# SAMSUNG

BN68-01399A-01

SERIES 4
450

# Plasma TV
# user manual

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Model _____  Serial No. _____

# SAMSUNG

# Important Warranty Information Regarding Television Format Viewing

Wide screen format PDP Displays (16:9, the aspect ratio of the screen width to height) are primarily designed to view wide screen format full-motion video. The images displayed on them should primarily be in the wide screen 16:9 ratio format, or expanded to fill the screen if your model offers this feature and the images are constantly moving. Displaying stationary graphics and images on screen, such as the dark side-bars on nonexpanded standard format television video and programming, should be limited to no more than 5% of the total television viewing per week.

Additionally, viewing other stationary images and text such as stock market reports, video game displays, station logos, web sites or computer graphics and patterns, should be limited as described above for all televisions. **Displaying stationary images that exceed the above guidelines can cause uneven aging of PDP Displays that leave subtle, but permanent burned-in ghost images in the PDP picture. To avoid this, vary the programming and images, and primarily display full screen moving images, not stationary patterns or dark bars.**
On PDP models that offer picture sizing features, use these controls to view different formats as a full screen picture.

Be careful in the selection and duration of television formats used for viewing. Uneven PDP aging as a result of format selection and use, as well as burned-in images, are not covered by your Samsung limited warranty.

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Conditions covered are limited only to manufacturing defects in material or workmanship, and only those encountered in normal use of the product.
Excluded, but not limited to, are any originally specified provisions for, in-home or on-site services, minimum or maximum repair times, exchanges or replacements, accessories, options, upgrades, or consumables.
For the location of a SAMSUNG Authorized Service Center, please call toll-free:
**In the United States : 1-800-SAMSUNG (1-800-726-7864)**                    **In Canada : 1-800-SAMSUNG**

➢ See the warranty card for more information on warranty terms.

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# User Instructions

### ● Screen Image retention

Do not display a still image (such as on a video game) on the plasma display panel for more than several minutes as it can cause screen image retention. This image retention is also known as "screen burn". To avoid such image retention, refer to page 23 of this manual to reduce the degree of brightness and contrast of the screen when displaying a still image.

### ● Altitude

The PDP can only operate normally at heights under 6500ft.

### ● Heat on the top of the Plasma TV

The top side of the product may be hot after long periods of use as heat dissipates from the panel through the vent hole in the upper part of the product.
This is normal and does not indicate any defect or operation failure of the product.
However, children should be prevented from touching the upper part of the product.

### ● The product is making a 'cracking' noise.

A 'cracking' noise may occur when the product contracts or expands due to a change of surrounding environment such as temperature or humidity. This is normal and not a defect of the unit.

### ● Cell Defects

The PDP uses a panel consisting of 1,230,000(SD-level) to 3,150,000(HD-level) pixels which require sophisticated technology to produce. However, there may be a few bright or dark pixels on the screen. These pixels will have no impact on the performance of the product.

### ● Avoid operating the TV at temperatures below 5°C (41°F)

### ● A still image displayed too long may cause permanent damage to the PDP Panel.
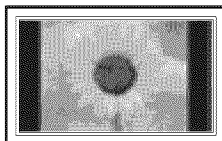


Watching the Plasma TV in 4:3 format for a long period of time may leave traces of borders displayed on the left, right and center of the screen caused by the difference of light emission on the screen.
Playing a DVD or a game console may cause similar effect to the screen.
Damages caused by the above effect are not covered by the Warranty.

### ● Afterimage on the Screen.

Displaying still images from Video games and PC for longer than a certain period of time may produce partial after-images. To prevent this effect, reduce the 'brightness' and 'contrast' when displaying still images for a long time.

### ● Warranty

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

# Contents

Symbols
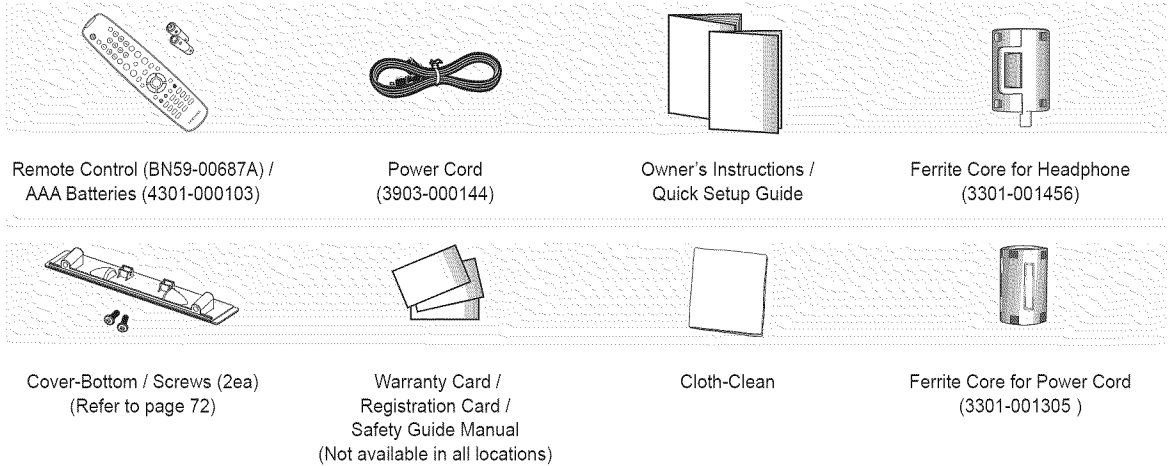
△ Press

📖 One-Touch Button

➢ Note

# General Information

## List of Features

- Adjustable picture settings that can be stored in the TV's memory.
- Automatic timer to turn the TV on and off.
- A special sleep timer.
- V-Chip function.
- Excellent Digital Interface & Networking :
  With a built-in HD digital tuner, non-subscription HD broadcasts can be viewed with no Set-Top Box needed.
- Excellent Picture Quality
  - DNIe technology provides life-like clear images.
- SRS TruSurround XT
  - SRS TruSurround XT provides a virtual Dolby surround system.
- HDMI/DVI connection of your PC to this TV.

## Accessories

**Please make sure the following items are included with your TV. If any items are missing, contact your dealer.**

| | | | |
|---|---|---|---|
| Remote Control (BN59-00687A) / AAA Batteries (4301-000103) | Power Cord (3903-000144) | Owner's Instructions / Quick Setup Guide | Ferrite Core for Headphone (3301-001456) |

| | | | |
|---|---|---|---|
| Cover-Bottom / Screws (2ea) (Refer to page 72) | Warranty Card / Registration Card / Safety Guide Manual (Not available in all locations) | Cloth-Clean | Ferrite Core for Power Cord (3301-001305 ) |

The following parts are sold separately and are available at most electronics stores.

➢ If you do not use a good quality cable, some noise may appear on the screen.

| | | | |
|---|---|---|---|
| S-VIDEO Cable (BN39-00149A) | HDMI Cable (BN39-00641A) | HDMI/DVI cable (BN39-00643A) | Component Cables (RCA) (BN39-00279A) |

| | | | |
|---|---|---|---|
| PC Cable (BN39-00115A) | PC Audio Cable (BN39-00061B) | Optical Cable | Antenna Cable (BN39-00333A) |
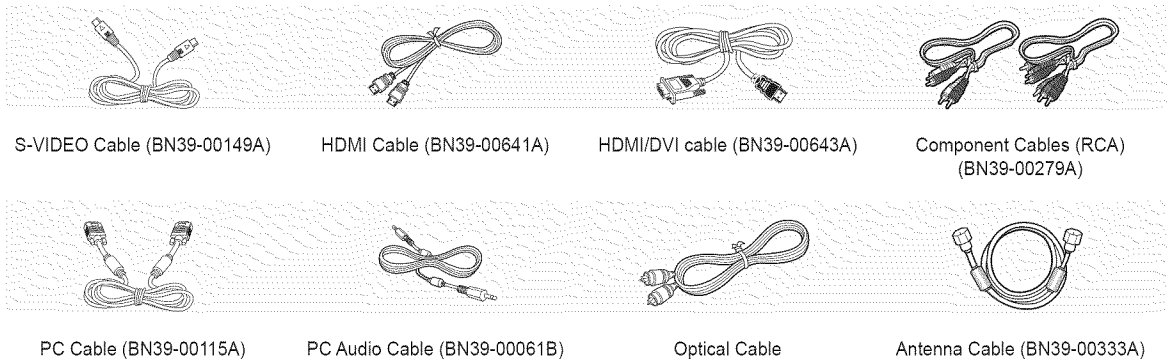
➢ **Ferrite Core (Power Cable, Headphone)**
   The ferrite cores are used to shield the cables from interference.
   When connecting a cable, open the ferrite core and clip it around the cable near the plug.
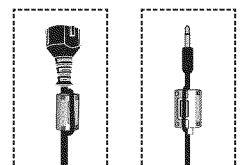
# Viewing the Control Panel

## Buttons on the Lower-Right Part of the Panel

The buttons on the lower-right panel control your TV's basic features, including the on-screen menu.
To use the more advanced features, you must use the remote control.

➤ The product color and shape may vary depending on the model.

**Front Panel buttons**
Touch each button to operate.

**❶ SOURCE ☞**
Toggles between all the available input sources
(**TV**, **AV1**, **AV2**, **S-Video**, **Component1**, **Component2**,
**PC**, **HDMI1**, **HDMI2**, **HDMI3**).
➤ In the on-screen menu, use this button as you
would use the **ENTER** button on the remote control.
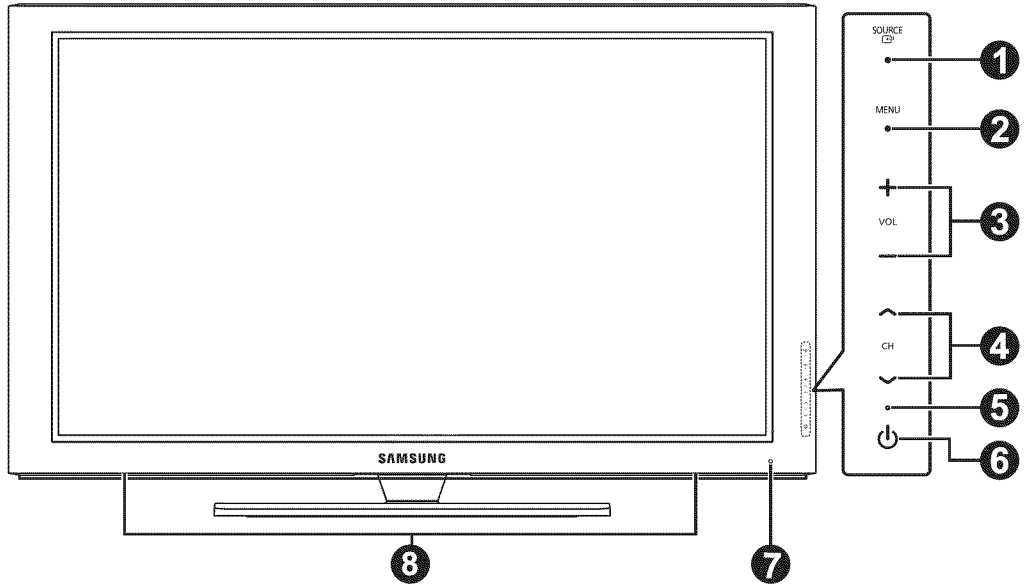
**❷ MENU**
Press to see an on-screen menu of your TV's features.

**❸ + VOL −**
Press to increase or decrease the volume. In the on-
screen menu, use the **+ VOL −** buttons as you would
use the ◄ and ► buttons on the remote control.

**❹ ∧ CH ∨**
Press to change channels.
In the on-screen menu, use the ∧ **CH** ∨ buttons as
you would use the ▲ and ▼ buttons on the remote
control.

**❺ Power Indicator**
Blinks and turns off when the power is on and lights up
in stand-by mode.

**❻ ⏻ POWER**
Press to turn the TV on and off.

**❼ Remote Control Sensor**
Aim the remote control towards this spot on the TV.

**❽ Speakers**

# Viewing the Connection Panel

## Rear Panel Jacks

Use the rear panel jacks to connect A/V components that will be connected continuously, such as VCR or DVD players. For more information on connecting equipment, see pages 9-15. The product color and shape may vary depending on the model.
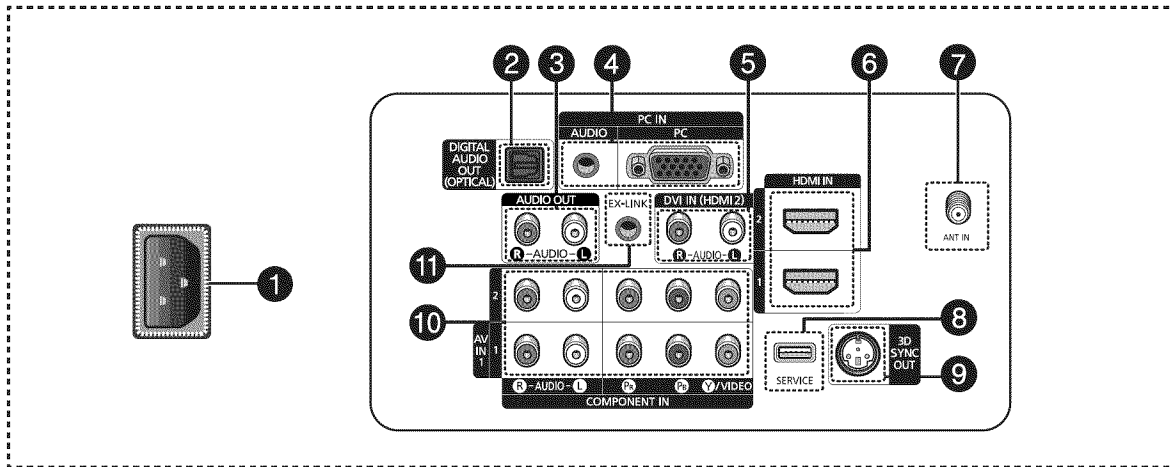


❶ **POWER IN**
Connect the supplied power cord.

❷ **DIGITAL AUDIO OUT (OPTICAL)**
Connect to a Digital Audio component.

❸ **AUDIO OUT (R/L)**
Audio outputs to external devices.

❹ **PC IN[PC]/[AUDIO]**
Connect to the video and audio output jack on your PC.

❺ **DVI IN (HDMI 2) (AUDIO-R/L)**
Connect to the DVI audio output jack of an external device.

❻ **HDMI IN 1, 2**
Connect to the HDMI jack of a device with an HDMI output. (HDMI2 supports HDMI-DVI IN and connection from a PC.)
- This input can also be used as a DVI connection with separate analog audio inputs. An optional HDMI/DVI cable will be necessary to make this connection.
- When using an optional HDMI/DVI adapter, the DVI analog audio inputs on your TV allow you to receive left and right audio from your DVI device.

❼ **ANT IN**
Uses a 75Ω Coaxial connector for an Air/Cable Network.

❽ **SERVICE**
For service only.

❾ **3D SYNC OUT**
Connect to 3D IR Emitter.

❿ **COMPONENT IN 1, 2 / AV IN 1**
Connects Component video/audio.
The COMPONENT IN 1 jack is also used as the AV IN 1 jack.
- Connect the video cable to the COMPONENT IN 1 [Y/ VIDEO] jack and the audio cable to the COMPONENT IN [R-AUDIO-L] jacks.

⓫ **EX-LINK**
Connect this to the jack on the optional wall mount bracket. This will allow you to adjust the TV viewing angle using your remote control.

## Side Panel Jacks

Use the right side panel jacks to connect a component that is used only occasionally, such as a camcorder or video game. The product color and shape may vary depending on the model.
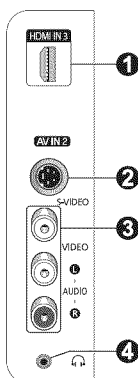


❶ **HDMI IN 3**
Connect to the HDMI jack of a device with HDMI output.

❷ **S-VIDEO (AV IN 2)**
S-Video input for external devices with an S-Video output.

❸ **AV IN 2**
Video and audio inputs for external devices.

❹ **HEADPHONE**
You can connect a set of headphones if you wish to watch a television program without disturbing other people in the room.

You can use the remote control up to a distance of about 23 feet from the TV.
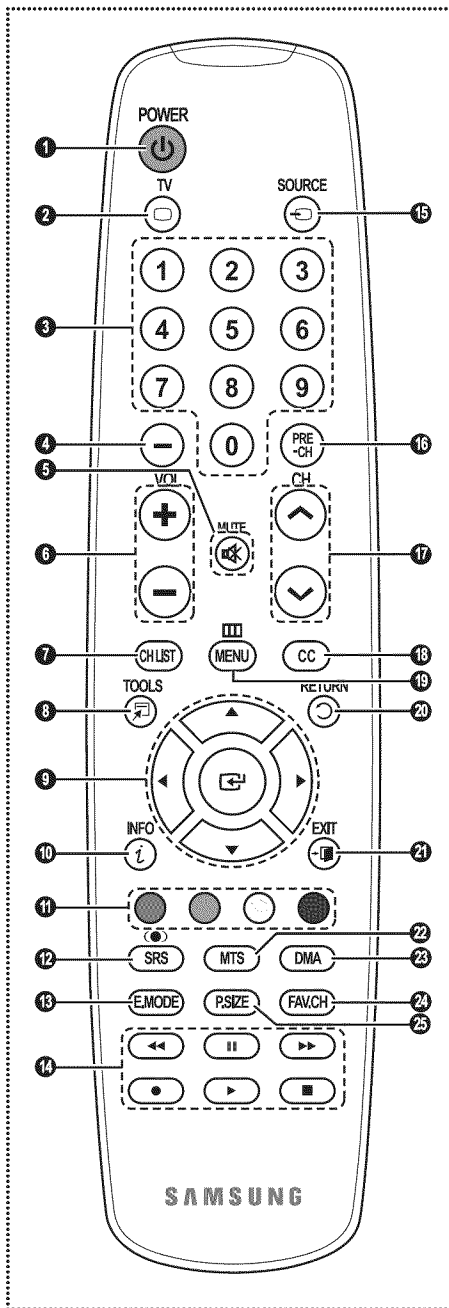
**O POWER**
Turns the TV on and off.

**O TV**
Selects the TV mode directly.

**O NUMERIC BUTTONS**
Press to directly select a channel.

**O -**
Press to select additional channels (digital and analog) being broadcast by the same station. For example, to select channel "54-3", press "54", then press "-" and "3".

**O MUTE**
Press to temporarily cut off the sound.

**O (+) VOL (-)**
Press to increase or decrease the volume.

**O CH LIST**
Used to display Channel Lists on the screen.

**O TOOLS**
Use to quickly select frequently used functions.

**O UP▲/DOWN▼/LEFT◄/ RIGHT►/ENTER ☉**
Use to select on-screen menu items and change menu values.

**O INFO**
Press to display information on the TV screen.

**O COLOR BUTTONS**
Use these buttons in the Channel list.

**O SRS**
Selects SRS TruSurround XT mode.

**O E.MODE**
Press to select the preset display and sound modes for sports, cinema and games.

**O** Use these buttons in the DMA and Anynet+ modes.
( ●): This remote can be used to control recording on Samsung recorders with the Anynet+ feature)

**O SOURCE**
Press to display all of the available video sources.

**O PRE-CH**
Tunes to the previous channel.

**O (∧) CH (∨)**
Press to change channels.

**O CC**
Controls the caption decoder.

**O MENU**
Displays the main on-screen menu.

**O RETURN**
Returns to the previous menu.

**O EXIT**
Press to exit the menu.

**O MTS**
Press to choose stereo, mono or Separate Audio Program (SAP broadcast).

**O DMA** (Digital Media Adapter)
Use this when connecting a Samsung DMA device through an HDMI interface and switching to DMA mode.
For more information on the operating procedures, refer to the user manual of the DMA.
➢ This button is available when "Anynet(HDMI-CEC)" is "On". (see page 65)

**O FAV.CH**
Press to switch to your favorite channels.

**O P.SIZE**
Press to change the screen size.

➢ The performance of the remote control may be affected by bright light.

# Installing Batteries in the Remote Control

1 Lift the cover at the back of the remote control upward as shown in the figure.
2 Install two AAA size batteries.
 ➢ Make sure to match the "+" and "–" ends of the batteries with the diagram inside the compartment.
 ➢ Do not mix battery types, i.e. alkaline and manganese.
3 Close the cover as shown in the figure.
 ➢ Remove the batteries and store them in a cool, dry place if you won't be using the remote control for a long time. The remote control can be used up to about 23 feet (7m) from the TV. (Assuming typical TV usage, the batteries last for about one year.)
➢ **If the remote control doesn't work, check the following:**
 1. Is the TV power on?
 2. Are the plus and minus ends of the batteries reversed?
 3. Are the batteries drained?
 4. Is there a power cut, or is the power cord unplugged?
 5. Is there a special fluorescent light or a neon sign nearby?
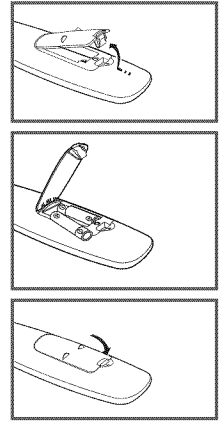
# Connections

## Connecting VHF and UHF Antennas

**If your antenna has a set of leads that look like this, see "Antennas with 300 Ω Flat Twin Leads" below.**

**If your antenna has one lead that looks like this, see "Antennas with 75 Ω Round Leads".**
**If you have two antennas, see "Separate VHF and UHF Antennas".**

### Antennas with 300 Ω Flat Twin Leads
**If you are using an off-air antenna (such as a roof antenna or "rabbit ears") that has 300 Ω twin flat leads, follow the directions below.**
1 Place the wires from the twin leads under the screws on a 300-75 Ω adapter (not supplied).
 Use a screwdriver to tighten the screws.
2 Plug the adaptor into the ANT IN terminal on the back of the TV.

### Antennas with 75 Ω Round Leads
1 Plug the antenna lead into the ANT IN terminal on the back of the TV.

### 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).**
1 Connect both antenna leads to the combiner.
2 Plug the combiner into the ANT IN terminal on the bottom of the back panel.
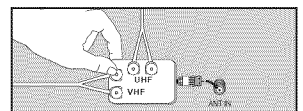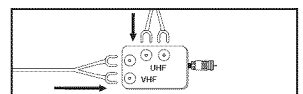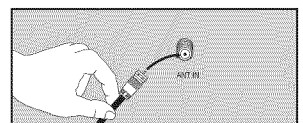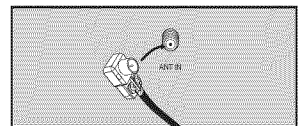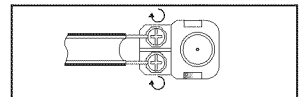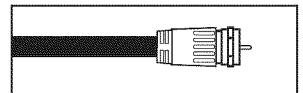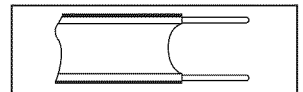
# Connecting Cable TV

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

## Cable without a Cable Box

1 Plug the incoming cable into the ANT IN 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.



## Connecting to a Cable Box that Descrambles All Channels

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 Connect the other end of this cable to the ANT IN terminal on the back of the TV.



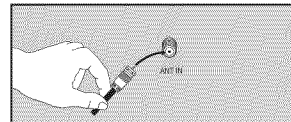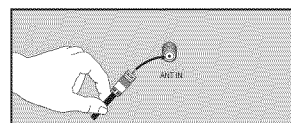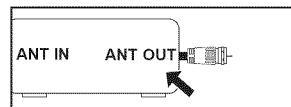## Connecting to a Cable Box that Descrambles Some Channels

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

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".



2 Connect this cable to a two-way splitter.



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



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



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



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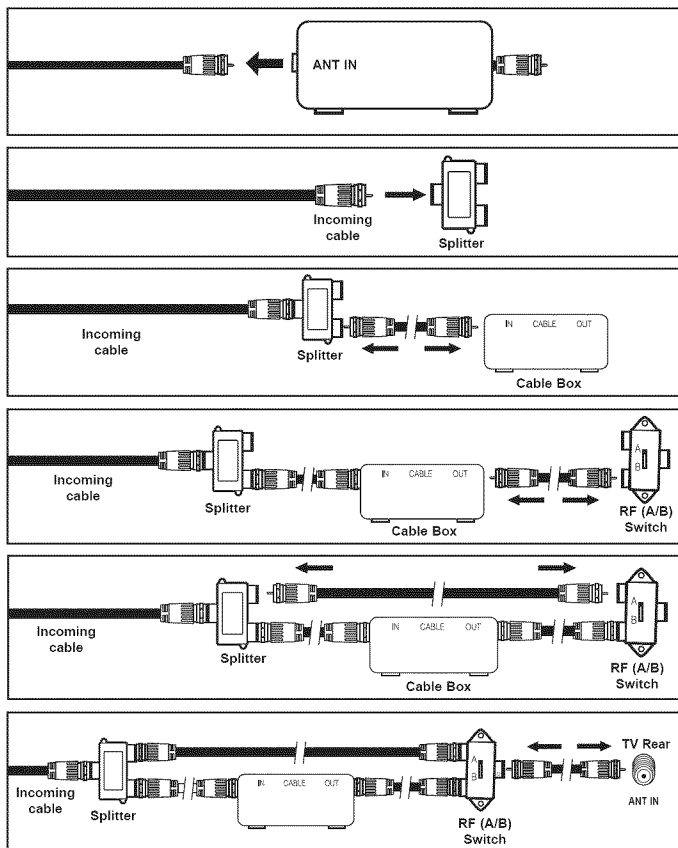


After you have made this connection, set the A/B switch to the "A" position for normal viewing. Set the A/B switch to the "B" position to view scrambled channels. (When you set the A/B switch to "B", you will need to tune your TV to the cable box's output channel, which is usually channel 3 or 4.)

## Connecting a DVD Player or Cable Box / Satellite receiver (Set-Top Box) via HDMI

**This connection can only be made if there is an HDMI Output jack on the external device. This connection will provide the highest quality picture.**

1  Connect an HDMI Cable between the HDMI IN(1, 2 or 3) jack on the TV and the HDMI jack on the DVD Player or Cable Box / Satellite receiver (Set-Top Box).



DVD Player or Cable Box / Satellite receiver (Set-Top Box)

TV Rear Panel          TV Side Panel

HDMI Cable (Not supplied)          or
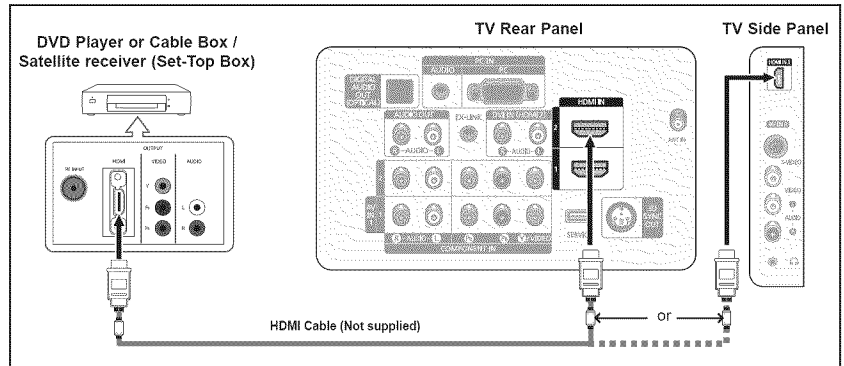
What is HDMI?
- HDMI, or high-definition multimedia interface, is an interface that enables the transmission of digital audio and video signals using a single cable without compression.
- The difference between HDMI and DVI is that the HDMI device is smaller in size and has the HDCP (High Bandwidth Digital Copy Protection) coding feature installed.
➢ Each DVD Player or Cable Box / Satellite receiver (Set-Top Box) has a different back panel configuration.
➢ When connecting a DVD Player or Cable Box / Satellite receiver (Set-Top Box), match the color of the connection terminal to the cable.

## Connecting a DVD Player or Cable Box / Satellite receiver (Set-Top Box) via DVI

**This connection can only be made if there is a DVI Output jack on the external device.**

1  Connect a HDMI/DVI Cable or DVI-HDMI Adapter between the HDMI IN 2 jack on the TV and the DVI jack on the DVD Player or Cable Box/Satellite receiver (Set-Top Box).

2  Connect Audio Cables between the DVI IN (HDMI 2) [R-AUDIO-L] jack on the TV and the AUDIO OUT jacks on the DVD Player or Cable Box/Satellite receiver (Set-Top Box).



DVD Player or Cable Box / Satellite receiver (Set-Top Box)

TV Rear Panel

2  Audio Cable (Not supplied)
1  HDMI/DVI Cable (Not supplied)
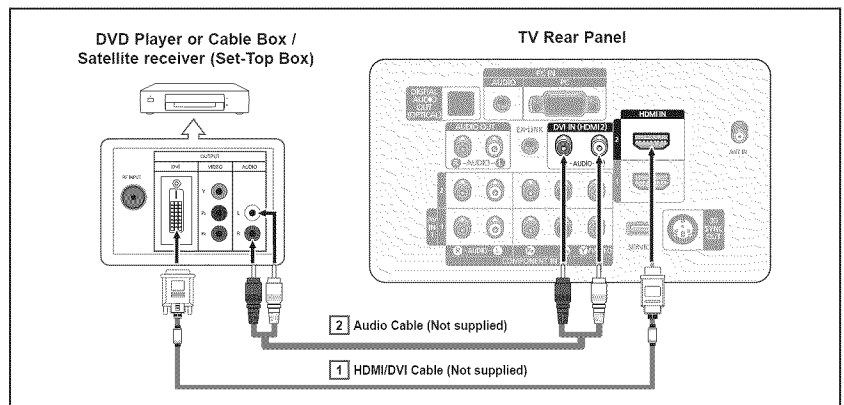
➢ Each DVD Player or Cable Box / Satellite receiver (Set-Top Box) has a different back panel configuration.
➢ When connecting a DVD Player or Cable Box / Satellite receiver (Set-Top Box), match the color of the connection terminal to the cable.
➢ When using an HDMI / DVI cable connection, you must use the HDMI IN 2 jack.

## Connecting a DVD Player or Cable Box / Satellite receiver (Set-Top Box) via Component cables

The rear panel jacks on your TV make it easy to connect a DVD Player or Cable Box / Satellite receiver (Set-Top Box) to your TV.

1 Connect Component Cables between the COMPONENT IN (1 or 2) [Y, P$_B$, P$_R$] jacks on the TV and the COMPONENT [Y, P$_B$, P$_R$] jacks on the DVD Player or Cable Box / Satellite receiver (Set-Top Box).

2 Connect Audio Cables between the COMPONENT IN (1 or 2) [R-AUDIO-L] jacks on the TV and the AUDIO OUT jacks on the DVD Player or Cable Box / Satellite receiver (Set-Top Box).



TV Rear Panel

DVD Player or Cable Box/ Satellite receiver (Set-Top Box)

2 Audio Cable (Not supplied)

1 Component Cable (Not supplied)

➢ Component video separates the video into Y (Luminance (brightness)), P$_B$ (Blue) and P$_R$ (Red) for enhanced video quality. Be sure to match the component video and audio connections. For example, if connecting the video cable to COMPONENT IN 1, connect the audio cable to COMPONENT IN 1 also.
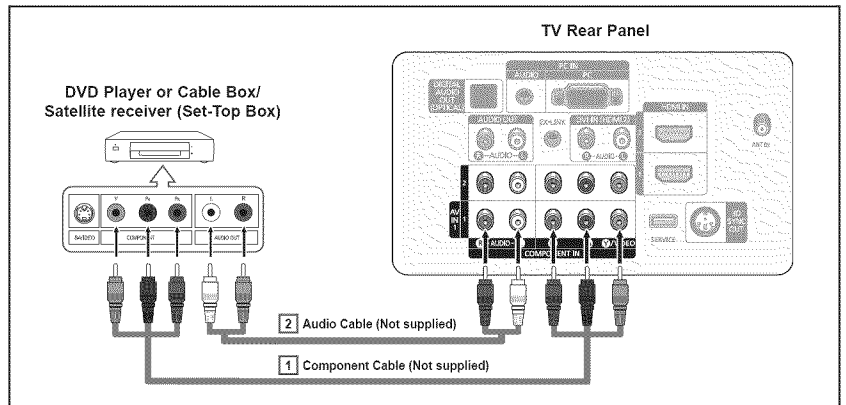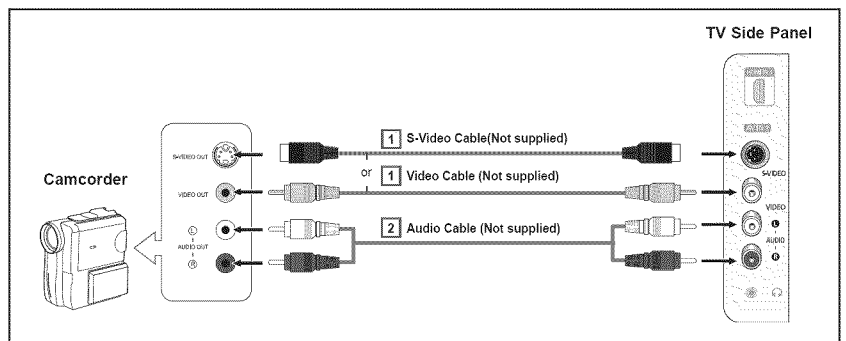
➢ Each DVD Player or Cable Box / Satellite receiver (Set-Top Box) has a different back panel configuration.

➢ When connecting a DVD Player or Cable Box / Satellite receiver (Set-Top Box), match the color of the connection terminal to the cable.

## Connecting a Camcorder

The side panel jacks on your TV make it easy to connect a camcorder to your TV.
They allow you to view the camcorder tapes without using a VCR.

1 Connect a Video Cable (or S-Video Cable) between the AV IN 2 [VIDEO] (or S-VIDEO) jack on the TV and the VIDEO OUT jack on the Camcorder.

2 Connect Audio Cables between the AV IN 2 [L-AUDIO-R] jacks on the TV and the AUDIO OUT jacks on the Camcorder.



TV Side Panel

Camcorder

1 S-Video Cable(Not supplied)

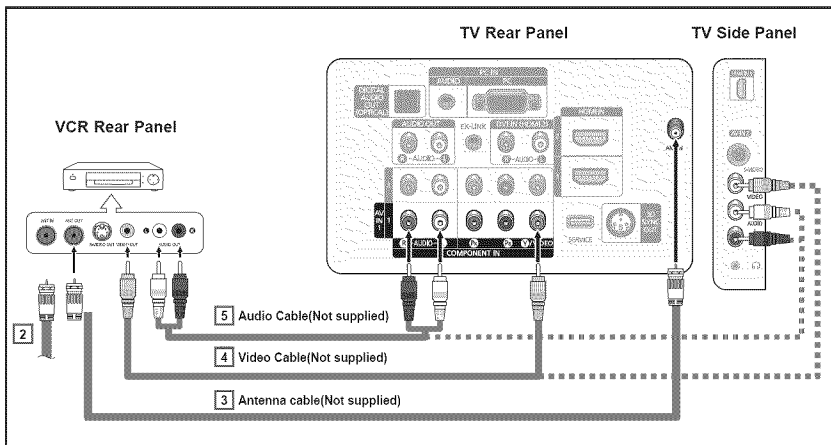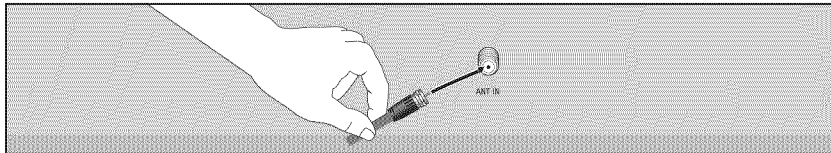or   1 Video Cable (Not supplied)

2 Audio Cable (Not supplied)

➢ Each Camcorder has a different back panel configuration.

➢ When connecting a Camcorder, match the color of the connection terminal to the cable.

# Connecting a VCR

## Video Connection

These instructions assume that you have already connected your TV to an antenna or a cable TV system (according to the instructions on pages 9~10). Skip step 1 if you have not yet connected to an antenna or a cable system.

1   Unplug the cable or antenna from the back of the TV.

2   Connect the cable or antenna to the ANT IN terminal on the back of the VCR.

3   Connect an Antenna Cable between the ANT OUT terminal on the VCR and the ANT IN terminal on the TV.

4   Connect a Video Cable between the VIDEO OUT jack on the VCR and the AV IN 1 [Y/VIDEO] or AV IN 2 [VIDEO] jack on the TV.

5   Connect Audio Cables between the AUDIO OUT jacks on the VCR and the AV IN 1 (or AV IN 2) [R-AUDIO-L] jacks on the TV.

**TV Rear Panel**      **TV Side Panel**

**VCR Rear Panel**

5   Audio Cable(Not supplied)
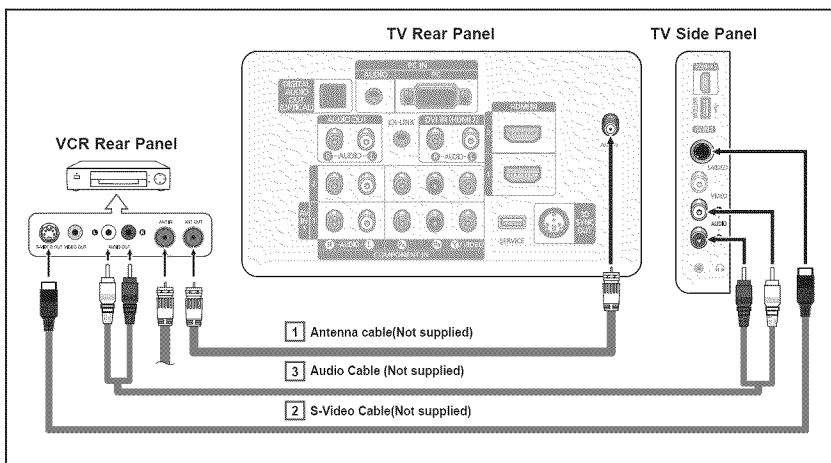4   Video Cable(Not supplied)
3   Antenna cable(Not supplied)

➢   If you have a "mono" (non-stereo) VCR, use a Y-connector (not supplied) to connect to the right and left audio input jacks of the TV. Alternatively, connect the cable to the "R" jack.
    If your VCR is stereo, you must connect two cables.
➢   Each VCR has a different back panel configuration.
➢   When connecting a VCR, match the color of the connection terminal to the cable.
➢   When connecting to AV IN 1, the color of the AV IN 1 [Y/VIDEO] jack (Green) does not match the color of the video cable (Yellow).

## S-Video Connection

Your Samsung TV can be connected to an S-Video jack on a VCR.
(This connection delivers a better picture as compared to a standard VCR.)

1   To begin, follow steps 1–3 in the previous section to connect the antenna or cable to your VCR and your TV.

2   Connect an S-Video Cable between the S-VIDEO OUT jack on the VCR and the AV IN 2 [S-VIDEO] jack on the TV.

3   Connect Audio Cables between the AUDIO OUT jacks on the VCR and the AV IN 2 [R-AUDIO-L] jacks on the TV.

**TV Rear Panel**      **TV Side Panel**

**VCR Rear Panel**

1   Antenna cable(Not supplied)
3   Audio Cable (Not supplied)
2   S-Video Cable(Not supplied)

An S-Video may be included with your VCR. (If not, check your local electronics store.)
➢   Each VCR has a different back panel configuration.
➢   When connecting a VCR, match the color of the connection terminal to the cable.

# Connecting a Digital Audio System

**The rear panel jacks on your TV make it easy to connect a Digital Audio System(Home theater/Receiver) to your TV.**

1 Connect an Optical Cable between the DIGITAL AUDIO OUT (OPTICAL) jacks on the TV and the Digital Audio Input (OPTICAL) jacks on the Digital Audio System.

When a Digital Audio System is connected to the DIGITAL AUDIO OUT (OPTICAL) terminal:
Decrease the volume of the TV, and adjust the volume level with the system's volume control.
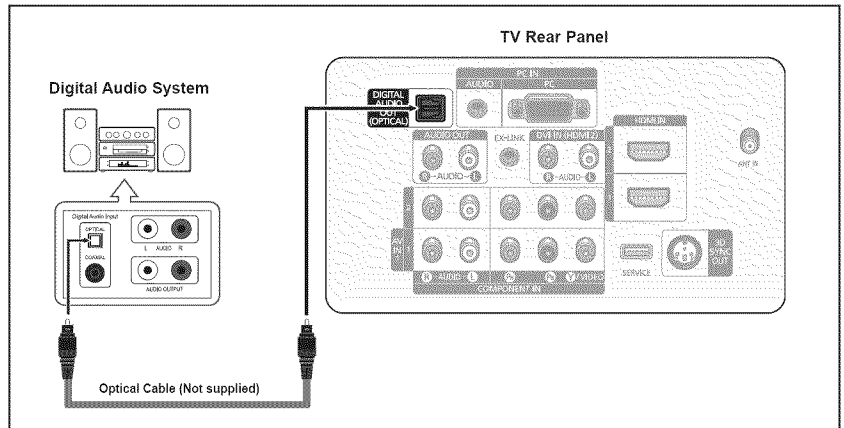


What is OPTICAL?
• Converts the electric signal into an optical light signal, and transmits it through glass fibers. S/PDIF is a transmission system of digital audio in the form of a light wave that uses a glass conductor.
➢ 5.1CH audio is possible when the TV is connected to an external device supporting 5.1CH.
➢ Each external input source device has a different back panel configuration.
➢ When the receiver (home theater) is set to On, you can hear sound output from the TV's Optical jack. When the TV is displaying a DTV(air) signal, the TV will send out 5.1 channel sound to the Home theater receiver. When the source is a digital component such as a DVD and is connected to the TV via HDMI, only 2 channel sound will be heard from the Home Theater receiver.

# Connecting an Amplifier / DVD Home Theater

1 Connect Audio Cables between the AUDIO OUT [R-AUDIO-L] on the TV and AUDIO IN [L-AUDIO-R] on the Amplifier / DVD Home Theater.

When an audio amplifier is connected to the AUDIO OUT [R-AUDIO-L] jacks terminals:
Decrease the volume of the TV, and adjust the volume level with the Amplifier's volume control.
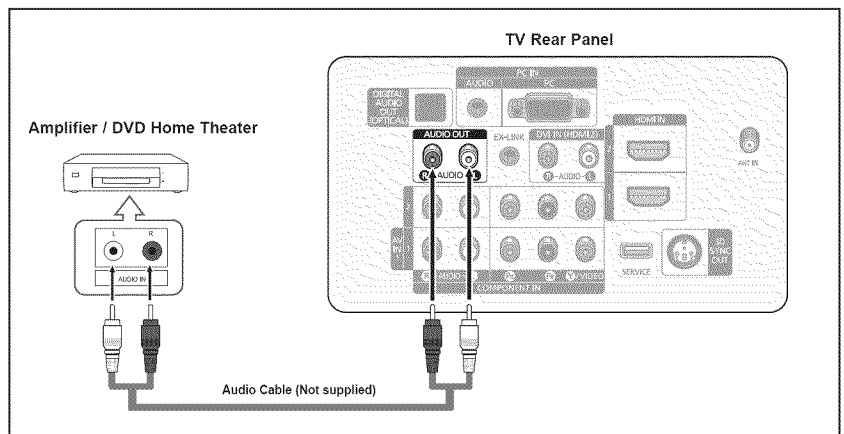


➢ Each Amplifier / DVD Home Theater has a different back panel configuration.
➢ When connecting an Amplifier / DVD Home Theater, match the color of the connection terminal to the cable.
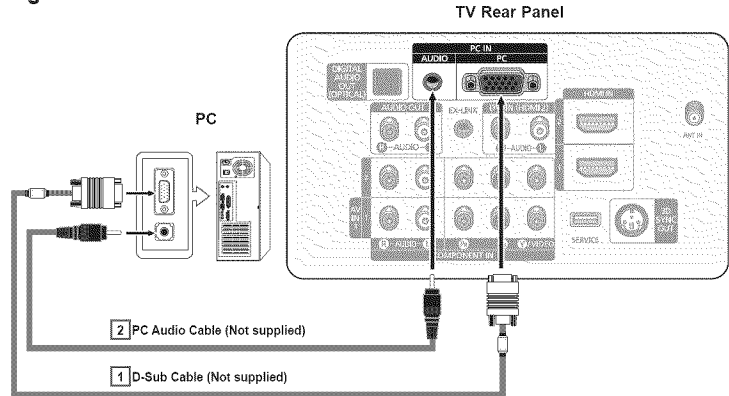
# Connecting a PC

## Using the D-Sub Cable

1   Connect a D-Sub Cable between PC IN [PC] jack on the TV and the PC output jack on your computer.

2   Connect a PC Audio Cable between PC IN [AUDIO] jack on the TV and the Audio Out jack of the sound card on your computer.

### Using the D-Sub Cable

TV Rear Panel

PC

2  PC Audio Cable (Not supplied)

1  D-Sub Cable (Not supplied)

## Using the HDMI/DVI Cable

1   Connect a HDMI/DVI cable between the HDMI IN 2 jack on the TV and the PC output jack on your computer.

2   Connect a 3.5mm Stereo/ 2RCA cable between the DVI IN (HDMI 2) [R-AUDIO-L] jack on the TV and the Audio Out jack of the sound card on your computer.

### Using the HDMI/DVI Cable

TV Rear Panel

PC

2  3.5 mm Stereo plug to 2 RCA Cable (Not supplied)

1  HDMI/DVI Cable (Not supplied)
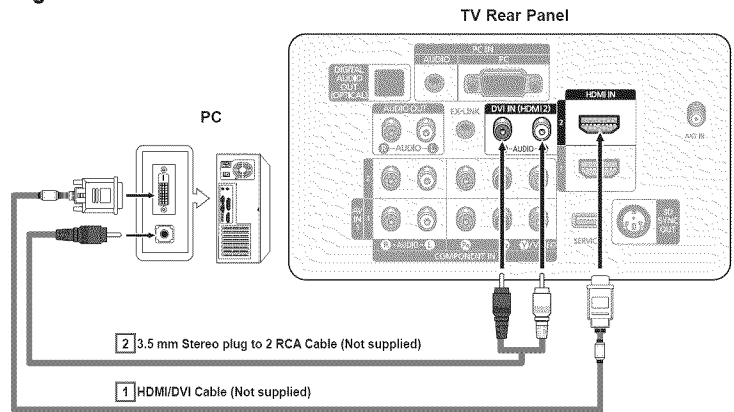
➢ Each PC has a different back panel configuration.
➢ When connecting a PC, match the color of the connection terminal to the cable.
➢ When using an HDMI/DVI cable connection, you must use the HDMI IN 2 terminal.

# Operation

## Turning the TV On and Off

**Press the POWER button on the remote control.**
**You can also use the POWER button on the TV.**

➢ It may take a while before you see a full picture.
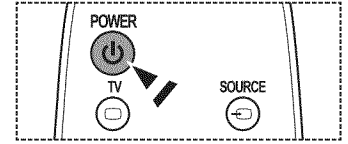
## Plug & Play Feature

**When the TV is initially powered On, basic settings proceed automatically and subsequently:**

1   Press the **POWER** button on the remote control.
    The message **Menu language, Store Demo, Channels and Time will be set.**
    is displayed.

2   Press the **ENTER** button to enter the language.
    Press the ▲ or ▼ button to select language, then press the **ENTER** button.
    The message **Select "Home Use" when installing this TV in your home.** is
    automatically displayed.

3   Press the ◄ or ► button to select **Store Demo** or **Home Use**, then press the
    **ENTER** button.
    ➢ We recommend setting the TV to **Home Use** mode for the best picture in
      your home environment.
    ➢ **Store Demo** mode is only intended for use in retail environments.
    ➢ If the unit is accidentally set to Store Demo mode and you want to return to
      **Home Use** (Standard) : Press the Volume button. While the volume OSD is
      displayed, press and hold the **MENU** button for 5 seconds.

4   Press the ▲ or ▼ button to memorize the channels of the selected connection.
    Press the **ENTER** button to select **Start**.
    ➢ **Air** : **Air** antenna signal.
      **Cable** : **Cable** antenna signal.
      **Auto** : **Air** and **Cable** antenna signals.
    ➢ In Cable mode, you can select the correct analog signal source among
      **STD**, **HRC**, and **IRC** by pressing the ◄ or ► button, then press the **ENTER**
      button. If you have Digital cable, select the signal source for both Analog and
      Digital. Contact your local cable company to identify the type of cable system
      that exists in your particular area.
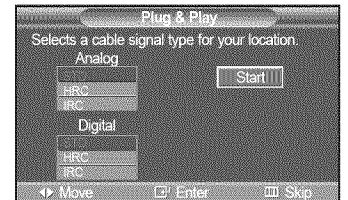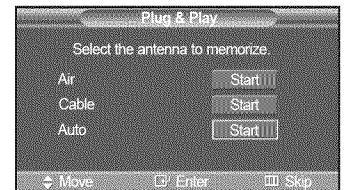
*Continued...*

**5** The TV will begin memorizing all of the available channels.

➢ To stop the search before it has finished, press the **ENTER** button with Stop selected.

After all the available channels are stored, the TV starts to remove scrambled channels(see page38). The Auto program menu then reappears.
Press the **ENTER** button when channel memorization is complete.
**Clock Mode** menu is automatically displayed.

**6** Press the **ENTER** button.
Press the ▲ or ▼ button to select **Manual** if you want to set the current time manually, then press the **ENTER** button. **Enter the current date and time.** is displayed.

➢ If you select **Auto**, **Set to daylight savings time.** is displayed, then go to step **9**.

**7** Press the ◄ or ► button to move to **Month**, **Day**, **Year**, **Hour**, **Minute**, or **am/pm**. Set the date and time you want by pressing the ▲ or ▼ button, then press the **MENU** button.

➢ You can set the **Month**, **Day**, **Year**, **Hour**, and **Minute** directly by pressing the number buttons on the remote control.

**8** The message **Enjoy your watching.** is displayed.
When you have finished, press the **ENTER** button.

➢ Even if the **ENTER** button is not pressed, the message will automatically disappear after several seconds.
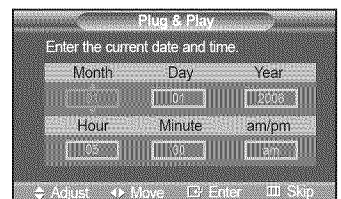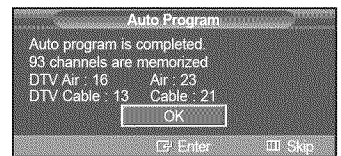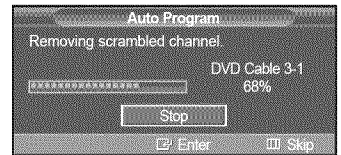
## Setting the Clock Automatically

**9** Press the **ENTER** button.
Press the ▲ or ▼ button to select **On** or **Off**, then press the **ENTER** button.
The **Select the time zone in which you live.** menu is automatically displayed.

**10** Press the ▲ or ▼ button to highlight the time zone for your local area (and to move the highlight to the appropriate time zone on the map of the United States).
Press the **ENTER** button.
If clock is not automatically set, see page 48 to set the clock.
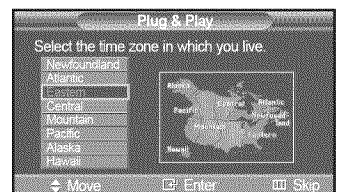
**11** The message **Enjoy your watching.** is displayed.
When you have finished, press the **ENTER** button.

➢ Even if the **ENTER** button is not pressed, the message will automatically disappear after several seconds.

## If you want to reset this feature...

1 Press the **MENU** button to display the menu.
  Press the ▲ or ▼ button to select **Setup**, then press the **ENTER** button.

2 Press the **ENTER** button to select **Plug & Play**. For further details on setting up options, refer to the pages 16~17.
  ➢ The Plug & Play feature is only available in the TV.

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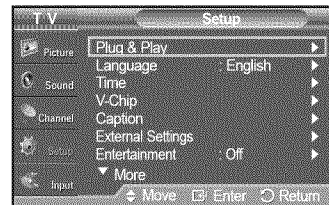
# Changing Channels

## Using the Channel Buttons

1 Press the **CH** ⌃ or **CH** ⌄ button to change channels.
  ➢ When you press the **CH** ⌃ or **CH** ⌄ button, the TV changes channels in sequence. You will see all the channels that the TV has memorized. (The TV must have memorized at least three channels). You will not see channels that were either erased or not memorized. See pages 20-21 to memorize channels.
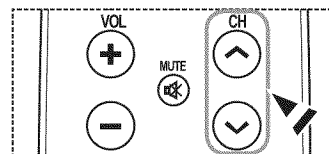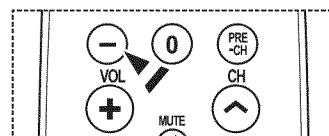
## Using the Number Buttons

1 Press the number buttons to go directly to a channel. For example, to select channel 27, press **2**, then **7**.
  The TV will change channels when you press the second number.
  ➢ For quick channel change, press the number buttons, then press the **ENTER** button.
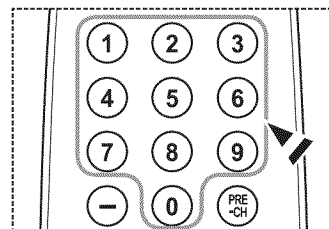
## Using the "-" Button

The "⊖" button is used to select stations that broadcast a digital signal.

1 For example, for Channel 7-1, press **7**, then ⊖, then **1**.
  ➢ HD indicates the TV is receiving a Digital High Definition signal.
    SD indicates the TV is receiving a Standard Definition signal.
  ➢ For quick channel change, press the number buttons, then press the **ENTER** button.

## Using the PRE-CH Button to select the Previous Channel

Use the number buttons to quickly tune to any channel.

1 Press the **PRE-CH** button. The TV will switch to the last channel viewed.
  ➢ To quickly switch between two channels that are far apart, tune to one channel, then use the number button to select the second channel. Then use the **PRE-CH** button to quickly alternate between them.
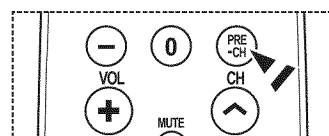
# Adjusting the Volume
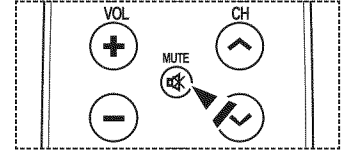
## Using the Volume Buttons

1 Press the **VOL** ⊕ or **VOL** ⊖ button to increase or decrease the volume.
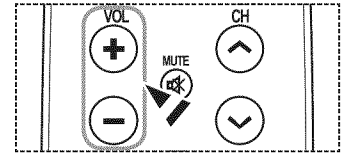
## Using the Mute Button

At any time, you can cut off the sound using the **MUTE** button.

1 Press **MUTE** and the sound cuts off.
Mute will displayed on the screen.

2 To turn mute off, press the **MUTE** button again, or simply press the **VOL** ⊕ or **VOL** ⊖ button.

# Using the TOOLS Button

**You can use the TOOLS button to select your frequently used functions quickly and easily. The "Tools" menu changes depending on which external input mode you are viewing.**

1 Press the **TOOLS** button.
The **Tools** menu will appear.

2 Press the ▲/▼ button to select a menu, then press the **ENTER** button.

3 Press the ▲/▼/◄/►/**ENTER** buttons to display, change, or use the selected items.
For a more detailed description of each function, refer to the corresponding page.
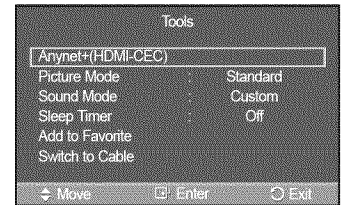
• Anynet+(HDMI-CEC), see page 65
• Picture Mode, see page 23
• Sound Mode, see page 34
• Sleep Timer, see page 49
• Add to Favorite, see page 40
• Switch to Cable, see page 20
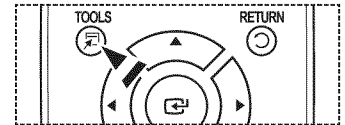
# Viewing the Display

**The display identifies the current channel and the status of certain audio-video settings.**

1 Press the **INFO** button on the remote control.
The TV will display the channel, the type of sound, and the status of certain picture and sound settings.
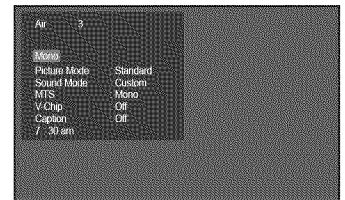
⌨ Press the **INFO** button once more or wait approximately 10 seconds and it disappears automatically.
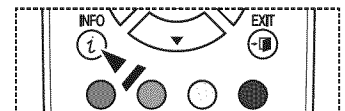
# Viewing the Menus

1    With the power on, press the **MENU** button.
     The main menu appears on the screen. Its left side has five icons:
     **Picture**, **Sound**, **Channel**, **Setup**, **Input**.

2    Press the ▲ or ▼ button to select one of the icons.
     Then press the **ENTER** button to access the icon's sub-menu.

3    Press the **EXIT** button to exit.

➢   It takes about one minute until the on-screen menu disappears.
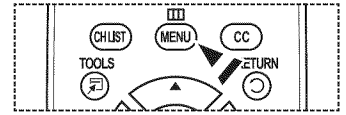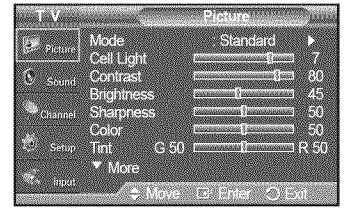
# Memorizing the Channels

Your TV can memorize and store all of the available channels for both "off-air" (air) and cable channels. After the available channels are memorized, use the CH ⌒ or CH ⌄ button to scan through the channels. This eliminates the need to change channels by entering the channel digits. There are three steps for memorizing channels: selecting a broadcast source, memorizing the channels (automatic) and adding and deleting channels (Channel Lists).

### Selecting the Video Signal-source

Before your television can begin memorizing the available channels, you must specify the type of signal source that is connected to the TV (i.e. an Air or a Cable system).

1    Press the **MENU** button to display the menu.
     Press the ▲ or ▼ button to select **Channel**, then press the **ENTER** button.

2    Press the **ENTER** button to select **Antenna**.
     Press the ▲ or ▼ button to select **Air** or **Cable**, then press the **ENTER** button.

     Press the **EXIT** button to exit.

### Easy Setting

1    Press the **TOOLS** button on the remote control.

2    Press the ▲ or ▼ button to select **Switch to Cable** or **Switch to Air**, then press the **ENTER** button.
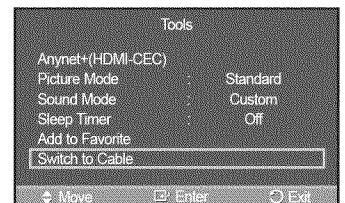
*Continued...*

## Storing Channels in Memory (Automatic Method)

1  Press the **MENU** button to display the menu.
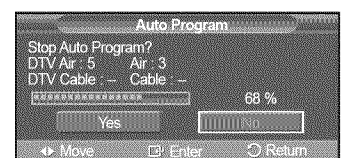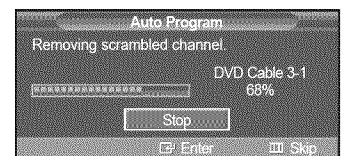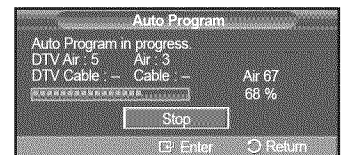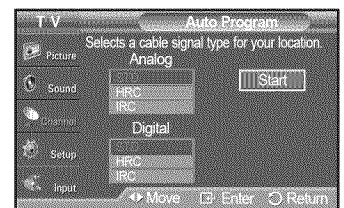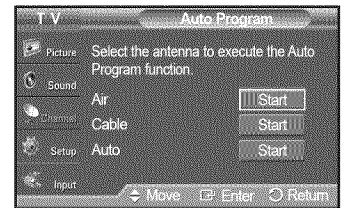Press the ▲ or ▼ button to select **Channel**, then press the **ENTER** button.

2  Press the ▲ or ▼ button to select **Auto Program**, then press the **ENTER** button.

3  Press the ▲ or ▼ button to select the antenna connection, then press the **ENTER** button.
  ➢ **Air** : **Air** antenna signal.
  **Cable** : **Cable** antenna signal.
  **Auto** : **Air** and **Cable** antenna signals.

4  When selecting the Cable TV system:
Press the **ENTER** button to start the auto program.
Press the ▲ or ▼ to select the correct analog signal cable system source from among **STD**, **HRC**, and **IRC**, then press the **ENTER** button. If you have Digital cable TV, select the cable system signal source for both Analog and Digital.
  ➢ STD, HRC, and IRC identify various types of cable TV systems. Contact your local cable company to identify the type of cable system that exists in your particular area. At this point the signal source has been selected.

5  The TV begins memorizing all available stations.
  ➢ After all the available channels are stored, the TV starts to remove scrambled channels (see page 38). The Auto program menu then reappears.
  ➢ If you want to stop Auto Programming, press the **ENTER** button.
  The **Stop Auto Program?** message will be displayed. Select **Yes** by pressing the ◄ or ► button.
  Press the **EXIT** button to exit.

# To Select the Source

Use to select TV or other external input sources such as DVD players or Set-top/Cable boxes connected to the TV. Use to select the input source of your choice.

1   Press the **MENU** button to display the menu.
    Press the ▲ or ▼ button to select **Input**, then press the **ENTER** button.

2   Press the **ENTER** button to select **Source List**.
    Press the ▲ or ▼ button to select signal source, then press the **ENTER** button.
    ➢ Available signal sources : **TV**, **AV1**, **AV2**, **S-Video**, **Component1**, **Component2**, **PC**, **HDMI1**, **HDMI2**, **HDMI3**.
    ➢ You can choose only those external devices that are connected to the TV.
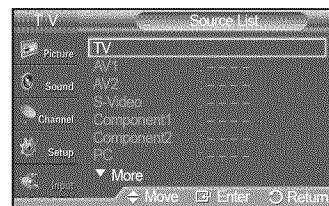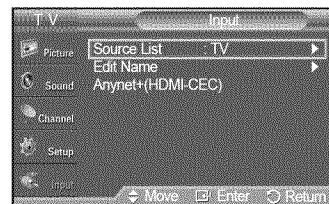
    📖 You can also press the **SOURCE** button on the remote control to view an external signal source.
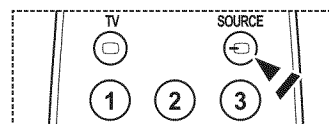
# To Edit the Input Source Name

You can name the device connected to the input jacks to make your input source selection easier.

1   Press the **MENU** button to display the menu.
    Press the ▲ or ▼ button to select **Input**, then press the **ENTER** button.
    Press the ▲ or ▼ button to select **Edit Name**, then press the **ENTER** button.

2   Press the ▲ or ▼ button to select **AV1**, **AV2**, **S-Video**, **Component1**, **Component2**, **PC**, **HDMI1**, **HDMI2**, or **HDMI3** input jack, then press the **ENTER** button.

3   Press the ▲ or ▼ button to select **VCR**, **DVD**, **Cable STB**, **Satellite STB**, **PVR STB**, **AV Receiver**, **Game**, **Camcorder**, **PC**, **TV**, **IPTV**, **Blu-Ray**, **HD DVD** or **Digital Media Adapter** input source, then press the **ENTER** button.

    Press the **EXIT** button to exit.

    When a PC with a resolution of 640 x 480@60Hz is connected to the HDMI IN 2 port, you should set the HDMI2 mode to PC in the Edit Name menu.
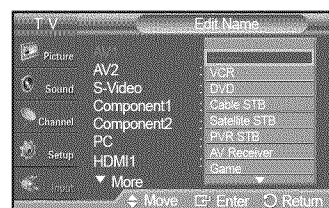
# Picture Control

## Changing the Picture Standard

**You can select the type of picture which best corresponds to your viewing requirements.**

1  Press the **MENU** button to display the menu.
   Press the **ENTER** button to select **Picture**.

2  Press the **ENTER** button to select **Mode**.
   Press the ▲ or ▼ button to select **Dynamic**, **Standard**, or **Movie.**
   Press the **ENTER** button.

   - **Dynamic** : Select the picture for high-definition in a bright room.
   - **Standard** : Select the picture for the optimum display in a normal environment.
   - **Movie** : Select the picture for viewing movies in a dark room.

3  Press the **EXIT** button to exit.

### Easy Setting

1  Press the **TOOLS** button on the remote control.

2  Press the ▲ or ▼ button to select **Picture Mode**.

3  Press the ◄ or ► button to select the required option.
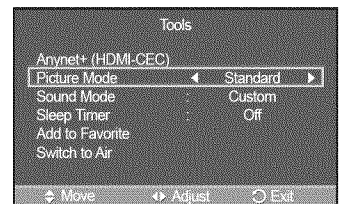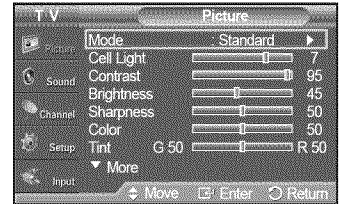
## Customizing the Picture Settings

**Your television has several setting options that allow you to control the picture quality.**

1  To select the desired picture mode, follow the **Changing the Picture Standard** instructions number 1 to 2.

2  Press the ▲ or ▼ button to select **Cell Light**, **Contrast**, **Brightness**, **Sharpness**, **Color**, or **Tint**, then press the **ENTER** button.

3  Press the ◄ or ► button to decrease or increase the value of a particular item.
   Press the **ENTER** button.
   Press the **EXIT** button to exit.

   ➢ • When you make changes to **Cell Light**, **Contrast**, **Brightness**, **Sharpness**, **Color**, or **Tint(G/R)** the OSD will be adjusted accordingly.
      • When in PC mode, **Tint(G/R)**, **Sharpness** and **Color** are not available.
      • Each adjusted setting will be stored separately according to its input mode.

      - **Cell Light** : Sets the pixel brightness; 10 being the highest setting.
      - **Contrast** : Adjusts the contrast level of the picture.
      - **Brightness** : Adjusts the brightness level of the picture.
      - **Sharpness** : Adjusts the edge definition of the picture.
      - **Color** : Adjusts color saturation of the picture.
      - **Tint** : Adjusts the color tint of the picture by compensating the red and green color.
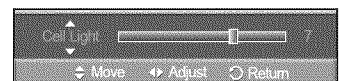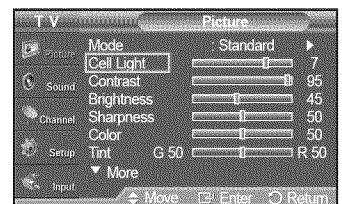
# Adjusting the Detailed Settings

Samsung's new TVs allow you to make even more precise picture settings than previous models. See below to adjust detailed picture settings.

## Activating Detailed Settings

1   Press the **MENU** button to display the menu.
Press the **ENTER** button to select **Picture**.
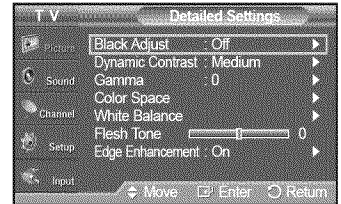
2   Press the **ENTER** button to select **Mode**.
Press the ▲ or ▼ button to select **Standard** or **Movie**, then press the **ENTER** button.

   ➢ **Detailed Settings** is available in **Standard** or **Movie** mode.

3   Press the ▲ or ▼ button to select **Detailed Settings**, then press the **ENTER** button.

   ➢ In PC mode, you can only make changes to **Dynamic Contrast**, **Gamma** and **White Balance** from among the **Detailed Settings** items.

## Activating Black adjust

You can select the black level on the screen to adjust the screen depth.

4   Press the ▲ or ▼ button to select **Black adjust**, then press the **ENTER** button.

5   Press the ▲ or ▼ button to select **Off**, **Low**, **Medium** or **High**.
Press the **ENTER** button.

   • **Off** : Turns off the black adjustment function.
   • **Low** : Sets the black color depth to low.
   • **Medium** : Sets the black color depth to medium.
   • **High** : Sets the black color depth to high.
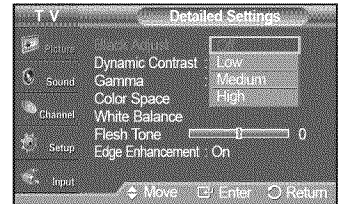
## Activating Dynamic Contrast

You can adjust the screen contrast so that the optimal contrast is provided.

6   Press the ▲ or ▼ button to select **Dynamic Contrast**, then press the **ENTER** button.

7   Press the ▲ or ▼ button to select **Off**, **Low**, **Medium** or **High**.
Press the **ENTER** button.

   • **Off** : Turns off the dynamic contrast adjustment function.
   • **Low** : Sets the dynamic contrast to low.
   • **Medium** : Sets the dynamic contrast to medium.
   • **High** : Sets the dynamic contrast to high.
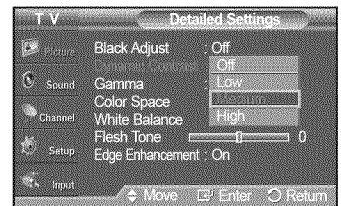
## Activating Gamma

You can adjust the Primary Color (Red, Green, Blue) Intensity. (-3 ~ +3)

8   Press the ▲ or ▼ button to select **Gamma**, then press the **ENTER** button.

9   Press the ◄ or ► button to decrease or increase the value.
Press the **ENTER** button.
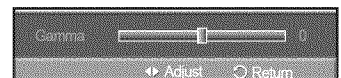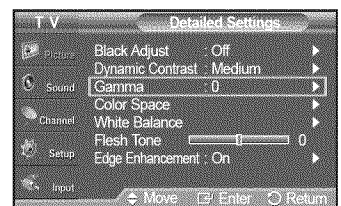
## Changing the Color Space

Color space is a color matrix composed of red, green and blue colors.
Select your favorite color space to experience the most natural color.

**10** Press the ▲ or ▼ button to select **Color Space**, then press the **ENTER** button.

**11** Press the **ENTER** button again to select **Color Space**.

**12** Press the ▲ or ▼ button to select **Auto**, **Native** or **Custom**. Press the **ENTER** button.

> • **Auto** : Auto Color Space automatically adjusts to the most natural color tone based on program sources.
> • **Native** : Native Color Space offers deep and rich color tone.
> • **Custom** : Adjusts the color range to suit your preference. (see "Customizing the Color Space")

## Customizing the Color Space

**13** Press the ▲ or ▼ button to select **Color**, then press the **ENTER** button.
> ➢ **Color** is available when **Color Space** is set to **Custom**.

**14** Press the ▲ or ▼ button to select **Red**, **Green**, **Blue**, **Yellow**, **Cyan** or **Magenta**. Press the **ENTER** button.

**15** Press the ▲ or ▼ button to select Red, Green or Blue to change it. Press the **ENTER** button.

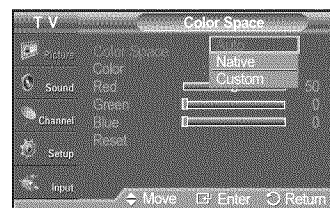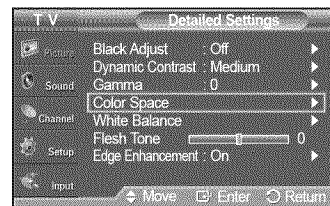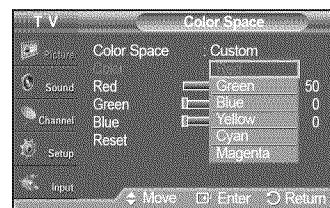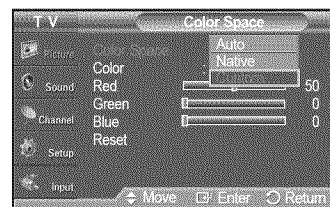**16** Press the ◄ or ► button to decrease or increase the value of a particular item. Press the **ENTER** button.

> ➢ In Color, you can adjust the RGB values for the selected color.
> ➢ To reset the adjusted RGB value, select **Reset**.

> • **Red** : Adjusts the red saturation level of the selected color.
> • **Green** : Adjusts the green saturation level of the selected color.
> • **Blue** : Adjusts the blue saturation level of the selected color.
> • **Reset** : Resets the color space to the default values.

> ➢ Changing the adjustment value will refresh the adjusted screen.
> ➢ Settings can be adjusted and stored for each external device you have connected to an input of the TV.

## Activating White Balance

You can adjust the color temperature for more natural picture colors.

**17** Press the ▲ or ▼ button to select **White Balance**, then press the **ENTER** button.

**18** Select the required option by pressing the ▲ or ▼ button, then press the **ENTER** button.

**19** Press the ◄ or ► button to decrease or increase the value of a particular item. Press the **ENTER** button.

> • **R Offset** : Adjusts the red color darkness.
> • **G Offset** : Adjusts the green color darkness.
> • **B Offset** : Adjusts the blue color darkness.
> • **R Gain** : Adjusts the red color brightness.
> • **G Gain** : Adjusts the green color brightness.
> • **B Gain** : Adjusts the blue color brightness.
> • **Reset** : The previously adjusted white balance will be reset to the factory defaults.

> ➢ Changing the adjustment value will refresh the adjusted screen.
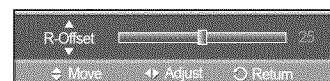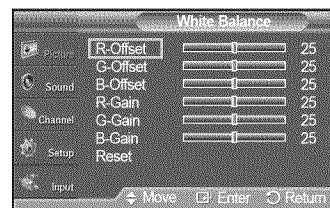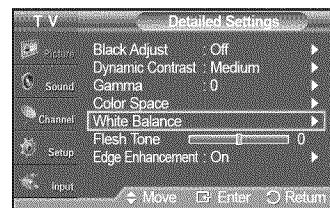
_Continued...

## Flesh Tone

You can emphasize the pink flesh tone in the picture.

**20** Press the ▲ or ▼ button to select **Flesh Tone**, then press the **ENTER** button.

**21** Press the ◄ or ► button to decrease or increase the value.
Press the **ENTER** button.
➢ Changing the adjustment value will refresh the adjusted screen.
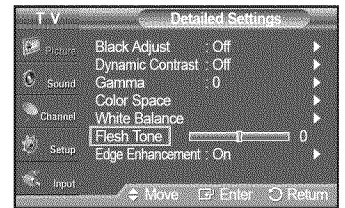
## Activating Edge Enhancement

You can emphasize object boundaries in the picture.

**22** Press the ▲ or ▼ button to select **Edge Enhancement**, then press the **ENTER** button.

**23** Press the ▲ or ▼ button to select **Off** or **On**.
Press the **ENTER** button.
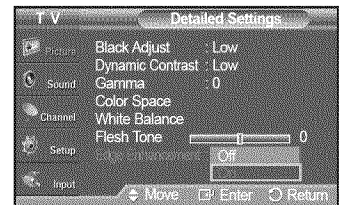
# Configuring Picture Options

## Activating Picture Options

**1** Press the **MENU** button to display the menu.
Press the **ENTER** button to select **Picture**.

**2** Press the ▲ or ▼ button to select **Picture Options**, then press the **ENTER** button.

**3** Press the ▲ or ▼ button to select a particular item. Press the **ENTER** button.

➢ When you are satisfied with your setting, press the **ENTER** button.

➢ In PC mode, you can only make changes to the **Color Tone** and **Size** from among the items in **Picture Options**.
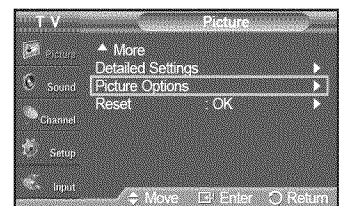
## Adjusting the Color Tone

**1** Follow the **Activating Picture Options** instructions numbers 1 and 2.

**2** Press the ▲ or ▼ button to select **Color Tone**, then press the **ENTER** button.

**3** Press the ▲ or ▼ button to select **Cool2**, **Cool1**, **Normal**, **Warm1** or **Warm2**.
Press the **ENTER** button.

➢ **Warm1** or **Warm2** is only activated when the picture mode is Movie.

➢ Settings can be adjusted and stored for each external device you have connected to an input of the TV.

## Changing the Screen Size

Occasionally, you may want to change the size of the image on your screen. Your TV comes with six screen size options, each designed to work best with specific types of video input. Your cable box or satellite receiver may have its own set of screen sizes as well. In general, though, you should view the TV in 16:9 mode as much as possible.

1  Follow the **Activating Picture Options** instructions numbers 1 and 2.

2  Press the ▲ or ▼ button to select **Size**, then press the **ENTER** button.

3  Press the ▲ or ▼ button to select the screen format you want.
Press the **ENTER** button.
Press the **EXIT** button to exit.

- **16:9** : Sets the picture to 16:9 wide mode.
- **Zoom1** : Magnifies the size of the picture on the screen.
- **Zoom2** : Expands the Zoom1 format picture.
- **Wide Fit** : Enlarges the aspect ratio of the picture to fit the entire screen.
- **4:3** : Sets the picture to 4:3 normal mode.
- **Just Scan** : Use the function to see the full image without any cutoff when HDMI (1080i/1080p), Component (1080i/1080p) or DTV (1080i) signals are input.

➢ Temporary image retention may occur when viewing a static image on the set for more than two hours.

➢ **After selecting Zoom1, Zoom2 or Wide Fit**
Press the ◄ or ► button to select **Position**, then press the **ENTER** button.
Press the ▲ or ▼ button to move the picture up and down.
**Reset**: Press the ◄ or ► button to select **Reset**, then press the **ENTER** button. You can initialize the setting.

➢ **After selecting Just Scan in HDMI (1080i/1080p) or Component (1080i/1080p) mode:**
Press the ▲ or ▼ button to select **H-Position** or **V-Position**, then press the **ENTER** button. Press the ◄ or ► button to adjust the screen Position. Press the **ENTER** button.
**Reset**: Press the ▲ or ▼ button to select **Reset**, then press the **ENTER** button. You can initialize the setting.

➢ **HD (High Definition)**
16:9 - 1080i (1920x1080), 720p (1280x720)

➢ Settings can be adjusted and stored for each external device you have connected to an input of the TV.
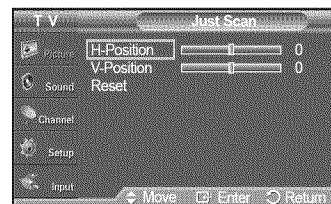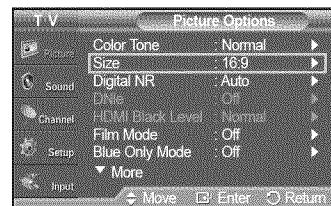
| Input Source | Picture Size |
| --- | --- |
| TV, Video, S-Video, Component (480i, 480p) | 16:9, Zoom1, Zoom2, 4:3 |
| DTV(1080i), Component (1080i), HDMI (1080i) | 16:9, 4:3, Wide Fit, Just Scan |
| PC | 16:9, 4:3 |

Alternately, you can press the **P.SIZE** button on the remote control repeatedly to change the picture size.

*Continued...*

**16:9**
Sets the picture to 16:9 wide mode.

**Zoom1**
The screen size when Wide screen is vertically enlarged.

**Zoom2**
The screen size when the Zoom1 screen is vertically enlarged.

**Wide Fit**
Enlarges the aspect ratio of the picture to fit the entire screen.

**4:3**
Sets the picture to 4:3 normal mode.

**Just Scan**
Use the function to see the full image without any cutoff when HDMI (720p/1080i), Component (1080i) or DTV (1080i) signals are input.

## 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.

1   Follow the **Activating Picture Options** instructions numbers 1 and 2. (Refer to page 26)

2   Press the ▲ or ▼ button to select **Digital NR**, then press the **ENTER** button.

3   Press the ▲ or ▼ button to select **Off**, **Low**, **Medium**, **High** or **Auto**. Press the **ENTER** button.

---

- **Off** : Turns the screen noise reduction function off.
- **Low** : Reduces screen noise at a low level.
- **Medium** : Reduces screen noise at a medium level.
- **High** : Reduces screen noise at a high level.
- **Auto** : Automatically recognizes and reduces screen noise.

---

Press the **EXIT** button to exit.
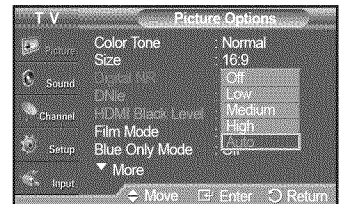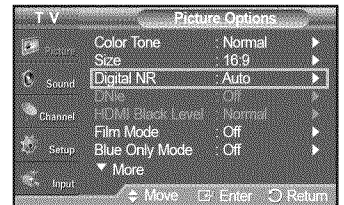
## DNIe (Digital Natural Image engine)

This TV includes the DNIe function to provide high visual quality. If you set DNIe to on, you can view the screen with the DNIe feature activated.

1  Follow the **Activating Picture Options** instructions numbers 1 and 2. (Refer to page 26)

2  Press the ▲ or ▼ button to select **DNIe**, then press the **ENTER** button.

3  Press the ▲ or ▼ button to select **On** or **Off** or then press the **ENTER** button.

• **Off** : Switches off the DNIe mode.
• **On** : Switches on the DNIe mode.

Press the **EXIT** button to exit.

➢ DNIe™ (Digital Natural Image engine) [DNIe™]
   This feature brings you a more detailed image with 3D noise reduction and detail, contrast and white enhancement.
➢ DNIe is only available in Dynamic mode.
➢ This function doesn't work when the Input Source is PC.


## Setting the HDMI Black Level

Use this function to adjust the Black Level of the picture while in HDMI mode.
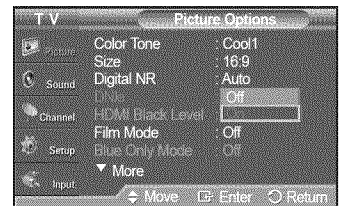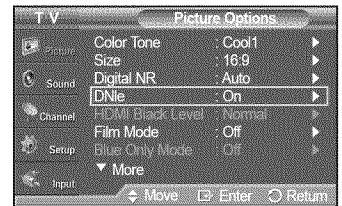
1  Follow the **Activating Picture Options** instructions numbers 1 and 2 (Refer to page 26)

2  Press the ▲ or ▼ button to select **HDMI Black Level**, then press the **ENTER** button.

3  Press the ▲ or ▼ button to select **Normal** or **Low**, then press the **ENTER** button.

• **Normal** : The screen gets brighter.
• **Low** : The screen gets darker.

➢ This function is active only when an external device is connected to the TV via HDMI. **HDMI Black Level** function may not be compatible with or external devices.

Press the **EXIT** button to exit.
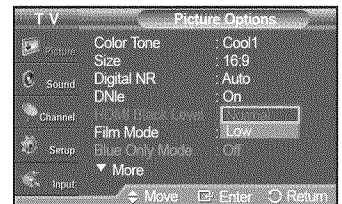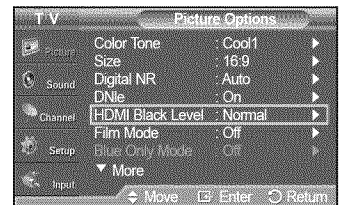

## Setting the Film Mode

The TV can be set to automatically sense and process film signals from all sources and adjust the picture for optimum quality.

1  Follow the **Activating Picture Options** instructions numbers 1 and 2. (Refer to page 26)

2  Press the ▲ or ▼ button to select **Film Mode**, then press the **ENTER** button.

3  Press the ▲ or ▼ button to select **Off** or **Auto**, then press the **ENTER** button. Press the **EXIT** button to exit.

➢ **Film mode** is supported in **TV**, **AV1**, **AV2**, **S-Video**, **Component** (480i /1080i) and **HDMI** (1080i).
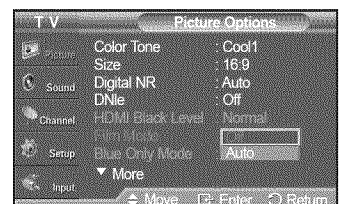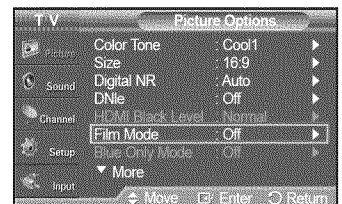
## Setting the Blue Only Mode

This function is for AV device measurement experts.
This function displays the blue signal only by removing the red and green signals from the video signal so as to provide a Blue Filter effect that is used to adjust the Color and Tint of video equipment such as DVD players, Home Theaters, etc.
Using this function, you can adjust the Color and Tint to preferred values appropriate to the signal level of each video device using the Red/Green/Blue/Cyan/Magenta/Yellow Color Bar Patterns, without using an additional Blue Filter.

1  Follow the **Activating Picture Options** instructions numbers 1 and 2.
(Refer to page 26)

2  Press the ▲ or ▼ button to select **Blue Only Mode**, then press the **ENTER** button.

3  Press the ▲ or ▼ button to select **Off** or **On**, then press the **ENTER** button.
Press the **EXIT** button to exit.
➢ **Blue Only Mode** is available when the picture mode is set to **Standard** or **Movie**.

## Reducing the Effects of Screen Burn

If screen burn has occurred, you can select a white screen or scrolling to help remove screen burn artifacts.

1  Follow the **Activating Picture Options** instructions numbers 1 and 2.
(Refer to page 26)

2  Press the ▲ or ▼ button to select **Screen Burn Protection**, then press the **ENTER** button.

3  Press the ▲ or ▼ button to select **Pixel Shift, White, Scrolling**, or **Side Gray** then press the **ENTER** button.

Press the **EXIT** button to exit.

• **White**
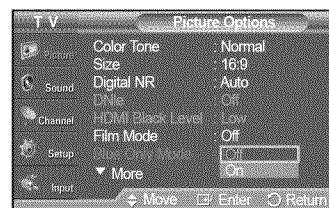This function removes after-images on the screen by changing the color of pixels to white. Use this function when there are remaining after-images or symbols on the screen, especially when you displayed a still image on the screen for a long time.

• **Scrolling**
This function removes after-images on the screen by moving all the pixels on the PDP according to a pattern. Use this function when there are remaining after-images or symbols on the screen, especially when you displayed a still image on the screen for a long time.

• **Side Gray**
When you watch TV with the screen ratio of 4:3, the screen is prevented from any damage by adjusting the white balance on both extreme left and right sides.
To prevent the screen burn from happening, select **Dark** or **Light**.

• **Dark** : When you set the screen ratio to 4:3, it darkens the left and right sides.
• **Light** : When you set the screen ratio to 4:3, it brightens the left and right sides.

➢ To remove after-images on the screen, use either the **White** or **Scrolling** function. Although both functions remove after-images on the screen, **Scrolling** is more effective.
➢ The after-image removal function has to be executed for a long time (approximately 1 hour) to effectively remove after-images on the screen. If the after-image is not removed after performing the function, repeat the function again.
➢ Press any key on the remote control to cancel this feature.
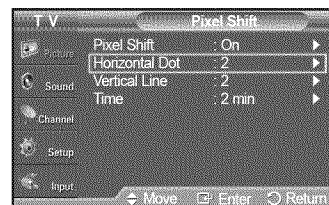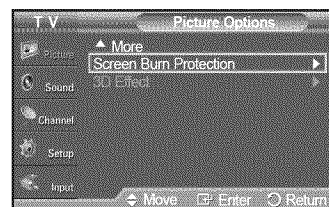
## Preventing Screen Burn-in

To reduce the possibility of screen burn, this unit is equipped with screen burn prevention technology.
This technology enables you to set picture movement up/down (Vertical Line) and side to side (Horizontal Dot).
The Time setting allows you to program the time between movement of the picture in minutes.

1   Follow the **Activating Picture Options** instructions numbers 1 and 2. (Refer to page 26)

2   Press the ▲ or ▼ button to select **Screen Burn Protection**, then press the **ENTER** button.

3   Press the **ENTER** button to select **Pixel Shift**, then press the **ENTER** button. Pressing the ▲ or ▼ button will alternate between **On** and **Off**. You will also see the items **Horizontal Dot**, **Vertical Line** and **Time**.

> • **Pixel Shift** : Using this function, you can minutely move pixels on the PDP in the horizontal or vertical direction to prevent after-images on the screen.

4   Press the ▲ or ▼ button to select the item you wish to change, then press the **ENTER** button.
    Press the ▲ or ▼ button to change the value of the item, then press the **ENTER** button.

• Optimum condition for pixel shift;

|  | PC | TV/AV1/AV2/S-Video/Component/HDMI |
|---|---|---|
| Horizontal Dot | 1 | 2 |
| Vertical Line | 1 | 2 |
| Time(min) | 2 | 2 min |

Press the **EXIT** button to exit.
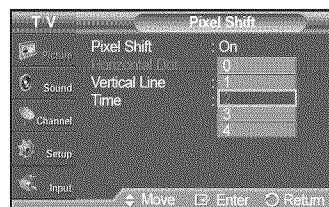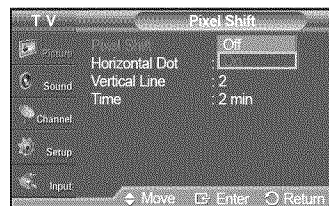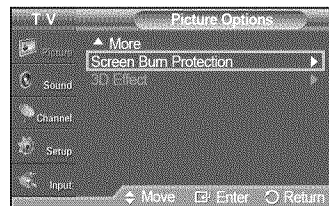
# Using the 3D Function

You can enjoy 3D movies and games on your TV. The 3D effects function enables you to view 3D images using special 3D glasses.

## Connections



3D Glasses
(Not supplied)

TV Rear Panel

3D IR Emitter
(Not supplied)

PC

[2] 3.5 mm Stereo plug to 2 RCA Cable (Not supplied)

[1] HDMI/DVI Cable (Not supplied)

※ The appearance of the 3D glasses (including Emitter) may differ depending on the model of your glasses.

1  Connect a HDMI/DVI cable between the HDMI IN 2 jack on the TV and the PC output jack on your computer.
2  Connect a 3.5mm Stereo/2RCA cable between the DVI IN (HDMI 2) [R-AUDIO-L] jack on the TV and the Audio Out jack of the sound card on your computer.
3  Connect the Emitter to the 3D SYNC OUT port on the rear panel of the TV.
4  Turn the TV on and set the source of the TV to HDMI2.
➢  For more information on the 3D glasses (including the Emitter), refer to the user manual of your 3D glasses.
➢  **Adjust the PC resolution**: - PN42A450P1D: 1024 x 768@60Hz
                                       - PN50A450P1D: 1024 x 768@60Hz,1360 x 768@60Hz
➢  The 3D IR Emitter communicates with the 3D glasses.
    Therefore, the 3D IR Emitter should be located near the 3D glasses.
➢  It is activated when the HDMI or DVI input signal is RGB, and DVI Sound is supported.
➢  When the power is turned on or off, the mode changes to the default (**Off**) and the **Format** is saved.
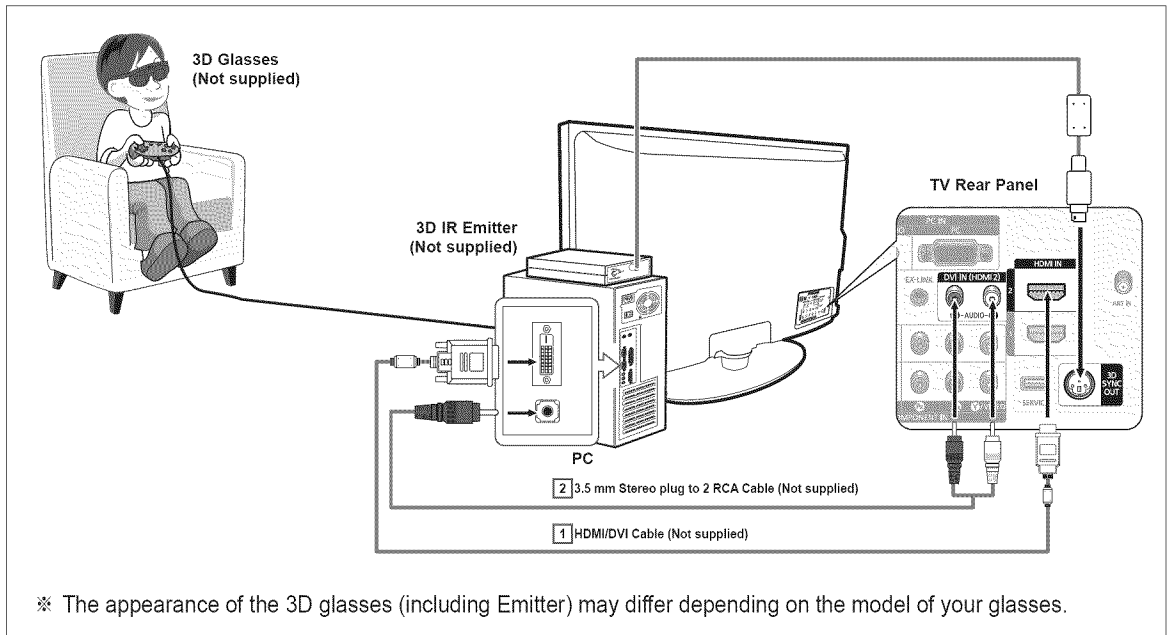➢  The **3D Effect** is turned on or off regardless of the **Picture Mode**.
➢  When **3D Effect** is on, only the **Contrast**, **Brightness**, **3D Effect**, and **Reset picture menus** are activated.
➢  To use the 3D Effect function, a graphics card supporting 3D or 3D software is required.
➢  The 3D glasses and the Emitter must be manufacturer by the same company.
➢  If you play a game or watch TV while wearing the 3D glasses for long periods of time, you may experience eyestrain or a headache.
➢  3D glasses (including the Emitter) not manufactured by Samsung may not be supported.

## Changing the Mode

Provides the function to turn on the 3D Effect. You can choose between Mode1 and Mode2. To achieve the 3D effect, the 3D glasses shutter back and forth from the left to right and vice versa (left/right sync).



1  Connect the TV, PC and 3D IR Emitter as shown in the figure.
2  Press the **SOURCE** button to select **HDMI2**.
3  Press the **MENU** button to display the menu.
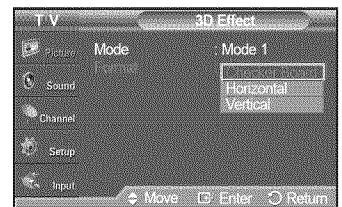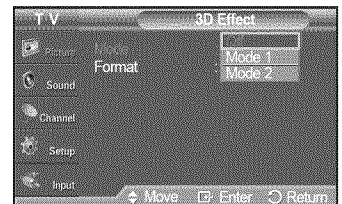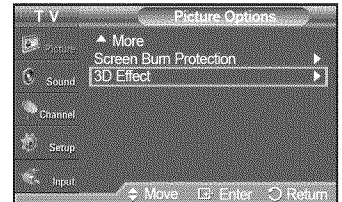    Press the ▲ or ▼ button to select **Picture**, then press the **ENTER** button.
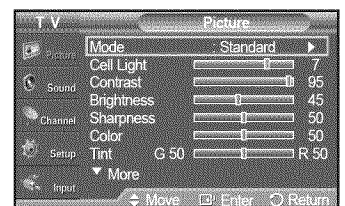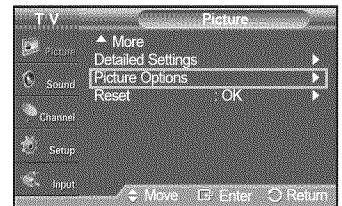
4 Press the ▲ or ▼ button to select **Picture, Option** then press the **ENTER** button.
Press the ▲ or ▼ button to select **3D Effect** then press the **ENTER** button.

5 Press the ▲ or ▼ button to select **Mode**, then press the **ENTER** button.
Press the ▲ or ▼ button to select **Off, Mode1** or **Mode2** then press the **ENTER** button.

- **Off** : Turns the 3D Effect function off.
- **Mode1** : Mode 1 operates with right sync first.
- **Mode2** : Mode 2 operates with left sync first.

➢ If the 3D effect is not working properly, it means the Mode and 3D glasses may not be syncing properly. To put them in sync, switch to the other mode.

## Changing the Format

Select the optimal input format to match your graphic cards or 3D Software.

See the descriptions for Steps 1 to 4 above.

5 Press the ▲ or ▼ button to select **Format**, then press the **ENTER** button.

6 Press the ▲ or ▼ button to select **Checker Board, Horizontal** or **Vertical** then press the **ENTER** button.

| Checker Board | If the output format of your graphic card or 3D software is Checkerboard, select this input format. |
|---|---|
| Horizontal | If the output format of your graphic card or 3D software is Horizontal interleaved, select this input format. |
| Vertical | If the output format of your graphic card or 3D software is Vertical interleaved, select this input format. |
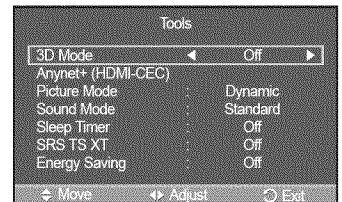
### Easy Setting

1 Press the **TOOLS** button on the remote control.

2 Press the ▲ or ▼ button to select **3D Effect**.

3 Press the **ENTER** button to start the 3D Effect.

# Resetting the Picture Settings to the Factory Defaults

1 To select the desired picture mode, follow the **Activating Picture Options** instructions numbers 1 and 2. (see page 26)

2 Press the ▲ or ▼ button to select **Picture Reset**, then press the **ENTER** button.
Press the ◄ or ► button to select **OK** or **Cancel** then press the **ENTER** button.
Press the **EXIT** button to exit.

➢ Each mode can be reset.
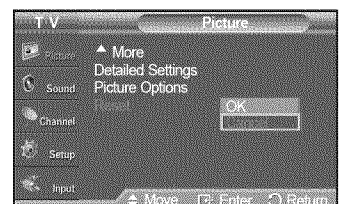
# Sound Control

## Changing the Sound Standard

**You can select the sound mode to best suit the programming you're watching.**

1   Press the **MENU** button to display the menu.
    Press the ▲ or ▼ button to select **Sound**, then press the **ENTER** button.

2   Press the **ENTER** button to select **Mode**. Press the ▲ or ▼ button to select **Standard**, **Music**, **Movie**, **Speech**, or **Custom** sound setting, then press the **ENTER** button.

    Press the **EXIT** button to exit.

- **Standard** : Selects the normal sound mode.
- **Music** : Emphasizes music over voices.
- **Movie** : Provides the best sound for movies.
- **Speech** : Emphasizes voice over other sounds.
- **Custom** : Recalls your customized sound setting. (See Customizing the Sound)

### Easy Setting

1   Press the **TOOLS** button on the remote control.

2   Press the ▲ or ▼ button to select **Sound Mode**.

3   Press the ◄ or ► button to select the required option.
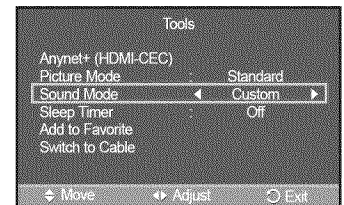
## Customizing the Sound

**The sound settings can be adjusted to suit your personal preference.**

1   Press the **MENU** button to display the menu.
    Press the ▲ or ▼ button to select **Sound**, then press the **ENTER** button.

2   Press the ▲ or ▼ button to select **Equalizer**, then press the **ENTER** button.

3   Press the ◄ or ► button to select a particular frequency to adjust.
    Press the ▲ or ▼ button to increase or decrease the level of the particular frequency, then press the **ENTER** button.

    Press the **EXIT** button to exit.

- **L/R Sound Balance Adjustment** : To adjust the sound balance of the L/R speakers.
- **Bandwidth Adjustment (100Hz, 300Hz, 1kHz, 2kHz, 3kHz, 10kHz)** : To adjust the level of different bandwidth frequencies.

➢  If you make any changes to the equalizer settings, the sound mode is automatically switched to the **Custom** mode.
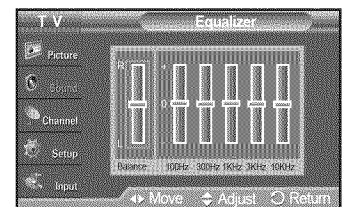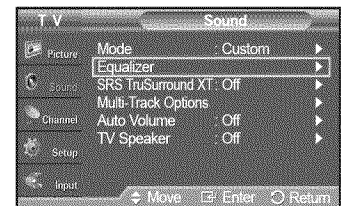
# Setting the TruSurround XT

**TruSurround XT is a patented SRS technology that solves the problem of playing 5.1 multichannel content over two-speakers. TruSurround delivers a compelling, virtual surround sound experience through any two-speaker playback system, including internal television speakers. It is fully compatible with all multi channel formats.**

1   Press the **MENU** button to display the menu.
    Press the ▲ or ▼ button to select **Sound**, then press the **ENTER** button.

2   Press the ▲ or ▼ button to select **SRS TruSurround XT**, then press the **ENTER** button.

3   Press the ▲ or ▼ button to select **Off** or **On**, then press the **ENTER** button.
    Press the **EXIT** button to exit.

  Press the **SRS** button on the remote control to select **On** or **Off**.

---

|  | **TruSurround XT**, SRS and ⟨●⟩ Symbol are trademarks of SRS Labs, Inc. |
|  | **TruSurround XT** technology is incorporated under license from SRS Labs, Inc. |

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# Choosing a Multi-Channel Sound (MTS) Track - Digital

**The digital-TV transmission system is capable of simultaneous transmission of many audio tracks (for example, simultaneous translations of the program into foreign languages).**
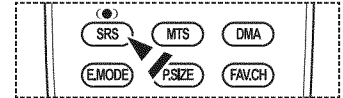
## Preferred language

1   Press the **MENU** button to display the menu.
    Press the ▲ or ▼ button to select **Sound**, then press the **ENTER** button.

2   Press the ▲ or ▼ button to select **Multi-Track Options**, then press the **ENTER** button.

3   Press the **ENTER** button to select **Preferred Language**.
    Press the ▲ or ▼ button to choose the language (**English/Spanish/French**) you want, then press the **ENTER** button.

    Press the **EXIT** button to exit.

    ➣ You can only select the language from among the actual languages being broadcast.

    ➣ **Preferred Language** is available only in Digital TV mode.
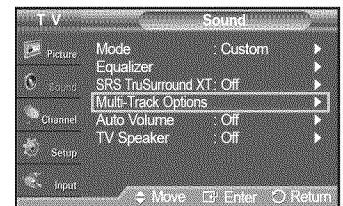
  Press the **MTS** button on the remote control to listen in a language other than the preferred language.
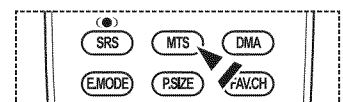
# Choosing a Multi-Channel Sound (MTS) Track - Analog

Depending on the particular program being broadcast, you can listen to Mono, Stereo or SAP.

## Multi-Track Sound

1  Press the **MENU** button to display the menu.
   Press the ▲ or ▼ button to select **Sound**, then press the **ENTER** button.

2  Press the ▲ or ▼ button to select **Multi-Track Options**, then press the **ENTER** button.

3  Press the ▲ or ▼ button to select **Multi-Track Sound**, then press the **ENTER** button.
   Press the ▲ or ▼ button to select a setting you want, then press the **ENTER** button.

   Press the **EXIT** button to exit.

   ---
   • **Mono** : Choose for channels that are broadcasting in mono or if you are having difficulty receiving a stereo signal.
   • **Stereo** : Choose for channels that are broadcasting in stereo.
   • **SAP** : Choose to listen to the Separate Audio Program, which is usually a foreign language translation.
   ---

   ➢ **Multi-Track Sound** is available only in Analog TV mode.
   ➢ Depending on the particular program being broadcast, you can listen to **Mono**, **Stereo** or **SAP**.

   Press the **MTS** buttons on the remote control to select **Mono**, **Stereo**, or **SAP**.
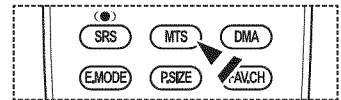
# Automatic Volume Control

Reduces the difference in volume level among broadcasters.

1  Press the **MENU** button to display the menu.
   Press the ▲ or ▼ button to select **Sound**, then press the **ENTER** button.

2  Press the ▲ or ▼ button to select **Auto Volume**, then press the **ENTER** button.

3  Press the ▲ or ▼ button to select **Off** or **On**, then press the **ENTER** button.

   Press the **EXIT** button to exit.
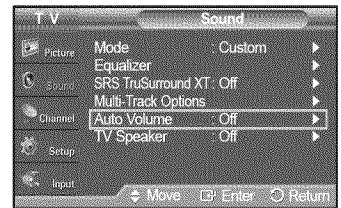
## Setting the TV Speakers On/Off

**Sound output from the TV speakers is muted.**

1   Press the **MENU** button to display the menu.
    Press the ▲ or ▼ button to select **Sound**, then press the **ENTER** button.

2   Press the ▲ or ▼ button to select **TV Speaker**, then press the **ENTER** button.

3   Press the ▲ or ▼ button to select **Off** or **On**, then press the **ENTER** button.
    Press the **EXIT** button to exit.
    ➢ • When **TV Speaker** is set to **Off**, Sound menus except **Multi-track
        Options** cannot be adjusted.
      • The **VOL** ⊕, **VOL** ⊖ and **MUTE** buttons do not operate when the **TV
        Speaker** is set to **Off**.
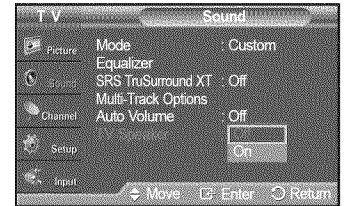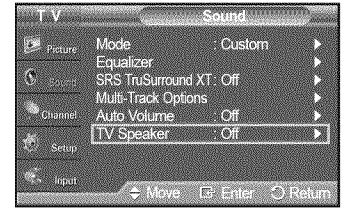
| | TV's Internal Speakers | | | Audio Out (Optical, L/R Out) to Sound System | | |
|---|---|---|---|---|---|---|
| | TV | AV, S-Video | Component, PC, HDMI | TV | AV, S-Video | Component, PC, HDMI |
| TV Speaker On | Speaker Output | Speaker Output | Speaker Output | Sound Output | Sound Output | Sound Output |
| TV Speaker Off | Mute | Mute | Mute | Sound Output | Sound Output | Sound Output |
| Video No Signal | Mute | Mute | Mute | Mute | Mute | Mute |

## Connecting Headphones (Sold separately)

**You can connect a set of headphones to your set if you wish to watch a TV program without disturbing other people in the room.**

➢ When you insert the headphone's plug into the headphone jack, you cannot
   operate **TV Speaker** in **Sound** menu.

➢ Prolonged use of headphones at a high volume may damage your hearing.

➢ You will not hear sound from the speakers when you connect headphones to the TV.

TV Side Panel
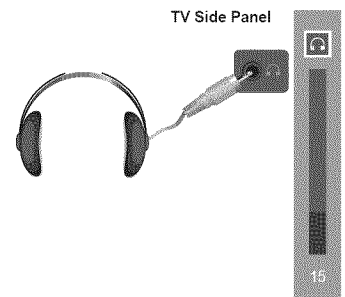
# Channel Control

## Selecting the Antenna
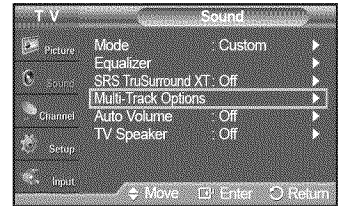
1  Press the **MENU** button to display the menu.
   Press the ▲ or ▼ button to select **Channel**, then press the **ENTER** button.

2  Press the **ENTER** button to select **Antenna**.
   Press the ▲ or ▼ button to select **Air** or **Cable**, then press the **ENTER** button.

   Press the **EXIT** button to exit.

## Clearing Scrambled Channels - Digital

**The Clear Scrambled Channel function is used to filter out scrambled channels after Auto Program is completed. This process may take up to 20-30 minutes.**

1  Press the **MENU** button.
   Press the ▲ or ▼ button to select **Channel**, then press the **ENTER** button.
   Press the ▲ or ▼ button to select **Clear Scrambled Channel**, then press the
   **ENTER** button. It searches scrambled channels, which are to be removed from
   the list.

   **To stop searching scrambled channels;**
   Press the **ENTER** button to select **Stop**.
   Press the ◄ button to select **Yes**, then press the **ENTER** button.

2  When the scrambled channel searching is completed, press the **ENTER** button.
   Press the **EXIT** button to exit.

➤ This function is only available in **Cable** mode.

# Adding and Erasing Channels

**You can add or delete a channel to display the channels you want.**

1  Press the **MENU** button to display the menu.
   Press the ▲ or ▼ button to select **Channel**, then press the **ENTER** button.

2  Press the ▲ or ▼ button to select **Channel List**, then press the **ENTER** button.

3  Press the ▲ or ▼ button to select **Added**, then press the **ENTER** button.

4  Press the ▲/▼/◄/► buttons to select a channel to add, then press the **ENTER** button.
   Press the ▲ or ▼ button to select **Add**, then press the **ENTER** button to add the channel.

   Press the **MENU** button to return.
   ➢ All added channels will be shown on **Added** menu.

5  Press the ▲/▼/◄/► buttons to select a channel to delete, then press the **ENTER** button.
   Press the ▲ or ▼ button to select **Delete**, then press the **ENTER** button to delete the channel.

   Press the **EXIT** button to exit.
   ➢ You can also delete a channel in the All Channels menu in the same manner.
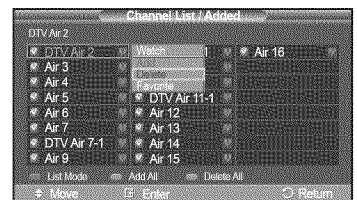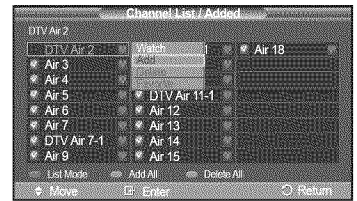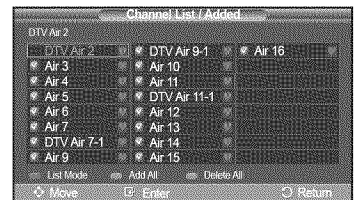
---

- **Red button** : Press repeatedly to select **All**, **Added**, or **Favorite**.
- **Green button** : Press to add all channels deleted.
- **Yellow button** : Press to delete all channels memorized.

# Viewing the Channel Lists

**You can display a list of all channels, added channels or your favorite channels.**

1   Press the **MENU** button to display the menu.
    Press the ▲ or ▼ button to select **Channel**, then press the **ENTER** button.

2   Press the ▲ or ▼ button to select **Channel List**, then press the **ENTER** button.

3   Press the ▲ or ▼ button to select **All**, **Added** or **Favorite**, then press the
    **ENTER** button.

    To toggle between your all channels, add channels, or favorite channels, use the
    red button on the remote control.

    • **Red button** : Press repeatedly to select **All**, **Added**, or **Favorite**.
    • **Green button** : Press to add all channels deleted.
    • **Yellow button** : Press to delete all channels memorized.
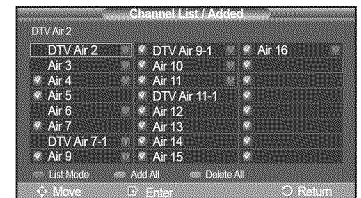

# Setting Your Favorite Channels

**You can set channels you watch frequently as favorites.**

1   Press the **MENU** button to display the menu.
    Press the ▲ or ▼ button to select **Channel**, then press the **ENTER** button.

2   Press the ▲ or ▼ button to select **Channel List**, then press the **ENTER** button.

3   Press the ▲ or ▼ button to select **All** or **Added**, then press the **ENTER** button.

4   Press the ▲/▼/◄/► buttons to select a channel as a favorite channel, then
    press the **ENTER** button.

    Press the **CH** ⊙ and **CH** ⊙ button to display the next channel list page.
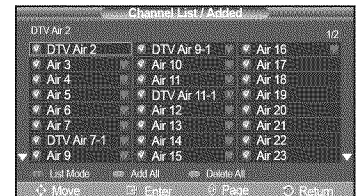
**5** Press the ▲ or ▼ button to select **Favorite**, then press the **ENTER** button.
The "♥" symbol will be highlighted and the channel will be set as a Favorite.
To cancel your Favorite channel selection, press the **ENTER** button until the
"♥" symbol disappears.

Press the **EXIT** button to exit.

➢ Only memorized channels can be set as favorite channels.

➢ All favorite channels will be shown on the **Favorite** menu.

### Easy Setting

**1** Press the **TOOLS** button on the remote control.

**2** Press the ▲ or ▼ button to select **Add to Favorite** or **Delete from Favorite**,
then press the **ENTER** button.

➢ The current channel is added to or deleted from Favorites.
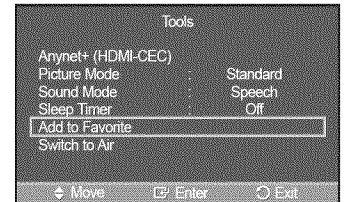
[📖] To select the favorite channels you have set up, press the **FAV.CH** button on the remote
control.
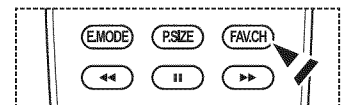
# Setting the Default Channel List Mode

**You can set All, Added, or Favorite to be the Default List that appears when you press the CH LIST button.**

**1** Press the **MENU** button to display the menu.
Press the ▲ or ▼ button to select **Channel**, then press the **ENTER** button.

**2** Press the ▲ or ▼ button to select **Channel List**, then press the **ENTER** button.

**3** Press the ▲ or ▼ button to select **Default List Mode**, then press the **ENTER**
button.
Press the ▲ or ▼ button to select **All**, **Added**, or **Favorite**, then press the
**ENTER** button.

➢ Select the Channel list you want to appear when you press the **CH LIST**
button.
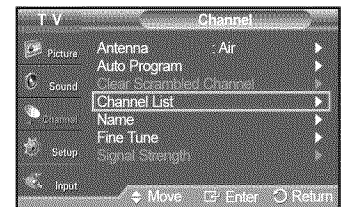
- **All** : Shows All the channels when you press the **CH LIST** button on the remote
control.
- **Added** : Shows Added channels when you press **CH LIST** button on the remote
control.
- **Favorite** : Shows Favorite channels when you press **CH LIST** button on the
remote control.

Press the **EXIT** button to exit.

[📖] Press the **CH LIST** button on the remote control to bring up the Channel Lists.

# Labeling Channels

**Channels can labeled so that their call letters appear whenever the channel is selected.**

1. Press the **MENU** button to display the menu.
   Press the ▲ or ▼ button to select **Channel**, then press the **ENTER** button.
   Press the ▲ or ▼ button to select **Name**, then press the **ENTER** button.

2. Press the ▲ or ▼ button to select the channel to be assigned a new name, then press the **ENTER** button.

3. Press the ▲ or ▼ button to select a letter, a number or a blank (Results in this sequence: A~Z, 0~9, +, −, *, /, blank).
   Press the ▶ button to switch to the next field, which will be selected.
   Select a second letter or digit by pressing the ▲ or ▼ button, as above.
   Repeat the process to select the last three digits. When you have finished, press the **ENTER** button to assign the new name.
   To erase the assigned new name, select **Clear** by pressing the ◀ or ▶ button, then press the **ENTER** button.

   Press the **EXIT** button to exit.

   ➢ The names of digital broadcasting channels are automatically assigned and thus cannot be assigned by users.
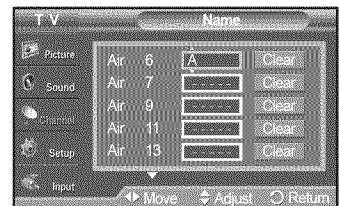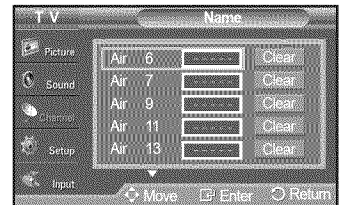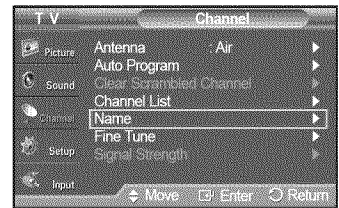
# Fine Tuning Analog Channels

**Use fine tuning to manually adjust a particular channel for optimal reception.**
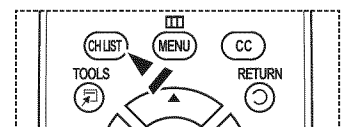
1. Press the **MENU** button to display the menu.
   Press the ▲ or ▼ button to select **Channel**, then press the **ENTER** button.

2. Press the ▲ or ▼ button to select **Fine Tune**, then press the **ENTER** button.

3. Press the ◀ or ▶ button to adjust the fine tuning.

4. To store the fine tuning setting in the TV's memory, press the **ENTER** button.
   To reset the fine tuning setting, press the ▼ button to select **Reset**, then press the **ENTER** button.

   Press the **EXIT** button to exit.

   ➢ Only analog TV channels can be fine tuned.

   ➢ " * " will appear next to the number of fine-tuned channels.
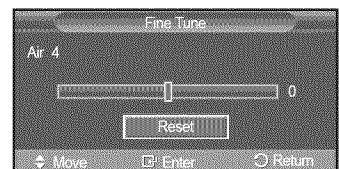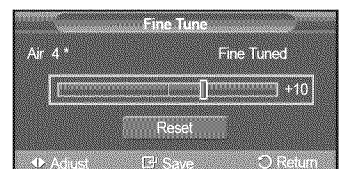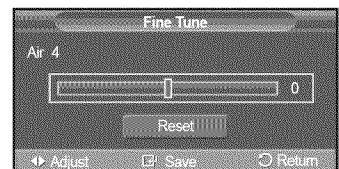
# Checking the Digital-Signal Strength

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.

1  Press the **MENU** button to display the menu.
   Press the ▲ or ▼ button to select **Channel**, then press the **ENTER** button.

2  Press the ▲ or ▼ button to select **Signal Strength**, then press the **ENTER** button. 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.

   Press the **EXIT** button to exit.
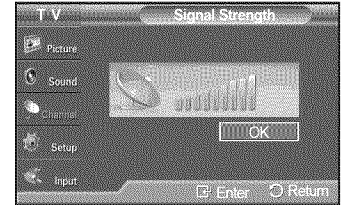
# PC Display

## Using Your TV as a Computer (PC) Display

### Setting Up Your PC Software (Based on Windows XP)

The Windows display-settings for a typical computer are shown below. The actual screens on your PC will probably be different, depending upon your particular version of Windows and your particular video card. However, even if your actual screens look different, the same basic set-up information will apply in almost all cases. (If not, contact your computer or Video Card manufacturer.)

1. First, click on **Control Panel** on the Windows start menu.
2. When the control panel window appears, click on **Appearance and Themes** and a display dialog-box will appear.
3. When the control panel window appears, click on **Display** and a display dialog-box will appear.
4. Navigate to the **Settings** tab on the display dialog-box.
   The correct size setting (resolution)
   Optimum : PN42A450P1D : 1024x768 pixels
   PN50A450P1D : 1360x768 pixels
   If a vertical-frequency option exists on your display settings dialog box, the correct value is **60** or **60 Hz**. Otherwise, just click **OK** and exit the dialog box.

## Display Modes

**If the signal from the system equals the standard signal mode, the screen is adjusted automatically. If the signal from the system doesn't equal the standard signal mode, adjust the mode by referring to your videocard user guide; otherwise there may be no video. For the display modes listed below, the screen image has been optimized during manufacture.**

### D-Sub Input

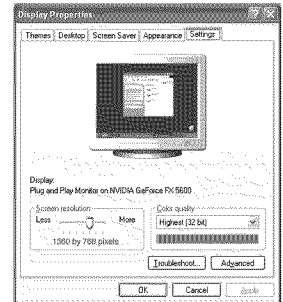| Mode | Resolution | Horizontal Frequency (kHz) | Vertical Frequency (Hz) | Pixel Clock Frequency (MHz) | Sync Polarity (H/V) | PN42A450P1D | PN50A450P1D |
|------|-----------|---------------------------|------------------------|----------------------------|--------------------|-------------|-------------|
| IBM | 640 x 350 | 31.469 | 70.086 | 25.175 | +/- | ✔ | ✔ |
| | 720 x 400 | 31.469 | 70.087 | 28.322 | -/+ | ✔ | ✔ |
| VESA | 640 x 480 | 31.469 | 59.940 | 25.175 | -/- | ✔ | ✔ |
| | 640 x 480 | 37.861 | 72.809 | 31.500 | -/- | ✔ | ✔ |
| | 640 x 480 | 37.500 | 75.000 | 31.500 | -/- | ✔ | ✔ |
| | 800 x 600 | 37.879 | 60.317 | 40.000 | +/+ | ✔ | ✔ |
| | 800 x 600 | 48.077 | 72.188 | 50.000 | +/+ | ✔ | ✔ |
| | 800 x 600 | 46.875 | 75.000 | 49.500 | +/+ | ✔ | ✔ |
| | 1024 x 768 | 48.363 | 60.004 | 65.000 | -/- | ✔ | ✔ |
| | 1024 x 768 | 56.476 | 70.069 | 75.000 | -/- | ✔ | ✔ |
| | 1024 x 768 | 60.023 | 75.029 | 78.750 | +/+ | ✔ | ✔ |
| | 1360 x 768 | 47.712 | 60.015 | 85.500 | +/+ | | ✔ |

### HDMI/DVI Input

| Mode | Resolution | Horizontal Frequency (kHz) | Vertical Frequency (Hz) | Pixel Clock Frequency (MHz) | Sync Polarity (H/V) | PN42A450P1D | PN50A450P1D |
|------|-----------|---------------------------|------------------------|----------------------------|--------------------|-------------|-------------|
| VESA | 640 x 480 | 31.469 | 59.940 | 25.175 | -/- | ✔ | ✔ |
| | 800 x 600 | 37.879 | 60.317 | 40.000 | +/+ | ✔ | ✔ |
| | 1024 x 768 | 48.363 | 60.004 | 65.000 | -/- | ✔ | ✔ |
| | 1360 x 768 | 47.712 | 60.015 | 85.500 | +/+ | | ✔ |

• The interlace mode is not supported.
• The TV operates abnormally if a non-standard video format is selected.
• The table above conforms to IBM/VESA regulations and is based on using the Analog Input.
• " ✓ " mark means that this mode is supported.
  ➢ • For the PN42A450P1D, PC text quality is optimum in VESA mode (1024 x 768@60Hz).
      • For the PN50A450P1D, PC text quality is optimum in VESA mode (1360 x 768@60Hz).
        (Three pixels on left, right, top and bottom will be grayed out at the resolution setting of 1360x768@60Hz. This is not a mechanical
        problem but a result caused by the pixel difference between the standard resolution and the PDP panel.)
      • When this TV is used as a PC display, 32-bit color is supported.
      • Depending on the manufacturer, your PC display screen might appear different. (and depending on your particular version of
        Windows.) Check your PC instruction book for information about connecting your PC to a TV.
      • If a vertical and horizontal frequency-select mode exists, select 60Hz (vertical) and 48.4KHz (horizontal).
      • In some cases, abnormal signals (such as stripes) might appear on the TV screen when the PC power is turned off (or if the PC is
        disconnected). If so, press the **SOURCE** button on the remote control or TV panel to enter a VIDEO mode. Also, make sure that the PC
        is connected.

# Setting up the TV with your PC

**Use the Auto Adjust function to have the TV set automatically adjust the video signals it receives from the PC.
The function also automatically fine-tunes the settings and adjusts the frequency values and positions.**

### How to Auto Adjust

1   Press the **MENU** button to display the menu.
    Press the ▲ or ▼ button to select **Picture**, then press the **ENTER** button.

2   Press the ▲ or ▼ button to select **Auto Adjustment**, then press the **ENTER**
    button. The message **Auto Adjustment in progress. Please wait.** appears on
    the screen and the picture adjustments are automatically activated.

    Press the **EXIT** button to exit.
    ➢  This function does not work in DVI-Digital mode.
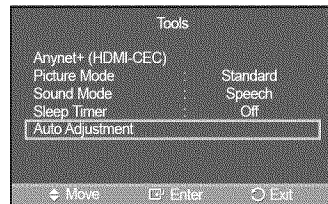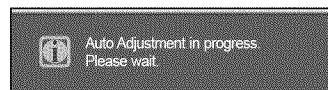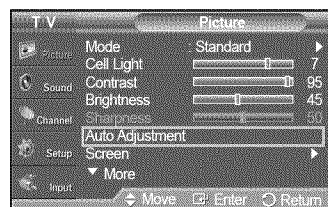
### Easy Setting

1   Press the **TOOLS** button on the remote control.

2   Press the ▲ or ▼ button to select **Auto Adjustment**, then press the **ENTER**
    button.

### Adjusting the Screen Quality

The purpose of the picture quality adjustment is to remove or reduce picture noise.
If the noise is not removed by fine tuning alone, then do the frequency adjustments
to the utmost and fine tune again. After the noise has been reduced, re-adjust the
picture so that it is aligned on the center of the screen.

➢  Preset : Press the **SOURCE** button to select PC mode.

1   Press the **MENU** button to display the menu.
    Press the ▲ or ▼ button to select **Picture**, then press the **ENTER** button.
    Press the ▲ or ▼ button to select **Screen**, then press the **ENTER** button.

2   Press the **ENTER** button to select **Image Lock**.

3   Press the ▲ or ▼ button to select **Coarse** or **Fine**, then press the **ENTER** button.
    Press the ◄ or ► button to adjust the screen quality, then press the **ENTER** button.

    Press the **EXIT** button to exit.
    ➣ Vertical stripes may appear or the picture may be blurry.

## Changing the Screen Position

Adjust the PC's screen positioning if it does not fit the TV Screen.

➣ Preset: Press the **SOURCE** button to select PC mode.

1   Press the **MENU** button to display the menu.
    Press the ▲ or ▼ button to select **Picture**, then press the **ENTER** button.
    Press the ▲ or ▼ button to select **Screen**, then press the **ENTER** button.

2   Press the ▲ or ▼ button to select **Position**, then press the **ENTER** button.

3   Press the ▲ or ▼ button to adjust the V-Position.
    Press the ◄ or ► button to adjust the H-Position.
    Press the **ENTER** button.

    Press the **EXIT** button to exit.

## Initializing the Screen Position

You can replace all image settings with the factory default values.
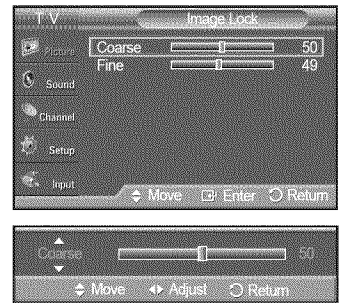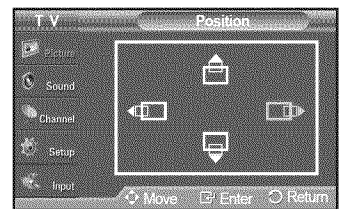
➣ Preset: Press the **SOURCE** button to select PC mode.

1   Press the **MENU** button to display the menu.
    Press the ▲ or ▼ button to select **Picture**, then press the **ENTER** button.
    Press the ▲ or ▼ button to select **Screen**, then press the **ENTER** button.

2   Press the ▲ or ▼ button to select **Image Reset**, then press the **ENTER** button.
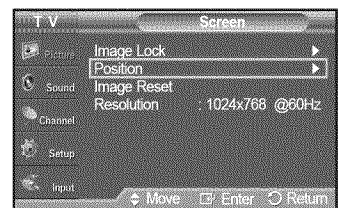    The message **Image Reset is completed.** appears on the screen.

    Press the **EXIT** button to exit.
    ➣ The previously adjusted settings will be reset to the factory defaults.
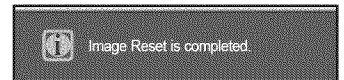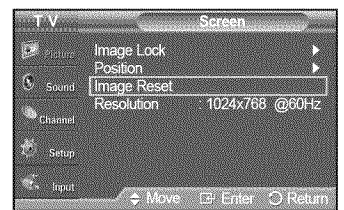
## Viewing the Resolution

Displays currently set PC resolution.

# Time Setting

## Setting the Time

Setting the clock is necessary in order to use the various timer features of the TV. Also, you can check the time while watching the TV. (Just press the INFO button.)

### Option 1: Setting the Clock Manually

1  Press the MENU button to display the menu.
   Press the ▲ or ▼ button to select Setup, then press the ENTER button.
   Press the ▲ or ▼ button to select Time, then press the ENTER button.

2  Press the ENTER button to select Clock.

3  Press the ENTER button to select Clock Mode.
   Press the ▲ or ▼ button to select Manual, then press the ENTER button.

4  Press the ▲ or ▼ button to select Clock Set, then press the ENTER button.

5  Press the ◄ or ► button to move to Month, Day, Year, Hour, Minute, or am/pm. Set the date and time you want by pressing the ▲ or ▼ button, then press the ENTER button.

   Press the EXIT button to exit.

   ➢ The current time will appear every time you press the INFO button.
   ➢ You can set the Month, Day, Year, Hour, and Minute directly by pressing the number buttons on the remote control.
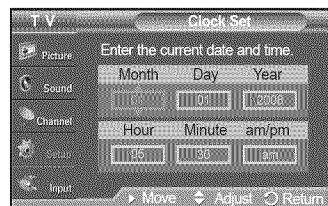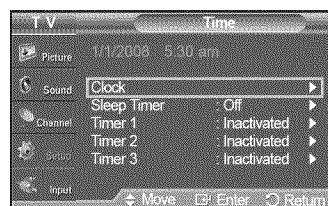
## Option 2: Setting the Clock Automatically

The Clock can be set automatically if you are receiving a digital signal.

1. Press the **MENU** button to display the menu.
   Press the ▲ or ▼ button to select **Setup**, then press the **ENTER** button.
   Press the ▲ or ▼ button to select **Time**, then press the **ENTER** button.
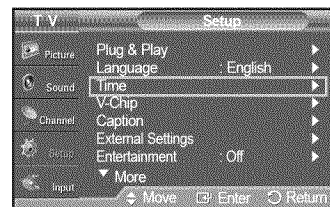
2. Press the **ENTER** button to select **Clock**.
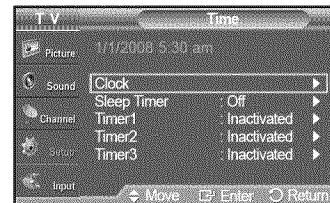
3. Press the **ENTER** button to select **Clock Mode**.
   Press the ▲ or ▼ button to select **Auto**, then press the **ENTER** button.

4. Press the ▲ or ▼ button to select **Time Zone**, then press the **ENTER** button.

5. Press the ▲ or ▼ button to highlight the time zone for your local area (and to move the highlight to the appropriate time zone on the map of the United States), then press the **ENTER** button.

6. Press the ▲ or ▼ button to select **DST(Daylight Saving Time)**, then press the **ENTER** button.
   Press the ▲ or ▼ button to select **Off** or **On**, then press the **ENTER** button.

   Press the **EXIT** button to exit.

   ➢ Depending on the broadcast station and signal, the auto time may not be set correctly. If this occurs, set the time manually.
   ➢ Antenna or Cable must be connected in order to set the time automatically.

## Setting the On/Off Timer

Use this feature to set the TV to turn on or off at a desired time. You must set the clock first.

1. Press the **MENU** button to display the menu.
   Press the ▲ or ▼ button to select **Setup**, then press the **ENTER** button.
   Press the ▲ or ▼ button to select **Time**, then press the **ENTER** button.

*Continued...*

English - 48
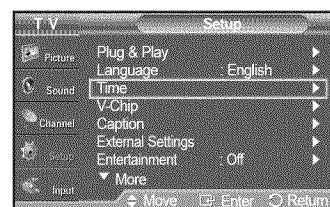
**2** Three different On/Off Timer Settings can be made.
Press the ▲ or ▼ button to select **Timer1**, **Timer2**,or **Timer3**, then press the
**ENTER** button. The timer menu is displayed.
Press the ▲ or ▼ button to adjust hour, then press the ▶ button to move to the
next step. Set other items using the same method as above.

**3** Press the ◄ or ▶ button to select the desired item below.
Press the ▲ or ▼ button to adjust the setting.

Press the **EXIT** button to exit.

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- **On Time** : Set the Hour, Minute, am/pm, and Activation/Inactivation.
  (To activate timer with the setting you've chosen, set to **Activate**.)
- **Off Time** : Set the Hour, Minute, am/pm, and Activation/Inactivation.
  (To activate timer with the setting you've chosen, set to **Activate**.)
- **Volume** : Set the required volume level.
- **Channel** : When the **On Timer** is activate, you can turn on a specific channel.
- **Repeat** : Select **Once**, **Everyday**, **Mon~Fri**, **Mon~Sat**, **Sat~Sun**, or **Manual**.
  ➢ When **Manual** is selected, press the ▶ button to select the desired day of the
  week. Press the **ENTER** button over the desired day and the mark (✓) will
  appear.

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➢ You can set the hour, and minute directly by pressing the number buttons on
the remote control.

➢ **Auto Power Off**

When you set the timer **On**, the television will eventually turn off, if no
controls are operated for 3 hours after the TV was turned on by the timer.
This function is only available in timer **On** mode and prevents overheating,
which may occur if a TV is on for too long time.

## Setting the Sleep Timer

The sleep timer automatically shuts off the TV after a preset time (30, 60, 90, 120,
150 and 180 minutes).

**1** Press the **MENU** button to display the menu.
Press the ▲ or ▼ button to select **Setup**, then press the **ENTER** button.
Press the ▲ or ▼ button to select **Time**, then press the **ENTER** button.

**2** Press the ▲ or ▼ button to select **Sleep Timer**, then press the **ENTER** button.
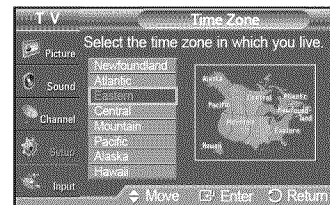
**3** Press the ▲ or ▼ button to select the minute.
Setting the Timer sets the **Activation** to **On** automatically.
**To cancel the set sleep timer:**
Press the ▶ button to select **Activation**.
Press the ▲ or ▼ button to select **Off**, then press the **ENTER** button.

Press the **EXIT** button to exit.

## Easy Setting

**1** Press the **TOOLS** button on the remote control.

**2** Press the ▲ or ▼ button to select **Sleep Timer**, then press the **ENTER** button.

**3** Press the ◄ or ▶ button to select the minute, then press the **ENTER** button.

**4** Press the **EXIT** or **TOOLS** button to exit.
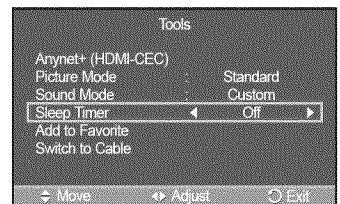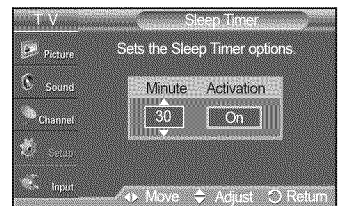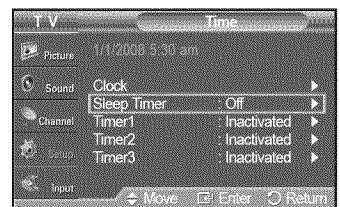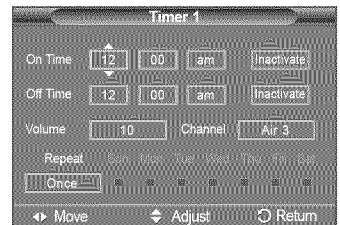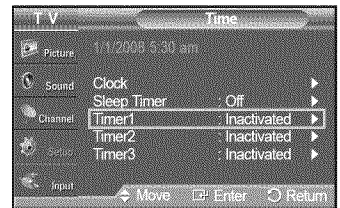
# Function Description

## Selecting a Menu Language

1   Press the **MENU** button to display the menu.
    Press the ▲ or ▼ button to select **Setup**, then press the **ENTER** button.
    Press the ▲ or ▼ button to select **Language**, then press the **ENTER** button.

2   Press the ▲ or ▼ button to select the appropriate language: **English**, **Español**,
    or **Français**, then press the **ENTER** button.

    Press the **EXIT** button to exit.

## Viewing Closed Captions (On-Screen Text Messages) - Digital

**The Digital Captions function operates on digital channels.**

1   Press the **MENU** button to display the menu.
    Press the ▲ or ▼ button to select **Setup**, then press the **ENTER** button.

2   Press the ▲ or ▼ button to select **Caption**, then press the **ENTER** button.

3   Press the **ENTER** button to select **Caption**.
    Press the ▲ or ▼ button to select **On**, then press the **ENTER** button.

*Continued...*

**4** Press the ▲ or ▼ button to select **Caption Mode**, then press the **ENTER** button. Press the ▲ or ▼ button to select submenu (**Default, Service1~Service6, CC1~CC4** or **Text1~Text4**) you want, then press the **ENTER** button.

➢ **Service1~6** in digital caption mode may not be available depending on the broadcast.

➢ **Caption Options** are available only when **Default, Service1~Service6** can be selected in **Caption Mode**.

**5** Press the ▲ or ▼ button to select **Caption Options**, then press the **ENTER** button.

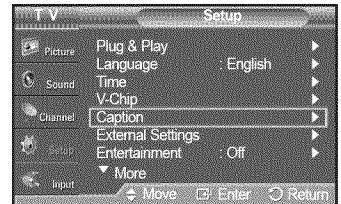**6** Press the ▲ or ▼ button to select **Size**, then press the **ENTER** button. Press the ▲ or ▼ button to select the desired caption option, then press the **ENTER** button. Press the ▲ or ▼ button to select the desired sub-menu options (see options below), then press the **ENTER** button.
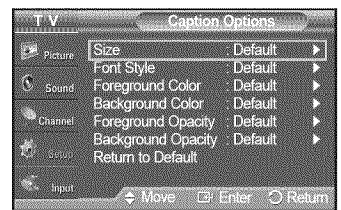
Press the **EXIT** button to exit.

➢ The availability of captions depends on the program being broadcast.

➢ **Default** means to follow the standard set by the broadcaster.

➢ Foreground and Background cannot be set to have the same color.

➢ Foreground Opacity and Background Opacity cannot be both set to Transparent.

- **Size** : This option consists of **Default, Small, Standard,** and **Large**. The default is **Default**.
- **Font Style** : This option consists of **Default, Style0 ~ Style7**. You can change the font you want. The default is **Default**.
- **Foreground Color** : This option consists of **Default, White, Black, Red, Green, Blue, Yellow, Magenta,** and **Cyan**. You can change the color of the letter. The default is **Default**.
- **Background Color** : This option consists of **Default, White, Black, Red, Green, Blue, Yellow, Magenta,** and **Cyan**. You can change the background color of the caption. The default is **Default**.
- **Foreground Opacity** : This option consists of **Default, Transparent, Translucent, Solid,** and **Flashing**. You can change the opacity of the letter.
- **Background Opacity** : This option consists of **Default, Transparent, Translucent, Solid,** and **Flashing**. You can change the background opacity of the caption.
- **Return to Default** : This option sets each of **Size, Font Style, Foreground Color, Background Color, Foreground Opacity,** and **Background Opacity** to its default.

[%] Press the **CC** button on the remote control to turn the Caption **On** or **Off**.
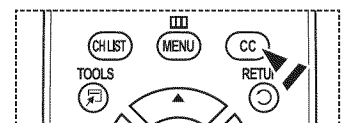
# Viewing Closed Captions (On-Screen Text Messages) - Analog

The Analog Caption function operates in either analog TV channel mode or when a signal is supplied from an external device. (Depending on the broadcasting signal, the Analog Caption function may operate on digital channels.)
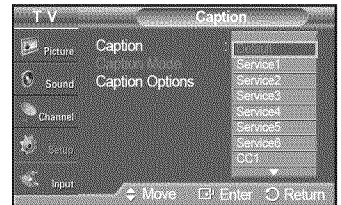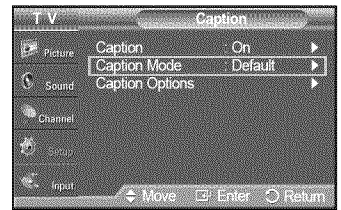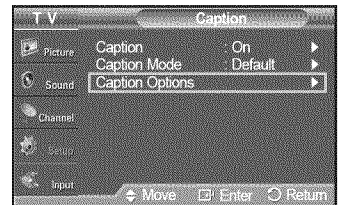
1 Press the **MENU** button to display the menu.
Press the ▲ or ▼ button to select **Setup**, then press the **ENTER** button.

2 Press the ▲ or ▼ button to select **Caption**, then press the **ENTER** button.

3 Press the **ENTER** button to select **Caption**.
Press the ▲ or ▼ button to select **On**, then press the **ENTER** button.

4 Press the ▲ or ▼ button to select **Caption Mode**, then press the **ENTER** button. Press the ▲ or ▼ button to select submenu (**Default**, **CC1~CC4** or **Text1~Text4**) you want, then press the **ENTER** button.

Press the **EXIT** button to exit.

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- The default is **Default**.
- **CC1** : The Primary Synchronous Caption Service. These are captions in the primary language that must be in sync with the sound, preferably matched to a specific frame.
- **CC2** : The Special Non-Synchronous Use Captions.This channel carries data that is intended to augment information carried in the program.
- **CC3** : Secondary Synchronous Caption Service.
  Alternate program-related caption data, typically second language captions.
- **CC4** : Special Non-Synchronous Use Captions. Similar to CC2.
- **Text1** : First Text Service. This may be various non-program related data.
- **Text2** : Second Text Service. Additional data, usually not program related.
- **Text3/Text4** : Third and Fourth Text Services. These data channels should be used only if Text1 and Text2 are not sufficient.

---

➢ • The Caption feature doesn't work in COMPONENT, PC, HDMI(DVI) modes.

- The availability of captions depends on the program being broadcast.

[🔳] You can also press the **CC** button on the remote control to select Captions **On** or **Off**.

# Adjusting the TV On/Off Melody Sound

**The TV power on/off melody sound volume can be adjusted.**

1   Press the **MENU** button to display the menu.
    Press the ▲ or ▼ button to select **Setup**, then press the **ENTER** button.

2   Press the ▲ or ▼ button to select **External Settings**, then press the **ENTER** button.

3   Press the **ENTER** button to select **Melody**.
    Press the ▲ or ▼ button to select **Off**, **Low**, **Medium**, or **High**, then press the **ENTER** button.

    • **Off** : Turns off the melody function.
    • **Low** : Sets the melody volume to low.
    • **Medium** : Sets the melody volume to medium.
    • **High** : Sets the melody volume to high.

    Press the **EXIT** button to exit.

    ➢ **The Melody does not play**
      - When no sound is output from the TV because the **MUTE** button has been pressed,
      - When no sound is output from the TV because you have reduced the volume to minimum by pressing the **VOL** ⊖ button.
      - When the TV is turned off by Timer function.

    | ⊓⊓ DOLBY⁰  D I G I T A L | Manufactured under license from Dolby Laboratories. Dolby and the double-D symbol are trademarks of Dolby Laboratories. |
    |---|---|
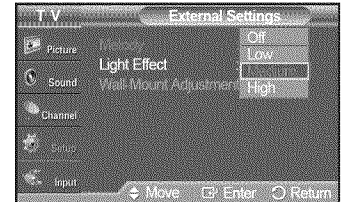
# Setting the Light Effect
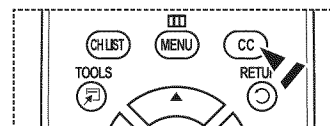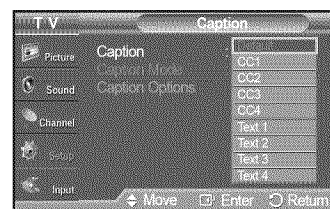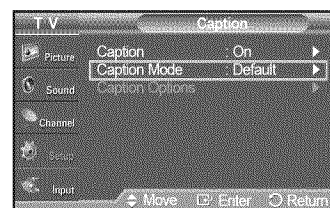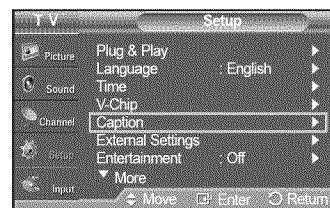
**You can turn the blue LED on the front of TV on/off.**

1   Press the **MENU** button to display the menu.
    Press the ▲ or ▼ button to select **Setup**, then press the **ENTER** button.
    Press the ▲ or ▼ button to select **External Settings**, then press the **ENTER** button.

2   Press the ▲ or ▼ button to select **Light Effect**, then press the **ENTER** button.
    Press the ▲ or ▼ button to select **Off**, **In Standby**, **When Watching TV**, or **Always**, then press the **ENTER** button.

    Press the **EXIT** button to exit.

    • **Off** : The LED is always off.
    • **In Standby** : The LED lights while in Standby mode and it turns off when your TV is turned on.
    • **When Watching TV** : The LED lights when watching TV and it turns off when your TV is turned off.
    • **Always** : The LED is always lit.

    ➢ Set the Light Effect to Off to reduce the power consumption.
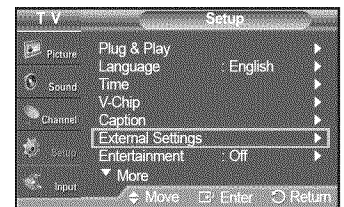
# Setting the Entertainment mode

The Entertainment mode enables you to select the optimal display and sound for sports, cinema and games.

1   Press the **MENU** button to display the menu.
    Press the ▲ or ▼ button to select **Setup**, then press the **ENTER** button.

2   Press the ▲ or ▼ button to select **Entertainment**, then press the **ENTER** button.

3   Press the ▲ or ▼ button to select **Off**, **Sports**, **Cinema** or **Game**, then press the **ENTER** button.

    • **Off** : Switches the **Entertainment** function off.
    • **Sports** : Provides the optimal picture and sound quality for sports.
    • **Cinema** : Provides the optimal picture and sound quality for movie watching.
      You can experience a richer picture and enhanced sound.
    • **Game** : Provides the optimal picture and sound quality for games. This mode
      accelerates the playing speed when using an external game console connected
      to the TV.

    Press the **EXIT** button to exit.

➢   If you set any of the three **Entertainment** modes to On, the settings will be locked and
    can not be adjusted. If you want to make Picture and Sound mode adjustments, the
    Entertainment mode must be turned off.
➢   The **Entertainment** settings are saved for each input source.

    You can press the **E.MODE** button on the remote control repeatedly to change the
    **Entertainment** setting.
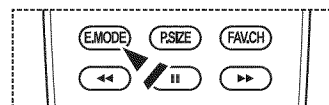

# Using the Energy Saving Feature

This feature adjusts the power consumption of the unit in order to save energy.

1   Press the **MENU** button to display the menu.
    Press the ▲ or ▼ button to select **Setup**, then press the **ENTER** button.

2   Press the ▲ or ▼ button to select **Energy Saving**, then press the **ENTER** button.
    Press the ▲ or ▼ button to select **Off**, **Low**, **Medium**, or **High**, then press the
    **ENTER** button.

    Press the **EXIT** button to exit.

    • **Off** : Switches off the Energy Saving mode.
    • **Low** : Operates in standard mode.
    • **Medium** : Enters medium power saving mode.
    • **High** : Enters maximum power saving mode.
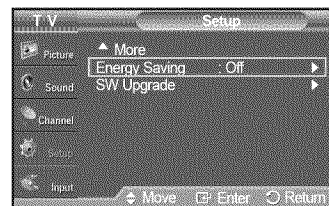
# Upgrading the Software

Samsung may offer upgrades for your TV's firmware in the future. Please contact the Samsung call center at 1-800-SAMSUNG to receive information about downloading upgrades and using a USB drive. Upgrades will be possible by connecting a USB drive to the USB port.

1   Insert a USB drive containing the firmware upgrade into the USB Upgrade Port on the rear of the TV.
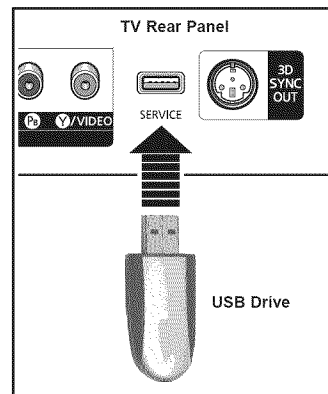
2   Press the **MENU** button to display the menu.
    Press the ▲ or ▼ button to select **Setup**, then press the **ENTER** button.

3   Press the ▲ or ▼ button to select **SW Upgrade**, then press the **ENTER** button.

4   Press the ▲ or ▼ button to select **USB**, then press the **ENTER** button.
    The message **Scanning for USB... It may take up to 30 seconds** is displayed.
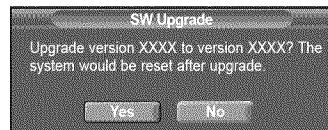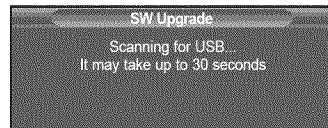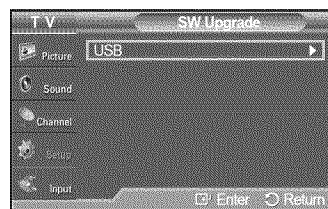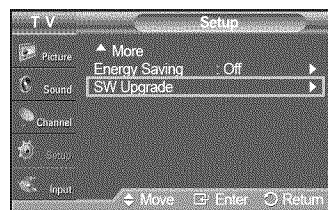
5   If the firmware on the USB is properly recognized, the message **Upgrade version xxxx to version xxxx The system would be reset after upgrade.** is displayed.
    Press the ◄ or ► button to select **Yes**, then press the **ENTER** button.
    The upgrade starts.

    Please be careful to not disconnect the power or remove the USB drive while upgrades are being applied.
    The TV will shut off and turn on automatically after completing the firmware upgrade.
    Please check the firmware version after the upgrades are complete.
    When software is upgraded, video and audio settings you have made will return to their default (factory) settings. We recommend you write down your settings so that you can easily reset them after the upgrade.

# Using the V-Chip

U.S.A Only
This product is covered by the following U.S. patents : US4,930,158 US4,930,160

**The V-Chip feature automatically locks out programs that are deemed inappropriate for children. The user must enter a PIN (personal ID number) before any of the V-Chip restrictions are set up or changed.**

➢ **V-Chip** function is not available in **HDMI**, **Component** or **PC** mode.

## Setting Up Your Personal ID Number (PIN)

1   Press the **MENU** button to display the menu.
    Press the ▲ or ▼ button to select **Setup**, then press the **ENTER** button.

2   Press the ▲ or ▼ button to select **V-Chip**, then press the **ENTER** button.
    The message **Enter PIN** will appear. Enter your 4 digit PIN number.
    ➢ The default PIN number of a new TV set is **0-0-0-0**.

3   The **V-Chip** screen will appear.
    Press the ▲ or ▼ button to select **Change PIN**, then press the **ENTER** button.
    The Change PIN screen will appear. Choose any 4 digits for your PIN and enter them. Re-enter the same 4 digits.
    When the message **PIN is changed successfully.** is displayed, your PIN has been memorized.

    Press the **EXIT** button to exit.

    ➢ 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.

## How to Enable/Disable the V-Chip

1   Press the **MENU** button to display the menu.
    Press the ▲ or ▼ button to select **Setup**, then press the **ENTER** button.

2   Press the ▲ or ▼ button to select **V-Chip**, then press the **ENTER** button.
    The message **Enter PIN** will appear. Enter your 4 digit PIN number.

3   The **V-Chip** screen will appear.
    To enable the V-Chip feature, press the **ENTER** button so that the **V-Chip Lock**
    field is **On**. (Pressing the ▲ or ▼ button will alternate between **On** and **Off**.)
    Press the **ENTER** button.

    Press the **EXIT** button to exit.
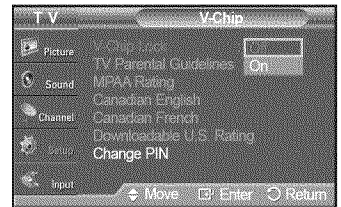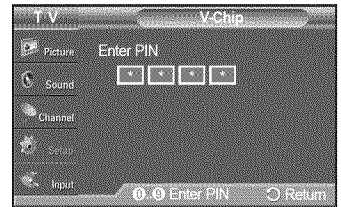
## How to Set up Restrictions Using "TV Parental Guidelines"

First, set up a personal identification number (PIN), and enable the V-Chip.
(See previous section.) Parental restrictions can be set up using either of two
methods: The TV guidelines or the MPAA rating.

1   Press the **MENU** button to display the menu.
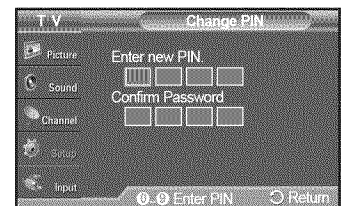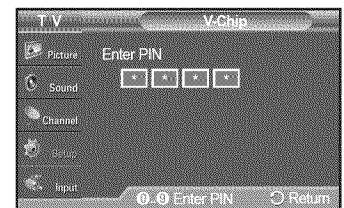    Press the ▲ or ▼ button to select **Setup**, then press the **ENTER** button.

2   Press the ▲ or ▼ button to select **V-Chip**, then press the **ENTER** button.
    The message **Enter PIN** will appear. Enter your 4 digit PIN number.

3   The **V-Chip** screen will appear. Press the ▲ or ▼ button to select **TV Parental
    Guidelines**, then press the **ENTER** button.
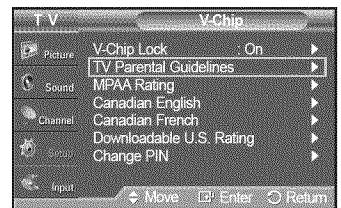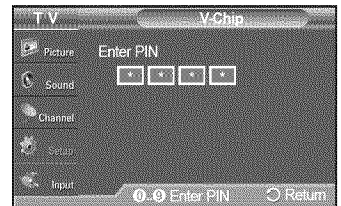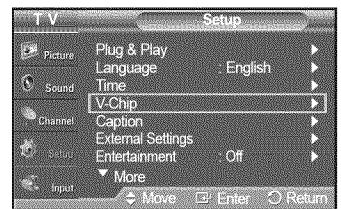
**4** The **TV Parental Guidelines** screen will appear.
Press the ▲ or ▼ button to select one of the six aged based categories:

---

- **TV-Y** : All children. The themes and elements in this program are specifically designed for a very young audience, including children from ages two to six.
- **TV-Y7** : Directed to older children. The themes and elements in this program may include mild physical or comedic violence, or may frighten children under the age of seven.
- **TV-G** : General audience. It contains little or no violence, no strong language, and little or no sexual dialog or situations.
- **TV-PG** : Parental guidance suggested. This program may contain infrequent coarse language, limited violence, some suggestive sexual dialog and situations.
- **TV-14** : Parents strongly cautioned. This program may contain sophisticated themes, sexual content, strong language and more intense violence.
- **TV-MA** : Mature audiences only. This program may contain mature themes, profane language, graphic violence and explicit sexual content.

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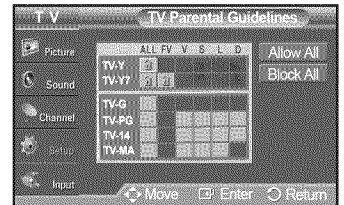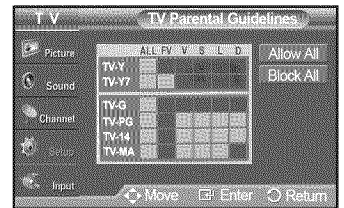
**5** At this point, one of the TV-Ratings is selected.
Press the **ENTER** button. Depending on your existing setup, the " 🔒 " symbol will be selected. (Blank = Unblocked, 🔒 = Blocked) While " 🔒 " is selected, press the **ENTER** button to block or unblock the category.
To select a different TV-Rating, press the ▲ or ▼ button and then repeat the process.

➢ **Allow All:** Press to unlock all TV ratings.
**Block All:** Press to lock all TV ratings.

➢ The TV-Y, TV-Y7, TV-G, TV-PG, TV-14 and TV-MA have additional options.
See the next step to change any of the following sub-ratings:

---

| | |
|---|---|
| • **ALL** : Lock all TV ratings. | • **L** : Adult language. |
| • **FV** : Fantasy violence. | • **S** : Sexual situation. |
| • **D** : Sexually suggestive dialog. | • **V** : Violence. |

---

➢ The V-Chip will automatically block certain categories that are "more restrictive". For example, if you block **TV-Y** category, then TV-Y7 will automatically be blocked. Similarly, if you block the TV-G category, then all the categories in the "young adult" group will be blocked (TV-G, TV-PG, TV-14, and TV-MA). The subratings (D, L, S, V) work together similarly. (See next section.)

**6** How to set the FV, D, L, S and V sub-ratings. First, select one of these TV-Ratings: TV-Y, TV-Y7, TV-G, TV-PG, TV-14, or TV-MA (See Step **4**), and press the **ENTER** button. The " 🔒 " symbol will be displayed for each sub-rating. While " 🔒 " is selected, press the ▶ button to go to a sub rating. Press the **ENTER** to block the sub rating. To select a different TV-Rating, press the ▲ or ▼ button and then repeat the process.

**7** Press the **EXIT** button to clear all the screens. (Or proceed to the next section, and set up additional restrictions based on the MPAA codes.)

➢ These categories consist of two separate groups: TV-Y and TV-Y7 (young children through age 7), and TV-G through TV-MA (everybody else). The restrictions for these two groups work independently: If a household includes very young children as well as young adults, the TV guidelines must be set up separately for each age group.

## How to Set up Restrictions Using "MPAA Ratings" (G, PG, PG-13, R, NC-17, X, NR )

The MPAA rating system uses the Motion Picture Association of America (MPAA) system, and its main application is for movies. When the V-Chip lock is on, the TV will automatically block any programs that are coded with objectionable ratings (either MPAA or TV-Ratings).

1  Press the **MENU** button to display the menu.
   Press the ▲ or ▼ button to select **Setup**, then press the **ENTER** button.

2  Press the ▲ or ▼ button to select **V-Chip**, then press the **ENTER** button.
   The message **Enter PIN** will appear. Enter your 4 digit PIN number.

3  The **V-Chip** screen will appear. Press the ▲ or ▼ button to select **MPAA Rating**, then press the **ENTER** button.

4  Press the ▲ or ▼ button to select an appropriate restriction.
   Press the **ENTER** button to activate the restriction selected.
   The " 🔒 " symbol is indicated. While " 🔒 " is selected, press the **ENTER** button to block or unblock the category.

   Press the **EXIT** button to exit.

   ➢ **Allow All:** Press to unlock all TV ratings.
      **Block All:** Press to lock all TV ratings.

   ---
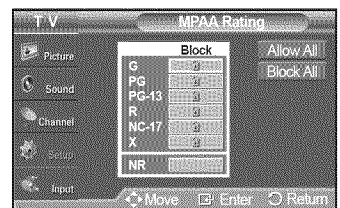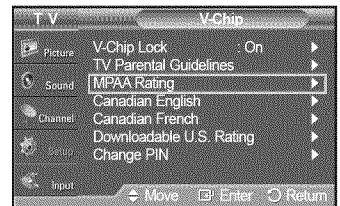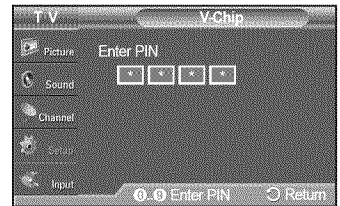
   • **G** : General audience (no restriction).
   • **PG** : Parental guidance suggested.
   • **PG-13** : Parents strongly cautioned.
   • **R** : Restricted. Children under 17 should be accompanied by an adult.
   • **NC-17** : No children under age 17.
   • **X** : Adults only.
   • **NR** : Not rated.

   ---

   ➢ The V-Chip will automatically block any category that is "more restrictive".
      For example, if you block the PG-13 category, then R, NC-17 and X will automatically be blocked also.

## How to Set up Restrictions Using "Canadian English" (for Canada Models)

1   Press the **MENU** button to display the menu.
    Press the ▲ or ▼ button to select **Setup**, then press the **ENTER** button.

2   Press the ▲ or ▼ button to select **V-Chip**, then press the **ENTER** button.
    The message **Enter PIN** will appear. Enter your 4 digit PIN number.

3   The **V-Chip** screen will appear. Press the ▲ or ▼ button to select **Canadian English**, then press the **ENTER** button.

4   Press the ▲ or ▼ button to select an appropriate restriction.
    Press the **ENTER** button to activate the restriction selected. The " 🔒 " symbol is indicated.

    Press the **EXIT** button to exit.

    ➢ **Allow All** : Press to unlock all TV ratings.
      **Block All** : Press to lock all TV ratings.

---

• **C** : Programming intended for children under age 8.
• **C8+** : Programming generally considered acceptable for children 8 years and over
  to watch on their own.
• **G** : General programming, suitable for all audiences.
• **PG** : Parental guidance.
• **14+** : Programming contains themes or content which may not be suitable for
  viewers under the age of 14.
• **18+** : Adult programming.

---

➢ The V-Chip will automatically block any category that is "more restrictive".
  For example, if you block G category, then PG, 14+ and 18+ will
  automatically be blocked also.

## How to Set up Restrictions Using "Canadian French" (for Canada Models)

1 Press the **MENU** button to display the menu.
  Press the ▲ or ▼ button to select **Setup**, then press the **ENTER** button.

2 Press the ▲ or ▼ button to select **V-Chip**, then press the **ENTER** button.
  The message **Enter PIN** will appear. Enter your 4 digit PIN number.
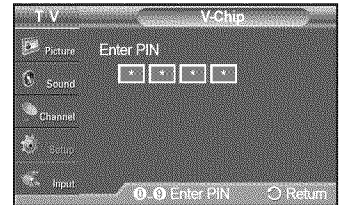
3 The **V-Chip** screen will appear. Press the ▲ or ▼ button to select **Canadian French**, then press the **ENTER** button.
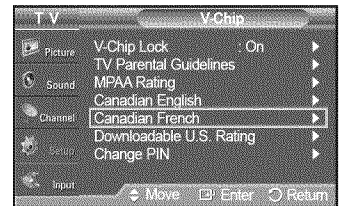
4 Press the ▲ or ▼ button to select an appropriate restriction.
  Press the **ENTER** button to activate the restriction selected. The " 🔒 " symbol is indicated.

  Press the **EXIT** button to exit.
  ➤ **Allow All** : Press to unlock all TV ratings.
    **Block All** : Press to lock all TV ratings.

---
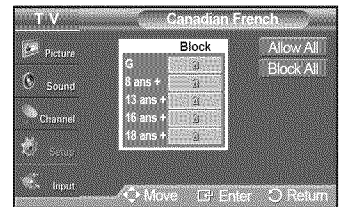
• **G** : General.
• **8 ans+** : Not recommended for young children.
• **13 ans+** : Programming may not be suitable for children under the age of 13.
• **16 ans+** : Programming is not suitable for children under the age of 16.
• **18 ans+** : Programming restricted to adults.

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➤ The V-Chip will automatically block any category that is "more restrictive". For example, if you block 8 ans+ category, then 13 ans+, 16 ans+ and 18 ans+ will automatically be blocked also.

## Using the V-Chip for Digital channels

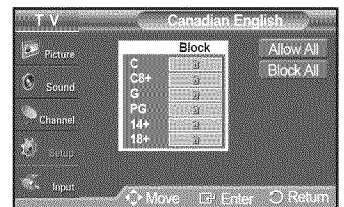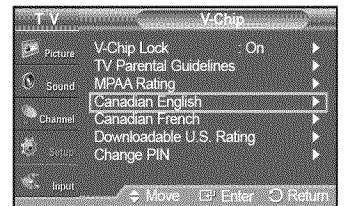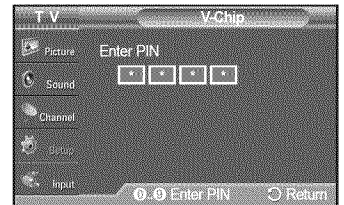Parental restriction information can be used while watching DTV channels.

1 Press the **MENU** button to display the menu.
Press the ▲ or ▼ button to select **Setup**, then press the **ENTER** button.
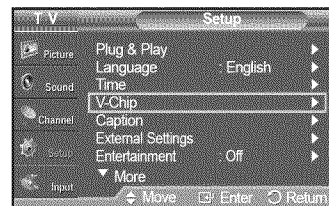
2 Press the ▲ or ▼ button to select **V-Chip**, then press the **ENTER** button.
The message **Enter PIN** will appear. Enter your 4 digit PIN number.
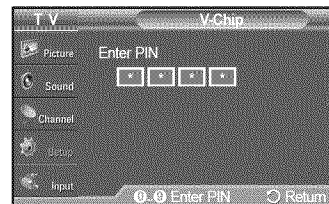
3 The **V-Chip** screen will appear. Press the ▲ or ▼ button to select
**Downloadable U.S. Rating**, then press the **ENTER** button.

➢ If information is not downloaded from the broadcasting station, the
**Downloadable U.S. Rating** menu is deactivated.

➢ Parental restriction information is automatically downloaded while watching
DTV channels. It may take several seconds.

➢ The **Downloadable U.S. Rating** menu is available for use after information
is downloaded from the broadcasting station. However, depending on the
information from the broadcasting station, it may not be available for use.

4 Press the ▲ or ▼ button to select an appropriate restriction.
Press the **ENTER** button to activate the restriction selected.
The " 🔒 " symbol is indicated.

Press the **EXIT** button to exit.

➢ **Allow All** : Press to unlock all TV ratings.
**Block All** : Press to lock all TV ratings.

➢ Parental restriction levels differ depending on the broadcasting station.

➢ The default menu name and downloadable US rating changes depending on
the downloaded information.

➢ Even if you set the on-screen display to your desired language, the
**Downloadable U.S. Rating** menu will appear in English only.

➢ The rating will automatically block certain categories that are more
restrictive.

➢ The rating titles (for example: Humor Level..etc) and TV ratings (for
example: DH,MH,H..etc) may differ depending on the broadcasting station.

Rating title

The number of current rating information
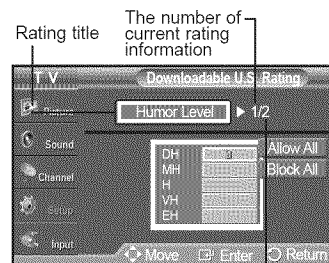
The number of all the rating information

## How to Reset the TV after the V-Chip Blocks a Channel ("Emergency Escape")

If the TV is tuned to a restricted channel, the V-Chip will block it. The screen will go blank and the following message will appear:

1 Enter your PIN.
 To resume normal viewing, tune to a different channel using **CH** ⌃ or **CH** ⌄ button. Under certain conditions (depending on the rating of the local TV programs) the V-Chip might lock out all the channels. In this case, use the V-Chip function for an "emergency escape":

2 Press the **MENU** button. Press the ▲ or ▼ button to select **Setup**, then press the **ENTER** button.

3 Press the ▲ or ▼ button to select **V-Chip**, then press the **ENTER** button.

4 Enter your PIN, then press the **ENTER** button, and press the ▲ or ▼ button to temporarily disable the V-Chip Lock.
 ➢ 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.

Channel Is Locked by
TV-PG[ S ]
☐☐☐☐
Use the NUMBER buttons to enter your pin number to unlock all channels.
Press EXIT to clear PIN.
Press MENU for main menu.

Channel Is Locked by
TV-PG[ L ]
☐☐☐☐
Use the NUMBER buttons to enter your pin number to unlock all channels.
Press EXIT to clear PIN.
Press MENU for main menu.
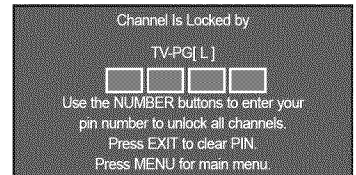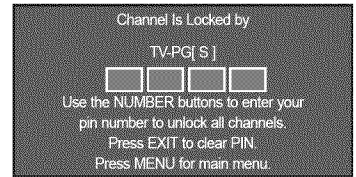
# About Anynet⁺

## What is Anynet⁺?

Anynet+ is an AV network system that enables you to control all connected Samsung AV devices with your Samsung TV's remote.

## Connecting Anynet⁺ Devices

The Anynet⁺ system can be used only with Samsung AV devices that have the Anynet⁺ feature. To be sure your Samsung AV device has this feature, check if there is an Anynet⁺ mark on it.

### To directly connect to TV
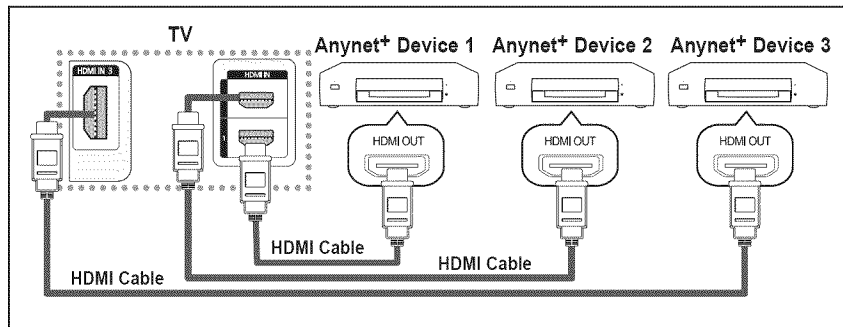
TV    Anynet⁺ Device 1    Anynet⁺ Device 2    Anynet⁺ Device 3

HDMI IN 3    HDMI IN

HDMI OUT    HDMI OUT    HDMI OUT

HDMI Cable

HDMI Cable

HDMI Cable

Connect the [HDMI 1], [HDMI 2] or [HDMI 3] jack on the TV and the HDMI OUT jack of the corresponding Anynet⁺ device using the HDMI cable.

### To connect to Home Theater

TV

DIGITAL AUDIO OUT OPTICAL

HDMI IN 3

Anynet⁺ Device 1    Anynet⁺ Device 2

HDMI OUT    HDMI OUT

HDMI Cable    HDMI Cable

Home Theater    Anynet⁺ Device 3

HDMI OUT    DIGITAL AUDIO IN    HDMI IN    HDMI OUT

HDMI Cable    HDMI Cable

Optical Cable
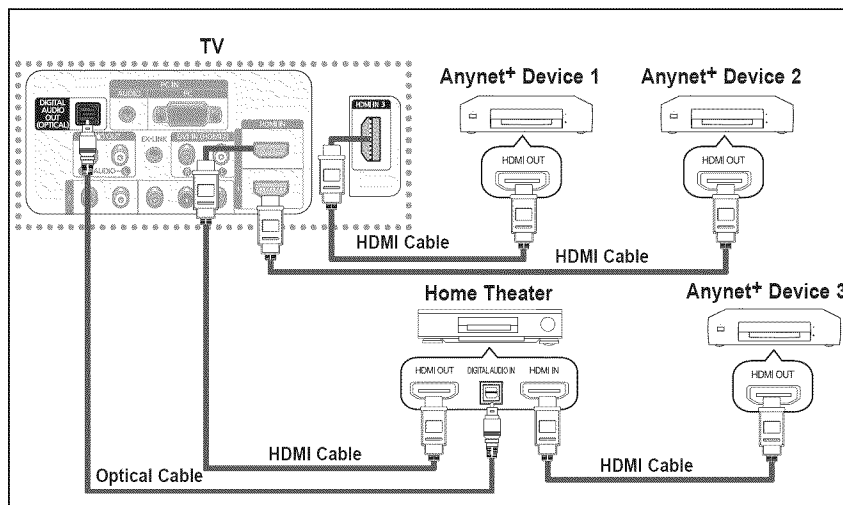
1    Connect the [HDMI 1], [HDMI 2] or [HDMI 3] jack on the TV and the HDMI OUT jack of the corresponding Anynet⁺ device using the HDMI cable.

2    Connect the HDMI IN jack of the home theater and the HDMI OUT jack of the corresponding Anynet⁺ device using the HDMI cable.

➢ Connect the Optical cable between [Digital Audio Out (Optical)] on your TV and Digital Audio Input on the Home Theater.
➢ Connect only one Home Theater.
➢ When following the connection above, the Optical jack only outputs 2 channel audio. You will only hear sound from the Home Theater's Front Left and Right speakers and the subwoofer. If you want to hear 5.1 channel audio, connect the DIGITAL AUDIO OUT (OPTICAL) jack on the DVD player or Cable/Satellite Box (ie Anynet Device 1 or 2) directly to the Amplifi er or Home Theater, not the TV.
➢ You can connect an Anynet⁺ device using the HDMI cable. Some HDMI cables may not support Anynet⁺ functions.
➢ Anynet⁺ works when the AV device supporting Anynet⁺ is in the Standby or On status.
➢ Anynet⁺ supports up to 12 AV devices in total. Note that you can connect up to 3 devices of the same type.

# Setting Up Anynet⁺

The following settings are to use Anynet⁺ functions.

## To use the Anynet+ Function, Anynet+ (HDMI-CEC) must be set to On

1  Press the **MENU** button to display the menu.
   Press the ▲ or ▼ button to select **Input,** then press the **ENTER** button.

2  Press the ▲ or ▼ button to select **Anynet+ (HDMI-CEC)**, then press the
   **ENTER** button.

3  Press the ▲ or ▼ button to select **Setup**, then press the **ENTER** button.

4  Press the ▲ or ▼ button to select **Anynet+ (HDMI-CEC)**.

5  Press the ▲ or ▼ button to select **On**, then press the **ENTER** button.
   ➢  The **Anynet+ (HDMI-CEC)** function is enabled.
   ➢  If you select **Off, Anynet+ (HDMI-CEC)** is disabled.
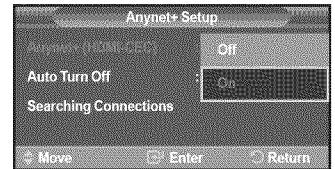   ➢  When the **Anynet+ (HDMI-CEC)** function is disabled, all the Anynet⁺ related
      operations are deactivated.

## Setting an Anynet+ Device to turn Off Automatically when the TV is Turned Off

4  Press the ▲ or ▼ button to select **Auto Turn Off**, then press the **ENTER** button.

5  Press the ▲ or ▼ button to select **Yes**, then press the **ENTER** button.
   ➢  The Auto turn off function is enabled.
   ➢  If you select **No**, the Auto turn off function is canceled.
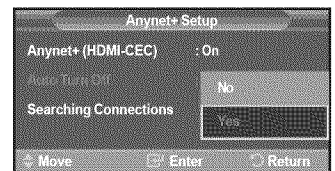
   Press the **EXIT** button to exit.

➢  The Select Device setting of the TV remote control is to be set to TV to use the Anynet⁺ function.
➢  If you set **Auto Turn Off** to **Yes**, connected external devices are also turned off when the TV is turned off.
   However, if the device is recording, it may not be turned off.

# Scanning and Switching between Anynet⁺ Devices

1  Press the **TOOLS** button.
   ➢  Anynet⁺ devices connected with the TV are listed.

2  Press the ▲ or ▼ button to select to a particular device and press the **ENTER**
   button. It is switched to the selected device.

3  If you cannot find a device you want, press the ▲ or ▼ button to select
   **Searching Connections**, then press the **ENTER** button.

   The message **Configuring Anynet+ Connection...** is displayed.
   When searching devices completes, the connected devices are listed in the
   Anynet+ menu.
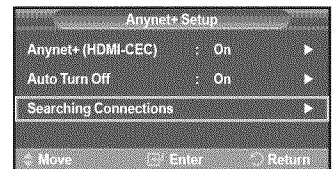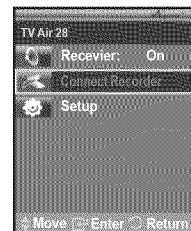
➢  Switching to the selected devices may take up to 2 minutes. You cannot cancel the operation during the switching
   operation.
➢  The time required to scan for devices is determined by the number of connected devices.
➢  When the device scan is complete, the number of found devices is not displayed.
➢  Although the TV automatically scans devices when it is turned on using the **POWER** button, devices connected when
   the TV is already on are not displayed in the device list. In this case, select the Searching Connections menu to search
   devices.
➢  If you have selected external AV device by pressing the **SOURCE** button, you cannot use the Anynet⁺ function. Make
   sure to switch to an Anynet⁺ device by using the **TOOLS** button.

## Anynet⁺ Menu

The Anynet⁺ menu changes depending on the type and status of the Anynet⁺ devices connected to the TV.

| Anynet⁺ Menu | Description |
|---|---|
| View TV | Switches from Anynet⁺ to TV broadcast mode. |
| Record | Starts a recording. (This menu works only for a device supporting recording.) |
| (Device_Name) Menu | Shows the menu of the connected device.<br>Example: When a DVD Recorder is connected, the DVD Recorder's title menu appears. |
| (Device_Name) Operation | Shows the play control menu of the connected device.<br>Example: When a DVD Recorder is connected, the play control menu of the DVD Recorder appears. |
| Connect (Device_Name) | Your TV connects to the corresponding device. |
| Receiver | Sound is output through the receiver (home theater). A audio stream in HDMI is one way only from Device to TV. But there's SPDIF output in TV. So TV sound can be sent to HT. |
| Setup | You can set the Anynet+ (HDMI-CEC), auto turn off, and searching connections for using Anynet⁺. |

## TV Remote Control Buttons Available in Anynet⁺ Mode

| Device Type | Operating Status | Available Buttons |
|---|---|---|
| Anynet⁺ Device | After switching to the device, when the menu of the corresponding device is displayed on the screen. | Numeric buttons<br>▲/▼/◄/►/ENTER buttons<br>Color buttons<br>EXIT button |
| | After switching to the device, while playing a file | ⏪ (Backward search)<br>⏩ (Forward search)<br>⏹ (Stop)<br>▶ ⏸ (Play/Pause) |
| Device with built-in Tuner | After switching to the device, when you are watching a TV program | CH ⌃ / ⌄ button |
| Audio Device | When Receiver is activated | VOL ⊕ / ⊖ button<br>MUTE button |

➣ The Anynet⁺ function only works when the remote control is set to TV.
➣ The **REC** button works only while in the recordable state.
➣ You cannot control Anynet⁺ devices using the buttons on the side of the TV. You can control Anynet⁺ devices only using the TV remote control.
➣ The TV remote control may not work under certain conditions. In this case, re-select the Anynet⁺ device.
➣ The Anynet⁺ functions don't operate for the products from other manufacturers.
➣ The Anynet⁺ functions do not work with other manufacturers' products.
➣ The ⏪, ⏩ operations may differ depending on the device.

# Recording

**You can make a recording of a TV program using a Samsung recorder.**

Press the **TOOLS** button.
Recording begins. (Only when the Anynet⁺ enabled recording device is connected.)

➣ You can record the source streams by selecting **Record** after pressing the **TOOLS** button.
➣ The current TV program is recorded in the Watching TV status. If you are watching video from another device, the video from the device is recorded.
➣ Before recording, check whether the antenna jack is properly connected to the recording device. For the antenna connection to the recording device's user manual.

# Listening through a Receiver (Home theater)

**You can listen to sound through a receiver instead of the TV speaker.**

1   Press the **MENU** button to display the menu.
    Press the ▲ or ▼ button to select **Input**, then press the **ENTER** button.

2   Press the ▲ or ▼ button to select **Anynet+ (HDMI-CEC)**, then press the **ENTER** button.

3   Press the ▲ or ▼ button to select **Receiver**, then press the **ENTER** button.

4   Press the ◄ or ► button to select to **On**, then press the **ENTER** button.
    Now you can listen to sound through the receiver.

5   Press the **EXIT** button to exit.

➢ When the receiver (home theater) is set to On, you can hear sound output from the TV's Optical jack. When the TV is
   displaying a DTV(air) signal, the TV will send out 5.1 channel sound to the Home theater receiver. When the source is
   a digital component such as a DVD and is connected to the TV via HDMI, only 2 channel sound will be heard from the
   Home Theater receiver.
➢ If your receiver supports audio only, it may not appear in the device list.
➢ The receiver will work when you have properly connected the Optical IN jack of the receiver to the Optical Out jack of
   the TV.
➢ When listening through the receiver, there are restrictions for using the audio-related (MTS, Preferred language)
   menus.
➢ If there is a power interruption to the TV when the **Receiver** is set to **On** (by disconnecting the power cord or a power
   failure), the **TV Speaker** may be set to **Off** when you turn the TV on again.

# Check Points before Requesting Service

| Symptom | Solution |
|---|---|
| Anynet⁺ does not work. | ■ Check if the device is an Anynet⁺ device. The Anynet⁺ system supports Anynet⁺ devices only.<br>■ Connect only one receiver (home theater).<br>■ Check if the Anynet⁺ device power cord is properly connected.<br>■ Check the Anynet⁺ device's Video/Audio/HDMI cable connections.<br>■ Check whether Anynet+ (HDMI-CEC) is set to On in the Anynet+ setup menu.<br>■ Check whether the TV remote control is in TV mode.<br>■ Check whether it is Anynet+ exclusive remote control.<br>■ Anynet+ doesn't work in certain situations. (Searching channels, Plug & Play, etc.)<br>■ When connecting or removing the HDMI cable, please make sure to search devices again or turn your TV off and on again.<br>■ Check if the Anynet+ Function of Anynet+ device is set on. |
| I want to start Anynet⁺. | ■ Check if the Anynet⁺ device is properly connected to the TV and check if the Anynet+ (HDMI-CEC) is set to On in the Anynet⁺ Setup menu.<br>■ Press the **TV** button on the TV remote control to switch to TV. Then press the **TOOLS** button to show the Anynet⁺ menu and select a menu you want. |
| I want to exit Anynet⁺. | ■ Select **View TV** in the Anynet+ menu.<br>■ Press the **SOURCE** button on the TV remote control and select a device other than Anynet+ devices.<br>■ Press **CH**, **CH LIST**, **PRE-CH**, and **FAV.CH** to change to the TV mode. (Note that the channel button operates only when an Anynet+ device with a built-in tuner is not connected.) |
| The Connecting to Anynet⁺ device... message appears on the screen. | ■ You cannot use the remote control when you are configuring Anynet⁺ or switching to a view mode.<br>■ Use the remote control when the Anynet⁺ setting or switching to view mode is complete. |
| The Anynet⁺ device does not play. | You cannot use the play function when Plug & Play is in progress. |
| The connected device is not displayed. | ■ Check whether or not the device supports Anynet⁺ functions.<br>■ Check whether or not the HDMI cable is properly connected.<br>■ Check whether Anynet+ (HDMI-CEC) is set to On in the Anynet+ setup menu.<br>■ Search Anynet+ devices again.<br>■ You can connect an Anynet⁺ device using the HDMI cable only. Some HDMI cables may not support Anynet⁺ functions. |
| The TV program cannot be recorded. | Check whether the antenna jack on the recording device is properly connected. |
| The TV sound is not output through the receiver. | Connect the optical cable between TV and the receiver. |

# Appendix

## Troubleshooting

**If the TV seems to have a problem, first try this list of possible problems and solutions.**
**If none of these troubleshooting tips apply, call Samsung customer service at 1-800-SAMSUNG.**

| Problem | Possible Solution |
|---|---|
| Poor picture quality. | Try another channel.<br>Adjust the antenna.<br>Check all wire connections. |
| Poor sound quality. | Try another channel.<br>Adjust the antenna. |
| No picture or sound. | Try another channel.<br>Press the **SOURCE** button.<br>Make sure the TV is plugged in.<br>Check the antenna connections.<br>Make sure the **MUTE** button is off. |
| No sound or sound is too low at maximum volume. | First, check the volume of units connected to your TV (digital broadcasting receiver, DVD, cable broadcasting receiver, VCR, etc.). Then, adjust the TV volume accordingly. |
| Picture rolls vertically. | Check all connections. |
| The TV operates erratically. | Unplug the TV for 30 seconds, then try operating it again. |
| The TV won't turn on. | Make sure the wall outlet is working. |
| Remote control malfunctions | Replace the remote control batteries.<br>Clean the upper edge of the remote control (transmission window).<br>Check the battery terminals.<br>Make sure the remote has batteries.<br>Check that the "+" and "-" ends of the batteries are inserted correctly. |
| Digital broadcasting screen problem. | Please check the digital signal strength and input antenna. |
| The image is too light or too dark. | Adjust the Brightness and Contrast.<br>Adjust the Fine tuning. |
| The image is too large or too small. | Adjust the Size settings. |
| The visual qualities of digital channels vary. | The visual qualities of digital channels may vary depending on the original production method (analog or digital).<br>- If the original production method is digital: High visual quality.<br>- If the original production method is analog: The digital program displayed on the screen is originally an analog program which has been converted to digital.<br>The visual quality is of an SD(Standard Definition) grade. |
| Screen is black and power indicator light blinks steadily. | On your computer; check the Power and Signal Cable.<br>The TV is using its power management system.<br>Move the computer's mouse or press any key on the keyboard. |
| | On your equipment check (STB, DVD, etc) ; Power and Signal Cable.<br>The TV is using its power management system.<br>Press the Source button on the panel or remote control.<br>Turn the TV off and on. |
| Although the TV caption shows HD, the visual quality is not satisfactory. | The HD(High Definition) caption that appears when switching channels or when pressing the Information button on the remote control means the selected channel is a digital channel. If the broadcasting station converts an analog signal into digital and transmits the signal, the visual quality may not be perfect. |
| A distorted picture appears in the corner of the screen. | If **Just Scan** is selected in some external devices, a distorted picture may appear in the corner of the screen. This symptom is caused by external devices, not the TV. |
| A Strange sound is heard. | This is caused by minor systems operation and is not a defect. |
| The "Resets all settings to the default values" message appears. | This appears when you press and hold the **EXIT** button for a while. The product settings are reset to the factory defaults. |

➤ This Plasma panel uses a panel consisting of sub pixels (2,359,296 pixels (for 42 inch models) / 3,147,264 pixels (for 50 inch models)) which require sophisticated technology to produce. However, there may be few bright or dark pixels on the screen. These pixels will have no impact on the performance of the product.

# Wall- mount adjustment (Sold separately)

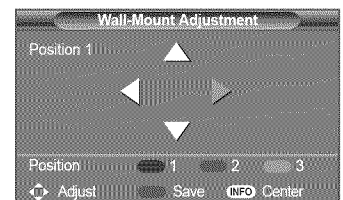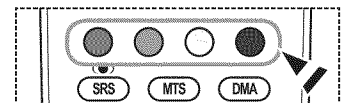**Once the wall mount is installed, the position of your TV can be easily adjusted.**

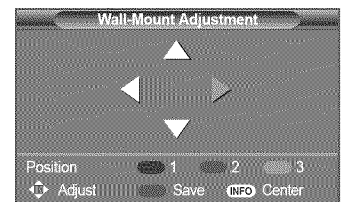TV Rear Panel                                                Auto Wall-Mount

EX-LINK Cable (Not supplied)
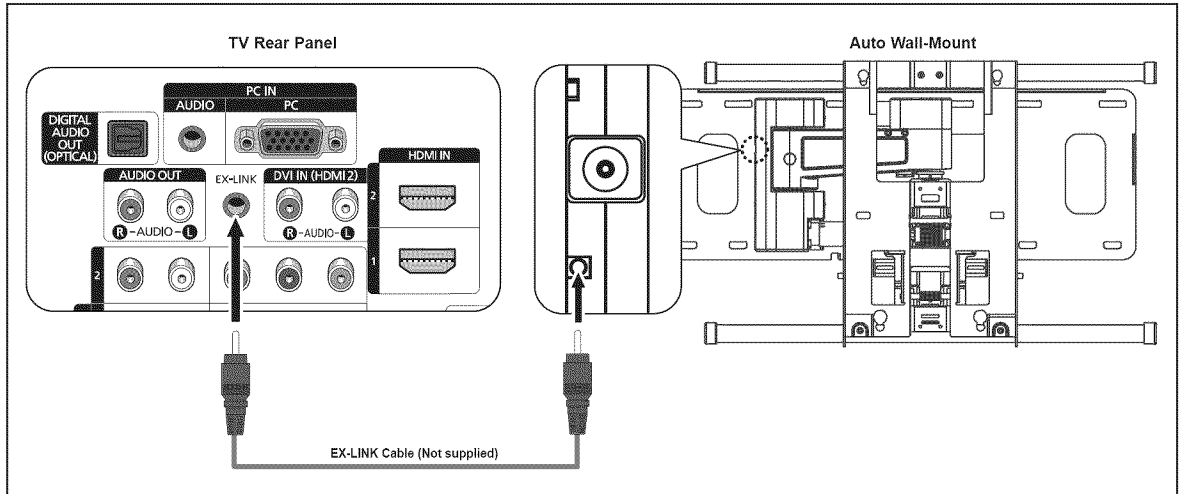
## Entering the menu

1   Press the ▲, ▼, ◄ or ► button on your remote control.
  ➢ The Wall Mount Adjustment screen is displayed.
  ➢ If the Wall Mount Adjustment screen is not displayed when clicking on a
     direction button while watching your TV, use the menu to display that screen.
     • Press the **MENU** button to display the menu.
       Press the ▲ or ▼ button to select **Setup**, then press the **ENTER** button.
     • Press the ▲ or ▼ button to select **External Settings**, then press the
       **ENTER** button.
     • Press the ▲ or ▼ button to select **Wall-Mount Adjustment**, then press the
       **ENTER** button.
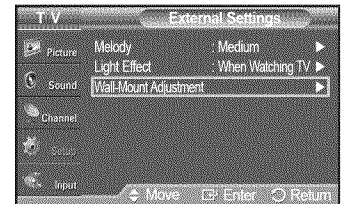
## Remembering the Position

2   Adjust to the desired position using the ▲, ▼, ◄, ► buttons.
  ➢ If you press an arrow button when no OSD is displayed on the TV screen, the
     Adjustment screen appears.
  ➢ Press the **INFO** button to reset. Press the ◄ or ► button to select **Yes**, then
     press the **ENTER** button. The position is initialized to the default setting.

3   Press the Blue button.
    Press the ▲ and ▼ buttons to select a save mode from either **Position 1**,
    **Position 2** or **Position 3** in order to save the current position.
  ➢ To not save the current position, press the **RETURN** button.
  ➢ When selecting a save mode, you cannot use the Color buttons.

4   Press the **ENTER** button to save.
  ➢ When **Position 1** is selected, the message **Current position saved as
     Position 1** is displayed.

5   Press the **ENTER** button.
  ➢ The saved Position appears on the left side of the OSD.

## Moving to the remembered position

1 Complete Step 1 of **Entering the menu**.

2 Pressing a Color (Red, Green, Yellow) button moves the auto wall mount to the saved position.

➢ You can move the wall mount to one of the 3 pre-set positions by pressing the Red (Position 1), Green (Position 2) or Yellow (Position 3) buttons.

➢ If you adjust the positon after moving to a pre-set position, the position display will disappear.

➢ For installation, refer to the Installation Manual provided with the wall mount.

➢ For product installation and the installation and moving of the wall mount, make sure to consult a specialized installation company.

➢ This installation manual is to be used when attaching the wall mount to a wall. When attaching to other building materials, please contact your nearest dealer.

➢ The auto wall mount will not work when Anynet+ is operating.

# Wall Mount Kit Specifications (VESA)

Install your wall mount on a solid wall perpendicular to the floor.
When attaching to other building materials, please contact your nearest dealer.
If installed on a ceiling or slanted wall, it may fall and result in severe personal injury.
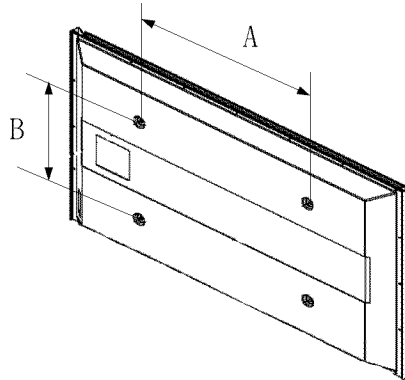
| Product Family | inch | VESA Spec. (A * B) | Standard Screw | Quantity |
|---|---|---|---|---|
| LCD-TV | 23 ~ 26 | 200 * 100 | M4 | |
| | 32 ~ 40 | 200 * 200 | M6 | |
| | 46 ~ 52 | 400 * 400 600 * 400 | | 4 |
| | 57 | 700 * 400 (No VESA) | M8 | |
| | 57 ~ 70 | 800 * 400 | | |
| | 80 ~ | 1400 * 800 | | |
| PDP-TV | 42 ~ 58 | 400 * 400 600 * 400 | | 4 |
| | 63 | 676 * 407 (No VESA) | M8 | 6 |
| | 63 ~ 70 | 800 * 400 | | 4 |
| | 80 ~ | 1400 * 800 | | 4 |

➢ We provided the standard dimensions for wall mount kits as shown in the table above.
➢ When purchasing our wall mount kit, a detailed installation manual and all parts necessary for assembly are provided.
➢ Do not use screws longer than the standard dimension, as they may cause damage to the inside of the TV set.
➢ For wall mounts that do not comply with the VESA standard screw specifications, the length of the screws may differ depending on their specifications.
➢ Do not use screws that do not comply with the VESA standard screw specifications.
   Do not use fasten the screws too strongly, this may damage the product or cause the product to fall, leading to personal injury. Samsung is not liable for these kinds of accidents.
➢ Samsung is not liable for product damage or personal injury when a non-VESA or non-specified wall mount is used or the consumer fails to follow the product installation instructions.
➢ Our 57" and 63" models do not comply with VESA Specifications. Therefore, you should use our dedicated wall mount kit for this model.
➢ Do not exceed 15 degrees tilt when mounting this TV.

> ⚠ Do not install your Wall Mount Kit while your TV is turned on.
> It may result in personal injury due to electric shock.

# How to assemble the Stand-Base

Using the 6 screws for securing the stand base and the monitor, firmly attach the monitor to the stand base.
(The exterior of the set may be different than the picture.)

When mounting your TV on a wall, install the cover (❶) on the stand-base using two screws.
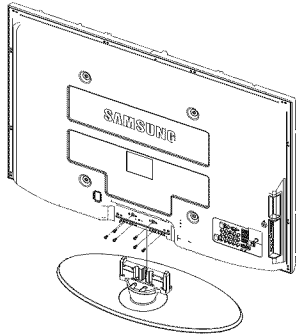
**Warning**
Firmly secure the stand to the TV before moving it, as the stand may fall and could cause serious injury.

➢ Two or more people should carry the TV. Never lay the TV on the floor because of possible damage to the screen. Always store the TV upright.
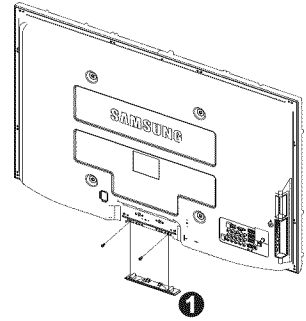
# Specifications

| Model Name | PN42A450P1D | PN50A450P1D |
|---|---|---|
| Screen Size (Diagonal) | 42 inch | 50 inch |
| PC Resolution | 1024 x 768 @ 60 Hz | 1360 x 768 @ 60 Hz |
| Sound (Output) | 10+10 W | 10+10 W |
| Dimension (W x H x D)<br>Body<br><br>With stand | 41.5 X 26.3 X 3.7 inches<br>(1055.0 X 667.4 X 93.2 mm)<br>41.5 X 28.5 X 12.4 inches<br>(1055.0 X 724.9 X 315.9 mm) | 48.4 X 29.8 X 3.8 inches<br>(1230.2 X 755.7 X 95.0 mm)<br>48.4 X 32.0 X 12.4 inches<br>(1230.2 X 812.7 X 315.9 mm) |
| Weight<br>Body<br>With stand | 59.3 lbs (26.9 Kg)<br>67.2 lbs (30.5 Kg) | 75.4 lbs (34.2 Kg)<br>81.6 lbs (37.0 Kg) |
| Environmental Considerations<br>Operating Temperature<br>Operating Humidity<br>Storage Temperature<br>Storage Humidity | 50 °F to 104 °F (10 °C to 40 °C)<br>10% to 80%, non-condensing<br>-4 °F to 113 °F (-20 °C to 45 °C)<br>5% to 95%, non-condensing | |

➢ This device is a Class B digital apparatus.
➢ Design and specifications are subject to change without prior notice.
➢ For the power supply and Power Consumption, refer to the label attached to the product.
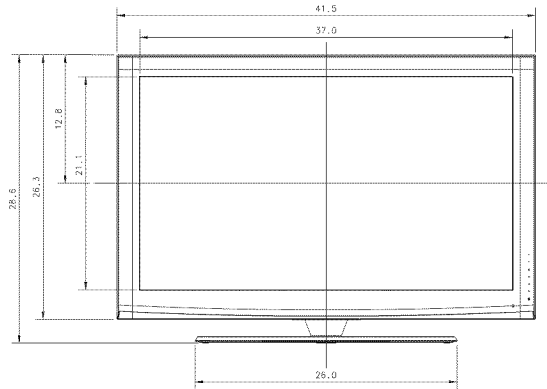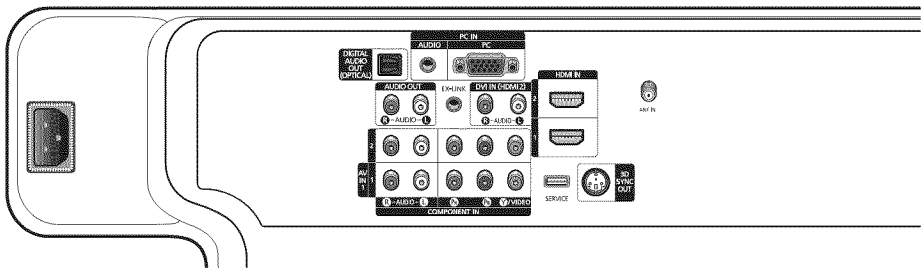
**Stand Swivel (Left / Right)**
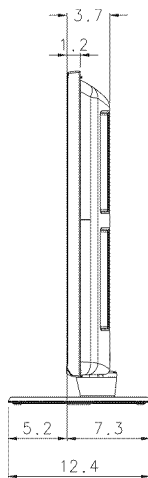
-20° ~ 20°
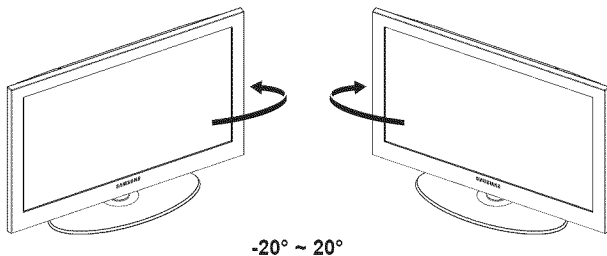
# Dimensions (PN42A450P1D)

TOP VIEW

FRONT VIEW

41.5
37.0
12.8
21.1
28.6
26.3
26.0
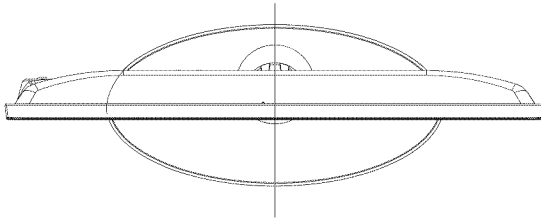
JACK PANEL DETAIL 3.7"H x 7.2"W

SIDE VIEW
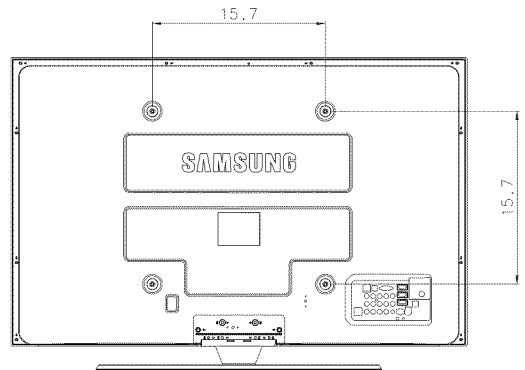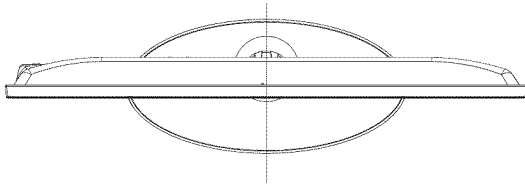
3.7
1.2
5.2  7.3
12.4

REAR VIEW

15.7
15.7
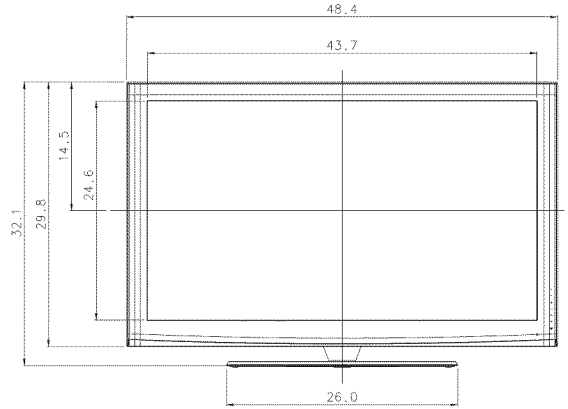
NOTE: All drawings not necessarily to scale. Some
dimensions are subject to change without prior notice.
Refer to dimensions on each unit prior to performing
any carpentry. Not responsible for typographical or
printed errors.
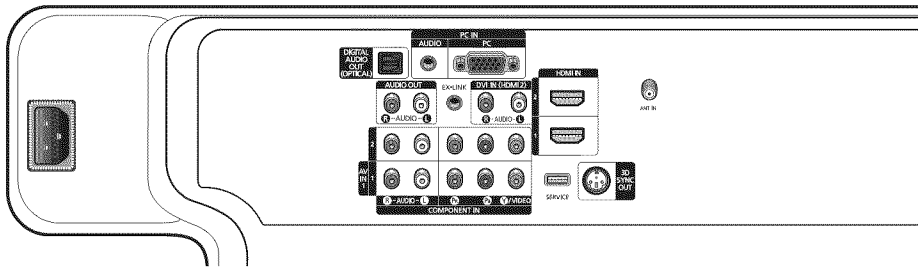© 2008 Samsung Electronics America, Inc.
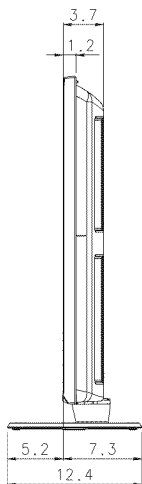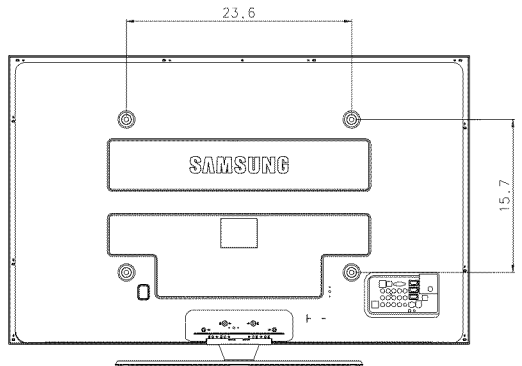
# Dimensions (PN50A450P1D)

| TOP VIEW | FRONT VIEW |
|---|---|

48.4
43.7
14.5
24.6
29.8
32.1
26.0

## JACK PANEL DETAIL 3.7"H x 7.2"W

PC IN
AUDIO  PC
DIGITAL AUDIO OUT (OPTICAL)
AUDIO OUT  EX-LINK  DVI IN (HDMI 2)
HDMI IN
ANT IN
AUDIO-L
AUDIO-L
AV IN
AUDIO-L  VIDEO
3D SYNC OUT
SERVICE
COMPONENT IN

| SIDE VIEW | REAR VIEW |
|---|---|

3.7
1.2
5.2  7.3
12.4

23.6
15.7
SAMSUNG

NOTE: All drawings not necessarily to scale. Some
dimensions are subject to change without prior notice.
Refer to dimensions on each unit prior to performing
any carpentry. Not responsible for typographical or
printed errors.
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