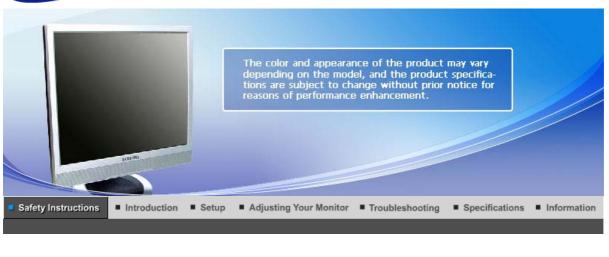


# SyncMaster 714BM



# Install driver Install programs Install programs Natural Color NagicTune™ MagicRotation





Notational Power Installation Clean Others

## Notational

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



Ground to prevent an electric shock

Notational Power Installation Clean Others

#### Power



When not used for an extended period of time, set your computer to DPM. If using a screen saver, set it to active screen mode.

The images here are for reference only, and are not applicable in all cases (or countries).





- 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. (Class I Equipment only.)



- 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
  - Using the power cord with a dusty plug or connector may cause electric shock or fire.
- To disconnect the apparatus from the mains, the plug must be pulled out from the mains socket, therefore the mains plug shall be readily operable.



• This may cause electric shock or fire.

Notational Power Installation Clean Others

## Installation



Be sure to contact an authorized Service Center, when installing your monitor in a location with heavy dust, high or low temperatures, high humidity, and exposed to chemical substances and where it operates for 24 hours such as at airports, train stations etc.

Failure to do so may cause serious damage to your monitor.



- 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.



- O Do not place the product on an unstable or small surface area.
  - Place the product on an even and 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.



- TO PREVENT THE SPREAD OF FIRE, KEEP CANDLES OR OTHER OPEN FLAMES AWAY FROM THIS PRODUCT AT ALL TIMES.
  - 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 the internal temperature may cause fire.



- Put down the monitor carefully.
  - Failing to do so may damage the monitor.



- Do not place the monitor face down.
  - This may damage the TFT-LCD surface.



- The installation of the bracket must be done by a qualified professional.
  - Installing the bracket 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 inches) 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.

| Notational | Power | Installation | Clean | Others |
|------------|-------|--------------|-------|--------|

Clean





- Do not spray water or detergent directly onto 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 using 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.



- Ontact the SAMSUNG customer care 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 a malfunction or fire.

Notational Power Installation Clean Others

Others



- Do not remove the cover (or back).
  - This may cause electric shock or fire.
  - Refer to a qualified servicing company.
- O If your monitor does not operate normally in particular, if there is any



unusual sound or smell coming from the monitor - unplug it immediately and the Service Center .

• 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.
- In particular, 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 electric shock or fire.



- Disconnect the plug from the outlet during storms or lightning or if it is not used for a long period of time.
  - Failure to do so may cause 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 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 tools or inflammable objects such as paper or matches into the vent, headphone port or AV ports or etc.
  - This may cause electric shock or fire. If an alien substances or water enters the product, turn the product off, unplug the power connector from the wall outlet and contact the Service Center.



- When viewing a fixed screen for an extended period of time, residual image or blurriness may appear.
  - Change the mode to energy saving mode or set a screensaver to a changing picture when away from the monitor for an extended period of time.



- Adjust the resolution and frequency to the level appropriate for the model.
  - An 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 level may damage hearing.



Viewing the monitor continuously at a too close angle may result in damage to your eyesight.



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 cause the product to 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 cables may damage it and cause fire or electric shock.



- Place the product out of children's reach, as they could damage by hanging onto it.
  - A falling product may cause injury to the person or even fatality.



- When not using the product for an extended period of time, keep the product unplugged.
  - Otherwise, this may cause heat emission from the accumulated dirt or degraded insulation, causing electric shock or fire.

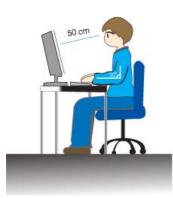


- Do not place your children's favorite toys or any other objects of interest on the product.
  - Children may try to climb on the product to retrieve an object. The product could fall, causing injury or even fatality.



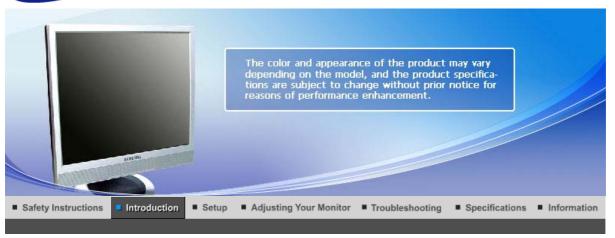
- When lifting up or moving the monitor, do not lift the monitor upside down while holding only the stand.
  - This may cause your monitor to fall, and become damaged or cause personal injury.

## Good Postures When Using the Monitor



- Try to maintain a good posture when using the monitor.
  - · 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.





Unpacking Front Rear

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



**Monitor** 

With Stand



Manual







# **Quick Setup Guide**

Warranty Card (Not available in all locations) Monitor Driver, Natural Color software, MagicTune™ software, MagicRotation software

# Cable



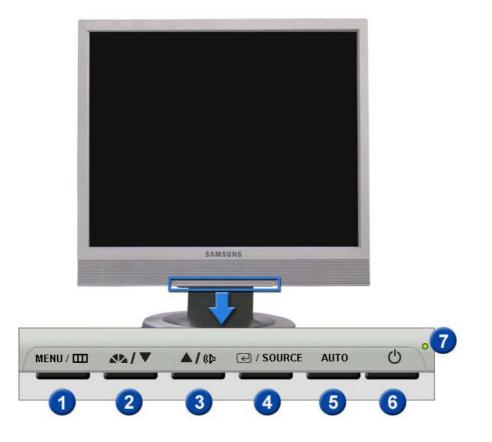
# Sold separately



**DVI Cable** 

Unpacking Front Rear

# Front



MENU button [Ⅲ]

Opens the OSD menu. Also use to exit the OSD menu or return to the previous menu.

2 MagicBright™ button [∡১] MagicBright<sup>™</sup> 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 texts 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

When OSD is not on the screen, push the button to adjust volume.

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

Enter button [@] / Activates a highlighted menu item. / SOURCE button Push the 'Source' and then select the

Push the 'Source' and then select the Video signal while the OSD is off. (When the SOURCE button is pressed to change the input mode, a message appears on the upper left of the screen displaying the current mode -- analog or digital input signal.) Note: If you select the Digital mode, you must connect your monitor to the graphic card's port using the DVI cable.

6 AUTO button Use this button for auto adjustment.

6 Power button [o] Turns the monitor On/Off.

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.

Unpacking Front Rear





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

**? POWER port** Connect the power cord for your monitor to the power port on the back

of the monitor.

**DVI IN port**Connect the DVI Cable to the DVI port on the back of your monitor.

3 RGB IN port Connect the signal cable to the 15-pin, D-sub port on the back of your

monitor.

POWER on/off Switch Use this button for turn the monitor on and off.

(option)

S 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 purchased it.



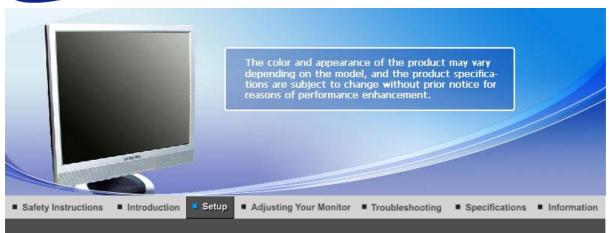
# Meadphone connection terminal [Π]

**AUDIO IN** Connect the audio cable for your monitor to the audio port on the back of your computer.



See Connecting the Monitor for further information regarding cable connections.





Connecting the Monitor

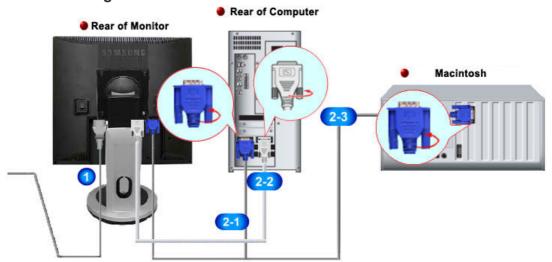
Using the Stand

Installing the Monitor Driver (Automatic)

Installing the Monitor Driver (Manual)

Natural Color

Connecting the 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. Use appropriate connection for your computer.
  - **2-1.** Using the D-sub (Analog) connector on the video card. Connect the signal cable to the 15-pin, D-sub port on the back of your monitor.



**2-2.** Using the DVI (Digital) connector on the video card. Connect the DVI Cable to the DVI Port on the back of your Monitor.



- 2-3. Using Macintosh
  - Connect the monitor and the Macintosh computer using the computer connection cable.

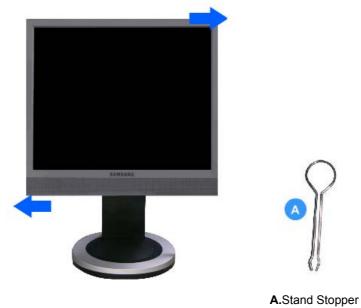


If the monitor and the computer are connected, you can turn them on and use them.

# Using the Stand

# HAS Stand





# 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)
- 1. Turn off your monitor and unplug its power cord.
- Lay the LCD monitor face-down on a flat surface with a cushion beneath it to protect the screen.
- 3. Remove four screws and then remove the stand from the LCD monitor.
- 4. 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.



- Do not use screws longer than the standard dimension, as they may damage the inside
  of the Monitor.
- For wall mounts that do not comply with VESA standard screw specifications, the length
  of the screws may differ depending on their specifications.
- Do not use screws that do not comply with the VESA standard screw specifications.
   Do not fasten the screws too tightly, as this may damage the product or cause the product to fall, leading to personal injury.
   Samsung is not liable for these kinds of accidents.
- Samsung is not liable for product damage or personal injury when a non-VESA or nonspecified wall mount is used or the consumer fails to follow the product installation instructions.



- To mount the monitor on a wall, you should purchase the wall mounting kit that allows you to mount the monitor at least 10cm away from the wall surface.
- Contact the nearest Samsung Service Center for more information. Samsung Electronics will not be responsible for damages caused by using a base other than those specified.
- Please use Wall Mount according to the International standards.

Connecting the Monitor Using the Stand Installing the Monitor Driver (Automatic) (Manual)



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



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.

Natural Color

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

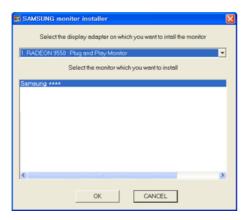
• Internet web site : http://www.samsung.com/ (Worldwide)

http://www.samsung.com/monitor (U.S.A) http://www.sec.co.kr/monitor (Korea)

http://www.samsungmonitor.com.cn/ (China)

- 1. Insert CD into the CD-ROM drive.
- 2. Click "Windows"

3. Choose your monitor model in the model list, then click the "OK" button.



4. 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 momepage http://www.samsung.com/.

5. Monitor driver installation is completed.

Connecting the Monitor | Using the Stand | Installing the Monitor Driver (Automatic) | Installing the Monitor Driver (Automatic) | Natural Color

# Installing the Monitor Driver (Manual)

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



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 below.

• 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)

- Microsoft<sup>®</sup> Windows Vista<sup>™</sup> Operating System
  - 1. Insert your Manual CD into your CD-ROM drive.
  - Click (Start) and "Control Panel". Then, double-click on "Appearance and Personalization".



3. Click "Personalization" and then "Display Settings".





4. Click "Advanced Settings..."



Click "Properties" in the "Monitor" tab. If the "Properties" button is deactivated, it
means the configuration for your monitor is completed. The monitor can be used as is.
If the message "Windows needs..." is displayed, as shown in the figure below,
click "Continue".





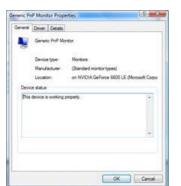
 $\checkmark$ 

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/

6. Click "Update Driver..." in the "Driver" tab.





Check the "Browse my computer for driver software" checkbox and click "Let me pick from a list of device drivers on my computer".





8. Click "Have Disk..." and select the folder (for example, D:\Drive) where the driver setup file is located, and click "OK".

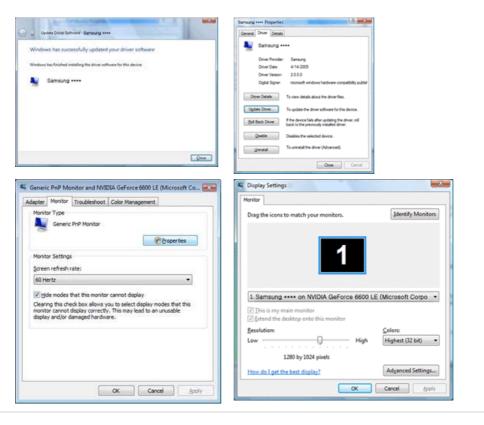




Select the model that matches your monitor from the list of monitor models on the screen, and click "Next".



10. Click "Close"  $\to$  "Close"  $\to$  "OK"  $\to$  "OK" on the following screens displayed in sequence.

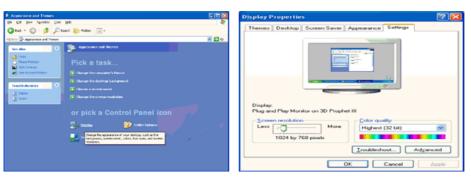


Microsoft<sup>®</sup> Windows<sup>®</sup> XP Operating System

- 1. Insert CD into the CD-ROM driver.
- 2. Click "Start" -> "Control Panel" then click the "Appearance and Themes" Icon.

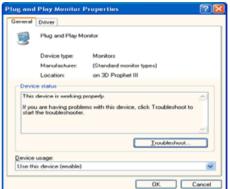


3. Click "Display" icon and choose the "Settings" tab then click "Advanced..".

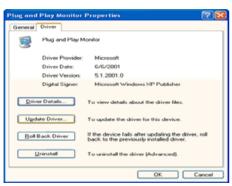


4. Click the "Properties" button on the "Monitor" tab and select "Driver" tab.



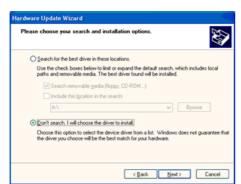


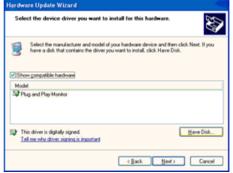
5. Click "Update Driver.." and select "Install from a list or.." then click "Next" button.





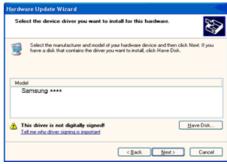
6. Select "Don't search, I will..." then click "Next" and then click "Have disk".





7. Click the "Browse" button then choose A:(D:\Driver) and choose your monitor model in the model list and click the "Next" button.





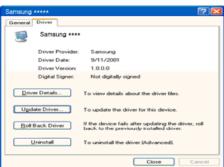
8. If you can see following "Message" window, then click the "Continue Anyway" button. Then click "OK" button.

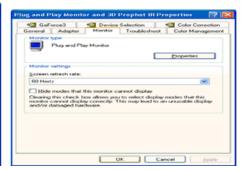


This monitor driver is under certified MS logo, and this installation doesn't damage your system. The certified driver will be posted on Samsung Monitor homepage. http://www.samsung.com/

9. Click the "Close" button then click "OK" button continually.







10. Monitor driver installation is completed.

## Microsoft<sup>®</sup> Windows<sup>®</sup> 2000 Operating System

- 🔯 When you can see "Digital Signature Not Found" on your monitor, follow these steps.
- 1. Choose "OK" button on the "Insert disk" window.
- Click the "Browse" button on the "File Needed" window.
- 3. Choose A:(D:\Driver) then click the "Open" button and then click "OK" button.

#### Mow to install

- 1. Click "Start", "Setting", "Control Panel".
- 2. Double click the "Display" Icon.
- 3. Choose the "Settings" tab and then click "Advanced..".
- 4. Choose "Monitor".
  - Case 1: 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.
- 5. Click "Driver" and then click on "Update Driver.." then click on the "Next" button.
- 6. 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<sup>®</sup> Windows<sup>®</sup> Millennium Operating System

- Click "Start", "Setting", "Control Panel".
   Double click "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<sup>®</sup> Windows<sup>®</sup> 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
- 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
- 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.

Installing the Monitor Driver Connecting the Monitor Using the Stand Installing the Monitor Driver Natural Color (Automatic)



Natural Color



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 is only available for Samsung monitors and ensures that the color of the images on the monitor are the same as the printed or scanned images.

For more information, refer to Help (F1) in the software program.

## **Installing the Natural Color Software**

Insert the CD included with the Samsung monitor into the CD-ROM Drive. The initial Natural Color screen will appear. Click on Natural Color in the startup window 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 windows **[Start]** button, 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.)

#### **Uninstalling the Natural Color Software Program**

Select "Settings/Control Panel" from the "Start" menu and then double-click "Add/Delete a program".

Select Natural Color from the list and then click the "Add/Delete" button.







- 1 Opens the on-screen menu and exits from the menu or closes the adjustment menu.
- These buttons allows you to adjust items in the menu.
- Press this button to activate a highlighted menu item.
- Press to self-adjust to the incoming PC signal. The values of fine, coarse and position are adjusted automatically.







**Menu** Description

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

Auto adjustment allows the monitor to self-adjust to the incoming video signal. The values of fine, coarse and position are adjusted automatically. (Available in analog Mode Only)

**AUTO** 

To make the automatic adjustment function sharper, execute the 'AUTO' function while the AUTO PATTERN is on.

- If Auto Adjustment does not work properly, press **AUTO** button again to adjust picture with more accuracy.
- By changing the resolution in the control panel, auto function is performed automatically.

# OSD Lock & Unlock

When pressing the AUTO button after locking the OSD



# When pressing the MENU button after locking the OSD



Menu

# Description

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 seconds to activate the OSD adjustment lock function.

Locked

 $\textbf{Unlock}: \mbox{Hold}$  down the menu button for more than five seconds to deactivate the OSD adjustment lock function.

# MagicBright™

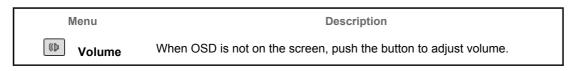


Menu Description

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

# Volume







Menu Description

SOURCE Selects the Video signal while the OSD is off.





| Menu       | Description   | Play/Stop |
|------------|---|-----------|
| Brightness | You can use the on-screen menus to change the brightness according to personal preference.                                    |           |
|            | $[MENU \to \mathbf{e}\!$                                |           |
| Contrast   | You can use the on-screen menus to change the contrast according to personal preference.                                      |           |
|            | $[MENU \to \mathbf{e} \to \blacktriangle, \blacktriangledown \to \mathbf{e} \to \blacktriangle, \blacktriangledown \to MENU]$ |           |









| T-         |  |           |
|------------|--|-----------|
| 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. |           |
|            | 1) Off - Returns to the original mode.   |           |
| MagicColor | <ol> <li>Demo - The screen before applying MagicColor<br/>appears on the right and the screen after applying<br/>MagicColor appears on the left.</li> </ol>                |           |
|            | 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.  |           |
|            | $[MENU \to \blacktriangle, \blacktriangledown \to \clubsuit \to \clubsuit, \blacktriangledown \to MENU]$   |           |
| Color Tone | The tone of the color can be changed and one of four modes can be selected - Cool, Normal, Warm and Custom.  | 00        |
| Color Tone | (Not available in MagicColor mode of Full and Intelligent.)  |           |
|            | <ul><li>Cool : Makes whites bluish.</li><li>Normal : Keeps whites white.</li></ul>   |           |

• Warm : Makes whites reddish.

• Custom: Choose Custom if you want to adjust the settings according to personal preference.

 $[\mathsf{MENU} \to \blacktriangle, \blacktriangledown \to \boxdot \to \blacktriangle, \blacktriangledown \to \boxdot \to \blacktriangle, \blacktriangledown \to \mathsf{MENU}]$ 

Follow these steps to adjust individual R,G,B color

**Color Control** 

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

 $[\mathsf{MENU} \to \underline{\blacktriangle}, \overline{\blacktriangledown} \to \boxed{\bullet}, \overline{\blacktriangledown} \to \underline{\blacktriangle}, \overline{\blacktriangledown} \to \boxed{\bullet}, \overline{\blacktriangledown} \to \underline{\blacktriangle}, \overline{\blacktriangledown} \to$ MENU]

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

Gamma

- Mode 1
- Mode 2
- Mode 3











| 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) |           |
|        | $[MENU \to \blacktriangle, \blacktriangledown \to \boxdot \to \boxdot \to \blacktriangle, \blacktriangledown \to MENU]$  |           |
| 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)                |           |
|        | $[MENU \to {}_{\blacktriangle}, {}_{\blacktriangledown} \to {}_{\AE} \to {}_{\blacktriangle}, {}_{\blacktriangledown} \to {}_{\AE} \to {}_{\blacktriangle}, {}_{\blacktriangledown} \to MENU]$ |           |

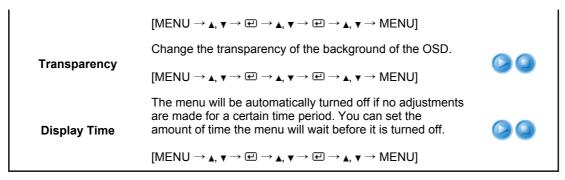
| Sharpness  | Changes the clearance of image. (Not available in MagicColor mode of Full and Intelligent.) $[MENU \to \blacktriangle, \blacktriangledown \to \boxdot \to \blacktriangle, \blacktriangledown \to MENU]$ |  |
|------------|---|--|
| H-Position | Changes the horizontal position of the monitor's entire display. (Available in analog Mode Only)  [MENU → ▲, ▼ → ゼ → ▲, ▼ → ゼ → ▲, ▼ → MENU]  |  |
| V-Position | Changes the vertical position of the monitor's entire display. (Available in analog Mode Only)  [MENU → ▲, ▼ → 堲 → ▲, ▼ → 堲 → ▲, ▼ → MENU]  |  |



# OSD 💷



| Menu       | Description  | Play/Stop |
|------------|--|-----------|
|            | You can choose one of the nine languages.  • English, Deutsch, Español, Français, Italiano, Svenska, Русский, Português, Türkçe  |           |
| Language   | <b>Note</b> :The language chosen affects only the language of the OSD. It has no effect on any software running on the computer.   |           |
|            | $[MENU \to \blacktriangle, \blacktriangledown \to \boxdot \to \boxdot \to \blacktriangle, \blacktriangledown \to MENU]$  |           |
| H-Position | You can change the horizontal position where the OSD menu appears on your monitor.   |           |
|            | $[MENU \to \underline{\blacktriangle}, \blacktriangledown \to \textcircled{e} \to \underline{\blacktriangle}, \blacktriangledown \to \textcircled{e} \to \underline{\blacktriangle}, \blacktriangledown \to MENU]$ |           |
| V-Position | You can change the vertical position where the OSD menu appears on your monitor.   | <b>9</b>  |





# Setup 🕮





| Menu        | Description  | Play/Stop |
|-------------|--|-----------|
| Auto Source | Select <b>Auto Source</b> for the monitor to automatically select the signal source.   |           |
|             | $[MENU \to \blacktriangle, \blacktriangledown \to \boxdot \to \boxdot \to \blacktriangle, \blacktriangledown \to MENU]$  |           |
| Image Reset | Image parameters are replaced with the factory default values.   |           |
|             | $[MENU \to \blacktriangle, \blacktriangledown \to \boxdot \to \blacktriangle, \blacktriangledown \to \boxdot \to \blacktriangle, \blacktriangledown \to MENU]$ |           |
| Color Reset | Color parameters are replaced with the factory default values.   |           |
|             | $[MENU \to \blacktriangle, \blacktriangledown \to \Rho \to \blacktriangle, \blacktriangledown \to \Rho \to \blacktriangle, \blacktriangledown \to MENU]$       |           |







Menu Description

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

Information

 $[\mathsf{MENU} \to \blacktriangle, \blacktriangledown \to \mathsf{MENU}]$ 



# **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 Installation Shield 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  $\mbox{^{TM}}$  program.
- 7. Click "Install."
- 8. The "Installation Status" window appears.
- 9. Click "Finish."
- When the installation is completed, the MagicTune<sup>™</sup> executable icon appears on your desktop.
   Double-click the icon to start the program.

MagicTune\*

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



#### **1** Installation Problems

The installation of MagicTune $^{\text{TM}}$  can be affected by such factors as the video card, motherboard and the network environment.

## System Requirements

#### os

- Windows 2000
- Windows XP Home Edition
- Windows XP Professional
- Windows Vista™



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

#### Hardware

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

<sup>\*</sup> For more information, visit the MagicTune™ website.



The MagicTune  $^{\text{M}}$  program can be removed only by using the "Add or Remove Programs" option of the Windows® Control Panel.

Perform the following steps remove  $\mathsf{MagicTune}^{\scriptscriptstyle\mathsf{TM}}$  .

- 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 if
- 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 $^{\text{\tiny IM}}$  website for technical support for MagicTune $^{\text{\tiny IM}}$ , FAQs (questions and answers) and software upgrades.

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.



## Installation

- 1. Insert the installation CD into the CD-ROM drive.
- 2. Click the MagicRotation installation file.
- 3. Select installation Language, Click "Next".
- 4. When the InstallShield Wizard window appears, click "Next."
- 5. Select "I accept the terms of the license agreement" to accept the terms of use.
- 6. Choose a folder to install the MagicRotation program.
- 7. Click "Install."
- 8. The "Setup Status" window appears.
- 9. Click "Finish."

Have to reboot the system in order for the MagicRotation to work properly.

 When the installation is complete, the MagicRotation executable icon appears on your desktop.



# Installation Problems

The installation of MagicRotation can be affected by the factors such as video card, motherboard and the network environment.

### Limitation

- The "Display Driver" should be properly loaded for the MagicRotation to work properly.
   The installed "Display Driver" should be the latest driver supplied by the vendor.
- 2. If some applications like Windows Media Player, Real Player, etc. are not displaying movie files properly in 90, 180 and 270 orientations then do the following :
  - o Close the application.
  - $\circ\,$  Select the Orientation (90, 180, 270) you want to view the application.
  - o Relaunch the application.

In most cases this should fix the problem.

- User Applications using OpenGL and DirectDraw (3D drawing) will not function as per the orientation mode selected (90, 180, 270).
   e.g. 3D games
- DOS based applications in Full Screen Mode will not function as per the orientation mode selected (90, 180, 270).
- 5. Dual is not supported in Windows® 98, ME, NT 4.0.
- 6. MagicRotation does not provide support for 24 bits per pixel (Bit depth/Color Quality).
- If you are changing your Graphic Card it is recommended that you uninstall the MagicRotation Software before doing so.

### System Requirements

os

- Windows 98 SE
- Windows Me

- Windows NT 4.0
- Windows 2000
- Windows XP Home Edition
- Windows XP Professional
- Windows Vista™

#### Hardware

- 128MB Memory above(recommended)
- 25MB Free Hard disk space above

#### **Service Packs**

- It is recommended that your System has the latest Service Pack installed.
- For Windows® NT 4.0, it is recommended to install Internet Explorer 5.0 and above with Active Desktop component.
- \* For more information, visit the MagicRotation website.
- \* Windows® is registered trademark of Microsoft Corporation,Inc.

# Uninstall

The MagicRotation program can be removed only by using the "Add/Remove Programs" option of the Windows Control Panel.

Perform the following steps to remove MagicRotation.

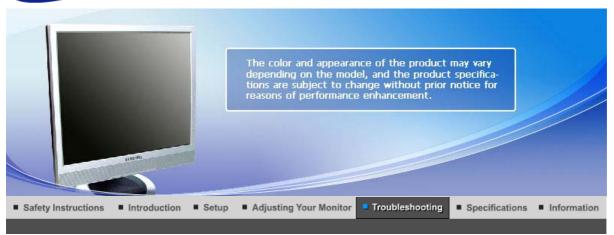
- 1. Go to [Task Tray] ' [Start] ' [Settings] and select [Control Panel] in the menu. If the program runs on Windows® XP, go to [Control Panel] in the [Start] menu.
- 2. Click the "Add/Remove Programs" icon in Control Panel.
- In the "Add/Remove Programs" screen, scroll down to find "MagicRotation" Click 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.
- 7. After uninstall restart the system to complete the uninstallation.

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

\* Windows® is registered trademark of Microsoft Corporation,Inc.

The specifications are subject to change without notice.
MagicRotation is a trademark of SAMSUNG ELECTRONICS CO., LTD.
All other product trademarks mentioned in this document may be registered trademarks of their respective companies.
Windows™ is registered trademark of Microsoft Corporation,Inc.





Check List Q & A Self-Test Feature Check



Before calling for assistance, 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  | Is the power cord connected properly?   | Check the power cord connection and supply.   |
| cannot turn on the monitor. | Can you see "Check<br>Signal Cable" on the<br>screen?   | (When connecting D-Sub cable) Check the signal cable connection. (When connecting DVI cable) If you still see an error message on the screen when the monitor is connected properly, check to see if the monitor status is set to analog. Press '@/SOURCE' button to have the monitor double-check the input signal source. |
|                             | If the power is on, reboot<br>the computer to see the<br>initial screen(the login<br>screen), which can be<br>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)  |
|                             |   | Note: If the initial screen (the login screen) does not appear, contact the Service Center or your dealer.  |
|                             | Can you see "Not<br>Optimum<br>Mode","Recommended<br>Mode 1280 x 1024 60Hz"<br>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 75Hz, a "Not Optimum Mode","Recommended Mode 1280 x 1024 60Hz" message is displayed. If the display exceeds  |

85Hz, the display will work properly but the "Not Optimum Mode", "Recommended Mode 1280 x 1024 60Hz" 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 The monitor is in PowerSaver mode. screen. Is the power indicator on press a key on the keyboard to the monitor blinking at 1 activate the monitor and restore the second intervals? 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. Is the monitor connected You may get a blank screen if you using the DVI cable? boot the system before you connect the DVI cable, or disconnect and then reconnect the DVI cable while the system is running as certain types of graphic cards do not send out video signals. Connect the DVI cable and then reboot the system. I cannot see Have you locked the On Unlock the OSD by pressing the [MENU/III] button for the On Screen Screen Display (OSD) at least 5 seconds. Menu to prevent changes? Display. The screen Is the screen displaying Check the signal cable connection. shows strange only one color as if looking Make sure the video card is fully at the screen through a inserted in it's slot. colors or just black and cellophane paper? white Have the screen colors Reboot the computer. become strange after running a program or due to a crash between applications? Has the video card been Set the video card by referring to the set properly? video card manual. The screen Adjust screen image position and Have you changed the suddenly has video card or the driver? size using the OSD. become Have you adjusted the Adjust the resolution and frequency unbalanced. resolution or frequency to at the video card. the monitor? (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. Have you adjusted the The screen is Adjust the resolution and frequency resolution or frequency on of the video card. out of focus or OSD cannot be the monitor? (Refer to the Preset Timing Modes). adjusted. LED is blinking Is the frequency properly Adjust the frequency properly by referring to the video card manual but no images adjusted when checking on the screen. the Display Timing on the and the Preset Timing Modes. menu? (The maximum frequency per resolution may differ from product to product.)

There are only Have the Windows colors Windows ME/2000/XP: 16 colors been set properly? Set the colors properly at the shown on the Control Panel → Display → screen. Settings. The screen colors have Has the video card been Set the video card by referring to the changed after set properly? video card manual. changing the video card. Have you installed the Install the monitor driver according There is a message that monitor driver? to the Driver Installation Instructions. reads "Unrecognized See the video card Install the monitor driver according monitor, Plug & manual to see if the Plug to the Driver Installation Instructions. Play (VESA & Play (VESA DDC) DDC) monitor function can be supported. found". **Problems** No sound Ensure that the audio cable is firmly related to connected to both the audio-in port Audio on your monitor and the audio-out port on your sound card. (Refer to Connecting the Monitor) Check the volume level. Sound level is too low. Check the volume level. If the volume is still too low after turning the control to its maximum. check the volume control on the computer sound card or software program. MagicTune™ feature is \* To check whether your PC is Check when MagicTune™ found only on PC (VGA) available for MagicTune™ feature, does not with Window OS that follow the supports Plug and Play. steps below (When Windows is function properly. 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™ Have you changed your Download the latest program. The doesn't work PC or video graphic card? program can be downloaded properly. http://www.samsung.com/monitor/magictune. Did you install the Reboot the computer after installing the program for the first time. If a copy of the program is already program? installed, remove it, reboot the computer, and then install the program again. You need to reboot the computer for it to operate normally after installing or removing the program.



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

- 1. Check if the power cord and the video cables are properly connected to the computer.
- 2. 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.)
- 3. If you installed a new video card or if you assembled the PC, check if the installed the adapter (video) driver and the monitor driver.
- Check if the scanning ratio of the video screen is set to between 56Hz ~ 75Hz. (Do not exceed 75Hz when using the maximum resolution.)
- If you have problems in installing the adapter (video) driver, boot the computer in Safe Mode, remove the Display Adapter in the "Control Panel→System→Device Administrator" and then reboot the computer to reinstall the adapter (video) driver.



If problems repeatedly occur, contact an authorized Service Center.



# • Q & A

| Question                                  | Answer  |
|---|---|
| How can I change the frequency?           | The frequency can be changed by reconfiguring the video card.   |
| irequericy:                               | 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 ME/XP/2000 : Set the resolution in the Control Panel→Display→Settings.  |
|   | * Contact the video card manufacturer for details.  |
| How can I set the Power Saving function?  | Windows ME/XP/2000 : Set the function in the BIOS-SETUP of the computer or the screen saver. (Refer to the 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 detergent or scratches on the case. Do not let any water enter the monitor.  |

Check List Q & A Self-Test Feature Check

# Self-Test Feature Check

Self-Test Feature Check | Warning Messages | Environment | Useful Tips

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, the message below 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

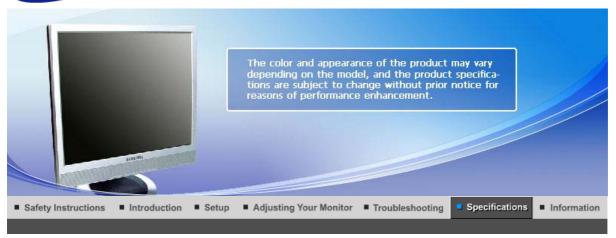
A monitor recreates visual signals received from the computer. Therefore, if there is a problem
with the computer or the video card, this can cause the monitor to become blank, have poor
coloring, become noisy, and video mode not supported, etc. In this case, first check the source of
the problem, and 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 60Hz" 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.
- o In this case, check the computer for trouble.





General PowerSaver Preset Timing Modes

### General

General

Model Name SyncMaster 714BM

**LCD Panel** 

Size 17" Diagonal (43 cm)

Display area 337.92 mm (H) x 270.33 mm (V)

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

**Synchronization** 

Horizontal 30 ~ 81 kHz

Vertical 56 ~ 75 Hz

**Display Color** 

16.7M Colors

Resolution

Optimum resolution 1280 x 1024@60 Hz

Maximum resolution 1280 x 1024@75 Hz

Input Signal, Terminated

RGB Analog , DVI(Digital Visual Interface) Compliant Digital RGB

0.7Vp-p Positive at 75 Ω

Separate H/V sync, Composite sync, SOG, TTL level positive or negative.

**Maximum Pixel Clock** 

140 MHz

**Power Supply** 

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

Signal Cable

15pin-to-15pin D-sub cable, detachable

DVI-D to DVI-D connector, detachable (not supplied)

Dimensions (WxHxD)/ Weight (HAS Stand)

370.0 x 342.3 x 64.1 mm / 14.6 x 13.5 x 2.5 inch (Without Stand)

370.0 X 404.0 X 200.0 mm / 14.6 X 15.9 X 7.9 inch (With Basic Stand) , 5.8 kg / 12.8 lbs

**VESA Mounting Interface** 

100 mm x 100 mm (for use with Specialty(Arm) Mounting hardware.)

Max internal speaker

1.2~1.5 W

**Environmental considerations** 

Operating Temperature:  $50^{\circ}F \sim 104^{\circ}F(10^{\circ}C \sim 40^{\circ}C)$ 

Humidity: 10 % ~ 80 %, non-condensing

Storage Temperature:  $-4^{\circ}F \sim 113^{\circ}F (-20^{\circ}C \sim 45^{\circ}C)$ 

Humidity: 5 % ~ 95 %, non-condensing

### Plug and Play Capability

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

### **Dot Acceptable**

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

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

### Note: 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.)

General PowerSaver Preset Timing Modes

### PowerSaver

This monitor has a built-in power management system called PowerSaver. This system saves energy by switching your monitor to 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 DPM compliant video card installed in your computer. Use the software utility installed on your computer to set up this feature.

| State                | Normal<br>Operation | Power saving mode           | Power off<br>(Power button) /<br>EPA/ENERGY<br>2000 | Power off<br>(Power Switch)<br>(option) |
|----------------------|---------------------|-----------------------------|---|---|
| Power Indicator      | Green               | Green Blinking              | off   | off                                     |
| Power<br>Consumption | Less than 38 W      | Less than 1 W<br>(Off-mode) | Less than 1 W<br>(120 Vac)                          | Less than 0 W                           |



This monitor is EPA ENERGY STAR® compliant and ENERGY2000 compliant when used with a computer equipped with VESA DPM functionality.

As an ENERGY STAR® Partner, SAMSUNG has determined that this product meets the ENERGY STAR® guidelines for energy efficiency.

# 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 (Exception :  $640 \times 480/60$ Hz,  $720 \times 400/70$ Hz,  $800 \times 600/60$ Hz) 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.

**Table 1. Preset Timing Modes** 

| Display Mode      | Horizontal<br>Frequency<br>(kHz) | Vertical<br>Frequency<br>(Hz) | Pixel Clock<br>(MHz) | Sync Polarity<br>(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   | 37.500                           | 75.000                        | 31.500               | -/-                    |
| VESA, 640 x 480   | 37.861                           | 72.809                        | 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   | 46.875                           | 75.000                        | 49.500               | +/+                    |
| VESA, 800 x 600   | 48.077                           | 72.188                        | 50.000               | +/+                    |
| 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                        | 108.00               | +/+                    |
| VESA, 1280 x 1024 | 79.976                           | 75.025                        | 135.00               | +/+                    |

### **Horizontal Frequency**

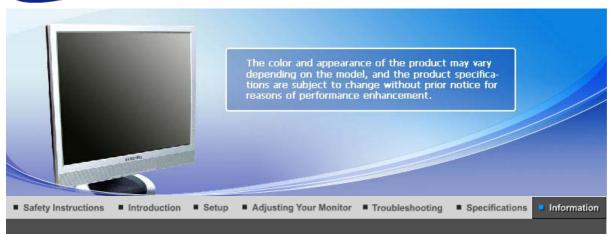


The time to scan one line connecting the right edge to the left edge of the screen horizontally is called the Horizontal Cycle and the inverse number of the Horizontal Cycle is called the Horizontal Frequency. Unit: kHz

### **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 the Vertical Frequency or Refresh Rate. Unit: Hz





Contact SAMSUNG WORLDWIDE | Terms | For Better Display | Authority | Image Retention Free | Correct Disposal |

# Contact SAMSUNG WORLDWIDE



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

| Latin America     |                        |                              |  |
|-------------------|------------------------|------------------------------|--|
| ARGENTINE         | 0800-333-3733          | http://www.samsung.com/ar    |  |
| BRAZIL            | 4004-0000              | http://www.samsung.com/br    |  |
| CHILE             | 800-726-7864 (SAMSUNG) | http://www.samsung.com/cl    |  |
| COLOMBIA          | 01-8000112112          | http://www.samsung.com.co    |  |
| 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 |  |
| TRINIDAD & TOBAGO | 1-800-7267-864         | http://www.samsung.com/latin |  |
| VENEZUELA         | 0-800-100-5303         | http://www.samsung.com/latin |  |

| BELGIUM             | 02 201 2418  | http://www.samsung.com/be |  |
|---------------------|--|---------------------------|--|
| CZECH REPUBLIC      | 844 000 844  | http://www.samsung.com/cz |  |
|                     | Distributor pro Českou republiku:<br>Samsung Zrt., česka organizační složka Vyskočilova 4, 14000 Praha 4 |                           |  |
| DENMARK             | 70 70 19 70  | http://www.samsung.com/dk |  |
| FINLAND             | 030-6227 515   | http://www.samsung.com/fi |  |
| FRANCE              | 3260 SAMSUNG(7267864)<br>(€ 0,15/min)  | http://www.samsung.com/fr |  |
| GERMANY             | 01805 - 121213 (€ 0,14/Min)  | http://www.samsung.de     |  |
| HUNGARY             | 06-80-SAMSUNG (7267864)  | http://www.samsung.com/hu |  |
| ITALIA              | 800 SAMSUNG (7267864)  | http://www.samsung.com/it |  |
| LUXEMBURG           | 0032 (0)2 201 24 18  | http://www.samsung.lu     |  |
| NETHERLANDS         | 0900 20 200 88 (€ 0,10/Min)  | http://www.samsung.com/nl |  |
| NORWAY              | 815-56 480   | http://www.samsung.com/no |  |
| POLAND              | 0 801 801 881  | http://www.samsung.com/pl |  |
| PORTUGAL            | 80 8 200 128   | http://www.samsung.com/pt |  |
| REPUBLIC OF IRELAND | 0818 717 100   | http://www.samsung.com/uk |  |
| SLOVAKIA            | 0800-SAMSUNG (7267864)   | http://www.samsung.com/sk |  |
| SPAIN               | 902 10 11 30   | http://www.samsung.com/es |  |
| SWEDEN              | 0771-400 200   | http://www.samsung.com/se |  |
| SWITZERLAND         | 0800-7267864   | http://www.samsung.com/ch |  |
| U.K                 | 0870 SAMSUNG (7267864)   | http://www.samsung.com/uk |  |

|            | CIS            |                           |
|------------|----------------|---------------------------|
| ESTONIA    | 800-7267       | http://www.samsung.ee     |
| LATVIA     | 800-7267       | http://www.samsung.com/lv |
| LITHUANIA  | 8-800-77777    | http://www.samsung.lt     |
| KAZAKHSTAN | 8 800 080 1188 | http://www.samsung.kz     |
| RUSSIA     | 8-800-200-0400 | http://www.samsung.ru     |
| UKRAINE    | 8-800-502-0000 | http://www.samsung.com/ur |
| UZBEKISTAN | 140-1234       | http://www.samsung.uz     |

| 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    | 3698-4698                    | 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  |
| U.A.E        | 800SAMSUNG (7267864)<br>8000-4726 | http://www.samsung.com/mea |

Contact SAMSUNG WORLDWIDE | Terms | For Better Display | Authority | Image Retention Free | Correct Disposal |

### 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 the 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 the 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 sequentially 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 the 'resolution'. This number shows the accuracy of the display. A 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).

Contact SAMSUNG WORLDWIDE | Terms | For Better Display | Authority | Image Retention Free | Correct Disposal |

 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.

o Resolution: 1280 x 1024

- o Vertical frequency (refresh rate): 60 Hz
- TFT LCD panels manufactured by using advanced semiconductor technology with precision of 1ppm (one millionth) above are used for this product. But the pixels of RED, GREEN, BLUE and WHITE color appear to be bright sometimes or some black pixels may be seen. This is not from bad quality and you can use it without any problelms.
  - For example, the number of TFT LCD sub pixels contained in this product are 3.932,160.
- 3. When cleaning the monitor and the panel outside, please apply the recommended small amount of cleaner by using a soft cloth to polish. Do not force the LCD area but rub softly. If excessive force is applied, you can have a stain on it.
- 4. If you are not satisfied with the picture quality, you can get better quality of picture by performing the "auto adjustment function" in display screen that is appeared as window termination button is pressed.
  If there's still noise after the automatic adjustment, use the FINE/COARSE adjustment function.
- When viewing a fixed screen for an extended period of time, residual image or blurriness may appear.
  - Change the mode to energy saving mode or set a screensaver to a changing picture when away from the monitor for an extended period of time.

Contact SAMSUNG WORLDWIDE | Terms | For Better Display | Authority | Image Retention Free | Correct Disposal |

# Authority

Information in this document is subject to change without notice. © 2007 Samsung Electronics Co., Ltd. All rights reserved.

Reproduction in any manner whatsoever without the written permission of Samsung Electronics Co., Ltd. is strictly forbidden.

Samsung Electronics Co., Ltd. shall not be liable for errors contained herein or for incidental or consequential damages in connection with the furnishing, performance, or use of this material.

Samsung is the registered trademark of Samsung Electronics Co., Ltd.; Microsoft, Windows and Windows NT are registered trademarks of Microsoft Corporation; VESA, DPM and DDC are registered trademarks of Video Electronics Standard Association; the ENERGY STAR® name and logo are registered trademarks of the U.S. Environmental Protection Agency (EPA). As an ENERGY STAR® Partner, Samsung Electronics Co., Ltd. has determined that this product meets the ENERGY STAR® guidelines for energy efficiency. All other product names mentioned herein may be the trademarks or registered trademarks of their respective owners.

### **PRODUCT INFORMATION (Image Retention Free)**

LCD Monitors and TVs may have an image retention when switching from one image to another especially after displaying a stationary image for a long time.

This guide is to demonstrate a 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

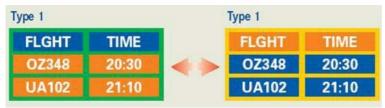
### Power Off, Screen Saver, or Power Save Mode Ex)

- Turn the power off when using a stationary pattern.
  - Turn the power off for 4 hours after 20 hours in use
  - Turn the power off for 2 hours 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)

SYSTEM: 245
STATUS: NG
STATUS: NG

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

SYSTEM: 245
STATUS: OK
SYSTEM: 245
STATUS: OK
SYSTEM: 245
STATUS: OK
SYSTEM: 245
STATUS: OK

- Every 30 minutes, change the characters with movement.

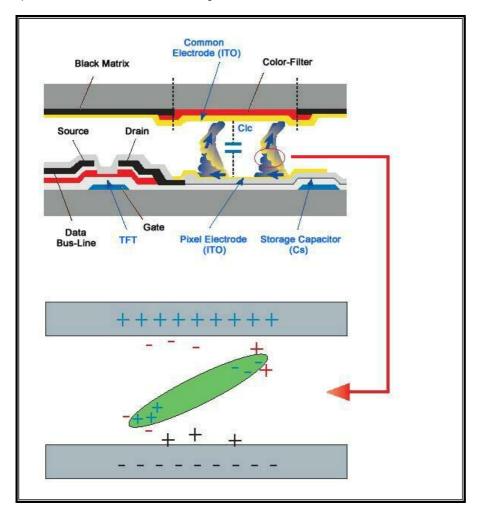


The best way to protect your monitor from Image retention is to set your PC or System to operate a Screen Saver program when you are not using it.

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

# 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.