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Macrovision Statement

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

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

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Important Safety Information

Safety Instructions

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



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

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

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

Wireless Guidance

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.

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/cm2 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 colocated with another transmitter and transmitting antenna."

FCC Part 68

This equipment compiles 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

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 limitesapplicables 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

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 you 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 (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

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

Information Icons

Three 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.

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

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

Introducing Your Computer



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



Turning the Computer On and Off

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.





Since opening the LCD panel by hand might cause damage to the panel, please use both hands when opening the panel.

To turn off the computer

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



3. Click Turn Off.





If the computer is not turned 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.

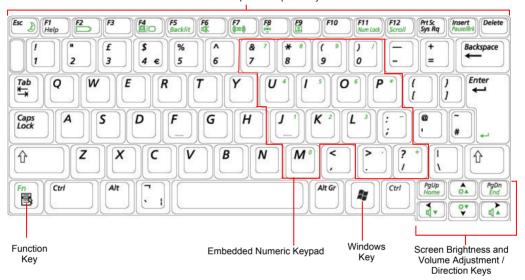


If <Ctrl>+<Alt>+<Delete> keys do not operate either, press the power button for more than 4 seconds to turn off the computer. Your unsaved work may be lost/damaged. When you turn on the computer next time, it will perform a disk checking process.

Using the Keyboard

Your computer has an 82-key keyboard. By pressing designated key combinations, you can have access to all the key functions of a full-sized keyboard.

Function & Special Purpose Keys





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.



You can use a symbol of $\ensuremath{\mathfrak{E}}$, if press Fn and F3 simultaneously depending on a kind of keyboard.

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.

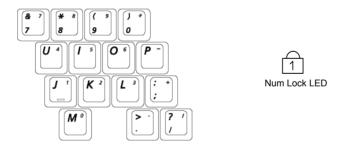
To clean the computer keyboard, use slightly damp cotton swabs. Scrub the keys and the surface around the keys.



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 corner of each keypad key shows its numeric function.



Press **Fn+Num Lock**> 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 15 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+Num Lock>** 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 keys.

<fn> Key Combinations</fn>	Key Name	Key Function	
<esc 🔰=""></esc>	Rest	Puts the computer into suspended mode. To escape suspended mode, press the power button. (p74).	
<f2 -=""></f2>	Gauge	Shows the current power source and the remaining battery charge.	
<f4 ≅ ○=""></f4>	LCD/CRT	Switches the display between the LCD and external display device when an external display device is connected. (p72)	
<f5 backlit=""></f5>	Backlight	Turns the LCD on and off.	
<f6 mute=""></f6>	Mute	Turns the audio output on and off.	
<f7 ((30))=""></f7>	3D sound	Extends the spatial sound of the stereo speakers so that the listener can experience even greater stereophonic sound. Turns 3D sound (((3D)) OFF Turns 3D sound off Turns 3D sound off 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	
<f8 (ŵ)=""></f8>	Wireless LAN	used, depending on the audio source. Turns the wireless LAN service on and off for models with wireless	
	On/Off	LAN installed.	
<f9 🔀=""></f9>	Touchpad	Turns the touchpad function on and off. Touchpad Turns Touchpad on Touchpad Turns Touchpad off Touchpad Turns Touchpad off	
<f11 lock="" num=""></f11>	Number Lock	Enables the numeric keypad. (p9)	
<f12 scroll=""></f12>	Scroll Lock	Scrolls the screen up and down while the cursor position does not change in some applications.	
<insert <br="">Pause/Brk></insert>	Pause/Break	In DOS mode, pauses the scroll of the screen or exits a running program.	

<pgup home=""></pgup>	Home	Moves to the beginning of the sentence.
<pgdn end=""></pgdn>	End	Moves to the end of the sentence.
< ← / ◁▼ >	Volume Down	Decreases the audio volume.
< → / ₫▲ >	Volume Up	Increases the audio volume.
< ↑ / ☆▲ >	Brightness Up	Makes the LCD screen brighter.
< ↓ /☆▼>	Brightness Down	Makes the LCD screen dimmer.



When you press a function key combination, the system sound may be temporarily muted.

Using the Touchpad

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 ($\mbox{\cite{N}}$) or 'I' shape ($\mbox{\cite{I}}$).



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.



Locking the touchpad

You can lock the touchpad and use only the keyboard and mouse. To lock the touchpad function, press the <Fn>+<F9> key combination.

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

Action	Function	Process	
Move	Move the pointer	Place your finger on the touchpad and slide your finger to a destination.	
Click	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.	
Double-Click	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.	
Right-Click	Display a short cut menu	Place the pointer over an object, then press right touchpad button once.	
Drag	Move an object, or select an area or multiple objects	Drag and drop a part to the required place.	

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



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.

Operating the touchpad or touchpad button while starting your system may increase the time required for starting Windows.

Reading the Status Indicators

Shows the operating status of the computer.



1	Num Lock	Turns on when the numeric keypad is activated.
A	Caps Lock	Turns on when all alphabet characters you type will be in upper case.
₽ P	Scroll Lock	Turns on when it is set to scroll the screen up and down while the cursor position does not change in some applications.
	Hard disk drive	Blinks when the hard disk drive is in operation.
((•)))	Wireless LAN	Turns on when wireless LAN function is enabled. (This light does not operate for the models without wireless LAN.)
‡ ⊙	Battery	Turned blue - 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.
- <u>Ö</u> -	Power	Turned blue - 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: Brightness Level 2



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

- 1. Turn the system on. When the Samsung Logo appears, press the <F2> key to enter Setup.
- 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 dimmer 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.

To adjust using keyboard

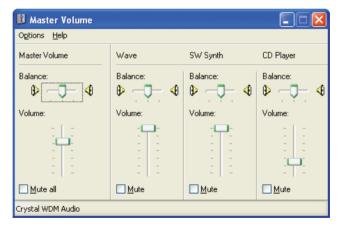
Press $\langle F_n \rangle + \langle q_v \rangle$ or $\langle F_n \rangle + \langle q_A \rangle$ from the keyboard.

To adjust using volume adjustment program

Click the **Volume** icon(**1**) on the taskbar, and move the Volume slider to a desired level.



For advanced volume control options, double-click the **Volume** icon(**1**), and adjust the volume level in the volume control program.



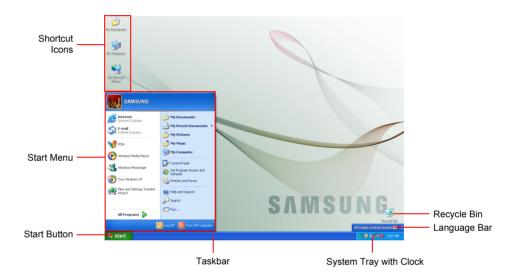


When you turn the system on, a booting noise may occur.

Introducing Windows

Understanding the Desktop

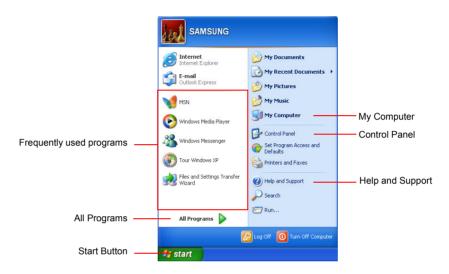
The desktop is the working area on the computer. It consists of the large workspace and a taskbar at the bottom.



Start Button	🐉 start	Opens the Start menu.
Taskbar		Displays programs that are currently running. Frequently used icons can be placed here.
Recycle Bin	©	Deleted files or folders are sent here.
Language Bar	EN English (United Kingdom) 💈 📮	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.

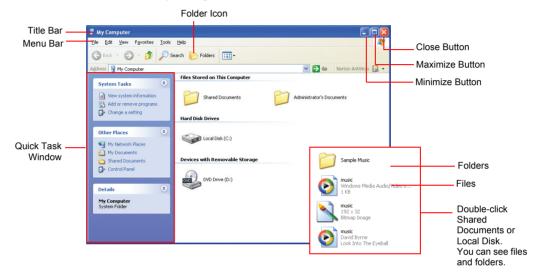


My Computer		Displays the contents of the hard disk, the CD-ROM drive, the network drive(s), and floppy disks. It can also be used to search and open files and folders.
Control Panel		Enables users to configure settings on the computer.
Help and Support	②	Provides on-line help, information on Windows and troubleshooting.
Search	P	Enables users to search for information in files or the Internet.
Run	=	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

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

Using the CD Drive(Optional)

For this computer, a 1394 external CD-RW/CD-ROM combo or DVD multi drive is provided.

To connect a CD drive

Connect the CD drive to the 1394 port.



To use a CD drive

1. Push the eject button on 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.
- 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 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**.





Windows Media Player tour

For more information about using the Windows Media Player, run the Windows Media Player and click **Help > Help Item**.

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 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.



Above procedure applies only to the video CDs that has a .dat file as the execution file. Playing procedure may be different according to video CDs.

To write data on a CD (Option)

If your computer has CD-RW functionality, you can copy data to a blank CD or create an audio CD.



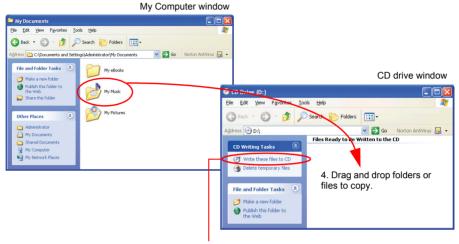
An additional CD writing program is supplied in an additional CD.



You cannot write to a CD that already has data in it.

- 1. Insert a blank CD into the CD drive.
- 2. On the [CD Drive] dialog, 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 Item**. 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 drives. It provides 3D surrounding sound and vivid screen.



What is a home theater system?

Home theater system usually consists of a TV, DVD, 5.1 channel speaker, and digital amp and provides a high-resolution screen (MPEG2) and 3D surrounding 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.

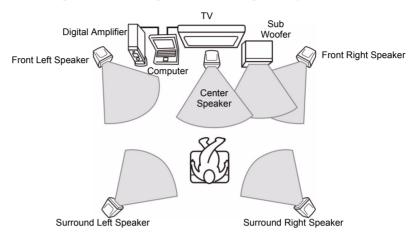
5.1 channel speaker system (amplifier, speakers, connection cables)	Purchased separately
DVD drive and DVD playing program on the computer	Optional
DVD title that supports 5.1 channel	Purchased separately

To use home theater system, complete the following procedures:

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

Step 1. Connect 5.1 channel speaker system to your computer

- 1. Connect the S/PDIF jack on the left-hand side of the system and the 5.1 channel amplifier.
- 2. Connect speakers to the amplifier. (Refer to speaker system's manual.)





You need a TV that supports VGA port to display through a TV.

Step 2. Configure digital sound output on the computer

- 1. Click Start > Control Panel > Sounds, Speech and Audio Devices > Sounds and Audio Devices.
- 2. In the Device volume field on the Volume tab, click Advanced.
- 3. In the [Master Volume] dialog, click **Option > Advanced Controls**. Then **Advanced** button is displayed on the bottom of the dialog.
- 4. Click Advanced, select "AC3 SPDIF", then click Close.

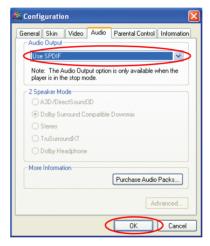
Step 3. Enable S/PDIF output on the DVD program

To use 5.1 channel speakers, you need to install the Power DVD program from the DVD Installation 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 Audio Output 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 Memory Card Slot

Through the memory card slot, you can use memory cards such as memory stick, SD (Secure Digital) memory card, and MMC (Multi Media Card). You can use the memory cards as a removable disk, and use them to exchange data between your computer and digital devices such as a digital camera.





Memory Stick

SD (Secure Digital) Memory Card / MMC (Multi Media Card)



Restrictions on using Memory Stick/SD Memory Card

You can use Memory Stick, SD Memory Card and Memory Stick Pro (256MB~1GB, approximately 1 MB/s) for storing data only. Copyright protection function is not supported.

To insert and use a memory card



Before using the memory card slot, remove the slot protector.

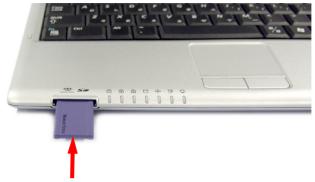
Press the end of the slot protector softly to pop it outward, then remove it.



You should insert the memory card upside down.

Inserting wrong side up may cause damage in the memory card and the computer.

1. Insert the card into the memory card slot, logo side facing upwards.



2. Click Start > My Computer. The inserted memory card is displayed.







SD (Secure Digital) Memory Card / MMC (Multi Media Card)

3. You can write data to the memory card. If the memory card is not formatted yet, format the memory card before use.



Since the memory card may be easily mislaid when moving your computer, keep the memory card separately.

To remove a memory card

- 1. Press the end of the memory card softly to pop it outward.
- **2.** Remove the memory card.



Do not remove a memory card for about 20 seconds after format, write, or delete operation in Windows 2000, Me, or 98SE. Removing a memory card immediately after the operations may cause damage to the memory card caused by the inherent problem of the Windows operating system.

To format a memory card

You can use a memory card after the format operation. The procedures to format a memory card are described below.



Since format operation deletes all data in the memory card, please make sure that there is no important data in the memory card before formatting.



To protect the data in the memory card

Set the write protection tab of the Memory Stick or SD memory card to the Lock position.

- 1. Click Start > My computer.
- 2. Press the right touchpad button on the memory card drive, and select **Format** from the pop-up menu.
- 3. Click **Start** to start the format operation.



To use a memory card in both the computer and other digital device such as digital camera, it is recommended to format the memory card in the digital device. If you format the memory card in the computer, you may have to format the memory card in other digital device again to use the memory card in the digital device.



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 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.

To Re-install the Memory Stick (Card) Driver

The Memory Stick (Card) needs to be removed prior to installing the driver.

If the driver is installed when the Memory Stick (Card) is installed, remove the Memory Stick (Card), then select Start > Control Panel > System > Hardware tab > Device Manager, remove Other Device and re-install the Memory Stick (Card) driver using the System Software CD.

Using the CF Card Slot

You can insert a CF card, used in multimedia devices such as digital cameras, into the CF card slot and exchange data between the CF card and the computer.

1. Insert a CF card into the CF card slot at the side of the system.



2. If you insert a CF card, the Removable Disk window appears and you can use the CF card.



To remove a CF card

Close the Removable Disk window and pull the CF card, holding the lower side of the card.

Since using your nails to pull the card may cause injury to your nails, please use your fingers to pull the card.

Using Samsung Smart Screen

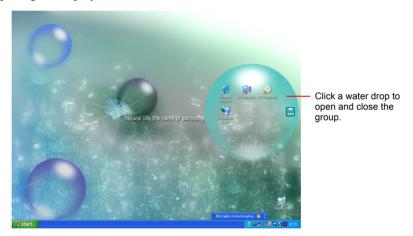
Use Samsung Smart Screen program to arrange desktop icons as desired and manage them effectively.

1. Click Start > All Programs > Samsung > Samsung Smart Screen.



When you launch Samsung Smart Screen for the first time, a dialog box asking whether to register the program as a start program or not appears. If you select OK, the program is automatically launched when you start your computer.

2. Samsung Smart Screen appears. When you run the program for the first time, water drop image is displayed.



3. To move an icon, click a water drop to open it, then drag an icon to another water drop.



To return to Windows desktop

Right-click on Samsung Smart Screen and click **Windows desktop**. Windows desktop is displayed.

To return to Samsung Smart Screen, double-click ([5]) icon on the taskbar.

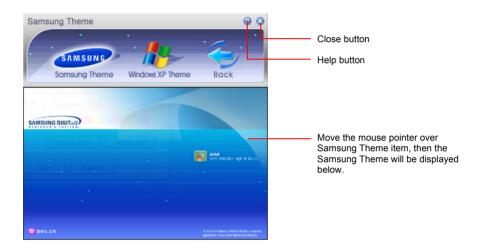
To change background or skin

Right-click on Samsung Smart Screen and select desired item.

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 > 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

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



- Click Start > Control Panel.
- Click Network and Internet Connections in the [Control Panel] window. 3.
- Click Network Connections in the [Network and Internet Connections] window.
- 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:

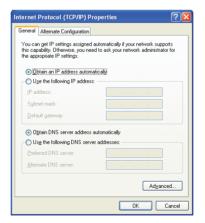
On the **General** tab, select "Obtain an IP address automatically" and "Obtain DNS server address automatically". Click **OK**.

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

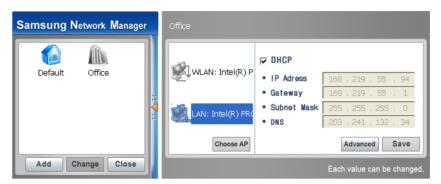
- 1. Connect LAN cable to the computer's LAN port.
- 2. Double-click Samsung Network Manager icon on the desktop. Or click Start > All Programs > Samsung Network Manager > Samsung Network Manager.
- 3. When you are using DHCP, available IP's are displayed in the status dialog box. Click Change.



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 59.



The description in this section concerns the Intel(R) PRO/Wireless LAN 2100 3B Mini PCI Adapter (hereafter referred to as a 11b card), the Intel(R) PRO/Wireless LAN 2200BG Network Connection (hereafter referred to as a 11g card) and the Intel(R) PRO/Wireless 2915ABG Network Connection device (hereafter referred to as a 11a/g 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 > Performance and Maintenance > 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 (p10) 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 computerto-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.

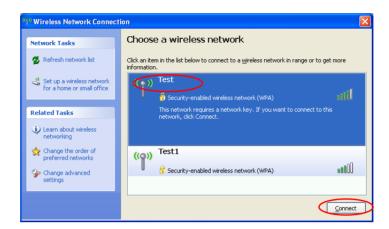


The connection setup is described for a computer running on Windows XP Service Pack 2. If you are using the Windows 2000 system, refer to (p 51). For more detailed information such as the network key (encryption key), ask your network administrator.

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



Select an AP (E.g. Test) to connect to and click Connect.
 When the network key dialog box appears, enter the network key and click Connect.





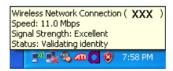
When a network key is not defined for a selected AP, click on Link to display the warning message box. Then click Connect again in the box.

Now when **Connected** in AP is displayed, 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 (p 64).)

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.



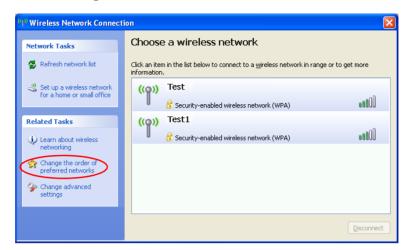
The connection setup is described for computers running Windows XP Service Pack 2. If you are using the Windows 2000 system, refer to (p 51).

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.

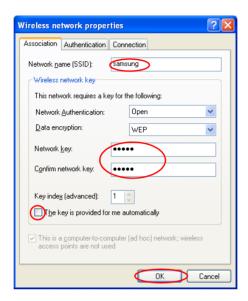


2. Click Change the order of Preferred Networks.



- 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**.

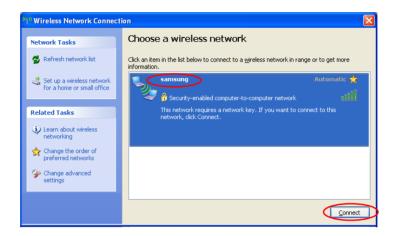


Now your wireless network setup has been completed.

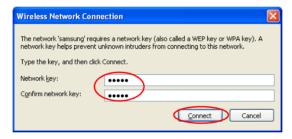
Step 2. Connecting to the configured computer

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, and click Connect.



3. Enter a cryptographic key in the network key box and 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, just click Connect, without any keystrokes.

When connected to the wireless network, the system displays Connected in the selected network of the Network Connection window.



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(for an 11a/g and 11g card)

You can use a wireless LAN by using a wireless LAN configuration program (PROSet) provided separately.



For an 11b card, see "Wireless Network Setup Using the Wireless LAN Setup Program(for an 11b card)" (p55).

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.

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 PROSet Wireless > Intel PROSet 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. In Available Networks, click on Refresh.
- 2. Select the name of desired access point or computer-to-computer network to connect from the searched available networks list, and click **Configure**.



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. Enter **Profile Name** and click **Next**.
- **4.** In the Search Security Settings window, the wireless network security search message will appear. Click **Next**.
- Enter the network authentication, data encryption (WEP), encryption level, key index, and wireless security password configured for the target access point or computer-to-computer network in the Security Settings window, and click Next.



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 encryption key: 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).
- **6.** The Done window appears, click **OK**.

When a wireless connection to an access point is established, the connection icon ([60]) 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. In Profiles, click on Add.
- 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:

- Network (Infrastructure) Connect to an Access Point Select to connect to an access point.
- Device to device (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), encryption level, key index, and wireless security 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. 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.

Wireless Network Setup Using the Wireless LAN Setup Program(for an 11b card)

You can use a wireless LAN by using a wireless LAN configuration program (PROSet) provided separately.



For an 11a/g card, see "Wireless Network Setup Using the Wireless LAN Setup Program(for an 11a/g and 11g card)" (p51).

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 (**SU**) 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 64bit) 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.
- 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

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.

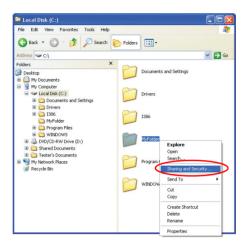


When a file or folder is shared, anyone connected to the network can open and delete the shared file or folder.

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**.



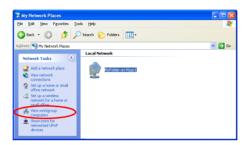
Be cautious when selecting 'Allow network users to change my files' since other network users can change the files in the shared folder.

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. Double-Click My Network Places of desktop under Other Places.
- 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

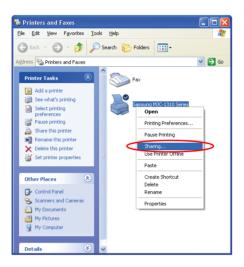
This section describes how to share a printer between computers connected to a network.

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.
- Select 'A network printer, or a printer attached to another computer', and click Next.

- Select 'Browse for a printer', and click Next.
- 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.
- 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 2.

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.

- 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

Using System Setup

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

Menu	Function
Main	Changes the basic system.
Advanced	Configures advanced features on your computer.
Security	Enables security features, including passwords.
Boot	Specifies the order of boot devices and configures boot features.
Exit	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

Navigation Key	Function
<f1></f1>	Displays the General Help window.
<esc></esc>	Exits the current menu.
< ↑ > or < ↓ >	Moves the cursor up and down between fields.
<> or <>	Selects different menus. Pressing the <esc></esc> key at the Main menu brings you to the Exit menu.
<f5></f5>	Scrolls backwards through the options for the highlighted field.
<f6></f6>	Scrolls forward through the options for the highlighted field.
<f9></f9>	Sets the parameters for the current menu to their default values.
<f10></f10>	Save changes and exit system setup.
<enter></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 $< \downarrow >$ 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

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 67.
- 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.

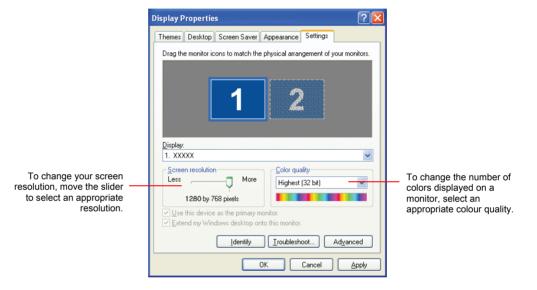
Deactivating the Password

- 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 Color Depth

Screen resolution is the number of pixels displayed on the screen. High resolution makes the overall screen area large, although individual items appear small. Color quality is determined by the number of bits used to represent a pixel on the screen. High color 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.



3. When you have completed configuration, click Apply.



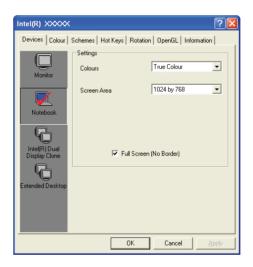
It is recommended setting the resolution to 1280x768, and the number of colours to Highest (32bit).

Using External Display Devices

Using external display devices such as monitor or projector, you can view the screen images alternatively or simultaneously. You can extend the screen into two display devices to use larger workspace.

Using external display devices would be especially useful when you are giving presentations or watching a video file.

- Connect a monitor or a projector to the monitor port of the computer or the docking station.
- 2. Right-click on the desktop, and select **Graphics Options > Graphics Properties**.
- **3.** On the **Devices** tab, select your desired display device, and click **OK**. (The displayed device list is determined by the currently connected devices.)



Monitor	Displays on an external device such as monitor or a projector.
Notebook	Displays on the notebook LCD only.
Intel(R) Dual Display Clone	Displays the same screen on the notebook LCD, and an external device such as monitor or projector.
Extended Desktop	Extends the screen into the notebook LCD and an external device such as monitor or projector to use a 2 times larger workerspace.



To switch display devices using shortcut key

You can switch display devices easily by pressing <Fn>+<F4/≜□> shortcut key.

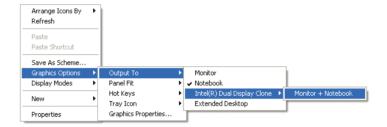
Provided that the CRT monitor is connected, the display order will be LCD > CRT > LCD+CRT whenever the <Fn>+<<F4/
||O> key is pressed.

You cannot use the <Fn>+<F4/阊□> shortcut key in the full screen mode DOS prompt.



To change display devices easily

Right-click on the desktop, and select Graphics Options > Output To to change the current display device easily.





To change the screen resolution and color quality

If the screen does not appear clearly, please try to change the screen resolution and colour quality. In the figure of step 3, select a device, and configure the color, screen area, and refresh rate.

System Management

Using Power Management Options

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.

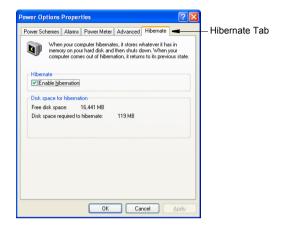
Hibernate Mode (Power Management or Manual Method)

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".





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:

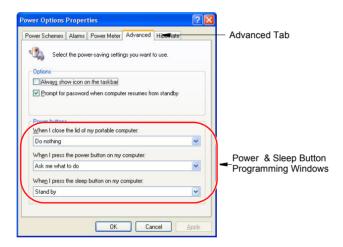
The manual **<Fn+**Esc/ **>** > key combination will not activate Standby or Hibernate modes while you are playing a multimedia program or have an active USB device connected.

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:

- Click Start > Control Panel > Performance and Maintenance.
- Click **(\mathbb{\ell}** 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 Rest <Esc/ \geqslant > 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 74 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

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 (p114) 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. First, slide the right battery latch in the direction of open(), slide the left battery latch in the direction of open() and remove the battery.



4. To install the battery again, insert the battery into the battery compartment of the system and slide the right battery latch in the direction of closed() to fix the battery.

Monitoring the Battery Charge

You can view the battery charge status by completing the following procedures.

To use the shortcut key to view

Press the <Fn>+<F2/ > key combination on the keyboard and then the current power source and the current remaining battery charge are displayed at the top left of the screen.

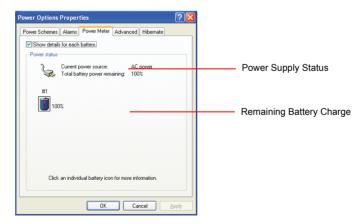
To view on the battery

Click the PUSH button on the battery. The remaining battery charge (%) will be displayed.



To view through the Control Panel

Select Start > Control Panel > Performance and Maintenance > Power Option > **Power Measure** tab. Then you can view the current power source and the current remaining battery charge.





Using the battery

Battery is 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. 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.

Using the Security Lock Port

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.
- 2. While holding the security lock port lever to the left, connect the cable to the security lock port.





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

Tips for Using Your Computer

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



Do not try to disassemble your computer. Opening the system chassis voids your warranty. Only an authorised manufacturer 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

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

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 authorized manufacturer's service center for a replacement.

Storing the Computer for Long Periods

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

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 86 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.

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

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

- O1 The LCD screen is blank.
- Adjust the LCD screen brightness. Use the $\langle Fn \rangle + \langle \psi \rangle$, $\langle Fn \rangle + \langle \psi_{\blacktriangle} \rangle$ keys.
- O2 The screen saver disturbs screen viewing during Media Player or video file operation.
- Α Under the Media Player Tools, Options > Player > Enable Screen Saver During Use, uncheck the box and restart the player.
- O3 In DOS mode, changing the full screen DOS mode by pressing <ALT>+<Enter> key displays a broken image for a short period.
- The DOS mode which supports 2 Byte characters such as Korean and Japanese Α runs in graphic not in text mode. In this case, a broken image may be displayed while changing the video mode settings.
- O4 The screen blinks, displays noise for a short time, or the screen resolution is changed.
- Α This may happen in the following cases (resolution change, display device change, removal of AC adapter, system restart, and the implementation or termination of stand-by mode or maximum power saving mode) This happens while the system is detecting display devices connected to the system. During the detection operation, the connected display devices may blink or some noise may occur. If you continually view an afterimage on the screen, right-click on the Desktop and select Refresh or restart the system.
- Q5 Extended Desktop is not configured on [Display Properties] dialog. (Start > Control Panel > Appearance and Themes > Display > Settings tab)
- Change the setting to extended desktop on [Graphics Controller Properties] Α dialog. (Refer to (p 72).)
- Q6 I pressed $\langle Fn \rangle + \langle F4/ \boxtimes \square \rangle$ keys, then the screen blinks.
- This problem may occur when you pressed <Fn>+<F4/Alo> keys to convert display devices while there is no external display device connected. Connect an external display device first, then convert display devices.

- Q7 When I pressed <Fn>+<F4/≧□> keys to change display devices, the screen resolution is changed.
- A Change the resolution again on [Graphics Controller Properties] dialog. (Refer to "Using External Display Devices" (p72).)
- Q8 <Fn>+<F4/
 | | > keys do not operate.
- A When you are playing a video file such as a video CD, an MPEG file, or a DVD, when no external display is connected, or when you are using the extended desktop mode or full screen DOS mode, you cannot change display devices.
- Q9 Desktop is displayed abnormally or some icons disappear while the system is operating.
- A This problem may occur when you entered hibernate mode while using the Extended Desktop mode, removed the monitor and then pushed power button to exit hibernate mode.
 When the desktop is displayed abnormally, press right touchpad button on the
 - When the desktop is displayed abnormally, press right touchpad button on the desktop and click Refresh. When the icons disappear, press <Fn>+<F4/=|0> or <Ctrl>+<Alt>+<F3> to change the display setting.
- Q10 When I played DVD/MPEG/AVI in Windows 2000, the screen is not displayed properly.
- When you play DVD/MPEG/AVI in Windows 2000 while the display setting is in Extended Desktop mode, the operation may be abnormal due to the limitations of the operating system. Press <Fn>+<F4/=10> to change the display setting to Dual Display mode, then play the video clip.
- **A2** If above method does not solve the problem, change the setting to display only on the LCD.
- Q11 When I played DVD or Video CD in Dual Display Clone mode or Extended Desktop mode, actions such as changing display setting or volume operates slowly.
- A Playing DVD or Video CD requires separate data handling. When you are using Dual Display Clone mode or Extended Desktop mode, problem may occur because the data exceeds the capacity of the video chip. Change the display device to display only on LCD or only on CRT.

Modem Related

O1 I cannot hear the modem sound.

- 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 vellow 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:
- Click Start > All Programs > Accessories > Entertainment > Volume Control. 1.
- 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 a 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 (Rest mode) (For Windows XP and 2000)?

- **A** To receive a fax when the system is in power saving 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.

- In the Modems tab, select the installed modem, and click Properties. 4.
- 5. In the Power Management tab of the Modem Properties window, select the "With this device, exit the computer from stand-by mode" item and then click OK. The above setting enables the modem to turn on the system and receive a fax when in power saving 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. Select My Network Places > View network connections from the Desktop.
- 2. Click the right button on 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 wired LAN while using wireless LAN may not execute <Wake On LAN> function. Configure wireless LAN to 'Disable' to use <Wake On LAN> function.
- Q2 When I connected 100Mbps wired LAN and the computer exits standby/ hibernate mode, a message informing 10Mbps wired LAN connection appears.
- A When the computer exits standby/hibernate mode, restoring the network takes about 3 seconds. When the network is restored, it operates in 100Mbps.

Wireless LAN Related

Refer to "Connecting Through a Wireless LAN (Option)" (p42) for the basic uses of a wireless LAN.

O1 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 vellow 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 O3. 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.

O3 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.
 - If there is a Wireless LAN On/Off button, check if the wireless LAN button is pressed.
- 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. Install the AP in a high and open space 50cm from the wall and far removed from any other radio signal sources.
- **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.
- 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
- **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)" (p43)) 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 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.

Q7 When using a computer-to-computer (Ad Hoc) network, sometimes I cannot search the access point.

It may happen occasionally when you are using a computer-to-computer (Ad A 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

Q8 Running Help file while running Profile Wizard in the wireless LAN program (PROSet) makes the PROSet window white.

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

Q9 The network does not operate properly when both the wireless and the wired network connections are simultaneously configured with the same IP address.

You cannot use the wireless and the wired network connections using the same Α 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.

Q10 The wireless LAN does not work properly when there is a device operating on an adjacent frequency in the vicinity of the product.

- A1 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. For more information about AP settings, refer to the User Manual supplied by the AP manufacturer
- A2 IEEE802.11g equipment operates in hybrid mode when there is active IEEE802.11b equipment. This may result in data rate degradation.

O11 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

Q12 Although I have turned the wireless LAN off using the Off Button on the PROSet, the wireless LAN operating light is still on.

A This is normal. The Off Button for the Wireless LAN on the PROSet only turns off the S/W and not the H/W for the Wireless LAN.

Q13 After installing the PROSet, I cannot manage the wireless network under Windows.

A Click on "Use Microsoft Client" in the Tools menu of the PROSet program to manage a wireless network in Windows.

To manage a wireless network in the PROSet program, click on "Use Inter PROSet/Wireless" in the Tools menu of the PROSet program.

Games and Programs Related

O1 3D game is not executed, or some functions are not working.

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

O2 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.

O3 When I play a game, the screen is displayed in reduced size.

- A1 Before executing a game, press touchpad right button on the desktop, and click Graphics Options > Panel Fit > Enable.
- **A2** Change the display setting to extended desktop mode before executing a game.
- 1. Press touchpad right button on the desktop.
- 2. Click Graphic Options > Graphic Properties > Devices tab.
- 3. Select Notebook, then select 'Full Screen' check box.
- 4. Click OK.

O4 When I pressed $\langle Fn \rangle + \langle F4/ \boxtimes \square \rangle$ kevs to convert display devices while playing a 3D game, the computer does not operate.

Α Do not press <Fn>+<F4/\$| \infty> keys while playing a 3D game, since it may cause a system error.

Q5 When you press the $\langle Fn \rangle + \langle F4 \rangle = 0$ or $\langle Fn \rangle + \langle F2 \rangle = 0$ keys while running a game, the screen is not properly displayed.

This may happen in some games. Press the $\langle Fn \rangle + \langle F4 / \blacksquare | 0 \rangle$ or $\langle Fn \rangle + \langle F2 / \blacksquare \rangle$ keys before running a game and do not press the button combination while running the game.

- Q6 The 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'.)
- Q7 When I pressed <Fn>+<F10 or F11> keys while playing a game, the computer does not operate properly.
- **A** Do not press <Fn>+<F10 or F11> keys while playing a game, since it may cause a system error.
- Q8 When I played 'The Sims: House Party' game in Dual Display Clone mode, a mouse afterimage is displayed.
- A1 Press <Fn>+<F4/
 | O> to change the display setting to Dual Display mode, then play the game.
- **A2** If above method does not solve the problem, change the setting to display only on the LCD.

Security Center

Q1 To change the popup window display settings when connected to the Internet.

In the Windows XP SP2 environment, you can decide whether to display a popup window when connected to the Internet, for user convenience and security.

- A1 To display most of the popup windows when connected to the Internet:
- 1. Click on Internet Options in Start > Control Panel > Security Center > Manage security settings for.
- 2. In the Privacy tab of Internet Properties, clear Block pop-ups.
- A2 To display popup windows only from the current site when connected to the Internet:

Place the cursor on the notification area at the bottom of the Internet address bar and right-click to display a menu, from which you can select Temporarily Allow Pop-ups or Always Allow Pop-ups from This Site.

- **A3** To display popup windows from a particular site:
- 1. Click on Internet Options in Start > Control Panel > Security Center > Manage security settings for.
- 2. In the Privacy tab of Internet Properties, click on Settings from Block pop-ups.
- 3. Enter a URL to want to allow pop-ups into Address of Web site to allow and click on Add.
- 4. You will find that the entered address is added to the allowed sites list. The next time you connect to the Web site, you will see pop-ups appearing.
 - When you need to re-block a permitted site, select the Web site address that you want to block from the Allowed Sites and click on Remove.
- Q2 When you connect to a Web site, you see the message, "To help protect your security, Internet Explorer stopped this site from installing an ActiveX control on your computer" or "This site might require the following ActiveX control" below the address bar.
- A Windows XP SP2 blocks unsigned ActiveX controls from being installed when connected to certain Web sites for security reasons. On some Web sites that have no ActiveX controls installed, applications are not started or do not display properly.

In this case, to install ActiveX controls, right-click the notification area to display a menu from which you can select Install ActiveX control.

Q3 When you see a Windows Security Alert icon () appear on the right part of the task bar.

With the Security Center feature added, Windows XP SP2 checks the Firewall, the automatic updates configuration and installation of virus-checking programs to display a Windows Security Alert icon on the right part of the task bar when it judges that the computer is vulnerable to attacks from the Internet. In this case, check the following to install the necessary components.

- **A1** Set up the Windows Firewall.
 - When you set up the Windows Firewall, you will be protected from unauthorized access through the Internet or the network.
- 1. Click on Windows Firewall in Start > Control Panel > Security Center > Manage security settings for.
- 2. From the General tab of Windows Firewall, select ON (recommended).
- 3. If you want to allow a certain program or service to gain access to your computer using the Firewall, select and check the program or service that you want to allow access from, in the Exceptions tab of the Windows Firewall. If you want to add a program to Programs and Services, click on Add Program and select it.
- A2 Set up Windows Automatic Updates.

 This automatically downloads and installs critical updates via the Internet to keep your computer up to date.
- 1. Click on Automatic Updates in Start > Control Panel > Security Center > Manage security settings for.
- 2. From general tab of Automatic Updates window, select Automatic (recommended).
- A3 Keep your computer current with the latest virus updates. (ex: Norton Antivirus) Even when you have installed Norton AntiVirus on your computer, Windows cannot recognize the program until you configure the settings, displaying a Security Alert icon.

 When you first use or install Norton AntiVirus for the first time, follow the
 - Registration Wizard steps to configure the registration settings.

 To protect your computer from virus attacks with the latest updates, click on Options to display the Norton AntiVirus Options window. From the left menu of the window, check Run Automatic Protection to select Automatic Protection and check Run LiveUpdate to select LiveUpdate.
- A4 Two virus scanning programs on one computer may cause system conflicts. Remove one of the programs from the system.

A5 If Windows does not recognize the existence of an anti-virus program even when it has been installed, your computer could be vulnerable to attacks from the Internet. You should install an anti-virus program that your computer is able to identify.

Check the following programs which Windows can detect and select one from the list.

A list of anti-virus programs that Windows can detect:

- -Symantec Norton Anti-Virus
- -NetworkAssociates (McAfee)
- -TrendMicro
- -ComputerAssociates
- -Panda
- -Kaspersky
- -Ahnlabs (AhnLab)



The list is subject to change. Visit the Web site (www.microsoft.com) regularly to check the latest list

Restoring the System



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.



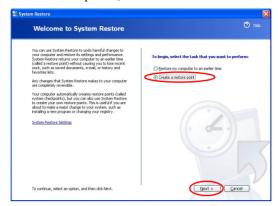
There has to more than 200MB of free space on the hard disk drive. If the disk space is insufficient, a saved restore point might be deleted.

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.





Since changes made after the Recovery Point may not be maintained, please back-up all necessary files to another location before performing system recovery.

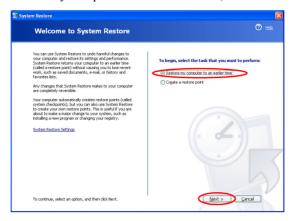
3. In the Restore point description box, type a name to identify the restore point, and than click Create. A restore point has been created.

Returning your computer to an earlier restore point

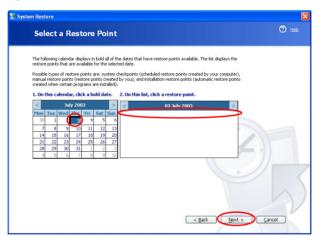
The procedures to return your computer to an earlier restore point when a problem has occurred are described below.

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 than 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

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.



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.



- Standard Installation: This displays a list of drivers or programs that are not currently installed on your computer from the system software CD provided. All necessary components are installed using the factory defaults.
- **Minimum Installation**: This displays the components (driver, Windows programs, etc) that, if not installed, may cause problems with the system performance. You can install only required components.
- **Custom Installation**: You can customize the installation of drivers and programs.

Installing drivers and programs

- 1. Click **Standard Installation** in the main window of the System Software CD. (Standard Installation is recommended)
- 2. The system is scanned to display the drivers and programs that need to be installed.
- 3. Click **OK**. The drivers and programs are automatically installed as factory defaults.



(The components of Standard Installation can vary depending on the model)



In figure 3, to add components to the installation, click **Cancel** and select the component(s) that you want to install and then click on Install Now.

4. When done, restart the system.

Reinstalling Windows XP

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 Window 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.



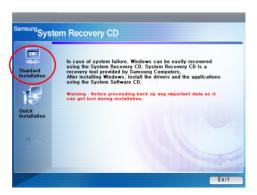
When you have set a booting password

You are asked to enter your booting password after restarting the system during the Windows installation. Enter the password to continue to the next steps.

Reinstalling Windows

Explain Standard installation option as a standard.

- 1. Insert the system recovery CD into the CD-ROM drive.
- 2. In the initial screen, click Standard Installation.



- Standard installation: You can change the settings for partitioning, the installation folder, etc. during the Windows installation. However, 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.
- Quick Installation: This re-installs Windows with the user data and the system configuration intact. The user data in the already existing Windows folders may be preserved as the existing Windows folders are overwritten.
- 3. The description for the standard installation appears. Click Yes. The installation starts, and the system will be restarted after a while.



When Quick Installation is selected.

Setup proceeds with Step 3 before automatically installing Windows. Quick Installation overwrites the existing Windows version, so that drivers or applications do not need to be reinstalled.

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 devides 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 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.



If you press ESC to select another folder for the installation, new Windows folders are created causing a risk of dual booting.

- **6.** After the installation process copies the necessary folders for the Windows installation, restart the system, and the message "Press any key to boot from CD" is displayed. You do not need to enter anything. In a moment, the Windows XP installation screen will appear to proceed with the installation.
- 7. When the Regional and Language Options window appears, click Next.

- 8. When a window that requires your name and organization pops up, enter your name and the organization and click Next.
 In the Windows XP Professional edition, an additional window that requires the computer name and the administrator password appears.
 Enter the computer name and the administrator password and click Next.
- **9.** When **the Date and Time Settings** window appears, click **Next**. Setup will continue.
- **10.** When the system restarts to display Press any key to boot from CD, do not press any key.

When you see the Windows desktop, this means that the installation process is completed. Remove the system recovery CD and install **the device drivers and applications** from **the system software CD**.

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 68.

- **3.** Do not press any key at this time. After a while the partition configuration screen appears.
 - To not change the partition, press **<Enter>**.
- **4.** Select the desired file system (format). To maintain the current file system, press **<Enter>**.
- 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.
- **6.** After the installation process copies the necessary folders for the Windows installation, restart the system, and the message "Press any key to boot from CD" is displayed. You do not need to enter anything. In a moment, the Windows XP installation screen will appear to proceed with the installation.
- 7. Follow the instructions of the Windows XP installation wizard to continue with the installation.
- **8.** When the installation is complete, the computer will restart. When the system has restarted, the Press any key to boot from CD message appears. Ignore the message.

The system boots and the Windows and Windows Registration screen appears. Register Windows, following the instructions to finish the Windows installation. Remove the System Recovery CD and install the **device drivers** and **application programs** using **Standard Installation** from the **System Software CD**.

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
CPU	Intel Pentium M ULV 1.1~1.2GHz Intel Celeron M ULV 900MHz~1.0GHz	Optional
Cache memory	2MB / 512KB L2 cache	Optional
Main memory	On board 256 DDR SDRAM (An additional 128/256/512/1024 MB module can be installed, 1DDR socket)	
Main Chipset	Intel 82855GME / ICH4-M	
Hard disk drive (HDD)	1.8", UltraDMA, S.M.A.R.T 8.0mmH	
CD drive	External CD-RW / DVD-Rom Combo, DVD-Multi drive	Optional
Graphics	Intel Integrated GFX 2, Memory : 64MB 1280 x 768 pixels (Wide XGA)	
Sound	AC97 Audio CODEC (AD1981B), support S/PDIF	
Network Interface	Modem: AMBIT MDC modem Wired LAN: 10/100 Base T Ethernet Wireless LAN: 802.11b, 802.11b/g, or 802.11a/b/g Optional	
Memory Card Slot	Memory Stick, SD(Secure Digital) Memory Card, and MMC(Multi Maximum 128 MB Media Card) Supported	
CF Card Slot	One Type	
Ports	Monitor, USB2.0 x 2, Modem(RJ-11), LAN(RJ-45), IEEE 1394 (6 Pin), DC-In, Microphone, and Headphone / S PDIF	
Options	Lithium-lon smart battery	
Dimensions (mm)	287.7 x 197.5 x 18	WxDxH
LCD Panel Size	12.1" Wide TFT LCD	
Weight	1.0 Kg (with standard battery is installed)	
Battery	Lithium-lon smart battery	
Operation Environment	Temperature (storage) : $-5 \sim 40^{\circ}$ C (operation) : $10 \sim 32^{\circ}$ C Humidity (storage) : $5\% \sim 90\%$ (operation) : $20\% \sim 80\%$	
Operation Voltage	100 - 240 VAC	
Frequency	50 - 60 Hz	
Output Power	60W	
Output Voltage	19.0VDC	

^{*} 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 2200BG Network Connection

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	0.85W
	Transmission Mode	1.45W
	Power	3.3V
Network Specifications	Compatibility	IEEE 802.11b, IEEE 802.11g
	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 or PROSet may be required depending on the network settings. For information on the PROSet installation, refer to (p 51). 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.

^{** 11}g 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)

Intel(R) PRO/Wireless 2915ABG Network Connection

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	0.85 W
	Transmission Mode	1.45 W
	Power	3.3V
Network Specifications	Compatibility	IEEE802.11a, IEEE802.11b, IEEE802.11g
	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 or PROSet may be required depending on the network settings. For driver update, visit www.samsung.com and for information on the PROSet installation, refer to "Wireless Network Setup Using the Wireless LAN Setup Program(for an 11a/g and 11g card)" (p51). For more information, ask your network administrator.

Radio Specifications

RF Band	2.4GHz, 5.725~5.825GHz	
Support Channels	1~13 channel, 149~161 channel (See "Regulatory Notice for Channel Use in France".)	
Device	Transceiver	
Standard Output Power	5 mW	
Transmission Method	11a mode: OFDM 11b mode: DSSS 11g mode: OFDM	
Transmission Rate (Mbps) *	11a mode** 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.

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 802.11a/g

• Regulation: ETSI 300 328, CE Marked

• Channel Allocation:

- Channel 10 (2457 MHz)

- Channel 11 (2462 MHz)

- Channel 12 (2467 MHz)

- Channel 13 (2472 MHz)

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

^{***11}g mode is supported only when you are connected to an IEEE 802.11g device (e.g. An Access Point supporting IEEE 802.11g).

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 or PROSet may be required depending on the network settings. For driver update, visit www.samsung.com and for information on the PROSet installation, refer to "Vireless Network Setup Using the Wireless LAN Setup Program(for an 11b card)" (p55). 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)

Abbreviations

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

IRQ 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

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.

SAMSUNG Q30

BA68-02721A11 041120

Changer 1

Getting Started

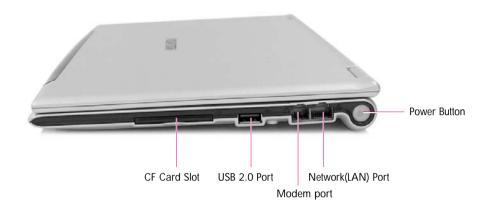
This chapter provides basic information for using this computer. System overview and methods for general use are provided.

Introducing The Computer

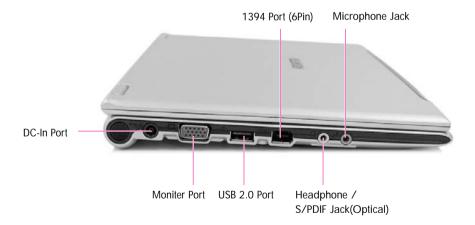
Front View



Right View



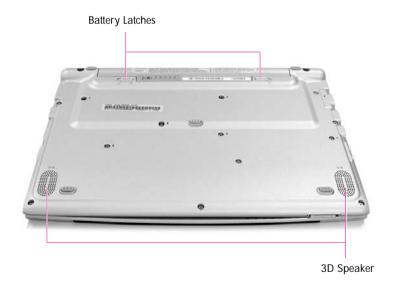
Left View



Rear View



Bottom View



Turning the Computer On and Off

Turning On

- 1. Insert the battery and connect the power according to the supplied Installation Guide.
- 2. Lift up the LCD panel and open it to a comfortable angle.
- 3. Press and then release the power button to turn the system on.



Since opening the LCD panel by hand might cause damage to the panel, please use both hands when opening the panel.

Turning Off

- 1. Click the **Start** button on the Taskbar.
- 2. Select Turn Off Computer.
- 3. Click Turn Off from the [Turn Off Computer] window.



Caution If the system is not turned off properly due to a system error, press and hold the power button for more than 4 seconds to turn the system off. After doing so, when you turn the system on, the system examination program is executed automatically.

Creating and Changing User Accounts

Multiple users can be registered in a single system so that each user may use their own customized working environment. Procedures to register and change user accounts are provided below.

Registering a new user

- 1. Click Start > Control Panel.
- 2. Click User Accounts > Create a new account.
- 3. Type a name for the new account, and click **Next**.
- Select the account type and click Create Account. The new user account has been created.

Changing users

- 1. Click Start > Log Off
- 2. Click Switch User.



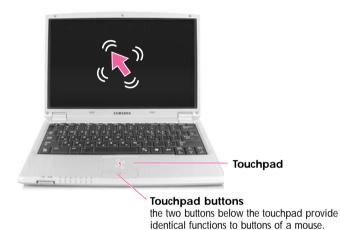
3. In the [Windows Log On] window, select the desired **user name**.

Mote To delete a user account

- 1. Click on a user account to delete and click **Delete the account**.
- Select either Keep Files or Delete Files, and then click Delete Account.

Touchpad

Movement of the pointer (arrow) on the screen will correspond to movement made with a finger on the touchpad.



Note Locking the touchpad

You can lock the touchpad and use only the keyboard and mouse. To lock the touchpad function, press the **<Fn>+<F9>** key combination.

Click (Select Function)

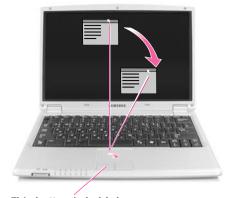
Place a finger on the touchpad, move the pointer on the screen to the icon or item to select, and tap the touchpad once. The click operation is also used to move the 'cursor' during document operations.

Double-click (Run Function)

Place a finger on the touchpad, move the pointer on the screen to the item to run, and quickly tap your finger on the touchpad twice. Or double-click the left touchpad button.

Drag (Move / Select)

Drag and drop a part to the required place.



This button is held down Place the touchpad pointer on the title bar of the window.

Using the Touchpad Scroll Function

The touchpad has a scroll function, which can be used like the wheel dial of a wheel mouse. Move up and down along the right edge of the touch pad (scrolling up and down) or left and right along the bottom edge of the touch pad (scrolling left and right) to scroll the screen. However, this may not apply to some programs.



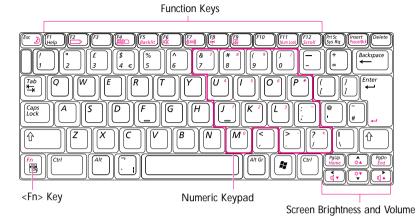
Caution: Using other objects other than a finger for touchpad use will result in touchpad malfunction and damage. Only use bare fingers.

> Operating the touchpad or touchpad button while starting your system may increase the time required for starting Windows.

Mote

To utilize the touchpad buttons for other more diverse functions, please refer to the Mouse icon in the Control Panel.

Using the Keyboard



Adjustment / Direction Keys Special Function Keys: The <Fn> key activates special functions when pressed in combination with other keys.

Key Combinations	Key Name	Function	
Esc 🔊	REST	Puts the computer into suspended mode.To use the computer again, press the power button.	
[2]	Gauge	Shows the current power source and the remaining battery charge.	
	LCD/CRT	Switches the display between the LCD and an external display device when an external display device is connected. (P. 6-8)	
F5 Backlit	Backlit	Turns the LCD on and off.	
F 6 □X	Mute	Turns the audio output on and off.	
(7)	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 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. 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.	
		Some distortion may be experienced when the 3D function is used, depending on the audio source.	

Key Combinations	Key Name	Function	
	Wireless LAN	Turns the wireless LAN service on and off for appropriate models.	
	Touchpad	Turns the touchpad function on and off.	
(fun Lock)	Num Lock	Puts the computer into suspended mode. To use the computer again, press the power button.	
F12 Scroll	Scroll Lock	Scrolls the screen up and down while the cursor position does not change in some applications.	
Insert Paune Wirk	Pause/Break	In DOS mode, pauses the scroll of the screen or exits a running program.	
(PgUp Home	Home	Moves to the beginning of the sentence.	
(FgDn End	End	Moves to the end of the sentence.	
	Volume Up	Increases the audio volume.	
(dv	Volume Down	Decreases the audio volume.	
	Brightness Up	Turns the LCD screen brighter.	
***	Brightness Down	Turns the LCD screen dimmer.	

Key	Function		
PSUP SA PSUP	Page Up / Page Down, Direction Keys		
	Moves to the previous or next page, or moves the location of the cursor on the screen.		
(Fn	Application Key Provides the right button function of the touchpad.		
	Windows key		
	Display start menu.		

Status Indicators

Shows the operating status of the computer.



Icon	Name	Description
1	Num Lock	Turns on when the numeric keypad is activated.
Ā	Caps Lock in upper case.	Turns on when all alphabet characters you type will be
₽ P	Scroll Lock	Turns on when it is set to scroll the screen up and down while the cursor position does not change in some applications.
0	Hard disk drive	Blinks when the hard disk drive is in operation.
« ♦ »	Wireless LAN	Turns on when wireless LAN function is enabled. (This light does not operate for the models without wireless LAN.)
	Charger	Turns blue - 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.
-Ď.	Power	Turns blue - 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 < >> or < >> > 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: Brightness Level 2

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

- 1. Turn the system on. When the **Samsung Logo** appears, press the **<F2>** key 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 dimmer 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.

Caution

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

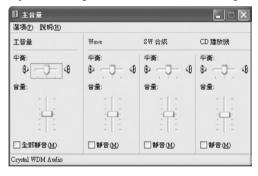
Press < >>+< 3>> or < >> >+ < 1>> from the keyboard.

Using the Volume Control Program

On the taskbar, click the **Volume** () icon, and adjust the **slide bars**.



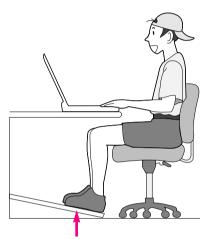
For advanced volume control options, double-click the **Volume** (2) icon, and adjust the settings in the [Master Volume] dialog.



Caution When you turn the system on, a booting noise may occur.

Proper Seating Posture During Computer Use

The proper seating posture during computer use is provided here. Maintaining proper posture during computer use enhances performance and prevents physical bodily harm.



If necessary, use a footrest to raise the level of your knees and ease the pressure on the thighs.



Seating Posture

- Position the chair so that the eyes are slightly higher than the display
- Straighten the neck and back.
- Place the legs naturally.
- If necessary, use a cushion to provide extra back support.
- Avoid working postures that require twisting the body or neck.



Lighting

- Soft, indirect lighting is recommended.
- Position the display panel so that external light does not reflect off the screen. Use curtains, if necessary.



Work Habits

- Take periodic breaks and stretch out stiff muscles regularly.
- Look outside the window or at distant objects frequently to relieve strain on the eyes.

Ghapter 2

Introducing Windows

This chapter provides basic information on using the computer's main operating system Windows.

Windows XP Basics

Windows is the computer's main operating system, which needs to be familiarized with in order for efficiently computer use.

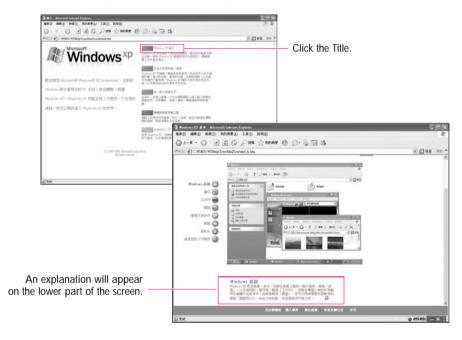
Windows XP Tour

A tour of the elementary functions provided by Windows XP.

Click Start > Tour Windows XP.

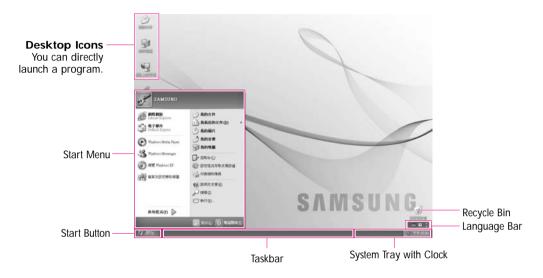
Or click Start > All Programs > Accessories > Tour Windows XP.

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



Understanding the Desktop

The Desktop is the working area on the computer. It consists of the large workspace, which is more or less the entire the screen and a Taskbar at the bottom.



Start Button	建 開始	Opens the Start Menu.
Taskbar		Displays programs that are currently running. Frequently used icons can be placed here.
Recycle Bin	資源回收筒	Deleted files or folders end up here.
Language Bar		Enables switching between English/other languages text inputs and provides other text input services.

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 the Control Panel, receive support by clicking Help and Support, and search desired items from computer or Internet by clicking Search.

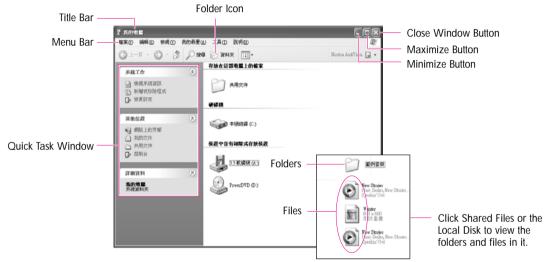


My Computer		Displays the contents of the hard disk, the CD-ROM drive, the network drive, and floppy disks. It can also be used to search and open files and folders.
Control Panel		Enables users to configure settings on the computer.
Help and Support	2	Provides on-line help, information on Windows and troubleshooting.
Search		Enables users to search for information in files or the Internet.
Run		Runs 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 Contents.

Mote

- 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.
 - A file is a document or various kinds of material
- What is a File? 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 Toolbar to view the entire structure. Click again to return to the Quick Task Window.

Help and Support Center

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

Click Start > Help and Support.



Troubleshooting Information

Document Operations

To create documents, WordPad or NotePad, which is included in Windows, or a separate specialized word processor program can be used, such as MS Word.

Instructions for creating documents using WordPad is provided here.

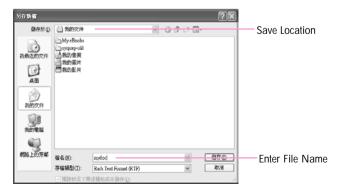
Creating a New Document

- 1. Click Start > All Programs > Accessories> WordPad
- 2. Create and edit your document. For more information about WordPad, refer to on-line Help.



Saving a Document

- 1. Select File from the Menu, and click Save.
- 2. Click on the Save in field to specify a folder to save the file in, enter the name of the file in the File Name field, and click **Save**.



Opening a Document

- 1. Click Start > All programs > Accessories > WordPad.
- 2. Select File From the Menu, and click Open.
- 3. Click on the Look in field and specify the folder in which the file is saved.
- 4. Select the file to open and click **Open**.

Printing a Document

To print a document, connect a printer to the computer.

For more information about connecting and configuring a printer, please refer to the printer manual.

To print a WordPad document

- 1. Turn on the printer, and insert paper.
- 2. Open the WordPad file to print.
- 3. Select **File** from the Menu and select **Print**.
- 4. Click **Properties**, adjust the printer options accordingly, and click **OK**.
- 5. In Print window, click **OK** to print the document.

Chapters

Using The Computer

This chapter investigates various different functions of the computer and provides information on using the related application programs for them.

Using the CD Drive (optional)

For this computer, a 1394 external CD-RW/CD-ROM combo or DVD multi drive is provided.

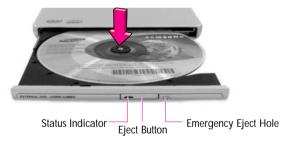
Connecting a CD drive

Connect the CD drive to the 1394 port.



To Run a CD

1. Push the eject button on the CD drive.



- 2. When the tray slides out, place a CD onto it and push down until it clicks.
- 3. Push the CD tray in gently. The CD will run automatically.

Note To eject a CD when the CD drive is out of order or the system is turned off, unfold a paper clip, and insert the unfolded end of the clip into the hole () and press until the CD tray opens.

- Caution: To clean a CD or DVD title, clean the disc with a soft clean cloth by wiping from the center outwards.
 - Do not eject the CD while the Status Indicator is on.

Using the Windows Media Player

The Windows Media Player enables the user to configure and play video and audio files from the computer or the Internet.

Click Start > Windows Media Player.

Or click Start > All Programs > Accessories > Entertainment > Windows Media Player.



Mote

Windows Media Player tour

For more information about using the Windows Media Player, run the Windows Media Player and click Help > Help Topics

Caution If you maximize or restore down the window while playing a media such as an audio CD on Media Player, the screen may not displayed properly for a moment.

To Play an Audio CD

- 1. Insert an audio CD into the CD drive, and a list of all available players is displayed automatically.
- 2. Select Windows Media Player, and click OK to play the audio CD.



To Play a Video CD

- 1. Insert a video CD into the CD drive.
- 2. When a video window appears, double-click the MPEGAV folder.
- 3. Double-click the **DAT** file.
- 4. When a warning window appears, click the **Open with** button.
- 5. In the new window, click **Select Program from List** and click **OK**.
- 6. Select the Windows Media Player, and click OK. The video will start playing.



To Write Data in CD

If your computer has CD-RW functionality, you can copy data to a blank CD or create an audio CD.

Mote An additional CD writing program is supplied in an additional CD.

- 1. Insert a blank CD into the CD-RW drive.
- 2. Click **Open Writable CD Folder** and click **OK**. The CD-ROM drive window appears automatically.



3. Click Start > My Computer.

4. Select, drag and drop folders or files to copy onto the CD-ROM drive window. Click Write Files to CD in the CD-ROM drive window.



- 5. When the CD Write Wizard appears, enter the CD label, and click Next. The data will begin copying.
- 6. When copying is completed, a 'completed' message will appear and the CD-ROM drive will open automatically.

Mote

For more information on copying CDs

Click Start > Help and Support. Enter [CD copy] in the search field, and click the Search button.

To create an audio CD

Launch Windows Media Player and click **Help > Help Topics**. [Using Windows Media Player > Using CDs > Creating your own CDs > To create your own CD].

Enjoying Home Theater

This product supports 5.1 channel output, which is a basic function for home theater systems, and DVD drives. It provides 3D surrounding sound and vivid screen.

Note

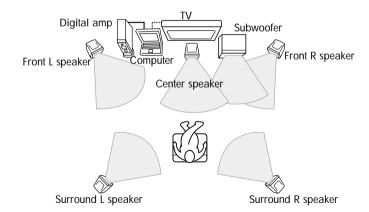
Home theater system usually consists of a TV, DVD, 5.1 channel speaker, and digital amp and provides a high-resolution screen (MPEG2) and 3D surrounding sound (Dolby 5.1 or DTS). With a home theater system, you can enjoy a vivid screen and sound in your home as if you are in a movie theater.

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

- 5.1 channel speaker system (amplifier, speakers, connection cables) (Purchased separately)
- DVD drive and DVD playing program on the computer
- DVD title that supports 5.1 channel (Purchased separately)

■ Step 1. Connect 5.1 channel soeaker system to your computer

- 1. Connect the S/PDIF jack on the left-hand side of the system and the 5.1 channel amplifier.
- Connect speakers to the amplifier. (Refer to speaker system's manual.)
 (P. 6-8)



Note You need a TV that supports VGA port to display through a TV.

Step 2. Configure digital sound output on the computer

- 1. Click Start > Control Panel > Sounds, Speech and Audio Devices > Sounds and Audio Devices.
- 2. In the Device volume field on the **Volume** tab, click **Advanced**.
- 3. In the [Master Volume] dialog, click **Option > Advanced Controls**. Then **Advanced** button is displayed on the bottom of the dialog.
- 4. Click **Advanced**, select "AC3 SPDIF", then click **Close**.

Step 3. Enable S/PDIF on the DVD program

When using 5.1 channel speakers, you need to install the Power DVD program from the DVD Installation CD separately supplied and then change the settings as directed in these steps:

1. Run Power DVD and click the **Settings** button.



2. On the Audio tab, set the Output setting to 'Use SPDIF Output'.



Now, you can enjoy home theater using DVD titles.

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

Using Memory Card Slot

Through the memory card slot, you can use memory cards such as memory stick, SD (Secure Digital) memory card, and MMC (Multi Media Card). You can use the memory cards as a removable disk, and use them to exchange data between your computer and digital devices such as a digital camera.



Memory Stick



SD (Secure Digital) Memory Card / MMC (Multi Media Card)

<u>Caution</u> : Restrictions on using Memory Stick/SD Memory Card

You can use Memory Stick, SD Memory Card and Memory Stick Pro (256MB~1GB, approximately 1 MB/s) for storing data only. Copyright protection function is not supported.

To insert and use a memory card

Caution: Before using the memory card slot, remove the slot protector. Press the end of the slot protector softly to pop it outward, then remove it.



1. Insert a memory card into the memory card slot.



2. Click **Start > My Computer**. The inserted memory card is displayed.



MemoryStick (E:)



3. You can write data to the memory card. If the memory card is not formatted yet, format the memory card before use.

ເຊິ່ງປະເທດ Since the memory card may be easily mislaid when moving your computer, keep the memory card separately.

To remove a memory card

- 1. Press the end of the memory card softly to pop it outward.
- 2. Remove the memory card.

ເຊັ່ນໃຫ້ເທັກ Do not remove a memory card for about 20 seconds after format, write, or delete operation in Windows 2000, Me, or 98SE. Removing a memory card immediately after the operations may cause damage to the memory card caused by the inherent problem of the Windows operating system.

To format a memory card

You can use a memory card after the format operation. The procedures to format a memory card are described below.

Caution: Since format operation deletes all data in the memory card, please make sure that there is no important data in the memory card before formatting.

Mote:

To protect the data in the memory card

Set the write protection tab of the Memory Stick or SD memory card to the Lock position.

- 1. Click Start > My computer.
- 2. Press the right touchpad button on the memory card drive, and select Format from the pop-up menu.
- 3. Click Start to start the format operation.

(മൂപ്പ്) To use a memory card in both the computer and other digital device such as digital camera, it is recommended to format the memory card in the digital device. If you format the memory card in the computer, you may have to format the memory card in other digital device again to use the memory card in the digital device.

Mote

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.

To Re-install the Memory Stick (Card) Driver

The Memory Stick (Card) needs to be removed prior to installing the driver. If the driver is installed when the Memory Stick (Card) is installed, remove the Memory Stick (Card), then select Start > Control Panel > System > Hardware tab > Device Manager, remove Other Device and re-install the Memory Stick (Card) driver using the System Software CD.

Using the CF Card Slot

You can insert a CF card, used in multimedia devices such as digital cameras, into the CF card slot and exchange data between the CF card and the computer.

1. Insert a CF card into the CF card slot at the side of the system.



2. If you insert a CF card, the Removable Disk window appears and you can use the CF card.

Caution To remove a CF card

Close the Removable Disk window and pull the CF card, holding the lower side of the

Since using your nails to pull the card may cause injury to your nails, please use your fingers to pull the card.

Using Samsung Smart Screen

Use Samsung Smart Screen program to arrange desktop icons as desired and manage them effectively.

1. Click Start > All Programs > Samsung > Samsung Smart Screen.

More When you launch Samsung Smart Screen for the first time, a dialog box asking whether to register the program as a start program or not appears. If you select OK, the program is automatically launched when you start your computer.

2. Samsung Smart Screen appears. When you run the program for the first time, water drop image is displayed.



Click a water drop to open and close the group.

3. To move an icon, click a water drop to open it, then drag an icon to another water drop.

Note

To return to Windows desktop

Right-click on Samsung Smart Screen and click Windows desktop. Windows desk-

To return to Samsung Smart Screen, double-click () icon on the taskbar.

To change background or skin

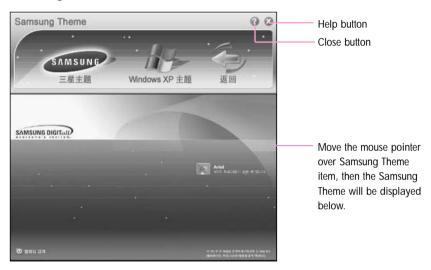
Right-click on Samsung Smart Screen and select desired item.

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 > 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.

Ginnier 4

Connecting to the Internet

This chapter provides instructions on connecting to the Internet.

Connecting to the Internet

The following options show many ways to connect to the Internet. An appropriate option should be selected depending on the user's working environment and the user's system specifications.

Option 1 Connecting using a modem and a telephone line Service has to be applied for and received from an Internet Service Provider (ISP) through an Internet service account.

Option 2 Connecting using a High-speed communication network service, such as ADSL and VDSL

Service has to be applied for and received from a High-speed communication network service provider. Receiving Internet service may require support from specific devices. Contact the service provider for details.

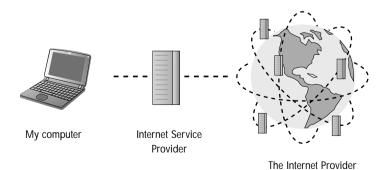
Option 3 Connecting using a wired LAN

Use a LAN cable that is already installed in your office or building,

Option 4 Connecting using a wireless LAN

The Internet can be accessed without a telephone line or a LAN cable if there is a Wireless LAN AP (Access Point) nearby.

Morta : The Wireless LAN function is optional.



Connecting to the Internet Using a Modem

1. Connect the telephone line to the modem port. Do not use a digital telephone line.



2. To connect the modem to the Internet, and use e-mail, you have to apply to an Internet Service Provider (ISP) for an Internet service.

- For more account information, please contact your ISP.
 - Ask your ISP about Internet fees and the disconnection procedure. If the Internet connection is not disconnected properly, additional telephone charges may incur.

Configuring the Network Environment Settings for Wired LAN Connections

A wired LAN environment is an environment where you can connect to the Internet using the company's LAN or with a broadband modem.

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



- 2. Click Start > Control Panel.
- 3. Select **Network and Internet Connections** in the [Control Panel] window.
- 4. Click **Network Connections** in the [Network and Internet Connections] window.
- 5. In the [Network Connections] window, point the mouse pointer to Local Area Network and click the right touchpad button. Select **Properties** from the popup menu that appears.



6. In the General tab of the [Local Area Connection Properties] window, check that the connecting device field includes the **Broadcom 440x 10/100** Integrated driver.

7. In the "This connection uses the following items" field, select **Internet Protocol** (TCP/IP), and click **Properties**.



- Note In the above screen, necessary network components can be added by clicking the Install button.
- 8. Enter the system's IP and DNS server addresses on the General tab of the [Internet Protocol (TCP/IP) Properties] window. If DHCP is used, click "Obtain an IP address automatically" and "Obtain DNS server address automatically" on the **General** tab.



- IP addresses and other information necessary for configuration can be obtained from the network administrator.
- 9. Once all of the information is entered in the [Internet Protocol (TCP/IP) Properties] window, click **OK** to finish.

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.



Mole 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.
- Click Close to close the dialog box.

Using Both DHCP and Static IP Simultaneously.

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

Molte This function is provided only when your operating system is Windows XP.

- 1. Click Start > Control Panel > Network and Internet Connections > **Network Connections > Local Area Connection**, press the right button of the touchpad, and then select Properties.
- 2. Select the Internet Protocol (TCP/IP) item, and then click Properties.
- 3. In the Alternate Configuration tab, click User configured, and then enter the appropriate values for the following:

(IP address, Subnet mask, Default gateway, Preferred and alternate DNS server, Preferred and alternate WINS server)



4. When the configuration has been completed, click **OK**. Now you can connect to both networks using DHCP and static IP respectively.

Configuring the Network Environment Settings for Wireless LAN Network (WLAN)

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.

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. (See P. 4-21. Using Network Services)

Note:

The description in this section concerns the Intel(R) PRO/Wireless LAN 2100 3B Mini PCI Adapter (hereafter referred to as a 11b card), the Intel(R) PRO/Wireless LAN 2200BG Network Connection (hereafter referred to as a 11g card) and the Intel(R) PRO/Wireless 2915ABG Network Connection device(hereafter referred to as a 11a/g 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 > Performance and Maintenance > 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.

Wireless network connections can be classified into two categories.

1) Access Point

You can connect to an AP to use the network. This is possible only in an environment equipped with an AP. (See P. 4-10, 'Connecting to an Access Point (AP)')

Mote 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.

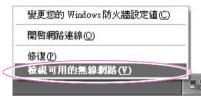
In computer-to-computer wireless networks, you can wirelessly connect 2 or more computers that have wireless LAN modules. (See P. 4-11, 'Connecting to computer-to-computer networks (peer-to-peer or ad hoc)').

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.

Morta The connection setup is described for a computer running on Windows XP Service Pack 2. If you are using the Windows 2000 system, refer to P. 4-15 'Wireless Network Setup Using the Wireless LAN Setup Program'. For more detailed information such as the network key (encryption key), ask your network administrator.

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



2. Select an AP (E.g. Test) to connect to and click Connect. When the network key dialog box appears, enter the network key and click Connect.



Note:

When a network key is not defined for a selected AP, click on Link to display the warning message box. Then click Connect again in the box.

Now when Connected in AP is displayed, and you can access the network.

Mote:

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. (P.4-27 Refer to "Sharing an Internet connection through a wireless network".)

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.

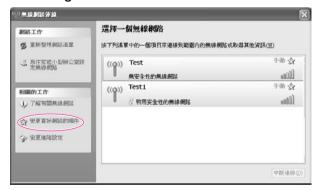
Mofte The connection setup is described for computers running Windows XP Service Pack 2. If you are using the Windows 2000 system, refer to P. 4-15 'Wireless Network Setup Using the Wireless LAN Setup Program'.

■ 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 Change the order of Preferred Networks.



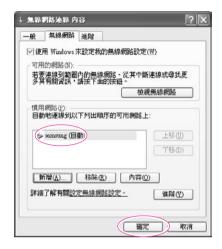
- 3. On the Wireless Networks tab, click **Advanced**.
- 4. Clear 'Automatically connect to non-default network' check box, if it is selected.
 - Select 'Computer-to-computer (ad hoc) networks only', and click Close.
- 5. In the Wireless Networks tab, click Add.
- 6. Enter the network name (e.g. samsung), and unselect 'The key is provided for me automatically'. Enter the encryption key in the Network key field, and click OK.



Moite

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)", and click **Connect**.



3. Enter a cryptographic key in the network key box and click Connect.



Mote

If the network key is not configured in "Connecting to computer-to-computer networks (peer-to-peer or ad hoc)" on P. 4-11, just click Connect, without any keystrokes.

When connected to the wireless network, the system displays **Connected** in the selected network of the Network Connection window.

Mote

Checking the connection status.

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



Wireless Network Setup Using the Wireless LAN SetupProgram(for an 11a/g and 11g card)

You can use a wireless LAN by using a wireless LAN configuration program (PROSet) provided separately.

Molte For an 11b card, see P. 4-18 Wireless Network Setup Using the Wireless LAN Setup Program(for an 11b card)

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.

■ 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 PROSet Wireless > Intel PROSet Wireless.)

Morte 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. In Available Networks, click on **Refresh**.
- 2. Select the name of desired access point or computer-to-computer network to connect from the searched available networks list, and click **Configure**.

Molte 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.

- Enter Profile Name and click Next.
- 4. In the Search Security Settings window, the wireless network security search message will appear. Click Next.
- 5. Enter the network authentication, data encryption (WEP), encryption level, key index, and wireless security password configured for the target access point or computer-to-computer network in the Security Settings window, and click Next.

Morte 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 encryption key: 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).
- 6. The Done window appears, click **OK**.

When a wireless connection to an access point is established, connection icon (19) appears in front of the name of 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. In Profiles, click on Add.
- 2. Enter Profile Name and Network name (SSID), select Operating Mode, then click Next.

Molte 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:

Network (Infrastructure) - Connect to an Access Point : Select to connect to an access point.

Device to device (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), encryption level, key index, and wireless security password configured in the access point.

Mote:

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. 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 (**a**) appears in front of the name of the connected profile.

Wireless Network Setup Using the Wireless LAN Setup Program(for an 11b card)

You can use a wireless LAN by using a wireless LAN configuration program (PROSet) provided separately.

Note: For an 11a/g and 11g card, see P. 4-15 Wireless Network Setup Using the Wireless LAN Setup Program(for an 11a/g and 11g card)

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.

Mote To not display '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 (\$\mathbb{S}\) icon on the taskbar. (Or, Click Start > All Programs > Intel Network Adapters > Intel PROSet for Wireless.)

Note In some languages, some buttons on the window may not be displayed. 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-tocomputer 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**.

Mote

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

An access point is represented by (🐸) icon, and a computer-to-computer network is represented by (
) 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.

Mote

The network authentication, data encryption (WEP), key index, and password of a access point are configured in the access point management program. For the 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 and 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, connection icon (19) appears in front of the name of 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.

Note: 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.

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

Mofte What is a network name (SSID)?

Network name (SSID) is a name that a wireless adapter uses for identifying connection. Enter the name of a computer-to-computer network (e.g. samsung) or the name of the access point to connect to. 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.

Morta 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, connection icon ((1)) appears in front of the name of connected profile.

Using Network Services

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.

Noîte Network services are provided for the computers that are connected to the network through wired or wireless network connections. (See Pages 4-4, 4-9,

Configuring Network Environment Settings)

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.

Cauที่ผู้ดูก : 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'.

Mote

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.



More If your computer is a member of another workgroup:

- 1. Click Other Places > Microsoft Windows Network.
- 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.

Mofte To share an Internet connection, the computers should be connected to a computer-to-computer (peer-to-peer) wireless network.

(See Page 4-11, 'Connecting to computer-to-computer networks')

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 2.

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.

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



3. In 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.

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

Giranter 5

System Management

This chapter provides information on efficient computer management.

Managing Power

Use Power Options to save power consumption. You can switch Standby Mode while you are not using your computer or configure the system components to shut it down on a specified time.

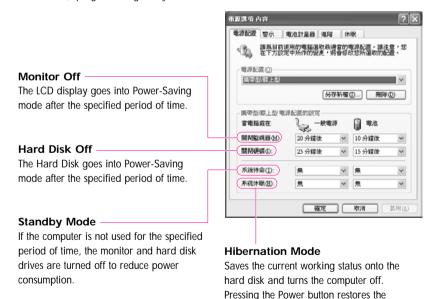
Specifying Power Save Time

You can specify Turn Off Monitor, Turn Off Hard Disk, System Standby Mode, and Maximum Power Save Mode.

Select Start > Control Panel > Performance and Maintenance > **Power Options** > **Power** Schemes tab. Then specify time in each item and click OK.

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 the SAMSUNG mode after reinstalling Windows, install the PowerCFG program using the system software CD.



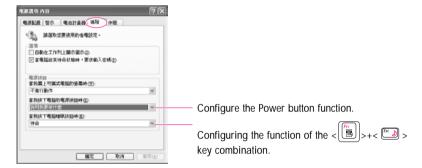
Press Power button to use computer again in Standby Mode or Hibernation Mode.

computer to the previous working status.

Using the Power button

You can configure the function of the power button.

Click Start > Control Panel > Performance and Maintenance > Power Options and select the Advanced tab.



Caution When the Power button is configured to put the system into Power-Saving Mode, manually shutting down the computer requires the Power button to be pressed and held for more than 4 seconds.

Using the Battery

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

This computer uses smart rechargeable Lithium-Ion (Li-Ion) battery.

- Caution: Please read the instructions on the battery before use.
 - Please refer to the system operation environment (Page A-2) of this manual and operate and store the battery at room temperature.

Ejecting and Attaching Battery

- 1. Shutdown system and close LCD.
- 2. Put the computer upside down.
- 3. First, slide the right battery latch in the direction of **open** (\Box), slide the left battery latch in the direction of **open** (\Box) and remove the battery.



4. To install the battery again, insert the battery into the battery compartment of the system and slide the right battery latch in the direction of $closed(\triangle)$ to fix the battery.



Monitoring the Battery Charge

You can view the battery charge status by completing the following procedures.

■ Using the shortcut key to view

Press the < > > key combination on the keyboard and then the current power source and the current remaining battery charge are displayed at the top left of the screen.

■ To view on the battery

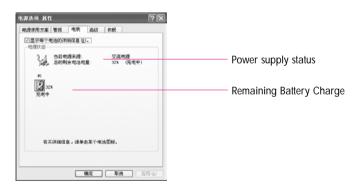
Click the PUSH button on the battery. The remaining battery charge (%) will be displayed.



■ To view through the Control Panel

Select Start > Control Panel > Performance and Maintenance > Power Option > Power Measure tab.

Then you can view the current power source and the current remaining battery charge.



Caution

Using the battery

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

Note

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.

Increasing Battery Life

Adjust LCD Brightness

Press the < >> key combination on the keyboard to dim the LCD brightness. ((p. 1-12) For more information about how to adjust the screen brightness, refer to.)

Use Power Saving Mode

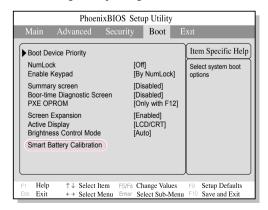
This function reduces power consumption when the system is not being used for a prolonged period of time.

Use Battery Calibration

When the battery is in continuous use without being completely charged or discharged, there may be a difference between the displayed battery charge and the actual battery charge, owing to the inherent characteristics of the battery.

Completely discharging the battery and fully charging it can correct this problem. Completely discharging the battery for this reason is called battery calibration. The procedure to calibrate the battery is described below.

- Turn off the computer and disconnect the AC power.
- 2. Turn on the computer and press <F2> to enter into System Setup.
- Select Smart Battery Calibration in the Boot Menu, and press <Enter> to start. The calibration process usually takes 3 to 5 hours depending on the remaining battery charge.



4. When the calibration process is complete and the battery is completely discharged, connect the AC power adaptor to fully recharge the battery.

Using the Security Lock

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.

Fix the Kensington lock cable to a fixed object (1) and connect the cable to the Anti-theft port at the rear of the system (2).



Traveling with the Computer

- When traveling, keep the system and the AC adapter disconnected. Otherwise, it may affect the functions of the system.
- Make sure that the system is not pressed by a book or heavy objects. The LCD may get damaged.
- When traveling by plane, use a bag designed for notebook PCs and hand-carry the computer.
- Allow the computer and disks to pass through security X-rays but do not pass the computer and disks through metal detectors.
- Do not use the computer during take off and landing.
- Make sure the eject button of PCMCIA card slot is locked.

Granier 2

Customizing your computer

This chapter provides information how to use the system setup, customizinig screen settings.

Using System Setup

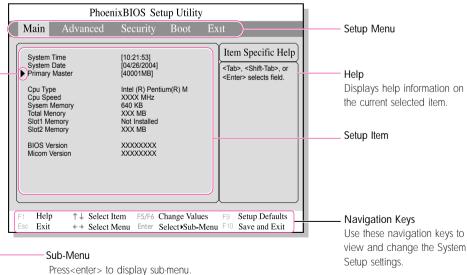
System Setup is a utility that enables the computer environment to be changed to suit the user. System Setup is used when changing the system password, booting priority, or when adding new devices. Please use extra care when configuring System Setup, as it may cause serious system error.

To enter System Setup

- 1. Turn on the computer.
- 2. When the booting screen appears, press <F2>.



3. The initial System Setup screen will appear in a moment.

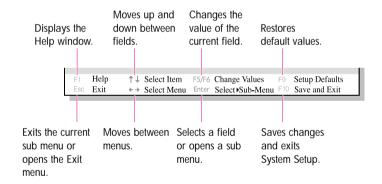


System Setup Menus

Menu Items	Description
Main	Configures the basic system environment
Advanced	Configures OS and major chipset options of the system
Security	Configures system security options
Boot	Configures booting options
Exit	Exits System Setup

For more information on System Setup menus or options, please refer to Help on the right side of the screen.

System Setup Navigation Keys



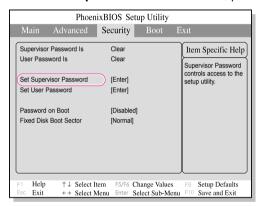
Note Contents of System Setup may be changed due to functional improvement or other reasons.

Configuring the Password

Setting the Supervisor Password

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

- Note 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 into System Setup, see Page 6-2.)
- 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.

Mote:

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 Configuring the Supervisor Password.

Activating the Booting Password



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

Set the 'Password on boot' option to [Enabled]. From now on, you must enter the password to boot the system.

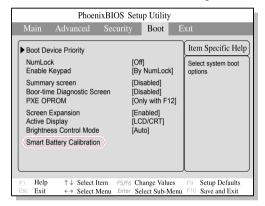
Deactivating the Password

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

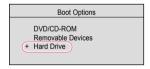
Changing Booting Priority

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.
- Press <Enter> on Boot Device Priority item.



3. Use the < ↓ > key to move to the **Hard Drive** item, and press <F6> key until it is at the very top.

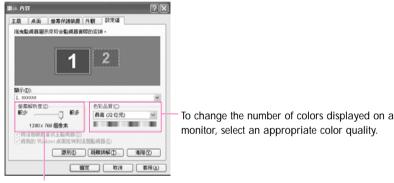


4. Press <F10> to save the changed configuration, and exit System Setup. Now you can boot the system with the hard disk drive as the first booting device.

Configuring Resolution and Color Depth

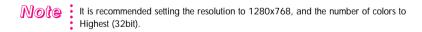
Screen resolution is the number of pixels displayed on the screen. High resolution makes the overall screen area large, although individual items appear small. Color quality is determined by the number of bits used to represent a pixel on the screen. High color quality displays more number of colors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

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



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

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



Using External Display Devices

Using external display devices such as monitor or projector, you can view the screen images alternatively or simultaneously. You can extend the screen into two display devices to use larger workspace.

Using external display devices would be especially useful when you are giving presentations or watching a video file.

- 1. Connect a monitor or a projector to the monitor port of the computer or the docking station.
- 2. Right-click on the desktop, and select **Graphics Options > Graphics** Properties.



3. On the **Devices** tab, select your desired display device, and click **OK**. (The displayed device list is determined by the currently connected devices.



Monitor	Displays on an external device such as monitor or a projector.	
Notebook	Displays on the notebook LCD only.	
Intel(R) Dual Display Clone	Displays the same screen on the notebook LCD, and an external device such as monitor or projector.	
Extended Desktop	Extends the screen into the notebook LCD and an external device such as monitor or projector to use a 2 times larger workerspace.	

Note

To switch display devices using shortcut key

You can switch display devices easily by pressing <Fn>+< shortcut key. Provided that the CRT monitor is connected, the display order will be LCD > CRT > LCD+CRT whenever the <Fn>+< sey is pressed.

You cannot use the <Fn>+< > shortcut key in the full screen mode DOS prompt.

To change display devices easily

Right-click on the desktop, and select **Graphics Options > Output To** to change the current display device easily.



To change the screen resolution and color quality

If the screen does not appear clearly, please try to change the screen resolution and color quality. In the figure of step 3, select a device, and configure the color, screen area, and refresh rate.

Checking for Viruses

The Norton AntiVirus software is provided as the virus inspection program.

Morton AntiVirus Configuration window pops up. If you complete the configuration and your computer connect to network, you can download and install the latest updates via the network. When the live update is done, virus scanning starts automatically. To stop scanning, click on Stop.

> If you didn't configure the Norton AntiVirus program, a security alert icon (🐷) appears in the notification area on the right of the task bar. This indicates that the current security state of your computer is not secure. Configure the virus-scanning program to make the security alert icon disappear.

- 1. Select Start > All Programs > Norton AntiVirus > Norton AntiVirus 2003.
- 2. Click **Scan Virus**, select drive to inspect, and click **Scan**.



Vaccines for the latest viruses can be downloaded by connecting to Symantec's homepage.

3. If a virus is detected, select Automatic in Norton AntiVirus, and click **Next** to delete the virus.

Ghapter 7

Recovering the Computer

This chapter provides recovery procedures using the System Recovery CD when the computer is not operating properly.

Restoring the System

Mote 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.

Mora There has to be 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.
- Select 'Create a restore point', and than click Next.



3. In the **Restore point description** box, type a name to identify the restore point, and than 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. Start > All Programs > Accessories > System Tools > System Restore.
- 2. Select 'Restore my computer to an earlier time', and click Next.

Caution

Since changes made after the Recovery Point may not be maintained, please back-up all necessary files to another location before performing system recovery.

3. Select the desired restore date (1) from the calendar restoration and select the desired restore point from the list (2), and then click Next.

Mote

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 box, 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 click **Next**.
- 3. Confirm the restoration information to undo, and click **Next**. System Restore shuts down Windows and starts undoing the restoration.
- 4. After the undo restoration is complete, Windows restarts. On the [Undo the last restoration completed] dialog box, click **OK**. Your computer has been restored to the point prior to the last restoration.

Reinstalling Software

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.

Mote This computer is optimized for Microsoft Windows XP. Therefore, Windows drivers 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.



• Standard Installation : This displays a list of drivers or programs that are not

currently installed on your computer from the system

software CD provided.

All necessary components are installed using the factory defaults.

• Minimum Installation : This displays the components (driver, Windows

programs, etc) that, if not installed, may cause problems with the system performance. You can

install only required components.

 Custom Installation : You can customize the installation of drivers and

programs.

Installing drivers and programs

- 1. Click **Standard Installation** in the main window of the System Software CD. (Standard Installation is recommended)
- 2. The system is scanned to display the drivers and programs that need to be installed.
- 3. Click **OK**. The drivers and programs are automatically installed as factory defaults.



(The components of Standard Installation can vary depending on the model)

In figure 3, to add components to the installation, click Cancel and select the component(s) that you want to install and then click on Install Now.

4. When done, restart the system.

Reinstalling Windows XP

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.

Caution: 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 Window 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.

Mote

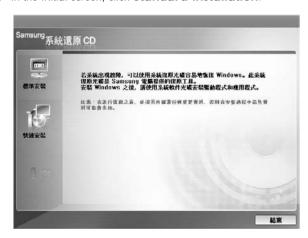
When you have set a booting password

You are asked to enter your booting password after restarting the system during the Windows installation. Enter the password to continue to the next

Reinstalling Windows

Explain Standard installation option as a standard.

- 1. Insert the system recovery CD into the CD-ROM drive.
- 2. In the initial screen, click **Standard installation**.



Standard installation: You can change the settings for partitioning, the installation folder, etc. during the Windows installation. However, 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.

Quick Installation: This re-installs Windows with the user data and the system configuration intact. The user data in the already existing Windows folders may be preserved as the existing Windows folders are overwritten.

3. The description for the standard installation appears. Click **Yes**. The installation starts, and the system will be restarted after a while.

Note: When Quick Installation is selected,

Setup proceeds with Step 3 before automatically installing Windows. Quick Installation overwrites the existing Windows version, so that drivers or applications do not need to be reinstalled.

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**>.

Note: What is partition configuration?

Partition configuration is a function that devides 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 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.

Mote If you press ESC to select another folder for the installation, new Windows folders are created causing a risk of dual booting.

- 6. After the installation process copies the necessary folders for the Windows installation, restart the system, and the message "Press any key to boot from CD" is displayed. You do not need to enter anything. In a moment, the Windows XPinstallation screen will appear to proceed with the installation.
- 7. When the Regional and Language Options window appears, click Next.
- 8. When a window that requires your name and organization pops up, enter your name and the organization and click **Next**. In the Windows XP Professional edition, an additional window that requires the computer name and the administrator password appears. Enter the computer name and the administrator password and click Next.
- 9. When the Date and Time Settings window appears, click Next.
- 10. When the system restarts to display Press any key to boot from CD, do not press any key.

When you see the Windows desktop, this means that the installation process is completed. Remove the system recovery CD and install the device drivers and applications from the system software CD.

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.....

Mote

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 the Changing Booting Priority in the User Guide.

- Do not press any key at this time. After a while the partition configuration screen appears. To not change the partition, press **<Enter>**.
- Select the desired file system (format). To maintain the current file system, press **<Enter>**.
- 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.
- After the installation process copies the necessary folders for the Windows installation, restart the system, and the message °∞Press any key to boot from CD" is displayed. You do not need to enter anything. In a moment, the Windows XP installation screen will appear to proceed with the installation.
- 7. Follow the instructions of the Windows XP installation wizard to continue with the installation.

When the installation is complete, the computer will restart.

When the system has restarted, the Press any key to boot from CD message appears. Ignore the message.

The system boots and the Windows and Windows Registration screen appears. Register Windows, following the instructions to finish the Windows installation. Remove the System Recovery CD and install the **device drivers** and **application** programs using Standard Installation from the System Software CD.

Q&A

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

Windows Related

Q1The 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.

Q2The 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 'End 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

Q1The 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 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.
- Q4 The screen blinks, displays noise for a short time, or the screen resolution is changed.
- A This may happen in the following cases (resolution change, display device change, removal of AC adapter, system restart, and the implementation or termination of stand-by mode or maximum power saving mode)
 - This happens while the system is detecting display devices connected to the system. During the detection operation, the connected display devices may blink or some noise may occur. If you continually view an afterimage on the screen, right-click on the Desktop and select Refresh or restart the system.
- Q5 Extended Desktop is not configured on [Display Properties] dialog. (Start > Control Panel > Appearance and Themes > Display > Settings tab)
- A Change the setting to extended desktop on [Graphics Controller Properties] dialog. ((P. 6-8) Refer to 'Using External Display Devices'.)
- Q6 I pressed <Fn>+< > keys, then the screen blinks.
- A This problem may occur when you pressed <Fn>+< >> > keys to convert display devices while there is no external display device connected. Connect an external display device first, then convert display devices.

Q7 When I pressed <Fn>+< > keys to change display devices, the screen resolution is changed.

A Change the resolution again on [Graphics Controller Properties] dialog. ((P. 6-8) Refer to 'Using External Display Devices'.)

Q8 <Fn>+< >> keys do not operate.

A When you are playing a video file such as a video CD, an MPEG file, or a DVD, when no external display is connected, or when you are using the extended desktop mode or full screen DOS mode, you cannot change display devices.

Q9 Desktop is displayed abnormally or some icons disappear while the system is operating.

A This problem may occur when you entered hibernate mode while using the Extended Desktop mode, removed the monitor and then pushed power button to exit hibernate mode.

When the desktop is displayed abnormally, press right touchpad button on the desktop and click Refresh. When the icons disappear, press <Fn>+< >> or <Ctrl>+<Alt>+<F3> to change the display setting.

Q10 When I played DVD/MPEG/AVI in Windows 2000, the screen is not displayed properly.

- A1 When you play DVD/MPEG/AVI in Windows 2000 while the display setting is in Extended Desktop mode, the operation may be abnormal due to the limitations of the operating system. Press <Fn>+< >> to change the display setting to Dual Display mode, then play the video clip.
- A2 If above method does not solve the problem, change the setting to display only on the LCD.

Q11 When I played DVD or Video CD in Dual Display Clone mode or Extended Desktop mode, actions such as changing display setting or volume operates slowly.

A Playing DVD or Video CD requires separate data handling. When you are using Dual Display Clone mode or Extended Desktop mode, problem may occur because the data exceeds the capacity of the video chip. Change the display device to display only on LCD or only on CRT.

Modem Related

O1I 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.
 - 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.)

Q2I cannot make a call using an extension line.

A In general, the dial tone of a PABX or a digital phone switching system is not a continuous one, unlike that of a trunk line. Therefore, the modem may not make a call because the modem mistakes the dial tone from a PABX 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 (Rest mode) (For Windows XP and 2000)?

- A To receive a fax when the system is in power saving 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.
 - 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 "With this device, exit the computer from stand-by mode" item and then click OK.

The above setting enables the modem to turn on the system and receive a fax when in power saving 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. Select My Network Environment > View Network Connections from the Desktop.
- 2. Click the right button on 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 wired LAN while using wireless LAN may not execute <Wake On LAN> function. Configure wireless LAN to 'Disable' to use <Wake On LAN> function.
- Q2 When I connected 100Mbps wired LAN and the computer exits standby/hibernate mode, a message informing 10Mbps wired LAN connection appears.
- A When the computer exits standby/hibernate mode, restoring the network takes about 3 seconds. When the network is restored, it operates in 100Mbps.

Wireless LAN Related

Refer to (P.4-9) "Configuring the Network Environment Settings for Wireless LAN Network (WLAN)" 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 inappropriate configuration. 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 (**N**) 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.

O3 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.
 - If there is a Wireless LAN On/Off button, check if the wireless LAN button is pressed.
- 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. .
 - Install the AP in a high and open space 50cm from the wall and far removed from any other radio signal sources.

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.
- 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' from the popup menu. 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 p.4-10 'Connecting to an AP') 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 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: 255.255.255.0, and then try again.

Q7 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.

Q8 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 dose not affect the program operation.

Q9 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.

Q10 The wireless LAN does not work properly when there is a device operating on an adjacent frequency in the vicinity of the product.

- A1 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. For more information about AP settings, refer to the User Manual supplied by the AP manufacturer.
- A2 IEEE802.11g equipment operates in hybrid mode when there is active IEEE802.11b equipment. This may result in data rate degradation.

Q11 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.
- Q12 Although I have turned the wireless LAN off using the Off Button on the PROSet, the wireless LAN operating light is still on.
- A This is normal. The Off Button for the Wireless LAN on the PROSet only turns off the S/W and not the H/W for the Wireless LAN.
- Q13 After installing the PROSet, I cannot manage the wireless network under Windows.
- A Click on "Use Microsoft Client" in the Tools menu of the PROSet program to manage a wireless network in Windows. To manage a wireless network in the PROSet program, click on "Use Inter PROSet/Wireless" in the Tools menu of the PROSet program.

Game/Program Related

Q13D 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.

Q2I 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.

Q3When I play a game, the screen is displayed in reduced size.

- A1 Before executing a game, press touchpad right button on the desktop, and click Graphics Options > Panel Fit > Enable.
- A2 Change the display setting to extended desktop mode before executing a game.
 - 1. Press touchpad right button on the desktop.
 - 2. Click Graphic Options > Graphic Properties > Devices tab.
 - 3. Select Notebook, then select 'Full Screen' check box.
 - 4. Click OK.

Q4When I pressed <Fn>+< 1 > keys to convert display devices while playing a 3D game, the computer does not operate.

A Do not press <Fn>+< (> keys while playing a 3D game, since it may cause a system error.

Q5 When you press the <Fn>+<60> or <Fn>+<60> keys while running a game, the screen is not properly displayed.

A This may happen in some games. Press the <Fn>+< >> or <Fn>+< >> keys before running a game and do not press the button combination while running the game.

Q6 The 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'.)

- Q7 When I pressed <Fn>+<F10 or F11> keys while playing a game, the computer does not operate properly.
- A Do not press <Fn>+<F10 or F11> keys while playing a game, since it may cause a system error.
- Q8 When I played 'The Sims: House Party' game in Dual Display Clone mode, a mouse afterimage is displayed.
- A1 Press <Fn>+< >> to change the display setting to Dual Display mode, then play the game.
- A2 If above method does not solve the problem, change the setting to display only on the LCD.

Security Center

Q1 To change the popup window display settings when connected to the Internet.

In the Windows XP SP2 environment, you can decide whether to display a popup window when connected to the Internet, for user convenience and security.

A1 To display most of the popup windows when connected to the Internet:

- 1. Click on Internet Options in Start > Control Panel > Security Center > Manage security settings for.
- 2. In the Privacy tab of Internet Properties, clear Block pop-ups.
- A2 To display popup windows only from the current site when connected to the Internet:

Place the cursor on the notification area at the bottom of the Internet address bar and right-click to display a menu, from which you can select Temporarily Allow Pop-ups or Always Allow Pop-ups from This Site.

A3 To display popup windows from a particular site:

- 1. Click on Internet Options in Start > Control Panel > Security Center > Manage security settings for.
- 2. In the Privacy tab of Internet Properties, click on Settings from Block pop-ups.
- 3. Enter a URL to want to allow pop-ups into Address of Web site to allow and click on Add.
- 4. You will find that the entered address is added to the allowed sites list. The next time you connect to the Web site, you will see pop-ups appearing. When you need to re-block a permitted site, select the Web site address that you want to block from the Allowed Sites and click on Remove.
- Q2 When you connect to a Web site, you see the message, "To help protect your security, Internet Explorer stopped this site from installing an ActiveX control on your computer" or "This site might require the following ActiveX control" below the address bar.
- A Windows XP SP2 blocks unsigned ActiveX controls from being installed when connected to certain Web sites for security reasons. On some Web sites that have no ActiveX controls installed, applications are not started or do not display properly. In this case, to install ActiveX controls, right-click the notification area to display a menu from which you can select Install ActiveX control.

Q3 When you see a Windows Security Alert icon appear on the right part of the task bar.

With the Security Center feature added, Windows XP SP2 checks the Firewall, the automatic updates configuration and installation of virus-checking programs to display a Windows Security Alert icon on the right part of the task bar when it judges that the computer is vulnerable to attacks from the Internet. In this case, check the following to install the necessary components.

- A1 Set up the Windows Firewall. When you set up the Windows Firewall, you will be protected from unauthorized access through the Internet or the network.
 - 1. Click on Windows Firewall in Start > Control Panel > Security Center > Manage security settings for.
 - 2. From the General tab of Windows Firewall, select ON (recommended).
 - 3. If you want to allow a certain program or service to gain access to your computer using the Firewall, select and check the program or service that you want to allow access from, in the Exceptions tab of the Windows Firewall. If you want to add a program to Programs and Services, click on Add Program and select it.
- A2 Set up Windows Automatic Updates.

This automatically downloads and installs critical updates via the Internet to keep your computer up to date.

- Click on Automatic Updates in Start > Control Panel > Security Center > Manage security settings for.
- 2. From general tab of Automatic Updates window, select Automatic (recommended).
- A3 Keep your computer current with the latest virus updates. (ex: Norton Antivirus) Even when you have installed Norton AntiVirus on your computer, Windows cannot recognize the program until you configure the settings, displaying a Security Alert icon. When you first use or install Norton AntiVirus for the first time, follow the Registration Wizard steps to configure the registration settings. To protect your computer from virus attacks with the latest updates, click on Options to display the Norton AntiVirus Options window. From the left menu of the window, check Run Automatic Protection to select Automatic Protection and check Run LiveUpdate to select LiveUpdate.
- A4 Two virus scanning programs on one computer may cause system conflicts. Remove one of the programs from the system.

A5 If Windows does not recognize the existence of an anti-virus program even when it has been installed, your computer could be vulnerable to attacks from the Internet. You should install an anti-virus program that your computer is able to identify.

Check the following programs which Windows can detect and select one from the list.

A list of anti-virus programs that Windows can detect:

- Symantec Norton Anti-Virus
- NetworkAssociates (McAfee)
- TrendMicro
- ComputerAssociates
- Panda
- Kaspersky
- Ahnlabs (AhnLab)

Note The list is subject to change. Visit the Web site (www.microsoft.com) regularly to check the latest list.

Appendix

Appendix

System specifications, software types and safety instructions are provided here.

System Specifications

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

Item	Specification	Comment
СРИ	Intel Pentium M ULV 1.1~1.2GHz / Intel Celeron M ULV 900MHz~ 1.0GHz	Optional
Cache memory	2MB / 512KB L2 cache	Optional
Main memory	On board 256 DDR SDRAM (An additional	
	128/256/512/1024 MB module can be installed, 1DDR socket)	
Main Chipset	Intel 82855GME / ICH4-M	
Hard Disk (HDD)	1.8", Ultra DMA, S.M.A.R.T 8.0mmH	
CD Drive	External CD-RW/DVD-ROM Combo, DVd Multi	
Graphics	Intel Intergrated GFX 2, Memory : 64MB	
	1280 x 768 Pixel (Wide XGA)	
Sound	AC' 97 Audio CODEC (AD1981B), support S/PDIF	
Network Interface	Modem : AMBIT MDC modem	
	Wired LAN: 10/100 Base T Ethernet	
	wireless LAN: 802.11b, 802.11a/g or 802.11b/g	Optional
Memory Card Slot	Memory Stick, SD(Secure Digital) Memory Card, and MMC(Multi Media Card) Supported	Maximum 128 MB
CF Card Slot	One Type	
Ports	Monitor, USB 2.0 x 2, Modem(RJ-11), LAN(RJ-45),	
	IEEE 1394 (6 Pin), DC-In, Microphone, and Headphone/S PDIF	
Dimensions (mm)	287.7 x 197.5 x 18	Width x Depth
100.0 101	40 47 147 757 00	x Height
LCD Panel Size	12.1" Wide TFT LCD	
Weight	1 Kg (with standard battery)	
Battery	Lithium-lon smart battery	
Operation Environment	Temperature for custody : -5~40°C for operation: 10~32°C	
	Humidity for custody : 5~90% for operation: 20~80%	
Operation Voltage	100 - 240 VAC	
Frequency	50 - 60 Hz	
Output Power	60W	
Output Voltage	19.0 VDC	

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

^{*} Some optional devices have to be selected at the point of purchase and cannot be upgraded or changed afterward.

Wireless LAN Specifications (Optional)

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

Item		Specifications
	Dimensions	•
Physical	Dimensions	59.75 X 44.45 mm (Width X Height)
Specifications	operation temperature	Same as system operation specifications
	and humidity	Temperature: 0 ~ 70°C, Humidity: less than 85%
	Power Saving Mode	135mW
Power	Receiving Mode	1.0W
Specification	Transmission Mode	1.6W
	Power	3.3V
	Compatibility	IEEE 802.11b
	Operating System	Microsoft Windows XP, 2000
Network		- NDIS5 Miniport Driver
Specifications	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, 1.2.2.8 or higher version of wireless LAN driver have to be installed on your computer, and certificates or PROSet may be required depending on the network settings. For driver update, visit www.samsung.com and for information on the PROSet installation, refer to P.4-18 "Wireless Network Setup Using the Wireless LAN Setup Program" . For more information, ask your network administrator.

RF Specifications

R-F Frequency Band	2.4GHz (ISM band)	
Support Channels	1~13 channel	
Device Description	Transceiver	
Power	5 mW	
Transmission Method	DSSS	
Data Rate (Mbps)*	11, 5.5, 2, and 1	
Antenna Type Internal Antenna 2 EA (Main/Aux)		

^{*} The data rate may differ from the actual data rate.

Intel(R) PRO/Wireless LAN 2915 ABG **Network Connection**

Item		Specifications
Physical	Dimensions	59.75 X 44.45 mm (Width X Height)
Specifications	operation temperature and humidity	Same as system operation specifications Temperature: 0 ~ 70°C, Humidity: less than 85%
	Power Saving Mode	135mW
Power	Receiving Mode	0.85W
Specification	Transmission Mode	1.45W
	Power	3.3V
	Compatibility	IEEE 802.11a, IEEE 802.11b, IEEE 802.11g,
Network	Operating System	Microsoft Windows XP, 2000 - NDIS5 Miniport Driver
Specifications	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 or PROSet may be required depending on the network settings. For information on the PROSet installation, refer to P.4-15 'Wireless Network Setup Using the Wireless LAN Setup Program'. For more information, ask your network administrator.

RF Specifications

R-F Frequency Band	2.4GHz, 5.725~5.825GHz	
Support Channels	1~13 channel, 149~161 channel(149, 153, 157, 161)	
Device Description	Transceiver	
Power	5 mW	
Transmission Method	11a mode : OFDM 11b mode : DSSS 11g mode : OFDM	
Data Rate (Mbps)*	11a mode** : 54, 48, 36, 24, 18, 12, 9, and 6 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 data rate may differ from the actual data rate.

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

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

Intel(R) PRO/Wireless 2200BG Network Connection

Item		Specifications
Physical	Dimensions	59.75 X 44.45 mm (Width X Height)
Specifications	operation temperature and humidity	Same as system operation specifications Temperature: 0 ~ 70°C, Humidity: less than 85%
	Power Saving Mode	135mW
Power	Receiving Mode	0.85W
Specification	Transmission Mode	1.45W
	Power	3.3V
	Compatibility	IEEE 802.11g, IEEE 802.11b
Network	Operating System	Microsoft Windows XP, 2000 - NDIS5 Miniport Driver
Specifications	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 P.4-15 'Wireless Network Setup Using the Wireless LAN Setup Program'. For more information, ask your network administrator.

RF Specifications

R-F Frequency Band	2.4GHz (ISM band)	
Support Channels	1~13 channel	
Device Description	Transceiver	
Power	5 mW	
Transmission Method	11b mode: DSSS 11g mode: OFDM	
Data 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 data rate may differ from the actual data rate.

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

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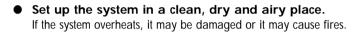
Safety Instructions



Instructions for Setup

- Set up the system on a stable work surface. If the system is dropped it may be damaged or it may inflict injuries on the user.
- Do not use loose power outlets or damaged power cables.

There is a danger of electric shocks or fires.



- Use standard power voltage. High-voltage may result in product damage or cause fires.
- Use grounded power outlets designed for computers. A grounded power outlet prevents electric shock from electricity leakage.
- Set up the system away from magnetic objects. Contents of the hard disk drive may be deleted or the color of the monitor may be permanently distorted.
- Dispose of moisture-reducing agents and plastic packaging

Consumption of moisture-reducing agents and placing plastic packaging over the head is fatal, especially for children.





Instructions for careful handling

- Handle with care so as not to damage the data in the hard disk.
 - Since the hard disk is fragile and sensitive to external conditions, it may be damaged from temperature changes or impact during operation. Take extra care to prevent such damages.
 - Loss of data due to external conditions or carelessness during use is the user's sole responsibility and the manufacturer shall not be held liable for any compensation.

In order to minimize damages from data loss, please backup data at all times.

Cases when the hard disk and data may be damaged:

- External impacts while separating from or installing into the computer may cause disk or data damage.
- Power failure during hard disk operation resulting in resetting the computer may cause disk or data damage.
- Execution of delete (DEL) or format (FORMAT) commands by mistake may cause loss of data.
- Virus infection may cause unrecoverable loss of data.
- An abrupt power cut during program operation may cause disk or data damage.
- Moving the computer, or impacts to the computer during hard disk operation may cause data loss or bad sectors on the hard disk.
- Be sure to make backup copies of important data. The Manufacturer is not liable for lost data.
- Turn on peripheral devices before, turning on the computer Otherwise damages may occur.
- Turn off the computer before turning off other peripheral devices. Otherwise damages may occur.
- Do not touch the modem, telephone lines and exposed electrical terminals during a thunder storm There is a danger of electric shocks or fires.
- Before disassembling the system, turn the power off and disconnect the power cable.

There is a danger of electric shocks.



• Use only authorized parts and do not disassemble, repair or modify the computer unless at an authorized dealer.



Use authorized service centers as the system may be damaged.

- Do not touch the power strip with wet hands. There is a danger of electric shock.
- Place the computer away from heat devices (such as heaters). It may damage the system or cause fires.
- Clean with cleaners specifically for computers Do not use benzene, paint thinner, or alcohol to clean the computer. It may damage the product.

