

Using External Display Devices

Using external display devices such as a monitor, projector, TV, etc allows you to view screen images alternatively or simultaneously on each device. You can also split a screen into two display devices, or view different images on each display device. Using external display devices is especially useful when you are giving a presentation or watching a movie through your TV.

Switching Display Devices Using the Shortcut Key

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

1. Connect the external display device (e.g. a monitor or a projector) to the corresponding port of the system. To connect a TV, connect the TV to the TV output port of the system.
2. Press the <Fn>+<F4/□> keys. Provided that an external display device is connected, the display option changes in LCD > CRT > LCD+CRT order whenever the <Fn>+<F4/□> keys are pressed.



Provided that multiple external display devices are connected, the display order would be LCD > CRT > LCD+CRT > TV whenever the <Fn+F4/□> keys are pressed.

You cannot view the screen via the LCD, CRT, and TV simultaneously.

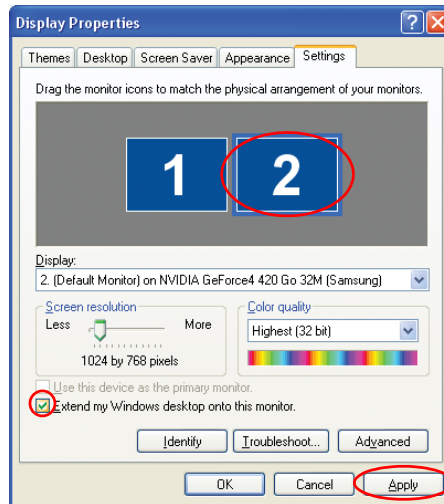
Using Dual View to View Extended Screen

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

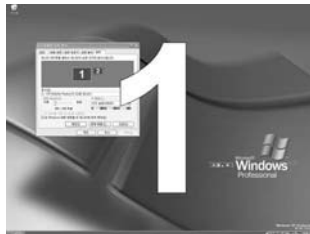
In Dual View mode, you can select the screen resolution and color quality for each display device, as if there were two separate graphics cards.

1. Connect the external display device (e.g. a monitor or a projector) to the corresponding port of the system. To connect a TV, connect the TV to the TV output port of the system.
2. Click **Start > Control Panel > Appearance and Themes > Change the screen resolution.**

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



4. When the configuration is complete, click **OK** on the left side of Troubleshoot. The primary display device (the LCD) is indicated as '1', and the secondary display device is indicated as '2'. Now you can view the screen through two monitors.



1 : Primary



2 : Secondary



When using Dual View, it is recommended that LCD is kept as '1', the primary display device.



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

Deactivating Dual View Mode

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



To move a window between display devices in Dual View mode. Click the title bar of the window in the primary display device(1, the LCD), and drag it to the secondary display device (2). The window is move to the secondary display device.

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

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

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

Hibernate Mode (*Power Management or Manual Method*)

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



If You Reinstall Windows:

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



Hibernate Tab



Frequent Interruptions:

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

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

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

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




Rest Key:

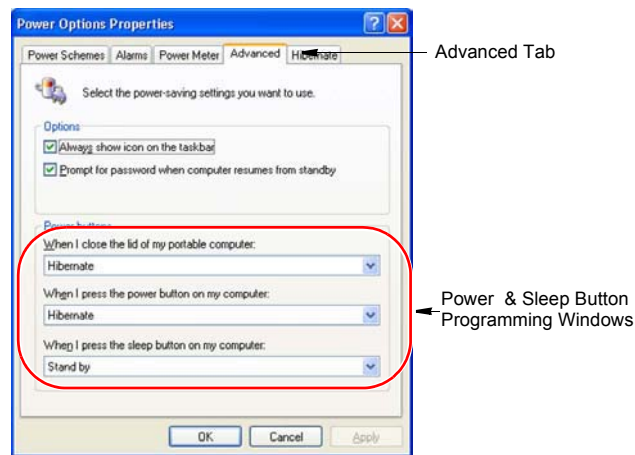
The manual **<Fn+Esc/ >** key combination will not activate Standby or Hibernate modes while you are playing a multimedia program or have an active USB device connected.

Advanced Power Management Schemes

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

To enter the power management window complete the following:

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



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



The "Rest" key is assigned to the **<Fn+Esc/ >** key combination. See "Basic Power Management Schemes" on page 66 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 (p103) 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. While holding the battery latch to the Unlock position, remove the battery.



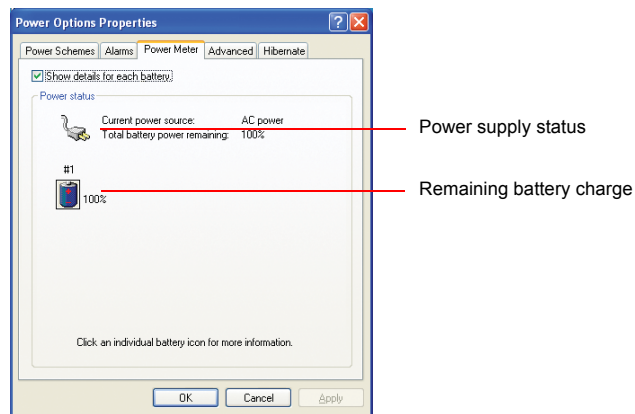
4. To attach the battery, place the battery into the system. Check that the battery latch is in the Lock position.



Monitoring the Battery Charge

To monitor in control panel

Click **Start > Control Panel > Performance and Management > Power Options > Power Meter** tab. Power source and remaining battery charge are displayed.



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.



If the remaining battery level is less than 5% when you turned on the system

The system will shut down during the start up process to prevent any loss of data. Connect the AC adapter, and then turn the system on.

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.

Upgrading Memory Module

There are two memory slots, one inside the computer and the other at the bottom of the computer. There is one or more 256MB memory modules installed in the computer. The procedure to install additional memory is described below.

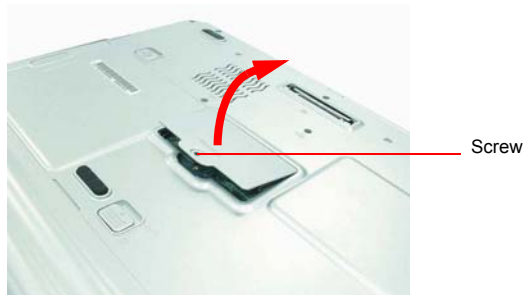


To replace the memory inside the system, contact the Samsung service center.



Before installing the memory module, turn off the system completely. Do not install the memory module when the system is in suspended mode.

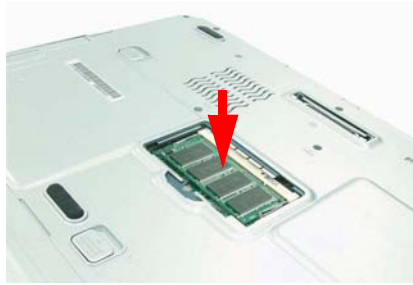
1. Using a screwdriver, open the memory compartment cover on the bottom of the system.



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



3. Push the memory module in until the module clicks into place. If the memory module is not fixed completely, push the module while pushing the memory module latches outward.



4. Replace the memory cover and secure using a screwdriver.



To remove a memory module

Push the memory module latches outward until the memory module pops up, and then pull out the module at an angle of about 30° angle.



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.

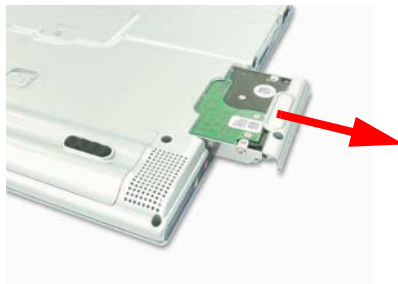
Connect a security lock cable to a fixed object, and to the security lock port.



Replacing the Hard Disk Drive

The procedures for replacing the hard disk will be described below.

1. Turn off the computer.
2. Using a screwdriver, remove the screw securing the hard disk, and pull out the hard disk bracket.



3. Remove the 4 screws securing the hard disk to the bracket and remove the hard disk.



4. Insert a new hard disk into the bracket so that the labeled side is outside.
5. Fix the hard disk to the bracket using the 4 screws removed previously.

6. Insert the bracket into the hard disk compartment, and secure it using the screw.



After replacing the hard disk

Referring to "Reinstalling Windows XP" (p 100), reinstall Windows, and reinstall the drivers and programs referring to "Reinstalling Software" (p 98).

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. (For information on installing memory modules, see “Upgrading Memory Module” on page 73.)
- 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 possible, leave the power cord connected to the computer and an electrical outlet when the computer is not in use. This extends the life of the battery and keeps the battery fully charged.

If you will not be using the computer for a long period of time (a month or more), you should charge the battery until it is completely full. After you have done so, remove the battery from the unit.

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 83 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.**

The Norton Antivirus Subscription on your Samsung notebook will expire within 3 months. It is your responsibility to update the virus definitions, and renew subscription with Symantec when the subscription expires.

▶ *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.samsung.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

Q1 The LCD screen is blank.

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

Q2 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.

Q3 The screen blinks or displays noise for a short time.

A This problem may occur when you started the computer, enter or come out of standby/hibernate mode, pressed <Fn>+<F4/□/□> keys, or performed tasks such as changing resolution or scanning new hardware. This may occur when you connected a projector and performed one of above actions. After a short time, the screen displays normally.

Modem Related

Q1 I cannot hear the modem sound.

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

A2 Check that the modem driver is installed properly.

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

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

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

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

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

Q2 I cannot make a call using an extension line.

A In general, the dial tone of a PBX or a digital phone switching system is not a continuous one, unlike that of 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.
 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 "This device activates the computer in power saving mode" check box, and 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. Click Start > My Computer > My Network Places > View network connections.
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 with wired LAN while also using wireless LAN may not execute <Wake On LAN> function. To remedy this, configure wireless LAN to 'Disable' to use <Wake On LAN> function.

Wireless LAN Related

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

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

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

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

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

- A1** Check that the TCP/IP properties are configured properly. When you connect to an AP, click the Wireless Network Connection icon on the taskbar and select the Support tab. If the IP is not allocated properly, the IP address will be displayed as follows (e.g. 169.254.xxx.xxx).
If the network does not provide DHCP, you have to specify the correct IP address by asking your network administrator.
Even if the network provides DHCP, the server may not allocate an IP address to the client properly, and the client station cannot connect to the network.
- A2** Referring to A2 of Q1, check that the network key is correct.
- A3** Referring to Q4, check that AP is operating properly.
- A4** If the security patch (Q815485) has been installed, uninstall the patch.

WPA Q815485 patch provided by Microsoft requires 802.11x, RADUIS, and authentication server. Also the patch requires the AP and the driver to support the patch. The current version of the driver does not support the WPA function.

Click Start > Control Panel > Add or Remove Programs. If you can find the Q815485 patch in the [Add or Remove Programs] window, uninstall the patch before use.

Q3 I cannot share an Internet connection.

- A1** It may require some time to synchronize the computers to share an Internet connection after the Internet connection sharing configuration is completed. If you cannot share Internet connection even after a longer period, restart the computer.
- A2** Check if the connection between the network adapters is configured to bridge. If there is a configured bridge connection between the network adapters through the network configuration wizard, remove the network bridge, and reconfigure the Internet connection sharing.

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

Q4 I cannot connect to the AP.

- A1** Check the wireless LAN radio environment. Using a wireless LAN may be restricted by the surrounding radio environment, and the distance between wireless stations. Also obstacles such as walls or doors may affect wireless LAN connections.
- A2** Check that the AP is operating properly. If the AP is not operating properly, turn off the AP, and turn it on again after a short wait.
- A3** Check that the network key (encryption key) configuration for the AP is correct.
- A4** Check that the wireless LAN function of the AP is enabled. If it is disabled, enable the wireless LAN function referring to the description in "Connecting Through a Wireless LAN (Option)" (p 37).

- If you are using Windows XP, click Start > Control Panel > Network Connections and check that the wireless network connection is configured to 'Enable'.

- If you are using Windows 2000, check that the Turn on/Turn off Radio is configured to 'Turn on' in the General tab of the PROSet program.

- Q5 In the Windows XP 'Available wireless networks' window, the Wireless Network Connection is displayed as 'Not Available'.**
- A1** Check that the specific program for a wireless LAN connection is installed. Windows XP supports wireless LAN connections through the Wireless Zero Configuration (WZC) service. Therefore, an additional program for a wireless LAN connection is not required. However, installation of the specific program for a wireless LAN connection may disable the 'Available wireless networks' window of the Wireless Network Connection supported by WZC service in certain cases. Exit the program and try again.
- A2** 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.
- A3** 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.
- Q6 The Wireless network connection operates properly, but the Wireless Network Connection icon on the Taskbar displays the "Disconnected" message.**
- A** This is one of the known problems when you are using a wireless LAN connection after installing Windows XP service pack 1.
Check that the wireless LAN card is operating properly by initializing the device driver referring to A2 of Q5. For more information, refer to the following link for known problems with Microsoft.
<http://support.microsoft.com/default.aspx?scid=kb;en-us;Q328647>
- Q7 When connecting to a computer-to-computer (Ad Hoc) network, I cannot connect to another computer connected to the same computer-to-computer network.**
- A1** Make sure that the security settings and network name of the computer-to-computer (Ad Hoc) network is correct.
- A2** Check the TCP/IP properties of the computers to be connected through the computer-to-computer (Ad Hoc) network. All of the computers to be connected

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

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

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

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

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

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

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

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

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

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

A Devices compliant with IEEE 802.11b, operate in the public frequency, ISM band. Therefore some channel interference may happen when there are other devices using the same frequency band such as a wireless video transceiver, a microwave oven, etc. If other products cause channel interference, changing the AP channel is recommended.

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

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

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

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

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

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

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

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

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

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

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

Games and Programs Related

Q1 When I pressed <Fn>+<F4/☒|□> keys to convert display devices while playing a 3D game, the computer does not operate.

A Do not press <Fn>+<F4/☒|□> keys while playing a 3D game, since it may cause a system error.

Q2 When I pressed <Fn>+<F4/☒|□> keys to convert display devices while playing a game, the screen is not displayed properly.

A This problem may occur in some games. Use <Fn>+<F4/☒|□> keys before launching a game, and not while playing the game.

Q3 When you press shortcut keys while playing a game, icons(OSD) are not displayed properly on the screen.

A This problem may occur when you press shortcut keys repeatedly while playing a game. You are not recommended to use shortcut keys while playing a game.

Q4 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'.)

Q5 When I played 'The Sims: House Party' game in Dual Display Clone mode, a mouse afterimage is displayed.

A1 Press <Fn>+<F4/☒|□> 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.

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.



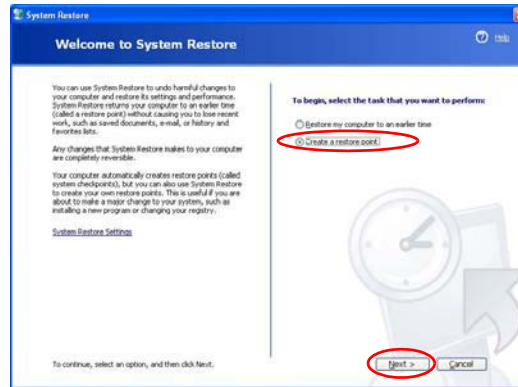
There has to more than 200MB of free space on the hard disk drive. If the disk space is insufficient, a saved restore point might be deleted.

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.

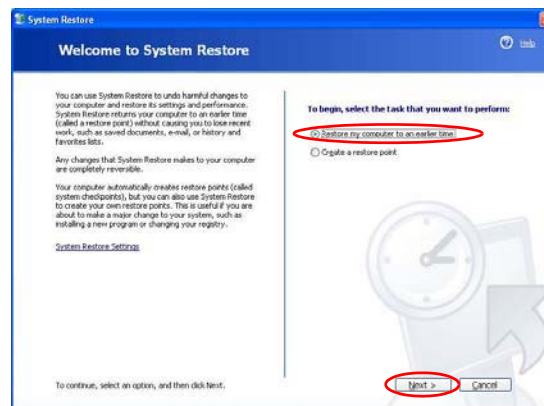


3. In the Restore point description box, type a name to identify the restore point, and then click **Create**. A restore point has been created.

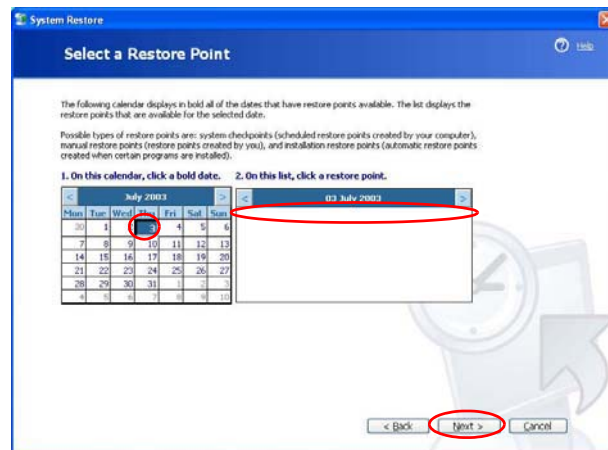
Returning your computer to an earlier restore point

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

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



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



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

4. Confirm the selected restore point and click **Next**. System Restore shuts down Windows, and starts the restoration processes.
5. After the restoration is complete, Windows restarts. In the [System Restore completed] dialog 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 then click **Next**.
3. Confirm the restoration information to undo, and then click **Next**. System Restore shuts down Windows and starts undoing the restoration.
4. After the undo restoration is complete, Windows restarts. In the [Undo the last restoration completed] dialog 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.



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

Running the system software CD

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



Installing drivers

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



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

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

Installing programs

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

Reinstalling Windows XP

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

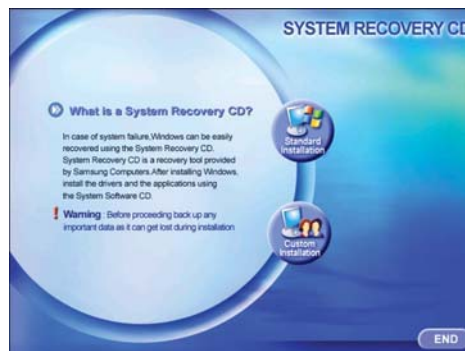


With the system recovery CD, you can reinstall Windows XP only. To return the system to the state of shipment, reinstall the device drivers and programs with the system software CD after reinstalling Windows XP with the system recovery CD.

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

Reinstalling Windows

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



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

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



What is partition configuration?

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

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



What is Format?

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

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



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

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

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

If You Cannot Run Windows

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

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

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



This message appears only when the CD drive has booting priority. If the message does not appear, configure the CD drive as the first booting device referring to "Changing Booting Priority" on page 59.

3. After a while, the partition configuration screen appears. Complete the installation referring to "Reinstalling Windows" on page 100.

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 Baniyas 1.3GHz~1.7GHz	
Cache memory	L2 1MB	
Main memory	266 MHz DDR memory, 2 Memory slot. (You can add 128/256/512MB module additionally)	standard : 256MB, max : 1 GB
Main Chipset	Intel 855PM(ODEM) + ICH4-M	
Hard disk drive (HDD)	2.5", UltraDMA 100, S.M.A.R.T 9.5mmH	
CD Drive	CD-ROM drive, CD-RW drive, DVD-ROM drive, CD-RW/DVD-ROM Combo drive, DVD-Multi drive, or 2nd HDD Pack	Optional
Graphics	ATi Mobility Radeon M9+32CL or M9-CSP64	
Sound	SigmaTel STAC9750	
Network Interface	Modem : ActionTec MDC S/W Modem or Bluetooth/Modem Combo Wired LAN: RealTek RTL8101L Wireless LAN: Intel Calexico Infrared: FIR	Optional
PCMCIA Slot	Type I and II Compatible	
Memory Card Slot	Memory Stick, SD(Secure Digital) Memory Card, and MMC(Multi Media Card) Supported	Maximum 128 MB
FingerPrint	ST TCS2CF	Optional
Ports	Monitor, USB 2.0 x2, Modem (RJ-11), LAN (RJ-45), IEEE 1394 (4 Pin), S-VHS, PS/2, Serial, Parallel, DC-In, Microphone, Headphone	
Options	Lithium-Ion smart battery	
Dimensions (mm)	323 X 270.5 X 29.5	W x D x H
LCD Panel Size	15"-SXGA+, 15"-XGA, 14.1"-XGA	Optional
Weight	2.5Kg (14.1")	
Battery	Lithium-Ion smart battery	
Operation Environment	Temperature (storage) : -5 ~ 40°C (operation) : 10 ~ 32° C Humidity (storage) : 5% ~ 90% (operation) : 20% ~ 80%	
Operation Voltage	100 - 240 VAC	
Frequency	50 - 60 Hz	
Input/Output Power	1.5-0.8A, 100 ~ 240V	
Output Voltage	DC 19V / 3.15A	

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

Wireless LAN Specification (Optional)

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 standard (DSSS) Mini-PCI Rev.1.0
	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

Radio Specifications

RF Band	2.4 GHz			
Support Channels	1~13 channel (See "Regulatory Notice for Channel Use in France".)			
Device	Transceiver Direct Sequence Spread Spectrum (DSSS)			
Modulation Scheme	Direct Sequence Spread Spectrum (DSSS) CCK for high and mid transmission rate DQPSK for standard transmission rate DBPSK for low transmission rate			
Standard Output Power	5 mW			
Transmission Rate	High Speed	Mid Speed	Standard	Low Speed
	11 Mb/s	5.5 Mb/s	2 Mb/s	1 Mb/s
Antenna Type	Internal antenna (TX/RX)			

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.b
- 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 AT-compatible 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	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
mAh 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.

Using Windows 2000

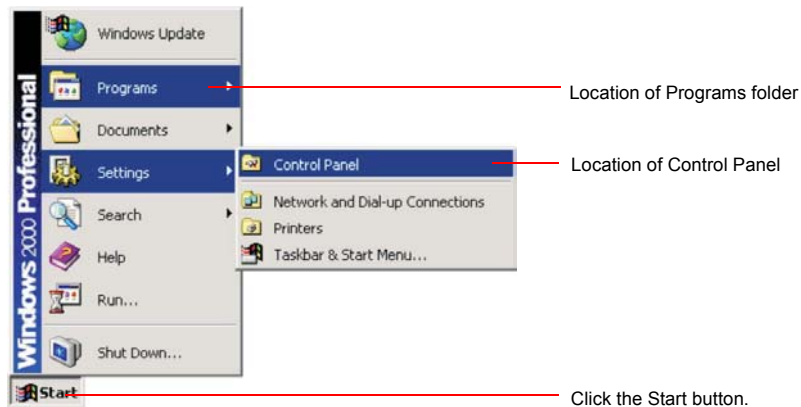
Samsung notebook provides Windows XP or 2000 as operating system depending on the product model.

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

Registering Windows 2000

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

Locations of Programs folder and Control Panel



Introducing Windows

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

To Playback Audio or Video CD

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

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

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

Descriptions in p27 "To write data on a CD (Option)" (p 27) section are applicable only to Windows XP. For using CD-RW drive on Windows 2000, refer to the CD-RW manual provided separately with your CD-RW.

Reinstalling Windows 2000

For reinstallation of Windows 2000, refer to "Reinstalling Windows XP" (p 100) section in the User Guide. The installation procedure for Windows 2000 is similar to Windows XP, but some screens may differ.