SAMSUNG

SyncMaster 720XT

Model [▾]

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Adobe **Reader**

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SyncMaster

Install drivers

▶ ▶ *Microsoft* **Windows**

Install programs

▶ ▶ **Natural Color**

▶ ▶ *MagicTune* **MagicTune™**

O   Safety Precautions

Notation   Power   Installation   Cleaning and Use   Others

▶ Notation

> Please read the following safety instructions as they are designed to prevent damage to property and harm to the user.

! Warning / Caution

⚠ Failure to follow directions noted by this symbol could result in bodily harm or damage to the equipment.

! Notational Conventions

🚫	Prohibited	❗	Important to read and understand at all times
🚫	Do not disassemble	👉	Disconnect the plug from the outlet
🚫	Do not touch	⏚	Grounding to prevent an electric shock

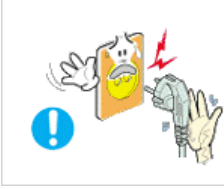Notation   Power   Installation   Cleaning and Use   Others

▶ Power

⚠ When not used for extended period of time, set your computer to DPMS.
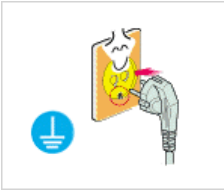If using a screen saver, set it to active screen mode.
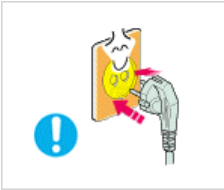
Shortcut to Anti-Afterimage Instructions ▶

Do not use a damaged or loose plug.

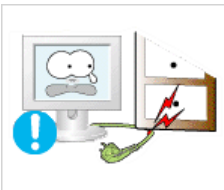▶ This may cause electric shock or fire.

Do not pull the plug out by the wire nor touch the plug with wet hands.

▶ This may cause electric shock or fire.

Use only a properly grounded plug and receptacle.

▶ An improper ground may cause electric shock or equipment damage.

Insert the power plug firmly so that it does not come loose.

▶ A bad connection may cause fire.

Do not excessively bend the plug and wire nor place heavy objects upon them, which could cause damage.

▶ This may cause electric shock or fire.
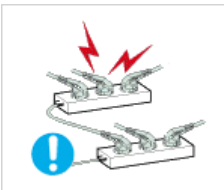
Do not connect too many extension cords or plugs to one outlet.

▶ This may cause fire.

Do not disconnect the power cord while using the monitor.

▶ A surge may be caused by the separation and may damage the monitor.

Do not use the power cord when the connector or plug is dusty.

▶ If the connector or plug of the power cord is dusty, clean it with a dry cloth.
▶ Using the power cord with a dusty plug or connector may cause an electric shock or fire.

▶ Installation

Be sure to contact an authorized Service Center when installing your set in a location with heavy dust, high or low temperatures, high humidity, and chemical substances, or where it will be operated for 24 hours continuously such as an airport, train station or etc.
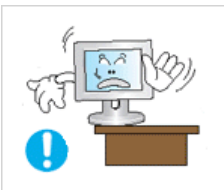
Failure to do so may cause serious damage to your set.

▶ Place your monitor in a location with low humidity and a minimum of dust.

   ▶ Failure to do so may cause electric shock or fire inside the monitor.
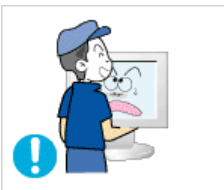
▶ Do not drop the monitor when moving it.

   ▶ This may cause damage to the product or the person carrying it.

▶ Install the monitor base in a showcase or shelf so that the end of the base does not protrude from the showcase or shelf.

   ▶ Dropping the product may cause damage to the product or the person carrying it.

▶ Do not place the product on an unstable or small surface area.

   ▶ Place the product on an even, stable surface, as the product may fall and cause harm to someone walking by, specifically children.
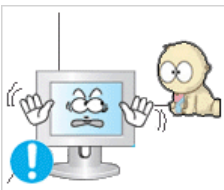
▶ Do not place the product on the floor.

   ▶ Take care, as someone, specifically children may trip over it.

▶ Keep any flammable objects such as candles, insecticides or cigarettes away from the product.

   ▶ Otherwise, this may cause fire.
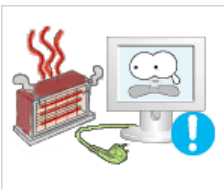
▶ Keep any heating devices away from the power cable.

   ▶ A melted coating may cause electric shock or fire.

Do not install the product in places with poor ventilation, for instance, a bookshelf, closet, etc.

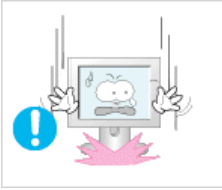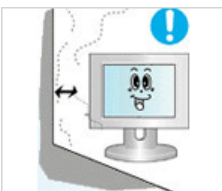▶ Any increase in internal temperature may cause fire.

Set down the monitor carefully.

▶ The monitor could be damaged or broken.

Do not place the monitor face down.

▶ This may damage the TFT-LCD surface.

Installing a wall bracket must be done by a qualified professional.

▶ Installation by unqualified personnel may result in injury.
Always use the mounting device specified in the owner's manual.

When installing the product, make sure to keep it away from the wall (more than 10 cm/4 inch) for ventilation purposes.

▶ Poor ventilation may cause an increase in the internal temperature of the product, resulting in a shortened component life and degraded performance.

Keep the plastic packaging (bag) out of children's reach.

▶ The plastic packaging (bag) may cause suffocation if children play with it.

Notation   Power   Installation   Cleaning and Use   Others

Cleaning and Use

When cleaning the monitor case or the surface of the TFT-LCD screen, wipe with a slightly moistened, soft fabric.

Do not spray water or detergent directly on the monitor.

▶ This may cause damage, electric shock or fire.

Use the recommended detergent with a smooth cloth.

If the connector between the plug and the pin is dusty or dirty, clean it properly with a dry cloth.

▶ A dirty connector may cause electric shock or fire.

Make sure to unplug the power cord before cleaning the product.

▶ Otherwise, this may cause electric shock or fire.

Unplug the power cord from the power outlet and wipe the product using a soft, dry cloth.

▶ Do not use any chemicals such as wax, benzene, alcohol, thinners, insecticide, air freshener, lubricant or detergent.

Contact the Service Center or Customer Center for interior cleaning once a year.

▶ Keep the product's interior clean.
Dust which has accumulated in the interior over an extended period of time may cause malfunction or fire.

Notation   Power   Installation   Cleaning and Use   Others

Others

Do not remove cover (or back).

▶ This may cause electric shock or fire.
Refer servicing to qualified service personnel.

If your monitor does not operate normally - in particular, if there are any unusual sounds or smells coming from it - unplug it immediately and contact an authorized dealer or service.
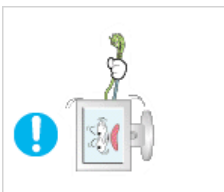
▶ This may cause electric shock or fire.

Keep the product away from places exposed to oil, smoke or moisture; do not install inside a vehicle.

▶ This may cause a malfunction, electric shock or fire.
   Especially avoid operating the monitor near water or outdoors where the monitor could be exposed to snow or rain.

If the monitor is dropped or the casing is damaged, turn the monitor off and unplug the power cord. Then contact the Service Center.

▶ The monitor may malfunction, causing an electric shock or fire.

Disconnect the plug from the outlet during storms or lightening or if it is not used for a long period of time.

▶ Failure to do so may cause an electric shock or fire.

Do not try to move the monitor by pulling only the wire or the signal cable.

▶ This may cause a breakdown, electric shock or fire due to damage to the cable.
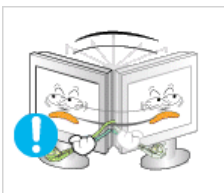
Do not move the monitor right or left by pulling only the wire or the signal cable.

▶ This may cause a breakdown, electric shock or fire due to damage to the cable.

Do not cover the vents on the monitor cabinet.

▶ Bad ventilation may cause a breakdown or fire.
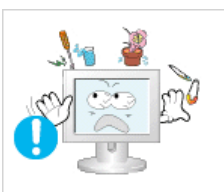
Do not place water containers, chemical products or small metal objects on the monitor.

▶ This may cause a malfunction, electric shock or fire.
   If a foreign substance enters the monitor, unplug the power cord and contact the Service Center.

Keep the product away from combustible chemical sprays or inflammable substances.

▶ This may cause an explosion or fire.

▶ Never insert anything metallic into the monitor openings.

▶ This may cause electric shock, fire or injury.

▶ Do not insert metal objects such as chopsticks, wire and gimlet or inflammable objects such as paper and match into the vent, headphone port or AV ports.

▶ It may cause a fire or an electric shock.
If an alien substances or water flows into the product, turn the product off, unplug the power connector from the wall outlet and contact Service Center.

▶ If you view a fixed screen for an extended period of time, residual image or blurriness may appear.

▶ Change the mode to energy save or set a screensaver to moving picture when you need to be away from the monitor for an extended period of time.

▶ Adjust the resolution and frequency to the levels appropriate for the model.

▶ Inappropriate resolution may cause undesirable picture quality.

17 inch (43 cm) - 1280 x 1024

▶ Keep the volume at a comfortable level when using the headphones.

▶ Excessively loud volume levels may damage hearing.
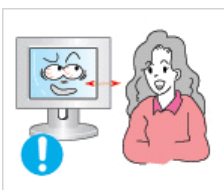
▶ Watching the monitor continuously at a too close angle may result in eyesight damage.
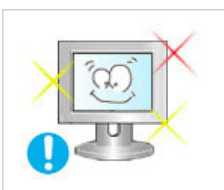
▶ To ease eye strain, take at least a five-minute break after every hour of using the monitor.

▶ Do not install the product on an unstable, uneven surface or a location prone to vibrations.

▶ Dropping the product may cause damage to the product or the person carrying it. Using the product in a location prone to vibrations may shorten the lifetime of the product or may catch fire.

When moving the monitor, turn off and unplug the power cord. Make sure that all cables, including the antenna cable and cables connected to other devices, are disconnected before moving the monitor.

▶ Failure to disconnect a cable may damage it and lead to fire or an electric shock.

Place the product out of children's reach, as they could damage it by hanging onto it.

▶ A falling product may cause injury to the person or even fatality.

When not using the product for an extended time period, keep the product unplugged.

▶ Otherwise, this may cause heat emission from the accumulated dirt or degraded insulation, leading to electric shock or fire.
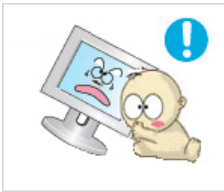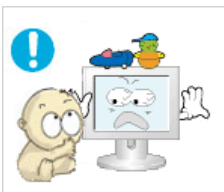
Do not place children's favorite objects (or anything else that may be tempting) on the product.

▶ Children may try to climb on the product to retrieve an object.
The product could fall, causing physical damage or even death.

Proper Seating Posture During Monitor Use

- Keep your back straight.
- Keep a distance of about 45 ~ 50 cm between your eyes and the monitor screen. Look at the screen from slightly above it, and have the monitor directly in front of you.
- Tilt the monitor upwards by 10 ~20 degrees. Adjust the monitor height so that the top of the monitor is slightly below eye level.
- Adjust the monitor angle so that there is no reflected light on the screen.Try to maintain your arms perpendicular to your armpits.
- Keep your arms level with the back of your hands.
- Keep the angle of the elbow perpendicular.
- Keep the angle of the knees at more than 90 degree. Do not let your feet fall up from the floor. Adjust the arm position so that it is below the heart.
- If you need repairs, contact a Samsung Service Center.

Correct Disposal of This Product
(Waste Electrical & Electronic Equipment) - Europe only

(Applicable in the European Union and other European countries with separate collection systems)
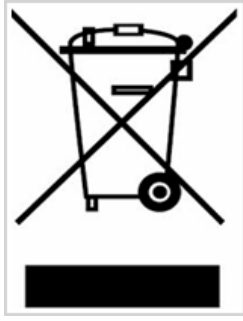
This marking shown on the product or its literature, indicates that it should not be disposed with other household wastes at the end of its working life. To prevent possible harm to the environment or human health from uncontrolled waste disposal, please separate this from other types of wastes and recycle it responsibly to promote the sustainable reuse of material resources.

Household users should contact either the retailer where they purchased this product, or their local government office, for details of where and how they can take this item for environmentally safe recycling.

Business users should contact their supplier and check the terms and conditions of the purchase contract. This product should not be mixed with other commercial wastes for disposal.

O Introduction

▶ Features

▣ What is a network monitor?
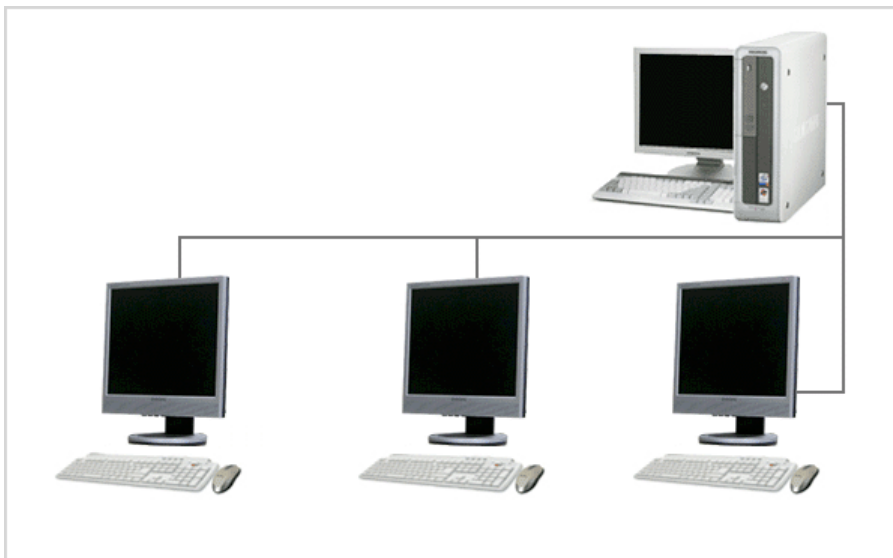
□ A network monitor can be used for the same purposes as a common monitor. It also provides the functionalities of most computers, such as an Internet connection, creating documents, editing images, via a connection to the host PC over the LAN. In addition, it allows you to connect an external device (DSC, MP3, external storage media) to the USB port and play music, movies and games. It is a new concept monitor.

□ You also can share the screen being displayed on your network monitor with other users by connecting a projector or other display device to its VGA OUT port. You can use this functionality for video conferencing and a variety of shared tasks.

□ In addition, because Windows XP is installed on your network monitor, you can perform Internet searches and USB memory searches independently of your host PC.

▶ Package Contents

Please make sure the following items are included with your monitor.
If any items are missing, contact your dealer.
Contact a local dealer to buy optional items.

▶ Unpacking

Without stand

With Stand

▶ Manual

Quick Setup Guide

Warranty Card
(Not available in all
locations)

User's Guide, Monitor Driver,
Natural Color software,
MagicTune™ software

▶ Cable

D-Sub Cable

Power Cord

▶ Sold separately

Keyboard (USB)

Mouse (USB)

Features   Package Contents   Your Monitor

▶ Your Monitor

▶ Front
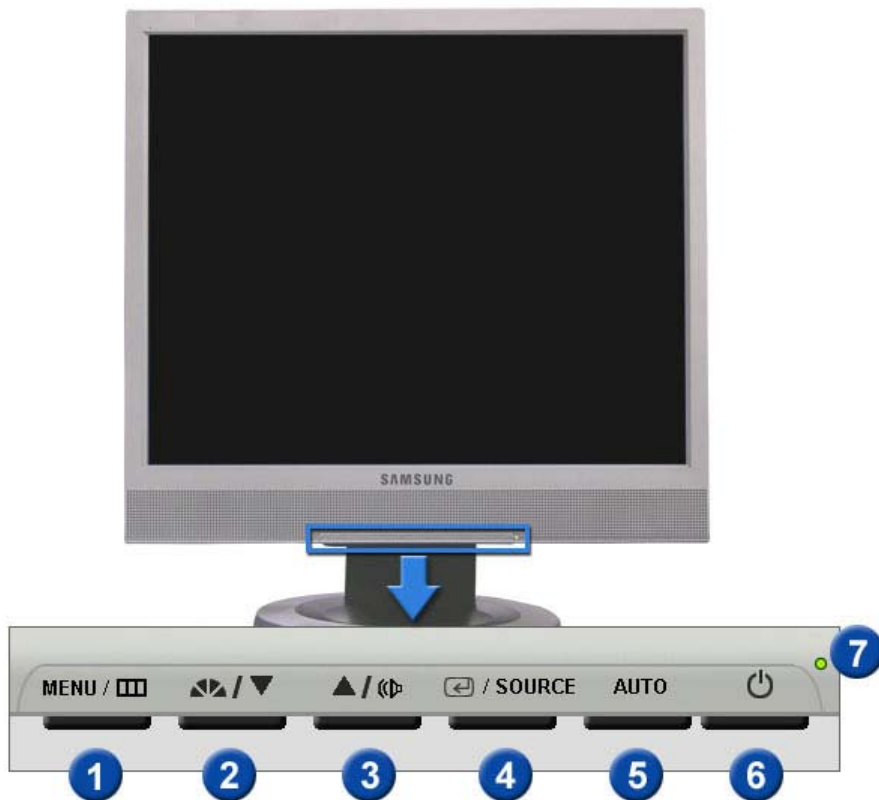
①   MENU button [▥]   Opens the OSD menu. Also use to exit the OSD menu or return to the previous menu.

②   MagicBright™ button   MagicBright™ is a new feature providing optimum viewing environment
[⚠]   depending on the contents of the image you are watching. Currently six
                       different modes are available : Custom, Text, Internet, Game, Sport and
                       Movie. Each mode has its own pre-configured brightness value. You can
                       easily select one of six settings by simply pressing MagicBright™ control
                       button.

       1) Custom
          Although the values are carefully chosen by our engineers, the pre-
          configured values may not be comfortable to your eyes depending on
          your taste.
          If this is the case, adjust the brightness and contrast by using the
          OSD menu.

       2) Text
          For documentations or works involving heavy text.

       3) Internet
          For working with a mixture of images such as text and graphics.

       4) Game
          For watching motion pictures such as a game.

       5) Sport
          For watching motion pictures such as a sport.

       6) Movie
          For watching motion pictures such as a DVD or Video CD.
       >> Click here to see an animation clip

③   Volume button [◖▣]   When OSD is not on the screen, push the button to adjust volume.

②,③ Adjust buttons [▼/▲]   Adjust items in the menu.

④   Enter button [▣]   Activates a highlighted menu item. /

|	/ SOURCE button	Push the 'SOURCE', then selects the video signal while the OSD is off. (When the SOURCE button is pressed to change the input mode, a message appears in the upper left of the screen displaying the current mode -- Analog or MagicNet input signal.)
⑤	AUTO button	Use this button for auto adjustment. >> Click here to see an animation clip
⑥	Power button [⏻]	Use this button for turn the monitor on and off. ※ Be careful as pressing the Power button in client mode will shut down Windows XPe. Be careful that if you force shut down Windows it may cause damage.
⑦	Power indicator	This light glows green during normal operation, and blinks green once as the monitor saves your adjustments.

※ See PowerSaver described in the manual for further information regarding power saving functions. For energy conservation, turn your monitor OFF when it is not needed, or when leaving it unattended for long periods.

▶ **Rear**

※ The configuration at the back of the monitor may vary from product to product.

❶	POWER IN port	Connect the power cord for your monitor to the power port on the back of the monitor.
❷	VGA IN port	Connect the signal cable to the 15-pin, D-sub port on the back of your monitor.
❸	RS-232C Connection Terminal	Connect a RS-232C cable to this terminal.
❹	VGA OUT port	Connect a monitor to another monitor through a D-Sub cable.
❺	Kensington Lock	The Kensington lock is a device used to physically fix the system when using it in a public place. ※ The locking device has to be purchased separately. For using a locking device, contact where you purchase it.
❻	Cable Fix Ring	When connecting the cable is finished, fix the cables to the Cable Fix Ring.
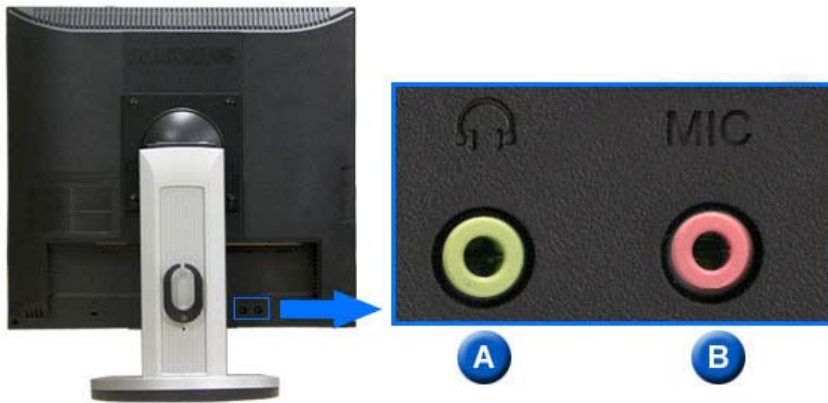
A	Earphone jack [🎧]	Headphone connection terminal.
B	The Microphone connection terminal (MIC)	Connect a microphone to the MIC terminal.

C	🔌 USB (USB Connection Terminal)	Connect USB devices such as a mouse, keyboard and external storage devices (DSC, MP3, external storage, etc.).
D	LAN (LAN Connection Terminal)	Connect when using it as a monitor.
E	AUDIO IN	Connect the audio cable for your monitor to the audio port on the back of your computer.

　　※ See Connecting Cables for further information regarding cable connections.

○ Connections

Connecting Cables   Using the Stand   Using Other Stands

▶ Connecting Cables

▷ Connect to the host PC using a LAN cable

❶ Host PC   **❷** Hub   **❸** LAN Cable   **❹** Monitor
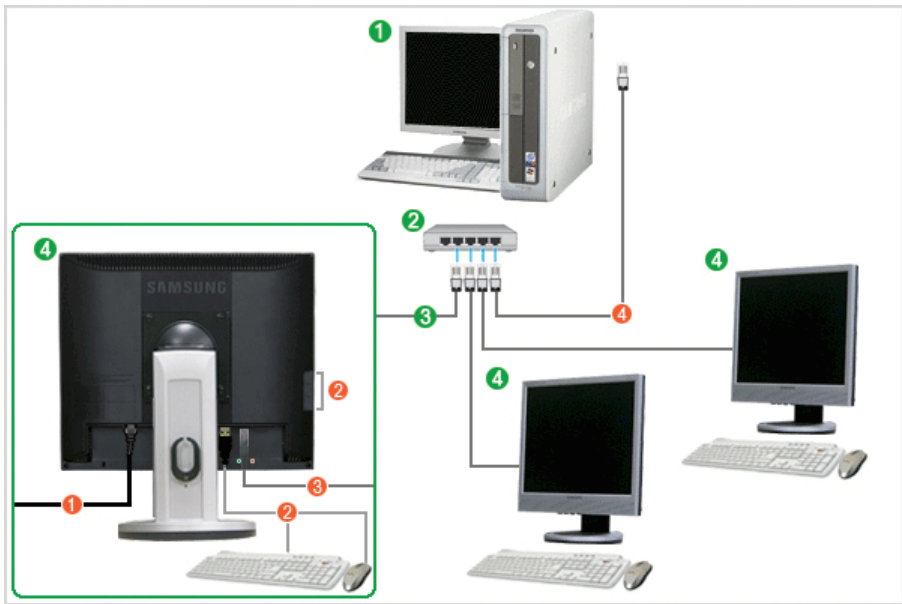
❶ Connect the power cord to the power terminal at the back of the monitor.
❷ Connect the mouse and the keyboard to the USB ports.
❸ Connect the LAN port on the back of the monitor and the hub.
❹ Connect the hub and the LAN port of the host PC.

※ The host PC must have an IP address.

After connecting the LAN and setting the IP address, you can view the host PC screen on the monitor.

Use the VGA IN port to directly connect the monitor to a PC.

Connect to the VGA OUT port to display the same picture on another monitor such as the projector. (For presentation purposes)

Use the USB port to connect an external storage device (DSC, MP3, external storage, etc.).

◘ Connecting Cables (When used as a normal monitor)
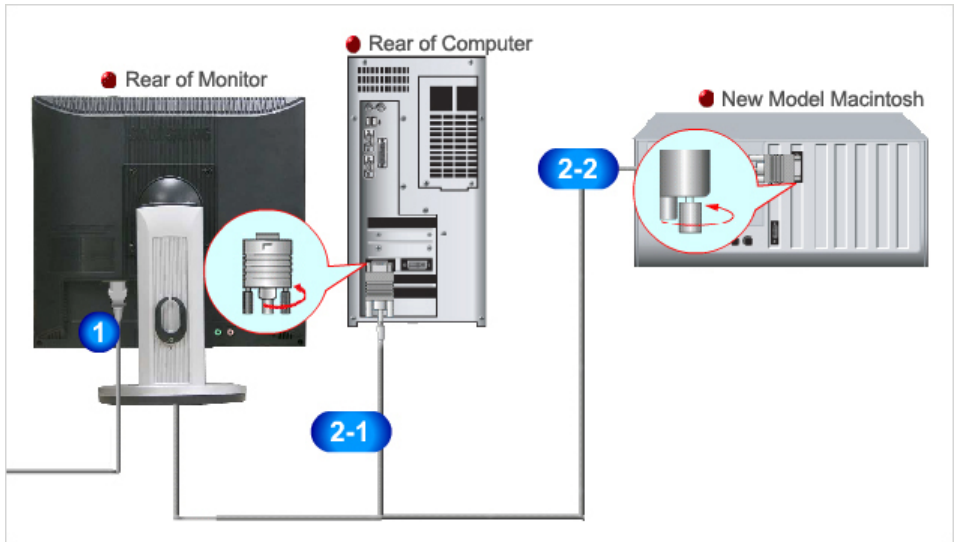
●   Connect the power cord for your monitor to the power port on the back of the monitor.
    Plug the power cord for the monitor into a nearby outlet.

2-1   Using the D-sub (Analog) connector on the video card.
    - Connect the D-Sub Cable to the VGA IN port on the back of your monitor.

     [VGA IN]

2-2   Using Macintosh
    - Connect the monitor and the Macintosh computer using the computer connection cable.

※   If the monitor and the computer are connected, you can turn them on and use them.

◘ External Device Connection
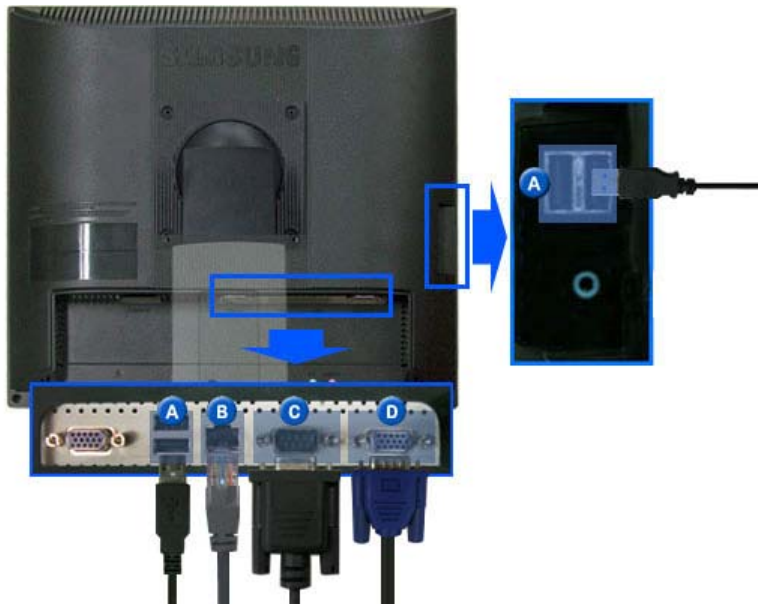
Ⓐ ⬸ USB (USB Connection Terminal)	Connect USB devices such as a mouse, keyboard and external storage devices (DSC, MP3, external storage, etc.). (You cannot use these devices without connecting to the host PC or switching to the MagicNet.)
Ⓑ LAN (LAN Connection Terminal)	Connect the LAN cable.
Ⓒ RS-232C Connection Terminal	Connect a RS-232C cable to this terminal.
Ⓓ D-sub 15-pin port [VGA OUT]	Use it by connecting it to another monitor. (The picture of the main monitor is displayed on the connected monitor.)

Using the Stand

Tilt angle

※ You can tilt the monitor screen forward to adjust the angle to a particular angle.

Swivel stand

※ You can easily adjust the position of the monitor screen from right to left using the rotating stand. Rubber stubs are attached at the bottom of the monitor to help fix it to the installation location.

Using Other Stands

Attaching a Base

※ This monitor accepts a 100 mm x 100 mm VESA-compliant mounting interface pad.

A Monitor   **B** Mounting interface pad (Sold separately)

❶ Turn off your monitor and unplug its power cord.

❷ Lay the LCD monitor face-down on a flat surface with a cushion beneath it to protect the screen.

❸ Remove four screws and then remove the stand from the LCD monitor.

❹ Align the mounting interface pad with the holes in the rear cover mounting Pad and secure it with four screws that came with the arm-type base, wall mount hanger or other base.

○ Using Windows XPe

▶ What is XPe Client?

An Microsoft Windows XP Embedded(XPe) client uses the Microsoft Windows XP Embedded operating system. When an XPe client is connected to a Citrix ICA server or another server that can provide the Microsoft RDP service, data for the keyboard, mouse, audio/video and display are transmitted through the network between the client and the server.

◘ Connectable Servers

A Citrix ICA (Independent Computing Architecture) Server
- A Microsoft Windows 2000/2003 Server where the terminal services and Citrix MetaFrame are installed
- A Microsoft Windows NT 4.0 Server where the Citrix MetaFrame is installed

A Microsoft RDP (Remote Desktop Protocol) Server
- A Microsoft Windows 2000 Server where the terminal services are installed
- A Microsoft Windows 2003 Sever
- A Microsoft Windows XP Professional

※ This manual describes the functions provided by the XPe Client. However, it does not explain general functionalities of Windows XP Embedded. For more general information on Windows XP Embedded , refer to Windows XP Embedded Help provided by Microsoft.

▶ Logon

◘ Logon

When the client starts, you can logon to the server by entering your username and password. The default usernames already configured are 'Administrator' and 'User', and their passwords are a space.

◘ Auto Log On

The client can log onto the server using a predefined account without the user information having to be manually entered every time.

Only an administrator (that is, only when you logged on as an administrator) can specify the username, password, and domain for an account for which 'auto log on' is activated. At this time, the password cannot be left empty.
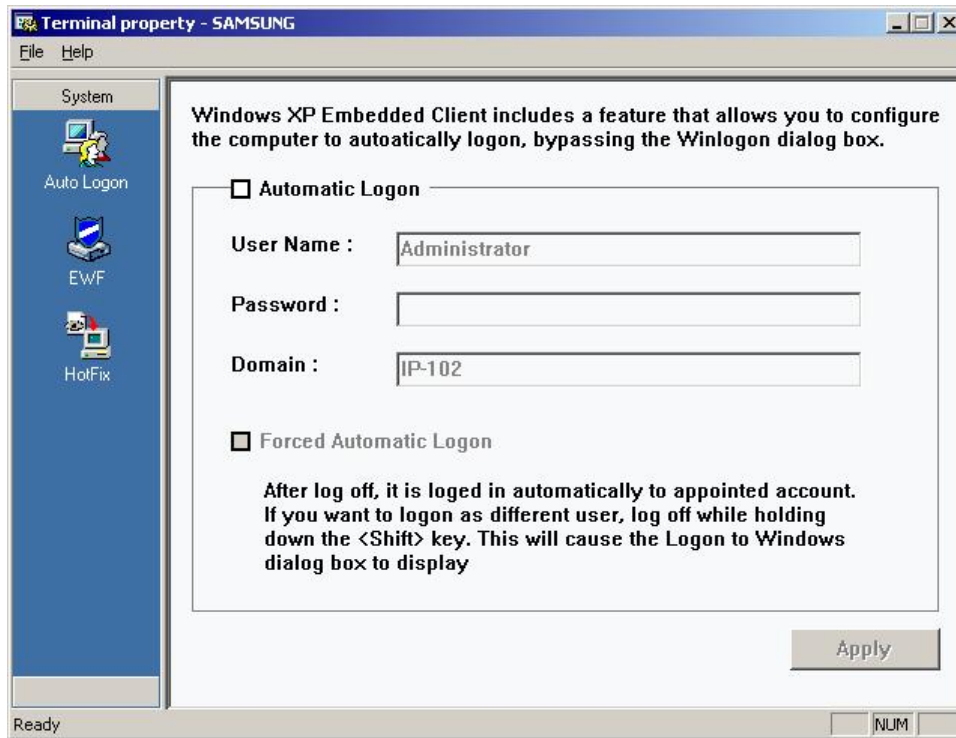
▶ Windows XP Embedded Desktop

▶ User

When a user logs in, the User Desktop appears, as shown in the figure below. The default icons that appear on the User Desktop are Citrix Program Neighborhood, Remote Desktop Connection and Internet Explorer. You can also run this connection from the Start menu. The audio volume icon, VNC server icon and system time are displayed on the User Taskbar.
When logged on as a user, there are many restrictions that protect the system from incorrent user actions. You cannot access the system drives and there are restrictions on configuring properties for them. To configure the client's advanced and detailed settings, log on as an administrator.

▶ Administrator

If you logon as Administrator, the Administrator Desktop appears, as shown in the figure below. The default icons that appear on the Administrator Desktop are My Computer, My Network Places, Citrix Program Neighborhood, Remote Desktop Connection, Internet Explorer, and Recycle Bin. You can also run the Citrix Program Neighborhood, Remote Desktop Connection, and Internet Explorer from the Start menu. The audio volume icon, VNC server icon, Enhanced Write Filter status icon, and system time are displayed on the Administrator Taskbar. The Administrator privilege is required for adding and removing programs.

▶ Log off, Restart, Shut down

- To log off the current session, shut down or restart your client, use the Start menu. Click Start → Shut down. The Shut Down Windows dialog box is displayed. Select an operation from the combo box and click OK. You can also log off or shut down your client using the Windows Security dialog box displayed when pressing the Ctrl + Alt + Del keys. If 'Force Auto Log on' is activated, you will be immediately logged on after each log off.

- The Client Log off, Restart and Shutdown take effect on the operations of the EWF(Enhanced Write Filter). To keep the changed system configuration, you must save a cache for the current system session into flash memory. Failing to do so will cause the changed configuration to be lost when the client is shutdown or restarted. (In the case of logging off, the configuration is remembered when loggin in again.) For more information on the Enhanced Write Filter, refer to the Program Help .

▶ Programs

- XPe Client is a client/server-based computing platform. On this platform, the client accesses the server each time it needs a program and it only receives the user interface screens from the server. Hence, various programs, such as ICA, RDP, and VNC, which are installed on a XPe Client, are used to help the client access the server and perform user tasks.

▶ Citrix Program Neighborhood

Independent Computing Architecture (ICA) allows you to use applications on the server through a wide range of platforms and networks regardless of their basis.
The ICA MetaFrame Server separates the application's internal logic from the user interface. Due to this separation, users only work with the user interface on the client. The actual application is 100% run on the server. In addition, running an application through ICA only uses approximately 10% bandwidth compared to running it locally. By using this feature of ICA, users can do more work on the client than working locally. The core technologies of ICA are as follows:

- ▶ Thin Resource
  - Low system requirements needed for running ICA; a computer equipped with an Intel 286 processor and 640K RAM is sufficient. This means ICA can be run on any computer that exists at present.
- ▶ Thin Wire
  - The default bandwidth required by ICA protocol is 20 kbps, on average. Therefore, even with a Dial-Up or ISDN connection, a consistent performance is maintained. Any program, however large it is, can be run stably at a low bandwidth.
- ▶ Universal Application Client
  - The Citrix ICA protocol separates the user interface from the application. While an application is running on the WinFrame multi-user application server, its user interface is running on the thin client software of WinFrame. Hence, in any environment, it is possible to run applications fast.
- ▶ Platform Independent
  - ICA is inherently being operated regardless of the operating system platform. Because the clients for UNIX, OS/2, Macintosh, and Non-DOS are already on the market, you can run Windows applications on these operating systems.

The Citrix Program Neighborhood is a program that manages these ICA connections. To start the Citrix Program Neighborhood, select Start → Programs → Citrix → MetaFrame Access Clients → Program Neighborhood, or double-click the Citrix Program Neighborhood icon.

To create a new ICA connection, double-click the Add ICA Connection icon and follow these steps:
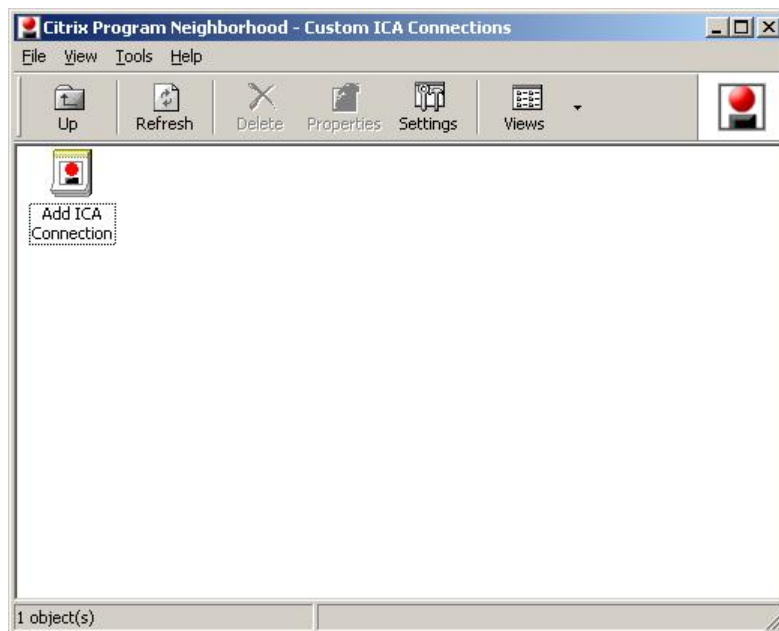
1. Select the type of connection to create.

2. Type the connection name and the server name (IP address or DNS name).
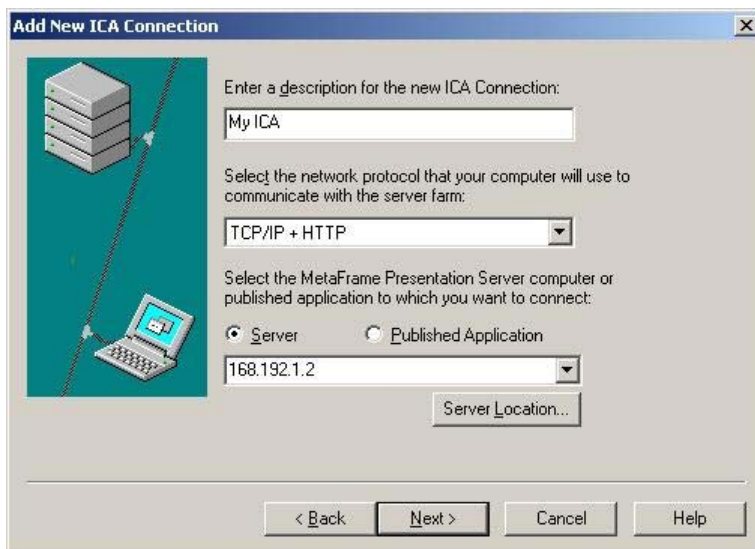
3. Configure the degree of compression for the data to be sent and received, and the degree of reliability for sessions.

4. To login to the server automatically, enter your username, password and domain. If you do not enter them now, you will be prompted to enter them whenever you connect to the server.

5. You can specify the color and size of the window to be displayed.

6. If a connection succeeds, the server's desktop appears on the client. In this step, you can make an application run automatically.

7. Click Finish to complete creating the new connection.

※ For more information on the ICA Client Program, visit the Citrix web site.

The Remote Desktop Connection

You can control a running terminal server or another computer (Windows 95 or later) remotely through a remote desktop connection.

Remote Desktop

- Windows XP Professional or Windows 2000/2003 Server must be installed on the computer to be controlled remotely. This computer is called a host.
- A remote computer running on an operating system later than Windows 95 is required. This remote computer is called a client. The client software for the remote desktop connection must be installed on the client.
- You must also be connected to the Internet. A broadband Internet connection is good for high performance. However, because the remote desktop transmits a minimum set of data including the display data and keyboard data to control the host remotely, a broadband Internet connection is not required. You can run a remote desktop on a low bandwidth Internet connection.

※ When running a remote desktop on Windows XP Professional, you cannot use the operating system of your computer.

Enabling Your Computer as the Host

You must enable the Remote Desktop feature to control it from another computer. You must be logged on as an administrator or a member of the Administrators group to enable Remote Desktop on your computer. Follow these steps:

- Open the System folder in the Control Panel. Click Start, point to Settings, click Control Panel, and then double-click the System icon.
- On the Remote tab, select the "Allow users to connect remotely to this computer" checkbox.
- Ensure that you have the proper permissions to connect to your computer remotely, and click OK.
- Leave your computer running and connected to the client's network with Internet access.
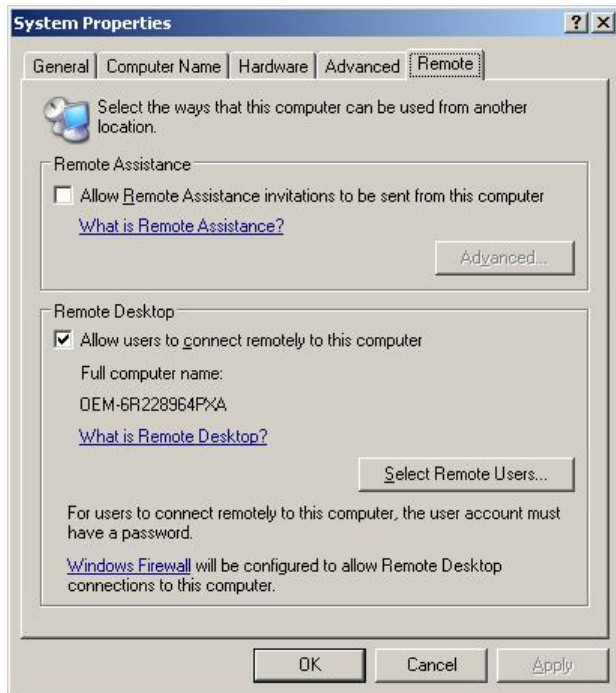
○ **Start a Remote Desktop Session on the Client**

Once you have enabled your host computer to allow remote connections and installed the client software on a Windows-based client computer, you are ready to start a Remote Desktop session. You must first establish a virtual private network connection or remote access service connection from your client computer to your host computer.

1. Click Start, point to Programs, and then click Remote Desktop Connection. Or double-click the Remote Desktop Connection icon.

   The Remote Desktop Connection window will open.

2. Enter the host computer name. You can configure detailed settings by clicking the Options button.

3. Options

   - General: Enter the login information to connect to the host computer. Enter your username and password to login to the host automatically.

- Display: The Remote Desktop Connection sends and receives compressed screen data. If you set the resolution and color quality to the high option, the speed may become slow.
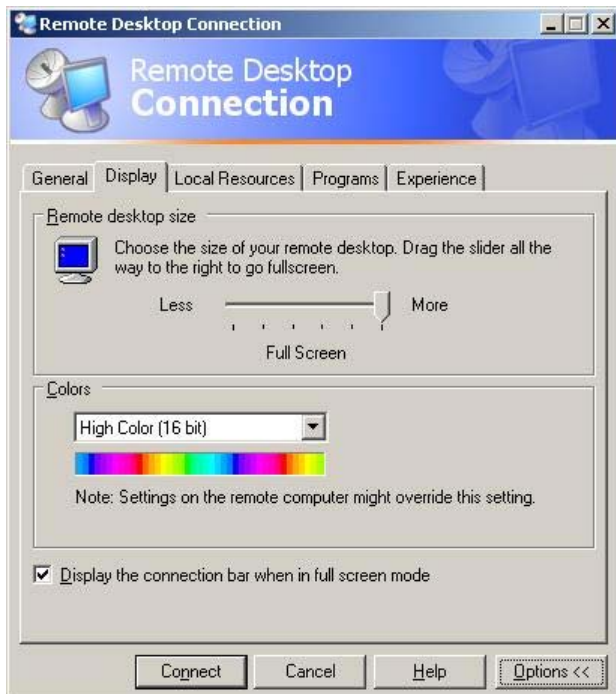
- Local Resource: Specify whether to use the hard disks and ports.

- Programs: Specify whether to display the Desktop or run an application whenever you are connected. The default is 'Desktop'.

- Experience: You can select your connection speed, and select and share environmental options.

4. Click Connect. The Log On to Windows dialog box appears.

5. In the "Log On to Windows" dialog box, type your username, password, and domain (if required), and then click OK. The Remote Desktop window will open and you will see the desktop settings, files, and programs that are on the host computer.

   ※ For more information on Remote Desktop Connections, visit the Microsoft web site.

▶ **RealVNC Server**

RealVNC (Virtual Network Computing) is a software program that allows you to connect to another computer on a network and control it remotely. Compared to the Windows terminal service which has a similar function, RealVNC allows only one administrator to connect to the server at a time. That is, if another is connected to the server as an administrator, the previous administrator connection will be disconnected.
In RealVNC, the server and the viewer communicate via the VNC protocol. You must install a RealVNC server on the computer you wish to control remotely, and a VNC viewer on the computer which remotely controls the computer where the RealVNC server is installed. Hence, the RealVNC server program is installed on a XPe client.

By using this program, you do not have to move directly to the client site to resolve its problems. Instead, you can connect to the client from the server and solve problems remotely. For this reason, RealVNC is being used very usefully.
Only administrators can configure the RealVNC server properties. To display the configuration dialog box for RealVNC, double-click the RealVNC icon in the system tray. From this dialog box, you can run a VNC server and configure a password and various properties. The default password is set to 'Administrator'. Note that it is case-sensitive.
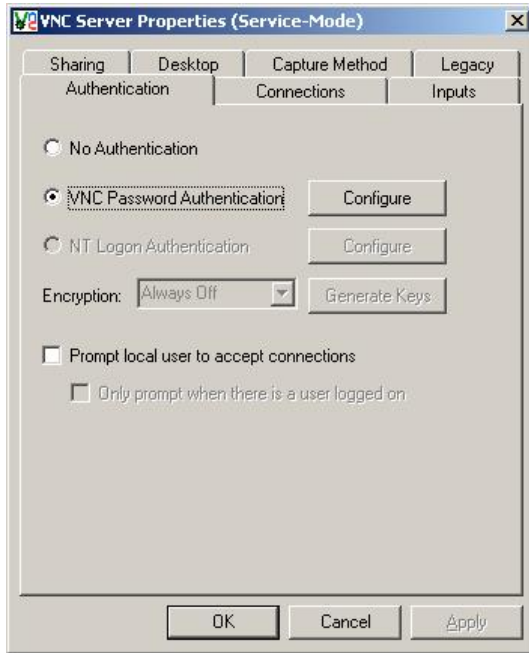
▶ Internet Explorer

A XPe Client includes Internet Explorer. This program is permitted for all users. For more information on Internet Explorer, visit the Microsoft website.

▶ Enhanced Write Filter

Enhanced Write Filter (EWF) protects a flash volume from write access and consequently, preserves the durability of the flash device. EWF provides read and write access through a cache to the client instead of allowing direct access to a flash volume.

If EWF is activated, data is not stored to the flash. The data stored in the cache is only effective while the client is operating. The cached data will be lost when restarting or shutting down your client. Therefore, to store the data written to the registry, favorites and cookie folders, etc., the content stored in the cache should be transferred to the flash. An error message is displayed when it is not possible to write to the cache due to a lack of memory. If this message is displayed, you have to deactivate EWF to flush the EWF cache. The user can double-click the EWF icon on the tray at the bottom right of the screen to call the EWF Manager. A user can also change the EWF configuration by entering EWF management commands at the command prompt. This task requires the administrator privilege.

▷ Enable disk write protection and restart your computer

- If the EWF is disabled, enable it. If this item is selected, the cache is flushed and the EWF is

enabled. After restarting your computer, the configurations and file system information for the client are written to a cache. You can also perform this operation by entering "ewfmgr.exe c: -enable" at the command prompt and restarting your computer.

▶ Disable disk write protection and restart your computer

- This item is activated when the EWF is running. If this item is selected, the current states of the client (saved in a cache) are saved to a flash volume and the EWF is disabled. After restarting your computer, the configurations and file system information for the client are written to a flash volume. You can also perform this operation by entering "ewfmgr.exe c: -commitanddisable" at the command prompt and restarting your computer.

▶ Write the changes to a disk

- This item is activated when the EWF is running. If this item is selected, the current states of the client (saved in a cache) are saved to a flash volume. However, the state of EWF will not be changed. You can also perform this operation by entering "ewfmgr.exe c: -commit" at the command prompt.

※You can view the configurations for the protected volumes by entering "ewfmgr.exe c:" at the command prompt.

In addition, the EWF icon in the system tray shows the current state of the EWF.

The EWF is enabled.

The EWF is disabled.

◻ Windows Media Player

The XPe Client includes Windows Media Player 6.4. With Windows Media Player, you can play audio and video files on a website.

| What is XPe Client? | Logon | Windows XP Embedded Desktop | Programs | Control Panel | Configuring Utilities | Recover the System |

▶ Control Panel

◻ The Windows Firewall

The Windows Firewall protect your client further. The Windows Firewall allows you to restrict incoming data to your client from other computers, thus helping to control your client data more effectively. In addition, it also provides a barrier between your client and network connections reducing unauthorized access, viruses, and worms across networks.
You can think of a firewall as a sentinel which identifies incoming data from the Internet and other networks. According to the firewall settings, incoming data to your computer is either permitted or rejected.
The Windows Firewall is, by default, installed and activated on your client. However, your administrator can turn it off. You can choose and select a different firewall. Therefore, it is not required for you to use the Windows Firewall. Estimate the functions of other firewalls and choose the best one to fit your requirements. To install and run a different firewall, you must turn off the Windows Firewall.

You must be logged on as administrator to turn the Windows Firewall on or off. Follow these steps to turn the Windows Firewall on or off.
1. Run the Windows Firewall.

2. Click on one of these options under the General tab.
    o **On (recommended)** : This is the recommended setting for normal use.
    o **On with no exceptions** : This settings blocks all unwanted access to your client, including all requests to programs and services selected in the Exceptions tab. Use this setting when you need to protect your client to the maximum extent.
    o **Off (Not recommended)** : Turning off the Windows Firewall may make your client and network more vulnerable to viruses and intruders.

| What is XPe Client? | Logon | Windows XP Embedded Desktop | Programs | Control Panel | Configuring Utilities | Recover the System |

▶ Configuring Utilities

◻ Local Drive

▶ C Drive

The C drive is used for the system. If there is less than 3MB of free space available, the client OS cannot operate. Therefore, always ensure that there is a sufficient amount of free space available. EWF can help maintain available space by preventing the C drive being written to directly.

▶ **D Drive**
If the size of the flash memory is larger than 1 GB, the D drive (that is, the flash memory) is used as temporary file storage. By specifying the folder path on drive D to frequently used system files, you can manage the system drive effectively. We recommend using this feature for temporary files such as the paging file, temporary internet files, and event logs files.

▶ **Saving Files**

Your client uses a fixed size of flash memory. Therefore, it is better to save files to the server rather than to your client.

Mapping a Network Drive

The administrator can map a folder to a network drive. To keep the mapping information after restarting the client, take note of these directions carefully.

- Select the **Reconnect at logon** checkbox in the **Map Network Drive** dialog box.
- If EWF is activated, save the changes to the disk.

Installing MUI (Multi-language User Interface)

The MUI Setup program helps you set up languages on the XPe client. In addition, you can delete an original language pack to extend the available free disk space. If you want to change the default language, standards or formats, use the **Regional Options** in the Control Panel.

To add a language to your XPe client, follow these steps:
- Log on as an administrator.
- If EWF is activated, you must deactivate it before starting the installation.
- Click **Start** and click **Run** . Type **muisetup.exe** in the Open box and click **OK** . A list of languages that can be installed is displayed as shown below.
- Select the language you want to install and click **Install** from the **File** menu. The installation will begin.

```
Multilingual User Interface Pack - SAMSUNG               [X]
 File  Help
┌─ Install languages ──────────────────────────────────┐
│                                                       │
│  Select the languages you want to install on the      │
│  system for menus and dialogs.                        │
│                                                       │
│  ┌─────────────────────────────────────────────┐     │
│  │ German                                      │     │
│  │ French                                      │     │
│  │ Italian                                     │     │
│  │ Swedish                                     │     │
│  │ Spanish                                     │     │
│  │                                             │     │
│  │                                             │     │
│  └─────────────────────────────────────────────┘     │
│                                                       │
│  Note: Using Regional and Language Options in          │
│  Control Panel, you can change the user interface,     │
│  default keyboard, locale, and standards and           │
│  formats. If deleting, the language source file will   │
│  be removed and returning the disk free space.         │
│                                                       │
│              [ Install ]   [ Close ]                  │
└──────────────────────────────────────────────────────┘
```

You can delete an original language pack using the **Delete** menu in the **File** menu.
This operation deletes the original language pack only and does not delete the copy installed on your XPe Client.

▶ **Recover the System**

▶ **Overview**

The XPe Client provides a recovery function which allows you to revert to a backed up system when encountering a serious problem. You can back up an OS image which is working normally to USB memory or the PXE server. You can revert to a backed up image when your client has one of these problems:

- **When a system file is deleted accidentally or is corrupted**
- **When the client computer is unstable or there is a problem with a device driver**
- **When problems occur, after installing a new program or device**
- **When the client computer is infected with a virus**
- **When Windows XP Embedded fails to start**

How to Recover the System

- **Recovery Using USB Memory**
  By following these steps, you can save all necessary files to USB memory, and boot up with the backed up system on the USB memory and recover the system.
  - Perform system formatting for your USB memory in order to make it bootable.
  - Save the Windows XP Embedded image and the Backup/Recovery Utility which will be recovered later to your USB memory.
  - Boot up with the USB memory.
  - Recover the system using the Windows XP Embedded image and the Backup/Recovery Utility in the USB memory.

- **Recovery Using Network Booting**
  This method is provided through the PXE (Preboot eXecution Environment) server. The PXE sever provides a client/server interface based on TCP/IP, DHCP, and TFTP. It allows an administrator at a remote location to configure and boot the operating system onto a client over a network.
  - Implement a PXE server.
  - Save the Windows XP Embedded image and the Backup/Recovery Utility which will be recovered later onto the PXE server.
  - Boot the client via the network.
  - Recover the system using the Windows XP Embedded image and the Backup/Recovery Utility saved on the PXE server via the network.

※ For more information, refer to the PXE Server User Manual.

■ Safety Precautions   ■ Introduction   ■ Connections   ■ Using Windows XPe   ■ Using the Software

■ Adjusting the Monitor   ■ Troubleshooting   ■ Specifications   ■ Information

○ Using the Software

Monitor Driver   Natural Color   MagicTune™

▶ Monitor Driver

When prompted by the operating system for the monitor driver, insert the CD-ROM included with this monitor. Driver installation is slightly different from one operating system to another. Follow the directions appropriate for the operating system you have.

Prepare a blank disk and download the driver program file at the Internet web site shown here.

Internet web site : http://www.samsung.com/ (Worldwide)
http://www.samsung.com/monitor (U.S.A)
http://www.sec.co.kr/monitor (Korea)
http://www.samsungmonitor.com.cn/ (China)

▶ **Installing the Monitor Driver (Automatic)**

▶ ❶ Insert CD into the CD-ROM drive.
❷ Click **"Windows"**.
❸ Choose your monitor model in the model list, then click the "OK" button.
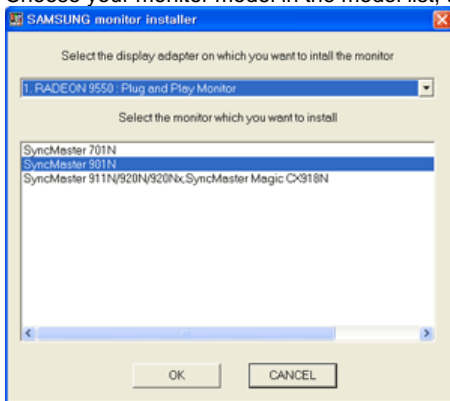
❹

If you can see following message window, then click the "Continue Anyway" button. Then click "OK" button (Microsoft® Windows® XP/2000 Operating System).

 ※ This monitor driver is under certifying MS logo, and this installation doesn't damage your
   system.
   The certified driver will be posted on Samsung Monitor homepage
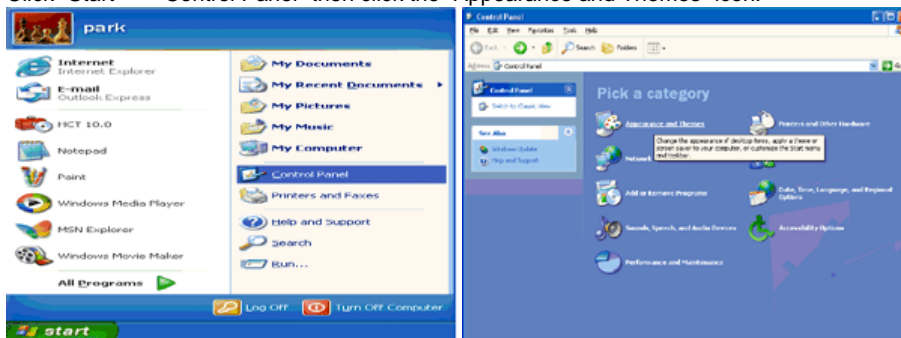
   http://www.samsung.com/

 ❺ Monitor driver installation is completed.

▶ **Installing the Monitor Driver (Manual)**

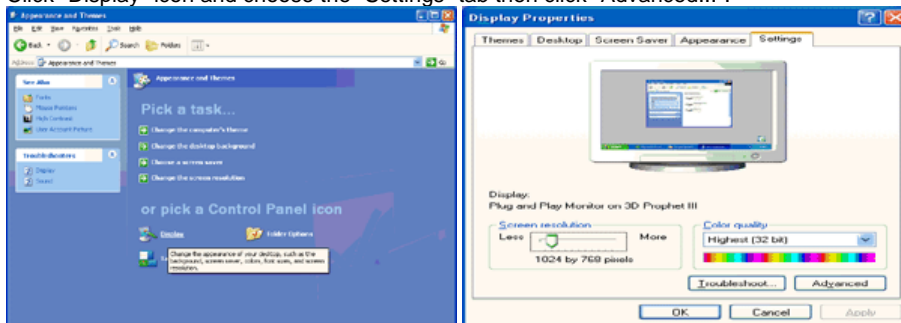 Windows XP | Windows 2000 | Windows ME | Windows NT | Linux

 ▷ Microsoft® Windows® XP Operating System ▲

   ❶ Insert CD into the CD-ROM drive.
   ❷ Click "Start" → "Control Panel" then click the "Appearance and Themes" icon.

   ❸ Click "Display" icon and choose the "Settings" tab then click "Advanced...".

   ❹

   Click the "Properties" button on the "Monitor" tab and select "Driver" tab.
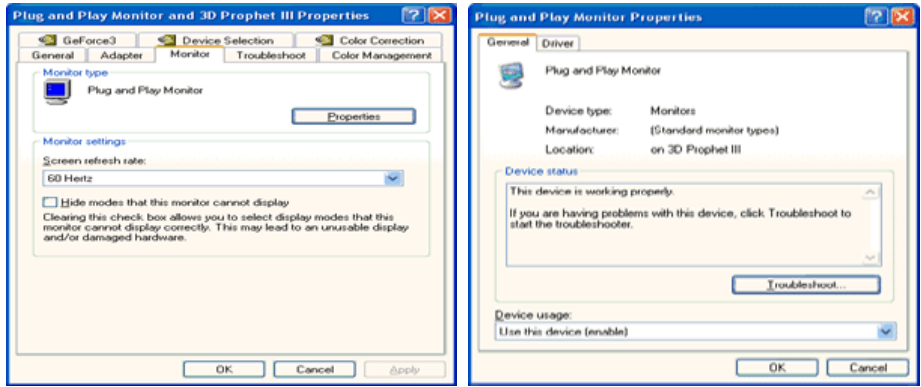
❺ Click "Update Driver..." and select "Install from a list or..." then click "Next" button.
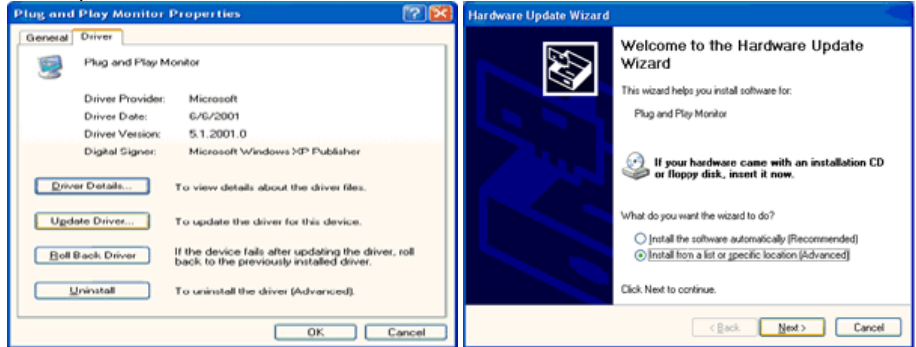
❻ Select "Don't search ,I will..." then click "Next" and then click "Have disk".
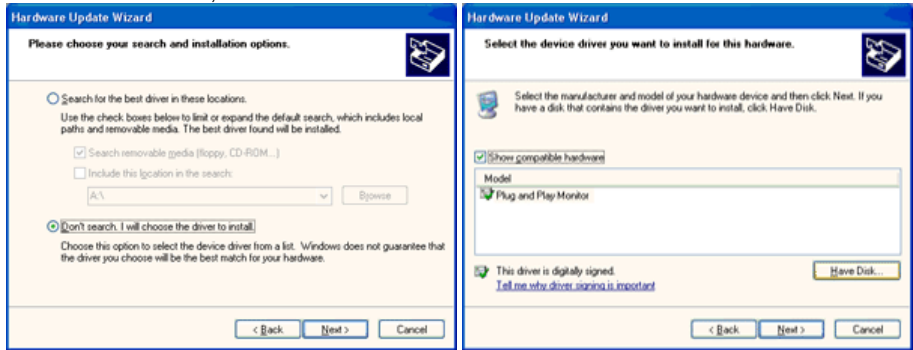
❼ Click the "Browse" button then choose A:(D:\Driver) and choose your monitor model in the model list and click the "Next" button.
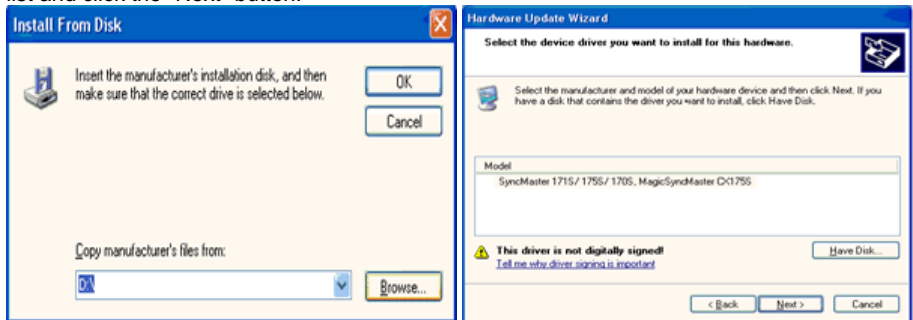
❽

If you can see following "Message" window, then click the "Continue Anyway" button. Then click "OK" button.

※ This monitor driver is under certifying MS logo, and this installation doesn't damage your system.
The certified driver will be posted on Samsung Monitor homepage

http://www.samsung.com/

⑨ Click the "Close" button then click "OK" button continually.
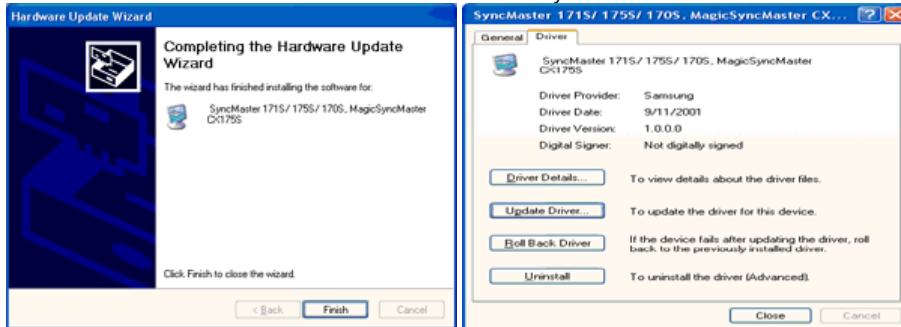
⑩ Monitor driver installation is completed.

▣ Microsoft® Windows® 2000 Operating System ▲

When you can see "Digital Signature Not Found" on your monitor, follow these steps.
❶ Choose "OK" button on the "Insert disk" window.
❷ Click the "Browse" button on the "File Needed" window.
❸ Choose A:(D:\Driver) then click the "Open" button and then click "OK" button.
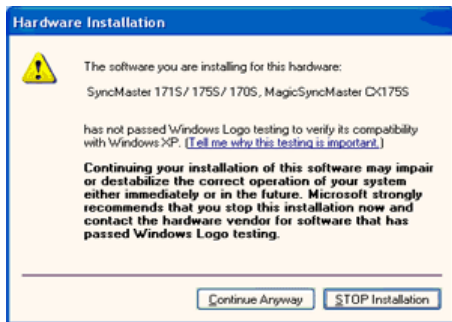
How to install
❶ Click "Start" , "Setting" , "Control Panel".
❷ Double click the "Display" icon.
❸ Select the "Settings" tab and click "Advanced Properties" button.
❹ Choose "Monitor".
  Case1 : If the "Properties" button is inactive, it means your monitor is properly configured. Please stop installation
  Case2 : If the "Properties" button is active, click the "Properties" button then follow next steps continually.
❺ Click "Driver" and then click on "Update Driver..." then click on the "Next" button.
❻ Choose "Display a list of the known drivers for this device so that I can choose a specific driver" then click "Next" and then click "Have disk".

⑦ Click the "Browse" button then choose A:(D:\Driver).

⑧ Click the "Open" button, then click "OK" button.

⑨ Choose your monitor model and click the "Next" button then click "Next" button.

⑩ Click the "Finish" button then the "Close" button.

If you can see the "Digital Signature Not Found" window then click the "Yes" button. And click the "Finish" button then the "Close" button.

▶ Microsoft® Windows® Millennium Operating System ▲

① Click "Start" , "Setting" , "Control Panel".

② Double click the "Display" icon.

③ Select the "Settings" tab and click "Advanced Properties" button.

④ Select the "Monitor" tab.

⑤ Click the "Change" button in the "Monitor Type" area.

⑥ Choose "Specify the location of the driver".

⑦ Choose "Display a list of all the driver in a specific location..." then click "Next" button.

⑧ Click the "Have Disk" button.

⑨ Specify A:\(D:\driver) then click "OK" button.

⑩ Select "Show all devices" and choose the monitor that corresponds to the one you connected to your computer and click "OK".

⑪ Continue choosing "Close" button and "OK" button until you close the Display Properties dialogue box.

▶ Microsoft® Windows® NT Operating System ▲

① Click "Start", "Settings", "Control Panel", and then double-click "Display" icon.

② In Display Registration Information window, click Settings Tab and then click "All Display Modes".

③ Select a mode that you wish to use (Resolution, Number of colors and Vertical frequency) and then click "OK".

④ Click "Apply" button if you see the screen working normally after clicking "Test". If the screen is not normal, change to a different mode (lower mode of resolution, colors or frequency).

※ If there is no Mode at All Display Modes, select the level of resolution and vertical frequency by referring to the Preset Timing Modes in the user guide.

▶ Linux Operating System ▲

To execute X-Window, you need to make the X86Config file, which is a type of system setting file.

① Press "Enter" at the first and the second screen after executing the X86Config file.

② The third screen is for setting your mouse.

③ Set a mouse for your computer.

④ The next screen is for selecting a keyboard.

⑤ Set a Keyboard for your computer.

⑥ The next screen is for setting your monitor.

⑦ First of all, set a horizontal frequency for your monitor. (You can enter the frequency directly.)

⑧ Set a vertical frequency for your monitor. (You can enter the frequency directly.)

⑨ "Enter" the model name of your monitor. This information will not affect the actual execution of X-Window.

⑩ You have finished setting up your monitor.
Execute X-Window after setting other requested hardware.

Monitor Driver   Natural Color   MagicTune™

▶ **Natural Color**

▶ **Natural Color Software Program**

One of the recent problems in using a computer is that the color of the images printed out by a printer or other images scanned by a scanner or a digital camera are not the same as those shown on the monitor. The Natural Color S/W is the very solution for this problem. It is a color administration system developed by Samsung Electronics in association with Korea Electronics & Telecommunications Research Institute (ETRI). This system is available only for Samsung monitors and makes the color of the images on the monitor the same as the printed or scanned images. For more information, refer to Help (F1) in the software program.

How to install the Natural Color software

Insert the CD included with the Samsung monitor into the CD-ROM Drive. Then, the initial screen of the program Natural Color will be executed. Click Natural Color on the initial screen to install the Natural Color software.

To install the program manually, insert the CD included with the Samsung monitor into the CD-ROM Drive, click the [Start] button of Windows and then select [Run...].
Enter D:\color\NCProSetup.exe and then press the [Enter] key.
(If the drive where the CD is inserted is not D:\, enter the applicable drive.)

How to delete the Natural Color software program

Select "Setting/Control Panel" on the "Start" menu and then double-click "Add/Delete a program".
Select Natural Color from the list and then click the "Add/Delete" button.

Monitor Driver   Natural Color   MagicTune™

MagicTune™ HELP

Overview | Installation | OSD Mode | Color Calibration | Uninstall | Troubleshooting

Overview

What is MagicTune™?

Monitor performance can vary due to the graphics card, host computer lighting conditions and other environmental factors. In order to get the best image on a monitor requires you to adjust it for your unique

setting. Unfortunately, the manual controls available to tune the image often prove to be challenging. Proper adjustment (tuning) requires an easy to use program that goes through a step-by-step process to obtain the best overall picture quality.

In most cases even simple adjustments to Brightness, or Contrast require navigation of the multi-level, on-screen display (OSD) menus that are not easy to understand. Furthermore, there is no feedback to assist in correctly setting the controls of the monitor. MagicTuneT is a software utility that guides you through the tuning process with easy to understand instructions and back ground patterns designed for each monitor control. The display settings for each user can be saved, providing an easy way to select display characteristics in a multi-user environme or having a single user have multiple defined presets based on content and ambient lighting.

·· MagicTune™

🔲 Basic Functionality

MagicTune™ is a software utility that allows monitor adjustment and color tuning using the Display Data Channel Command Interface (DDC/CI) protocol. All adjustments to the display are controlled via software to eliminate the need to use the monitor on-screen display (OSD).
MagicTune™ supports Windows™ 98 SE, Me, 2000, XP Home, and XP Professional.
It is recommended using MagicTune™ in Windows™ 2000 or later.

MagicTune™ allows for quick accurate tuning of the display with the ability to easily save and use monitor configurations that are best suited for you.

·· MagicTune™

🔲 OSD Mode

The OSD mode allows easy adjustment of monitor settings without taking pre-defined steps. You can access the desired menu item to set with ease.

Overview | **Installation** | OSD Mode | Color Calibration | Uninstall | Troubleshooting

▦ Installation

1. Insert the installation CD into the CD-ROM drive.
2. Click the MagicTune™ installation file.
3. Select installation Language, Click "Next".
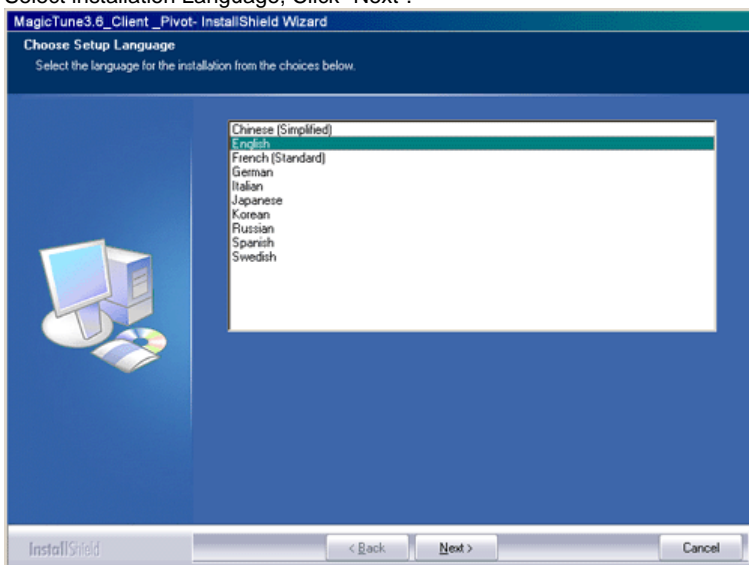
4. When the InstallationShield Wizard window appears, click "Next."
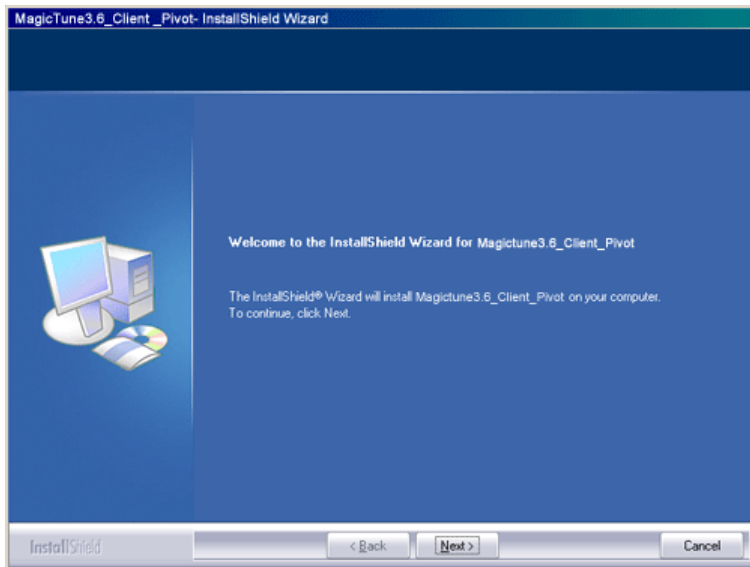
5. Select "I agree to the terms of the license agreement" to accept the terms of use.
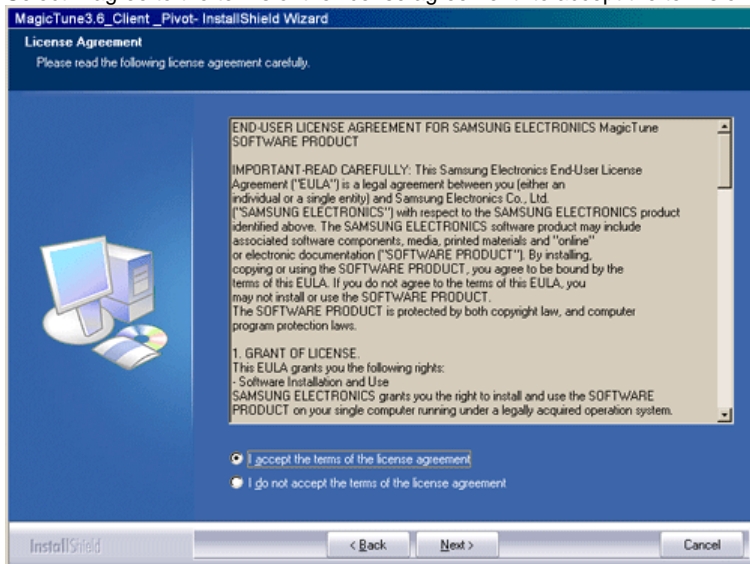
6. Choose a folder to install the MagicTune™ program.
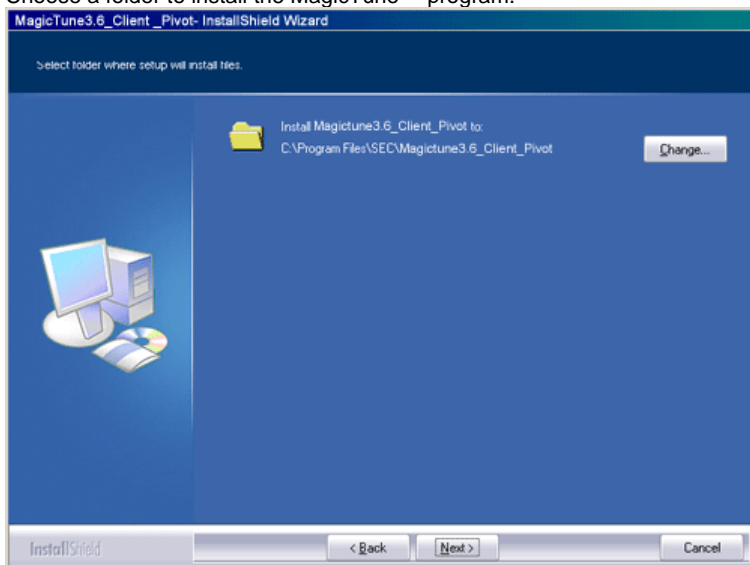
7. Click "Install."
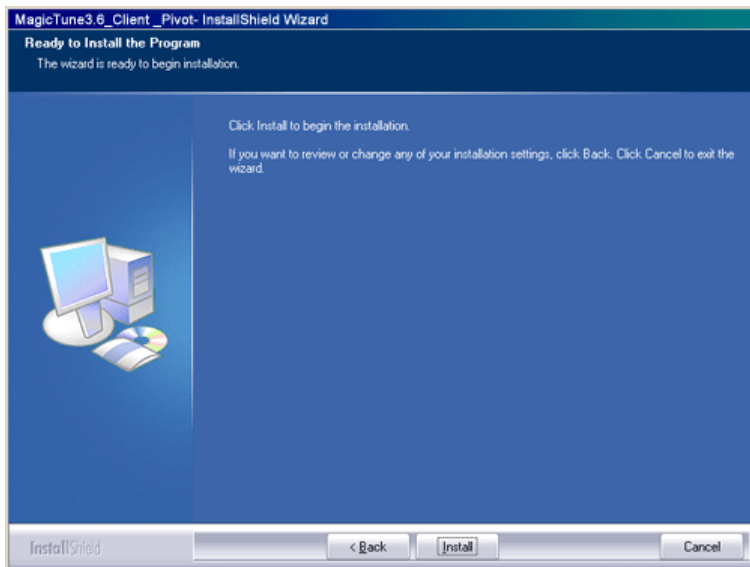
8. The "Installation Status" window appears.
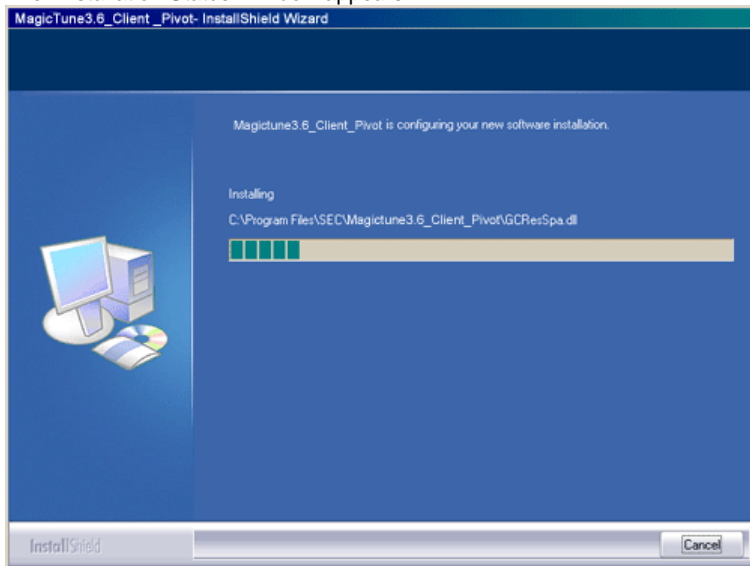
9. Click "Finish."
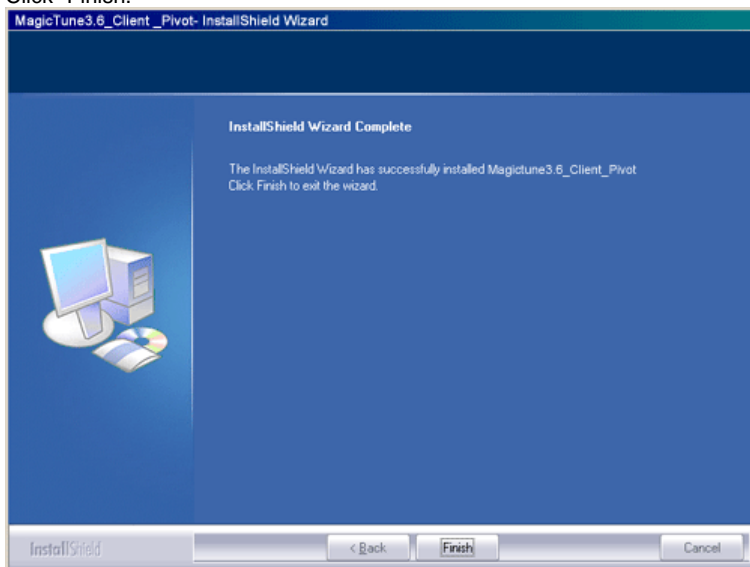
10. When the installation is complete, the MagicTune™ executable icon appears on your desktop.
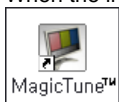
Double-click the icon to start the program.

MagicTune™ execution icon may not appear depending on specification of computer system or monitor.
If that happens, press F5 Key.

Installation Problems

The installation of MagicTune™ can be affected by such factors as the video card, motherboard and the network environment.
See "Troubleshooting" if you have trouble during installation.

System Requirements

OS

- Windows™ 98 SE
- Windows™ Me
- Windows™ 2000
- Windows™ XP Home Edition
- Windows™ XP Professional

It is recommended using MagicTune™ in Windows™ 2000 or later.

Hardware

- 32MB Memory above
- 25MB Hard disk space above

* For more information, visit the MagicTune™ website.

Overview | Installation | **OSD Mode**s | Color Calibration | Uninstall | Troubleshooting

MagicTune™ allows for quick accurate tuning of the display with the ability to easily save and use monitor configurations that are best suited for you.

- **OSD mode may appear inconsistent with the explanation in guidance book depending on specification of each monitor.**
- **When Pivot is functioning, part of MagicTune™ Program may not operate normally.**
- **AutoRotation : AutoRotation will automatically pivots the monitor to 0, 90, 180degrees when you pivots the monitor.**

To execute Rotation, it should be done as below.
- Please install both of Rotation program and MagicTune™ 3.6 in your PC.
- Launch MagicTune™ 3.6
- **Option** → **Preference** → click the small box as "V" in **enable task tray menu**.

- **MagicTune™ control mode will be different according to monitor models.**

⬛ OSD Mode

The OSD mode makes the adjustment of settings on all monitors easy. When selected , each tab on top of the control window displays the general descriptions of the sub-menu items for adjustment.
When selected, each tab displays a list of menus. For quick adjustment of the monitor settings, the OSD mode allows easy and convenient access to all tabs and sub-menu items.

Button Tab Definition

OK	Applies any changes made and exits MagicTune™.
Reset	Restores the display settings to the factory settings.
Cancel	Exits MagicTune™ without applying the changes made. If you have not made any changes in the control window, clicking "Cancel" does not cause any actions.

Picture Tab Definition

Allows the user to adjust the screen settings to the desired values.

Brightness	Makes the entire screen brighter or darker. The detailed data of the images in the dark areas can be lost if the brightness is not adjusted to the proper level. Adjust the brightness for best viewing conditions.
Contrast	Adjusts the difference in brightness between the bright and dark areas on screen. Determines the crispness of the images.
Resolution	Lists all display resolutions supported by the program.
MagicBright™	MagicBright™ is a new feature providing the optimum viewing environment depending on the contents of the image you are watching. Currently four different modes are available: Text, Internet,Game, Sport, Movie and Custom. Each mode has its own pre-configured brightness value. You can easily select one of six settings by simply pressing MagicBright control buttons. 1. Text: For documentations or works involving heavy text. 2. Internet: For working with a mixture of images such as text and graphics. 3. Game : For watching motion pictures such as a Game. 4. Sport : For watching motion pictures such as a Sport. 5. Movie: For watching motion pictures such as a DVD or Video CD. 6. Custom: Although the values are carefully chosen by our engineers, the pre-configured values may not be comfortable to your eyes depending on your taste. If this is the case, adjust the Brightness and Contrast by using the OSD menu. 7. Dynamic Contrast: Dynamic Contrast is to automatically detect distribution of inputted visual signal and adjust to create optimum contrast. MagicBright control mode will be different according to monitor models. Some monitor will only support Four modes(Text, Internet, Entertain, Custom)

Color Tab Definition

Adjusts the "warmth" of the monitor background or image color.

MagicColor, Gamma and Color Innovation will be shown only in the monitor that supports these functions.

Color Control	Adjusts of the monitor image color. You can change the monitor color to your desired color. • R- G - B
Calibration	The process through which the colors of your choice are optimized and maintained. You will find MagicTune™ extremely useful if you are one of those who wish to view images with their full details accurately reproduced - including web images and ones produced by a digital camera or scanner.

MagicColor	MagicColor is a new technology that Samsung has exclusively developed to improve digital image and to display natural color more clearly without disturbing image quality.
	
	1. OFF : Returns to the original mode.
	2. DEMO : The screen before applying MagicColor appears on the right and the screen after applying MagicColor appears on the left.
	3. Full : Displays not only vivid natural color but also more realistic natural skin color with clearness.
	4. Intelligent : Displays vivid natural color with clearness.
	5. MagicZone
	   o The MagicZone ensures the clear and sharp display of animated multimedia or photo images by enhancing the brightness, sharpness, saturation, Hue of a certain area on the screen. This offers an easy-to-use interface that highlights the video-playing portion of your multimedia program by automatically detecting and highlight the desired area by dragging.
	   o When the mouse cursor is activated()and it is necessary to de-activate it to use it for other tasks, right click your mouse, or put the activated cursor ()on the taskbar and click. When de-activated, the icon on the screen changes back to the one shown before activation.
	   o Especially, MagicZone is appropriate to using the moving picture.
	   o **Auto Detect** : If you run the Movie in some players, MagicZone will automatically get the play screen highlighted (it will be supported in players of Gom, Adrenalin, KCP, Window Media, and Power DVD etc.,)Some other players also can be highlighted but could have some problems.
	
	   o Tusk menu

HUE	Adjust the tint of the color.
Saturation	Adjusts the color saturation.
Brightness	Adjusts the Brightness.
Sharpness	Adjusts the difference between the lightest and darkest areas of the display.
Zone Off	Turn off the zone that you have captured.
Reset	Returns to the the default setting that vendor has set.

• Depending on the monitor models **Color Control, Sharpness, Contrast** will not be adjustable in MagicColor mode of **Full and Intelligent.**

• MagicTune™ will be disappear if you excute MagicZone, and closing the MagicZone after adjusting, will show the MagicTune™ again.
(System Tray is Unhecked)
MagicTune™ will be disappear if you excute MagicZone, and closing the MagicZone after adjusting. will not show MagicTune™ again.
(System Tray is Checked)

• MagicColor mode will be different according to monitor models. MagicZone mode will show if the monitor supports the function.

Gamma correction changes the luminance of the colors with intermediate luminance.

| Gamma | | Gamma mode will be different according to monitor models. Some monitor will only support Three modes.(Mode1, Mode2, Mode3) |

Image Tab Definition

Adjusts the Fine , Coarse and Position values.

Image Setup	• Fine : Removes noise such as horizontal stripes.
	  If the noise persists even after Fine tuning, repeat it after adjusting the frequency (clock speed).
	• Coarse : Removes noise such as vertical stripes.
	  Coarse adjustment may move the screen image area.
	  You may relocate it to the center using the Horizontal Control menu.
	• Auto Setup : Auto adjustment allows the monitor to self-adjust to the incoming video signal. The values of fine, coarse and position are adjusted automatically.

Position	Adjusts the screen location horizontally and vertically.
Sharpness	Changes the clearance of image.

Option Tab Definition

You can configure MagicTuneT using the following options.

Preferences	Loads the Preferences Dialog Box. Preferences in use will have an "V" in the check box. To turn on or off any Preference, position the cursor over the box and click. • Enable task tray menu . - To access the MagicTune™ menus, click the icon on the [task tray menu]. The menus are not displayed if the [Enable System Tray] is deselected in [Options] ' [Basic Settings]. • Select Language - The language chosen affects only the language of the OSD.
Source Select	• Analog • Digital

Support Tab Definition

Shows the Asset ID and the version number of the program, and allows you to use the Help feature.

Help	Visit the MagicTune™ website or click to open the Help files (User Manual) if you need any help installing or running MagicTune™. The User Manual opens within a basic browser window.
Asset ID	you can use the server to control the Client monitor. (Server program should be installed to use this program as Client)

User Name	Shows the user name that is registered in PC.
User ID	Shows the user ID that is register in PC.
Server IP	Write down the server IP .
Department	Write down the department.
Location	Write down the location.
Version	Displays the version of MagicTune™.

Color Calibration

Color Calibration

Color Calibration guides you to get optimal color condition for your monitor.

Proceed following 5steps for getting optimal monitor color condition .

1. Control "Brightness control bar" for matching the brightness of control patch and the brightness of background pattern
2. When you detect specific color tone on "Control patch", move the control cursor toward to the direction of the color tone referring to "Color reference Circle".
   => Adjustment is finished properly, you won't detect any color tone on Control patch.
3. When you finish adjustment for step1,Click "Next" button .
4. Repeat 1), 2), 3) procedures for remaining step2 ~ step5.
5. You can easily view the calibration effect through clicking "Preview " button!

How multiple users can use adjusted color values

Definition
When monitor is used by multiple users, color values which are adjusted via Color calibration for each users can be saved and used. Up to 5 users can use the saved color values.

1. How to save adjusted color values:
   Press Next to make it change into Apply and then you can save adjusted color values.
   As many as 5 values can be saved.
2. How to apply the saved color values:
   Press Multi User button on main screen to select and use one of the saved color values.

Preview

Press "Preview" button on the Color Calibration.
The above picture will be shown.

1. Press "View Calibrated" button to see the calibration effect which you adjusted.
2. Press "View Uncalibrated" button to see the original image.

::::: Uninstall

The MagicTune™ program can be removed only by using the "Add or Remove Programs" option of the Windows™ Control Panel.

Perform the following steps remove MagicTune™.

1. Go to [Task Tray] ' [Start] ' [Settings] and select [Control Panel] in the menu. If the program runs on Windows™ XP, go to [Control Panel] in the [Start] menu.

2. Click the "Add or Remove Programs" icon in Control Panel.

3. In the "Add or Remove Programs" screen, scroll down to find "MagicTune™." Click on it to highlight it.

4. Click the "Change/Remove" button to remove the program.

5. Click "Yes" to begin the uninstall process.

6. Wait until the "Uninstall Complete" dialog box appears.

Visit the MagicTune™ website for technical support for MagicTune™, FAQs (questions and answers) and software upgrades.

::::: Troubleshooting

The current computing system is not compatible with MagicTune™.

Please press OK and click on the "Shortcut to the MagicTune™ site" to view our home page for further reference.

An error may occur when your video/graphic card is not in the 'Available' list.
(The latest or oldest video cards may not be compatible.)

☀ Please visit our homepage to see the Troubleshooting section.

❗ An error may occur if the card maker has modified the video card driver or the graphics chip even when the video card is in the list.

☀ Please visit our homepage to see the Troubleshooting section.

❗ Check if your monitor is manufactured by Samsung.
Products from other manufacturers may cause errors.

☀ Only Samsung products are able to support this feature.

❗ An error may occur even when your monitor is manufactured by Samsung but is out of date. Check if your monitor is able to support MagicTune™.

☀ This feature is only supported by those monitors that are registered on our homepage. Check for the monitor before purchasing it as out-of-date models are not supported.

❗ An error occurs when no information on EDID (Extended Display Identification Data) exists for the current monitor.
This happens when from your desktop, Start → Setup → Control Panel → System → Hardware → Device Manager → Monitor is selected, the current "Plug-and-play monitor" is removed and new hardware is searched for but the system couldn't find any "Plug-and-play monitor".

☀ Please visit our homepage to see the Troubleshooting section.

❗ An error occurs when replacing the monitor with a new one when the system power is off but the system has not been restarted.

☀ Please restart the system each time the monitor is replaced before using MagicTune™.

❗ An error occurs when the video card driver is not installed properly.
This happens when the current video card list is not displayed normally. You can check this via Start → Setup → System → Hardware → Device Manager → Display Adapter.

☀ Visit the video card maker's homepage and download and install the latest driver.
For more information about the video card, contact the card manufacturer.

? To ensure normal operation, please restart your system.

❗ An error occurs when the system is not restarted after installing MagicTune™.
(This is for Win98SE and WinMe only.)

☀ Restart the system before use.

? For the best performance of MagicTune™, adjust to the optimal resolution.

Refer to the User Guide for the optimal resolution.

❗ If you do not adjust to the optimal resolution and perform Color Calibration, the monitor cannot be adjusted to the optimal condition.

☀ Refer to the manual for the optimal resolution.

? This video card does not support MagicTune™.

Please install a new video card driver.

❗ An error occurs when the video card driver is not installed properly.
This happens when the current video card list is not displayed normally. You can check this from Start → Setup → System → Hardware → Device Manager → Display Adapter.

☀ Visit the video card manufacturer's homepage and download and install the latest driver.
For more information about the video card, contact the card manufacturer.

? As the Highlight program uses the communication lines,

please exit the Highlight program before you can access MagicTune™.

Some of Samsung CDT monitors support the Highlight feature.
When using both the Highlight feature and MagicTune™ simultaneously, conflicts occur, which cause errors.

Make sure to turn OFF Highlight before using MagicTune™.

Troubleshooting

- MagicTune™ may not work in case monitor is replaced or driver of graphic card is updated while MagicTune™ is operating. If so, please restart the system.

Symptom	Check List	Solutions
Check when MagicTune™ does not function properly.	MagicTune™ feature is found only on PC (VGA) with Window OS that supports Plug and Play.	* To check whether your PC is available for MagicTune™ feature, follow the steps below (When Windows™ is XP);
		Control Panel → Performance and Maintenance → System → Hardware → Device Manager → Monitors → After deleting Plug and Play monitor, find 'Plug and Play monitor' by searching new Hardware.
		MagicTune™ is an additional software for the monitor. Some graphic cards may not support your monitor. When you have a problem with the graphic card, visit our website to check the compatible graphic card list provided. http://www.samsung.com/monitor/magicTune
MagicTune™ doesn't work properly.	Have you changed your PC or video graphic card?	Download the latest program. The program can be downloaded http://www.samsung.com/monitor/magicTune

- Visit the MagicTune™ website for technical support for MagicTune™, FAQs (questions and answers) and software upgrades.
- Visit the MagicTune™ website and download the installation software for MagicTune™ MAC.

The MagicTune™ program is an additional program for monitor products.
Some computing systems that install either an older or the latest video driver are not compatible with MagicTune™.
Please visit the MagicTune™ Website for technical support for MagicTune™.

Specifications subject to change without notice.
MagicTune™ is a trademark of SAMSUNG ELECTRONICS CO., Inc.
Windows™ is a registered trademark of Microsoft Corp.

Other trademarks are property of their respective holders.

○ Adjusting the Monitor

Control Buttons   Direct Functions   OSD Function

▶ Control Buttons
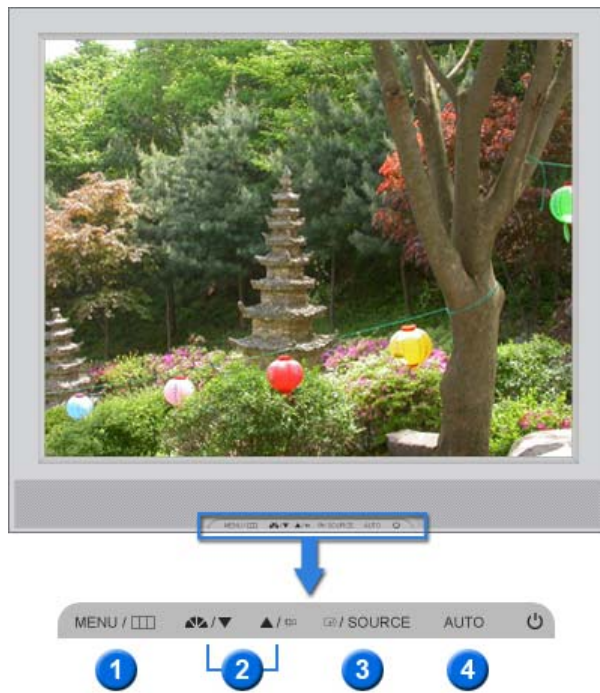
①   [MENU/] Opens the OSD menu. Also use to exit the OSD menu or return to the previous menu.

②   [▼/▲] These buttons allow you to adjust items in the menu.

③   [ ] Press this button to Activates a highlighted menu item.

④   [AUTO] When the 'AUTO' button is pressed, the Auto Adjustment screen appears as shown in the animated screen on the center.

Control Buttons   Direct Functions   OSD Function

▶ Direct Functions

□ AUTO

Menu	Description
AUTO	When the 'AUTO' button is pressed, the Auto Adjustment screen appears as shown in the animated screen on the center. The values of fine, coarse and position are adjusted automatically. To make the automatic adjustment function sharper, execute the 'AUTO' function while the AUTO PATTERN is on. ※ Available in analog Mode Only ▶ If auto adjustment does not work properly, press 'AUTO' button again to adjust picture with more accuracy. ▶ If you change resolution in the control panel, auto function will be executed automatically.

□ OSD Lock & Unlock

   ▷ AUTO button

▶ **MENU button**

Menu	Description
OSD Lock & Unlock	This is the function that locks the OSD in order to keep the current states of settings or prevent others from adjusting the current settings. **Lock** : Hold down the menu button for more than five (5) seconds to activate the OSD adjustment lock function. **Unlock** : Hold down the menu button for more than five (5) seconds to deactivate the OSD adjustment lock function. ※ Though the OSD adjustment lock function is activated, you can still adjust the brightness and contrast, and adjust MagicBright (⬛) using the Direct button.

▶ **MagicBright™**

Menu		Description
	MagicBright™	Push the MagicBright™ button to circle through available preconfigured modes. - Six different modes (Custom/Text/Internet/Game/Sport/Movie)

▶ Volume

Menu		Description
	Volume	When OSD is not on the screen, push [▲/ ⟨Φ⟩] the button to adjust volume.

▶ SOURCE

Menu	Description
SOURCE	Selects the Video signal while the OSD is off. (Analog/Client)

Control Buttons Direct Functions OSD Function

▶ OSD Function

Picture	Brightness	Contrast			
Color	MagicColor	Color Tone	Color Control	Gamma	
Image	Coarse	Fine	Sharpness	H-Position	V-Position
OSD	Language	H-Position	V-Position	Transparency	Display Time
Setup	Image Reset	Color Reset			
Information					

▶ **Picture** ▲

Menu	Description	Play/Stop
Brightness	You can use the on-screen menus to change the brightness according to personal preference. Direct Access Feature : When OSD is not on the screen, push the button to adjust brightness. MENU → ↵ → ↵ → ▲, ▼ → MENU	
Contrast	You can use the on-screen menus to change the contrast according to personal preference. (Not available in MagicColor mode of Full and Intelligent.) MENU → ↵ → ▲, ▼ → ↵ → ▲, ▼ → MENU	

Color

Menu	Description	Play/Stop

MagicColor is a new technology that Samsung has exclusively developed to improve digital image and to display natural color more clearly without disturbing image quality.

MagicColor

❶ Off — Returns to the original mode.

❷ Demo — The screen before applying MagicColor appears on the right and the screen after applying MagicColor appears on the left.

❸ Full — Displays not only vivid natural color but also more realistic natural skin color with clearness.

❹ Intelligent — Displays vivid natural color with clearness.

❺ MagicZone — The MagicZone ensures the clear and sharp display of animated multimedia or photo images by enhancing the brightness, sharpness, saturation, hue of a certain area on the screen. Especially, MagicZone is appropriate to using the moving picture.

MagicZone

▶ Hue — This function is to adjust the hue of the MagicZone.

Hue

▶ Saturation — This function is to adjust the saturation of the MagicZone.

Saturation

▶ Brightness — This function is to adjust the brightness of the MagicZone.

Brightness

▶ Sharpness — This function is to adjust the sharpness of the MagicZone.

Sharpness

▶ H-Position — This function is to move the MagicZone horizontally.

H-Position

▶ V-Position — This function is to move the MagicZone vertically.

V-Position

▶ H-Size — This function is to adjust the horizontal size of the MagicZone.

H-Size

▶ V-Size — This function is to adjust the vertical size of the MagicZone.

V-Size

Color Tone

The tone of the color can be changed and one of four modes can be selected -Cool, Normal, Warm and Custom.
(Not available in MagicColor mode of Full and Intelligent.)

MENU → ▲ , ▼ → ⏎ → ▲ , ▼ → ⏎ → ▲ , ▼ → MENU

Color Control

Adjusts individual Red, Green, Blue color balance. - Red, Green, Blue
(Not available in MagicColor mode of Full and Intelligent.)

MENU → ▲ , ▼ → ⏎ → ▲ , ▼ → ⏎ → ▲ , ▼ → ⏎ → ▲ , ▼ → MENU

Gamma

Gamma correction changes the luminance of the colors with intermediate luminance.

- Mode 1
- Mode 2
- Mode 3

MENU → ▲ , ▼ → ⏎ → ▲ , ▼ → ⏎ → ▲ , ▼ → MENU

▶ 🔲 **Image** 🔺

(Not available in MagicColor mode of Full and Intelligent.)

Menu	Description	Play/Stop
Coarse	Removes noise such as vertical stripes. Coarse adjustment may move the screen image area. You may relocate it to the center using the horizontal control menu. ※ Available in analog Mode Only MENU → ▲ , ▼ → ↵ → ↵ → ▲ , ▼ → MENU	
Fine	Removes noise such as horizontal stripes. If the noise persists even after fine tuning, repeat it after adjusting the frequency (clock speed). ※ Available in analog Mode Only MENU → ▲ , ▼ → ↵ → ▲ , ▼ → ↵ → ▲ , ▼ → MENU	
Sharpness	Changes the clearance of image. ※ Available in analog Mode Only MENU → ▲ , ▼ → ↵ → ▲ , ▼ → ↵ → ▲ , ▼ → MENU	
H-Position	Changes the horizontal position of the monitor's entire display. ※ Available in analog Mode Only MENU → ▲ , ▼ → ↵ → ▲ , ▼ → ↵ → ▲ , ▼ → MENU	
V-Position	Changes the vertical position of the monitor's entire display. ※ Available in analog Mode Only MENU → ▲ , ▼ → ↵ → ▲ , ▼ → ↵ → ▲ , ▼ → MENU	

OSD

Menu	Description	Play/Stop
Language	You can choose one of eight languages. • English, Deutsch, Español, Français, Italiano, Svenska, Русский, Português ※ The language chosen affects only the language of the OSD. It has no effect on any software running on the computer. MENU → ▲, ▼ → ↵ → ↵ → ▲, ▼ → MENU	
H-Position	You can change the horizontal position where the OSD menu appears on your monitor. MENU → ▲, ▼ → ↵ → ▲, ▼ → ↵ → ▲, ▼ → MENU	
V-Position	You can change the vertical position where the OSD menu appears on your monitor. MENU → ▲, ▼ → ↵ → ▲, ▼ → ↵ → ▲, ▼ → MENU	
Transparency	Change the transparency of the background of the OSD. MENU → ▲, ▼ → ↵ → ▲, ▼ → ↵ → ▲, ▼ → MENU	
Display Time	The menu will be automatically turned off if no adjustments are made for a certain time period. You can set the amount of time the menu will wait before it is turned off. - 5 Sec, 10 Sec, 20 Sec, 200 Sec MENU → ▲, ▼ → ↵ → ▲, ▼ → ↵ → ▲, ▼ → MENU	

Setup ▲

Menu	Description	Play/Stop
Image Reset	Image parameters are replaced with the factory default values. MENU → ▲, ▼ → ↵ → ↵ → ▲, ▼ → MENU	
Color Reset	Color parameters are replaced with the factory default values. MENU → ▲, ▼ → ↵ → ▲, ▼ → ↵ → ▲, ▼ → MENU	

Information ▲

Menu	Description

Information | Shows a video source, display mode on the OSD screen.

MENU → ▲ , ▼

O Troubleshooting

Check List   Q & A   Self-Test

▶ Check List

Before calling for service, check the information in this section to see if you can remedy any problems yourself. If you do need assistance, please call the phone number on the Information section or contact your dealer.

Symptom	Check List	Solutions
No images on the screen. I cannot turn on the monitor.	Is the power cord connected properly?	Check the power cord connection and supply.
	Can you see "Check Signal Cable" on the screen?	Check the signal cable connection.
	If the power is on, reboot the computer to see the initial screen(the login screen), which can be seen.	If the initial screen (the login screen) appears, boot the computer in the applicable mode (the safe mode for Windows ME/XP/2000) and then change the frequency of the video card. (Refer to the Preset Timing Modes) If the initial screen (the login screen) does not appear, contact the Service Center or your dealer.
	Can you see "Not Optimum Mode", "Recommended Mode 1280 x 1024 60 Hz" on the screen?	You can see this message when the signal from the video card exceeds the maximum resolution and frequency that the monitor can handle properly. Adjust the maximum resolution and frequency that the monitor can handle properly. If the display exceeds SXGA or 75 Hz, a "Not Optimum Mode", "Recommended Mode 1280 x 1024 60 Hz" message is displayed. If the display exceeds 85 Hz, the display will work properly but the "Not Optimum Mode", "Recommended Mode 1280 x 1024 60 Hz" message appears for one minute and then disappears. Please change to the recommended mode during this one-minute period. (The message is displayed again if the system is rebooted.)
	There is no image on the screen. Is the power indicator	The monitor is in PowerSaver mode. Press a key on the keyboard to activate the monitor

| | on the monitor blinking at 1 second intervals? | and restore the image on the screen.

If there is still no image, press the 'SOURCE' button. Then press any key on the keyboard again to activate the monitor and restore the image on the screen. |
| I cannot see the On Screen Display. | Have you locked the On Screen Display (OSD) Menu to prevent changes? | Unlock the OSD by pressing the [MENU / ⊞] button for at least 5 seconds. |
| The screen shows strange colors or just black and white. | Is the screen displaying only one color as if looking at the screen through a cellophane paper? | Check the signal cable connection.

Make sure the video card is fully inserted in it's slot. |
	Have the screen colors become strange after running a program or due to a crash between applications?	Reboot the computer.
	Has the video card been set properly?	Set the video card by referring to the video card manual.
The screen suddenly has become unbalanced.	Have you changed the video card or the driver?	Adjust screen image position and size using the OSD.
	Have you adjusted the resolution or frequency to the monitor?	Adjust the resolution and frequency at the video card. (Refer to the Preset Timing Modes).
		The screen can be unbalanced due to the cycle of the video card signals. Readjust Position by referring to the OSD.
The screen is out of focus or OSD cannot be adjusted.	Have you adjusted the resolution or frequency on the monitor?	Adjust the resolution and frequency of the video card. (Refer to the Preset Timing Modes).
LED is blinking but no images on the screen.	Is the frequency properly adjusted when checking the Display Timing on the menu?	Adjust the frequency properly by referring to the video card manual and the Preset Timing Modes.

(The maximum frequency per resolution may differ from product to product.) |
| There are only 16 colors shown on the screen. The screen colors have changed after changing the video card. | Have the Windows colors been set properly? | Windows XP : Set the resolution at the Control Panel → Appearance and Themes → Display → Settings.

Windows ME/2000 : Set the resolution at the Control Panel → Display → Settings. |
	Has the video card been set properly?	Set the video card by referring to the video card manual.
There is a message that reads "Unrecognized monitor, Plug & Play (VESA DDC) monitor found".	Have you installed the monitor driver?	Install the monitor driver according to the Driver Installation Instructions.
	See the video card manual to see if the Plug & Play (VESA DDC) function can be supported.	Install the monitor driver according to the Driver Installation Instructions.

Check when MagicTune™ does not function properly.	MagicTune™ feature is found only on PC (VGA) with Window OS that supports Plug and Play.	* To check whether your PC is available for MagicTune™ feature, follow the steps below (When Windows™ is XP); Control Panel → Performance and Maintenance → System → Hardware → Device Manager → Monitors → After deleting Plug and Play monitor, find 'Plug and Play monitor' by searching new Hardware. MagicTune™ is an additional software for the monitor. Some graphic cards may not support your monitor. When you have a problem with the graphic card, visit our website to check the compatible graphic card list provided. http://www.samsung.com/monitor/magictune
MagicTune™ doesn't work properly.	Have you changed your PC or video graphic card?	Download the latest program. The program can be downloaded http://www.samsung.com/monitor/magictune

※ Visit the MagicTune™ website and download the installation software for MagicTune™ MAC.

▣ **Check the following items if there is trouble with the monitor.**

Symptom	Solutions
The screen does not appear when I switch to the Client Mode.	To use the network function, approximately 30 seconds of booting time is required after turning the power on, and a blank screen appears for 3 to 4 seconds during booting. Please switch the mode about 30 seconds after the power is turned on.
The client screen appears, but I cannot connect to the server.	1) Check if the Hub port LED to which the LAN cable is connected blinks. If not, that indicates that the LAN connection is disconnected. In this case, connect using another LAN cable. 2) Check if the settings of the 'Settings', 'Network' tab are properly set up. The default setting is "DHCP". If your network uses a static IP address, select 'Use the following IP address' and then enter the appropriate IP address information. 3) Check if the 'User Name' and 'Password' set in the 'Remote Desktop' tab of 'Settings' are the same as those of the host PC. If not, match the 'User Name' and 'Password' of the 'Remote Desktop' with those of the host PC.
I cannot access the Internet in the Client screen.	1) Check if the Hub port LED to which the LAN cable is connected blinks. If not, that indicates that the LAN connection is disconnected. In this case, connect using another LAN cable. 2) Check if the settings of the 'Network' tab of 'Settings' have been properly set up. The default setting is "DHCP". If your network uses a static IP address, select 'Use the following IP address' and then enter the appropriate IP address information.
The contents (video, voice) on the server do not play smoothly on the Client Monitor.	This is because the data is transmitted over the LAN. Check your LAN connection status.
I have connected a digital device such as a digital camera, camcorder or USB memory to the USB port, but they do not work.	This model supports USB devices that support removable disk functions without an additional driver installation. Check if the device you want to connect to is a device that supports the removable disk function without an additional driver installation.
The file list does not appear.	1) Check the files on the card. If only abnormal files (e.g. 0KByte, broken JPEG) exist, the files do not appear on the screen. 2) The time required to display is determined by the size of the file. Wait a moment.

3) Check if the format of the file is supported by the Client Monitor. If the extension of the file has been changed, the file will not be played.

◘ Check the following items if there is trouble with the monitor.

◘ Check if the power cord and the video cables are properly connected to the computer.

◘ Check if the computer beeps more than 3 times when booting.
(If it does, request an a service for the main board of the computer.)

◘ If you installed a new video card or if you assembled the PC, check if the installed the adaptor(video) driver and the monitor driver.

◘ Check if the scanning ratio of the video screen is set at 56 Hz ~ 75 Hz.
(Do not exceed 75 Hz when using the maximum resolution.)

◘ If you have problems in installing the adaptor (video) driver, boot the computer in Safe Mode, remove the Display adaptor at the "Control Panel → System → Device Administrator" and then reboot the computer to reinstall the adaptor (video) driver.

※ If problems repeatedly occur, contact an authorized service center.

▶ Q & A

Question	Answer
How can I change the frequency?	Frequency can be changed by reconfiguring the video card. Note that video card support can vary, depending on the version of the driver used. (Refer to the computer or the video card manual for details.)
How can I adjust the resolution?	Windows XP : Set the resolution at the Control Panel → Appearance and Themes → Display → Settings. Windows ME/2000 : Set the resolution at the Control Panel → Display → Settings. ※ Contact the video card manufacturer for details.
How can I set the Power Saving function?	Windows XP : Set the resolution at the Control Panel → Appearance and Themes → Display → Screen Saver. Set the function at BIOS-SETUP of the computer. Windows ME/2000 : Set the resolution at the Control Panel → Display → Screen Saver. Set the function at BIOS-SETUP of the computer. ※ Refer to Windows/Computer Manual
How can I clean the outer case/LCD Panel?	Disconnect the power cord and then clean the monitor with a soft cloth, using either a cleaning solution or plain water. Do not leave any remains of the detergent nor scratch the case. Do not allow any water to go inside the monitor.

Self-Test

Your monitor provides a self test feature that allows you to check whether your monitor is functioning properly.

Self-Test Feature Check ▲

① Turn off both your computer and the monitor.

② Unplug the video cable from the back of the computer.

③ Turn on the monitor.

If the monitor is functioning properly, you will see a box in the illustration below.

This box appears during normal operation if the video cable becomes disconnected or damaged.

④ Turn off your monitor and reconnect the video cable; then turn on both your computer and the monitor.

If your monitor screen remains blank after using the previous procedure, check your video controller and computer system; your monitor is functioning properly.

Warning Messages ▲

If there is something wrong with the input signal, a message appears on the screen or the screen goes blank although the power indicator LED is still on. The message may indicate that the monitor is out of scan range or that you need to check the signal cable.
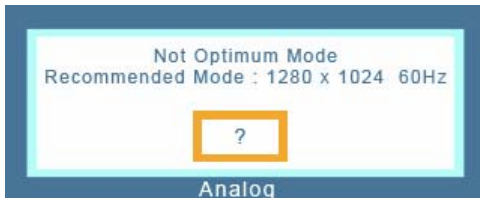
Environment ▲

▣ The location and the position of the monitor may influence the quality and other features of the monitor.

▸ If there are any sub woofer speakers near the monitor, unplug and relocate the woofer to another room.
Remove all electronic devices such as radios, fans, clocks and telephones that are within 3 feet (one meter) of the monitor.

Useful Tips ▲

▣ A monitor recreates visual signals received from the computer. Therefore, if there is trouble with the computer or the video card, this can cause the monitor to become blank, have poor coloring, noise, Video mode not supported, etc. In this case, first check the source of the problem, and then contact the Service Center or your dealer.

▣ Judging the monitor's working condition

If there is no image on the screen or a "Not Optimum Mode", "Recommended Mode 1280 x 1024 60 Hz" message comes up, disconnect the cable from the computer while the monitor is still powered on.

▸ If there is a message coming up on the screen or if the screen goes white, this means the monitor is in working condition.

In this case, check the computer for trouble.

- Safety Precautions   ■ Introduction   ■ Connections   ■ Using Windows XPe   ■ Using the Software
- Adjusting the Monitor   ■ Troubleshooting   ■ Specifications   ■ Information

O Specifications

Specifications   PowerSaver   Preset Timing Modes

▶ Specifications

General

Model Name   SyncMaster 720XT

LCD Panel

Size   17 " Diagonal (431.8 mm)

Display area   337.92 mm (H) x 270.336 mm (V)

Pixel Pitch   0.264 mm (H) x 0.264 mm (V)

Type   a-si TFT active matrix

Synchronization

Horizontal   31 ~ 81 kHz

Vertical   56 ~ 75 Hz

Display Color

16.2 M Colors

Resolution

Optimum resolution   1280 x 1024@60 Hz

Maximum resolution   1280 x 1024@75 Hz

Input Signal, Terminated

RGB Analog
0.7 Vp-p ± 5%
TTL level (V high ≥ 2.0V, V low ≤ 0.8V)

Maximum Pixel Clock

140 MHz

Power Consumption

AC 100 - 240V~ (+/- 10%), 50/60Hz

Signal Cable

15pin to 15pin D-sub cable, Detachable

Power Consumption

Less than 70 W

Dimensions (W x D x H) / Weight

370.0 x 69 x 342.3 mm / 14.6 x 2.7 x 13.5 inch (Without Stand)
370.0 x 200 x 404.3 mm / 14.6 x 7.9 x 15.9 inch (With Basic Stand), 6.45 Kg / 14.2 (lbs)

VESA Mounting Interface

100 mm x 100 mm

Environmental considerations

| Operating | Temperature : 50 °F ~ 104 °F (10 °C ~ 40 °C)
Humidity : 10 % ~ 80 %, non-condensing |
| Storage | Temperature : -4 °F ~ 113 °F (-20 °C ~ 45 °C)
Humidity : 5 % ~ 95 %, non-condensing |

Plug and Play Capability

This monitor can be installed on any Plug & Play compatible system. Interaction of the monitor and computer systems will provide the best operating conditions and monitor settings. In most cases, monitor installation will proceed automatically, unless the user wishes to select alternate settings.

Dot Acceptable

TFT LCD panel manufactured by using advanced semiconductor technology with precision of 1 ppm (one millionth) above is used for this product. But the pixels of RED, GREEN, BLUE and WHITE color seem to be bright sometimes or some of black pixels could be seen. This is not from bad quality and you can use it without uneasiness.

For example, the number of TFT LCD sub pixels that is contained in this product are 3,932,160.

※ Design and specifications are subject to change without prior notice.

◘ **Class B Equipment (Information Communication equipment for residential use)**

◘ This product complies with the Electromagnetic Compatibility Directives for residential use and can be used in all areas including common residential areas.

(Class B equipment emits less electromagnetic waves than Class A equipment.)

◘ **Client**

Item	Specifications
LAN	1Gbps
USB	2.0 4Ports
Internet Browser	MS Internet Explorer

Photo	JPEG,BMP			
Video	MPEG1,WMV (Not exceeding 720p)			

▶ Server Requirement

	Connect Client No	CPU	RAM	Ethernet	OS
Minimum SPEC	Just can load Server Program	P3 400MHz	64Mbyte	100Mbps	windows 2003 Server
Recommend SPEC	1	P4 1.0GHz	256Mbyte		
	2~4	P4 2.4GHz	512Mbyte	100Mbps	windows 2003 Server
	5~7	P4 3.0GHz	1Gbyte		
	8~10	P4 3.2GHz	2Gbyte		

※ The content presented above is the result of testing a specific server. The information may change as the server may be different. For some products, the OS may not be supported. When purchasing a product, make sure to check whether or not the OS is supported.

▶ USB

Local Device (USB) Connection Speed

When booting up a monitor, a blank screen may appear for 3 ~ 4 seconds until the MagicNet screen appears.

If you turn the monitor off while booting, it may damage the product.

Local Device (USB) compatibility

HID(Human Interface Devices) : Keyboard, Mouse

MSC(Mass Storage Class), Devices using the SCSI(Small Computer System Interface) command set, FAT(File Allocation Table) System

Exception

Some manufacturers have wrongly specified their device to be USB standard compatible.
Our product has exception handling procedures.
But Some devices are unlikely to work properly.
Some manufacturers have wrongly specified their device to be SCSI compatible.
Such devices are unlikely to work properly.
It is recommended that USB devices are purchased after they are tested and confirmed to be compatible.

Specifications   PowerSaver   Preset Timing Modes

PowerSaver

▶ PowerSaver (When used as a normal monitor)

This monitor has a built-in power management system called PowerSaver. This system saves energy by switching your monitor into a low-power mode when it has not been used for a certain amount of time. The monitor automatically returns to normal operation when you press a key on the keyboard. For energy conservation, turn your monitor OFF when it is not needed, or when leaving it unattended for long periods. The PowerSaver system operates with a VESA DPMS compliant video card installed in your computer. Use a software utility installed on your computer to set up this feature.

State	Normal Operation	Power saving mode	Power off (Power button)
Power Indicator	Green	Green, Blinking	Black
Power Consumption	Less than 70 W	Less than 4 W	Less than 4 W

PowerSaver (When used as a Network monitor)

This monitor has a built-in power management system called PowerSaver. This system saves energy by switching your monitor into a low-power mode when it has not been used for a certain amount of time. The monitor automatically returns to normal operation when you press a key on the keyboard. For energy conservation, turn your monitor OFF when it is not needed, or when leaving it unattended for long periods. The PowerSaver system operates with a VESA DPMS compliant video card installed in your computer. Use a software utility installed on your computer to set up this feature.

State	Normal Operation	Power saving mode	Power off (Power button)
Power Indicator	Green	Black	Black
Power Consumption	Less than 70 W	Less than 40 W	Less than 4 W

Preset Timing Modes

If the signal transferred from the computer is the same as the following Preset Timing Modes, the screen will be adjusted automatically. However, if the signal differs, the screen may go blank while the power LED is on. Refer to the video card manual and adjust the screen as follows.

Preset Timing Modes

Display Mode	Horizontal Frequency (kHz)	Vertical Frequency (Hz)	Pixel Clock (MHz)	Sync Polarity (H/V)
IBM, 640 x 350	31.469	70.086	25.175	+/-
IBM, 640 x 480	31.469	59.940	25.175	-/-
IBM, 720 x 400	31.469	70.087	28.322	-/+
MAC, 640 x 480	35.000	66.667	30.240	-/-
MAC, 832 x 624	49.726	74.551	57.284	-/-
VESA, 640 x 480	37.861	72.809	31.500	-/-
VESA, 640 x 480	37.500	75.000	31.500	-/-
VESA, 800 x 600	35.156	56.250	36.000	-/-
VESA, 800 x 600	37.879	60.317	40.000	+/+
VESA, 800 x 600	48.077	72.188	50.000	+/+
VESA, 800 x 600	46.875	75.000	49.500	+/+
VESA, 1024 x 768	48.363	60.004	65.000	-/-

VESA, 1024 x 768	56.476	70.069	75.000	-/-
VESA, 1024 x 768	60.023	75.029	78.750	+/+
VESA, 1280 x 1024	63.981	60.020	108.000	+/+
VESA, 1280 x 1024	79.976	75.025	135.000	+/+

Horizontal Frequency

The time to scan one line connecting the right edge to the left edge of the screen horizontally is called Horizontal Cycle and the inverse number of the Horizontal Cycle is called Horizontal Frequency. Unit : kHz

Vertical Frequency

Like a fluorescent lamp, the screen has to repeat the same image many times per second to display an image to the user. The frequency of this repetition is called Vertical Frequency or Refresh Rate. Unit : Hz

○ Information

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※ If you have any questions or comments relating to Samsung products, please contact the SAMSUNG customer care center.

North America

CANADA	1-800-SAMSUNG (7267864)	http://www.samsung.com/ca
MEXICO	01-800-SAMSUNG (7267864)	http://www.samsung.com/mx
U.S.A	1-800-SAMSUNG (7267864)	http://www.samsung.com

Latin America

ARGENTINE	0800-333-3733	http://www.samsung.com/ar
BRAZIL	0800-124-421	http://www.samsung.com/br
CHILE	800-726-7864 (SAMSUNG)	http://www.samsung.com/cl
COSTA RICA	0-800-507-7267	http://www.samsung.com/latin
ECUADOR	1-800-10-7267	http://www.samsung.com/latin
EL SALVADOR	800-6225	http://www.samsung.com/latin
GUATEMALA	1-800-299-0013	http://www.samsung.com/latin
JAMAICA	1-800-234-7267	http://www.samsung.com/latin
PANAMA	800-7267	http://www.samsung.com/latin
PUERTO RICO	1-800-682-3180	http://www.samsung.com/latin
REP. DOMINICA	1-800-751-2676	http://www.samsung.com/latin
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VENEZUELA	1-800-100-5303	http://www.samsung.com/latin

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NORWAY	231 627 22	http://www.samsung.com/no
POLAND	0 801 801 881	http://www.samsung.com/pl
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CIS

RUSSIA	8-800-200-0400	http://www.samsung.ru
UKRAINE	8-800-502-0000	http://www.samsung.com/ur

Asia Pacific

AUSTRALIA	1300 362 603	http://www.samsung.com/au
CHINA	800-810-5858, 010- 6475 1880	http://www.samsung.com.cn
HONG KONG	2862 6001	http://www.samsung.com/hk
INDIA	3030 8282, 1800 1100 11	http://www.samsung.com/in
INDONESIA	0800-112-8888	http://www.samsung.com/id
JAPAN	0120-327-527	http://www.samsung.com/jp
MALAYSIA	1800-88-9999	http://www.samsung.com/my
PHILIPPINES	1800-10-SAMSUNG (7267864)	http://www.samsung.com/ph
SINGAPORE	1800-SAMSUNG (7267864)	http://www.samsung.com/sg
THAILAND	1800-29-3232, 02-689-3232	http://www.samsung.com/th
TAIWAN	0800-329-999	http://www.samsung.com/tw

VIETNAM	1 800 588 889	http://www.samsung.com/vn

Middle East & Africa

SOUTH AFRICA	0860 7267864 (SAMSUNG)	http://www.samsung.com/za
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▶ Terms

■ Dot Pitch

▶ The image on a monitor is composed of red, green and blue dots. The closer the dots, the higher the resolution. The distance between two dots of the same color is called the 'Dot Pitch'. Unit : mm

■ Vertical Frequency

▶ The screen must be redrawn several times per second in order to create and display an image for the user. The frequency of this repetition per second is called Vertical Frequency or Refresh Rate. Unit : Hz

Example : If the same light repeats itself 60 times per second, this is regarded as 60 Hz.

■ Horizontal Frequency

▶ The time to scan one line connecting the right edge to the left edge of the screen horizontally is called Horizontal Cycle. The inverse number of the Horizontal Cycle is called Horizontal Frequency. Unit : kHz

■ Interlace and Non-Interlace Methods

▶ Showing the horizontal lines of the screen from the top to the bottom in order is called the Non-Interlace method while showing odd lines and then even lines in turn is called the Interlace method. The Non-Interlace method is used for the majority of monitors to ensure a clear image. The Interlace method is the same as that used in TVs.

■ Plug & Play

▶ This is a function that provides the best quality screen for the user by allowing the computer and the monitor to exchange information automatically. This monitor follows the international standard VESA DDC for the Plug & Play function.

■ Resolution

▶ The number of horizontal and vertical dots used to compose the screen image is called 'resolution'. This number shows the accuracy of the display. High resolution is good for performing multiple tasks as more image information can be shown on the screen.

Example :If the resolution is 1280 x 1024 , this means the screen is composed of 1280 horizontal dots (horizontal resolution) and 1024 vertical lines (vertical resolution).

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▶ For Better Display

▶ Adjust computer resolution and screen injection rate (refresh rate) oncomputer as described below to enjoy the best quality of picture. You can have an uneven quality of picture in the screen if the best quality of picture is not provided in TFT-LCD.

▶

Resolution : 1280 x 1024
- ▶ Vertical frequency (refresh rate) : 60 Hz

- ▣ TFT LCD panel manufactured by using advanced semiconductor technology with precision of 1ppm (one millionth) above is used for this product. But the pixels of RED, GREEN, BLUE and WHITE color seem to be bright sometimes or some of black pixels could be seen.
  This is not from bad quality and you can use it without uneasiness.

  - ▶ For example, the number of TFT LCD sub pixels that is contained in this product are 3,932,160.

- ▣ When you clean the monitor and the panel outside, please apply the recommended small amount of cleaner by using soft and dry cloth and polish it. Let LCD area not to be forced but to be scrubbed out softly.
  If excessive force is applied, you can have a stain on it.

- ▣ If you are not satisfied with the quality of picture, you can get better quality of picture by executing "auto adjustment function" in display screen that is appeared as window termination button is pressed.
  If there's still noise after automatic adjustment, use FINE/COARSE adjustment function.

- ▣ If you view a fixed screen for an extended period of time, residual image or blurriness may appear. Change the mode to energy save or set a screensaver to moving picture when you need to be away from the monitor for an extended period of time.

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▣ Authority

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MÉXICO

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Vía Lopez Portillo No. 6, Col. San Fco. Chilpan
Tultitlán, Estado de México, C.P. 54940
Tel: 01-55-5747-5100 / 01-800-726-7864

EXPORTADO POR: Samsung Electronics CO.,LTD.
416, Mae tan-3dong, Yeongtong - gu,
Suwon City, Gyeonggi-do Korea

PRODUCT INFORMATION (Image Retention Free)

LCD Monitors and TVs may have image retention when switching from one image to another especially after displaying a stationary image for a long time.
This guide is to demonstrate correct usage of LCD products in order to protect them from Image retention.

Warranty
Warranty does not cover any damage caused by image retention.
Burn-in is not covered by the warranty.

What is Image retention ?
During normal operation of a LCD panel, pixel image retention doesn't occur. However, if the same image is displayed for a long time, a slight difference in electric charge accumulates between the two electrodes which encase the liquid crystal. This may cause the liquid crystal to build up in a certain areas of the display. Thus, the previous image is retained when switching to a new video image. All display products, including LCD,are subject to image retention. This is not a product defect.

Please follow the suggestions below to protect your LCD from image retention

---

Power Off, Screen Saver, or Power Save Mode
Ex)
- Turn the power off when using a stationary pattern.
    - Turn the power off for 4 Hours after 24 Hours in use
    - Turn the power off for 2 Hour after 12 Hours in use
- Use a Screen saver if possible
    - Screen saver in one color or a moving image is recommended.
- Set the Monitor to power off with the PC Display Properties Power Scheme.

**Suggestions for specific applications**
Ex) Airports, Transit Stations, Stock Markets, Banks, and Controlling Systems
We recommend that you follow set up of your display system program as below:

Display Information together with Logo or Moving image cycle.
Ex) Cycle : Display Information for 1 hour followed by a
Display Logo or moving image for 1 minute.

Change the Color Information periodically (Use 2 different colors).
Ex) Rotate the Color Information with 2 colors every 30 Minutes.
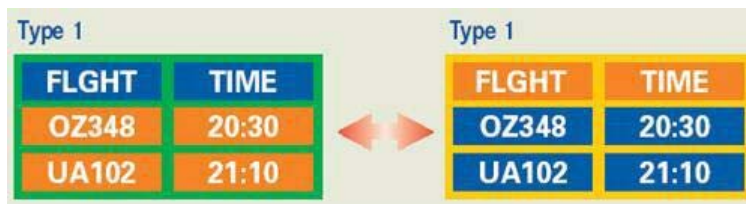
Avoid using a combination of characters and background color with large difference in luminance.
Avoid using Grey colors, which can cause Image retention easily.

- Avoid: Colors with big difference in luminance (Black & White, Grey)
Ex)

- Recommended settings: Bright colors with little difference in luminance
- Change the characters color and background color every 30 Minutes
Ex)

- Every 30 Minutes, change the characters with movement.

Ex)

● **The best way to protect your monitor from Image retention is to set your PC or System to operate a Screen Saver program when you are not using it.**

Image retention may not occur when a LCD panel is operated under normal conditions.

Normal conditions are defined as continuously changing video patterns. When the LCD panel is operated for a long time with a fixed pattern (-over 12 Hours-), there may be slight difference in voltage between electrodes that work the liquid crystal (LC) in a pixel. The voltage difference between electrodes increases with time, forcing the liquid crystal to lean. When this occurs, the previous image may be seen when the pattern is changed.
To prevent this, the accumulated voltage difference must be decreased.
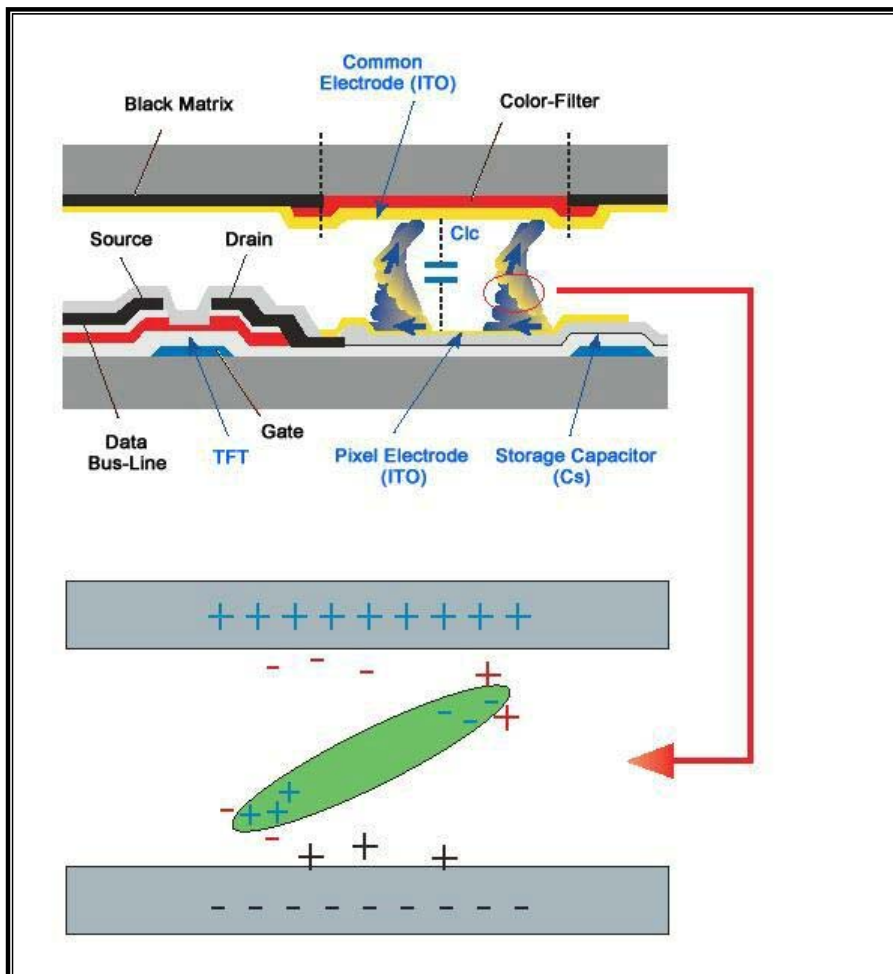
● Our LCD Monitor satisfies ISO13406-2 Pixel fault Class II