



# SyncMaster 2280HD

Install drivers

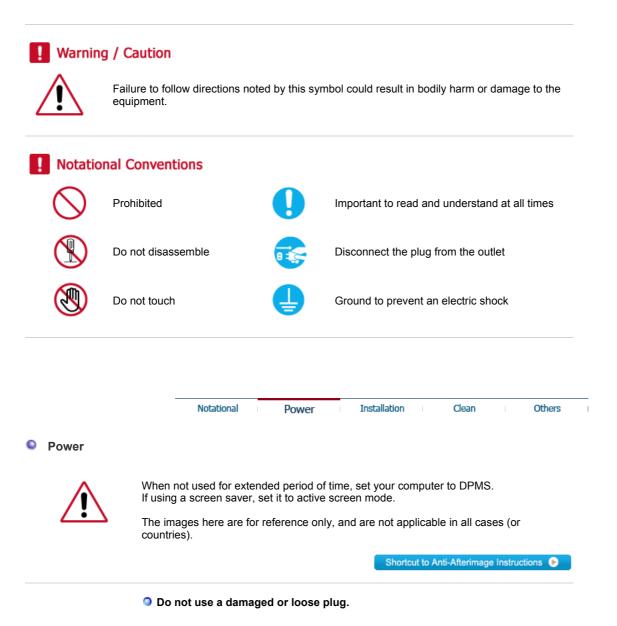


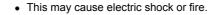


Model SyncMaster 2280HD -

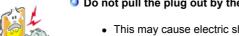


Please read the following safety instructions as they are designed to prevent damage to property and harm to the user.











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.



O 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.



• Failure to do so may cause electric shock or fire inside the monitor.



- O 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.



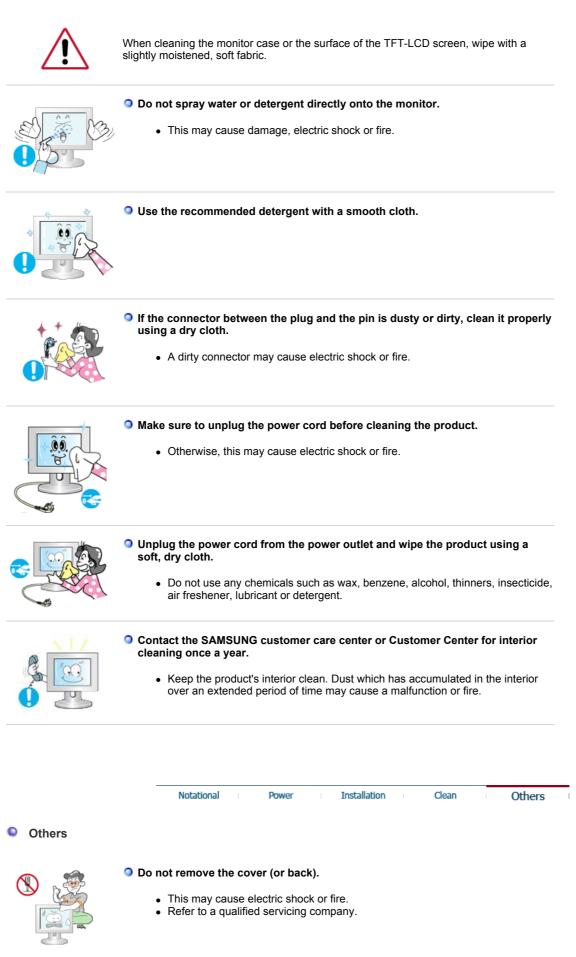
When using an outdoor antenna, ensure that there is sufficient distance between the antenna and any electric wires nearby so that they do not come into with each other if the antenna is knocked over by strong wind or any other accident.

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



- Seep the plastic packaging (bag) out of children's reach.
  - The plastic packaging (bag) may cause suffocation if children play with it.







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 a 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.

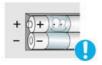


Do not place your children's favorite toys or any other objects of interest on the product.

 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.

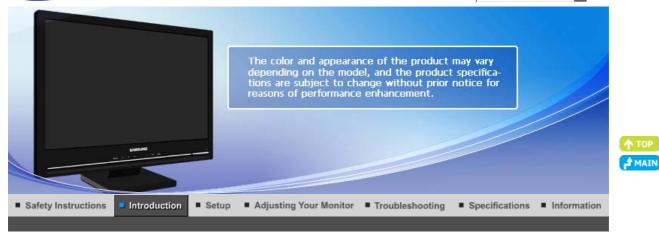
- Keep your back straight.
- Keep a distance of about 45 ~ 50 cm between your eyes and the monitor screen. Look at the screen from slightly above it, and have the monitor directly in front of you.
- Tilt the monitor upwards by 10 ~20 degrees. Adjust the monitor



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

#### 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.

## O 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.

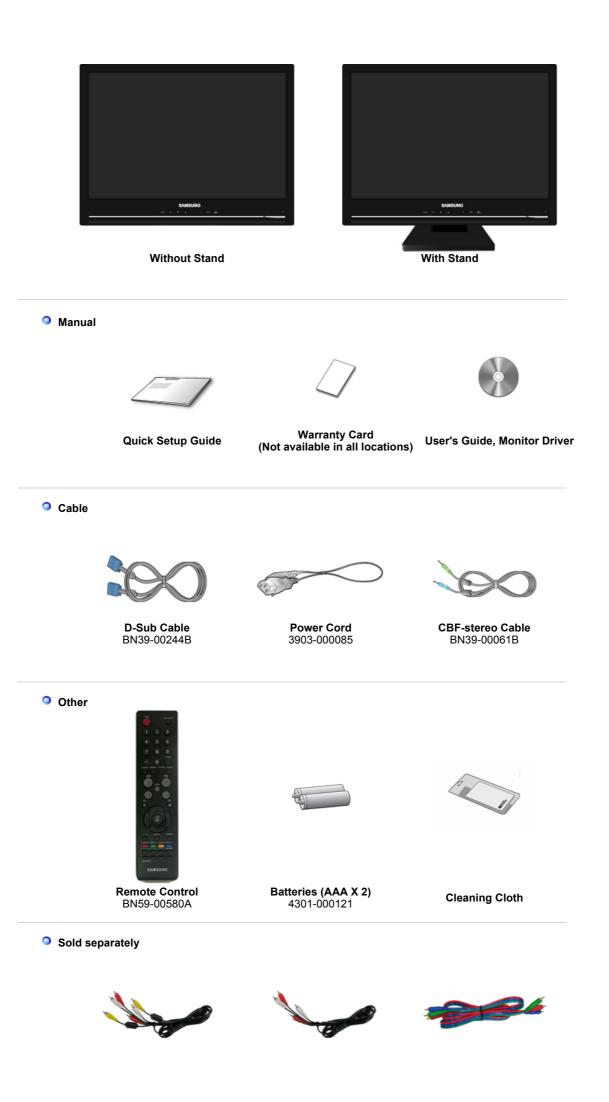
#### High Speed Response

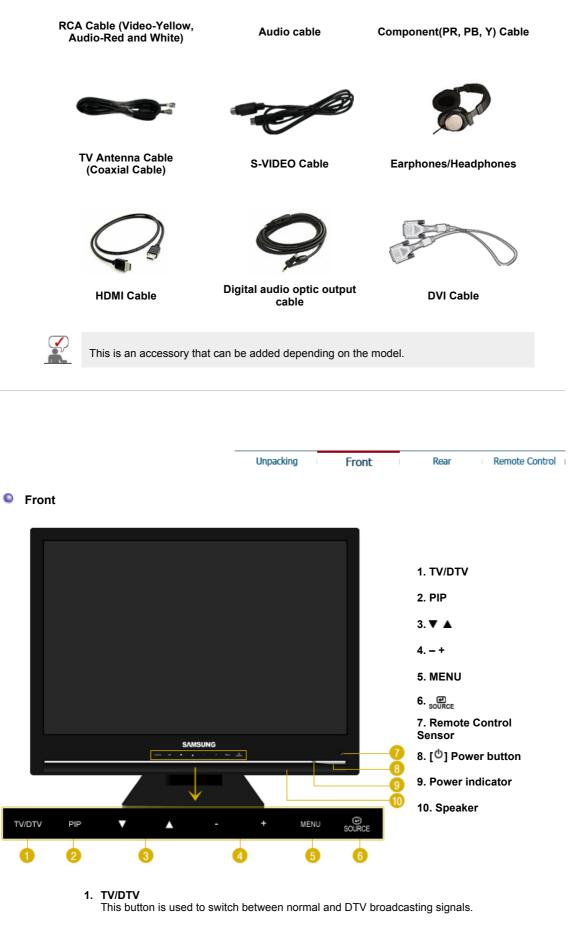
The 5ms response speed allows you to enjoy clearer and faster broadcasts.

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





2. PIP - Available in PC/DVI Mode In PC mode, turns on Video or TV screens in PIP mode. >>Click here to see an animation clip

#### 3. 🔻 🔺

Moves from one menu item to another vertically or adjusts selected menu values. In TV/DTV mode, selects TV/DTV 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. OURCE

Press the ' , 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] → [TV/DTV] → [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. [<sup>(b)</sup>] 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.

Unpacking Front Rear Remote Control

Rear



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

#### 1. POWER



 Power terminal 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. HDMI IN/PC



#### 1. HDMI IN

: Connects to the HDMI jack of a device with an HDMI output. No sound connection is needed for an HDMI to HDMI connection.

Use the **HDMI IN** terminal for a DVI connection to an external device.

You can also connect to a DVI output terminal of an external device using DVI to HDMI cable or DVI-HDMI adapter(DVI to HDMI) for video.

In this case, use the **[HDMI/PC DVI-D AUDIO IN]** terminal for audio.

For more information on how to connect digital DVI output devices, see "Connecting HDMI > Connecting Using a DVI to HDMI Cable" in the Installation section.

- You cannot connect a PC to the [HDMI IN] terminal.

#### 2. PC

: Connect the signal cable to the  $\left[ \textbf{PC} \right]$  port on the back of your monitor.

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. VIDEO

: Connect the [VIDEO] terminal of your monitor to the video

## 3. AV IN



## 4. ANT IN



## output terminal of the external device using a VIDEO cable.

3. S-VIDEO

: Connect the **[S-VIDEO]** terminal of your monitor to the S-VIDEO output terminal of the external device using a S-VIDEO cable.

- 1. Connects to an air antenna.
- 2. Connects to a cable system.

For more information on how to connect antennas, see "Connecting TV" in the Installation section.

## 5. DVI/PC IN



- 1. **DVI-D** 
  - Connect the DVI cable to the **[DVI-D]** port on the back of your monitor. (With DVI, only PC input signals are supported.)
- 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.

## 6. COMPONENT IN



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. Рк, Рв, У

: Connect the VIDEO OUT port of the DVD / DTV Set-Top Box to the **[Pr, Pb,Y]** input ports using a component video cable (Pr, Pb,Y).

7. DIGITAL AUDIO OUT(OPTICAL) / SERVICE

## 1. 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.

#### 2. SERVICE

: This is a reserved terminal used for servicing.



8. 🎧

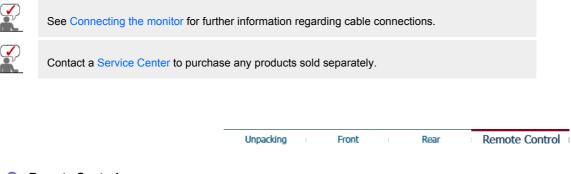


• Connect your headphones to the Headphone connection terminal

9. 🔐 Kensington Lock



 The Kensington lock is a device used to physically fix the system when using it in a public place. (The locking device has to be purchased separately.)
 For using a locking device, contact where you purchase it.



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. <sup>(1)</sup> POWER

- 2. Number button
- 3. button
- 4. TV/DTV
- 5. CH LIST
- 6 + VOL -
- 7. 🕸 MUTE
- 8. 🖽 MENU
- 9. ▲▼◀► Up-Down Left-Right buttons
- 10. 🕀 ENTER
- 11. SOURCE
- 12. PRE-CH
- 13. ANTENNA
- 14. ADD/DEL
- 15.  $\land$  CH  $\lor$
- 16. *-*<sup>©</sup> EXIT
- 17. PIP
- 18. INFO
- 19. SLEEP
- 20. P.MODE, M/B
- 21. S.MODE
- 22. AUTO
- 23. P.SIZE
- 24. SOURCE
- 25. POSITION
- 26. SIZE
- 27. MTS

#### 1. <sup>(b)</sup> POWER

Turns the monitor On/Off.

## 2. Number button

Selects TV/DTV channels in the TV/DTV mode. Used to change channels when PIP is selected and the PIP SOURCE is set to TV/DTV.

#### 3. - button

The "-" button operates only for DTV. It is used to select MMS (multi-channel) for a DTV.

## 4. TV/DTV

This button is used to switch between normal and DTV broadcasting signals.

## 5. CH LIST

Manages all channels.

## 6. + VOL -

Adjusts the audio volume.

### 7. 🕸 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 - **VOL** + buttons to cancel the Mute function.

#### 8. 🖽 MENU

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

### 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. 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.

## 12. PRE-CH

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

#### 13. ANTENNA

Press to select "Air" or "Cable".

#### 14. ADD/DEL

Use this button to manually memorize or delete the selected channel.

#### 15. $\wedge$ CH $\vee$

In TV/DTV mode, selects TV/DTV channels.

## 16. - 🛡 EXIT

Exits from the menu screen.

#### 17. PIP - Available in PC/DVI Mode

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

#### 18. INFO

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

#### 19. SLEEP

Turns the monitor off after a pre-determined period of time.

#### 20. P.MODE, M/B

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.

#### when you press this button, current mode is displayed on the lower center of the scree

#### TV/DTV / AV / 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  $\rightarrow$  Standard  $\rightarrow$  Movie  $\rightarrow$  Custom )

## PC / DVI ( M/B=MagicBright™)

MagicBright<sup>™</sup> 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)

## 21. 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  $\rightarrow$  Music  $\rightarrow$  Movie  $\rightarrow$  Speech  $\rightarrow$  Custom )

#### 22. AUTO - Available In PC mode Only

Adjusts the screen display automatically.

## 23. P.SIZE

Press to change the screen size. PC/ DVI mode : Wide / 4:3 TV/AV/S-Video/Component/HDMI : Wide / 16:9 / Zoom1 / Zoom2 / 4:3 DTV : Wide / 16:9 /4:3

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

Selects the Video SOURCE.

#### 25. POSITION - Adjustable when the PIP function is ON.

Changes the Position of the PIP window.

## 26. SIZE - Adjustable when the PIP function is ON.

You can switch the Picture Size.

#### 27. MTS

You can select the MTS (Multichannel Television Stereo) mode. Mono, Stereo, SAP (Separate Audio Program) Set 'MTS' to ON to choose Mono, Stereo or SAP.



Model SyncMaster 2280HD -



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

## Connecting the monitor



- 1. Connect the power cord for your monitor to the power port on the back of the monitor. Plug the power cord for the monitor into a nearby outlet.
- 2. Use appropriate connection for your computer.
  - 2-1. Using the D-sub (Analog) connector on the video card. Connect the signal cable to the [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.



You may enjoy clear and quality sound from the computer sound card using the monitor speakers. (You don't need to install any separate speakers for your computer.)



You may get a blank screen depending on the type of video card you are using, if you connect simultaneously both the D-sub and DVI cables to one computer.



If you connect properly your monitor using the DVI connector but get a blank or fuzzy screen, check to see if the monitor status is set to analogue. Press 'source' button to have the monitor double-check the input signal source.

1. Connecting to a Computer

#### 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. 6(.....)6 [PC]



Turn on the monitor and Macintosh.

Connecting the Monitor Using the Stand 👘 Installing the Monitor Driver Installing the Monitor Driver Connecting the (Automatic) (Manual) Other devices

## 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.



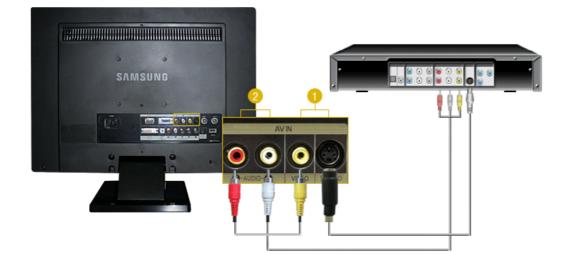
The DVI to HDMI cable, digital audio optic output cable, and RCA to stereo (for PC) cable are all sold separately.

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 [AV] or [S-VIDEO] terminal of

the monitor using the AV or S-Video cable.

2. Connect the port of the DVD, VCR (DVD / DTV Set-Top Box) to the [L- AUDIO-R] port of the monitor.

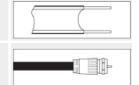


#### 2. Connecting TV - Connecting VHF and UHF Antennas



If your antenna has a set of leads that look like the diagram to the right, see "Antennas with 300  $\Omega$  Flat Twin Leads" below.

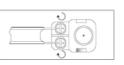
If your antenna has one lead that looks like the diagram to the right, see "Antennas with  $75\Omega$  Round Leads". If you have two antennas, see "Separate VHF and UHF Antennas".



#### 1. Antennas with 300Ω Flat Twin Leads

If you are using an off-air antenna (such as a roof antenna or "rabbit ears") that has  $300\Omega$  twin flat leads, follow the directions below.

1-1. Place the wires from the twin leads under the screws on a 300-75Ω adapter (not supplied).
 Use a screwdriver to tighten the screws.



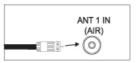
ANT 2 IN (CALBE)

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1-2. Plug the adaptor into the **ANT 2 IN (CABLE)** terminal on the back of the TV.

#### 2. Antennas with $75\Omega$ Round Leads

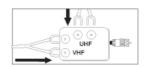
2-1. Plug the antenna lead into the ANT 1 IN (AIR) terminal on the back of the TV.



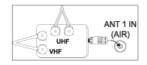
#### 3. Separate VHF and UHF Antennas

If you have two separate antennas for your TV (one VHF and one UHF), you must combine the two antenna signals before connecting the antennas to the TV. This procedure requires an optional combiner-adaptor (available at most electronics shops).

3-1. Connect both antenna leads to the combiner.



3-2. Plug the combiner into the ANT 1 IN (AIR) terminal on the



#### 2. Connecting TV - Connecting Cable TV

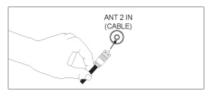


To connect to a cable TV system, follow the instructions below.

## 1. Cable without a Cable Box

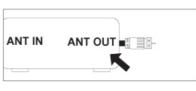
If you are using an off-air antenna (such as a roof antenna or "rabbit ears") that has  $300\Omega$  twin flat leads, follow the directions below.

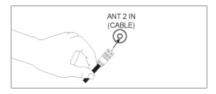
- 1- Plug the incoming cable into the ANT 2 IN (CABLE)
- 1. terminal on the back of the TV.
  - Because this TV is cable-ready, you do not need a cable box to view unscrambled cable channels.



#### 2. Connecting to a Cable Box that descrambles all Channels

- 2-1. Find the cable that is connected to the ANT OUT terminal on your cable box.
  - This terminal might be labeled "ANT OUT", "VHF OUT" or simply, "OUT".
- 2-2 Connect the other end of this cable to the ANT 2 IN (CABLE) terminal on the back of the TV.

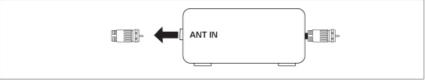




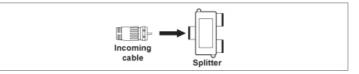
#### 3. Connecting to a Cable Box that descrambles some Channels

If your cable box descrambles only some channels (such as premium channels), follow the instructions below. You will need a twoway splitter, an RF (A/B) switch, and four lengths of RF cable. (These items are available at most electronics stores.)

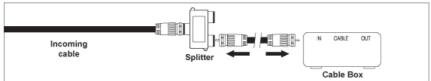
3-1. Find and disconnect the cable that is connected to the ANT IN terminal on your cable box. This terminal might be labeled "ANT IN", "VHF IN" or simply, "IN".



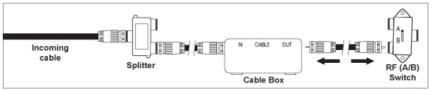
3-2. Connect this cable to a two-way splitter.



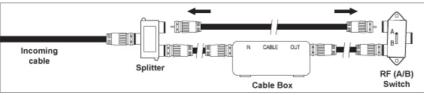
3-3. Connect an RF cable between the OUTPUT terminal on the splitter and the IN terminal on the cable box.



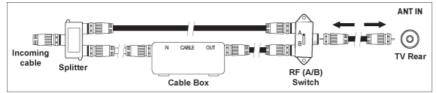
3-4. Connect an RF cable between the ANT OUT terminal on the cable box and the B–IN terminal on the RF(A/B) switch.



3-5. Connect another cable between the other OUT terminal on the splitter and the A–IN terminal on the RF (A/B) switch.



3-6. Connect the last RF cable between the OUT terminal on the RF (A/B) switch and the ANT IN terminal on the rear of the set.



After you have made this connection, set the A/B switch to the "A" position for normal viewing. Set the A/B switch to the "B" position to view scrambled channels. (When you set the A/B switch to "B", you will need to tune your TV to the cable box's output channel, which is usually channel 3 or 4.)

#### 3. Connecting Other Devices

#### 1. Connecting DVD/DTV Set Top Box

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



- 1. Connect the port of the DVD, VCR (DVD / DTV Set-Top Box) to the **[R-AUDIO-L]** port of the monitor.
- Connect the VIDEO OUT port of the DVD / DTV Set-Top Box to the [PR, PB,Y] input ports using a component video cable (PR, PB,Y).



Select "Component" using the 'SOURCE'.

If you connect the  $\mathsf{P}_\mathsf{R}, \mathsf{P}_\mathsf{B},$  and Y component cables to the incorrect terminals, the screen will be displayed in red or blue.

For single-family houses, install an UHF antenna to receive digital broadcasting.

#### 2. Connecting HDMI



You can connect digital output devices to your monitor. You can enjoy better screen and sound quality.

## 2-1. Connecting Using a HDMI Cable



- 1. Input devices such as digital DVD are connected to the **[HDMI IN]** terminal of the monitor using the HDMI cable.
- 2. When all the connections are completed, connect the power cords for the monitor and DVD (or the device connected to the digital output terminal).
- 3. Select "HDMI" using the '

#### 2-2. 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. When all the connections are completed, connect the power cords for the monitor and DVD (or the device connected to the digital output terminal).
- 4. Select "HDMI" using the '



If you just connect using the DVI to HDMI cable without connecting to the sound source, you cannot hear sound.

Connecting the audio output terminal of a digital device to the **[R-AUDIO-L]** of **[AV IN]** of the monitor using an audio cable will not give you sound. Make sure to connect to the **[HDMI/PC DVI-D AUDIO IN]** terminal of the monitor.

#### 3. 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.

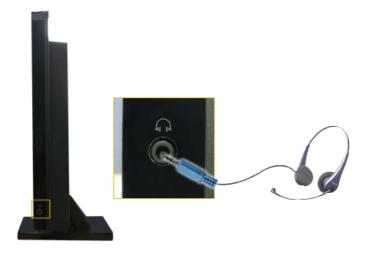


For information on how to connect a speaker and amplifier, refer to the respective user manuals provided by their manufacturers.

## 4. Connecting Headphone



You may connect your headphones to the monitor.



• Connect your headphones to the Headphone connection terminal.

Connecting the Monitor	Connecting the Other devices	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

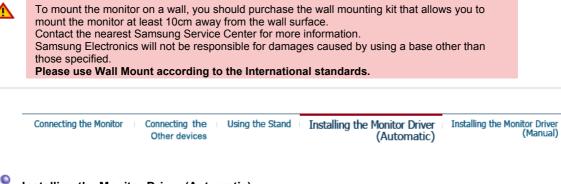
This monitor accepts a 100 mm x 100 mm VESA-compliant mounting interface pad



## A. Monitor

- B. Mounting interface pad (Sold separately)
- Turn off your monitor and unplug its power cord.
   Lay the LCD monitor face-down on a flat surface with a cushion beneath it to protect the screen.
- 3. Turn the fixing screw 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.



## 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 below.

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

- 1. Insert the CD into the CD-ROM drive.
- 2. Click "Windows".
- 3. Choose your monitor model in the model list, then click the "OK" button.

SAMSUNG monitor installer	×
Select the display adapter on which you want to intall the monitor	
1. RADEON 9550 : Plug and Play Monitor	-
Select the monitor which you want to install	
Samsung ****	
<	8
OK CANCEL	
UN CANCEL	

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

Hardwa	re Installation
⚠	The software you are installing for this hardware: Samsung **** has not passed Windows Logo testing to verify its compatibility with Windows XP. (Tell me why this testing is important.) Continuing your installation of this software may impair or destabilize the correct operation of your system either immediately or in the future. Microsoft strongly recommends that you stop this installation now and contact the hardware vendor for software that has passed Windows Logo testing.
	Continue Anyway



This monitor driver is under certifying MS logo,and this installation dosen'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	Connecting the Using the Stan Other devices	d Installing the Monitor Driver (Automatic)	Installing the Monitor Driver (Manual)
Installing	g the Monitor Dr	iver (Manual)		
		Windows XP	Windows 2000  Windows	Me  Windows NT   Linux
👗 wi	th this monitor. D	Priver installation is slight	the monitor driver, insert tly different from one oper or the operating system yo	ating system to
Pr	epare a blank disk	and download the driver p	rogram file at the Internet w	eb site shown below.
Internet	et web site :	http://www.samsung.com/ http://www.samsung.com/ http://www.sec.co.kr/moni	monitor (U.S.A)	

## Microsoft<sup>®</sup> Windows Vista™ Operating System

0

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

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

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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".

Adapter Monitor Doubleshoot Color Management Monitor Type Generic ProP Monitor Properties	Windows needs your permission to contionue.
Nontor Settings Sprene refresh rate: 60 Herts: 20 Herts: 20 Her modes that this monitor cannel display 20 Hole modes that this monitor cannel display charry this check box allows you to select display modes that this monitor cannot display correctly. This may lead to an unusable display and/or dismage the disease.	Device Properties     Microsoft Windows      Details     Continue     Cancel User Account Control helps stop unauthorized changes to your computer
OK Cancel Anti-	



This monitor driver is under certifying MS logo, and this installation doesn't damage your system.

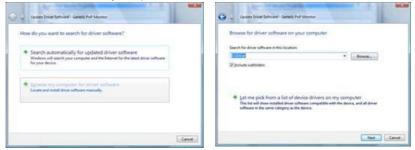
The certified driver will be posted on Samsung Monitor homepage

http://www.samsung.com/

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

neric PnP Monitor Properties	Generic Pr/P Monitor Properties
Seneral Driver. Details	General Driver Details
Senetic PvP Montor	Genesc PriP Monitor
Device type: Montors Manufacture: (Slandard monitor types) Location: on IN/DIA GeForce 6600 LE (Monseth Carpo Device status	Diver Provider Microsoft Diver Date 6/21/2006 Diver Version 6.0.6000 16388 Digital Sgner microsoft windows
This device is working properly.	Diver Details To vew details about the driver files. Lipides Driver To update the driver software for this device.
	Buil Back Driver Enderson fail the updates the driver roll back to the previously initialized driver. Deable: Deable: Deables the selected drivor. Upwatali To uninitial the driver (Advanced).
OK Ganoal	OK Ceres

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



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

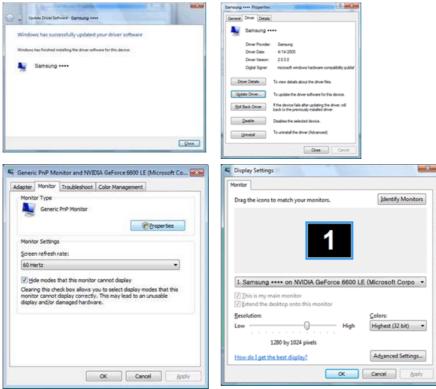
Select the device driver you want to install for this hardware.	heef the manufacture's installation disk, and then make sure that the correct drive is selected below. Cano
V. Bros genetick technic Node 19 Genetic Hill Monter	Copy manufacturer's files from:
The draw is diplaty signed. Tell we shall be a some a modeled.	L

9.

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



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

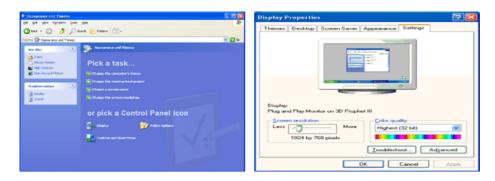


Microsoft<sup>®</sup> Windows<sup>®</sup> XP Operating System

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

E Control Panel		P Appearance and Tremes	
the Ell term Parotes tool (b)\$ © finit = ② + ③ P Search ≥ holles □ + Address ③ Controlfanel	\$7 ₩ 23 0	Die Eift zum Frauenten (dem Beite ∰ Eift zum Frauenten (dem Beiter) Robern ∰ Approvision auf Preven	a ≝ 23 o
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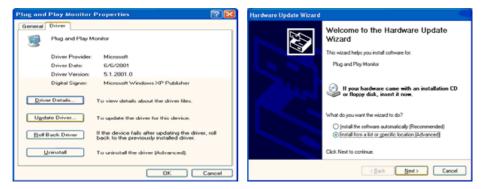
3. Click "Display" icon and choose the "Settings" tab then click "Advanced."



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

Plug and Play Monitor and 3D Prophet III Properties 👘 📝 🔀	Plug and Play Monitor Properties	2 🔀
GeForce3 Device Selection Color Correction General Adapter Monitor Troubleshoot Color Management Monitor type Plug and Play Monitor Properties	General Driver Plug and Play Monitor Device type: Monitors Manufacture: (Standard monitor types)	
Monitor settings Screen refresh rate:	Location: on 3D Prophet III	
60 Hertz Hide modes that this monitor cannot display Clearing this check hox allows you to select display modes that this monitor cannot display correctly. This may lead to an unusable display and/or damaged hardware.	Device status This device is working properly. If you are having problems with this device, click. Troubleshoot to start the troubleshooter.	~
	Iroubleshoot Revice usage: Use this device (enable)	
OK Cancel Apply	ОК. С.	ancel

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



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



 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.

Ceneral Driver Samsung **** Driver Povider: Samsung Driver Date: 3/11/2001 Driver Version: 1.0.0.0 Driver Version: Not digitally signed	Wizard The wizard has finished installing the software for: Samsung **** Circk Freich to close the wizard Circk Freich to close the wizard Circle Freich Connol Differe Provide: Samsung Differe Provide: Samsung Differe Provide: Samsung Differe Version: 10.0.0 Digital Signes: Not digitally signed Differe Details	Wizard         The wizard bas finished installing the software for:         Samsung ****         Cick Frish to close the wizard         Cick Frish to close the divertity of the close the divertity of the close the divertity in the close to the close the close the close to the close to the close to the close to the close	Vizard The wizard has finished installing the software for: Samsung **** Cick Frich to close the wizard Cick Frich to close the driver files. Cick Frich to close the driver for this device. Cick Frich to close the driver for this device. Cick Frich to close the driver for this device.	Hardware Update Wizard	
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10. Monitor driver installation is completed.

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

🔯 When you can see "Digital Signature Not Found" on your monitor, follow these steps.

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

Distall 🔀 🔁

- 1. Click "Start," "Setting," and then "Control Panel."
- 2.
- Double click the "Display" icon. Choose the "Settings" tab and then click "Advanced." 3.

- 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 "Update Driver" then click the "Next" button.
- 6. Choose "Display a list of the known drivers for this device so that I can choose a specific driver" then click "Next" and then click "Have disk.'
- 7. Click the "**Browse**" button then choose A:(D:\Driver).
- 8. Click the "Open" button, then click "OK" button.
- 9. Choose your monitor model and click the "Next" button then click "Next" button.
- 10. Click the "Finish" button then the "Close" button.

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

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

- 1. Click "Start," "Setting" and then "Control Panel."
- Double click "Display" icon.
   Select the "Settings" tab and click the "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 the "Next" button.
- 8. Click the "Have Disk" button
- 9. Specify A:\(D:\driver) then click "OK" button.
- 10. Select "Show all devices" and choose the monitor that corresponds to the one you connected to your computer and click "OK.'
- 11. Continue choosing "Close" button and "OK" button until you close the Display Properties dialogue box.

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

- 1. Click Start, Settings, Control Panel, and then double-click the Display icon.
- In the Display Registration Information window, click the Settings tab and then click All Display 2. Modes.
- 3. Select a mode that you wish to use (Resolution, Number of colors and Vertical frequency) and then click OK.
- 4. Click the 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.
- The third screen is for setting your mouse. 2.
- Set a mouse for your computer. 3.
- 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.



Model SyncMaster 2280HD



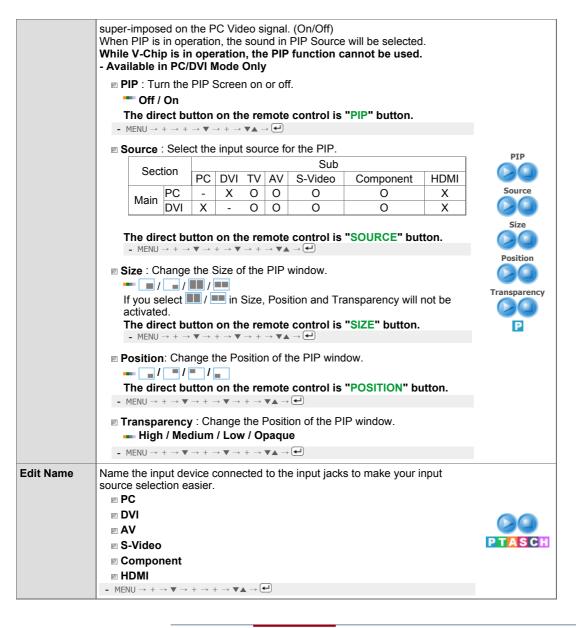
## Input



Available Source List PC / DVI T: TV A: AV S: S-Video C: Component : HDMI

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

Menu	Description	Play/Stop
Source List	Use to select PC, TV or other external input source connected to the Monitor. Use to select the screen of your choice. The direct button on the remote control is "SOURCE" button. ■ PC ■ DVI ■ TV ■ AV ■ S-Video ■ Component ■ HDMI - MENU → + → + → ♥ → +	PTASCH
PIP	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	



Input Picture Sound Channel Setup

# Picture

SOURCE (SOURCE) : PC / DVI



Available Mode	🖻 : PC / DVI	🚺 : TV	🔼 : AV	S: S-Video	C : Component	🗄 : HDMI

 $\checkmark$ 

Menu	Description	Play/Stop
MagicBright™	<ul> <li>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: Custom, Entertain, Internet, and Text. Each mode has its own pre-configured brightness value.</li> <li>Each mode has its own pre-configured brightness value.</li> <li>Each mode has its own pre-configured brightness value.</li> <li>Each mode has its own pre-configured brightness value.</li> <li>The direct button on the remote control is 'M/B' button.</li> <li>The direct button on the remote control is 'M/B' button.</li> <li>The direct button on the remote control is 'M/B' button.</li> <li>Internet     <ul> <li>High Brightness</li> <li>For watching motion pictures such as a DVD or VCD.</li> </ul> </li> <li>Internet     <ul> <li>Medium Brightness</li> <li>For working with a mixture of images such as text and graphics.</li> </ul> </li> <li>Text     <ul> <li>Normal Brightness</li> <li>For documentations or works involving heavy text.</li> </ul> </li> <li>Custom     <ul> <li>Although the values are carefully chosen by our engineers, the preconfigured values may not be comfortable to your eyes depending on your taste.</li> <li>If this is the case, adjust the Brightness and Contrast by using the OSD menu.</li> </ul> </li> <li>MENU → ▼ → + → + → ▼ ▲ → et</li> </ul>	
Custom	You can use the on-screen menus to change the contrast and brightness according to personal preference.    Contrast : Adjust the Contrast.  Brightness : Adjust the Brightness.  Sharpness : Adjust the Sharpness.  MENU → ▼ → + → ▼ → + → ♥ → ++▼▲ → ♥	
If you	adjust picture using Custom function, MagicBright will turn to Custom m	ode.
Color Tone	The tone of the color can be changed.         - Available in PC/DVI Mode Only.         Cool / Normal / Warm / Custom         - MENU → ▼ → + → ▼ → + → ▼ ▲ → ●	

Color Control	Adjusts the individual R, G, B color controls. - Available in PC/DVI Mode Only. ■ R-Gain ■ G-Gain ■ B-Gain - MENU → ▼ → + → ▼ → + → ♥ → -+ ▼▲ → MENU	
If you mode	adjust picture by using Color Control function, Color Tone will turn to the	Custom
Image Lock	<ul> <li>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.</li> <li>Available in PC Mode Only</li> <li>Coarse</li> <li>: 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.</li> <li>Fine</li> <li>: Removes noise such as horizontal stripes. If the noise persists even after Fine tuning, repeat it after adjusting the frequency (clock speed).</li> <li>MENU → ♥ → + → ♥ → + → ♥ → + → ■ → + ♥ ▲ → MENU</li> <li>Position</li> <li>: Adjusts the screen location horizontally and vertically.</li> <li>MENU → ♥ → + → ♥ → + → ♥ → + → - + ♥ ▲ → MENU</li> </ul>	Coarse /Fine 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 - MENU → ▼ → + → ▼ → +	
Size	You can switch the Size. The direct button on the remote control is the 'P.SIZE' button. ■ Wide ■ 4:3 - MENU → ▼ → + → ▼ → + → ▼▲ → ←	
PIP Picture	You can adjust the PIP Screen Settings. Available in PC / DVI Mode Only ■ Contrast : Adjusts the Contrast of the PIP window on the screen. ■ Brightness : Adjusts the Brightness of the PIP window on the screen. ■ Sharpness : Adjusts the Sharpness of the PIP window on the screen. ■ Color : Adjusts the Color of the PIP window on the screen ■ Tint : Adds a natural tone to the PIP window. (PIP Screen : Analog TV Only) - Available : PIP ON - MENU → ▼ → + → ▼ → + → ♥ → + ♥ ▲ → MENU	

SOURCE (SOURCE) : TV / AV / S-Video / Component / HDMI



Available Mode P: PC / DVI T: TV A: AV S: S-Video C: Component

Y,

🔢 : HDMI

Menu	Description	Play/Stop
Mode	<ul> <li>The Monitor has four automatic picture settings ("Dynamic", "Standard", "Movie", and "Custom") that are preset at the factory.</li> <li>You can activate either Dynamic, Standard, Movie, or Custom. You can select "Custom" which automatically recalls your personalized picture settings.</li> <li>The direct button on the remote control is 'P.MODE' button.</li> <li>Dynamic <ul> <li>Select this mode to view a sharper image than in "Standard" mode.</li> </ul> </li> <li>Standard <ul> <li>Select this mode when the surroundings are bright. This also provides a sharp image.</li> <li>Movie <ul> <li>Select this mode when the surroundings are dark. This will save power and reduce eye fatigue.</li> <li>Custom <ul> <li>Select this mode when you want to adjust the image according to your preferences</li> <li>MENU → ♥ → ♥ → ♥ → ♥ → ♥</li> </ul> </li> </ul></li></ul></li></ul>	TASCH
Custom	You can use the on-screen menus to change the contrast and brightness according to personal preference. ■ Contrast : Adjusts the contrast. ■ Brightness : Adjusts the brightness. ■ Sharpness : Adjusts the picture sharpness. ■ Color : Adjusts the picture color. ■ Tint : Adds a natural tone to the display. - MENU → ♥ → ♥ → ♥ → ♥ → ♥ → +♥ ▲ → MENU	TASCH
Color Tone	The tone of the color can be changed.            ■ Cool 2 / Cool 1 / Normal / Warm 1 / Warm 2             ■ MENU → ▼ → ♥ → ▼ → ♥ → ▼ ▲ → ♥	TASCH
Size	You can switch the Size. The direct button on the remote control is 'P.SIZE' button. ■ Wide / 16:9 / Zoom1 / Zoom 2 / 4:3 Zoom1, Zoom2 are not available in 1080i(or over 720p) of DTV. - MENU → ▼ → ♥ → ♥ → ♥ → ♥ → ♥	TASCH

Digital NR	Digital Noise Reduction. If the broadcast signal received by your TV is weak, you can activate the Digital Noise Reduction feature to help reduce any static and ghosting that may appear on the screen. ■ Off / Low / Medium / High / Auto - MENU → ▼ → ♥ → ▼ → ♥ → ▼ ▲ → ♥	
Film Mode	The Film Mode feature offers you a theater-quality viewing experience.         In Component mode, film mode is only available for 480i and 576i input.         Image: Solid constraints of the image: Soli	
	Input Picture Sound Channel	Setup

# Sound



Available Mode P: PC / DVI T: TV A: AV S: S-Video C: Component I: HDMI

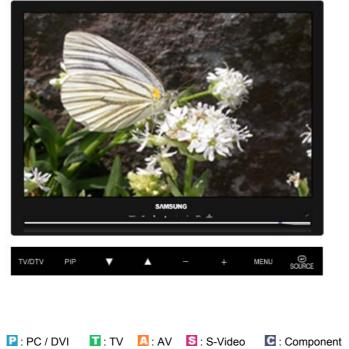
Menu	Description	Play/Stop
Mode	<ul> <li>The Monitor has a built-in high fidelity stereo amplifier.</li> <li>The direct button on the remote control is 'S.MODE' button.</li> <li>Standard <ul> <li>Choose Standard for the standard factory settings.</li> <li>Music</li> <li>Choose Music when watching music videos or concerts.</li> <li>Movie</li> <li>Choose Movie when viewing movies.</li> <li>Speech</li> <li>Choose Speech when watching a show that is mostly dialogue (i.e., news).</li> <li>Custom</li> <li>Choose Custom if you want to adjust the settings according to personal preference.</li> <li>MENU → ▼ → + → + → ▼ ▲ → ●</li> </ul> </li> </ul>	PTASCH
Custom	<ul> <li>The sound settings can be adjusted to suit your personal preference.</li> <li>Bass <ul> <li>Emphasize low frequency audio.</li> </ul> </li> <li>Treble <ul> <li>Emphasize high frequency audio.</li> </ul> </li> </ul>	00

	<ul> <li>Balance</li> <li>Allows you to adjust the sound balance between the left and right speakers.</li> <li>You can hear the sound even when the sound value is set to 0.</li> <li>MENU → ▼ → + → ▼ → + → € → → +▼▲ → MENU</li> </ul>	PTASCH
Auto Volume	Reduces the differences in volume level among broadcasters.         ■ Off / On         - MENU → ▼ → + → ▼ → + → ▼▲ → €	PTASCH
Internal Mute	If you set this menu "On", sound output from the speakers is muted in case of using the home theater. ■ Off / On - MENU → ▼ → + → ▼ → + → ▼ ▲ → €	PTASCH
Preferred Language	The digital-TV transmission system is capable of simultaneous transmission of many audio tracks (for example, simultaneous translations of the program into foreign languages). - Available in DTV Mode Only Benglish Español Français	
MTS	<ul> <li>MENU → ▼ → + → ▼ → + → ▼ ▲ → €</li> <li>You can select the MTS (Multichannel Television Stereo) mode.</li> <li>Mono, Stereo, SAP (Separate Audio Program)</li> <li>Available in Analog TV Mode Only</li> <li>I Off / On</li> <li>MENU → ▼ → + → ▼ ▲ → €</li> </ul>	
SRS TruSurround XT	You can experience sonorous and vivid sound, as if from 5.1 channel speakers. ■ Off / On - MENU → ▼ → + → ▼ → + → ▼ ▲ → ←	PTASCH
Sound Select	You can select either Main or Sub when PIP is On. ■ Main / Sub - Available : PIP ON - PIP → MENU → ▼ → + → ▼ → + → ▼▲ → ♥	P

Input Picture Sound Channel Setup

# Channel

Available Mode





Menu	Description	Play/Stop
Antenna	You can select a normal or wired channel. If the antenna is connected to ANT 1 IN (AIR),select "Air" and if it is connected to ANT 2 IN(CABLE), select "Cable". If both ANT 1 IN (AIR) and ANT 2 IN (CABLE) are connected, select the antenna input you want. If the antenna input is not selected properly, noise may appear on the screen. The direct button on the remote control is 'ANTENNA' button. ■ Air ■ Cable - MENU → ♥ → + → + → ♥ → ♥	
Auto Program	The TV automatically cycles through all of the available channels and stores them in memory. In rare cases, "Auto program" may miss a few channels due to weak signals and the channels may not be added to the channel memory. ■ Air ■ Cable ■ Air+Cable - MENU → ▼ → + → ▼ → + → ♥▲ → + → ♥●	
Clear Scrambled Channel	<ul> <li>The Clear Scrambled Channel function is used to filter out scrambled channels after "Auto Program" is completed. It removes the scrambled channels from the list by tuning the digital cable channels.</li> <li>This process may take up to 20~30 minutes.</li> <li>Available in Digital Cable TV Mode Only</li> <li>MENU → ▼ → + → ▼ → + → ▼ → + → ♥ → MENU</li> </ul>	
Channel List	You can manage the channels. The direct button on the remote control is 'CH LIST' button. - MENU → ♥ → + → ♥ → + → ♥ ▲ → + → ♥ → MENU	
Fine Tune	Due to weak signals or an incorrect antenna configuration, some of the channels may not be tuned correctly.         - Available in Analog TV Mode Only         - MENU → ▼ → + → ▼ → + → ● → ▼ → ●         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         - MENU → ▼ → + → ▼ → + → ▼ ▲ → ●	
Signal Strength	<ul> <li>Unlike analog channels, which can vary in reception quality from "snowy" to clear, digital (HDTV) channels have either perfect reception quality or you will not receive them at all. So, unlike analog channels, you cannot fine tune a digital channel. You can, however, adjust your antenna to improve the reception of available digital channels.</li> <li>If the signal strength meter indicates that the signal is weak, physically adjust your antenna to increase the signal strength. Continue to adjust the antenna until you find the best position with the strongest signal.</li> <li>Available in DTV Mode Only</li> <li>MENU → ▼ → + → ▼ → + → ●</li> </ul>	

Input Picture Sound Channel Setup

Setup



Available Mode	P : PC / DVI	🚺 : TV	A: AV	S: S-Video	C : Component	H : HDMI
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Manu	Description	
Menu	Description	Play/Stop
Language	You can choose one of 3 languages. English Español Français The language chosen affects only the language of the OSD. It has no effect on any software running on the computer. - MENU → ♥ → ♥ → ♥ → ♥ ▲ → ♥	PTASCH
Sleep Timer	Use to set the Monitor to be turned off automatically in certain minutes. The direct button on the remote control is 'SLEEP' button.	PTASCH
V-Chip	<ul> <li>Protects children from viewing inappropriate programs by blocking certain broadcast or AV programs. (More Information)</li> <li>While V-chip is in operation, the PIP function cannot be used.</li> <li>Parental restriction levels differ depending on the broadcasting station.</li> <li>The default menu name and Downloadable US rating changes depending on the downloaded information.</li> <li>Even if you set the On-screen display to your desired language, the "Downloadable U.S. Rating" menu will appear in English only.</li> <li>The rating will automatically block certain categories that are more restrictive.</li> <li>The rating titles(For example: Humor Leveletc) and TV ratings(For example:DH,MH,Hetc) may differ depending on the broadcasting station.</li> <li>If you forget the PIN, 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.</li> <li>TV Parental Guidelines</li> <li>MPAA Rating</li> <li>Canadian-English</li> <li>Canadian-French</li> <li>Downloadable U.S. Rating - Available in DTV Mode Only</li> <li>MENU → ▼ → ♥ → ▼ → ▼ → ♥</li> </ul>	V-Chip Lock V-Chip Lock TV Parental Guidelines MPAA Rating Canadian English Canadian French Change PIN Change PIN Change PIN Change Ch
Caption	Enables or disables the Caption feature and sets the appearance of closed caption text.	Caption Mode

	Analog TV © Caption	
	• Off / On	Channel
	⊠ Mode	
	Caption / Text	Field
	<pre>     Channel </pre>	
	<b>1</b> /2	Caption
	■ Field	
	<b>1</b> /2	Caption Mode
	DTV	Caption Options
	Caption Off / On	Size
	■ Caption Mode	
	Default / Service1 ~6 / CC1~4 / Text1~4	Font Style
	■Caption Options	
	<ul> <li>Size</li> </ul>	Foreground Color
	: Default, Small, Standard, Large	
	Font Style	Background
	: Default, Style0, Style1, Style2, Style3, Style4, Style5, Style6, Style7	Color
	Foreground Color : Default, White, Black, Red, Green, Blue, Yellow, Magenta. Cyan	
	Background Color	Foreground Opacity
	: Default, White, Black, Red, Green , Blue, Yellow, Magenta. Cyan	
	Foreground Opacity	Background
	: Default, Transparent, Translucent, Solid, Flashing	Opacity
	Background Opacity - Default Transport Translugent Solid Fleeking	
	: Default, Transparent, Translucent, Solid, Flashing	Return to Default
	$\overset{\bullet}{\longrightarrow} \text{Return to Default}$	
		TASH
Menu	Changes the opaqueness of the background of the OSD.	
Transparency	<ul> <li>High</li> </ul>	
	⊠ Medium	
	🖻 Low	PTASCH
	$- \text{ MENU} \rightarrow \mathbb{V} \rightarrow \mathbb{V} \rightarrow \mathbb{V} \rightarrow \mathbb{V} \triangleq \rightarrow \mathbb{V} \triangleq \rightarrow \mathbb{V} \blacksquare$	
Blue Screen	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". - PC Mode Available : PIP ON ■ Off / On - MENU → ♥ → ♥ → ♥ → ♥ → ♥ → ♥	PTASCH
HDMI Black Level	<ul> <li>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).</li> <li>Available in HDMI Mode Only</li> <li>Normal / Low</li> <li>MENU → ♥ → ♥ → ♥ → ♥ ▲ → ♥ → ♥ → ♥</li> </ul>	
Reset	Picture parameters are replaced with the factory default values. - Available in PC / DVI Mode Only	Image Reset
	■ Image Reset - Available in PC Mode Only	
	Image parameters are replaced with the factory default values.	Color Reset
	Color Reset - Available in PC / DVI Mode Only	
	Color parameters are replaced with the factory default values.	P
	$\bullet  MENU \to \mathbf{\nabla} \to \mathbf{e} \to \mathbf{\nabla} \to \mathbf{e} \to \mathbf{\nabla} \blacktriangle \to \mathbf{e} \to \bullet $	



Model SyncMaster 2280HD



Self-Test Feature Check Check List

Q & A

# 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 |

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.

## Not Optimum Mode

Recommended Mode

1680 x 1050 60Hz

Refer to Specifications > Preset Timing Modes for the resolutions or frequencies that are



### 3. 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.

### 4. 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.

```
Self-Test Feature Check
                          Check List
                                                Q & A
```

**Check List** 

 $\checkmark$ 

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	Solutions
	It appears the PC does not function normally.	<ul> <li>Check if the Display Adapter Driver (VGA Driver) is properly installed. (Refer to Installing Driver)</li> </ul>
	The monitor screen flickers.	<ul> <li>Check if the signal cable between the computer and the monitor is securely connected and tightened. (Refer to Connecting the monitor)</li> </ul>
TV Mode	TV screen is blurred or shows noise signals.	<ul> <li>Check if the TV antenna connector is securely connected to the external antenna. (Refer to Connecting TV)</li> </ul>

# 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	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> <li>Ensure that the signal cable is firmly connected to the PC or video SOURCEs. (Refer to the Connecting the Monitor)</li> <li>Ensure that the PC or video SOURCEs are turned on.</li> </ul>				
"Not Optimum Mode" message	<ul> <li>Check the maximum resolution and the frequency of the video adapter.</li> <li>Compare these values with the data in the Preset Timing Modes Chart.</li> </ul>				
Picture rolls vertically.	<ul> <li>Check if the signal cable is securely connected. Connect it again securely. (Refer to Connecting the monitor)</li> </ul>				
Image is not clear. Picture is blurred.	<ul> <li>Run Frequency Coarse and Fine tuning.</li> <li>Turn on again after removing all accessories (video extension cable, etc.)</li> <li>Set resolution and frequency to the recommended ranges.</li> </ul>				
Picture image is unstable and vibrates. Ghost images are shown in the	<ul> <li>Check if the resolution and frequency set for the computer video card falls in the range supported by the monitor.</li> <li>If not, reset them referring to the current Information under the monitor menu and Preset Timing Modes.</li> </ul>				
picture.					
The image is too light or too dark	<ul> <li>Adjust the Brightness and Contrast. (Refer to the Brightness, Contrast)</li> </ul>				
Screen color is inconsistent.	<ul> <li>Adjust color using Custom under OSD Color Adjustment menu.</li> </ul>				
Color image is distorted with dark shadows.					
White color is poor.					
Power Indicator blinks green.	<ul> <li>The monitor is currently saving the changes made in settings to the OSD memory.</li> </ul>				
Screen is blank and power indicator light is steady green or blinks every 0.5 or 1 seconds	<ul> <li>The monitor is using its power management system.</li> <li>press a key on the keyboard</li> </ul>				
The screen is blank and is blinking.	<ul> <li>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.</li> </ul>				

# 3. Problems related to Audio

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

Problems Solutions

No sound	<ul> <li>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)</li> <li>Check the volume level. (Refer to the Volume)</li> </ul>
The sound level is too low.	<ul> <li>Check the volume level. (Refer to the Volume)</li> <li>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.</li> </ul>
Sound is too high pitched or too low pitched	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> <li>Check the battery polarities (+/-).</li> <li>Check if the batteries have been exhausted.</li> <li>Check if the power is on.</li> <li>Check if the power cord is securely connected.</li> <li>Check if a special fluorescent or neon lamp is on in the vicinity.</li> </ul>

Self-Test Feature Check Check List

Q & A

1

Q&A

Y)

Question	Answer
How can I change the frequency?	Frequency can be changed by reconfiguring the video card.
	Note that video card support can vary, depending on the version of the driver used. (Refer to the computer or the video card manual for details.)
How can I adjust the resolution?	Windows XP : Set the resolution in the Control Panel $\rightarrow$ Appearance and Themes $\rightarrow$ Display $\rightarrow$ Settings.
	Windows ME/2000 : Set the resolution in the Control Panel $\rightarrow$ Display $\rightarrow$ Settings.
	* Contact the video card manufacturer for details.
How can I set the Power Saving function?	Windows XP : Set the resolution in the Control Panel $\rightarrow$ Appearance and Themes $\rightarrow$ Display $\rightarrow$ Screen Saver. Set the function in the BIOS-SETUP of the computer.
	Windows ME/2000 : Set the resolution in the Control Panel $\rightarrow$ Display $\rightarrow$ Screen Saver. Set the function in the BIOS-SETUP of the computer.
	* Refer to the Windows / Computer Manual
How can I clean the outer case/LCD Panel?	Disconnect the power cord and then clean the monitor with a soft cloth, using either a cleaning solution or plain water.
	Do not leave any detergent or scratches on the case. Do not let any water enter the monitor.
What are the benefits of digital broadcasting?	Digital TV broadcasting generates less noise and provides clearer visuals and sound than analog TV broadcasting does. As services develop, you can also enjoy various information services because various kinds of data besides video and audio can be sent.

	For example, while watching a sports game, you can view various data on your favorite player or you can view all or selected screens which have been captured from different angles for a specific scene. In addition, you can retrive information on a previous story or drama or you can buy home shopping products such as an accessory currently on TV. Digital TV broadcasting allows you to easily access various information services in your home creating a more information-oriented home.
What is the difference between HDTV and SDTV?	There are various types of digital TVs. The most widely known types of digital TV are HDTV and SDTV. They are classified according to the screen quality and the video specifications. - HDTV (High Definition TV): High screen quality, very clear TV. - SDTV (Standard Definition TV): Common standard digital TV. An SDTV has an aspect ratio of 4:3 which is the same as that of an analog TV. HDTV has an aspect ratio of 16:9 which is similar to a cinema screen. This provides a much better screen quality than SDTV.
	It's like having a theater in your home. Digital TV broadcasting in our country is ultimately orientated towards HDTV.
Can I watch HD broadcasting with all digital TVs?	You can receive all digital broadcasts, whether they are SD or HD, using any digital TV. However, you cannot enjoy HD programs, which are the highest quality digital TV programs, using an SD digital TV. Especially, as SD broadcasting has an aspect ratio of 4.3, HD broadcasting has an aspect ratio of 16:9, similar to a cinema screen. Therefore, to enjoy the full benefits of digital TV, it is better to purchase an HD digital TV.(At present, all digital TVs from Samsung Electronics have the 16:9 wide aspect ratio.)
Can I watch digital TV broadcasting with an analog TV?	No. The analog TV cannot interpret digital signals. Therefore, a digital TV is required to watch digital TV broadcasting.
Can I use my present antenna to receive digital broadcasting?	As for existing analog TV, digital TV is designed so that digital broadcasting signals are received via both indoor and outdoor antennas. If signal reception is very good in your environment, you can watch digital broadcasts with your existing indoor antenna. If not, it is better to
How do I connect an antenna for an apartment or tenement house?	Consult the superintendent's office or broadcasting facility administrator for your apartment or tenement house to check whether UHF reception is available.
	Even if digital TV broadcasting is available in your area, if you cannot watch it because the superintendent's office or common broadcasting facility does not rebroadcast the signal, you have to install an indoor or outdoor antenna. Alternatively, your local cable broadcasting company provides a digital
	TV service, and you can subscribe to it. If a cable broadcasting company is sharing a common broadcasting facility for your apartment or tenement house, it has to adjust and send digital TV signals so that they are compatible to shared viewing which is the original purpose of the common broadcasting facility.



Model SyncMaster 2280HD -



General PowerSaver Preset

Preset Timing Modes

# General

General				
Model Name SyncMaster 2280HD				
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 Colors				
Resolution				
Optimum resolution	1680 x 1050 @ 60 Hz < Analog/Digital >			
Maximum resolution	resolution 1680 x 1050 @ 60 Hz < Analog/Digital >			
Input Signal, Terminated				
RGB Analog TTL level (V high $\geq$ 2.0V, V low $\leq$ 0.7 Vp-p 5%	0.8V)			
Maximum Pixel Clock				
135MHz				
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 Conntector, Composite, S-Video, Component, RF				
Dimensions (WxHxD)/ Weight				

520.0 X 439.0 X 201.9 mm / 20.5 x 17.3 x 7.9 inch / 7.1 kg / 15.65 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

VESA Mounting Interface				
100 mm X 100 mm				
Environmental considerations				
OperatingTemperature: 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				
<ul> <li>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.</li> <li>For example, the number of TFT LCD sub pixels contained in this product are 5,292,000.</li> </ul>				
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
Concrete	FUNCIDAVEI	r react rinning riouca

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

State	Normal Operation	Iormal Operation Power saving mode	
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<sup>®</sup> compliant and ENERGY2000 compliant when used with a computer equipped with VESA DPMS functionality.

As an ENERGY STAR<sup>®</sup> Partner, SAMSUNG has determined that this product meets the ENERGY STAR<sup>®</sup> 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	100.00	-/-
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	108.00	+/+
VESA, 1280 x 960	60.000	60.000	108.00	+/+
VESA, 1280 x 1024	63.981	60.020	108.00	+/+
VESA, 1280 x 1024	79.976	75.025	135.00	+/+
VESA,1680 x 1050	64.674	59.883	119.00	+/-

Component	480i@60	480p/60	720p@60	1080i@60	1080p@60
HDMI	480p/60	720p@60,	1080i@60	1080p@60	

# **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





Model SyncMaster 2280HD



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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.

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MEXICO	01-800-SAMSUNG (7267864)	http://www.samsung.com/mx

Latin America				
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CHILE	800-726-7864 (SAMSUNG)	http://www.samsung.com/cl		
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EL SALVADOR	800-6225	http://www.samsung.com/latin		
GUATEMALA	1-800-299-0013	http://www.samsung.com/latin		
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PANAMA	800-7267	http://www.samsung.com/latin		
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1800-10-SAMSUNG (7267864)	http://www.samsung.com/ph		
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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.

## Oot 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.

#### OCATV

"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.

#### OVD

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.

#### ODTV 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.

### OA2

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

#### OBTSC

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.

## **O**VI

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 HD, 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 2channel speaker. It has a good effect when stereo signals are input.

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# For Better Display

- Adjust the computer resolution and screen inection 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.
  - o Resolution: 1680 x 1050
  - Vertical frequency (refresh rate): 60 Hz
- 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.
- 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
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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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LCD Monitors and TVs may have an image retention when switching from one image to another especially after displaying a stationary image for a long time. This guide is to demonstrate a correct usage of LCD products in order to protect them from Image retention.

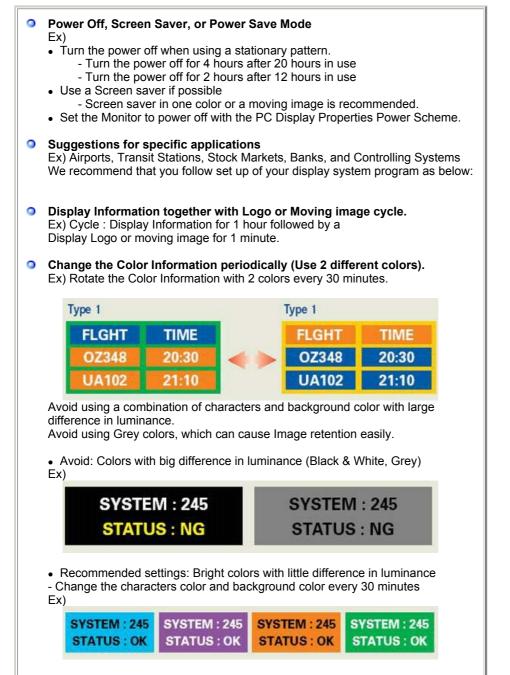
## Warranty

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

What is Image retention ?

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

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



- Every 30 minutes, change the characters with movement.

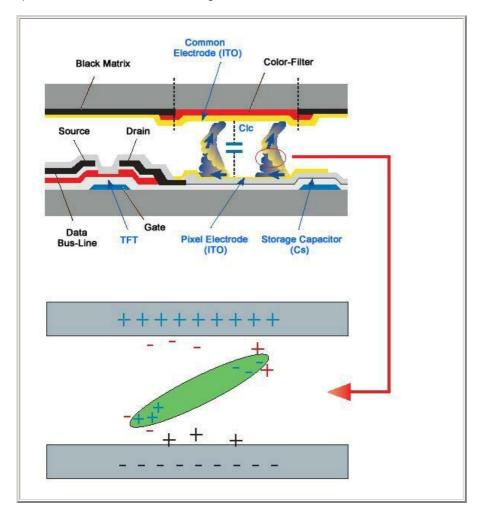


# The best way to protect your monitor from Image retention is to set your PC or System to operate a Screen Saver program when you are not using it.

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

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

To prevent this, the accumulated voltage difference must be decreased.



Our LCD Monitor satisfies ISO13406-2 Pixel fault Class II