the System Setup.

Deactivating the supervisor password also deactivates the user password.

On the **Set User Password** item, press <Enter>, and complete step 3-4 of "Setting the Supervisor Password".

## Activating the Booting Password



Before activating the booting password, the supervisor password must have been configured.

Set the **Password on boot** option to [Enabled].

From now on, system booting will not proceed without the password.

## Activating the Hard Disk Drive Password

Activating the hard disk drive password prevents the currently installed hard disk drive from being used in other systems.



Be extremely careful not to forget the hard disk drive password, as the password cannot be retrieved once forgotten.



Before activating the hard disk drive password, the supervisor password must have been configured.

On the **Set HDD 0 Password** item, press <Enter>, and complete step 3-4 of "Setting the Supervisor Password".

## Deactivating the Password

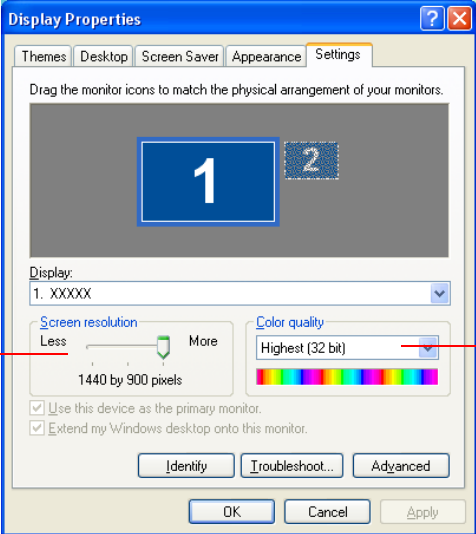
1. On the password to delete, press <Enter>. (e.g. supervisor password)
2. Enter the current configured password, and press <Enter>.
3. Leave the 'Enter New Password' and 'Confirm New Password' field empty, and press <Enter> to deactivate the password.

## Configuring Resolution and Colour Depth

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Screen resolution is the number of pixels displayed on the screen. High resolution makes the overall screen area large, although individual items appear small. Colour quality is determined by the number of bits used to represent a pixel on the screen. High colour quality displays more number of colours on your screen.

1. Select **Start > Control Panel > Appearance and Themes > Change the screen resolution**.
2. Make changes on the **Settings** tab of the [Display Properties] dialog box.



To change your screen resolution, move the slider to select an appropriate resolution.

To change the number of colours displayed on a monitor, select an appropriate colour quality.

3. When you have completed configuration, click **Apply**.



Configuring the Screen resolution to 1440x900 pixels and the Colour quality to 'Highest' (32bit) is recommended.


## Using External Display Devices

---


Using external display devices such as monitors, projectors, TVs, etc allows you to view screen images alternatively or simultaneously on each device. Additionally, you can extend the screen onto two display devices to use a larger workspace. Using external display devices is especially useful when you are giving a presentation or watching a movie through your TV.

### Switching Display Devices Using the Shortcut Key

You can watch the screen through either the LCD or an external display device, or you can even watch the screen through both the LCD and an external display device simultaneously.

1. Connect the external display device (e.g. a monitor or a projector) to the corresponding port of the system. To connect a TV, connect the TV to the TV output port of the system.
2. Press the <Fn>+<F4/ 



Provided that multiple external display devices are connected, the display order is LCD > CRT > LCD+CRT > TV > LCD+TV > CRT+TV whenever the <Fn>+<F4/ 

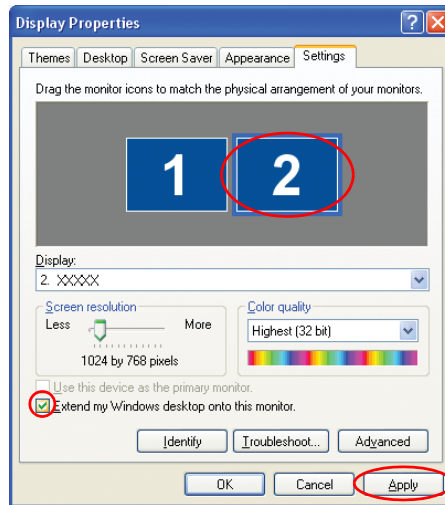


## Using Dual View to View Extended Screen

You can expand the screen into two display devices and work conveniently in separate workspaces.

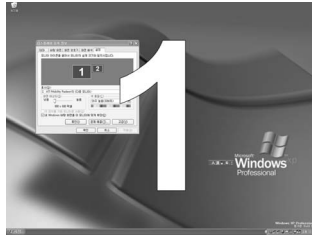
In Dual View mode, you can select the screen resolution and colour quality for each display device, as if there were two separate graphics cards.

1. Connect the external display device (e.g. a monitor or a projector) to the corresponding port of the system. To connect a TV, connect the TV to the TV output port of the system.
2. Press touchpad right button on the desktop, click **Properties**, and then click the **Settings** tab.
3. Click the monitor '2' icon, select the 'Extend my Windows desktop onto this monitor' check box, and then click **Apply**.



4. When the configuration is complete, click **Identify** on the left side of Troubleshoot. The primary display device (the LCD) is indicated as '1', and the

secondary display device is indicated as '2'. Now you can view the screen through two monitors.



1 : Primary



2 : Secondary



When using Dual View, only the LCD can be configured as the primary display device.



If the screen of the secondary display device is displayed at 640x480 pixels, with 256 colours, change the settings to the desired screen resolution and colour quality in the [Display Properties] dialog box.

## Deactivating Dual View Mode

Click the monitor '2' icon, clear the 'Extend my Windows desktop onto this monitor' check box, and then click **Apply**.



### **To move a window between display devices in Dual View mode**

Click the title bar of the window in the primary display device (1, the LCD), and drag it to the secondary display device (2). The window is moved to the secondary display device.

# System Management

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## Using Power Management Options

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Your computer includes **Power Management** options that can help the battery charge last longer and extend the life of the battery. Power-management options will slow down or shut off system components when the components are not being used.

Power management may slow down system performance. Your computer runs fastest with the power cord attached, whereby power management is disabled.

In the next sections, basic and advanced methods of power management will be discussed.

### Basic Power Management Schemes

This section discusses the basic schemes of power management when the computer is operating on battery power or using AC power.



#### Standby vs. Hibernation


Hibernation is a state where the contents of memory are stored in a special file on the hard disk, and Standby simply keeps a small holding current through the memory to keep the data. You are more likely to sustain loss of data in Standby mode so it is recommended to save all open files before entering Standby.



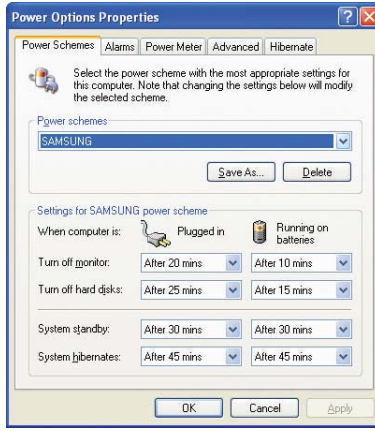
#### Changing Devices:

Do not change PC Cards while in standby or hibernate modes.

**To enter the power management window complete the following:**

1. Click **Start > Control Panel > Performance and Maintenance**.
2. Click  icon to display the **Power Options Properties** window.

3. Click the **Power Schemes** tab to display the basic power management options.



By default, the power scheme is configured to SAMSUNG mode. SAMSUNG mode extends the battery life and optimizes the Intel Speedstep function. Since the CPU power consumption is automatically optimized to conserve power when the computer is operating on battery power, an application may be executed slower than when it is operating on AC power. To use SAMSUNG mode after reinstalling Windows, install the PowerCFG program using the system software CD.

4. Select the time that you wish each of the following actions to occur in **Battery** and **AC power** mode.
- Turn off monitor
  - Turn off hard disks
  - System standby
  - System hibernates

Turning off the monitor and HDDs will save a substantial amount of battery power, therefore when in battery only mode select the shortest time practical.

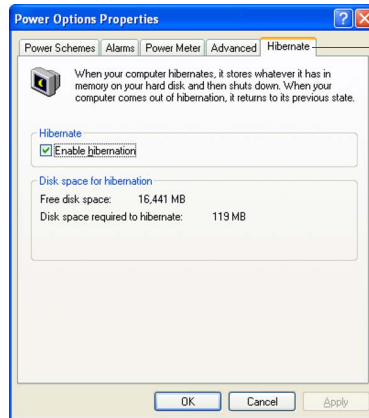
### **Hibernate Mode** (*Power Management or Manual Method*)

When hibernation is used, your computer turns off and when you power up again, everything is restored exactly as you left it—including programs and documents you may not have saved or closed. Everything in memory gets saved to the HDD, and the monitor and hard disk get turned off.



### If You Reinstall Windows:

You should re-establish hibernate in power options by opening **Power Options Properties** window and click on the **Hibernate** tab then click “Enable Hibernation”.



Hibernate Tab



### Frequent Interruptions:

If you experience frequent interruptions, you might also consider putting your computer into automatic hibernation after a specified number of minutes using the power management options.


### Standby Mode (*Power Management or Manual Method*)

Standby is used mainly for conserving battery power in your notebook computer. It also gives you the benefit of getting right back to your work without waiting for the computer to restart. Standby turns off your monitor and hard disks, placing your entire system in a low-power state. When you return to your computer, restores your desktop exactly as you left it. It is recommended that you do not enter standby mode with less than 20% battery power.

5. Click **OK** to set your power management options and close the window.




### Rest Key:

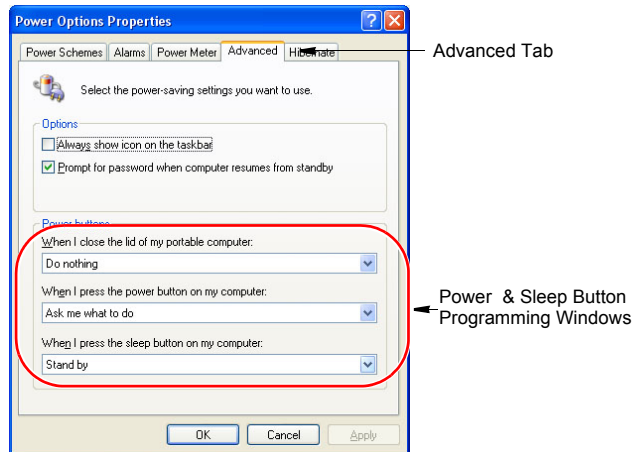
The manual **<Fn>+<Esc/  >** key combination will not activate Standby or Hibernate modes while you are playing a multimedia program or have an active USB device connected.


## Advanced Power Management Schemes

This section discusses the advanced power management schemes. There are two buttons that you can use to manually conserve power.


**To enter the power management window complete the following:**

1. Click **Start > Control Panel > Performance and Maintenance**.
2. Click  icon to display the **Power Options Properties** window.
3. Click the **Advanced** tab to display the advanced power management options.



4. Select the mode (**Do nothing/Ask me what to do/Standby/Hibernate/Shut down**) assigned to the Power button and/or <Esc/  > key. Also select the action (**Do nothing/Standby/Hibernate**) associated with closing the computer lid.



The “Rest” key is assigned to the <Fn>+<Esc/  > key combination. See “Basic Power Management Schemes” on page 70 for a better understanding of Standby and Hibernate modes.

5. Click **OK** to set your power management options and close the window.

You can return to normal operation after you have used one of the “Power Management” buttons by quickly pushing and releasing the **Power** button.

## Using the Battery

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Please refer to the following instructions when running the computer on battery power without connecting the AC power.

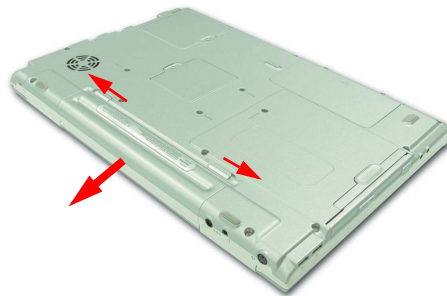


Please read the instructions on the battery before use.

Please refer to the system operation environment (p110) of this manual and operate and store the battery at room temperature.

### Ejecting and Attaching Battery

1. Shutdown the system and close LCD.
2. Put the computer upside down on a flat surface.
3. Pull the two battery latches outward, then remove the battery.



4. To install the battery again, slide the battery into the system as below. The battery latches move inward, and fix the battery automatically.






### Using the bridge battery

Your computer has a bridge battery, which supplies power for a short time even when there is no battery installed. Thus you can exchange a battery in standby mode, without turning the computer completely off. When you are exchanging the battery in standby mode, exchange in 3 minutes.

## Monitoring the Battery Charge

### To monitor using a shortcut key

Press <Fn>+<F2/  > keys to view the remaining battery charge.



### To monitor on the battery

Remove the battery from the computer, and press the PUSH button on the battery to view the approximate remaining battery charge (%).



### Using the battery

The battery has an expendable supply, so when you use it for a long time, the capacity/battery life is shortened. If the battery life is reduced to under half of the initial time, we recommend that you purchase a new battery to use.

#### Battery Warning

You will hear an alarm when the remaining battery charge is under 10%. Connect the power cable or turn off the computer and install a fully charged battery.

When the remaining battery charge is under 3%, the computer automatically saves current work and turns off. This may be different according to the settings in **Control Panel > Performance and Maintenance > Power Options > Alarms** tab.



## Battery Calibration

Calibrating your battery once a month is one of the recommended methods of increasing your computer's battery life. To calibrate the battery complete the following steps:



### Calibration Notes:

You should start the battery calibration process with a fully charged battery, battery status LED is green. However, the power meter may not show 100%.

Before you commence the battery calibration process you should fully charge, then fully discharge and finally fully recharge the battery again.

1. Disconnect the AC power adapter after turning off the system.
2. Restart your computer and press <F2> to enter BIOS setup.
3. Using the arrow keys, highlight **Smart Battery Calibration** in the **Boot** menu.
4. Press <Enter> to start calibration process. The calibration usually takes 3 to 5 hours depending on the current battery charge.
5. When the calibration process is complete, recharge the battery fully.

## Upgrading Memory

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This computer has one or more 128 MB or 256 MB memory module(s). Two memory module sockets are provided so that you can replace memory or install an additional memory module.

### Removing the memory module

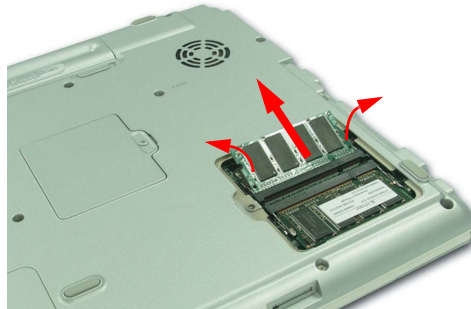


Before removing/replacing the memory module, turn the system off completely. Do not replace the memory module when the system is in Standby/Hibernate mode.

1. Using a screwdriver, open the memory module compartment cover on the bottom of the computer.



2. Push the memory module tabs outward to pop the memory module upwards. Carefully pull the module out at an angle of about 30°.



## Adding a memory module

1. Align the new memory module connectors accordingly and slide it into the slot at a 30° angle.



Ensure the notch on the memory module corresponds with the notch on the socket.



2. Push the memory module in until the module clicks into place. If the memory module is not fixed completely, gently push the memory down while pressing the memory module tabs outward.



3. Close and fix the memory module compartment cover using a screwdriver.

## Using the Security Lock Port

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The security lock is a device used to physically 'fix' the system when using it in a public place. The locking device needs to be purchased separately. The shape and methods of use may differ depending on the manufacturer. Please refer to the manual provided with the security lock for proper use.

Connect a security lock cable to a fixed object, and to the security lock port on the back of the computer.



Any damage to the machine caused by using a locking / security device is not covered under warranty.

## Tips for Using Your Computer

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The following information helps you avoid potential problems as you use your computer:



Do not try to disassemble your computer. Opening the system chassis or removing the hard disk drive voids your warranty. Only an authorised Samsung service center can replace or add any parts inside the chassis.

- Follow all the instructions and cautions in your computer user documentation.
- The LCD has a polarized surface and can be damaged easily. To prevent damage, avoid touching the screen.
- Use only approved AC adapters, auto adapters, memory modules and other options.
- Because a notebook computer is small and has restricted air flow around components, it is more likely to overheat than a desktop computer. A fan inside your computer runs when needed to help eliminate heat. Make sure the fan vent on the left side of your computer is not blocked when you use the computer. Occasionally check the vents and remove any accumulated dust on the outside.
- Avoid using or storing the computer in extremely hot or cold areas, such as a car on a hot day. Keep the computer away from heaters and out of direct sunlight. Exposure to excessive heat may damage computer components. If you have left your computer in a hot place, let it cool down slowly to room temperature (with the LCD panel open) before using it.
- Do not remove the memory-module compartment door, or try to install a memory module when the computer is on.
- Set up your computer work area to avoid physical strain. Sit with your back straight and supported by your chair. Adjust your chair or work table so that your arms and wrists can remain in a relaxed position, parallel with the floor. Avoid bending or twisting your wrists as you work. Your hands should “float” slightly above the keyboard. Refer to a book on office ergonomics for more information on setting up your work area.
- Take frequent breaks from working at the computer to rest your eyes and stretch your muscles.
- Remember to save your data files frequently and to make backup copies of your files.

# Travelling with Your Computer

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## Air Travel

### If you are travelling by air, follow these tips:

- Take the computer with you as carry-on luggage. Do not check the computer with your baggage.
- Allow the computer and disks to go through the X-ray security devices. Do not hand-carry disks through the walk-through metal detectors, which can cause loss of data.
- Make sure that the battery is charged or the power cord is easily accessible. You may be required to turn on the computer for airport security personnel.
- Be prepared to turn off the computer during take off and landing.

## Handling Spills

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Do not spill anything on your computer. The best way to avoid spills is to avoid eating and drinking around your computer. If you do spill something on your computer, turn off your computer, unplug it immediately, and do the following:

- If you spill liquid on the keyboard, drain as much of the liquid from the keyboard as possible. Be careful not to let the liquid drip onto the LCD panel. Allow the system to dry for several days before trying to use it.
- If you spill liquid on an external keyboard or keypad, unplug it and drain as much of the liquid as possible. Allow the keyboard to sit at room temperature for a full day before trying to use it.



Sweet liquids leave a sticky residue that may jam the keyboard despite your efforts to dry it.

- If you spill liquid on the LCD panel, clean it immediately with a soft cloth and denatured alcohol or a proprietary LCD screen cleaner. Do not use water, window cleaner, acetone, aromatic solvent, or dry, rough towels to clean it.



Some liquids damage the polarized LCD screen. If your screen is damaged, contact your local authorized Samsung service center for a replacement.

## Storing the Computer for Long Periods

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If you will not be using the computer for a long period of time (a month or more), you should discharge the battery completely then remove the battery from the computer. This extends the life of the battery.

# Troubleshooting

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Complete the following in the order presented until your system is functioning properly. If all of the steps below fail then contact your local reseller for assistance.

▶ **Questions and Answers**

Please see “Questions and Answers” on page 84 for assistance in correcting any computer operational problems.

▶ **Check the Connections**

Verify all of the power and peripheral cables are securely plugged into their sockets and that your system and power supply is on.

▶ **Norton AntiVirus**

Run Norton AntiVirus to ensure a virus is not affecting your computer.

**To run Norton AntiVirus proceed as follows:**

Click **Start > All Programs > Norton AntiVirus > Norton AntiVirus 2003**.

▶ **Windows Help and Support**

Run Windows Help and Support to find problem that may be affecting your computer.

**To run Windows Help and Support proceed as follows:**

Click **Start > Help and Support**.

▶ **Frequently Asked Questions**

To view FAQ's on your computer, please visit [www.samsungpc.com](http://www.samsungpc.com).

▶ **Reinstalling Software**

If for some reason your system crashes you may corrupt your HDD, Windows operating system and/or some of your device drivers. If this is the case, use **System Recovery CD** to reinstall OS and **System Software CD** to reinstall the corrupt device drivers.



**System Recovery Precaution:**

Before you start restoring your windows operating system insure you backup all data on your hard drive.

*Samsung* is NOT responsible for any data loss.



## Questions and Answers

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This section provides information on possible problems, solutions and other references for system use.

### Windows Related

**Q1 The system does not shutdown properly.**

**A** When the system does not shutdown normally, press and hold the Power button until the system manually shuts off. If the Power-Saving Mode is configured into the Power button, press and hold for more than 4 seconds to shut the system off. When the system is turned on after such manual shutdown, Scandisk will run to check errors in the system.

**Q2 The system freezes during program operation**

**A1** There is an error with the program currently being used. Press the <Ctrl>, <Alt>, and <Delete> keys simultaneously and click and Task in the [Windows Task Manager] window.

**A2** There is an error with the Windows OS. Reboot the system by using the Power button.

## Display Related

**Q1 The LCD screen is blank.**

A Adjust the LCD screen brightness. Use the <Fn>+< ↑ >, <Fn>+< ↓ > keys.

**Q2 The screen saver disturbs screen viewing during Media Player or video file operation.**

A Under the Media Player Options, in Player > Enable Screen Saver During Use, uncheck the box and restart the player.

**Q3 While using the horizontal or vertical span function in Windows 2000, configuring the screen resolution of an external monitor to less than that of the LCD monitor may display a blank screen.**

A The horizontal or vertical span mode does not support a screen resolution lower than the LCD resolution.

Set the screen resolution to higher than or equal to LCD resolution.

**Q4 Running the program after configuring the horizontal or vertical span mode displays a program window spanned to the LCD and the external display device.**

A Since Dual View (Extended Desktop) mode enables each display device to operate as if there were two separate graphics cards, you can select the screen resolution and color quality for each display device. Therefore dual view mode displays a program window on either the LCD or the external monitor, while the horizontal or vertical span mode may display a program window onto the LCD and the external monitor because the horizontal or vertical span mode displays a single screen image spanned over two display devices.

**Q5 In DOS mode, changing the full screen DOS mode by pressing <ALT>+<Enter> key displays a broken image for a short period.**

A The DOS mode which supports 2 Byte characters such as Korean and Japanese runs in graphic not in text mode. In this case, a broken image may be displayed while changing the video mode settings.

**Q6 In the following cases, the screen blinks or displays noise for a short time: (Clicking the nView tab, changing the resolution, changing the display**

**device, removing the AC adapter, restarting the system, or changing the PowerMizer level)**

A This may happen while the video driver is examining the connected device.

**Q7 When I connect a projector, and change the setting to display screen image on both the LCD and the projector by pressing <Fn>+<F4/□> keys, screen is not displayed properly.**

A Press <Fn>+<F4/□> keys once again.

**Q8 The desktop momentarily appears as a broken image when zooming in or out of the Media Player screen when Media Player is running.**

A Since zooming in or out of the Media Player screen changes the screen resolution, the desktop may momentarily appear as a 'broken image' during this operation.

**Q9 Execution of a DOS command such as DIR causes the desktop to momentarily appear as a broken image when using the system in 2-byte character language DOS mode.**

A This may happen when you have configured the display in such a way that the screen is displayed to both the LCD and CRT screens simultaneously. To avoid this, configure the screen as either LCD or CRT. (See "Using External Display Devices" (p 67).)

**Q10 The 'Turn off monitor' function configured in the Power Management does not work while using the system in full screen DOS mode**

A The 'Turn off monitor' function may not work in full screen DOS mode. (See "Using Power Management Options" (p 70).)

**Q11 A DVD or MPEG file is displayed only on the LCD screen.**

A Even though both LCD and CRT are configured as display devices, in basic setup, only one of the selected devices plays video.

1. Right-click on the desktop using the touchpad, and then select Properties.
2. Click Settings tab > Advanced > GeForce FX Go5200 32M/64M tab in the [Display Properties] dialog box.
3. Select the Full Screen Video item, configure Full Screen Device to 'Primary Display' or 'Secondary Display', and then click Apply. Now you can view video through both of the LCD and CRT screens.

**Q12 When I connected a TV, some programs, such as Mem, do not run properly in Full-DOS Screen.**

**A** When you are using a TV as display device, some programs, such as Mem, may not run properly in Full-DOS Screen. Run the program in DOS window mode.

**Q13 When I pressed <Alt>+<Enter> keys to change to full screen mode while playing a music file in Windows Media Player, the sound may be stopped for a short period.**

**A** When you maximize or restore down the Windows Media Player screen, the screen resolution is changed. Sound may be stopped for a short period while changing the resolution. Maximize or restore down the screen before playing an MP3 or MPEG file.

## Modem Related

### **Q1 I cannot hear the modem sound.**

**A1** Check that the telephone line is properly connected to the modem.

**A2** Check that the modem driver is installed properly.

1. Click Start > Control Panel > Performance and Maintenance > System.
2. Select Hardware tab > Device Manager > Modems in the System Properties window, and check if there is a yellow exclamation mark on the installed modem icon. If there is, delete the modem device driver and reinstall the driver, because the yellow exclamation mark represents a not properly installed driver.
3. If there is no yellow exclamation mark, double-click the installed modem, and click Diagnostics tab > Query Modem in the Modem Properties window to diagnose the modem.

No message in either of Command and Response in the Diagnostics tab means that the modem is not operating properly.

Diagnose the modem again after restarting the system or reinstalling the driver. (You have to exit all programs using modem in the advance of diagnostics of the modem).

**A3** Although I can make a connection with the modem, I cannot hear the dial tone and modem connection sound. In this case check the following list:

1. Click Start > All Programs > Accessories > Entertainment > Volume Control.
2. Clear the Mute check box in the Telephone Line item. (Depending on the sound driver, it may be displayed as another name such as Modem, Phone, Mono. If there is no corresponding item, click Options > Properties > Volume Control, select 'Playback', and select the 'Telephone Line' under the 'Display the following volume controls'. Click OK.)

### **Q2 I cannot make a call using an extension line.**

**A** In general, the dial tone of a PBX or a digital phone switching system is not a continuous one, unlike that of trunk line.

Therefore, the modem may not make a call because the modem mistakes the dial tone from a PBX or a digital phone switching system as a busy tone.

In this case, complete the following procedures.

**- Using an AT command**

As an initialization command, use the command, ATX3.

Otherwise, enter the ATX3 command manually before making a call.

It can correct this problem by skipping the dial tone check step.

**- Configuring the Modem through the Control Panel**

1. Click Start > Control Panel > Network and Internet Connections.
2. Under See Also, click Phone and Modem Options.
3. In the Modems tab, select the installed modem, and click Properties.
4. In the Modem tab of the Modem Properties window, clear the 'Wait for dial tone before dialing' check box.
5. When the configuration is completed, click OK.

**Q3 How do I use my modem when dialing from overseas?**

**A1** Check that the modem is correctly configured according to the current country. Because the values for communication may differ according to the country, you may not be able to connect via the modem due to an incorrect modem configuration.

1. Click Start > Control Panel > Network and Internet Connections.
2. Under See Also, click Phone and Modem Options.
3. In the Dialing Rules tab, click Edit.
4. In the General tab in the Edit Location window, select the current country from the Country/region radio box, specify the Area code, and click OK.

**A2** Because the shape of the telephone plug may differ according to the country, you have to purchase and use the appropriate telephone plug for that particular country.

**Q4 How do I receive a fax while the system is in power saving mode (Standby mode) (For Windows XP and 2000)?**

**A** To receive a fax when the system is in Standby mode, and the operating system is Windows XP or 2000, configure the system as follows:

1. The automatic fax reception function of the fax program needs to be activated. (For more information, refer to the corresponding fax program manual.)
2. Click Start > Control Panel > Network and Internet Connections.
3. Under See Also, click Phone and Modem Options.

4. In the Modems tab, select the installed modem, and click Properties.
5. In the Power Management tab of the Modem Properties window, select the "Allow this device to bring the computer out of standby." check box, and click OK.

The above setting enables the modem to turn on the system and receive a fax when in Standby mode.

## Wired LAN Related

### Q1 <Wake On LAN> function

- A <Wake On LAN> is a function that activates the system in rest mode when a signal (such as ping or magic packet commands) arrives from network (wired LAN).

To use <Wake On LAN> function:

1. Click Start > My Computer > My Network Places > View network connections.
2. Click the right button of the touchpad over Local Area Connection, and select Properties.
3. Click Configure, and select Power Management tab. Select 'Allow this device to bring the computer out of standby', then click OK. Restart the system.

If the system in rest mode is activated when there is no received signal, use the system after disabling <Wake On LAN> function.

Connecting with wired LAN while also using wireless LAN may not execute <Wake On LAN> function. To remedy this, configure wireless LAN to 'Disable' to use <Wake On LAN> function.



## Wireless LAN Related

Refer to "Connecting Through a Wireless LAN (Option)" (p 42) for the basic uses of a wireless LAN.

### **Q1 The Wireless LAN device is operating properly, but I cannot connect to the Internet or to another computer.**

This is due to an incorrect configuration, or a configuration error. Check the following check lists:

- A1** If you are using a computer-to-computer (Ad Hoc) network connection, check that the name of the configured network (SSID) is correct. The network name (SSID) is case sensitive.
- A2** If you are using a network key (encryption key), you have to use the same network keys for an AP (Access Point) or a computer-to-computer network (Ad Hoc). The network key of the AP is configured in the AP management program. Ask your network administrator or AP manager for more detailed information.
- A3** Check that the device driver is properly installed. If the driver is not properly installed, you will find a yellow exclamation mark on the network icon by clicking Start > Control Panel > Performance and Maintenance > System > Hardware tab > Device Manager > Network adapters > Wireless LAN adapter. If there is a yellow exclamation mark, please reinstall the device driver with the system software CD.
- A4** Referring to A2 of Q3, Check that the network bridge configuration is correct.

### **Q2 The signal strength is excellent, but I cannot connect to the network.**

Even if the signal strength is excellent, the network connection may not operate properly if the TCP/IP properties are not properly configured, or the network key (encryption key) is incorrect.

- A1** Check that the TCP/IP properties are configured properly. When you connect to an AP, click the Wireless Network Connection icon on the taskbar and select the Support tab. If the IP is not allocated properly, the IP address will be displayed as follows (e.g. 169.254.xxx.xxx).  
If the network does not provide DHCP, you have to specify the correct IP address by asking your network administrator.  
Even if the network provides DHCP, the server may not allocate an IP address to the client properly, and the client station cannot connect to the network.
- A2** Referring to A2 of Q1, check that the network key is correct.
- A3** Referring to Q4, check that AP is operating properly.

**Q3 I cannot share an Internet connection.**

**A1** It may require some time to synchronize the computers to share an Internet connection after the Internet connection sharing configuration is completed. If you cannot share Internet connection even after a longer period, restart the computer.

**A2** Check if the connection between the network adapters is configured to bridge. If there is a configured bridge connection between the network adapters through the network configuration wizard, remove the network bridge, and reconfigure the Internet connection sharing.

A bridge connection is created when you ran Network Setup Wizard from the [Network Connections] window, and selected both the internal connection adapter and another adapter in the wizard.

**Q4 I cannot connect to the AP.**

**Check the Computer Settings**

**A1** Verify whether the wireless LAN function of the computer is on by doing the following. If the wireless LAN function is off, turn it on.

- For Windows XP, verify that the wireless network connection has been set to "Enable" in Start > Control Panel > Network Connections.

- When a wireless LAN button is present, verify that the wireless LAN button has been switched on. (Refer to "Hot Keys" (p 15).)

**A2** Verify whether the same network key (encryption key) has been entered in both the AP and the computer.

The network key is an encryption key for encrypting data transmitted between the AP and the computer. It is recommended setting the network key manually.

**Check the AP Settings**

For the AP settings, refer to the User's Guide provided by the AP manufacturer.

**A3** Verify whether the environment is suitable for using a wireless LAN.

The use of a wireless LAN may be restricted according to the environment and distance. Obstacles such as walls or doors affect the use of a wireless LAN. Please install the AP in a high and open location, which is far from the interference of other electric waves.

**A4** Verify whether the AP is operating properly.

- When the AP is not operating normally, turn off the AP and after a short while turn it on again.

- Verify whether the AP's firmware is the most recent version. (Contact the AP manufacturer or the place where you purchased the AP for details of the AP firmware.)

**A5** Verify whether the AP has been properly connected to the network.

Verify whether the network is operating normally by connecting the wired network cable, which has been connected to the AP, to your computer.

**A6** Check the network key settings (encryption key).

When automatic code conversion (a passphrase function) has been selected and data communication is not functioning even with a normal wireless connection, it is recommended entering the network key (encryption key) manually.

**A7** Check the AP settings as follows. (The following is recommended for a standard environment and thus may differ according to the specific wireless network environment.)

- When several APs are present simultaneously, check the channel setting for each AP. When different APs are using nearby channels, interference may occur between electronic waves. Set the APs' channels further apart from each other. (Ex: Ch1, Ch5, Ch9, Ch13)

- When an AP's SSID (Service Set ID) option is set to "Hide", you cannot search for that AP on the computer. We recommend canceling the "Hide" option for an AP. The SSID is a name for distinguishing one wireless LAN from another wireless LAN.

- It is recommended using Long Preamble. Preamble is a signal for data transmission synchronization. Short Preamble may be supported by some types of APs but may cause compatibility problems.

- It is recommended using a static IP.

- Since static channel selection is more reliable than auto channel selection, it is recommended setting a static channel.

**Q5 In the Windows XP 'Available wireless networks' window, the Wireless Network Connection is displayed as 'Not Available'.**

**A1** When there is a Wireless LAN button, ensure that the Wireless LAN button is turned on. (Refer to "Hot Keys" (p 15).)

**A2** Check if there is additional program for a wireless LAN connection installed. Windows XP supports wireless LAN connections through the Wireless Zero Configuration (WZC) service. Therefore, an additional program for wireless LAN connection is not required, unless the network requires a specific program. However, installation of some wireless LAN related programs may sometimes

disable the [View Available Wireless Networks] window supported by WZC service. Exit the wireless LAN related program then check whether the window is enabled.

- A3** Initialize the device driver.  
Click Start > Control Panel > Performance and Maintenance > System > Hardware tab > Device Manager > Network adapters, and select the wireless LAN adapter. Right-click the network adaptor and select 'Disable'. Then right-click over the network adaptor and select 'Enable' after a short wait to check that the device is operating properly.
- A4** Right-click the My computer icon, and select Manage. When the Computer Management window appears, double-click Services and Applications on the left, and then click Services from the sub menu tree. Select the Standard tab in the right pane, double-click Wireless Zero Configuration and check that Startup Type is configured to Automatic, and the Service status is Started.
- A5** In the case of Windows XP, click Advanced in the [Wireless Network Connection] dialog box (see "Connecting to an Access Point (AP)" (p 43)) and make sure that 'Use Windows to configure my wireless network settings' is selected.

This may happen when a third-party wireless network setup program (e.g. PROSet) other than Windows XP default program is installed. For setting up a wireless network using the Windows XP program, this option should be selected.

**Q6 The Wireless network connection operates properly, but the Wireless Network Connection icon on the Taskbar displays the "Disconnected" message.**

- A** This is one of the known problems when you are using a wireless LAN connection after installing Windows XP service pack 1.  
For more information, refer to the following link for known problems with Microsoft.  
<http://support.microsoft.com/default.aspx?scid=kb;en-us;Q328647>

**Q7 When connecting to a computer-to-computer (Ad Hoc) network, I cannot connect to another computer connected to the same computer-to-computer network.**

- A1** Make sure that the security settings and network name of the computer-to-computer (Ad Hoc) network is correct.
- A2** Check the TCP/IP properties of the computers to be connected through the computer-to-computer (Ad Hoc) network. All of the computers to be connected

through a computer-to-computer (Ad Hoc) network should be configured so that their IP addresses are within the same subnet range.

- If the IP address is configured to DHCP (Obtain an IP address automatically) in TCP/IP properties, IP address is configured within the same subnet range automatically.

- If the IP address is configured to static IP in TCP/IP properties, select Use the following IP address in the TCP/IP properties of the wireless adapter, configure IP address: 10.0.0.1~10.0.0.254, and Subnet mask: 255.255.0.0, and then try again.

**Q8 When using a computer-to-computer (Ad Hoc) network, sometimes I cannot search the access point.**

**A** It may happen occasionally when you are using a computer-to-computer (Ad Hoc) network connection. Even if you cannot find some access points, the computer-to-computer (Ad Hoc) network is operating properly. Click Refresh to view the latest search result.

**Q9 Running Help file while running Profile Wizard in the wireless LAN program (PROSet) makes the PROSet window white.**

**A** It will be displayed properly when you finish the profile wizard. It does not affect the program operation.

**Q10 The network does not operate properly when both the wireless and the wired network connections are simultaneously configured with the same IP address.**

**A** You cannot use the wireless and the wired network connections using the same IP address simultaneously. To use either the wireless or the wired network in turn with the same IP address, you have to Disable whichever network device will not be using in the network connection of the Control Panel.

**Q11 The wireless LAN does not operate properly when there are other products operating in the 2.4GHz band.**

**A1** Since IEEE 802.11b and IEEE 802.11g equipment uses a common frequency or the ISM band, channel interference may occur when a wireless video transceiver or a microwave oven is being used. If you experience channel interference from other equipment, it is recommended changing the channel to connect to the AP.

**A2** IEEE802.11g equipment operates in hybrid mode when there is active IEEE802.11b equipment. This may result in data rate degradation.

**Q12 An established wireless LAN connection is disconnected after 2~3 minutes, and the connection is not recovered.**

**A1** This may be caused by channel interference. Change the channel of the AP, and reconnect.

**A2** This may be caused by selecting the 'Use IEEE 802.1x network authentication' option when IEEE 802.1x authentication is not available.

Check the properties of the AP in the wireless network settings. If the 'Use IEEE 802.1x authentication in this network' option is selected, deselect the option on the Authentication tab.

For more detailed information about authentication server, ask your network administrator.

**A3** If the AP is configured to 'Use network authentication (Shared Key)'

If the AP is configured to authentication shared mode, all computers to be connected should be configured as follows:

- If you are using Windows XP, select network authentication(shared mode) in the wireless network settings.

Click Start > Control Panel > Network and Internet Connections > Network Connections. Right-click the Wireless Network Connection icon, and click View Available Wireless Networks > Advanced. In the Wireless Networks tab, select an AP in the Available Networks field and click Configure and select 'Network Authentication (Shared Mode).

- If you are using Windows 2000, check that the network authentication mode is configured to Share in the security settings of the wireless LAN program (PROSet).

For more network authentication procedures, ask your AP (Access Point) administrator.

**A4** For a model with an installed 2100 11b card, check the wireless LAN driver version installed on your computer. (Click Start > Control Panel > System > Hardware tab > Device Manager. Under Network adapters, right-click PRO/Wireless LAN 2100 3B Mini PCI Adapter item and click Properties > Driver tab then check the driver version.)

When a driver of version 1.1.5.0 or lower is installed, remove the security patch (Q815485) if it is installed.

The WPA Q815485 patch provided by Microsoft can be used only when there is 802.11x, RADIUS, or an authentication server as well as an AP and a driver that

supports the function. This version of the driver does not support the WPA function.

Click Start > Control Panel > Add or Remove Programs > Add or Remove Programs and remove the Q815485 patch if it is installed.

**Q13 After PROSet is installed, The “AEGIS Protocol (IEEE 802.1x) v2.2.1.0” appears in the [Local Area Connection Properties] window.**

- A** The AEGIS Protocol is a security authentication protocol that is automatically installed when PROSet is installed and does not affect the operation of other programs.

## Games and Programs Related

**Q1 3D game is not executed, or some functions are not working.**

A Change the graphic setting of the game to '2D' or 'Software Renderer', then execute the program again.

**Q2 I launched a game right after installing it, and the game is not executed.**

A This problem may occur when the game is not compatible with Windows XP. Launch the game again, and it will be executed properly.

**Q3 A game runs only in small screen format.**

A This may happen when the display settings are configured to reduced mode ('Use Centered Output'). To view the game in full screen mode, complete the following procedures.

1. Right-click on the desktop using the touchpad, and then select Properties.
2. Click Settings tab > Advanced > GeForce FX Go5200 32M/64M tab in the [Display Properties] dialog box.
3. Select the nView Display Mode item, configure nView Modes to 'Single display' and configure Display to 'Digital Display'.
4. Right-click on the Digital display device figure, and then click on Screen Adjustment.
5. Select 'Use Display Adapter Scaling', and then click Apply.

**Q4 While playing a 3D game, I tried to change display devices using <Fn> + <F4/|> keys, then the system does not operate.**

A When you use <Fn> + <F4/|> keys while playing a 3D game, a system error may occur.  
Do not use <Fn> + <F4/|> keys while playing a 3D game.

**Q5 <Fn+F4/|> Key combination does not work.**

A When a DVD is being played, an external display device is not connected, Dual View (Extended Desktop) is being used, Full Screen DOS mode is being used, or some 3D game is running, then you cannot switch the display device.



**Q6 While running a game, <Fn>+<F4/□> keys may not work or screen may not be displayed properly when the keys are pressed.**

**A** While running Direct3D game, display device configuration keys do not work to maintain the system stability. Since display device control varies depending on the type of display devices in some games, the screen may not displayed properly. Use <Fn>+<F4/□> keys before starting a game. Do not press the keys while running a game.

(It may happen while running Harry Porter and the Chamber of Secrets, Warcraft 3, Unreal Tournament 2003, Starcraft, Quake 3, Soldier of Fortune 2, Heroes of Might and Magic 4, etc.)

**Q7 Running speed of a game is too slow or fast.**

**A** Change the setting of Power Schemes to 'Always On'.  
(Click Start > Control Panel > Performance and Maintenance > Power Options > Power Schemes tab, then configure the Power schemes field to 'Always On'.)

**Q8 Pressing <Fn>+<F2/□> keys while running a game may cause abnormal operation of the system.**

**A** Do not press <Fn>+<F2/□> keys while a game is running, because it may cause a system error.

**Q9 Some part of a game image is not displayed or is displayed in black.**

**A** This may happen when running a game designed for DirectX 8.1, such as NHL 2003, MVP Baseball 2003, etc.

**Q10 When playing a game, the image display temporarily freezes a number of times.**

**A** This may happen when the PowerMizer setting is configured to 'Maximize power saving function' or 'Balanced'.

1. Right-click on the desktop using the touchpad, and then select Properties.
2. Click Settings tab > Advanced > GeForce FX Go5200 32M/64M tab in the [Display Properties] dialog box.
3. Select the PowerMizer item, configure the AC Outlet and Battery slider to 'Maximum Performance', and then click Apply.

**Q11 The screen may not be displayed properly in some games.**

- A** In some games including Harry Potter and Sorcerer's Stone and Harry Potter and the Chamber of Secrets, the screen may not displayed properly when you set the screen resolution to 1024x768 and color quality to 32 bits.

Play these games in screen resolution - 1024x768 and color quality - 16 bits.

**Q12 The screen is severely interrupted in some games.**

- A** In 3D games, the texture data needed in 3D screen presentation are stored in the system memory. When the system memory is not enough, the data is stored in the hard disk and transferred to system memory when the data is needed. In some games, the screen may be interrupted during this process.

Lower the game resolution or texture image quality. (For example: Delta Force Black Hawk Down, Medal of Honor, Battle Field 1942)

**Q13 A blank screen is displayed when running games such as Tomb Raider.**

- A** A blank screen may be displayed when Clone mode is selected by pressing the <Fn>+<F4/🖥️> keys. The game screen will display properly if the game is run in LCD only mode or in Clone mode using the nView menu.

1. Right-click on the desktop and click Properties.
2. In the [Display Properties] dialog box, click Settings tab > Advanced > GeForce FX Go5200 32M/64M tab.
3. Select the nView Display Mode item and configure nView Modes to 'Clone'. Select Display pair and then click Apply.

# Restoring the System

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This description is only for models running Window XP.

The System Restore function allows you to restore your computer to an earlier copy (called restore point), and restores the settings if a problem occurs. The System Restore function is provided by Windows XP to enable the resolution of various problems without reinstalling Windows XP completely.

You can use System Restore in the following cases.

- The system files are deleted or damaged by mistake.
- The system is unstable or a problem occurs in a device driver.
- A problem occurs after changing system files such as the registry.
- A problem occurs after installing a new program.

## Creating a Restore Point

Restore points are created at predetermined times and at times of significant system events such as when a program or a driver is installed. You can also decide when to create your own restore points.



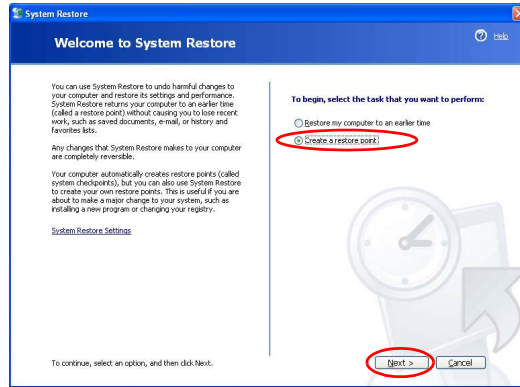
There has to more than 200MB of free space on the hard disk drive. If the disk space is insufficient, a saved restore point might be deleted.

You are recommended to create a restore point when you have purchased a new computer and before installing new programs or device drivers. Before creating a restore point, check that the computer is operating properly.

The procedures to create your own restore point are described below.

1. Click **Start > All Programs > Accessories > System Tools > System Restore**.

2. Select "Create a restore point", and click **Next**.

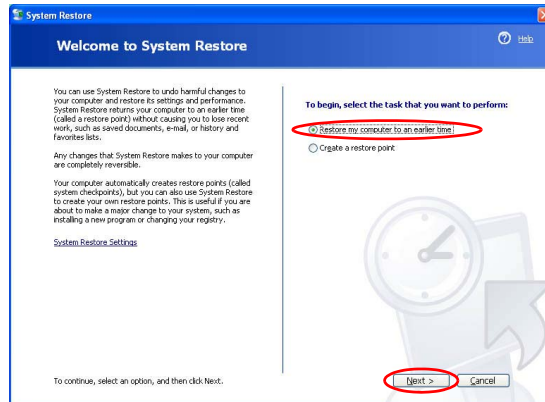


3. In the Restore point description box, type a name to identify the restore point, and then click **Create**. A restore point has been created.

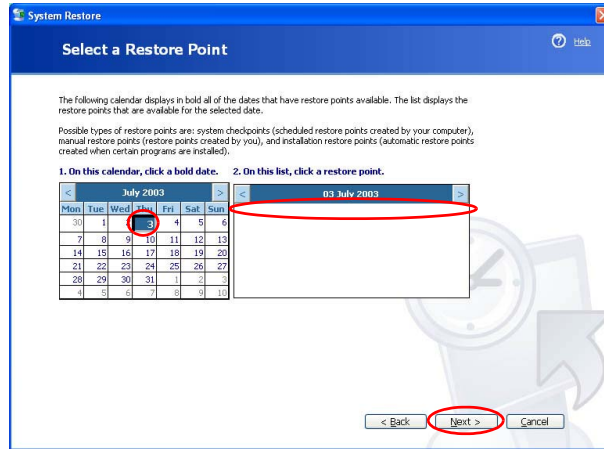
## Returning your computer to an earlier restore point

The procedures to return your computer to an earlier restore point when a problem has occurred are described below.

1. Click **Start > All Programs > Accessories > System Tools > System Restore**.
2. Select "Restore my computer to an earlier time", and then click **Next**.



3. Select the desired restore date from the calendar restoration and select the desired restore point from the list, and then click **Next**.



The date of the restore point is displayed in bold font.

4. Confirm the selected restore point and click **Next**. System Restore shuts down Windows, and starts the restoration processes.
5. After the restoration is complete, Windows restarts. In the [System Restore completed] dialog, click **OK**. Your computer has been restored to the selected restore point.

## Undoing the last restoration

The procedures to undo a restoration are described below.

1. Click **Start > All Programs > Accessories > System Tools > System Restore**.
2. Select "Undo my last restoration", and then click **Next**.
3. Confirm the restoration information to undo, and then click **Next**. System Restore shuts down Windows and starts undoing the restoration.
4. After the undo restoration is complete, Windows restarts. In the [Undo the last restoration completed] dialog, click **OK**. Your computer has been restored to the point prior to the last restoration.

## Reinstalling Software

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If you have reinstalled the Windows operating system, or the system and program do not operate properly, you can re-install the driver and program using the system software CD.

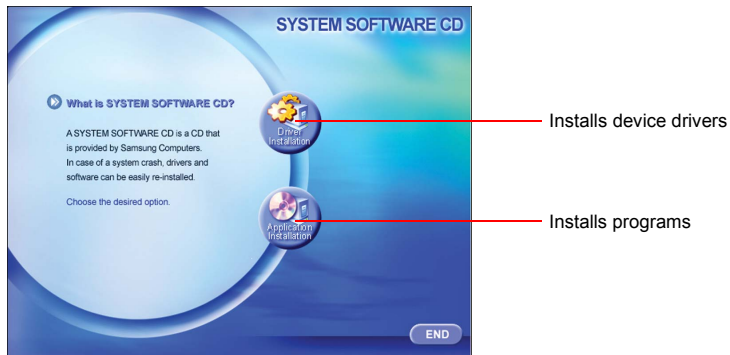


The drivers and programs included in the system software CD are listed in the D:\ReadMe.htm file. (Provided that the name of CD-ROM drive is "D".)

This computer is optimized for Microsoft Windows XP, therefore driver other than the ones included in the System Software CD are not provided.

### Running the system software CD

Insert the system software CD into the CD-ROM drive. The initial screen appears automatically.



### Installing drivers

1. In the initial screen, click **Driver Installation**.
2. Select the driver you want to install from the device installation screen, and click **Install Now**.



**How can one install the drivers for operating systems other than Windows XP?**

Install the appropriate driver software included in the system software CD.

## Installing programs

1. In the initial screen, click **Application Installation**.
2. Click **Standard installation** in the program installation screen (standard installation is recommended).
  - **Standard installation:** Installs and recovers programs to the state of shipment.
  - **User installation:** You can select the program installation location, and other options for the program installation.

## Reinstalling Windows XP

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If the Windows XP does not operate properly due to an error in the system, or if you have replaced the hard disk drive, you can reinstall Windows XP using the system recovery CD.

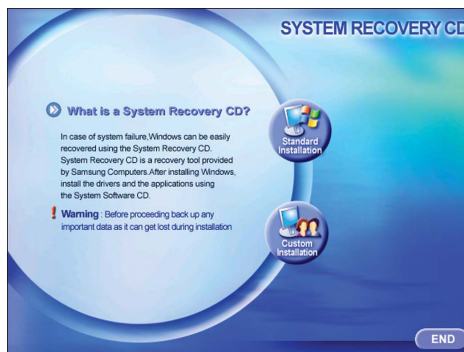


With the system recovery CD, you can reinstall Windows XP only. To return the system to the state of shipment, reinstall the device drivers and programs with the system software CD after reinstalling Windows XP with the system recovery CD.

Reinstalling Windows may delete the data on the hard disk drive such as files, programs, etc. In order to minimize damage from data loss, please remember to always back up data. Samsung Electronics is not liable in the case of data loss, please consult your warranty statement for clarification.

### Reinstalling Windows

1. Insert the system recovery CD into the CD-ROM drive.
2. In the initial screen, click **Standard Installation**. (Installation with the standard installation option is recommended. The standard installation does not require steps 5 and 7.)



- **Standard installation:** Installs Windows preserving the data saved on the hard disk drive. However, since personal data that is in the Windows folder may be deleted, please backup personal data.
- **Custom installation:** Enables Windows installation after partitioning or formatting the hard disk drive. Note that all data on the hard disk drives may be deleted depending on your configuration.



3. The description for the standard installation appears. Click **Yes**.  
The installation starts, and the system will be restarted after a while.
4. After the system has restarted, the message 'Press any key to boot from CD' appears. Do not press any key at this time. After a while the partition configuration screen appears.  
To not change the partition, press <Enter>.



#### **What is partition configuration?**

Partition configuration is a function that divides the hard disk drive into one or several partitions. Note that changing the partition deletes all of the data on the hard disk drive.

5. Select the desired file system (format).  
To maintain the current file system, press <Enter>.



#### **What is Format?**

Format is an operation that initializes the hard disk drive. Since formatting operation deletes all content on the hard disk drive, use Format with great care.

6. Select the folder to install the Windows operating system.  
To delete the previous version of Windows and install in the current folder, press <L> on the keyboard.



Note that selecting 'Use another folder to install' creates a new windows folder and installs Windows in dual boot mode.

7. The Windows XP installation wizard appears. Proceed with the installation according to the instructions provided by the Windows XP installation wizard.  
When the installation is completed, the computer will restart.
8. After the system has restarted, the message 'Press any key to boot from CD' appears. Do not press any key at this time.

The Windows installation has been completed. Remove the system recovery CD, and insert the system software CD into the CR-ROM drive to install the device drivers and programs.

## If You Cannot Run Windows

If you cannot run Windows, you have to boot the system with the system recovery CD, and reinstall Windows. If you boot the system from the system recovery CD, you can install Windows only with the user installation option. You cannot install with the standard installation option.

1. Insert the system recovery CD into the CD-ROM drive and start the computer.
2. If the following message appears on the screen, press any key from the keyboard.

**Press any key to boot from CD.....**



This message appears only when the CD drive has booting priority. If the message does not appear, configure the CD drive as the first booting device referring to "Changing Booting Priority" on page 63.

3. After a while, the partition configuration screen appears. Complete the installation referring to "Reinstalling Windows" on page 107.

# Specifications

## System Specification

The following is the basic hardware specification for the purchased product. Variations may exist depending on the model type.

Item	Specification	Remarks
<b>CPU</b>	Intel Pentium M 1.7 ~ 2.0GHz	
<b>Cache memory</b>	1MB(Banias)/2MB(Dothan)	
<b>Main memory</b>	128/256/512/1024 MB DDR SDRAM, 2 DDR socket	Max 2GB
<b>Main Chipset</b>	Odem+ / ICH4M	
<b>Hard disk drive (HDD)</b>	2.5", UltraDMA 100, S.M.A.R.T 9.5mmH	
<b>CD Drive</b>	CD-ROM Drive / CD-RW/DVD-ROM Combo Drive / DVD Super Multi Drive / 2nd HDD	Optional
<b>Graphics</b>	Nvidia GeForce FX Go 5200, Memory: 64MB 1440 x 900 pixels (Wide XGA)	
<b>Sound</b>	Chipset: Cirrus Logic CS4202(AC97 CODEC)3D Sound: JRC NJM2704V (EALA - Natural Surround)	
<b>Network Interface</b>	Modem: V.92 Modem Wired LAN: 10/100 Base T Ethernet Wireless LAN: 802.11b or 802.11b+g	Optional
<b>PCMCIA Slot</b>	Type I and II Compatible	
<b>Memory Stick Slot</b>	Memory Stick, and Memory Stick Pro (Approximately 1 MB/s) Support	
<b>Ports</b>	IEEE1394 (4 pin), USB 2.0 (x2), Microphone, Headphone, S/PDIF, Modem (RJ-11), Wired LAN (RJ-45), Monitor, TV Out (S-VHS)	
<b>Options</b>	Li-Ion smart battery, car adapter, external battery charger, ear-set	
<b>Dimensions (mm)</b>	395(W) x 276.5(D) x 32.6(H)	W x D x H
<b>LCD Panel Size</b>	17" Wide XGA TFT LCD , 382.2 x 244.5 (mm)	
<b>Weight</b>	3.0 Kg (including 6 cell battery)	
<b>Battery</b>	Li-Ion Smart Battery	
<b>Operation Environment</b>	Temperature (storage) : -5 ~ 40°C (operation) : 10 ~ 32° C Humidity (storage) : 5% ~ 90% (operation) : 20% ~ 80%	
<b>Operation Voltage</b>	100 ~ 240 VAC	
<b>Frequency</b>	50 ~ 60 Hz	
<b>Input/Output Power</b>	60W	
<b>Output Voltage</b>	19.0 VDC	

\* Please refer to the product catalog or consult your product provider for availability when purchasing optional accessories for this system.

# Wireless LAN Specification (Optional)

## Intel(R) PRO/Wireless LAN 2100 3B Mini PCI Adapter

### Product Specification

Item		Detailed Specifications
Physical Specifications	Dimensions	(Width X Height) 59.75 X 44.45 mm
	operation temperature and humidity	Same as system operation
		Temperature: 0°C ~ 70°C Humidity: less than 85%
Power Specification	Power Saving Mode	135 mW
	Receiving Mode	1.0 W
	Transmission Mode	1.6 W
	Power	3.3V
Network Specifications	Compatibility	IEEE802.11b
	Operating System	Microsoft Windows XP, 2000 - NDIS5 Miniport Driver
	Media Access Protocol	CSMA/CA (Collision Avoidance) with Acknowledgement(ACK)
	Security	Wired Equivalent Privacy support (WEP) 64bit / 128bit

\* This piece of equipment supports the Wi-Fi wireless LAN security standard, WPA (Wi-Fi Protected Access) and CCX (Cisco Compatible eXtensions). To connect to a wireless network consisting of the WPA and CCX, 1.2.2.8 or higher version of wireless LAN driver have to be installed on your computer, and certificates, Windows patch (KB826942) or PROSet may be required depending on the network settings. For driver update, visit [www.samsung.com](http://www.samsung.com) and for information on the PROSet installation, refer to "Wireless Network Setup Using the Wireless LAN Setup Program" (p 50). For more information, ask your network administrator.

### Radio Specifications

RF Band	2.4GHz (ISM band)
Support Channels	1~13 channel (See "Regulatory Notice for Channel Use in France".)
Device	Transceiver
Standard Output Power	5 mW
Transmission Method	DSSS
Transmission Rate (Mbps) *	11, 5.5, 2, and 1
Antenna Type	Internal Antenna 2 EA (Main/Aux)

\* The transmission rate may differ from the actual transmission rate.

## *Regulatory Notice for Channel Use in France*

The number of channels that can be used for wireless LAN differs from country to country. In France however, use only 4 channels (channel 10, 11, 12, 13) when using wireless networks.

- Standard: IEEE 802.11b
- Regulation: ETSI 300 328, CE Marked
- Channel Allocation:
  - Channel 10 (2457 MHz)
  - Channel 11 (2462 MHz)
  - Channel 12 (2467 MHz)
  - Channel 13 (2472 MHz)

## **Intel(R) PRO/Wireless 2200BG Network Connection**

### *Product Specification*

Item		Detailed Specifications
<b>Physical Specifications</b>	Dimensions	(Width X Height) 59.75 X 44.45 mm
	operation temperature and humidity	Same as system operation Temperature: 0°C ~ 70°C Humidity: less than 85%
	<b>Power Specification</b>	
	Power Saving Mode	135 mW
	Receiving Mode	0.85W
	Transmission Mode	1.45W
	Power	3.3V
<b>Network Specifications</b>	Compatibility	IEEE 802.11g, IEEE 802.11b
	Operating System	Microsoft Windows XP, 2000 - NDIS5 Miniport Driver
	Media Access Protocol	CSMA/CA (Collision Avoidance) with Acknowledgement(ACK)
	Security	Wired Equivalent Privacy support (WEP) 64bit/128bit WPA*, CCX*

\* This piece of equipment supports the Wi-Fi wireless LAN security standard, WPA (Wi-Fi Protected Access) and CCX (Cisco Compatible eXtensions). To connect to a wireless network consisting of the WPA and CCX certificates, Windows patch (KB826942) or PROSet may be required depending on the network settings. For information on the PROSet installation, refer to "Wireless Network Setup Using the Wireless LAN Setup Program" (p 50). For more information, ask your network administrator.

## *Radio Specifications*

RF Band	2.4GHz (ISM band)
Support Channels	1~13 channel (See "Regulatory Notice for Channel Use in France".)
Device	Transceiver
Standard Output Power	5 mW
Transmission Method	11b mode: DSSS 11g mode: OFDM
Transmission Rate (Mbps) *	11b mode: 11, 5.5, 2, and 1 11g mode** : 54, 48, 36, 24, 18, 12, 9, and 6
Antenna Type	Internal Antenna 2 EA (Main/Aux)

\* The transmission rate may differ from the actual transmission rate.

\*\* 11g mode is supported only when the device is connected with an IEEE802.11g device (e.g. IEEE802.11g compatible Access Point).

## *Regulatory Notice for Channel Use in France*

The number of channels that can be used for wireless LAN differs from country to country. In France however, use only 4 channels (channel 10, 11, 12, 13) when using wireless networks.

- Standard: IEEE 802.11g
- Regulation: ETSI 300 328, CE Marked
- Channel Allocation:
  - Channel 10 (2457 MHz)
  - Channel 11 (2462 MHz)
  - Channel 12 (2467 MHz)
  - Channel 13 (2472 MHz)

# Abbreviations

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<b>A</b> . . . . .	Amperes
<b>AC</b> . . . . .	Alternating current
<b>ACPI</b> . . . . .	Advanced Configuration and Power management Interface
<b>APM</b> . . . . .	Advanced Power Management
<b>ATA</b> . . . . .	AT attachment (refers to the hard-drive interface in an AT-compatible computer)
<b>ATAPI</b> . . . . .	AT attachment packet interface
<b>BBS</b> . . . . .	Bulletin board system
<b>BIOS</b> . . . . .	Basic input/output system
<b>C</b> . . . . .	Centigrade
<b>CD</b> . . . . .	Compact disc
<b>CD-ROM</b> . . . . .	Compact disc read-only memory
<b>cm</b> . . . . .	Centimeters
<b>COM</b> . . . . .	Communication (as in communication port)
<b>CMOS</b> . . . . .	Complementary metal-oxide semiconductor
<b>DC</b> . . . . .	Direct current
<b>DMA</b> . . . . .	Direct memory access
<b>DPMS</b> . . . . .	Display power-management signaling
<b>DRAM</b> . . . . .	Dynamic random access memory
<b>DSTN</b> . . . . .	Double layer super twist nematic
<b>ECP</b> . . . . .	Extended capabilities port
<b>EPP</b> . . . . .	Enhanced parallel port
<b>g</b> . . . . .	gram
<b>G</b> . . . . .	Gravity
<b>GB</b> . . . . .	Gigabytes
<b>hr</b> . . . . .	hour
<b>Hz</b> . . . . .	Hertz
<b>IDE</b> . . . . .	Integrated drive electronics
<b>I/O</b> . . . . .	Input/output
<b>IRQ</b> . . . . .	Interrupt request line

**ISA** . . . . . Industry Standard Architecture  
**KB** . . . . . Kilobytes  
**kg** . . . . . Kilograms  
**LAN** . . . . . Local-area network  
**lb** . . . . . Pounds  
**LBA** . . . . . Logical block addressing  
**LCD** . . . . . Liquid-crystal display  
**m** . . . . . Meters  
**mA** . . . . . Milliampere  
**mAhr** . . . . . Milliampere hour  
**MB** . . . . . Megabyte  
**mm** . . . . . millimeter  
**MPEG** . . . . . Motion Picture Experts Group  
**MPU** . . . . . Microprocessor unit  
**ms** . . . . . Millisecond  
**PDF** . . . . . Portable document format  
**PC** . . . . . Personal computer  
**PCI** . . . . . Peripheral component interconnect  
**PCMCIA** . . . . . Personal Computer Memory Card International Association  
**POST** . . . . . Power-on self-test  
**PNP** . . . . . Plug and play  
**PS/2** . . . . . Personal System/2  
**RAM** . . . . . Random-access memory  
**ROM** . . . . . Read-only memory  
**SVGA** . . . . . Super video graphics array  
**TFT** . . . . . Thin-film transistor  
**USB** . . . . . Universal serial bus  
**V** . . . . . Volt  
**VAC** . . . . . Voltage alternating current  
**VCC** . . . . . Voltage collector current  
**VDC** . . . . . Voltage direct current  
**whr** . . . . . Watt hour



# Glossary

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## **AC adapter**

The AC (or alternating current) adapter regulates current coming into your computer from the wall outlet. The current at the wall outlet is alternating current and needs to be changed by the adapter to DC (direct current) before your computer can use it for power.

## **ACPI**

ACPI (Advanced Configuration and Power Interface)- a method for describing hardware interfaces in terms abstract enough to allow flexible and innovative hardware implementations and concrete enough to allow shrink-wrap OS code to use such hardware interfaces.

## **BIOS**

BIOS stands for basic input/output system. The BIOS is software (often called firmware) that is independent of any operating system. It enables the computer to communicate with the screen, keyboard, and other peripheral devices without using programs on the hard disk.

The BIOS on your computer is flash BIOS, which means that it has been recorded on a flash memory chip that can be updated if needed.

## **Boot**

To start your computer. A cold boot resets the entire computer and runs through all computer self-tests. A warm boot clears out computer memory only.

## **Boot disk**

A disk containing operating system programs required to start your computer. A boot disk can be a floppy disk, hard drive, or compact disc.

## **Byte**

The basic unit of measure for computer memory. A character—such as a letter of the alphabet—uses one byte of memory. Computer memory is often measured in kilobytes (1,024 bytes) or megabytes (1,048,576 bytes).

Each byte is made up of eight bits. For more information on bytes and bits, see an introductory book on computers.

## **Cache memory**

Cache is very fast, zero-wait-state memory located between the microprocessor and main memory. Cache reduces the average time required by the microprocessor to get the data it needs from the main memory by storing recently accessed data in the cache.

**CardBus**

CardBus technology enables the computer to use 32-bit PC Cards. Hardware in the computer and the Windows operating system provide support for the 32-bit cards. The voltage of 32-bit cards (3.3 volts) is lower than that of 16-bit cards (5 volts). The 32-bit cards can transmit more data at a time than the 16-bit cards, thus increasing their speed.

**CMOS memory**

CMOS (complementary metal oxide semiconductor) memory is powered by the CMOS battery. The System Setup settings and other parameters are maintained in CMOS memory. Even when you turn your computer off, the information in CMOS memory is saved.

**COM port**

COM stands for communication. COM ports are the serial ports in your computer.

**Compact Disc**

A compact disc (CD).

**Conventional memory**

The first 640 KB of system memory. Operating systems and application programs can directly access this memory without using memory-management software.

**Disk**

The device used by the computer to store and retrieve information. *Disk* can refer to a floppy disk, hard disk, or RAM disk.

**Disk cache**

A software device that accumulates copies of recently used disk sectors in RAM. The application program can then read these copies without accessing the disk. This, in turn, speeds up the performance of the application.

A cache is a buffer for transferring disk sectors in and out of RAM. Data stored in a disk cache is a copy of data already stored on the physical disk.

**DMA (direct memory access)**

A method of transferring data from a device to memory without having the data pass through the microprocessor. Using DMA can speed up system performance.

**DPMS**

Display Power Management Signalling. Displays or monitors that comply with this can be managed by the Power Management features found in the system setup.

**Floppy disk**

A removable disk, also called *floppy* or *diskette*.

**Hard drive**

Also called *fixed* disk. A hard drive is connected to the computer and can be installed or removed. Data written to a hard drive remains until it is overwritten or corrupted.

The 2.5-inch hard drive in your computer was designed for use in a notebook computer. Because hard drives in notebook computers are smaller than those in desktop computers, their maximum storage capacity may be less than that of desktop hard drives. However, because of their smaller size, the drives handle shock and vibration better than larger drives, which is important for a notebook computer.

**I/O**

Input/output. Refers to peripheral devices, such as printers, that are addressed through an I/O address.

**I/O address**

I/O stands for input/output. Peripheral devices, such as printers, are addressed through the I/O port address.

**IRQ (interrupt request line)**

The IRQ is a hardware line that a device uses to signal the microprocessor when the device needs the microprocessor's services. The number of IRQs is limited by industry standards.

**LCD (liquid-crystal display)**

The LCD screen on your computer differs from the display screen of a desktop monitor. Most desktop monitors use CRT (cathode-ray tube) displays, which work by moving an electron beam across phosphor dots on the back of the screen. The phosphor dots light up to show the image. LCDs use a liquid-crystal solution between two sheets of polarizing material. Electric current passing through the liquid aligns the crystals so that light can or cannot pass through them, creating an image.

**MB (megabyte)**

1,024 kilobytes.

**Megabit**

1,048,576 bits or about 128 kilobytes.

**Operating system**

A program that supervises the computer's operation, including handling I/O. Application programs and users can request operating-system services. A user might request operation-system services to copy files or format a disk. An application program might use the operating system to obtain keyboard input, write data to a file, or write data to a screen.

**PC Card**

PC Card stands for personal computer card. The Personal Computer Memory Card International Association (PCMCIA) defines the standards used to develop all PC Cards. PC Card types include: modems, Ethernet adapters, SCSI adapters, ATA cards, and memory cards.

**PC slot**

The PC slot is the hardware slot in the computer where the PC Card is placed.

**Pixel**

A pixel is an individual dot in a graphic displayed on your computer. The pixels are so close together that they look as though they are connected. An LCD screen displays thousands or millions of pixels.

**Plug and Play**

A plug and play operating system automatically configures computer components to work with your system. With this type of operating system, you normally do not need to set jumpers on devices or set memory addresses or IRQs.

**RAM (random access memory)**

The computer's system memory, including conventional and extended memory. You can write to and read from RAM. Information stored in RAM is temporary, and is erased when the system is turned off.

**Refresh rate**

The refresh rate is the rate at which the image on the LCD screen is rewritten to the screen. A fast refresh rate helps keep the image from flickering.

**Resolution**

The resolution is the sharpness or clarity of the image on your LCD screen. Resolution is measured by the number of pixels the computer's screen can display. For example, a resolution of 800 x 600 means that the screen can display 800 pixels in row and can display 600 rows. The more pixels displayed, the higher the resolution and the better the image.

**ROM (read-only memory)**

Permanent computer memory dedicated to a particular function. For example, the instructions for starting the computer when you first turn on power are contained in ROM. You cannot write to ROM. (ROM is not the same as RAM).

**Sector**

Also known as *disk sector*. The portion of a track that is numbered and can hold a specified number of characters (usually 512 KB).

**Shadow RAM**

A write-protected area of RAM that contains a copy of the BIOS. As the computer boots, the BIOS is copied from its permanent location in ROM to RAM. The BIOS can be executed much faster in RAM than in ROM. The BIOS remains in shadow RAM until you turn off the computer.

**TFT (thin film transistor) LCD**

A TFT LCD uses a separate transistor circuit to control each pixel. This technology provides the best resolution for an LCD screen. A TFT LCD is also sometimes called an active matrix LCD.

# Using Windows 2000

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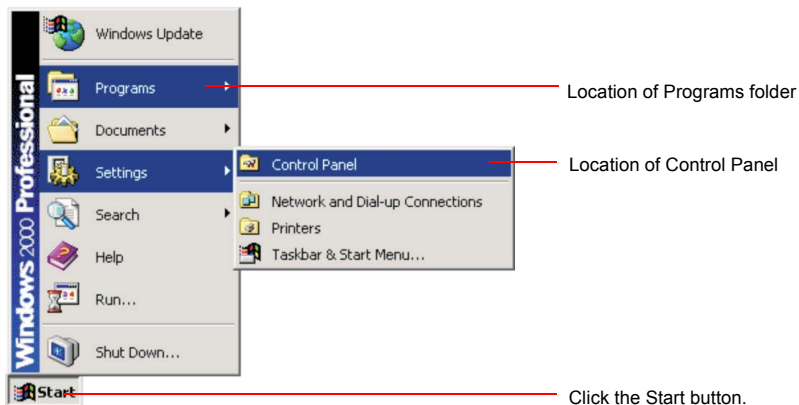
Samsung notebook provides Windows XP or 2000 as operating system depending on the product model.

Because the use of Windows XP is similar to Windows 2000, the same User Guide (Online Manual) is used regardless of operating system installed on your notebook. However, since there are some differences in menus, screens, and operations, you need to refer to this Guide if your notebook's operating system is Windows 2000.

## Registering Windows 2000

The procedure for registering your Windows presented in the Installation Guide is explained based on Windows XP. However, because registration procedure for Windows 2000 is similar, you can proceed the registration by following the direction displayed on the screens.

## Locations of Programs folder and Control Panel



## **Introducing Windows**

Descriptions presented in "Introducing Windows" (p 20) are applicable only to Windows XP. For Windows 2000, location of menus, shape of icons and some uses may differ from those of Windows XP.

## **To Playback Audio or Video CD**

Just insert your audio or video CD into your CD drive. The associated application program will start automatically and playback the audio or video files.

If your video CD is not played back automatically, locate and run the video file (for example, DAT file) to playback on your video CD.

## **Writing Data to CD (Applicable to the model equipping with CD-RW)**

Descriptions in "To write data on a CD" (p 26) section are applicable only to Windows XP. For using CD-RW drive on Windows 2000, refer to the CD-RW manual provided separately with your CD-RW.