



SyncMaster 225MD



Install Driver





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

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Power



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

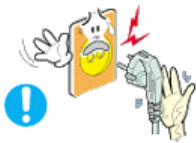
The images here are for reference only, and are not applicable in all cases (or countries).

[Shortcut to Anti-Afterimage Instructions](#)



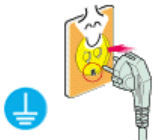
● **Do not use a damaged or loose plug.**

- This may cause electric shock or fire.



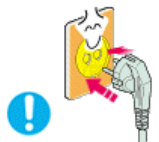
● **Do not pull the plug out by the wire nor touch the plug with wet hands.**

- 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. (Class I Equipment only.)



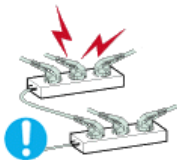
● **Insert the power plug firmly so that it does not come loose.**

- 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 cloth.
- 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.

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.



Do not place the product on the floor.

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



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.



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.



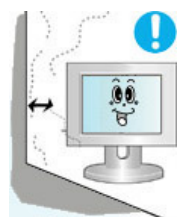
● **Do not place the monitor face down.**

- 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.



● **To prevent rainwater from running along the outdoor antenna cable and into the house, ensure that the outdoor portion of the cable is hanging below the point of entry.**

- If the product is exposed to rainwater, it may cause electric shock or fire.



● **When using an outdoor antenna, ensure that there is sufficient distance between the antenna and any electric wires nearby so that they do not come into with each other if the antenna is knocked over by strong wind or any other accident.**

- A knocked-over antenna may cause injury or electric shock.



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

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

Clean



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 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.



Contact 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

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Others

Others



Do not remove the cover (or back).

- This may cause electric shock or fire.
- Refer to a qualified servicing company.



- **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 contact an authorized dealer or [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.



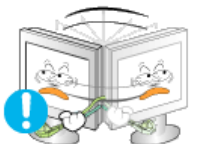
- **Disconnect the plug from the outlet during storms or lightning or if it is not used for a long period of time.**

- 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 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 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.



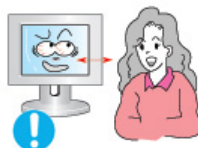
● **Adjust the resolution and frequency to the level appropriate for the model.**

- An inappropriate resolution may cause undesirable picture quality.
22 inch Wide (55 cm) - 1680 X 1050



● **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.



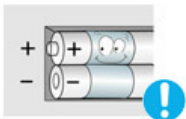
- **Do not place your children's favorite toys or any other objects of interest on the product.**

- Children may try to climb on the product to retrieve an object. The product could fall, causing injury or even fatality.



- **When removing batteries from the remote control, ensure that the children do not swallow the batteries. Keep the batteries out of children's reach.**

- If the batteries are swallowed, see a doctor immediately.



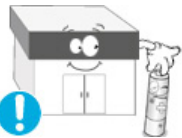
- **When replacing batteries, place the batteries in the correct +/- polarity position as indicated on the battery holder.**

- The incorrect polarity may cause a battery to break or leak and may cause fire, injury, or contamination (damage).



- **Use only specified standard batteries. Do not use new and used batteries together.**

- This may cause a battery to break or leak and may cause fire, injury, or contamination (damage).



- **The batteries (and rechargeable batteries) are not ordinary refuse and must be returned for recycling purposes. The customer is responsible for returning the used or rechargeable batteries for recycling purposes as the consumer.**

- The customer can return used or rechargeable batteries to a nearby public recycling center or to a store selling the same type of the battery or rechargeable battery.

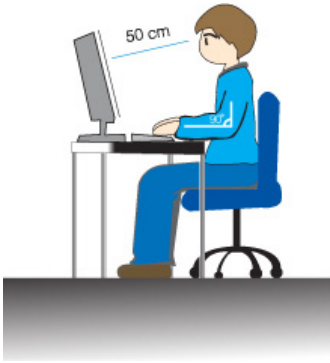


- **When lifting up or moving the monitor, do not lift the monitor upside down while holding only the stand.**

- 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.



Features | Unpacking | Front | Rear | Remote Control |

Features

Features of Digital Broadcasting

- All multimedia broadcasting processes including program creation, transmission, and receiving are processed digitally, which allows users to enjoy a very high screen quality without any signal loss as well as benefit from various additional services.

Viewing Digital Broadcasting

- To watch digital broadcasting, you need a monitor which can receive digital broadcasts and fulfill the required conditions necessary to receive digital broadcasting signals.

HDMI Features

- This is a widely accepted method for transmitting high resolution video and audio content without any compression loss.
- You can easily connect your devices using a single cable and control them in an integrated manner.

Premium Design

- This product features a simple, clean premium design

Shiny, glossy materials

- The black and shiny material suggests an elegant and classy mood.

High-Sensitive Touch Button

- The Power and Adjustment buttons both utilize a high-sensitivity touchpad, which not only provides a quality design but also high usability.

High Speed Response

- The 5ms response speed allows you to enjoy clearer and faster broadcasts.

Features | **Unpacking** | Front | Rear | Remote Control |

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

• **Cable**



D-Sub Cable



Stereo Cable



Power Cord

• **Other**



Remote Control



Batteries (AAA X 2)



Cleaning Cloth

• **Sold separately**



**TV Antenna Cable
(Coaxial Cable)**



**RCA Cable (Video-Yellow,
Audio-Red and White)**



Component(P_R, P_B, Y) Cable



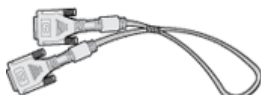
S-VIDEO Cable



Earphones/Headphones



SCART Cable



DVI Cable



DVI to HDMI cable



HDMI Cable



RCA to stereo (for PC) cable



**Digital audio optical output
cable**



This is an accessory that can be added depending on the model.

[Features](#)



[Unpacking](#)

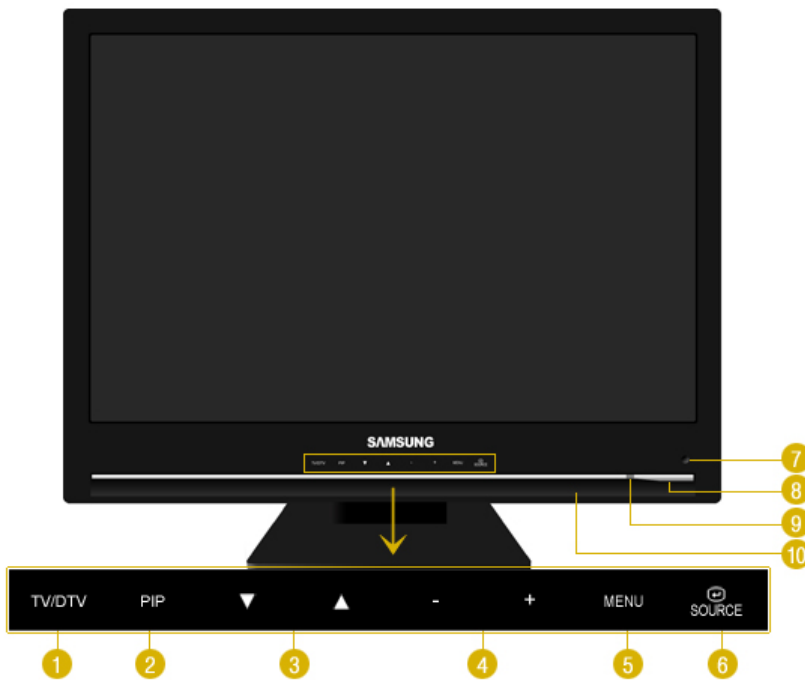
[Front](#)

[Rear](#)

[Remote Control](#)

● Front

1. TV/DTV
2. PIP
3. ▼, ▲
4. -, +
5. MENU
6.  SOURCE
7. Remote Control Sensor
8. [] Power button
9. Power indicator
10. Speaker

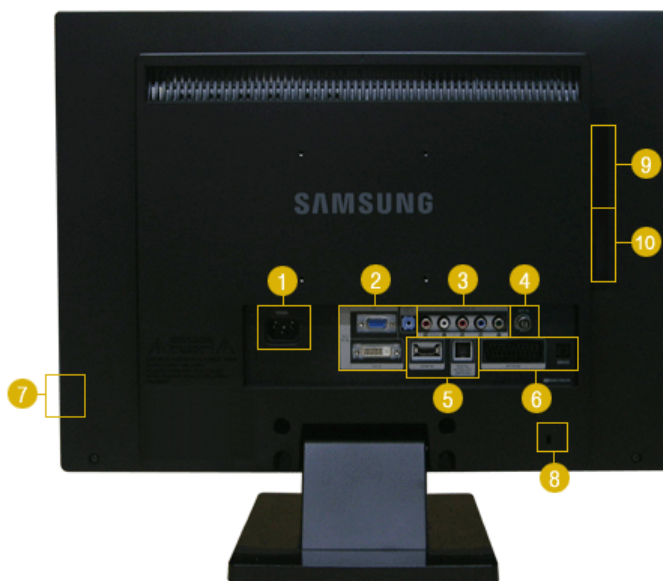


1. **TV/DTV**
This button is used to switch between normal and DTV broadcasting signals.
[TV] → [DTV]
>>Click here to see an animation clip
2. **PIP - Available in PC/DVI Mode**
In PC mode, turns on Video or TV screens in PIP mode.
3. **▼, ▲**
Moves from one menu item to another vertically or adjusts selected menu values.
In TV mode, selects TV channels.
4. **←, →**
Moves from one menu item to another horizontally or adjusts selected menu values.
Adjusts the audio volume.
5. **MENU**
Use this button for open the on-screen menu and exits from the menu screen or closes screen adjustment menu.
6. **SOURCE**
Activates a highlighted menu item.
Press the **SOURCE** button to change the input signal source.
Changing the source is allowed only in external devices that are connected to the monitor at the time.
To switch Screen modes:
[PC] → [DVI] → [Ext.] → [AV] → [S-Video] → [Component] → [HDMI]
>>Click here to see an animation clip
7. **Remote Control Sensor**
Aim the remote control towards this spot on the monitor.
8. **[⏻] Power button**
Turns the monitor On/Off.
9. **Power indicator**
This will enable you to see the overall power status of the system. For more information, see the [PowerSaver](#) section.
10. **Speaker**
You can hear sound by connecting the soundcard of your PC to the monitor.



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



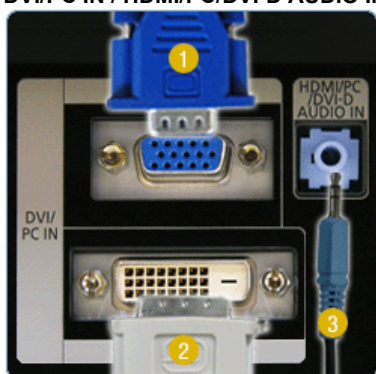
(The configuration at the back of the monitor may vary from product to product.)

1. POWER



- Connect the power cord for your monitor to the POWER on the back of the monitor. This product may be used with 100 ~ 240VAC(+/- 10%).

2. DVI/PC IN / HDMI/PC/DVI-D AUDIO IN



- 1. PC**
: Connect the signal cable to the PC port on the back of your monitor.
- 2. DVI-D**
: Connect the DVI cable to the DVI-D port on the back of your monitor.
- 3. HDMI/PC/DVI-D AUDIO IN**
: Connect the HDMI/PC/DVI-D AUDIO IN terminal at the back of your monitor to your computer's sound card.

3. COMPONENT IN

- 1. R - AUDIO - L**
: Connect the port of the DVD, VCR (DVD / DTV Set-Top Box) to the **R-AUDIO-L** port of the monitor.
- 2. P_R, P_B, Y**
: Connect the VIDEO OUT port of the DVD / DTV Set-Top Box to the P_R, P_B, Y input ports using a component cable (P_R, P_B, Y).



4. ANT IN



- Connect the CATV cable or TV antenna cable to the "ANT IN" port on the rear side of the monitor. Make sure to use a TV antenna cable (sold separately) as the antenna cable.

5. HDMI IN / DIGITAL AUDIO OUT(OPTICAL)



1. HDMI IN

: Connect the HDMI IN terminal at the back of your monitor to the HDMI terminal of your digital output device using a HDMI cable.

2. DIGITAL AUDIO OUT(OPTICAL)

: Connect the [DIGITAL AUDIO OUT(OPTICAL)] terminal of your monitor to the digital sound output or standard sound output terminal of the DVD home theater (or amplifier) using a digital audio optical output cable.

6. EXT(RGB) / SERVICE



1. EXT(RGB)

: Connect the EXT (RGB) port of the monitor to the DVD Player using a SCART jack.

As for EXT(RGB) port of the monitor, it makes TV or Video signal input and output.

2. SERVICE

: This is a reserved terminal used for servicing.

7.

- Connect your headphones to the Headphone connection terminal.

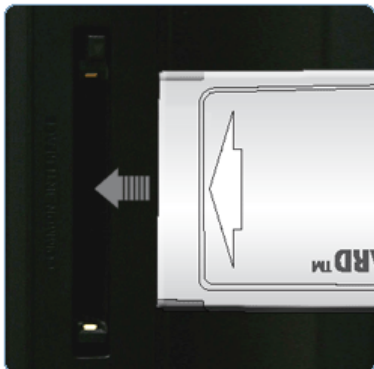


8.



- 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.

9. COMMON INTERFACE



- This contains information on CAM inserted in the CI slot and displays it. The Application Info inserting is about the CI CARD. You can install the CAM anytime whether the TV is ON or OFF.

10. S-VIDEO / VIDEO / R - AUDIO - L



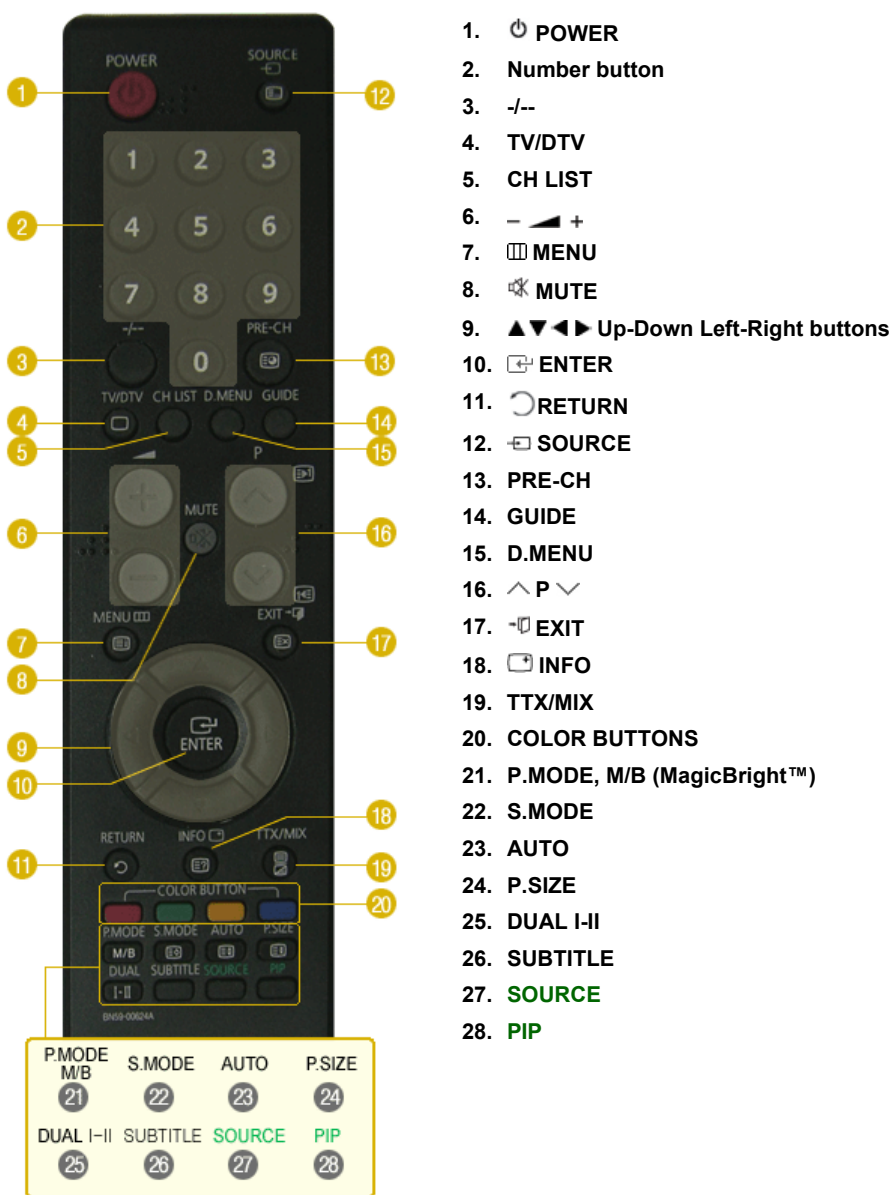
1. **S-VIDEO / VIDEO**
: Input devices such as DVD, VCR or Camcorder are connected to the VIDEO or S-VIDEO terminal of the monitor using the Video or S-Video cable.
2. **R - AUDIO - L**
: Connect the port of the DVD, VCR (DVD / DTV Set-Top Box) to the **R-AUDIO-L** port of the monitor.



See [Connecting the monitor](#) for further information regarding cable connections.

Remote Control

The performance of the remote control may be affected by a TV or other electronic device operated near the monitor, causing malfunction due to interference with frequency.



1. POWER

Turns the monitor On/Off.

2. Number button

Selects TV channels in the TV mode.

Used to change channels when PIP is selected and the PIP SOURCE is set to TV.

3. -/--

(One/Two-Digit channel selection)

Use to select a channel numbered ten or over.

Press this button, and the "--" symbol is displayed.

Enter the two-digit channel number.

4. TV/DTV

Selects the TV and DTV mode directly

5. CH LIST

It display "Channel List" on the screen.

6. +

Adjusts the audio volume.

7. MENU


Opens the on-screen menu and exits from the menu or closes the adjustment menu.

8. MUTE

Press to mute the sound temporarily.

Displayed on the bottom left of the screen.

Press the MUTE button again to cancel the Mute function.

Alternatively press the  + buttons to cancel the Mute function.

9. Up-Down Left-Right buttons

Moves from one menu item to another horizontally, vertically or adjusts selected menu values.

10. ENTER

Activates a highlighted menu item.

11. RETURN

Returns to the previous menu

12. SOURCE

Press the button to change the input signal SOURCE.

Changing the SOURCE is only allowed for external devices that are connected to the monitor at the time.

- You cannot watch TV or DTV using the SOURCE button

- You can only watch TV using the TV or DTV button.

13. PRE-CH

This button is used to return to the immediately previous channel.

14. GUIDE

Electronic Program Guide (EPG) display

15. D.MENU

DTV menu display

16. P

In TV mode, selects TV channels.

17. EXIT

Exits from the menu screen.

18. INFO

Current picture information is displayed on the upper left corner of the screen.

19. TTX/MIX

TV channels provide written information services via teletext.

- Teletext buttons



For more information > [TTX / MIX](#)

20. COLOR BUTTON

Press to add or delete channels and to store channels to the favorite channel list in the "Channel List" menu.

21. P.MODE, M/B (MagicBright™)

Press to select a pre-defined Picture Mode of the monitor or to change the picture atmosphere as required.

When you press this button, current mode is displayed on the lower center of the screen.

TV / DTV / AV / Ext. / S-Video / Component / HDMI : P.MODE

The monitor has four automatic picture settings that are preset at the factory.

Then press the button again to circle through available preconfigured modes.
(Dynamic → Standard → Movie → Custom)

PC / DVI Mode : M/B (MagicBright™)

MagicBright™ is a new feature providing the optimum viewing environment depending on the contents of the image you are watching.

Then press the button again to circle through available preconfigured modes.
(Entertain → Internet → Text → Custom)

22. S.MODE

When you press this button, current mode is displayed on the lower center of the screen.

The monitor has a built-in high fidelity stereo amplifier.

Then press the button again to circle through available preconfigured modes.
(Standard → Music → Movie → Speech → Custom)

23. AUTO - Available In PC mode Only

Adjusts the screen display automatically.

24. P.SIZE

Press to change the screen size.

- PC/ DVI mode : Wide / 4:3

- TV / DTV / Ext. / AV / S-Video mode : Auto Wide / Wide / 16:9 / Zoom1 / Zoom2 / 4:3

- Component / HDMI mode : Wide / 16:9 / Zoom1 / Zoom2 / 4:3

25. DUAL I-II

STEREO/MONO, DUAL I / DUAL II and MONO/NICAM MONO/NICAM STEREO can be operated depending on broadcasting type by using DUAL button on the remote control while watching TV.

26. SUBTITLE

Digital subtitle display

27. SOURCE - Adjustable when the PIP function is ON.

Select the input SOURCE for the PIP.

28. PIP - Available in PC/DVI Mode

Push the PIP button to turn PIP screen On/Off.



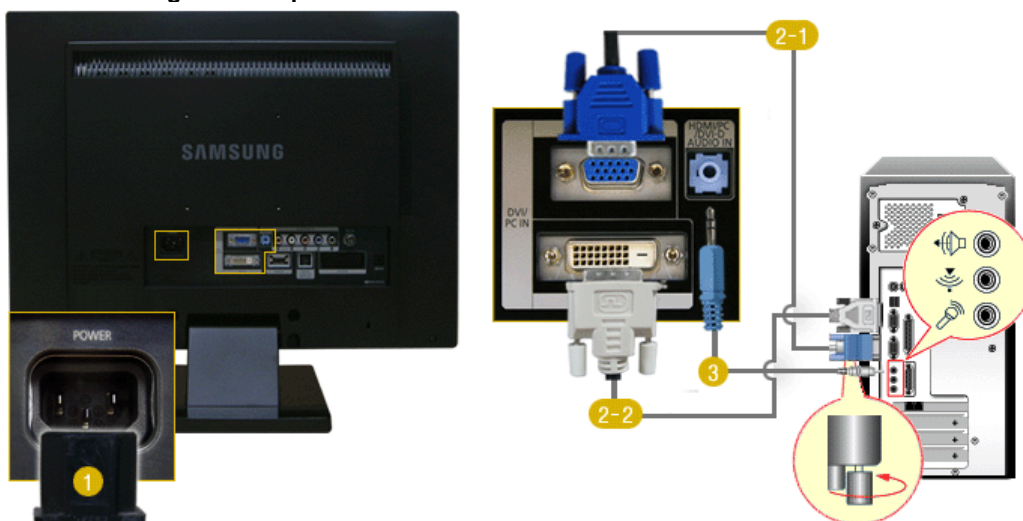
Connecting the Monitor



Using the Stand

Installing the Monitor Driver
(Automatic)Installing the Monitor Driver
(Manual)

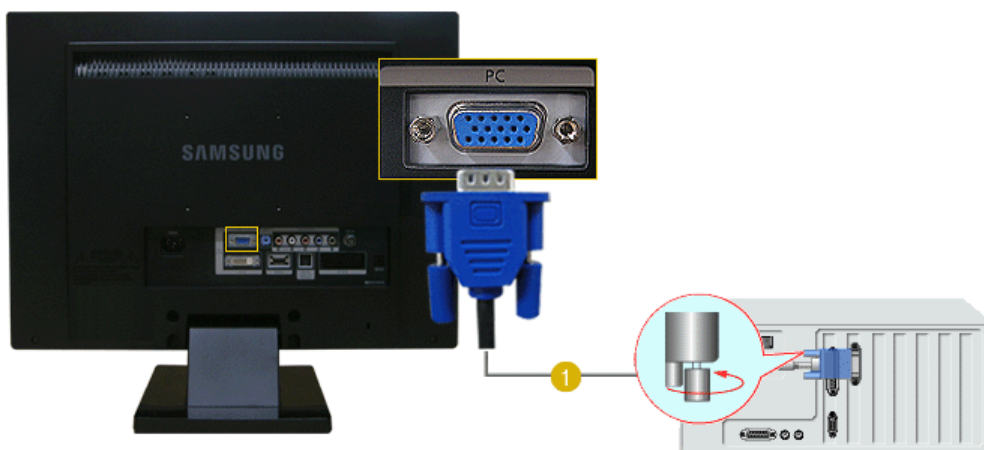
Connecting the monitor

1. Connecting to a Computer



1. Connect the power cord for your monitor to the **POWER** 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 **PC** port on the back of your monitor.
  **[PC]**
 - 2-2. Using the DVI (Digital) connector on the video card. Connect the DVI cable to the **DVI-D** port on the back of your monitor.
  **[DVI-D]**
3. Connect the **HDMI / PC / DVI-D AUDIO IN** port on the rear side of the monitor to the sound card of the PC.
4. Turn on both your computer and the monitor.

2. Connecting to a Macintosh



1. Using the D-sub (Analog) connector on the video card.
Connect the signal cable to the D-SUB port on the Macintosh computer.



2. Turn on the monitor and Macintosh.

Connecting to Other devices



This monitor allows the user to connect it to such input devices as a DVD player, a VCR or camcorder, or a DTV or TV without disconnecting the PC.



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



The DVI to HDMI cable, digital audio optic output cable, and RCA to stereo (for PC) cable are all sold separately.
Contact a [Service Center](#) to purchase any products sold separately.

1. Connecting AV Devices

The monitor has AV connection terminals to connect AV input devices like DVDs, VCRs or Camcorders. You may enjoy AV signals as long as the monitor is turned on.



1. Input devices such as DVD, VCR or Camcorder are connected to the VIDEO or S-VIDEO terminal of the monitor using the Video or S-Video cable.

2. Connect the the AUDIO OUT port of DVD/VCR/Camcorder to the **R-AUDIO-L** port of the monitor.
3. Then, start the DVD, VCR or Camcorders with a DVD disc or tape inserted.
4. Select AV or S-Video using the **SOURCE**.

2. Connecting EXT.(RGB) - It only applies to AV DEVICE that supports SCART.

Connect to the DVD Devices input if the device has a EXT (RGB) jack.
You can watch DVD simply by hooking up the DVD player with the monitor as long as the power is on.



1. Connect the **EXT (RGB)** port of the monitor to the DVD Player using a SCART jack.
2. When a Scart device is connected to your monitor, the **Source** automatically changes to **Ext**.

3. Connecting TV

You may view television programs on the monitor if it is connected to an antenna or CATV cable without installing any separate TV reception hardware or software on your computer.



1. Connect the CATV cable or TV antenna cable to the "ANT IN" port on the rear side of the monitor.
Make sure to use a TV antenna cable (sold separately) as the antenna cable.
 - **When using an interior antenna terminal:**
Check the antenna terminal on the wall first and connect the antenna cable.
 - **When using an outdoor antenna:**
If you are using an outdoor antenna, use a professional for installation if possible.
 - **To connect the RF cable to the antenna input terminal:**
Keep the copper wire portion of the RF cable straight.
2. Turn on the monitor.

3. Select TV using the **TV/DTV**.
4. Select a desired TV channel.

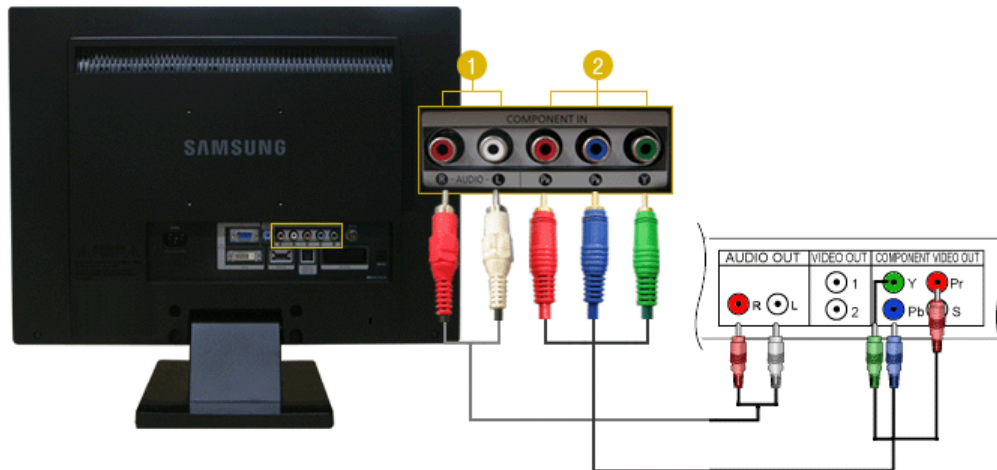


Is weak signal causing poor reception?

Purchase and install a signal amplifier for better reception.

4. Connecting DVD/DTV Set Top Box

Connect to the DVD/DTV Set Top Box input if the device has a DVD/DTV connector.
You can watch Component simply by hooking up the Component with the monitor as long as the power is on.



1. Connect the the AUDIO OUT port of DVD / DTV Set-Top Box to the **R-AUDIO-L** port of the monitor.
2. Connect the VIDEO OUT port of the DVD / DTV Set-Top Box to the Pr, Pb,Y input ports using a component cable (Pr, Pb,Y).
3. Select Component using the **SOURCE**.

5. Connecting HDMI



You cannot connect a PC to the **HDMI IN** terminal.



1. Input devices such as digital DVD are connected to the **HDMI IN** terminal of the monitor using the

HDMI cable.

2. Then, start the DVD with a DVD disc inserted.
3. Select HDMI using the **SOURCE** button.

6. Connecting Using a DVI to HDMI Cable



1. Connect the DVI output terminal of a digital output device to the **HDMI IN** terminal of the monitor using a DVI to HDMI cable.
2. Connect the red and white jacks of an RCA to stereo (for PC) cable to the same colored audio output terminals of the digital output device, and connect the opposite jack to the **HDMI / PC / DVI-D AUDIO IN** terminal of the monitor.
3. Then, start the DVD with a DVD disc inserted.
4. Select HDMI using the **SOURCE** button.

7. Connecting and Using an Amplifier



You can connect the digital sound input (optical) or standard sound input terminal of your amplifier to your monitor using the correct cable.



1. Connect the **DIGITAL AUDIO OUT (OPTICAL)** terminal of your monitor to the digital sound input terminal of your digital amplifier using an optical cable.

2. Set the **Internal Mute On** in the **Sound** menu using the MENU button.
3. Adjust the sound volume using the Volume button of your amplifier
4. If the connections are set up, power up your monitor and amplifier.



Because no sound is emitted from the monitor, you need to use an amplifier.



For information on how to connect a speaker and amplifier, refer to the respective user manuals provided by their manufacturers.

8. Connecting COMMON INTERFACE



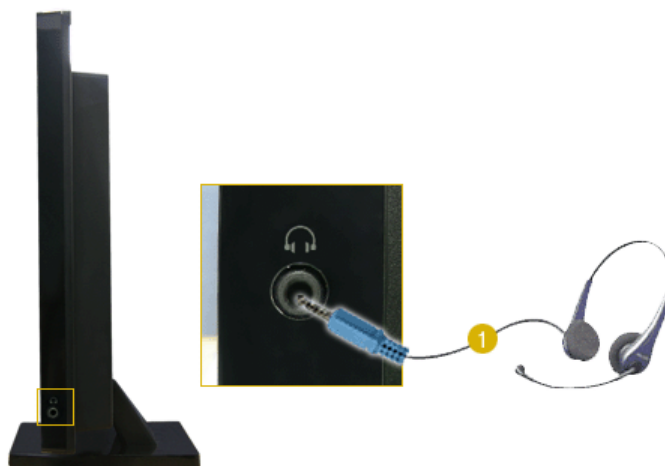
You can install the CAM anytime whether the TV is ON or OFF.
Purchase the CI CAM module by visiting your nearest dealer or by phone.



1. Insert the CI CARD into the CAM in the direction of the arrow until it fits.
 2. Insert the CAM with the CI CARD installed into the common interface slot.
(Insert the CAM in the direction of the arrow, right up to the end so that it is parallel with the slot.)
 3. Check if you can see a picture on a scrambled signal channel.
-

9. Connecting Headphone

You may connect your headphones to the monitor.



1. Connect your headphones to the Headphone connection terminal.

[Connecting the Monitor](#)

[Using the Stand](#)

[Installing the Monitor Driver
\(Automatic\)](#)

[Installing the Monitor Driver
\(Manual\)](#)



Using the Stand



This monitor supports various types of VESA-standard bases.
You need to either fold or remove the base in use in order to install a VESA base.

1. Folding the base

The monitor may be reclined from -1 to 23 degrees.



2. 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.
2. Lay the LCD monitor face-down on a flat surface with a cushion beneath it to protect the screen.
3. Turn the fixing screws handle on the stand counterclockwise to loosen it and then separate it from the stand.
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 non-specified 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)

Installing the Monitor Driver
(Manual)



Installing the monitor driver (Automatic)

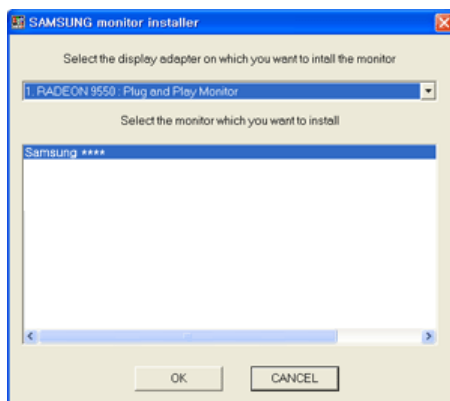


When prompted by the operating system for the monitor driver, insert the CD-ROM included with this monitor. Driver installation is slightly different from one operating system to another. Follow the directions appropriate for the operating system you have.

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)

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 Operating System)





This monitor driver is under certifying MS logo, and this installation don't damage your system. The certified driver will be posted on Samsung Monitor Homepage.
<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
(Manual)



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® Windows Vista™ Operating System

1. Insert your Manual CD into your CD-ROM drive.
2. Click  (Start) and **"Control Panel"**. Then, double-click on **"Appearance and Personalization"**.

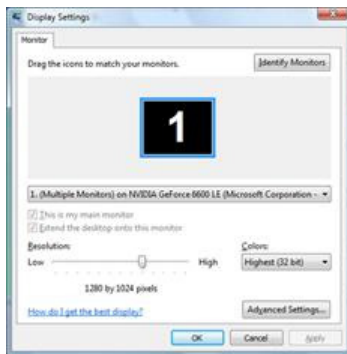


3. Click **"Personalization"** and then **"Display Settings"**.



4.

Click **"Advanced Settings..."**.



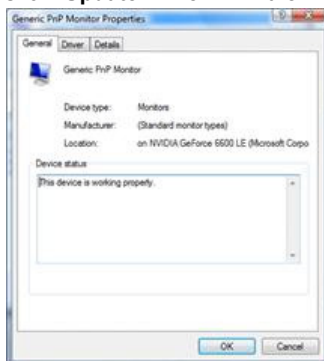
5. Click "**Properties**" in the "**Monitor**" tab. If the "**Properties**" button is deactivated, it means the configuration for your monitor is completed. The monitor can be used as is. If the message "**Windows needs...**" is displayed, as shown in the figure below, click "**Continue**".



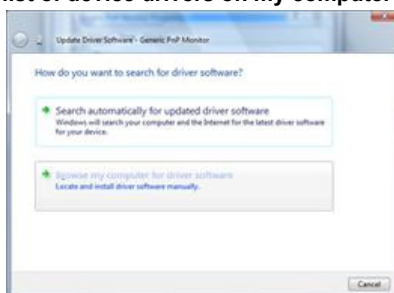
This monitor driver is under certifying MS logo, and this installation doesn't damage your system.
The certified driver will be posted on Samsung Monitor homepage.

<http://www.samsung.com/>

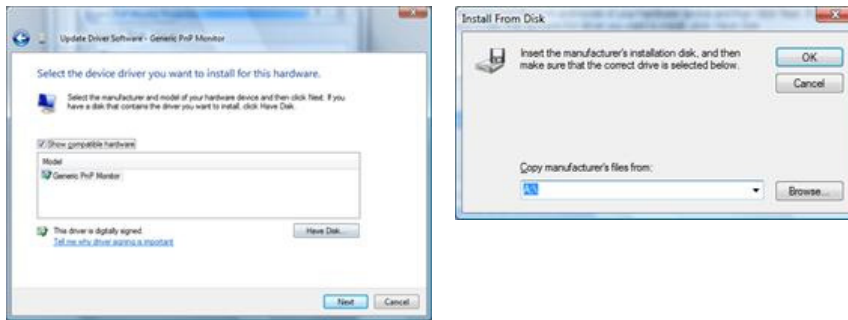
6. Click "**Update Driver...**" in the "**Driver**" tab.



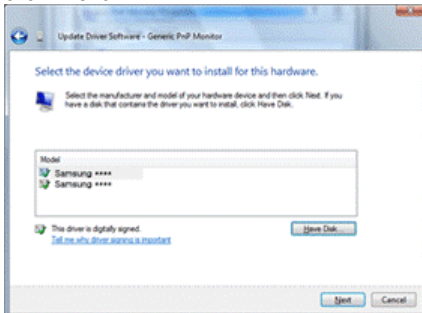
7. Check the "**Browse my computer for driver software**" checkbox and click "**Let me pick from a list of device drivers on my computer**".



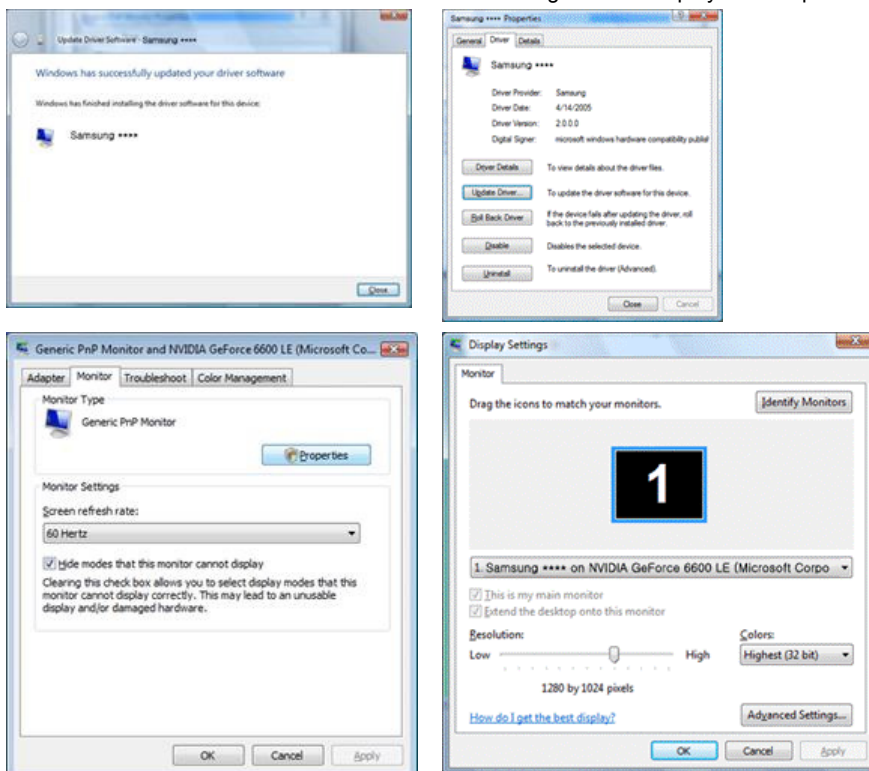
- Click "**Have Disk...**" and select the folder (for example, D:\Drive) where the driver setup file is located, and click "**OK**".



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

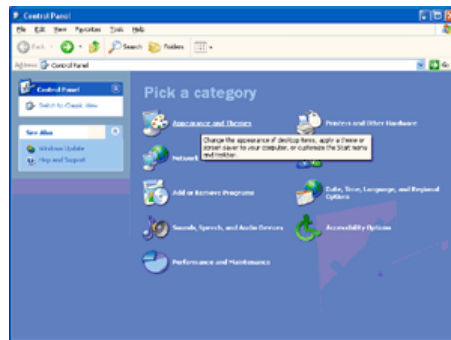


- Click "**Close**" → "**Close**" → "**OK**" → "**OK**" on the following screens displayed in sequence.

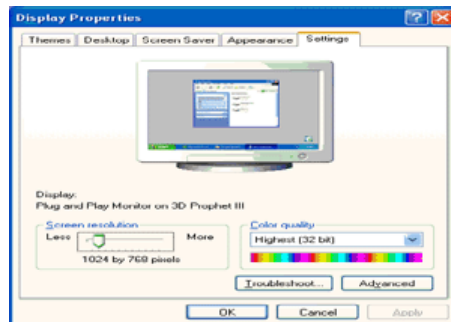
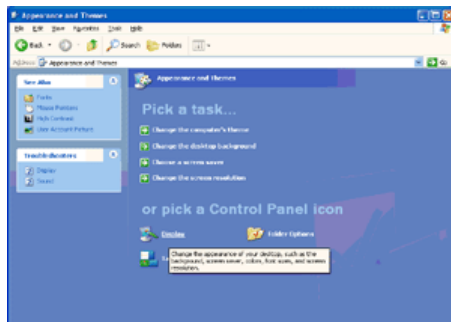


Microsoft® Windows® XP Operating System

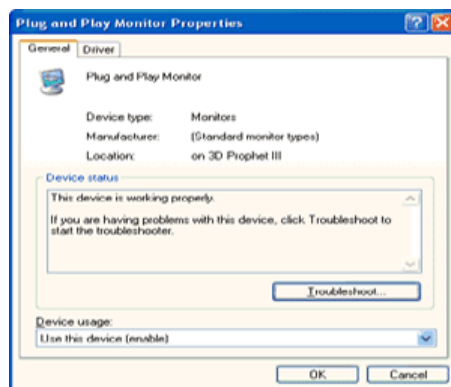
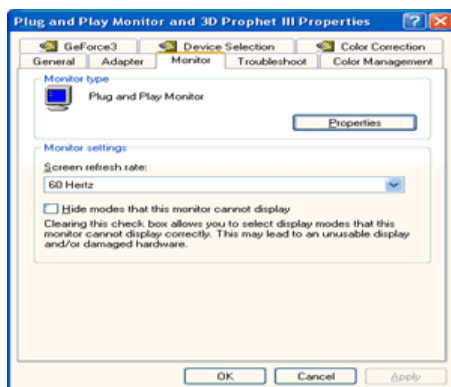
- Insert CD into the CD-ROM driver.
- Click "**Start**" → "**Control Panel**" then click the "**Appearance and Themes**" Icon.



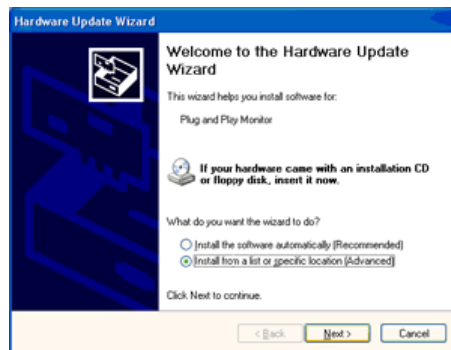
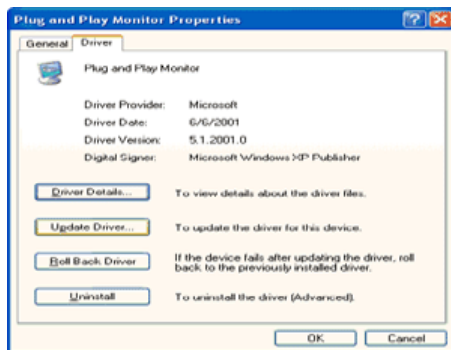
- Click **"Display"** icon and choose the **"Settings"** tab then click **"Advanced.."**.



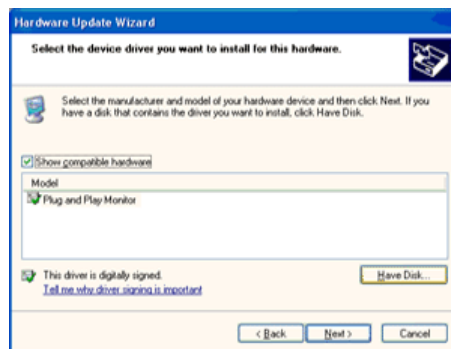
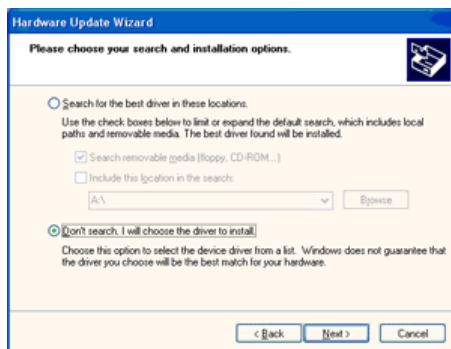
- Click the **"Properties"** button on the **"Monitor"** tab and select **"Driver"** tab.



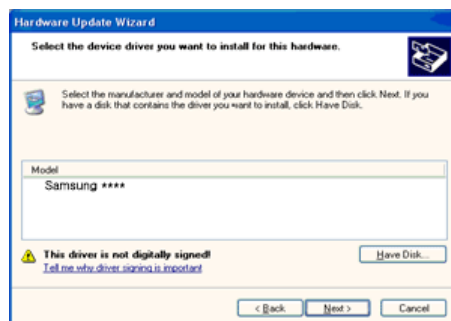
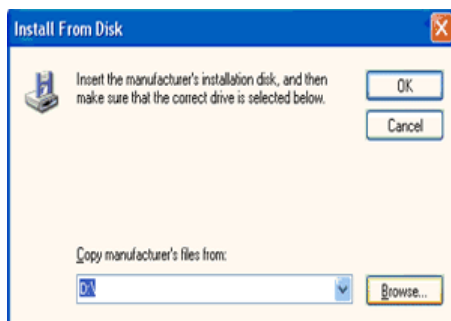
- Click **"Update Driver.."** and select **"Install from a list or.."** then click **"Next"** button.



- 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.

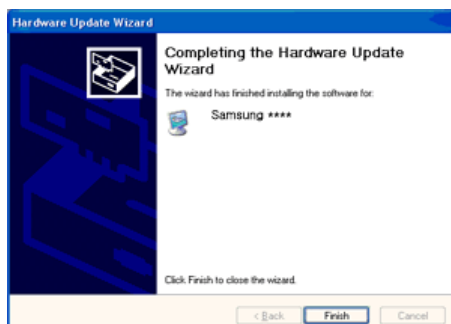


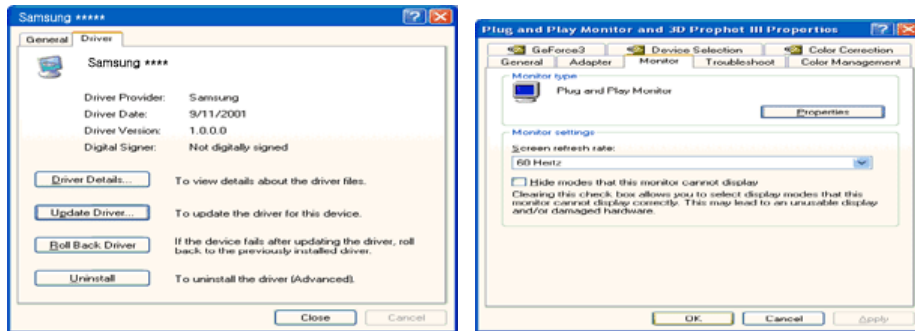
8. If you can see following message window, then click the **"Continue Anyway"** button. Then click **"OK"** button.



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® Windows® 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.
2. Click the "Browse" button on the "File Needed" window.
3. Choose A:(D:\Driver) then click the "Open" button and then click "OK" button.

 How 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".
 - 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.
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® Windows® Millennium Operating System

1. Click "Start", "Setting", "Control Panel".
2. 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® 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.



Input









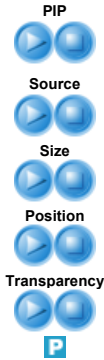



Available Mode **P** : PC / DVI **T** : TV **D** : DTV **E** : Ext. **A** : AV **S** : S-Video **C** : Component **H** : HDMI



The default setting may be different depending on the selected Input Mode (input signal SOURCE selected in External Input List) and the selected resolution.

OSD	Description	Play / Stop
Source List	<p>Use to select PC, TV, or other external input SOURCES connected to the Monitor.</p> <p>Use to select the screen of your choice.</p> <p>- The direct button on the remote control is the 'SOURCE' button.</p> <p>- You can switch between TV and DTV modes by pressing the TV/DTV button.</p> <ol style="list-style-type: none"> 1) PC 2) DVI 3) TV 4) Ext. 5) AV 6) S-Video 	

	7) Component 8) HDMI 9) DTV	
PIP	<p>When external AV devices such as VCRs or DVDs are connected to the monitor, PIP allows you to watch video from those devices in a small window super-imposed on the PC Video signal. (Off / On)</p> <p>- Available in PC / DVI Mode Only</p> <p>1) PIP : Turn the PIP Screen on or off. - The direct button on the remote control is 'PIP' button.  Off  On</p> <p>2) Source : Select the input SOURCE for the PIP. - The direct button on the remote control is 'SOURCE' button.  PC / DVI : TV / Ext. / AV / S-Video / Component</p> <p>3) Size : Change the Size of the PIP window.  If you select  or  in Size, Position and Transparency will not be activated.</p> <p>4) Position: Change the Position of the PIP window. </p> <p>5) Transparency : Adjust the Transparency of PIP windows.  High / Medium / Low / Opaque</p>	
Edit Name	<p>Name the input device connected to the input jacks to make your input SOURCE selection easier.</p> <p>1) PC 2) DVI 3) Ext. 4) AV 5) S-Video 6) Component 7) HDMI</p>	

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Picture





 PC / DVI Mode










Available Mode **P** : PC / DVI **T** : TV **D** : DTV **E** : Ext. **A** : AV **S** : S-Video **C** : Component **H** : HDMI



The default setting may be different depending on the selected Input Mode (input signal SOURCE selected in External Input List) and the selected resolution.

OSD	Description	Play / Stop
MagicBright™	<p>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, Entertain and Custom. Each mode has its own pre-configured brightness value. You can easily select one of four settings by simply pressing the MagicBright™ control button.</p> <p>- The direct button on the remote control is 'M/B' button.</p> <p>1) Entertain : High Brightness For watching motion pictures such as a DVD or VCD.</p> <p>2) Internet : Medium Brightness For working with a mixture of images such as the text with graphics added.</p> <p>3) Text : Normal Brightness For documentations or works involving heavy text.</p> <p>4) 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.</p>	
Custom	<p>You can use the on-screen menus to change the contrast and brightness according to personal preference.</p> <p>1) Contrast : Adjusts the Contrast.</p> <p>2) Brightness : Adjusts the Brightness.</p> <p>3) Sharpness : Adjusts the Sharpness.</p>	
 <p>If you adjust the picture by using Custom function, MagicBright will turn to the Custom mode.</p>		
Colour Tone	<p>The tone of the colour can be changed.</p> <p>1) Cool 2) Normal 3) Warm</p>	

	4) Custom	
Colour Control	Adjusts the individual R, G, B Colour Controls. 1) R-Gain 2) G-Gain 3) B-Gain	
 If you adjust picture by using Colour Control function, Colour Tone will turn to the Custom mode.		
Image Lock	Image Lock is used to fine-tune and get the best image by removing noise that creates unstable images with jitter and shimmer. If satisfactory results are not obtained using the Fine adjustment, use the Coarse adjustment and then use Fine again. - Available in PC Mode Only 1) 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. 2) Fine : Removes noise such as horizontal stripes. If the noise persists even after Fine tuning, repeat it after adjusting the frequency (clock speed). 3) Position : Adjusts the screen location horizontally and vertically.	1) Coarse 2) Fine 3) Position 
Auto Adjustment	The values of Fine, Coarse, Position are adjusted automatically. By changing the resolution in the control panel, auto function is performed. - The direct button on the remote control is the 'AUTO' button. - Available in PC Mode Only	
Size	You can switch the Size. 1) Wide 2) 4:3	
PIP Picture	When the PIP is on, you can adjust the PIP screen setting. - Available in PC / DVI Mode Only 1) Contrast : Adjusts the Contrast of the PIP window on the screen. 2) Brightness : Adjusts the Brightness of the PIP window on the screen. 3) Sharpness : Adjusts the Sharpness of the PIP window on the screen. 4) Colour : Adjusts the Colour of the PIP window on the screen. Available : PIP ON	







Available Mode **P** : PC / DVI **T** : TV **D** : DTV **E** : Ext. **A** : AV **S** : S-Video **C** : Component **H** : HDMI



The default setting may be different depending on the selected Input Mode (input signal SOURCE selected in External Input List) and the selected resolution.

OSD	Description	Play / Stop
Mode	<p>The Monitor has four automatic picture settings ("Dynamic", "Standard", "Movie", and "Custom") that are preset at the factory. You can activate either Dynamic, Standard, Movie, or Custom. You can select "Custom" which automatically recalls your personalized picture settings.</p> <p>- The direct button on the remote control is the 'P.MODE' button.</p> <ol style="list-style-type: none"> 1) Dynamic 2) Standard 3) Movie 4) Custom 	
Custom	<p>You can use the on-screen menus to change the contrast and brightness according to personal preference.</p> <ol style="list-style-type: none"> 1) Contrast : Adjusts the contrast. 2) Brightness : Adjusts the brightness. 3) Sharpness : Adjusts the picture sharpness. 4) Colour : Adjusts the picture colour. 	
Colour Tone	<p>The tone of the colour can be changed.</p> <ol style="list-style-type: none"> 1) Cool2 2) Cool1 3) Normal 4) Warm1 5) Warm2 	
Size	<p>You can switch the Size.</p> <p>- The direct button on the remote control is 'P.SIZE' button.</p> <ul style="list-style-type: none"> • TV / DTV / Ext. / AV / S-Video mode : Auto Wide / Wide / 16:9 / Zoom1 / Zoom2 / 4:3 • Component / HDMI mode : Wide / 16:9 / Zoom1 / Zoom2 / 4:3 - Zoom1 and Zoom2 are not available over 720p of Component and HDMI. 	
Screen Mode	<p>Only when setting the picture size to Auto Wide can the user determine the Screen mode. Each individual European country requires a different picture size so this function is intended to help users to select it.</p> <p>- Picture Size is available in Auto Wide mode</p> <p>- This function is not available in PC or Component, HDMI mode.</p> <ol style="list-style-type: none"> 1) Wide 	

	2) 16:9 3) Zoom1 4) Zoom2 5) 4:3	CH
Digital NR	- Digital Noise Reduction. You can turn the Noise Elimination feature Off / Low / Medium / High / Auto. The Digital Noise Elimination feature allows you to enjoy clearer and crisper images. 1) Off 2) Low 3) Medium 4) High 5) Auto	
Film Mode	You can turn Film Mode Off / On. The Film Mode feature offers you a theater-quality viewing experience. - This function supports the resolution only up to 480i/576i when the input mode is Component or HDMI.  Off  On	

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Channel

Setup

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Sound















Available Mode **P** : PC / DVI **T** : TV **D** : DTV **E** : Ext. **A** : AV **S** : S-Video **C** : Component **H** : HDMI



The default setting may be different depending on the selected Input Mode (input signal SOURCE selected in External Input List) and the selected resolution.

OSD	Description	Play / Stop
Mode	The Monitor has a built-in high fidelity stereo amplifier. - The direct button on the remote control is 'S.MODE' button. 1) Standard : Choose Standard for the standard factory settings. 2) Music	

	<p>: Choose Music when watching music videos or concerts.</p> <p>3) Movie : Choose Movie when viewing movies.</p> <p>4) Speech : Choose Speech when watching a show that is mostly dialogue (i.e., news).</p> <p>5) Custom : Choose Custom if you want to adjust the settings according to personal preference.</p>	
Custom	<p>The sound settings can be adjusted to suit your personal preference.</p> <p>1) Bass : Emphasize low frequency audio.</p> <p>2) Treble : Emphasize high frequency audio.</p> <p>3) Balance : Allows you to adjust the sound balance between the left and right speakers. You can hear the sound even when the sound value is set to 0.</p>	
Auto Volume	<p>Reduces the differences in volume level among broadcasters.</p> <p> Off  On</p>	
Internal Mute	<p>If you set this menu "On", sound output from the speakers is muted in case of using the home theater.</p> <p> Off  On</p>	
SRS TruSurround XT	<p>You can experience sonorous and vivid sound, as if from 5.1 channel speakers.</p> <p> Off  On</p>	
Sound Select	<p>You can select either Main or Sub when PIP is On.</p> <p>1) Main 2) Sub Available : PIP ON</p>	

Input

Picture

Sound

Channel

Setup

D.MENU

Channel










Available Mode **P** : PC / DVI **T** : TV **D** : DTV **E** : Ext. **A** : AV **S** : S-Video **C** : Component **M** : HDMI



The default setting may be different depending on the selected Input Mode (input signal SOURCE selected in External Input List) and the selected resolution.

OSD	Description	Play / Stop
Country	<p>Select the country in which the product is being used before you use the Auto Store feature. If you do not see your country in the list, select Others.</p> <div><div>1) Belgium</div><div>2) France</div><div>3) Germany</div><div>4) Italy</div><div>5) Netherlands</div><div>6) Spain</div><div>7) Sweden</div><div>8) Switzerland</div><div>9) United Kingdom</div><div>10) Others</div><div>11) CIS</div><div>12) Eastern Europe</div></div>	<div><div></div><div></div><div>T</div></div>
DTV Country	<p>Select the DTV country in which the product is being used before you use the Auto Store feature.</p> <div><div>1) France</div><div>2) Germany</div><div>3) Italy</div><div>4) Spain</div><div>5) Switzerland</div><div>6) United Kingdom</div><div>7) Austria</div><div>8) Sweden</div><div>9) Finland</div><div>10) Denmark</div></div>	<div><div></div><div></div><div>D</div></div>
Auto Store	<p>You can scan the frequency ranges available on your television in your area and store all the channels found automatically.</p>	<div><div></div><div></div><div>T</div></div>
Manual Store	<p>You can scan the frequency ranges available on your television in your area and store all the channels found manually.</p> <div><div>1) Programme : Inputting the appropriate program number on the screen.</div><div>2) Colour System: Adjusts repeatedly until the colour is of the best quality. (Auto <=> PAL <=> SECAM <=> NTSC4.43)</div><div>3) Sound System: Adjusts repeatedly until the sound is of the best quality. (B/G <=> D/K <=> I <=> L)</div><div>4) Channel : Choosing the air channel through the adjustment of up/down under the current frequency.</div><div>5) Search: The tuner scans the frequency range until the first channel or the channel that you selected is received on your screen.</div><div>6) Store : It's used to restore the number user inputs.</div></div>	<div><div></div><div></div><div>T</div></div>
Channel Manager	<div><div>1) Channel List : You can add or delete a channel so only channels you want are displayed. "🔒" is active when "Child Lock" is selected to "On".</div><div>2) Child Lock : Protects children from viewing inappropriate programs by</div></div>	<div><div>1) Channel List</div><div>2) Child Lock</div></div>

	blocking certain broadcast or video programs. The Child Lock feature can be selected only from the remote.	
Sort	It's used to exchange the numbers of two channels.	
Name	If channel name information is broadcast when you store the channels either manually or automatically, the names are assigned to the channels directly. You can however change these names or assign new names as required.	
Fine Tune	Due to weak signals or an incorrect antenna configuration, some of the channels may not be tuned correctly.	
LNA	Amplifies signals when antenna reception is poor. However, if incoming signals are interfering with each other, turn off LNA as it may malfunction.  Off  On	

Input

Picture

Sound

Channel

Setup

D.MENU



Setup












Available Mode  : PC / DVI  : TV  : DTV  : Ext.  : AV  : S-Video  : Component  : HDMI



The default setting may be different depending on the selected Input Mode (input signal SOURCE selected in External Input List) and the selected resolution.

OSD	Description	Play / Stop
Language	You can choose one of 8 languages. Deutsch English Español Français Italiano Português Русский Svenska Note : The language chosen affects only the language of the OSD. It has no effect on any software running on the computer.	
Sleep Timer	Turns the monitor off after a pre-determined period of time. 1) Off 2) 30 3) 60 4) 90 5) 120 6) 150 7) 180 - The direct button on the remote control is the 'SLEEP' button.	
Menu	Changes the opaqueness of the background of the OSD.	

Transparency	1) High 2) Medium 3) Low 4) Opaque	
Blue Screen	<p>If no signal is being received or the signal is very weak, a blue screen automatically replaces the noisy picture background. If you wish to continue viewing the poor picture, you must set the "Blue screen" mode to "Off".</p> <p>  Off  On </p>	
HDMI Black Level	<p>When a DVD or set-top box is connected to your TV via HDMI, it may cause a degradation in the screen quality, such as an increase in the black level, a low contrast, or discoloration, etc., depending on the external device connected. In this case, adjust the screen quality of your TV by configuring the HDMI black level. This function is active only when the an external device (DVD player, STB etc.) is connected to the TV via HDMI(RGB Signal).</p> <p>- Available in HDMI Mode Only</p> <p>  Normal  Low </p>	
Reset	<p>Picture parameters are replaced with the factory default values.</p> <p> 1) Image Reset - Available in PC Mode Only 2) Colour Reset - Available in PC / DVI Mode Only </p>	<p>1) Image Reset</p>  <p>2) Colour Reset</p>  <p>P</p>

“ D.MENU ”

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- ✘ The company does not guarantee the normal operation of the DTV menu for countries other than the 6 supported countries (United Kingdom, Germany, France, Italy, Spain, Austria) because only these country standards are supported. In addition, when the country of the broadcast stream differs from the country selected by the current user, the string appearing in the channel banner, Info, Guide, Channel Manager, etc. may not be displayed properly.
- ✘ Available in DTV mode. Preset to the DTV mode by using the TV/DTV button on your remote control. To help you navigate around the on- screen menu system and adjust the various settings available, refer to the following illustration.

Press the D.MENU button.

- Guide

- Now & Next Guide
- Full Guide
- Scheduled List
- Default Guide
- Now/Next, Full Guide

- Channel

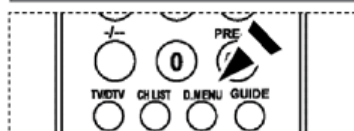
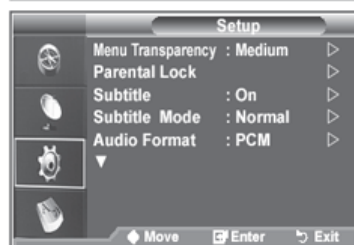
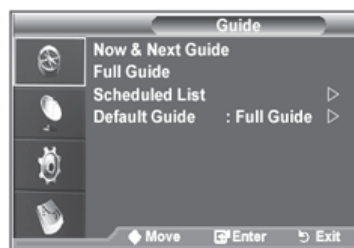
- Auto Store
- Manual Store
- Edit Favourite Channels
- Channel List

- Setup

- Menu Transparency
- Parental Lock
- Subtitle
- Subtitle Mode
- Audio Format
- Digital Text
- Time Zone
- System
- High, Medium, Low, Opaque
- Enter PIN
- Off, On
- Normal, Hard of hearing
- PCM, Dolby Digital
- Disable, Enable
- Product Information
- Signal Information
- Software Upgrade
- Common Interface
- Reset

- Language

- Audio Language
- Subtitle Language
- Teletext Language
- Preference
- Primary Audio Language
- Secondary Audio Language
- Primary Subtitle Language
- Secondary Subtitle Language
- Primary Teletext Language
- Secondary Teletext Language



You can select these options by simply pressing the D.MENU button on the remote control.

↑ TOP

- ✘ The sub-items of the CI Menu may vary depending on the CAM model.

“ D.MENU ”

Starting

Channel

Guide

Setup

Language

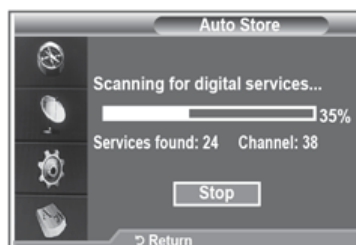
[Auto Store](#) / [Manual Store](#) / [Edit Favourite Channels](#) / [Channel List](#)

↑ TOP

◆ Updating the Channel List Automatically

✂ You can update the channel list when the broadcaster adds new Services or if you move the TV to a new location.

1. Press the D.MENU button to display the DTV menu.
2. Press the ▲ or ▼ button to select "Channel", then press the ENTER button.
3. Press the ENTER button again, to select "Auto Store". Press the ENTER button.
4. When it has finished, the number of scanned services will be displayed.



✂ The existing favourite channel list will not be deleted when the channel list is updated. To stop the scan before it has finished, press the ENTER button with "STOP" selected.

✂ First set a country by pressing **MENU** in **DTV** and then pressing **Channel** -> **DTV Country**.

5. Press the EXIT button to exit.

If the signal status is poor, the "No Service found! Check the aerial connection" message is displayed.

◆ Updating the Channel List Manually

✂ You can specify the channel for a fast channel search.

1. Press the D.MENU button to display the DTV menu.
2. Press the ▲ or ▼ button to select "Channel", then press the ENTER button.
3. Press the ▲ or ▼ button to select "Manual Store", then press the ENTER button.
4. Press the ▲ or ▼ button to select "Manual Store", Press the RED button on the remote control.



✂ Channel: Channel "5" to "69" in sequence are displayed (depending on the country)

✂ Frequency: The frequency available in the Channel group is displayed.

✂ Bandwidth: The available bandwidths are 7 and 8 MHz.

5. When it has finished, the number of scanned services will be displayed.
6. Press the EXIT button to exit.

◆ Editing Your Favourite Channels

✂ You can edit your favourite channels using the four colour buttons.

1. Press the D.MENU button to display the DTV menu.
2. Press the ▲ or ▼ button to select "Channel", then press the ENTER button.
3. Press the ▲ or ▼ button to select "Edit Favourite Channels", then press the ENTER button.
4. Press the red button to display all currently stored channels.
5. Press the ▲ or ▼ button to select a channel you want. Press the ENTER button.

✂ A "★" icon is shown next to the selected channel and the channel will be added to the favourite channel list.

- To undo, press the ENTER button again.

- Select All: Select all channels currently displayed.

- Select None: Deselect all selected channels.

- Preview: Displays (a) currently selected channel(s).

The Favorite Channels settings have been completed.

- Press the EXIT button to exit.

- Add

✘ You can use this function when one or more favourite channels have been selected.

- Press the D.MENU button to display the DTV menu.
- Press the ▲ or ▼ button to select "Channel", then press the ENTER button.
- Press the ▲ or ▼ button to select "Edit Favourite Channels", then press the ENTER button.
- Press the red button in the "Edit Favourite Channels" menu.
To add more channels, refer to the step 5 on the previous description.
- If you want to check the channel to be stored, press RETURN button.
Press the EXIT button to exit.

- ✘ To add all channels to the favourite channel list, press the red button.
- ✘ To remove all channels, press the green button.
- ✘ Preview : Displays (a) currently selected channel(s).
- ✘ Press the CH LIST button to display the favourite channel manager.



- Renumber

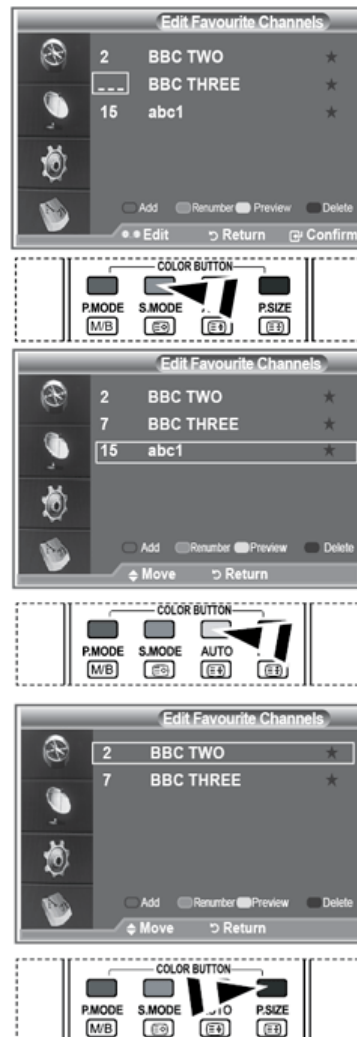
- Press the D.MENU button to display the DTV menu.
- Press the ▲ or ▼ button to select "Channel", then press the ENTER button.
- Press the ▲ or ▼ button to select "Edit Favourite Channels", then press the ENTER button.
- Select the required channel using the ▲ or ▼ button.
- Press the green button.
✘ The space for entering the number is a blank.
- Enter the new channel number. Press ENTER button to store or RETURN button to cancel.
✘ Press the ◀ button to delete an entered digit.
If you enter a number already assigned to another channel, the number is assigned to the selected channel and the previous number assigned to the selected channel is assigned to the other channel.
That is, the two numbers are exchanged.
The favorite channels are automatically sorted in ascending order of channel numbers.
- Press the EXIT button to exit.

- Preview

- In the "Edit Favourite Channels" menu, select the channel to be previewed by pressing the ▲ or ▼ button.
- Press the yellow button.
✘ The selected channel is displayed on the screen.

- Delete

- In the "Edit Favourite Channels" menu, select the channel to be deleted from the favourite channels list by pressing the ▲ or ▼ button.
- Press the blue button.
✘ The selected channel and number will be deleted.
To add a deleted channel back in to the favourite channel list.



◆ Selecting Channel List

✗ You can exclude the channels you have chosen from the channels you have scanned. When you scan through the stored channels, those you have chosen to skip are not displayed. All channels that you do not specifically choose to skip are displayed during scanning.

1. Press the D.MENU button to display the DTV menu.
2. Press the ▲ or ▼ button to select "Channel", then press the ENTER button.
3. Press the ▲ or ▼ button to select "Channel List". Press the ENTER button.
4. Press the ▲ or ▼ button to select "All", "Favourites" or "Default". Press the ENTER button.
5. Press the yellow button to toggle between your favourite channels and all channels.



✗ Your favourite channels are only displayed if they were previously set in the "Editing Your Favourite Channels" menu.

6. Press the red or green button to display the previous or next channel List page.
7. Press the ▲ or ▼ button to select a channel to be tuned. Press the ENTER button.

✗ The channel number, name and an icon are displayed in the top left corner while changing the channel.

✗ The channel number and name are displayed if the channel is one of the all channels, and a icon if the channel is one of the favourite channels.

8. Press the blue button to toggle between your TV, Radio, Data/Other and All.
9. Press the CH LIST button to exit from the channel List.

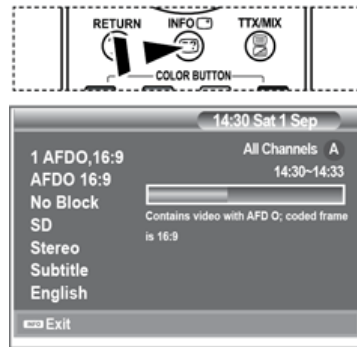
◆ Displaying Programme Information

✕ While viewing a channel, additional information about the current programme may be displayed.

1. While viewing a programme, press the INFO button

✕ The programme information is displayed.

2. To exit from banner information, press the INFO button.



“ D.MENU ”

Starting

Channel

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Setup

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[Now & Next Guide](#) / [Full Guide](#) / [Scheduled List](#) / [Default Guide](#)

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◆ Viewing the EPG (Electronic Programme Guide) Information

✂ The EPG (Electronic Programme Guide) information is provided by the broadcasters. Programme entries may appear blank or out of date as a result of the information broadcast on a given channel. The display will dynamically update as soon as new information becomes available.

◆ Now & Next Guide

For the six channels indicated in the left-hand column, displays the Current programme and the Next programme information.

◆ Full Guide

Displays the programme information as time ordered One hour segments. Two hours of programme information is displayed which may be scrolled forwards or backwards in time.

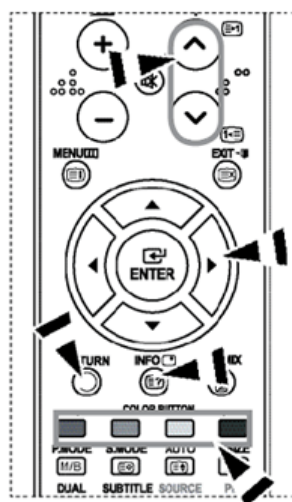
1. Press the D.MENU button to display the DTV menu.
2. Press the ENTER button, to select "Guide".
3. Press the ▲ or ▼ button to select "Now & Next Guide" or "Full Guide".
Press the ENTER button.

✂ You can also display the guide menu simply by ressing the GUIDE button.



4.

To...	Then...
Watch a programme in the EPG list	<ul style="list-style-type: none"> - Select a programme by pressing the ▲, ▼, ◀, ▶ button. - Press the ENTER button.
✂ If the next Programme is selected, it is scheduled with the clock icon displayed. If the ENTER button is pressed again, the scheduling is canceled with the clock icon gone.	
View programme information	<ul style="list-style-type: none"> - Select a programme of your choice by pressing the ▲, ▼, ◀, ▶ button. - Press the INFO button when the programme of your choice is highlighted.
Toggle between the "Now & Next Guide" or "Full Guide"	- Press the red button repeatedly.
Display the "Favourites" and the "All Channels" list	- Press the green button repeatedly.
Scrolls backwards quickly (24 hours).	- Press the yellow button repeatedly.
Scrolls forward quickly (24 hours).	- Press the blue button repeatedly.
Exit the guide	- Press the EXIT button.



✂ The programme title is on the upper part of the screen center. Please click on INFO button for the detailed information. Channel Number, Running Time, Status Bar, Parental Level, Video Quality Information(HD/SD), Sound Modes, Subtitle or

Teletext, Languages of Subtitle or Teletext, and brief summary of the highlighted programme are included on the detailed information. "..." will be appeared if the summary is long.

- ✂ Six channels are displayed. To scroll between channels, move to a channel using the ▲ or ▼ button. To display page by page, use the P ◀ or ▶ button.

◆ Using the Scheduled List

- ✂ If you make a scheduled viewing list of programs you may like to see, the channel will be automatically switched to the scheduled Programme at the scheduled time even if you are watching another program.

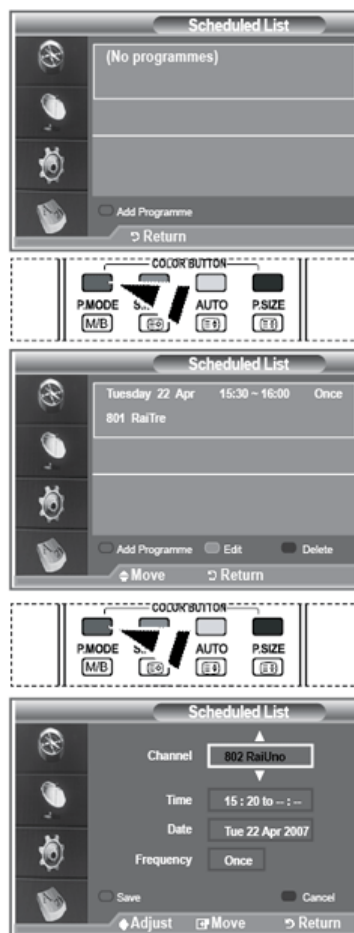
1. Press the D.MENU button to display the DTV menu.
2. Press the ENTER button, to select "Guide"
3. Press the ▲ or ▼ button to select "Scheduled List", then press the ENTER button.
4. Press the red button.
The channel will be switched to the scheduled program.
5. Press the ENTER button to select an item and adjust with the ◀ or ▶ button.

- ✂ You can also set hour and minute by pressing the number buttons on the remote control.

- Channel: Set the channel.
- Time: Set the time.
- Date: Set Year, Month and Day.
- Frequency: Set the frequency.
("Once", "Daily", or "Weekly")

6. After setting the schedule, Press the red button.
7. Press the EXIT button to exit.

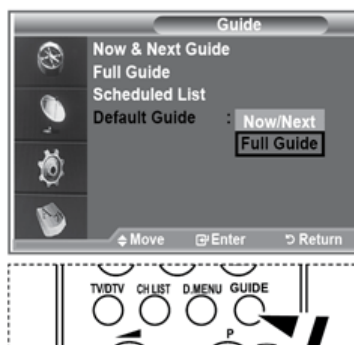
- Save: Save the adjusted schedule.
- Cancel: Cancel the adjusted schedule.
- Add Programme: Add a new schedule.
- Edit: Re-adjust the selected schedule.
- Delete: Delete the selected schedule.



◆ Setting the Default Guide

- ✂ You can preset the default guide style.

1. Press the D.MENU button to display the DTV menu.
2. Press the ENTER button, to select "Guide".
3. Press the ▲ or ▼ button to select "Default Guide", then press the ENTER button.
4. Select "Now/Next" or "Full Guide" using the ▲ or ▼ button, and press the ENTER button.
5. Press the EXIT button to exit.



You can select these options by simply pressing the GUIDE button on the remote control.

◆ Viewing All Channels and Favourite Channels

- ✂ In the EPG menu, you can display all channels or favourite channels.

1. Press the D.MENU button to display the DTV menu.
2. Press the ENTER button again, to select "Guide".
3. Select the your required guide ("Now & Next Guide" or "Full Guide") by pressing the ▲ or ▼ button.
4. Press the ENTER button.
5. Press the green button.
All the channel lists and the favorite channel lists will be toggled.
6. Select a programme of your choice by pressing the ;▲, ▼, ◀, or ▶ button.
7. Press the INFO button to display information about the highlighted programme.
8. When the Edit Favourite Channels list has not been set up:

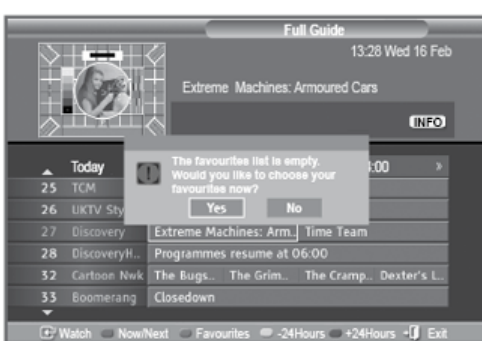
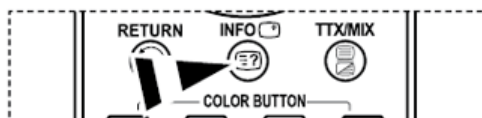
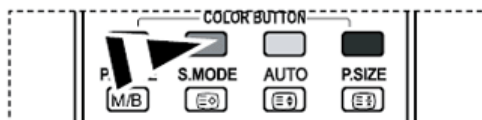
- "The favourites list is empty. Would you like to choose your favourites now?" message is displayed.
- Select "Yes". The "Edit Favourite Channels" menu is displayed. If you select "No", all channels will remain unchanged.

9. Press the EXIT button to exit.

✗ "All Channels" is the list of channels that have been scanned by the channel list update.

All channels are displayed in the all channel mode.

✗ "Favourites" (favourite channels) is the list of channels that has been set in the "Edit Favourite Channels" menu.



“ D.MENU ”

Starting

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Setup

Language

Menu Transparency / Parental Lock / Subtitle / Subtitle Mode / Audio Format / Digital Text / Time Zone / System

↑ TOP

◆ Adjusting the Menu Translucency

✂ You can set the translucency of the menu.

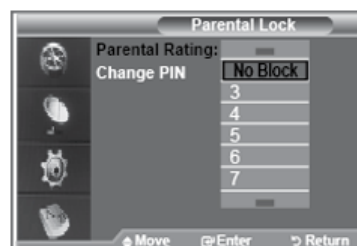
1. Press the D.MENU button to display the DTV menu.
2. Press the ▲ or ▼ button to select "Setup", then press the ENTER button.
3. Press the ▲ or ▼ button to select "Menu Transparency" then press the ENTER button.
4. Select the required option ("High", "Medium", "Low", or "Opaque") by pressing the ▲ or ▼ button, and press the ENTER button to change the setting.
5. Press the EXIT button to exit.



◆ Setting up the Parental Lock

✂ This feature allows you to prevent unauthorized users, such as children, from watching unsuitable programmes by a 4-digit PIN (Personal Identification Number) code that is defined by the user. The on-screen menu will instruct you to assign a PIN code (you can change it later, if necessary).

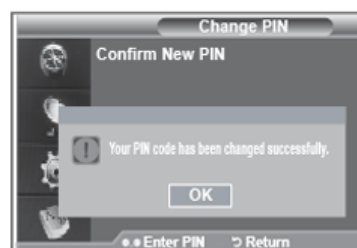
1. Press the D.MENU button to display the DTV menu.
2. Press the ▲ or ▼ button to select "Setup", then press the ENTER button.
3. Press the ▲ or ▼ button to select "Parental Lock.", then press the ENTER button.
4. The "Enter PIN" is displayed.
5. Enter your current 4-digit PIN code by using the numeric buttons (0~9). The options available in the "Parental Lock" group are displayed with the "Parental Rating" selected.



✂ The default PIN code for a new TV set is 0000.

✂ If you enter an invalid PIN code, the "Invalid PIN code. Please try again." message is displayed.

6. Press the ENTER button.
7. Press the ▲ or ▼ button to select the age rating you want to lock out. Press the ENTER button.
8. If you want to change the PIN code, select "Change PIN" by pressing the ▲ or ▼ button. Press the ENTER button.
9. Enter your new PIN code by using the numeric buttons (0~9).
10. Re-enter your new PIN code to confirm by using the numeric buttons (0~9).
11. Press the ENTER button.
12. Press the EXIT button to exit.



✂ If you forget the PIN code, press the remote control buttons in the following sequence, which resets the PIN to **0-0-0-0: POWER (Off), MUTE, 8, 2, 4, POWER (On).**

◆ Setting the Subtitle

✂ You can activate and deactivate the subtitles.

1. Press the D.MENU button to display the DTV menu.
2. Press the ▲ or ▼ button to select "Setup", then press the ENTER button.
3. Press the ▲ or ▼ button to select "Subtitle", then press the ENTER button.
4. Select "On" by pressing the ▲ or ▼ button. Press the ENTER button.
5. Press the EXIT button to exit.



◆ Setting the Subtitle Mode

✂ Use this menu to set the Subtitle Mode. "Normal" under the menu is the basic subtitle and "Hard of hearing" is the subtitle for a hearing-impaired person.

1. Press the D.MENU button to display the DTV menu.
2. Press the ▲ or ▼ button to select "Setup", then press the ENTER button.
3. Press the ▲ or ▼ button to select "Subtitle Mode", then press the ENTER button.
4. Press the ▲ or ▼ button to select "Normal" or "Hard of hearing". Press the ENTER button.
5. Press the EXIT button to exit.



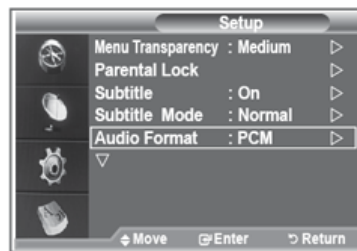
✂ If the programme you are watching does not support the "Hard of hearing" function, "Normal" automatically activates even though "Hard of hearing" mode is selected.

◆ Selecting the Audio Format

✂ You can only hear Dolby Digital sound through the audio receiver connected through an optical cable. You can only hear PCM sound through the main speaker.

When sound is emitted from both the main speaker and the audio receiver, a sound echo may occur due to the decoding speed difference between the main speaker and the audio receiver. In this case, use the internal mute function.

1. Press the D.MENU button to display the DTV menu.
2. Press the ▲ or ▼ button to select "Setup", then press the ENTER button.
3. Press the ▲ or ▼ button to select "Audio Format", then press the ENTER button.
4. Press the ▲ or ▼ button to select "PCM" or "Dolby Digital". Press the ENTER button.
5. Press the EXIT button to exit.



✂ The Audio Format appears according to the broadcasting signal.

Dolby digital sound is only available when the TV is connected with an external speaker using an optical cable.

◆ Selecting the Digital Text (UK only)

✂ If the programme is broadcast with digital text, this feature is enabled.

1. Press the D.MENU button to display the DTV menu.
2. Press the ▲ or ▼ button to select "Setup", then press the ENTER button.
3. Press the ▲ or ▼ button to select "Digital Text", then press the ENTER button.
4. Press the ▲ or ▼ button to select "Disable" or "Enable". Press the ENTER button.
5. Press the EXIT button to exit.



✂ MHEG(Multimedia and Hypermedia Information Coding Experts Group) An International standard for data encoding systems used in multimedia and hypermedia. This is at a higher level than the MPEG system which includes data-linking hypermedia such as still images, character service, animation, graphic and video files as well as multimedia data. MHEG is user runtime interaction technology and is being applied to various fields including VOD (Video-On-Demand), ITV (Interactive TV), EC (Electronic Commerce), tele-education, tele-conferencing, digital libraries and network games.

◆ Selecting the Time Zone (Spain only)

✂ Select the time zone where locate

1. Press the D.MENU button to display the DTV menu.
2. Press the ▲ or ▼ button to select "Setup", then press the ENTER button.
3. Press the ▲ or ▼ button to select "Time Zone", then press the ENTER button.
4. Select the time zone where you locate by pressing the ▲ or ▼ button. Press the ENTER button.

✂ The following options are available The Iberian Peninsula and Balears Islands - Canarian Islands

5. Press the EXIT button to exit.



◆ Viewing Product Information

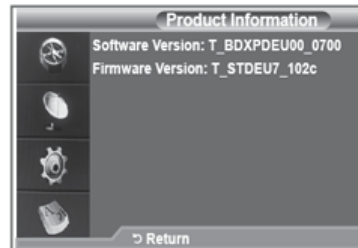
✂ You can view your product information. For service or repair, please contact a Samsung approved dealer.

1. Press the D.MENU button to display the DTV menu.
2. Press the ▲ or ▼ button to select "Setup", then press the ENTER button.
3. Press the ▲ or ▼ button to select "System", then press the ENTER button.
4. Press the ENTER button again, to select "Product Information".

✂ The Product Information menu is selected.

- Software Version, Firmware Version

5. Press the EXIT button to exit.

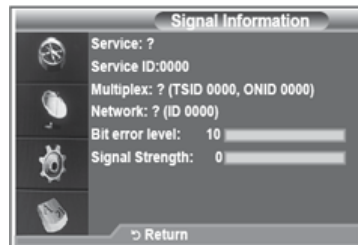


◆ Checking the Signal Information

✂ You can get information about the signal status.

1. Press the D.MENU button to display the DTV menu.
2. Press the ▲ or ▼ button to select "Setup", then press the ENTER button.
3. Press the ▲ or ▼ button to select "System", then press the ENTER button.
4. Press the ▲ or ▼ button to select "Signal Information", then press the ENTER button.
5. Press the EXIT button to exit.

✂ If the signal status is poor, the "No signal." message is displayed.



◆ Upgrading the Software

✂ To keep your product up-to-date with new Digital Television features then software upgrades are periodically broadcast as part of the normal Television signal.

It will automatically detect these signals and display the software upgrade banner. You are given the option to install the upgrade.

1. Press the D.MENU button to display the DTV menu.
2. Press the ▲ or ▼ button to select "Setup", then press the ENTER button.
3. Press the ▲ or ▼ button to select "System", then press the ENTER button.
4. Press the ▲ or ▼ button to select "Software Upgrade", then press the ENTER button.
5. Press the ▲ or ▼ button to select "Software Information", "Manual Upgrade" or "Standby Mode upgrade". Press the ENTER button.
 - Software Information

Press the ENTER button, then the current software version is shown.
To display the software version information, press the ENTER button again.

- Manual Upgrade

Press the ENTER button to search for new software from the currently broadcasting channels.

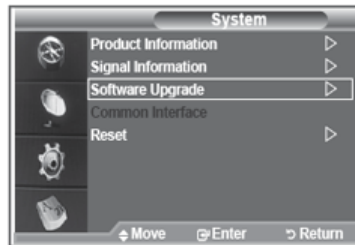
- Standby Mode Upgrade : On / Off

Press the ENTER button. To continue software upgrade with master power on, Select On by pressing the ▲ or ▼ button.

45 minutes after entering standby mode, a manual upgrade is automatically conducted. Since the power of the unit is turned on internally, the screen may be on slightly for the LCD product.

This phenomenon may continue for more than 1 hour until the software upgrade is completed.

6. Press the EXIT button to exit.



◆ Viewing Common Interface

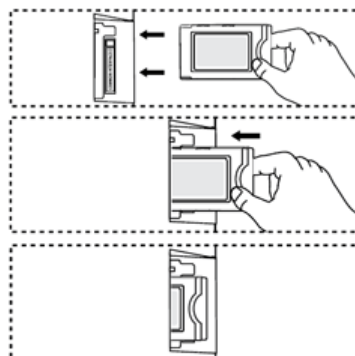
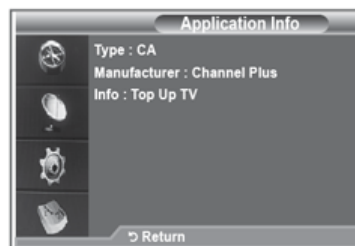
✗ This contains information on CAM inserted in the CI slot and displays it.

1. Press the D.MENU button to display the DTV menu.
2. Press the ▲ or ▼ button to select "Setup", then press the ENTER button.
3. Press the ▲ or ▼ button to select "System", then press the ENTER button.
4. Press the ▲ or ▼ button to select "Common Interface", then press the ENTER button.
5. Press the ENTER button to display the information for your application.
6. Press the EXIT button to exit.

✗ The Application Info inserting is about the CI CARD.

✗ You can install the CAM anytime whether the TV is ON or OFF.

1. Purchase the CI CAM module by visiting your nearest dealer or by phone.
2. Insert the CI CARD into the CAM in the direction of the arrow until it fits.
3. Insert the CAM with the CI CARD installed into the common interface slot.
(Insert the CAM in the direction of the arrow, right up to the end so that it is parallel with the slot.)
4. Check if you can see a picture on a scrambled signal channel.



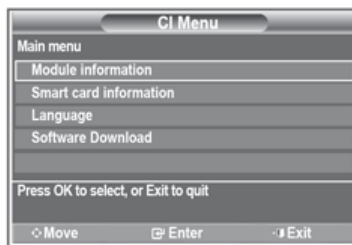
◆ Selecting the CI (Common Interface) Menu

✗ This enables the user to select from the CAM-provided menu.

1. Press the D.MENU button to display the DTV menu.

2. Press the ▲ or ▼ button to select "Setup", then press the ENTER button.
3. Press the ▲ or ▼ button to select "System", then press the ENTER button.
4. Press the ▲ or ▼ button to select "Common Interface", then press the ENTER button.
5. Select to "CI Menu" by pressing the ▲ or ▼ button, and press the ENTER button.
6. Select the required option by pressing the ▲ or ▼ button, and press the ENTER button.
7. Press the EXIT button to exit.

✘ Select the CI Menu based on the menu PC Card.

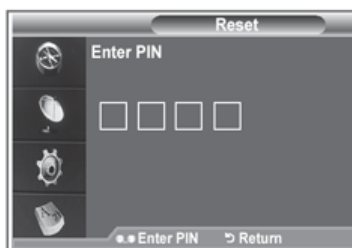


◆ Resetting

- ✘ You can reset the values stored to the factory default values.
- ✘ The Reset operation deletes all channel information and user preferences returning all values to their default factory state.

1. Press the D.MENU button to display the DTV menu.
2. Press the ▲ or ▼ button to select "Setup", then press the ENTER button.
3. Press the ▲ or ▼ button to select "System", then press the ENTER button.
4. Press the ▲ or ▼ button to select "Reset", then press the ENTER button.
5. The "Enter PIN" screen will appear.
6. Enter your current 4-digit PIN code by using the numeric buttons (0~9).
✘ The warning message is displayed. All values will be reset by pressing the coloured buttons (red, green, yellow, and blue) in turn.
7. Press the EXIT button to exit.

✘ Select the CI Menu based on the menu PC Card.



“ D.MENU ”

Starting

Channel

Guide

Setup

Language

Audio Language / Subtitle Language / Teletext Language / Preference

↑ TOP

◆ Selecting the Preferred Language (Audio, Subtitle or Teletext)

- ✂ You can change the default value for subtitle, audio teletext languages.
Displays the language information for the incoming stream.

1. Press the D.MENU button to display the DTV menu.
 2. Press the ▲ or ▼ button to select "Language", then press the ENTER button.
 3. Press the ▲ or ▼ button to select "Audio Language", "Subtitle Language" or "Teletext Language".
Press the ENTER button.
 4. Select a particular language by pressing the ▲ or ▼ button repeatedly.
Press the ENTER button.
- ✂ English is the default in cases where the selected language is unavailable in the broadcast.
5. Press the EXIT button to exit.
- While viewing a programme, the subtitle can be selected.
While viewing a programme, audio languages can be selected.



◆ Preference

- ✂ This menu consists of 6 sub-menus:
Primary Subtitle Language, Secondary Subtitle Language, Primary Audio Language, Secondary Audio Language, Primary Teletext Language, and Secondary Teletext Language.

Using this feature, users can select one of the languages (English, German, Italian, Swedish, French, Welsh, Gaelic, Irish, Danish, Finnish, Norwegian, Spanish, Czech, and Greek). The language selected here is the default when the user selects a channel.



- Press the ▲ or ▼ button to select required menu (Primary Subtitle Language, Secondary Subtitle Language, Primary Audio Language, Secondary Audio Language, Primary Teletext Language, or Secondary Teletext Language), then press the ENTER button. The options of the selected menu are displayed.
 - Press the ▲ or ▼ button to select required option (English, German, Italian, Swedish, French, Welsh, Gaelic, Irish, Danish, Finnish, Norwegian, Spanish, Czech, or Greek), then press the ENTER button.
- ✂ If you change the language setting, the Subtitle Language, Audio Language, and the Teletext Language of the Language menu are automatically changed to the selected language.
- ✂ The Subtitle Language, Audio Language, and the Teletext Language of the Language menu show a list of languages supported by the current channel and the selection is highlighted. If you change this language setting, the new selection is only valid for the current channel. The changed setting does not change the setting of the Primary Subtitle Language, Primary Audio Language, or the Primary Teletext Language of the Preference menu.



Self-Test Feature Check



Check the following items yourself before calling for service. Contact the [service center](#) for problems that you cannot solve by yourself.

[Self-Test Feature Check](#) | [Not Optimum Mode](#) | [Display Adapter Driver](#)

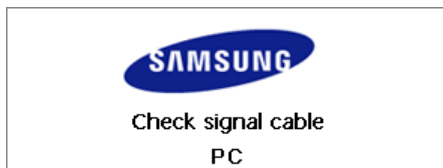
[Maintenance and Cleaning](#) | [Symptoms & Recommended Actions](#)

1. Self-Test Feature Check

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

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.

The figure shown below ("Check Signal Cable") appears on a black background when the monitor is in its normal working condition though it does not sense any video signal: While in the Self-Test mode, the LED power indicator remains green and the figure moves around on the screen.

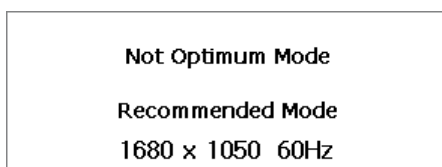


4. Turn off your monitor and reconnect the video cable; then turn on both your computer and the monitor.

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

2. Not Optimum Mode

If the vertical resolution is not optimum mode, you can still see the display but the warning message below appears and disappears after one minute. The user must adjust the frequency within that one minute.





Refer to Specifications > [Preset Timing Modes](#) for the resolutions or frequencies that are supported by the monitor.

3. Display Adapter Driver



Display adapter refers to the computer video card driver.

If the adapter is not properly set, you cannot adjust resolution, frequency or color and you cannot install the monitor driver.

1. Checking Adapter Driver

Click Start → Settings → Control Panel → Display → Settings → Advanced → Adapter.

If "Default" or a wrong product model is indicated, it means that the adapter driver is not properly installed. Install the adapter driver again according to the information provided by the computer or video card manufacturers.

2. Installing Adapter Driver



The instructions given below are for general circumstances.

For specific issues, contact the relevant computer or video card manufacturers.

1) Click Start → Settings → Control Panel → Display → Settings → Advanced → Adapter → Update Driver → Next → Display a list of the known drivers for this device so that I can choose a specific driver → Next → Have Disk (Insert Video Card Driver diskette) → OK → Next → Next → Finish.

2) In case you have Adapter Driver Setup file on your computer:

Run Setup.exe or Install.exe, which is found in the Adapter Driver Setup file.

4. Maintenance and Cleaning

1. Maintaining the Monitor Case.

Clean with a soft cloth after disconnecting the power cord.



- Do not use benzene, thinner or other flammable substances, or a wet cloth.
- We recommend a Samsung cleansing agent is used to prevent damage to the screen.

2. Maintaining the Flat Panel Display Screen.

Clean with a soft cloth (cotton flannel) smoothly.



- Never use acetone, benzene or thinner.
(They may cause flaws or deformation of the screen surface.)
- The user will be required to pay costs and related expenses for repair of damages caused by him/her.

5. Symptoms and Recommended Actions



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 a [service center or your dealer](#).

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 after-service for the main board of the computer.)
3. If you installed a new video card or if you assembled the PC, check if you installed the adapter(video) driver and the monitor driver.
4. Check if the scanning ratio of the video screen is set at 56 Hz ~ 75 Hz.
(Do not exceed 60 Hz when using the maximum resolution.)
5. If you have problems in installing the adapter (video) driver, boot the computer in Safe Mode, remove the Display Adapter at the "**Control Panel, System, Device Administrator**" and then reboot the computer to reinstall the adapter (video) driver.



Check List

The following table lists possible problems and their solutions. 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](#).

[Installation](#) | [Screen](#) | [Audio](#) | [Remote Control](#)

1. Problems related to Installation



Problems related to the monitor installation and their solutions are listed.

	Problems	Solutions
PC Mode	It appears the PC does not function normally.	<ul style="list-style-type: none">Check if the Display Adapter Driver (VGA Driver) is properly installed. (Refer to Installing Driver)
	The monitor screen flickers.	<ul style="list-style-type: none">Check if the signal cable between the computer and the monitor is securely connected and tightened. (Refer to Connecting the monitor)
TV Mode	TV screen is blurred or shows noise signals.	<ul style="list-style-type: none">Check if the TV antenna connector is securely connected to the external antenna. (Refer to Connecting TV)
	TV signal is not received	<ul style="list-style-type: none">Select "Auto Store" to configure the channel system automatically. (Refer to the Auto Store)

2. Problems related to Screen



Problems related to the monitor screen and their solutions are listed.

Problems	Solutions
Screen is blank and power indicator is off	<ul style="list-style-type: none">Ensure that the power cord is firmly connected and the LCD monitor is on. (Refer to the Connecting the Monitor)
"Check Signal Cable" message	<ul style="list-style-type: none">Ensure that the signal cable is firmly connected to the PC or video SOURCES. (Refer to the Connecting the Monitor)Ensure that the PC or video SOURCES are turned on.
"Not Optimum Mode" message	<ul style="list-style-type: none">Check the maximum resolution and the frequency of the video adapter.Compare these values with the data in the Preset Timing Modes Chart.
Picture rolls vertically.	<ul style="list-style-type: none">Check if the signal cable is securely connected. Connect it again securely. (Refer to Connecting the monitor)
Image is not clear. Picture is blurred.	<ul style="list-style-type: none">Run Frequency Coarse and Fine tuning.Turn on again after removing all accessories (video extension cable, etc.)Set resolution and frequency to the recommended ranges.
Picture image is unstable and vibrates.	<ul style="list-style-type: none">Check if the resolution and frequency set for the computer video card falls in the range supported by the monitor. If not, reset them referring to the current Information under the monitor menu and Preset Timing Modes.
Ghost images are shown in the picture.	
The image is too light or too dark	<ul style="list-style-type: none">Adjust the Brightness and Contrast. (Refer to the Brightness, Contrast)
Screen color is inconsistent.	<ul style="list-style-type: none">Adjust color using Custom under OSD Color Adjustment menu.
Color image is distorted with	

dark shadows.	
White color is poor.	
Power Indicator blinks green.	<ul style="list-style-type: none"> The monitor is currently saving the changes made in settings to the OSD memory.
Screen is blank and power indicator light is steady green or blinks every 0.5 or 1 seconds	<ul style="list-style-type: none"> The monitor is using its power management system. press a key on the keyboard
The screen is blank and is blinking.	<ul style="list-style-type: none"> If you see the "TEST GOOD" message on the screen when you press the MENU button, check the cable connection between the monitor and the computer to ensure that the connector is properly connected.

3. Problems related to Audio



Problems related to audio signals and their solutions are listed below.

Problems	Solutions
No sound	<ul style="list-style-type: none"> Ensure that the audio cable is firmly connected to both the audio-in port on your monitor and the audio-out port on your sound card. (Refer to the Connecting the Monitor) Check the volume level. (Refer to the Volume)
The sound level is too low.	<ul style="list-style-type: none"> Check the volume level. (Refer to the Volume) 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.
Sound is too high pitched or too low pitched	<ul style="list-style-type: none"> Adjust the Treble and Bass to appropriate level.

4. Problems related to Remote Control



Problems related to the remote control and their solutions are listed.

Problems	Items to check
The remote control buttons do not respond.	<ul style="list-style-type: none"> Check the battery polarities (+/-). Check if the batteries have been exhausted. Check if the power is on. Check if the power cord is securely connected. Check if a special fluorescent or neon lamp is on in the vicinity.

[Self-Test Feature Check](#) |

[Check List](#) |

[Q & A](#)

Q & A

Question	Answer
How can I change the frequency?	<p>The frequency can be changed by reconfiguring the video card.</p> <p>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.)</p>
How can I adjust the resolution?	<ul style="list-style-type: none"> Windows XP : Set the resolution in the Control Panel→Appearance and Themes→Display→Settings. Windows ME/2000 : Set the resolution in the Control Panel→Display→Settings.

How can I set the Power Saving function?

* Contact the video card manufacturer for details.

- Windows XP :
Set the resolution in the Control Panel→Appearance and Themes→Display→Screen Saver .
Set the function in the BIOS-SETUP of the computer. (Refer to Windows/Computer Manual).
- Windows ME/2000 :
Set the resolution in the Control Panel→Display→Screen Saver.
Set the function in the 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 detergent or scratches on the case. Do not let any water enter the monitor.

[↑ TOP](#)[↶ MAIN](#)[↑ ↶](#)[General](#)[PowerSaver](#)[Preset Timing Modes](#)

General

General

Model Name SyncMaster 225MD

LCD Panel

Size 22" Wide diagonal (55 cm)

Display area 473.76 mm(H) x 296.1 mm(V)

Pixel Pitch 0.282 mm(H) x 0.282 mm(V)

Synchronization

Horizontal 30 ~ 81 kHz

Vertical 56 ~ 75 Hz

Display Color

16.7 M

Resolution

Optimum resolution 1680 x 1050 @ 60 Hz

Maximum resolution 1680 x 1050 @ 60 Hz

Input Signal, Terminated

RGB Analog

TTL level (V high \geq 2.0V, V low \leq 0.8V)

0.7 Vp-p 5%

Maximum Pixel Clock

135 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(Sold separately)

Signal connectors

15pin 3-row D-sub connector, 24pin 3-row DVI-D connector

19pin Type A HDMI Connector, Composite, S-Video, Component, SCART, TV, DTV

Dimensions (WxHxD)/ Weight

520.0 X 439.0 X 201.9 mm / 20.5 X 17.3 X 7.9 inch / 7.1 kg / 15.7 lbs (With Stand)
520.0 X 386.0 X 65.5 mm / 20.5 X 15.2 X 2.6 inch (Without Stand)

VESA Mounting Interface

100 mm X 100 mm

Environmental considerations

Operating Temperature: 50°F ~ 104°F(10°C ~ 40°C)
Humidity: 10% to 80%, Non-condensing

Storage Temperature: -4 °F ~113 °F(-20 °C ~ 45 °C)
Humidity: 5% to 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 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 contained in this product are 5,292,000.

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 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 DPM compliant video card installed in your computer. Use the software utility installed on your computer to set up this feature.

State	Normal Operation	Power saving mode	Power off EPA/ENERGY 2000
Power Indicator	Blue	Blue, Blinking	Black
Power Consumption	Less than 58 W	Less than 1 W	Less than 1 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.

General

PowerSaver

Preset Timing Modes

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.

Table 1. 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	-/-
MAC, 1152 x 870	68.681	75.062	100.000	-/-
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, 1152 x 864	67.500	75.000	108.000	+/+
VESA, 1280 x 960	60.000	60.000	108.000	+/+
VESA, 1280 x 1024	63.981	60.020	108.000	+/+
VESA, 1280 x 1024	79.976	75.025	135.000	+/+
VESA, 1680 x 1050	64.674	59.883	119.000	+/-

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

The supported modes for each external input signal.

Input Source	Supported Resolutions						
	480i @60Hz	576i @50Hz	480p @60Hz	576p @50Hz	720p @50/60Hz	1080i @50/60Hz	1080p @50/60Hz
Component	O	O	O	O	O	O	O
HDMI	X	X	O	O	O	O	O

Input Source	Supported Systems
AV(CVBS)	NTSC-3.58, NTSC-4.43, PAL 60, PAL, SECAM
S-VIDEO	NTSC-3.58, NTSC-4.43, PAL 60, PAL, SECAM
EXT	NTSC-3.58, NTSC-4.43, PAL 60, PAL, SECAM, RGB
TV(Analog)	PAL B,G,D,K,I SECAM L/L', D,K
DTV	DVB-T



Model | SyncMaster 225MD



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Contact SAMSUNG WORLDWIDE



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

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

Europe

BELGIUM	02 201 2418	http://www.samsung.com/be
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CZECH REPUBLIC	844 000 844	http://www.samsung.com/cz
Distributor pro Českou republiku: Samsung Zrt., česká 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) (€ 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
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Terms

● Sync Signal

Sync (Synchronized) Signals refer to the standard signals that are required to display desired colors on the monitor. They are divided into Vertical and Horizontal Sync Signals. These signals display normal color images by the set resolution and frequency.

Types of Sync Signals

Separate	This is a scheme of transmitting individual vertical and horizontal sync signals to the monitor.
Composite	This is a scheme of combining vertical and horizontal sync signals into one composite signal and transmitting it to the monitor. The monitor displays the color signals by separating the composite signal into original color signals.

● 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 1680 x 1050, this means the screen is composed of 1680 horizontal dots (horizontal resolution) and 1050 vertical lines (vertical resolution).

● RF Cable

A round signal cable generally used for TV antennas.

● Satellite Broadcasting

Broadcasting service provided via satellite. Enables high picture quality and clear sound throughout the

country regardless of the location of the viewer.

● **Sound Balance**

Balances the levels of the sound coming from each speaker in televisions with two speakers.

● **Cable TV**

Whereas the terrestrial broadcasting is delivered via frequency signals through the air, cable broadcasting is transmitted via a cable network. In order to view cable TV, one must purchase a cable receiver and hook it up to the cable network.

● **CATV**

"CATV" refers to the broadcasting service offered at hotels, schools and other buildings through their own broadcasting system, apart from VHF or UHF broadcasting by terrestrial broadcasters. The CATV programs may include movies, entertainment and educational programs. (Different from cable TV.)

CATV can be viewed only within the area in which the CATV service is offered.

● **S-Video**

Short for "Super Video." S-Video allows up to 800 lines of horizontal resolution, enabling high-quality video.

● **VHF/UHF**

VHF indicates TV channels 2 to 13, and UHF indicates channels 14 through 69.

● **Channel Fine Tuning**

This feature allows the viewer to fine-tune the TV channel to obtain the best viewing conditions. The Samsung LCD TV has both automatic and manual channel fine-tuning features to enable the viewer to adjust their desired settings.

● **External Device Input**

External device input refers to video input from such external video devices as VCRs, camcorders and DVD players, separate from a TV broadcast.

● **DVD**

A type of digital disk technology that takes up only the benefits of CD and LD, to implement a high resolution/quality, which enables the user to enjoy clearer images.

● **DTV Broadcasting (Digital TV Broadcasting)**

An enhanced broadcasting technology to process digital video signals using a set-top box, which implements a high resolution and clearer digital images on the screen.

● **LNA (Low Noise Amplifier)**

This derives from artificial satellite technology that amplifies weak signals even in poor reception areas for sharper images.

● **Antenna Converter**

A connection part that is used to link a Wide antenna cable (feeder cable) to the TV.

● **English Caption (= Caption Setting)**

A kind of language selection feature that provides English subtitles (caption) or character information services from broadcasting services (ex: AFKN) or video tapes (marked CC), and which are especially useful for studying English.

● **Multiplex Broadcasting**

This enables the user to enjoy the broadcasting service in both Korean and foreign (original) language as well as in stereo mode.

● **A2**

This system uses two carriers to transmit voice data. Countries such as South Korea and Germany use this system.

● **BTSC**

Broadcast Television System Committee

The stereo broadcasting system that is used in most of the countries that have adopted the NTSC system, including the United States, Canada, Chile, Venezuela and Taiwan. It also refers to the

organization that has been organized to promote its development and management.

● EIAJ

Electronic Industries Association of Japan.

● DVI

DVI is the acronym for Digital Video Interface. It is a new type of video interface technology that provides the maximum screen quality for high quality display devices and high-end graphics cards including flat panel LCD monitors.

● HDMI (High Definition Multimedia Interface)

This is an interface that connects both quality video signals and digital audio signals with a cable without any compression.

- HD (High Definition)

In HD, 1080-line, 2x density beaming (1080i) is used. HD provides a five times clearer screen quality than the existing analog method and has a wide 16:9 aspect ratio.

- SD (Standard Definition)

In SD, 480-line, double beaming (480i) is used. SD provides a screen quality somewhere between HD and the existing analog method. It exhibits a two times better screen quality than analog TV.

● SRS TruSurround XT

This feature outputs sonorous and vivid 3D sound as for 5.1 channel speaker sound but through a 2-channel speaker. It has a good effect when stereo signals are input.

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● For Better Display

1. Adjust the computer resolution and screen injection rate (refresh rate) on the computer as described below to enjoy the best picture quality. You can have an uneven picture quality on screen if the best picture quality is not provided for TFT-LCD.
 - Resolution: 1680 x 1050
 - Vertical frequency (refresh rate): 60 Hz
 2. TFT LCD panels manufactured by using advanced semiconductor technology with a precision of 1ppm (one millionth) and 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 any problems.
 - For example, the number of TFT LCD sub pixels contained in this product are 5,292,000.
 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 may stain it.
 4. 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 the automatic adjustment, use the FINE/COARSE adjustment function.
 5. 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.
 6. Do not display a still image(such as on a video game or when hooking up a DVD to this LCD_TV) on the Color TFT-LCD (Thin Film Transister Liquid Crystal Display) panel for a long time as it can cause screen image retention. This image retention is also known as "screen burn". To avoid such image retention, reduce the degree of brightness and contrast of this screen when displaying a still image.
- Watching Digital Broadcasting Correctly

Digital 16:9 HD Broadcasting Screen



Digital SD Broadcasting Screen



Digital 4:3 Broadcasting Screen



This screen is shown when scenes are captured using digital broadcasting equipment and they are sent in HDTV (16:9) mode.

This screen is shown when scenes are converted to analog broadcasting signals before being sent. Humans and objects appear heavier than in reality.

This screen is shown when scenes created via analog signals are displayed while watching HDTV broadcasting.



If temporary stops, mosaic screens, or jagged screens occur, this is not a TV problem. Contact your cable broadcasting company for a check-up. For information on how to connect and use your video, DVD, DVD combo, home theater, PC, etc., refer to their respective user manuals.

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Authority

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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 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:

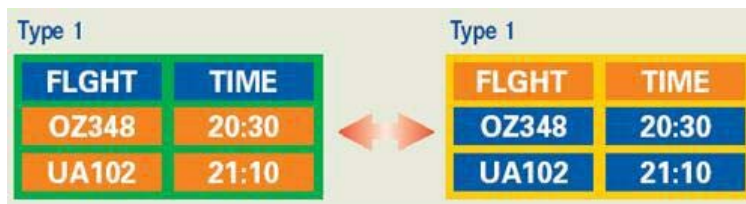
• Display Information together with Logo or Moving image cycle.

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)



- 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)

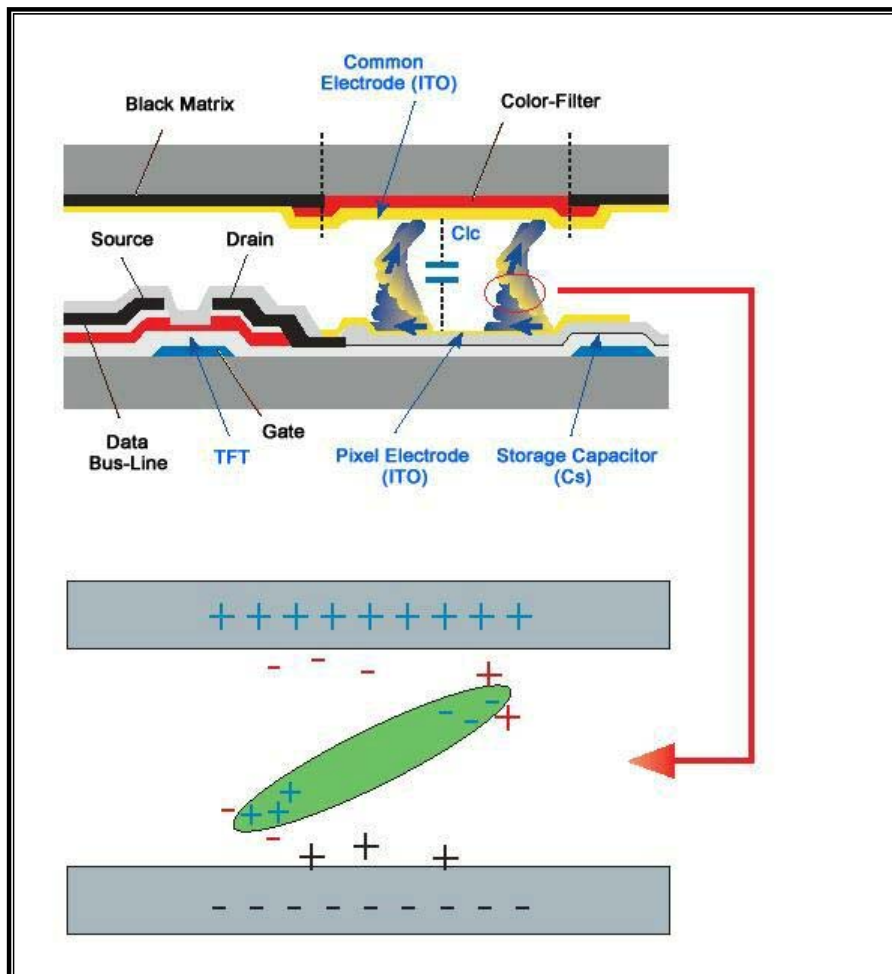


- The best way to protect your monitor from Image retention is to set your PC or System to operate a Screen Saver program when you are not using it.

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

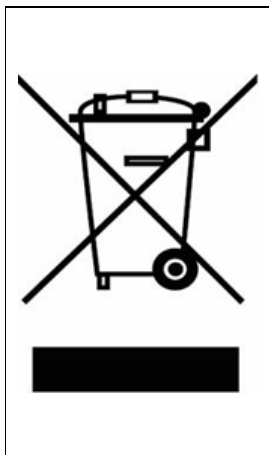
Normal conditions are defined as continuously changing video patterns. When the LCD panel is operated for a long time with a fixed pattern (-over 12 hours-), there may be slight difference in voltage between electrodes that work the liquid crystal (LC) in a pixel. The voltage difference between electrodes 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

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.