



Order Number : GETEC-C1-09-171  
Test Report Number : GETEC-E3-09-090

FCC Class B Certification  
Page 1 / 1

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## APPENDIX G

### : USER'S MANUAL



# LG

Life's Good

## LED LCD TV OWNER'S MANUAL

42LH90      42SL90  
47LH90      47SL90  
55LH90

## LCD TV OWNER'S MANUAL

42SL80  
47SL80  
55SL80

Please read this manual carefully before operating your set and retain it for future reference.

The model and serial number of the TV is located on the back and one side of the TV.

Record it below should you ever need service.

Model:

Serial:



This product qualifies for ENERGY STAR in the "factory default (Home Use)" setting.

Changing the factory default settings or enabling other features may increase power consumption that could exceed the limits necessary to qualify for ENERGY STAR.

**1-800-243-0000** USA, Consumer User  
**1-888-865-3026** USA, Commercial User  
**1-888-542-2623** CANADA

LG Customer Information Center

P/NO : SAC33601910 (0907-REV00)

[www.lgusa.com](http://www.lgusa.com) / [www.lg.ca](http://www.lg.ca)

# WARNING / CAUTION



**WARNING / CAUTION**

**RISK OF ELECTRIC SHOCK  
DO NOT OPEN**



**TO REDUCE THE RISK OF ELECTRIC SHOCK  
DO NOT REMOVE COVER (OR BACK). NO  
USER SERVICEABLE PARTS INSIDE. REFER TO  
QUALIFIED SERVICE PERSONNEL.**



The lightning flash with arrowhead symbol, within an equilateral triangle, is intended to alert the user to the presence of uninsulated “dangerous voltage” within the product’s enclosure that may be of sufficient magnitude to constitute a risk of electric shock to persons.



The exclamation point within an equilateral triangle is intended to alert the user to the presence of important operating and maintenance (servicing) instructions in the literature accompanying the appliance.

## WARNING/CAUTION

**TO REDUCE THE RISK OF FIRE AND ELECTRIC SHOCK, DO NOT EXPOSE THIS PRODUCT TO RAIN OR MOISTURE.**

## NOTE TO CABLE/TV INSTALLER

This reminder is provided to call the CATV system installer’s attention to Article 820-40 of the National Electric Code (U.S.A.). The code provides guidelines for proper grounding and, in particular, specifies that the cable ground shall be connected to the grounding system of the building, as close to the point of the cable entry as practical.

# WARNING / CAUTION

To prevent fire or shock hazards, do not expose this product to rain or moisture.

## FCC NOTICE

### Class B digital device

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment to an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause (harmful) interference, and (2) this device must accept any interference received, including interference that may cause undesired operation (of the device).

**Any changes or modifications not expressly approved by the party responsible for compliance could void the user’s authority to operate the equipment.**

## CAUTION

Do not attempt to modify this product in any way without written authorization from LG Electronics. Unauthorized modification could void the user’s authority to operate this product

# SAFETY INSTRUCTIONS

## IMPORTANT SAFETY INSTRUCTIONS

Read these instructions.

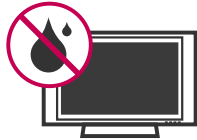
Keep these instructions.

Heed all warnings.

Follow all instructions.



- 1 Do not use this apparatus near water.



- 2 Clean only with dry cloth.



- 3 Do not block any ventilation openings. Install in accordance with the manufacturer's instructions.



- 4 Do not install near any heat sources such as radiators, heat registers, stoves, or other apparatus (including amplifiers) that produce heat.



- 5 Do not defeat the safety purpose of the polarized or grounding-type plug. A polarized plug has two blades with one wider than the other. A grounding type plug has two blades and a third grounding prong. The wide blade or the third prong are provided for your safety. If the provided plug does not fit into your outlet, consult an electrician for replacement of the obsolete outlet.



- 6 Protect the power cord from being walked on or pinched particularly at plugs, convenience receptacles, and the point where they exit from the apparatus.



- 7 Only use attachments/accessories specified by the manufacturer.

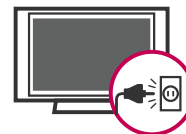


- 8 Use only with the cart, stand, tripod, bracket, or table specified by the manufacturer, or sold with the apparatus. When a cart is used, use caution when moving the cart/apparatus combination to avoid injury from tip-over.

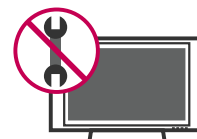


S3125A

- 9 Unplug this apparatus during lighting storms or when unused for long periods of time.



- 10 Refer all servicing to qualified service personnel. Servicing is required when the apparatus has been damaged in any way, such as power-supply cord or plug is damaged, liquid has been spilled or objects have fallen into the apparatus, the apparatus has been exposed to rain or moisture, does not operate normally, or has been dropped.



# SAFETY INSTRUCTIONS

- 11** Never touch this apparatus or antenna during a thunder or lightning storm.

- 12** When mounting a TV on the wall, make sure not to install the TV by the hanging power and signal cables on the back of the TV.

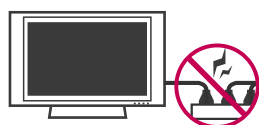
- 13** Do not allow an impact shock or any objects to fall into the product, and do not drop onto the screen with something.

- 14** **CAUTION** concerning the Power Cord:  
It is recommend that appliances be placed upon a dedicated circuit; that is, a single outlet circuit which powers only that appliance and has no additional outlets or branch circuits. Check the specification page of this owner's manual to be certain.

Do not connect too many appliances to the same AC power outlet as this could result in fire or electric shock.

Do not overload wall outlets. Overloaded wall outlets, loose or damaged wall outlets, extension cords, frayed power cords, or damaged or cracked wire insulation are dangerous. Any of these conditions could result in electric shock or fire. Periodically examine the cord of your appliance, and if its appearance indicates damage or deterioration, unplug it, discontinue use of the appliance, and have the cord replaced with an exact replacement part by an authorized servicer. Protect the power cord from physical or mechanical abuse, such as being twisted, kinked, pinched, closed in a door, or walked upon. Pay particular attention to plugs, wall outlets, and the point where the cord exits the appliance.

Do not make the TV with the power cord plugged in. Do not use a damaged or loose power cord. Be sure do grasp the plug when unplugging the power cord. Do not pull on the power cord to unplug the TV.



- 15** **WARNING** - To reduce the risk of fire or electrical shock, do not expose this product to rain, moisture or other liquids. Do not touch the TV with wet hands. Do not install this product near flammable objects such as gasoline or candles or expose the TV to direct air conditioning.



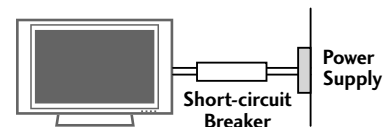
- 16** Do not expose to dripping or splashing and do not place objects filled with liquids, such as vases, cups, etc. on or over the apparatus (e.g. on shelves above the unit).



## **17** GROUNDING

Ensure that you connect the earth ground wire to prevent possible electric shock (i.e. a TV with a three-prong grounded AC plug must be connected to a three-prong grounded AC outlet). If grounding methods are not possible, have a qualified electrician install a separate circuit breaker.

Do not try to ground the unit by connecting it to telephone wires, lightening rods, or gas pipes.



- 18** **DISCONNECTING DEVICE FROM MAINS**  
Mains plug is the disconnecting device. The plug must remain readily operable.

- 19** As long as this unit is connected to the AC wall outlet, it is not disconnected from the AC power source even if you turn off this unit by SWITCH.

## 20 ANTENNAS

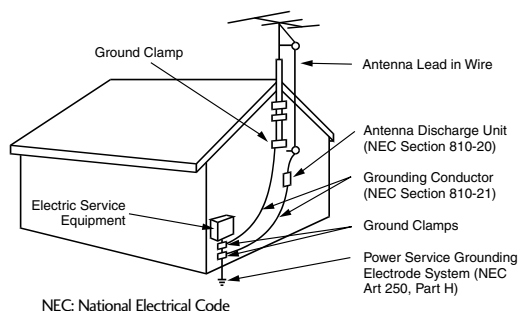
### Outdoor antenna grounding

If an outdoor antenna is installed, follow the precautions below. An outdoor antenna system should not be located in the vicinity of overhead power lines or other electric light or power circuits, or where it can come in contact with such power lines or circuits as death or serious injury can occur.

Be sure the antenna system is grounded so as to provide some protection against voltage surges and built-up static charges.

Section 810 of the National Electrical Code (NEC) in the U.S.A. provides information with respect to proper grounding of the mast and supporting structure, grounding of the lead-in wire to an antenna discharge unit, size of grounding conductors, location of antenna discharge unit, connection to grounding electrodes and requirements for the grounding electrode.

### Antenna grounding according to the National Electrical Code, ANSI/NFPA 70



## 21 Cleaning

When cleaning, unplug the power cord and scrub gently with a soft cloth to prevent scratching. Do not spray water or other liquids directly on the TV as electric shock may occur. Do not clean with chemicals such as alcohol, thinners or benzene.

## 22 Moving

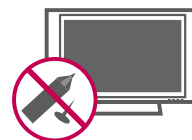
Make sure the product is turned off, unplugged and all cables have been removed. It may take 2 or more people to carry larger TVs. Do not press against or put stress on the front panel of the TV.

## 23 Ventilation

Install your TV where there is proper ventilation. Do not install in a confined space such as a bookcase. Do not cover the product with cloth or other materials (e.g.) plastic while plugged in. Do not install in excessively dusty places.

24 If you smell smoke or other odors coming from the TV or hear strange sounds, unplug the power cord contact an authorized service center.

25 Do not press strongly upon the panel with hand or sharp object such as nail, pencil or pen, or make a scratch on it.



26 Keep the product away from direct sunlight.

27 If the TV feels cold to the touch, there may be a small "flicker" when it is turned on. This is normal, there is nothing wrong with TV.

Some minute dot defects may be visible on the screen, appearing as tiny red, green, or blue spots. However, they have no adverse effect on the monitor's performance.

Avoid touching the LCD screen or holding your finger(s) against it for long periods of time. Doing so may produce some temporary distortion effects on the screen.

## ON DISPOSAL

### (Only Hg lamp used LCD TV)

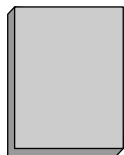
The fluorescent lamp used in this product contains a small amount of mercury. Do not dispose of this product with general household waste. Disposal of this product must be carried out in accordance to the regulations of your local authority.

# PREPARATION

## ACCESSORIES

Ensure that the following accessories are included with your TV. If an accessory is missing, please contact the dealer where you purchased the TV.

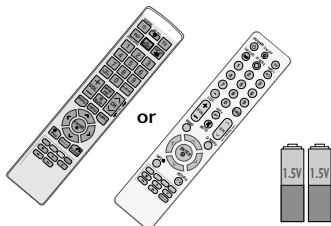
The accessories included may differ from the images below.



Owner's Manual



CD Manual



Remote Control, Batteries



Power Cord

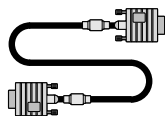
### Not included with all models



Polishing Cloth

- \* Wipe spots on the exterior only with the polishing cloth.
- \* Do not wipe roughly. Excessive pressure may cause scratches or discoloration.

### Option Extras



D-sub 15 pin Cable

When using the VGA (D-sub 15 pin cable) PC connection, the user must use shielded signal interface cables with ferrite cores to maintain standards compliance.

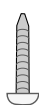
### Only 42/47/55LH90

(For 42/47LH90)



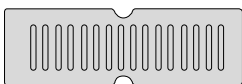
x 4

Screws for stand assembly  
(Refer to P.14)



(For 42LH90)

Screw for stand fixing  
(Refer to P.21)



Protection Cover

### Only 42/47SL90



x 3



x 4

Bolts for stand assembly  
(Refer to P.16)



Cable Management Clip  
(Refer to P.19)



Simple Remote Control,  
Batteries



x 1

Cable Holder  
(Refer to P.19)

### Only 42/47/55SL80

(Except 55SL80)

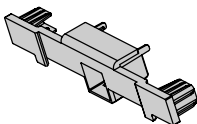


x 8

Bolts for stand assembly  
(Refer to P.15)



Cable Management Clip  
(Refer to P.18)



Protection Cover  
(Refer to P.15)



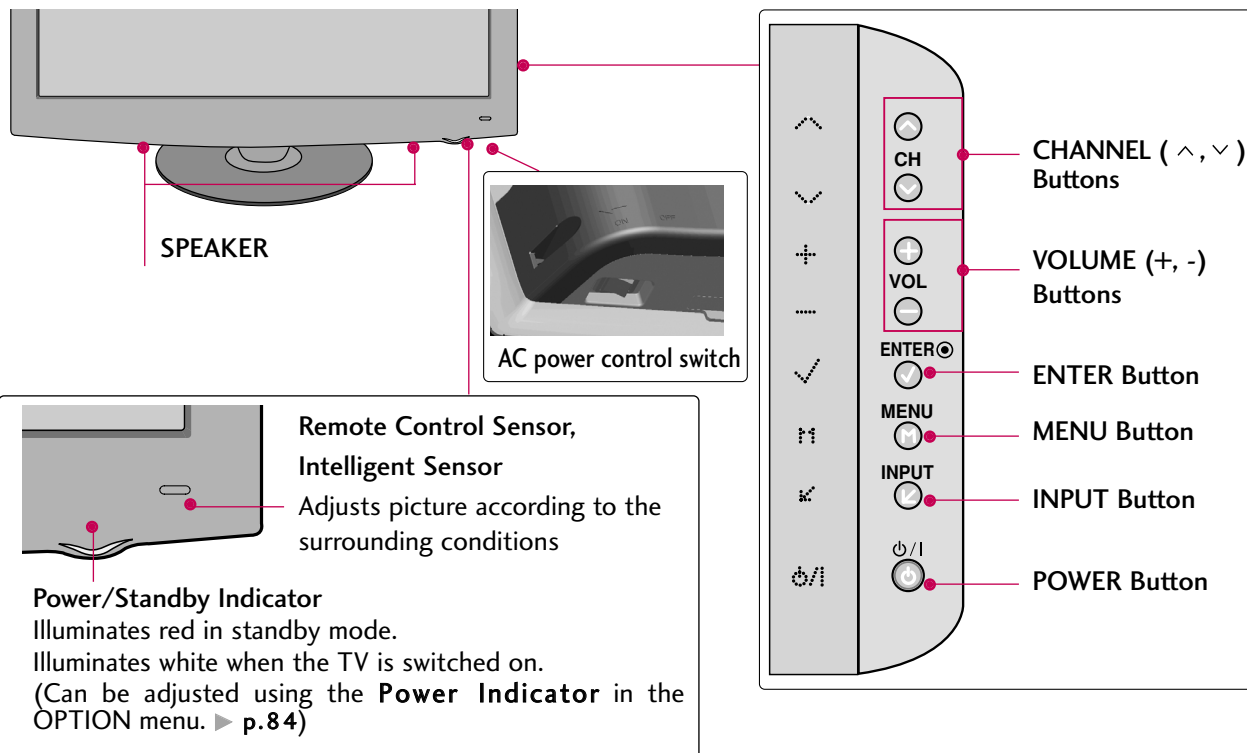
Cable Holder  
(Refer to P.18)

# PREPARATION

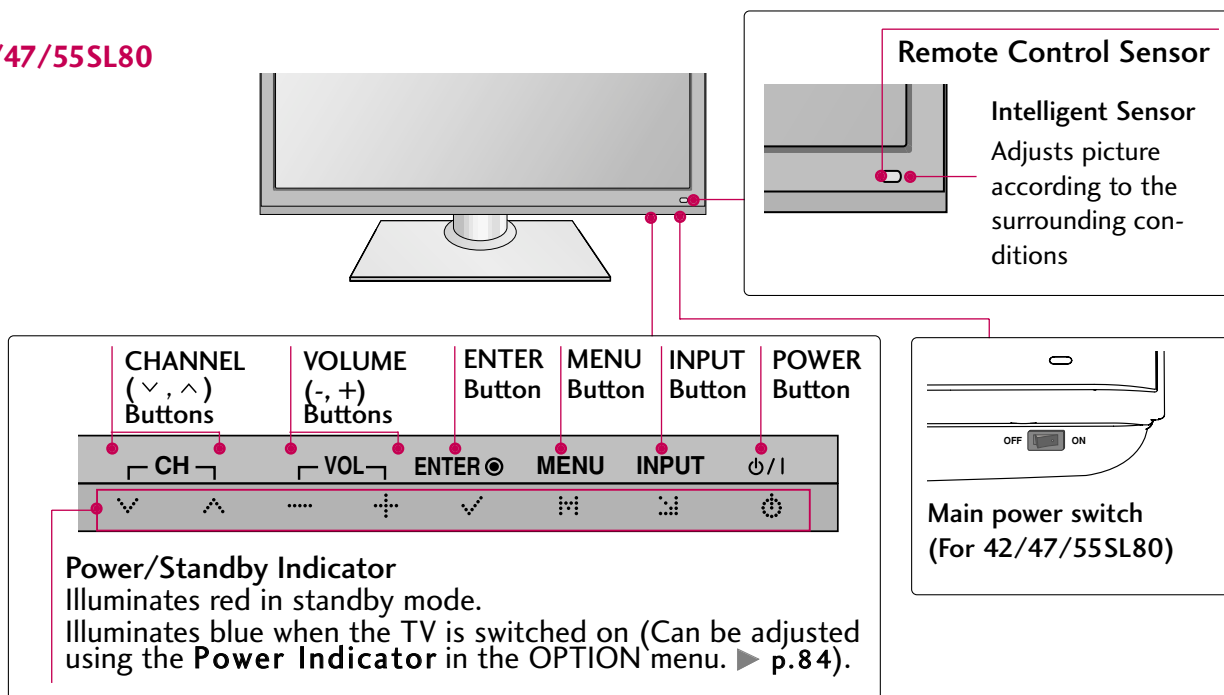
## FRONT PANEL INFORMATION

■ Image shown may differ from your TV.

### 42/47/55LH90



### 42/47/55SL80

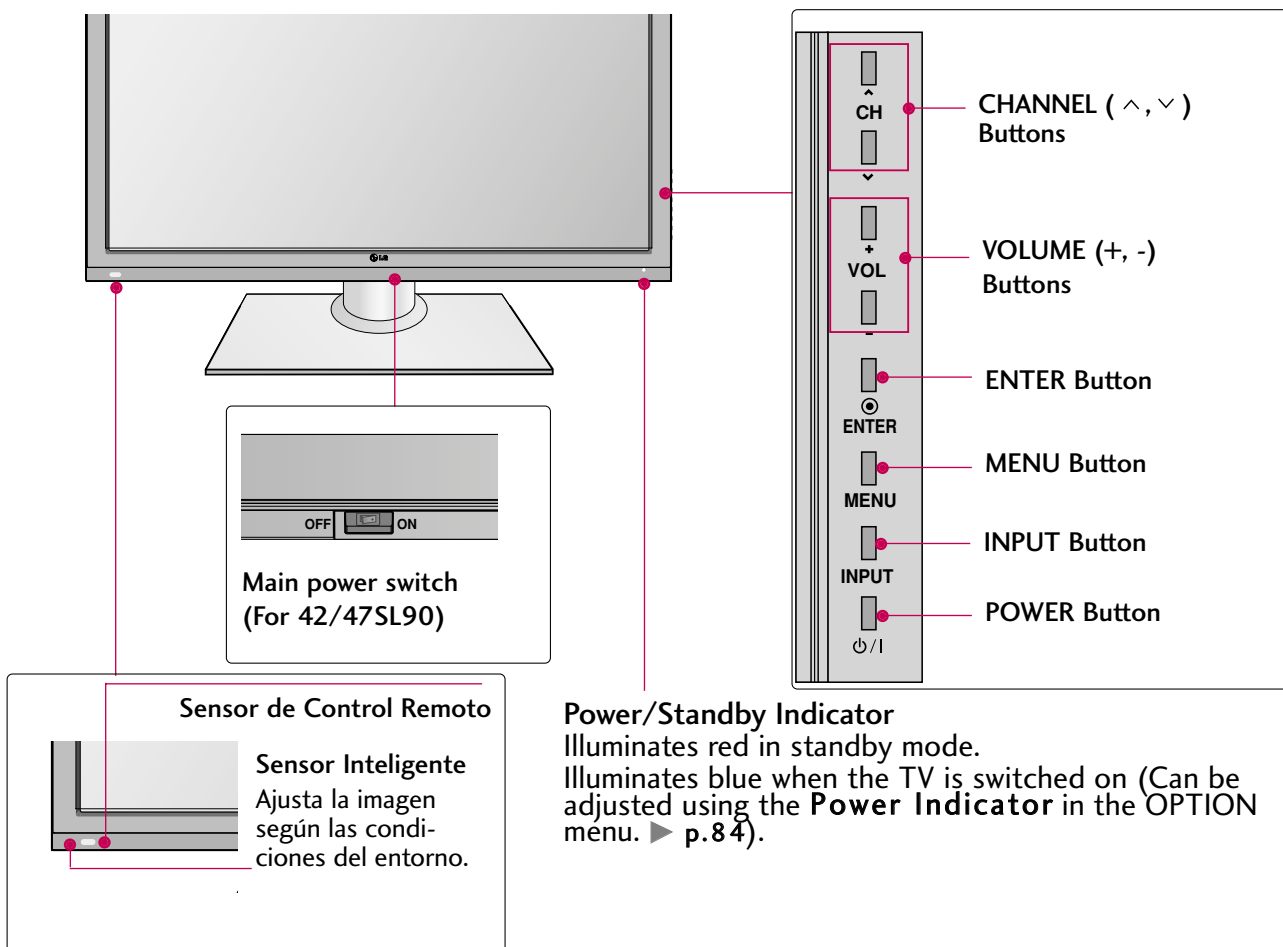


- ! NOTE**
- Do not step on the glass stand or subject it to any impact. It may break, causing possible injury from fragments of glass, or the TV may fall.
  - Do not drag the TV. The floor or the product may be damaged.



■ Image shown may differ from your TV.

## 42/47SL90



### ! NOTE

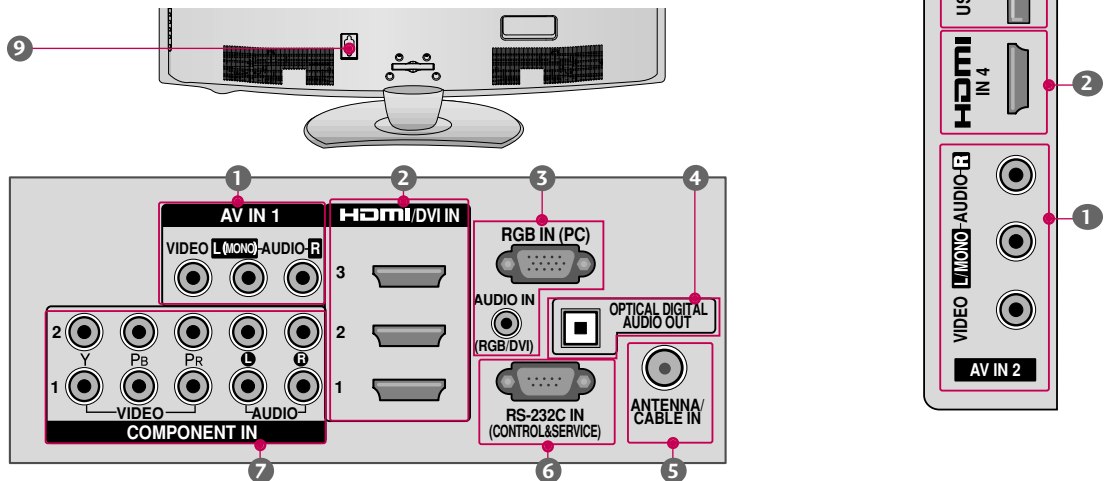
- ▶ Do not step on the glass stand or subject it to any impact. It may break, causing possible injury from fragments of glass, or the TV may fall.
- ▶ Do not drag the TV. The floor or the product may be damaged.

# PREPARATION

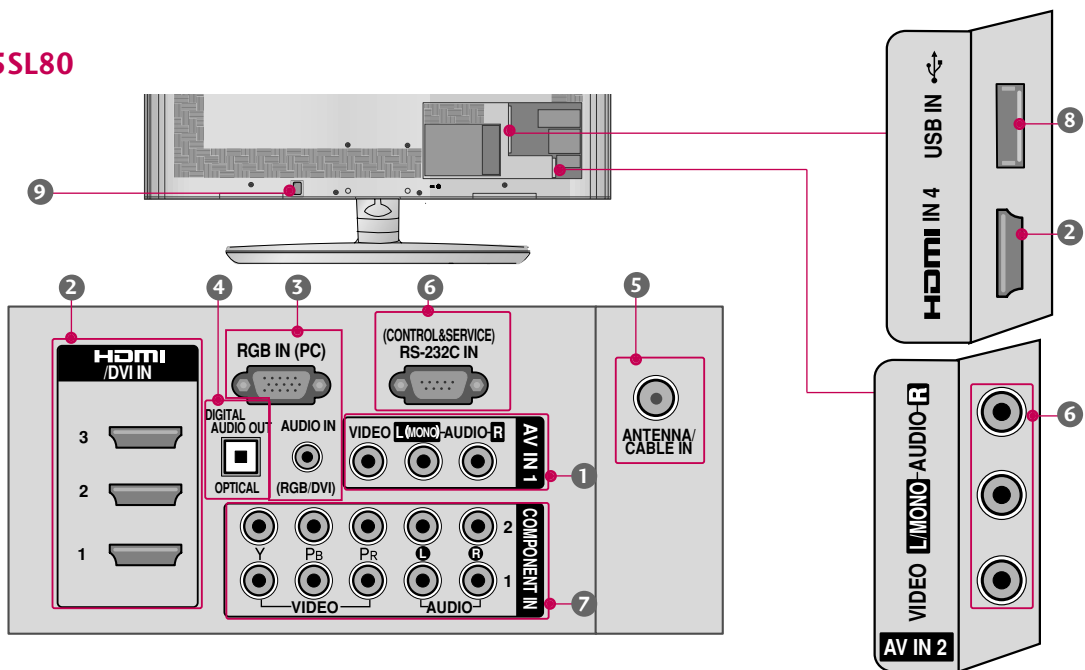
## BACK PANEL INFORMATION

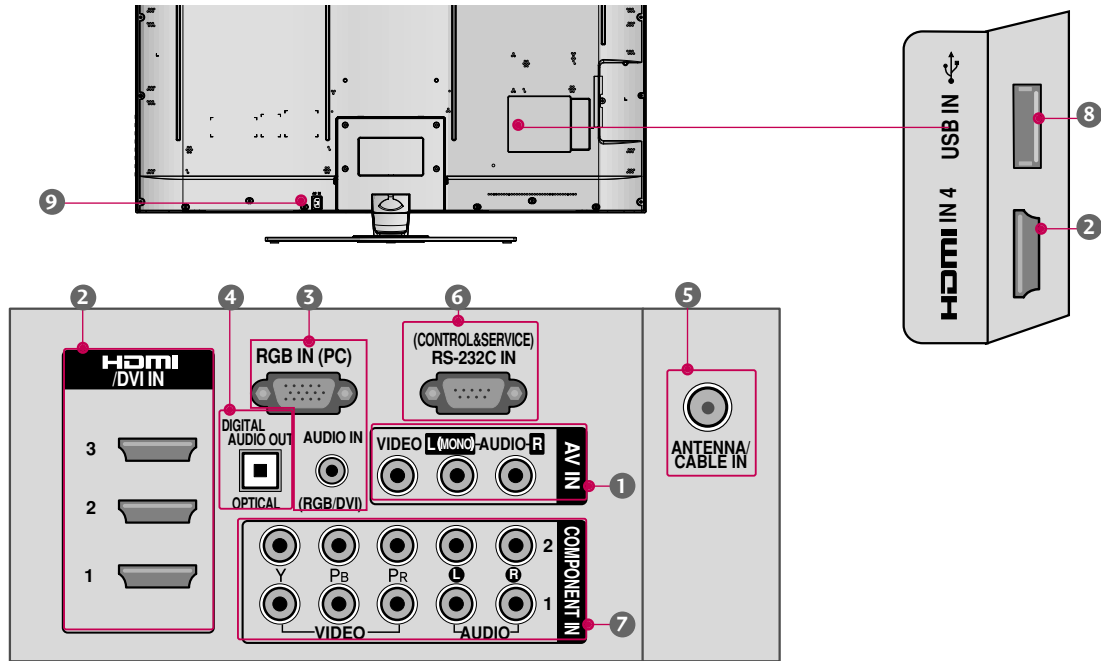
■ Image shown may differ from your TV.

### 42/47/55LH90



### 42/47/55SL80





- 1 AV (Audio/Video) IN**  
 Analog composite connection. Supports standard definition video only (480i).
- 2 HDMI/DVI IN, HDMI IN**  
 Digital Connection.  
 Supports HD video and Digital audio. Doesn't support 480i.  
 Accepts DVI video using an adapter or HDMI to DVI cable (not included).
- 3 RGB IN (PC)**  
 Analog PC Connection. Uses a D-sub 15 pin cable (VGA cable).  
**AUDIO IN (RGB/DVI)**  
 1/8" (0.32 cm) headphone jack for analog PC audio input.
- 4 OPTICAL DIGITAL AUDIO OUT**  
 Digital optical audio output for use with amps and home theater systems.  
 Note: In standby mode, this port doesn't work.
- 5 ANTENNA/CABLE IN**  
 Connect over-the air signals to this jack.  
 Connect cable signals to this jack.
- 6 RS-232C IN (CONTROL & SERVICE) PORT**  
 Used by third party devices.  
 This port is used for Service or Hotel mode.
- 7 COMPONENT IN**  
 Analog Connection.  
 Supports HD.  
 Uses a red, green, and blue cable for video & red and white for audio.
- 8 USB IN**  
 Used for viewing photos/movies and listening to MP3s.
- 9 Power Cord Socket**  
 For operation with AC power.  
 Caution: Never attempt to operate the TV on DC power.

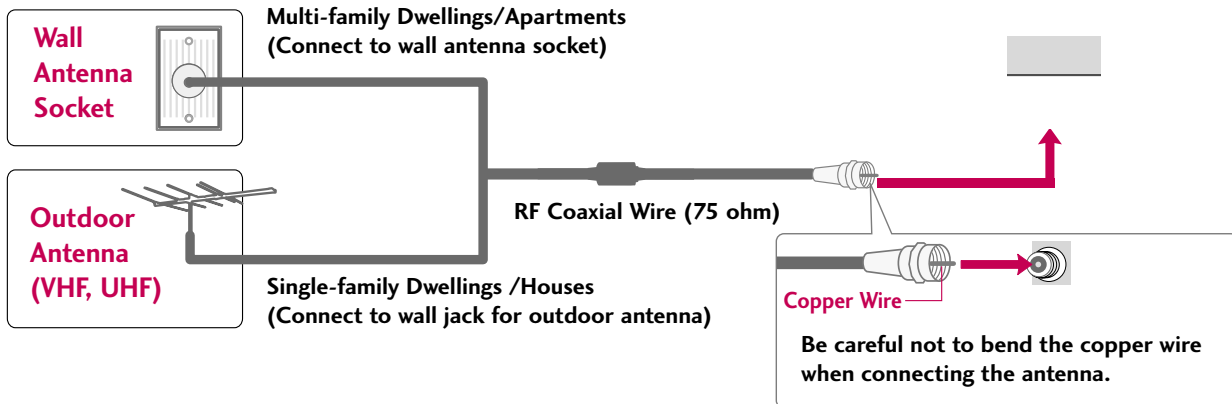
- To prevent damage do not connect to the power outlet until all connections are made between the devices.
- Image shown may differ from your TV.

## ANTENNA OR CABLE CONNECTION

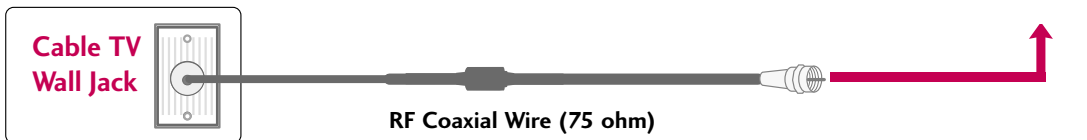
### 1. Antenna (Analog or Digital)

Wall Antenna Socket or Outdoor Antenna without a Cable Box Connections.

For optimum picture quality, adjust antenna direction if needed.



### 2. Cable



- To improve the picture quality in a poor signal area, please purchase a signal amplifier and install properly.
- If the antenna needs to be split for two TV's, install a 2-Way Signal Splitter.
- If the antenna is not installed properly, contact your dealer for assistance.

# EXTERNAL EQUIPMENT SETUP

- To prevent the equipment damage, never plug in any power cords until you have finished connecting all equipment.
- This part of EXTERNAL EQUIPMENT SETUP mainly use picture for 42/47/55LH90.

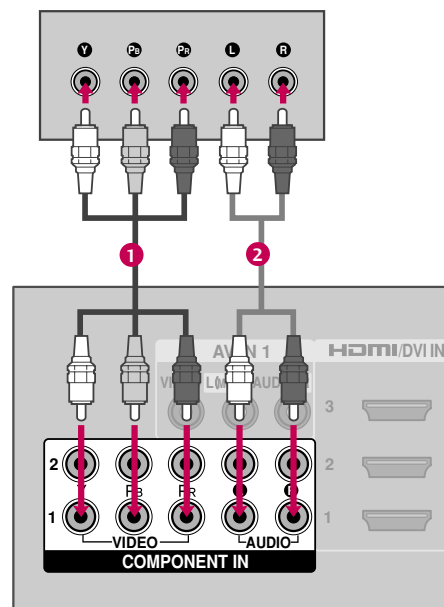
## HD RECEIVER SETUP

This TV can receive digital over-the-air/digital cable signals without an external digital set-top box. However, if you do receive digital signals from a digital set-top box or other digital external device.

### Component Connection

#### 1. How to connect

- 1 Connect the video outputs (Y, PB, PR) of the digital set-top box to the **COMPONENT IN VIDEO 1** or **2** jacks on the TV. Match the jack colors (Y = green, PB = blue, and PR = red).
- 2 Connect the audio output of the digital set-top box to the **COMPONENT IN AUDIO 1** or **2** jacks on the TV.



#### 2. How to use

- Turn on the digital set-top box.  
(Refer to the owner's manual for the digital set-top box operation.)
- Select the **Component1** or **2** input source on the TV using the **INPUT** button on the remote control.

#### Supported Resolutions

Signal	Component	HDMI
480i	Yes	No
480p	Yes	Yes
720p	Yes	Yes
1080i	Yes	Yes
1080p	Yes	Yes

#### Y, CB/PB, CR/PR

Resolution	Horizontal Frequency(KHz)	Vertical Frequency(Hz)
720x480i	15.73	59.94
	15.73	60.00
720x480p	31.47	59.94
	31.50	60.00
1280x720p	44.96	59.94
	45.00	60.00
1920x1080i	33.72	59.94
	33.75	60.00
1920x1080p	26.97	23.976
	27.00	24.00
	33.71	29.97
	33.75	30.00
	67.432	59.94
	67.50	60.00

## HDMI Connection

### 1. How to connect

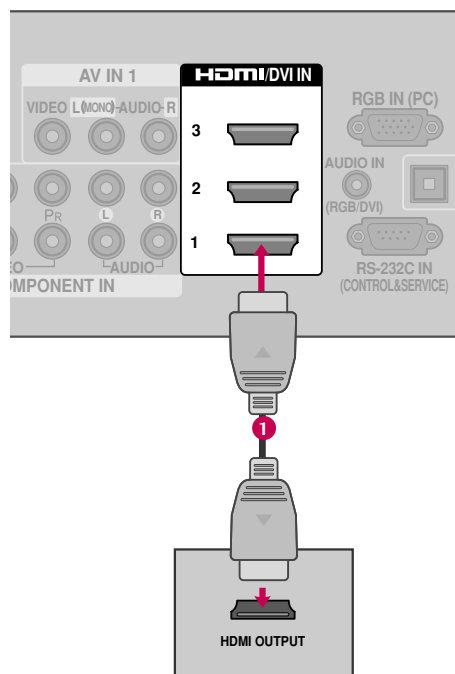
- 1 Connect the digital set-top box to **HDMI/DVI IN 1, 2, 3, or 4** jack on the TV.
- 2 No separate audio connection is necessary. HDMI supports both audio and video.

### 2. How to use

- Turn on the digital set-top box.  
(Refer to the owner's manual for the digital set-top box.)
- Select the **HDMI1**, **HDMI2**, **HDMI3**, or **HDMI4** input source on the TV using the **INPUT** button on the remote control.

#### ! NOTE

- Check HDMI cable over version 1.3.  
If the HDMI cables don't support HDMI version 1.3, it can cause flickers or no screen display. In this case use the latest cables that support HDMI version 1.3.
- HDMI mode supports PCM, Dolby Digital audio format.



#### HDMI-DTV

Resolution	Horizontal Frequency(KHz)	Vertical Frequency(Hz)
720x480p	31.47	59.94
	31.50	60.00
1280x720p	44.96	59.94
	45.00	60.00
1920x1080i	33.72	59.94
	33.75	60.00
1920x1080p	26.97	23.976
	27.00	24.00
	33.71	29.97
	33.75	30.00
	67.432	59.94
	67.50	60.00

# EXTERNAL EQUIPMENT SETUP

## DVI to HDMI Connection

### 1. How to connect

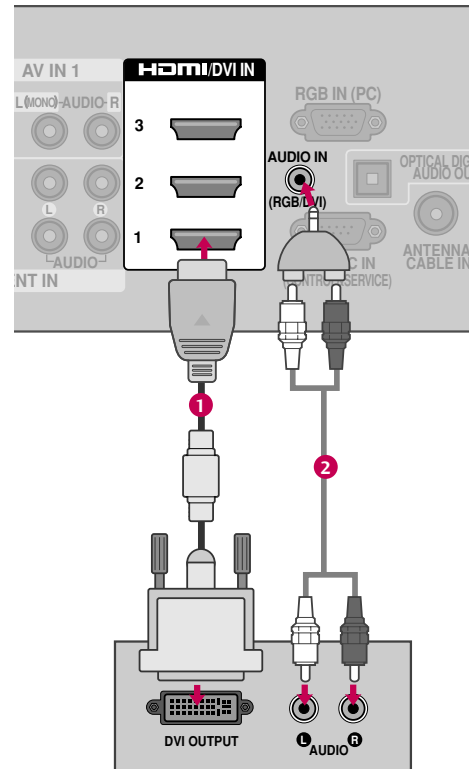
- 1 Connect the DVI output of the digital set-top box to the **HDMI/DVI IN 1, 2, or 3** jack on the TV.
- 2 Connect the digital set-top box audio output to the **AUDIO IN (RGB/DVI)** jack on the TV.

### 2. How to use

- Turn on the digital set-top box.  
(Refer to the owner's manual for the digital set-top box.)
- Select the **HDMI1**, **HDMI2**, or **HDMI3** input source on the TV using the **INPUT** button on the remote control.

#### ! NOTE

- ▶ A DVI to HDMI cable or adapter is required for this connection. DVI doesn't support audio, so a separate audio connection is necessary.



# EXTERNAL EQUIPMENT SETUP

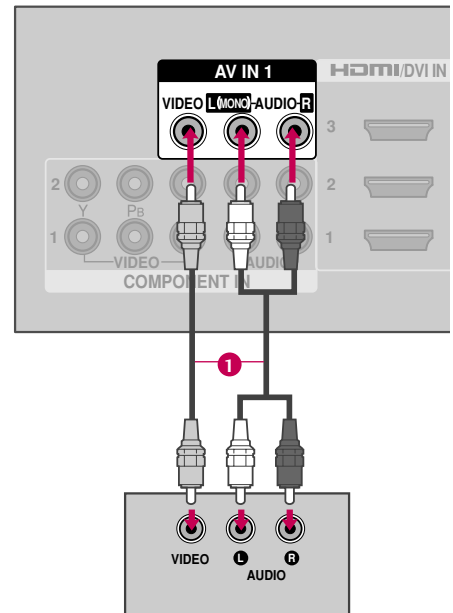
## Composite (RCA) Connection

### 1. How to connect

- 1 Connect the **AUDIO/VIDEO** jacks between TV and DVD. Match the jack colors (Video = yellow, Audio Left = white, and Audio Right = red)

### 2. How to use

- Turn on the DVD player, insert a DVD.
- Select the **AV1** or **AV2** input source on the TV using the **INPUT** button on the remote control.
- Refer to the DVD player's manual for operating instructions.



## HDMI Connection

### 1. How to connect

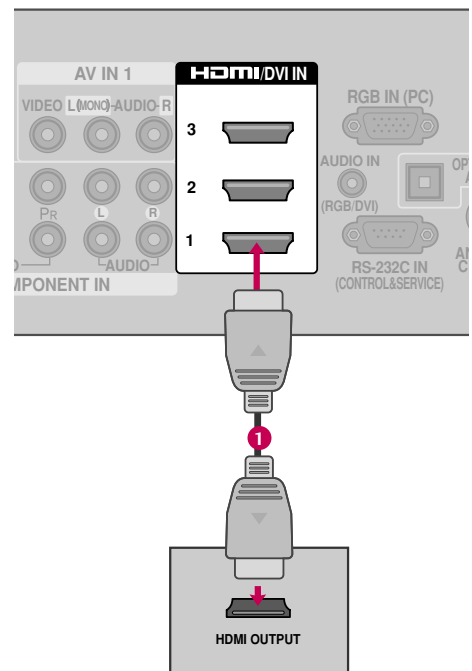
- 1 Connect the HDMI output of the DVD to the HDMI/DVI IN 1, 2, 3 or 4 jack on the TV.
- 2 No separate audio connection is necessary. HDMI supports both audio and video.

### 2. How to use

- Select the **HDMI1**, **HDMI2**, **HDMI3**, or **HDMI4** input source on the TV using the **INPUT** button on the remote control.
- Refer to the DVD player's manual for operating instructions.

#### ! NOTE

- ▶ Check HDMI cable over version 1.3. If the HDMI cables don't support HDMI version 1.3, it can cause flickers or no screen display. In this case use the latest cables that support HDMI version 1.3.





# EXTERNAL EQUIPMENT SETUP

## PC SETUP

This TV provides Plug and Play capability, meaning that the PC adjusts automatically to the TV's settings.

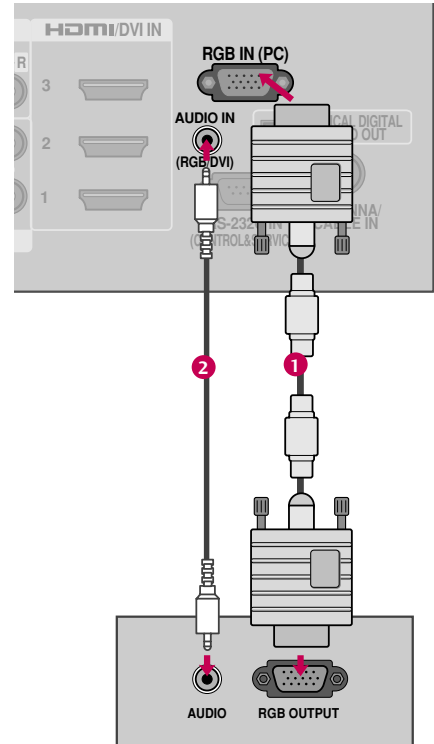
### VGA (D-Sub 15 pin) Connection

#### 1. How to connect

- 1 Connect the VGA output of the PC to the **RGB IN (PC)** jack on the TV.
- 2 Connect the PC audio output to the **AUDIO IN (RGB/DVI)** jack on the TV.

#### 2. How to use

- Turn on the PC and the TV.
- Select the **RGB-PC** input source on the TV using the **INPUT** button on the remote control.



### DVI to HDMI Connection

#### 1. How to connect

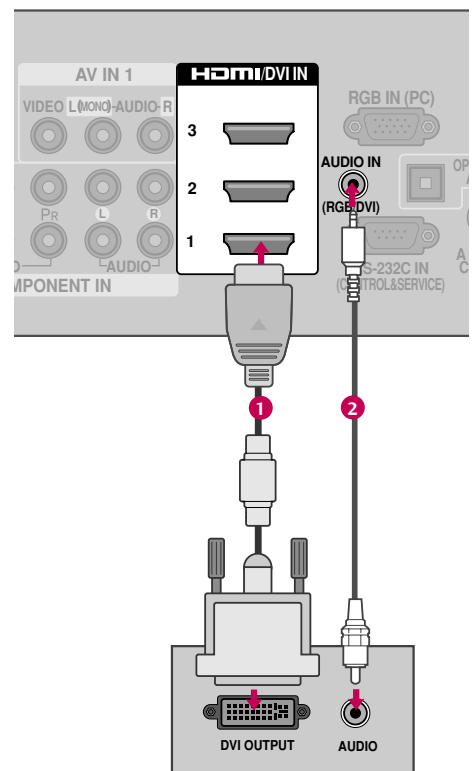
- 1 Connect the DVI output of the PC to the **HDMI/DVI IN 1, 2, or 3** jack on the TV.
- 2 Connect the PC audio output to the **AUDIO IN (RGB/DVI)** jack on the TV.

#### 2. How to use

- Turn on the PC and the TV.
- Select the **HDMI1**, **HDMI2**, or **HDMI3** input source on the TV using the **INPUT** button on the remote control.

#### ! NOTE

- ▶ Check HDMI cable over version 1.3. If the HDMI cables don't support HDMI version 1.3, it can cause flickers or no screen display. In this case use the latest cables that support HDMI version 1.3.



## ! NOTES

- ▶ To get the best picture quality, adjust the PC graphics card to **1920x1080**.
- ▶ Depending on the graphics card, DOS mode may not work if an HDMI to DVI Cable is in use.
- ▶ In PC mode, there may be noise associated with the resolution, vertical pattern, contrast or brightness. If noise is present, change the PC output to another resolution, change the refresh rate to another rate or adjust the brightness and contrast on the PICTURE menu until the picture is clear.
- ▶ Avoid keeping a fixed image on the screen for a long period of time. The fixed image may become permanently imprinted on the screen.
- ▶ Depending on the graphics card, some resolution settings may not allow the image to be positioned on the screen properly.
- ▶ If the screen is truncated using HDMI-PC 1920x1080, try changing the aspect ratio to **Just scan**.
- ▶ When selecting HDMI-PC, set the "Input Label - PC" in the OPTION menu.

## Supported Display Specifications (RGB-PC, HDMI-PC)

Resolution	Horizontal Frequency(KHz)	Vertical Frequency(Hz)
640x350	31.468	70.09
720x400	31.469	70.08
640x480	31.469	59.94
800x600	37.879	60.31
1024x768	48.363	60.00
1280x768	47.776	59.87
1360x768	47.712	60.015
1280x1024	63.981	60.02
1600x1200	75.00	60.00
1920x1080 RGB-PC	66.587	59.934
1920x1080 HDMI-PC	67.50	60.00

# EXTERNAL EQUIPMENT SETUP

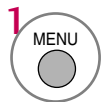


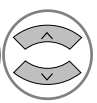

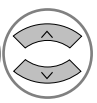

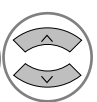

## Screen Setup for PC mode

### Selecting Resolution

You can choose the resolution in RGB-PC mode.

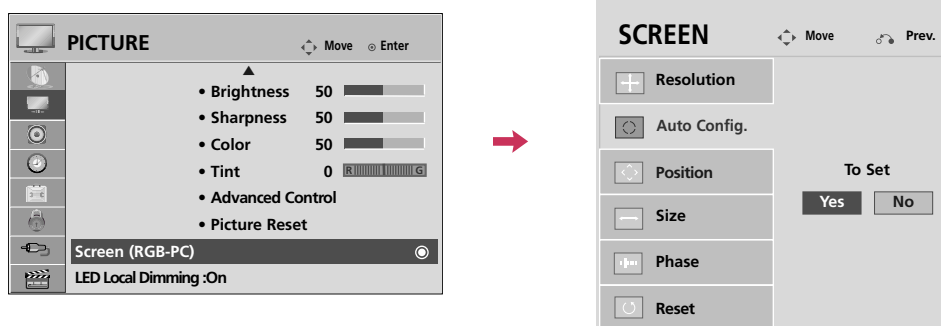
The **Position**, **Phase**, and **Size** can also be adjusted.












- 1   Select **PICTURE**.
- 2   Select **Screen (RGB-PC)**.
- 3   Select **Resolution**.
- 4   Select the desired resolution.
- 5 

## Auto Configure

Automatically adjusts picture position and minimizes image instability. After adjustment, if the image is still not correct, try using the manual settings or a different resolution or refresh rate on the PC.



- 1   Select **PICTURE**.
- 2   Select **Screen (RGB-PC)**.
- 3   Select **Auto Config..**
- 4   Select **Yes**.
- 5  Start Auto Configuration.

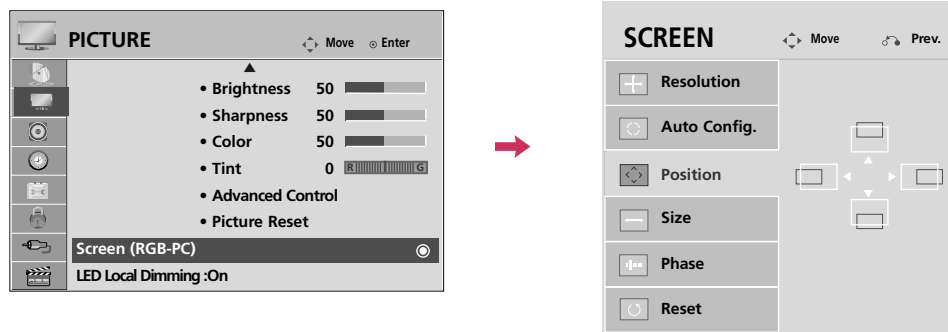
- If the position of the image is still not correct, try Auto adjustment again.
- If picture needs to be adjusted again after Auto adjustment in RGB-PC, you can adjust the **Position**, **Size** or **Phase**.

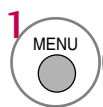




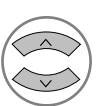

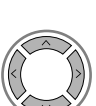

# EXTERNAL EQUIPMENT SETUP

## Adjustment for screen Position, Size, and Phase

If the picture is not clear after auto adjustment and especially if characters are still trembling, adjust the picture phase manually.

This feature operates only in RGB-PC mode.



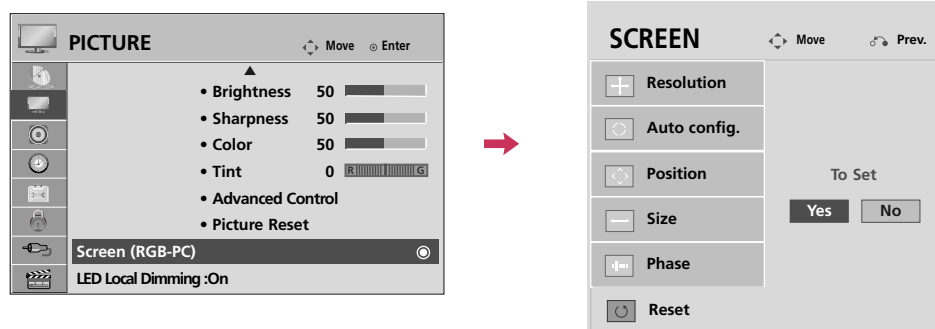
- 1   Select **PICTURE**.
- 2   Select **Screen (RGB-PC)**.
- 3   Select **Position, Size, or Phase**.
- 4   Make appropriate adjustments.
- 5 










- **Position:** This function is to adjust picture to left/right and up/down as you prefer.
- **Size:** This function is to minimize any vertical bars or stripes visible on the screen background. And the horizontal screen size will also change.
- **Phase:** This function allows you to remove any horizontal noise and clear or sharpen the image of characters.

## Screen Reset (Reset to original factory values)

Returns **Position**, **Size**, and **Phase** to the default factory settings.

This feature operates only in RGB-PC mode.



- 1   Select **PICTURE**.
- 2   Select **Screen (RGB-PC)**.
- 3   Select **Reset**.
- 4   Select **Yes**.
- 5 

# EXTERNAL EQUIPMENT SETUP

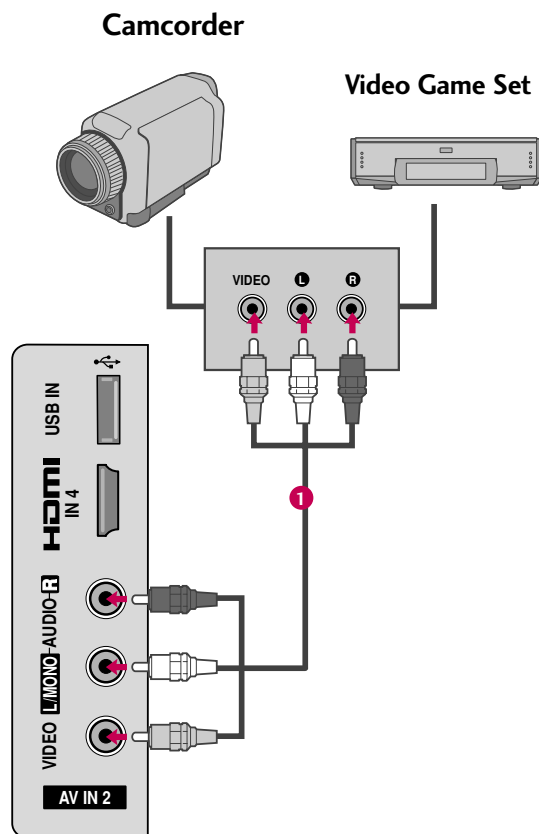
## OTHER A/V SOURCE SETUP

### 1. How to connect

- 1 Connect the **AUDIO/VIDEO** jacks between TV and external equipment. Match the jack colors.  
(Video = yellow, Audio Left = white, and Audio Right = red)

### 2. How to use

- Select the **AV2** input source on the TV using the **INPUT** button on the remote control.
- If connected to **AV IN 1** input, select the **AV1** input source on the TV.
- Operate the corresponding external equipment.



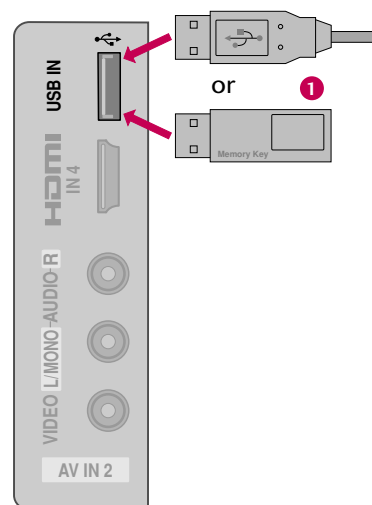
## USB CONNECTION

### 1. How to connect

- 1 Connect the USB device to the **USB IN** jack on the side of the TV.

### 2. How to use

- After connecting the **USB IN** jack, you use the USB function. (► p.58)

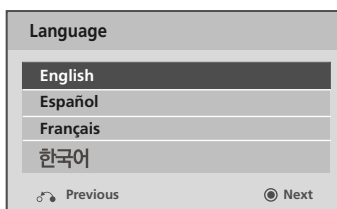


## INITIAL SETTING

This Function guides the user to easily set the essential items for viewing the TV for the first time when purchasing the TV. It will be displayed on the screen when turning the TV on for the first time. It can also be activated from the user menus.

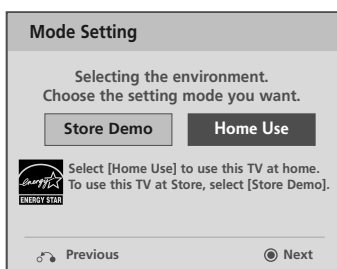
- Default selection is “**Home Use**”. We recommend setting the TV to “**Home Use**” mode for the best picture in your home environment.
- “**Store Demo**” Mode is only intended for use in retail environments. Customers can adjust the “**Picture** menu - **Picture mode**” manually while inspecting the TV, but the TV will automatically return to preset in-store mode after 5 minutes.
- “**Store Demo**” Mode is an optimal setting for displaying at stores. “Store Demo” mode initializes the TV to set the image quality.
- You can also adjust **Initial Setting** in the **OPTION** menu.

### Step1. Selecting Language



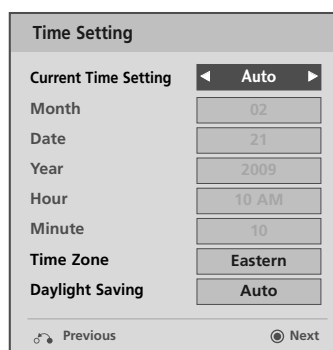
Select Menu Language.

### Step2. Mode setting



Select **Home Use**.

### Step3. Time setting

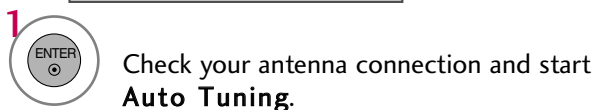
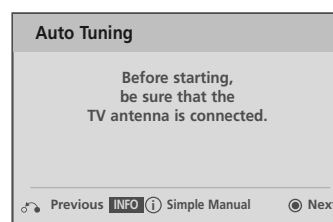


Select **Auto** or **Manual**.



Select desired time option.

### Step4. Auto Tuning



Check your antenna connection and start **Auto Tuning**.



# USB

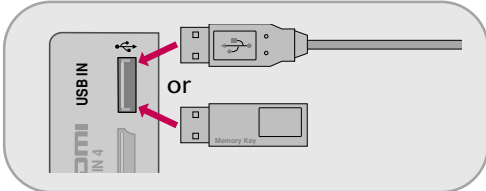
- Image shown may differ from your TV.

## ENTRY MODES

When you connect a USB device, this pop up menu is displayed automatically.

When the Pop Up menu does not appear, you can select Photo List, Music List or Movie List in the USB menu. On a USB device, you can not add a new folder or delete an existing folder.

- 1 Connect the USB device to the **USB IN** jacks on the side of TV.





- This TV Supports on JPG, MP3 and HD Divx.

- 2 Select **PHOTO LIST**, **MUSIC LIST** or **MOVIE LIST**.



### When removing the USB device

Select the **USB Device** menu before removing the USB device.

- 1   Select **USB Device**.
- 2  Select **Eject**.

### Precautions when using the USB device

- ▶ Only a USB storage device is recognizable.
- ▶ If the USB storage device is connected through a USB hub, the device is not recognizable.
- ▶ A USB storage device using an automatic recognition program may not be recognized.
- ▶ A USB storage device which uses its own driver may not be recognized.
- ▶ The recognition speed of a USB storage device may depend on each device.
- ▶ In case of a card reader, up to four memory cards are concurrently recognizable.
- ▶ Please do not turn off the TV or unplug the USB device when the connected USB storage device is working. When such device is suddenly separated or unplugged, the stored files or the USB storage device may be damaged.
- ▶ Only use a USB storage device which has normal music, image or movie files.
- ▶ Please connect power to a USB storage device (over 0.5A) which requires an external power supply. If not, the device may not be recognized.
- ▶ Please connect a USB storage device with cable is offered by USB maker. If connected with cable is not offered by USB maker or an excessively long cable, the device may not be recognized.
- ▶ Some USB storage devices may not be supported or operate properly.
- ▶ File alignment method of USB storage device is similar to Window XP and filename can recognize up to 100 English characters.
- ▶ Please backup important files because data on the USB device may be damaged. Data management is the consumer's responsibility and as a result, the manufacturer does not cover data damage.
- ▶ Please use only a USB storage device which was formatted as a FAT32, NTFS file system provided with the Windows operating system. In case of a storage device formatted as a different utility programme which is not supported by Windows, it may not be recognized.
- ▶ Data in a USB storage device cannot be deleted in the NTFS file system.
- ▶ If your USB memory device has multiple partitions, or if you use a USB multi-card reader, you can use up to 4 partitions or USB memory devices.
- ▶ The recommended capacity is 1TB or less for a USB external hard disk and 32GB or less for USB memory.
- ▶ Any device with more than the recommended capacity may not work properly.
- ▶ If a USB external hard disk with a "Energy Saving" function does not work, turn the hard disk off and on again to make it work properly. Refer to the user manual of the application USB external hard disk.
- ▶ When using a USB HDD via the USB extending cable, connect a support electric power source.

# MUSIC LIST

You can use the Music List menu to play MP3 files from a USB storage device.

This TV cannot play back copy-protected files.

The On-Screen Display on your model may be slightly different.

## Supported music file: \*.MP3

Bit rate range 32 Kbps - 320 Kbps

### • Sampling rate (Sampling Frequency)

MPEG1 layer 3: 32 kHz, 44.1 kHz, 48 kHz

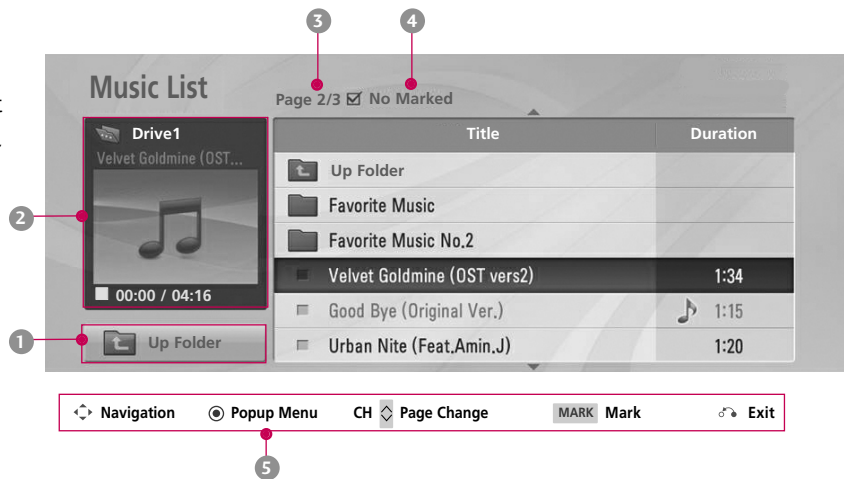
MPEG2 layer 3: 16 kHz, 22.05 kHz, 24 kHz

MPEG2.5 layer 3: 8 kHz, 11.025 kHz, 12 kHz

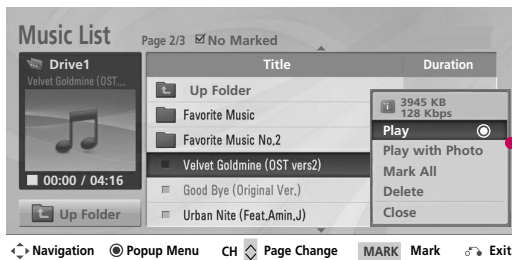
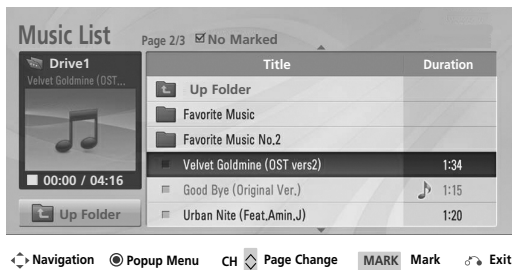
## Screen Components



- ① Moves to upper level folder
- ② Preview: If any album jacket for the file exists, this jacket is displayed.
- ③ Current page/Total pages
- ④ Total number of marked musics
- ⑤ Corresponding buttons on the remote control



## Music Selection and Popup Menu



### ► **Play** (During stop): Play the selected file.

Once a song finishes playing, the next selected one will be played. When there are no selected files to play, the next one in the current folder will be played. If you go to a different folder and press the **ENTER** button, the current song in playback will stop.

### ► **Play Marked**: Play the selected files. Once a file finishes playing, the next selected one will be played automatically.

### ► **Stop Play** (During playback): Stop the playing files.

### ► **Play with Photo**: Start playing the selected files and then move to the Photo List.

### ► **Mark All**: Mark all files in the folder.

### ► **Unmark All**: Deselect all marked files.

### ► **Delete or Delete Marked**: Delete the selected files.

### ► **Close**: Close the pop-up menu.



- 1 Select the target folder or drive.
- 2 Select the desired musics.
- 3 Show the Popup menu.
- 4 Select the desired Popup menu.
- 5 Return to TV viewing.

- Use the **CH** ^ v button to navigate in the music page.
- Use the **MARK** button to mark or unmark a music file. If no music is marked, all the music in the folder will be played in sequence. When one or more music files are marked, the marked music files will be played in sequence. If you want to listen to only one song repeatedly, just mark that one file and play.

- The play information box (as shown below) will automatically move across the screen when there is no user input to prevent a fixed image remaining on the screen for a extended period of time.



#### ! NOTE

- ▶ When music is playing,  is displayed in front of the music play time.
- ▶ A damaged or corrupted music file that does not play displays 00:00 as the play time.
- ▶ A music downloaded from a paid service with copyright protection does not start but displays inappropriate information in playtime.
- ▶ Press **ENTER**,  or **RETURN** button to stop the screen saver.

## MOVIE LIST

The movie list is activated once a USB drive is detected. It is used when playing movie files on TV.

Displays the movies in the USB folder and supports play.

Allows playback of all movies in the folder but you can not delete the movies.

Editing such as delete and add is not allowed. It is a movie list that displays folder information and DivX file.

Movie(\*.dat/\*.mpg/\*.mpeg/\*.ts/\*.trp/\*.tp/\*.vob/\*.mp4/\*.mkv/  
\*.avi/\*.divx) supporting file

Bit rate : within 32 ~ 320kbps(MP3)

Video Format	Audio Format	Subtitle format
DivX3.11, DivX4.12, DivX5.x, DivX6, Xvid 1.00, Xvid 1.01, Xvid 1.02, Xvid 1.03, Xvid 1.10-beta-1/beta-2, Mpeg-1, Mpeg-2, Mpeg-4, H.264/AVC	Dolby Digital, AAC, Mpeg, MP3, LPCM, HEAAC	*.smi/*.srt/*.sub(MicroDVD, SubViewer1.0/2.0)/*.ass/*.ssa/*.txt(TMPlayer)/*.psb(PowerDivx)

Extension name	Video Codec	Audio Codec	Resolution
mpg, mpeg, vob	MPEG1, MPEG2	Dolby Digital, MPEG, MP3, LPCM	1920x1080P @25/30P, 1280x720P @50/60P
dat	MPEG1	Dolby Digital, MPEG, MP3, LPCM	
ts, trp, tp	MPEG2, H.264/AVC	Dolby Digital, AAC, MPEG	
mp4	MPEG4 SP, MPEG4 ASP, Divx 3.11, Divx 4.12, Divx 5.x Divx 6, Xvid 1.00, Xvid 1.01, Xvid 1.02, Xvid 1.03 Xvid 1.10-beta 1, Xvid 1.10-beta 2, H.264/AVC	Dolby Digital, HEAAC, AAC, MPEG, MP3, LPCM	
avi	MPEG 2, MPEG 4 SP, MPEG4 ASP, Divx 3.11, Divx 4, Divx 5, Divx 6 Xvid 1.00, Xvid 1.01, Xvid 1.02, Xvid 1.03, Xvid 1.10-beta 1 Xvid 1.10-beta 2, H.264/AVC	Dolby Digital, HEAAC, AAC, MPEG, MP3, LPCM	
mkv	H.264/AVC, MPEG 1, MPEG 2, MPEG 4 SP, MPEG4 ASP	Dolby Digital, HEAAC, AAC, MPEG, MP3, LPCM	
divx	MPEG 2, MPEG 4 SP, MPEG4 ASP, Divx 3.11, Divx 4, Divx 5, Divx 6 Xvid 1.00, Xvid 1.01, Xvid 1.02, Xvid 1.03, Xvid 1.10-beta 1 Xvid 1.10-beta 2, H.264/AVC	Dolby Digital, HEAAC, AAC, MPEG, MP3, LPCM	

### Precautions when playing the movie

- ▶ Some user-created subtitles may not work properly.
- ▶ Some special characters are not supported in subtitles.
- ▶ HTML tags are not supported in subtitles.
- ▶ Subtitles in languages other than the supported languages are not available.
- ▶ **Time information in an external subtitle file should be arranged in ascending order to be played.**
- ▶ The screen may suffer temporary interruptions (image stoppage, faster playback, etc.) when the audio language is changed.
- ▶ A damaged video file may not play correctly, or some player functions may not be usable.
- ▶ Video files produced with some encoders may not play correctly.
- ▶ If the video and audio structure of recorded file is not interleaved, either video or audio is outputted.
- ▶ HD videos with a maximum of 1920x1080@25/30P or 1280x720@50/60P are supported, depending on the frame rate.
- ▶ Videos with resolutions higher than 1920x1080@25/30P or 1280x720@50/60P may not work properly depending on the frame rate.
- ▶ Video files other than the specified types and formats may not work properly.
- ▶ The video file encoded by the GMC (Global Motion Compensation) is not supported.
- ▶ Only the files saved in ASCII CODE is supported in subtitles.
- ▶ Only 250 Korean characters, 500 alphabets and 500 numbers are supported for each line of the subtitle.
- ▶ Only 10,000 of sync blocks can be supported within the subtitle file.
- ▶ Max bitrate of playable movie file is 20Mbps.
- ▶ We do not guarantee smooth playback of profiles encoded level 4.1 or higher in H.264.
- ▶ DTS Audio codec is not supported.
- ▶ A video file more than 30GB in file size is not supported for playback.
- ▶ Playing a video via a USB connection that doesn't support high speed may not work properly.
- ▶ USB storage devices below USB 2.0 are supported as well. But they may not work properly in the movie list.
- ▶ The video file and the subtitle file must be located in the same folder.
- ▶ The name of the video file and the subtitle file must be the same to view the subtitles normally.
- ▶ When you are watching the movie by Movie List function, you can adjust the picture by **ENERGY SAVING** and **AV MODE** button on the remote control. User setup for each picture mode does not operate.

## Screen Components

**1** Select **USB**.

**2** Select **Movie List**.

**1** Moves to upper level folder

**2** Current page/Total pages

**3** Total number of marked movie

**4** Corresponding buttons on the remote control

## Movie Selection and Popup Menu

- ▶ **Play:** Play the selected file.  
DivX play is executed while the screen changes.
- ▶ **Play Marked:** Play the selected files. Once a movie finishes playing, the next selected one will be played automatically.
- ▶ **Mark All:** Mark all files in the folder.
- ▶ **Unmark All:** Deselect all marked files.
- ▶ **Delete** or **Delete Marked**(FAT32 file system only): Delete the selected file.
- ▶ **Close:** Close the pop-up menu.

- 1** Select the target folder or drive.
- 2** Select the desired movies.
- 3** Show the Popup menu.
- 4** Select the desired Popup menu.
- 5** Return to the previous menu.

- Use the **CH** ^ v button to navigate in the movie page.
- Use the **MARK** button to mark or unmark a movie file. When one or more movie files are marked, the marked movie files will be played in sequence.

Option Menu Selection



Using the remote control

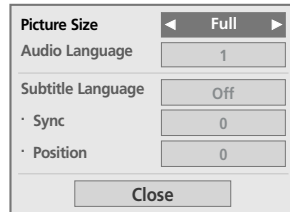
You can adjust various method during movie play.


◀◀ / ▶▶	<p>When playing, repeatedly press the <b>REW(◀◀)</b> button to speed up ◀◀ -&gt; ◀◀◀◀ -&gt; ◀◀◀◀◀◀ -&gt; ◀◀◀◀◀◀◀◀.</p> <p>repeatedly press the <b>FF(▶▶)</b> button to speed up ▶▶-&gt; ▶▶▶▶ -&gt; ▶▶▶▶▶▶ -&gt; ▶▶▶▶▶▶▶▶.</p> <p>■ Pressing these buttons repeatedly increases the fast forward/reverse speed.</p>
⏸	<p>During playback, press the <b>Pause(⏸)</b> button and a still screen will be displayed.</p>
< >	<p>■ When using the &lt; or &gt; buttons during playback a cursor indicating the position can be viewed on the screen.</p>
▶▶▶▶▶▶	<p>Press the <b>PLAY(▶▶)</b> button to return to normal playback.</p>

NOTE


- ▶ Use the ( < / > ) buttons to move to a specific frame forward or backward while playing a movie. (The ( < / > ) buttons may not work properly for some files while playing a movie.)


## DivX Audio Language & Subtitle Language



**1**  When DivX is playing, the above menu is displayed.

**2**  Select **Picture Size**, **Audio Language**, **Subtitle Language**, **Sync** or **Position**.

**3**  Select the desired option.

**4**  Return to movie viewing.

- **Picture Size:** Select the Full screen or Original size.
- **Audio Language:** Select the language.  
But, the file with only one audio can not be selected.
- **Subtitle Language:** The subtitle can be turned on or off.  
If there are two or more subtitles, you can select one of them.
- **Sync:** When the video is not synchronized with the caption, it can be adjusted by the unit of 0.5 second.
- **Position:** Move the location of the subtitle.

Country Group	Subtitle Language Group	Supported Language
US	Latin1	English, Spanish, French
	Korean	English, Korean










## DIVX REGISTRATION CODE

Confirm the DivX registration code number of the TV. Using the registration number, movies can be rented or purchased at [www.divx.com/vod](http://www.divx.com/vod).

With a DivX registration code from another TV, playback of rented or purchased DivX file is not allowed. (Only DivX files matched with the registration code of the purchased TV are playable.)



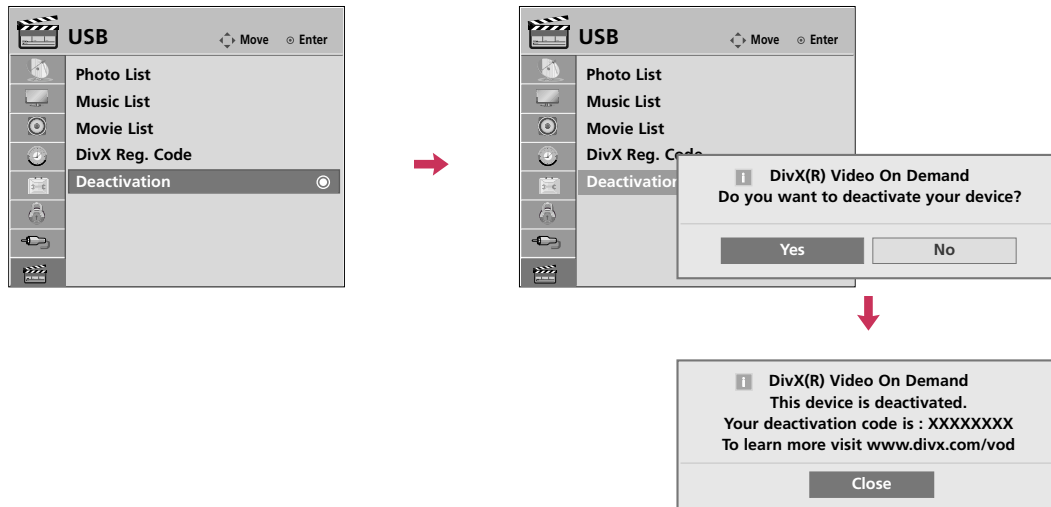
- 1   Select **USB**.
- 2   Select **DivX Reg. Code**.
- 3  Display **DivX Reg. Code**.
- 4  Return to the previous menu.
-  Return to TV viewing.











### ! NOTE

- ▶ When loading, some buttons may not work.
- ▶ If you use the DivX registration code of another device, the rented or purchased DivX file cannot be played. Therefore always use the DivX registration code assigned to this product.
- ▶ The video or audio of a file converted based on a standard other than the DivX codec standard may be corrupted or unable to be played.

# DEACTIVATION

Delete the existing authentication information to receive a new DivX user authentication for TV. Once this function is executed, a DivX user authentication is required again to see DivX DRM files.

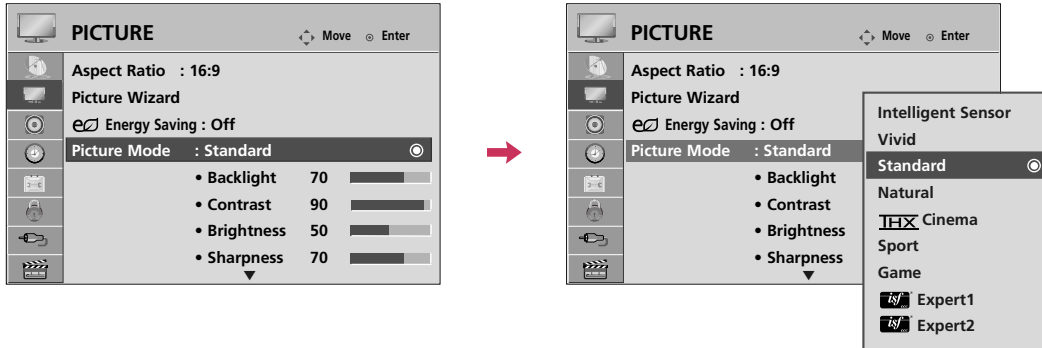


- 1   Select **USB**.
- 2   Select **Deactivation**.
- 3    Select **Yes**.
- 4  Select **Close**.
- 5  Return to the previous menu.
-  Return to TV viewing.

# PICTURE CONTROL

## PRESET PICTURE SETTINGS (PICTURE MODE)

There are factory presets for picture settings available in the user menus. You can use a preset, change each setting manually, or use the Intelligent Sensor.



- 1 Select **PICTURE**.
- 2 Select **Picture Mode**.
- 3 Select **Intelligent Sensor, Vivid, Standard, Natural, Cinema/ THX Cinema** (For 42/47/55LH90), **Sport**, or **Game**.
- 4 Return to the previous menu.
- Return to TV viewing.

- **THX** (Thomlinson Holman's Experiment) is the audio and video certification standard of THX established by George Lucas, who directed the movie Star Wars, and Thomlinson.

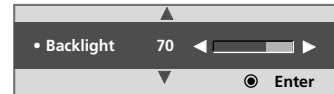
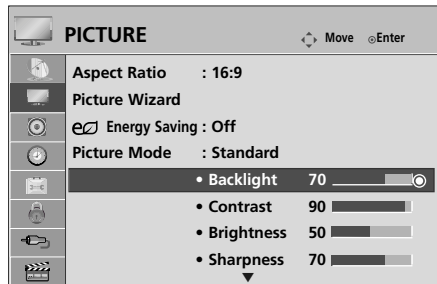
This is the product to be certified in THX display area and guarantees screen quality that exceeds the display standard specification in both hardware and software.













- When selecting **Intelligent Sensor**, **Energy Saving** is changed to **Auto** automatically.
- When selecting **Intelligent Sensor**, it is changed contrast, brightness, sharpness, color and tint automatically.
- Only **Vivid**, **Standard**, **Natural**, **Sport** and **Game** Settings are preset for the optimum picture quality at the factory.
- **Intelligent Sensor**: The most suitable picture is automatically adjusted according to the surrounding conditions.
- **Vivid**: This is the mode to maximize the effect of the video in the retail store. Strengthen the contrast, brightness, color and sharpness for vivid picture.
- **Standard**: This is the mode to realize optimum viewing condition for the general user.
- **Natural**: This is the mode to display the most natural screen status.
- **Cinema** (For 42/47/55SL80): This mode optimizes video for watching movies.
- **THX Cinema** (For 42/47/55LH90): This is cinema quality mode to provide you the experience of watching a movie at home. The user will be able enjoy the best level of satisfactory screen quality in any movie without any separate adjustments. **THX Cinema** expresses the optimal screen quality when it is darkest.
- It turns to Just scan only if change **THX Cinema** at input source which supports Just scan (For 42/47/55LH90).
- **Sport**: This is the video mode to emphasize dynamic video and primary color (e.g. white, uniform, grass, sky blue etc.) by realizing the optimal screen for sports.
- **Game**: This is the mode to realize fast response speed in a fast gaming screen.
- **Expert**: This is the mode to adjust the video in detail for video quality expert and general user.
- You can also adjust **Picture Mode** in the **Q.MENU**.

## MANUAL PICTURE ADJUSTMENT - USER MODE

Adjust the picture appearance to suit your preference and viewing situations.

This feature is disabled in "Picture Mode - Intelligent Sensor, Cinema/ ~~THX~~ Cinema".



- 1   Select **PICTURE**.
- 2   Select **Picture Mode**.
- 3   Select **Vivid, Standard, Natural, Sport, or Game**.
- 4   Select **Backlight, Contrast, Brightness, Sharpness, Color, or Tint**.
- 5   Make appropriate adjustments.
- 6  Return to the previous menu.
-  Return to TV viewing.

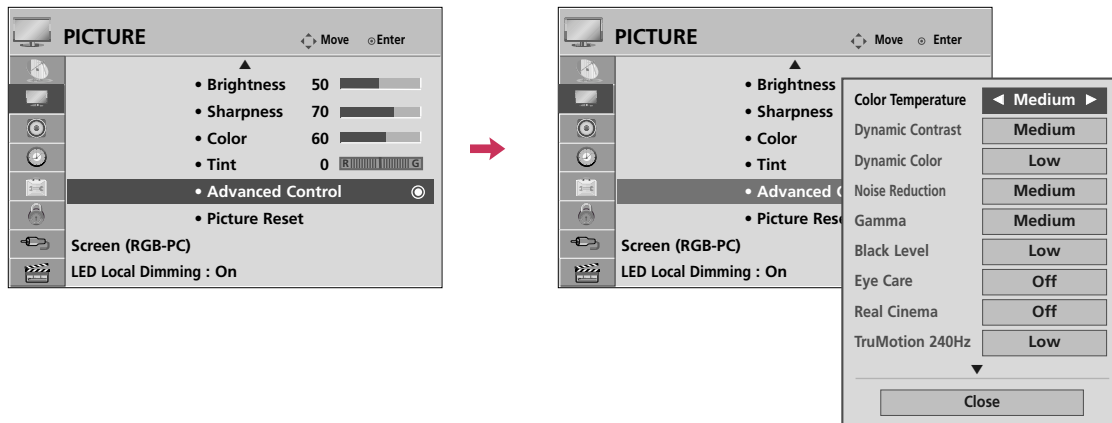
- When adjusting Energy Saving, **Backlight** function is disabled.
- **Backlight:** This function adjusts the brightness of LCD panel, to control the brightness of the screen. Adjusting the backlight is recommended when setting the brightness of the set. When decreasing the backlight, the brightness of the black becomes darker without any loss in video signal and the power consumption is reduced.
- **Contrast:** Increase or decrease the gradient of the video signal. You may use Contrast when the bright part of picture is saturated.
- **Brightness:** Adjusts the base level of the signal in the picture. You may use Brightness when the dark part of the picture is saturated.
- **Sharpness:** Adjusts the level of crispness in the edges between the light and dark areas of the picture. The lower the level, the softer the image.
- **Color:** Adjusts intensity of all colors.
- **Tint:** Adjusts the balance between red and green levels.










# PICTURE CONTROL

## PICTURE IMPROVEMENT TECHNOLOGY

You can calibrate the screen for each Picture Mode or set the video value according to the special video screen. You can set the video seeing differently for each input.

To reset to the factory default after making adjustments to each input source, execute the **Picture Reset** function for each Picture Mode.

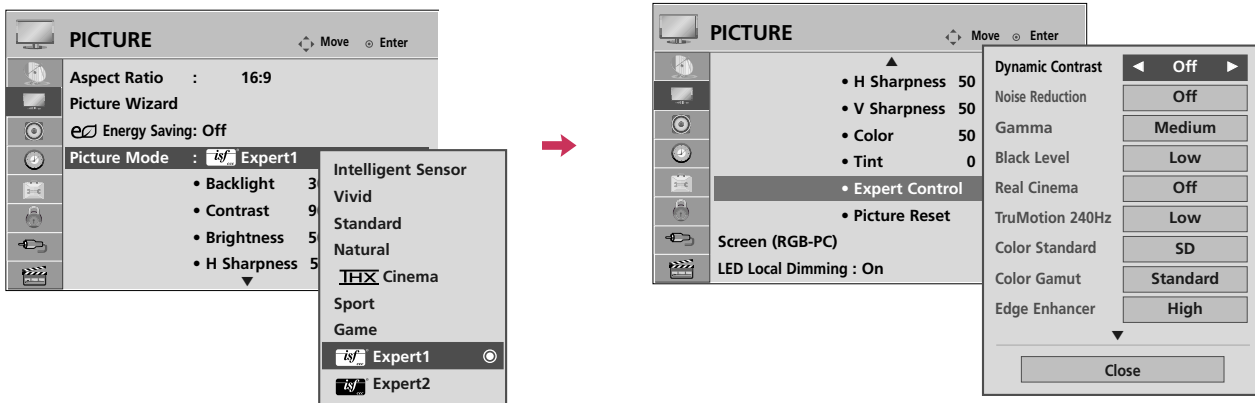


- 1   Select **PICTURE**.
- 2   Select **Advanced Control**.
- 3   Select your desired options.
- 4  Make appropriate adjustments.
- 5  Return to the previous menu.
-  Return to TV viewing.

## EXPERT PICTURE CONTROL

By segmenting categories, **Expert1** and **Expert2** provide more categories which users can set as they see fit, offering the optimal picture quality for users.

This may also be used by a professional to help optimize the TV performance in the environment the TV is in.



- 1 Select **PICTURE**.
- 2 Select **Picture Mode**.
- 3 Select **Expert1** or **Expert2**.
- 4 Select **Expert Control**.
- 5 Select your desired menu option.
- 6 Make appropriate adjustments.
- 7 Return to the previous menu.
- Return to TV viewing.

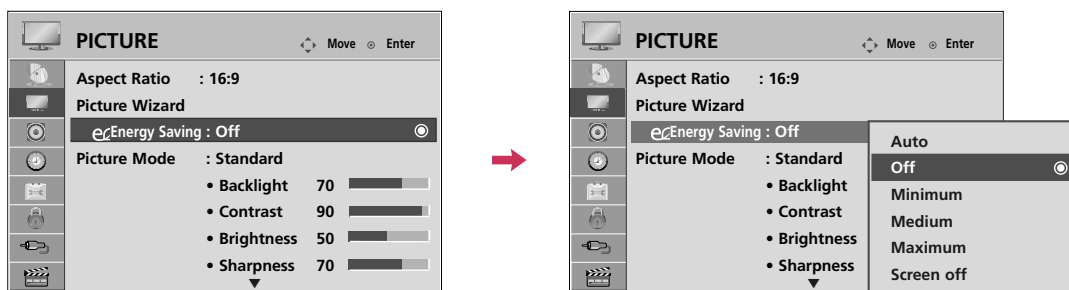
# PICTURE CONTROL

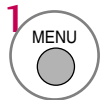
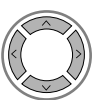

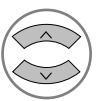



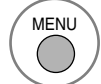
## ENERGY SAVING

It reduces the TV's power consumption by lowering the backlight level.

The default factory setting complies with the **Energy Star** requirements and is adjusted to the comfortable level to be viewed at home.

You can increase the brightness of your screen by adjusting the **Energy Saving** level or by setting the **Picture Mode**.

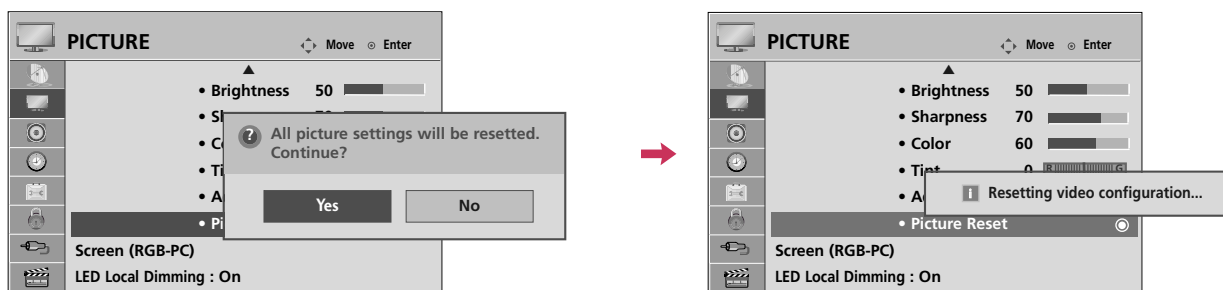










- 1   Select **PICTURE**.
- 2   Select **Energy Saving**.
- 3   Select **Auto, Off, Minimum, Medium, Maximum, or Screen Off**.
- 4  Return to the previous menu.
-  Return to TV viewing.

- When selecting **Screen off**, the screen will turn off 3 seconds.
- If you adjust “**Energy Saving-Auto, Minimum, Medium, Maximum**”, **Backlight** feature will not work.
- When selecting **Auto**, **Backlight** is automatically adjusted through **Intelligent sensor** according to the surrounding conditions.
- Press the **ENERGY SAVING** button repeatedly to select the appropriate Energy Saving setup.

## PICTURE RESET

Settings of the selected picture modes return to the default factory settings.



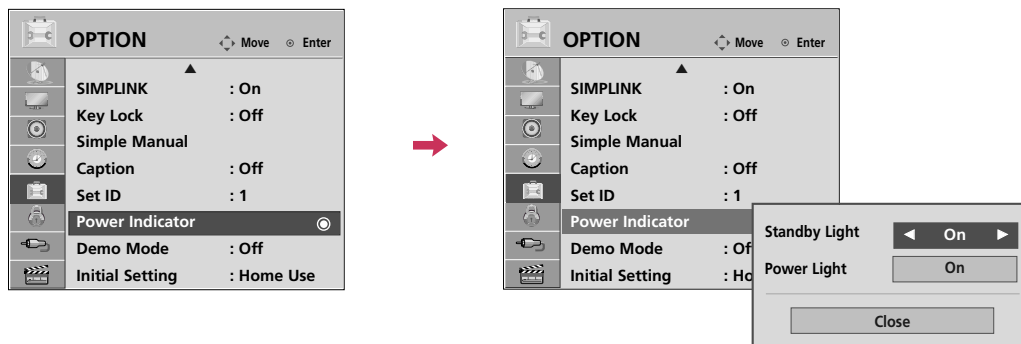
- 1   Select **PICTURE**.
- 2   Select **Picture Reset**.
- 3   Select **Yes**.
- 4  Initialize the adjusted value.
- 5  Return to TV viewing.












# PICTURE CONTROL

## POWER INDICATOR

Adjust the power/standby indicator light on the front of the TV.

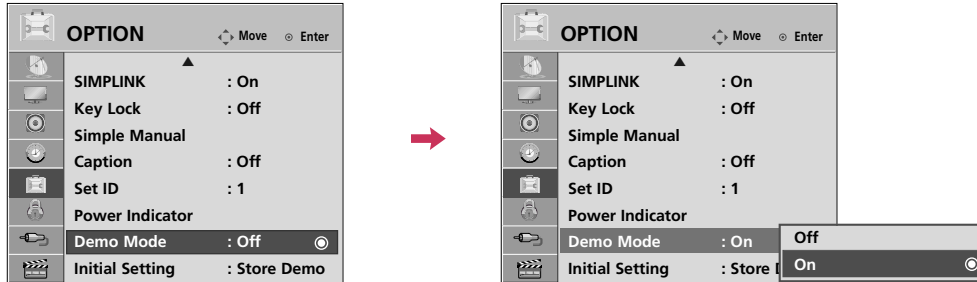









- 1   Select **OPTION**.
- 2   Select **Power Indicator**.
- 3   Select **Standby Light** or **Power Light**.
- 4  Select your desired options.
- 5  Return to the previous menu.
-  Return to TV viewing.

- **Standby Light:** Determines whether to set the indicator light on the front of the TV to **On** or **Off** in standby mode.
- **Power Light:** Determines whether to set the indicator light on the front of the TV to **On** or **Off** when the power turns on.

# DEMO MODE

Displays a slide show to explain the various feature of this TV.



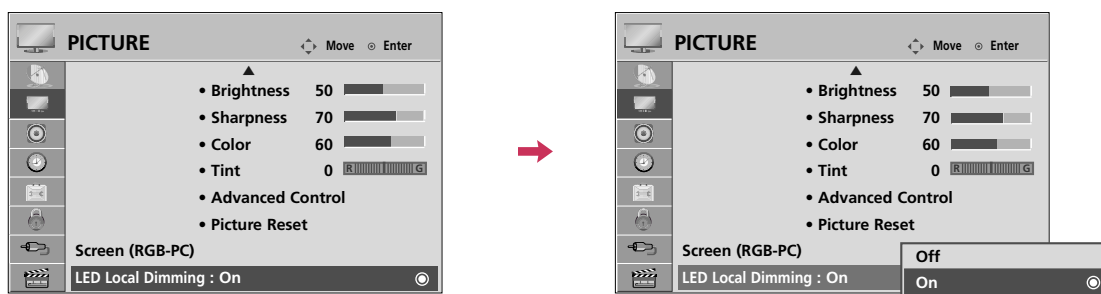
- 1   Select **OPTION**.
- 2   Select **Demo Mode**.
- 3   Select **On** to show the various feature of the TV.
- 4  Return to TV viewing.  
After a while, **Demo Mode** starts.  
If you want to stop the demo, press any button (Except VOL +, - and MUTE button).


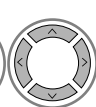

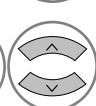



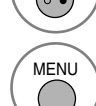
■ This feature is disabled in “Initial Setting-Home Use”.

# PICTURE CONTROL

## LED LOCAL DIMMING - For 42/47/55LH90

After analyzing the signal of the input video by areas of the screen, it adjusts the backlight to improve the contrast ratio. This feature is disabled in “**Picture Mode-Game**”.



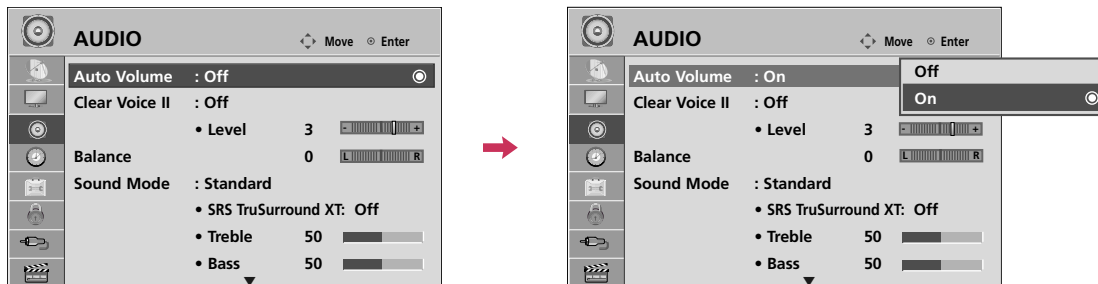
- 1   Select **PICTURE**.
- 2   Select **LED Local Dimming**.
- 3   Select **On** or **Off**.
- 4  Return to the previous menu.
-  Return to TV viewing.









# SOUND & LANGUAGE CONTROL

## AUTO VOLUME LEVELER (AUTO VOLUME)

Auto Volume makes sure that the volume level remains consistent whether you are watching a commercial or a regular TV program.

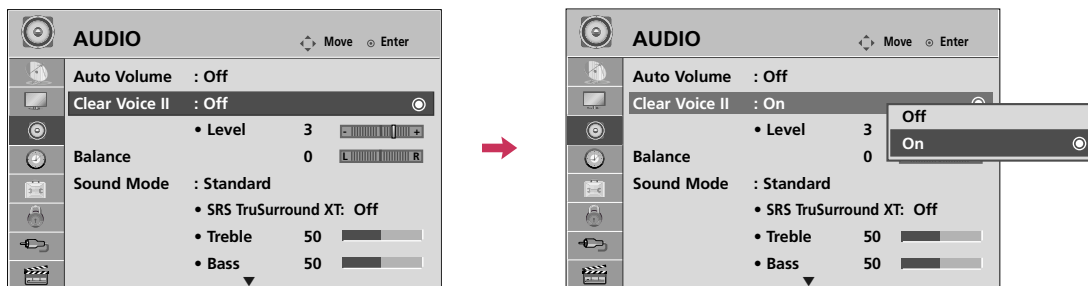
Because each broadcasting station has its own signal conditions, volume adjustment may be needed every time the channel is changed. This feature allows users to enjoy stable volume levels by making automatic adjustments for each program.

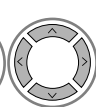




- 1   Select **AUDIO**.
- 2   Select **Auto Volume**.
- 3   Select **On** or **Off**.
- 4  Return to the previous menu.
-  Return to TV viewing.


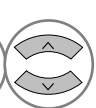

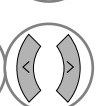

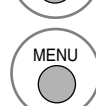
## CLEAR VOICE II

By differentiating the human sound range from others, it improves the sound quality of voices.



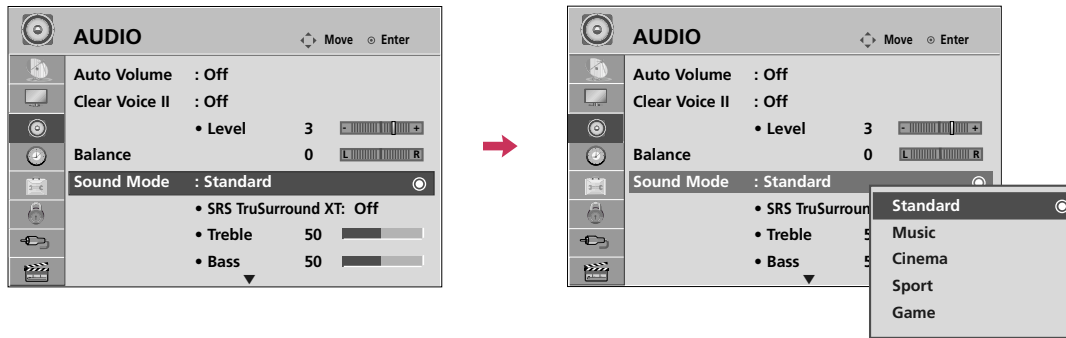
- 1   Select **AUDIO**.
- 2   Select **Clear Voice II**.
- 3   Select **On** or **Off**.









### Adjustment for Clear Voice Level With selecting **On**

- 4   Select **Level**.
- 5   Make appropriate adjustments.
- 6  Return to the previous menu.
-  Return to TV viewing.

## PRESET SOUND SETTINGS (SOUND MODE)

Sound Mode lets you enjoy the best sound without any special adjustment as the TV sets the appropriate sound options based on the program content.



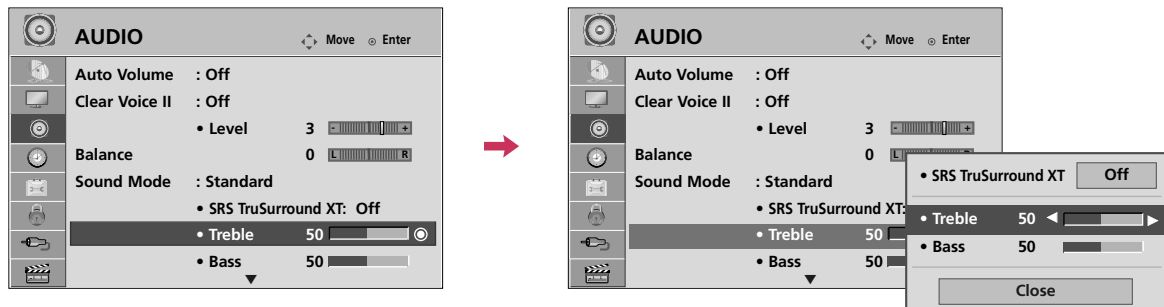
- 1   Select **AUDIO**.
- 2   Select **Sound Mode**.
- 3   Select **Standard, Music, Cinema, Sport, or Game**.
- 4  Return to the previous menu.
-  Return to TV viewing.









- **Standard, Music, Cinema, Sport, and Game** are preset for optimum sound quality at the factory.
- You can also adjust **Sound Mode** in the **Q.MENU**.
- **Standard:** Offers standard-quality sound.
- **Music:** Optimizes sound for listening to music.
- **Cinema:** Optimizes sound for watching movies.
- **Sport:** Optimizes sound for watching sports events.
- **Game:** Optimizes sound for playing games.





# SOUND & LANGUAGE CONTROL

## SOUND SETTING ADJUSTMENT - USER MODE

Adjust the sound to suit your taste and room situations.











- 1   Select **AUDIO**.
- 2   Select **Sound Mode**.
- 3   Select **Standard, Music, Cinema, Sport, or Game**.
- 4   Select **Treble or Bass**.

- 5   Make appropriate adjustments.
- 6  Return to the previous menu.
-  Return to TV viewing.

## SRS TRUSURROUND XT

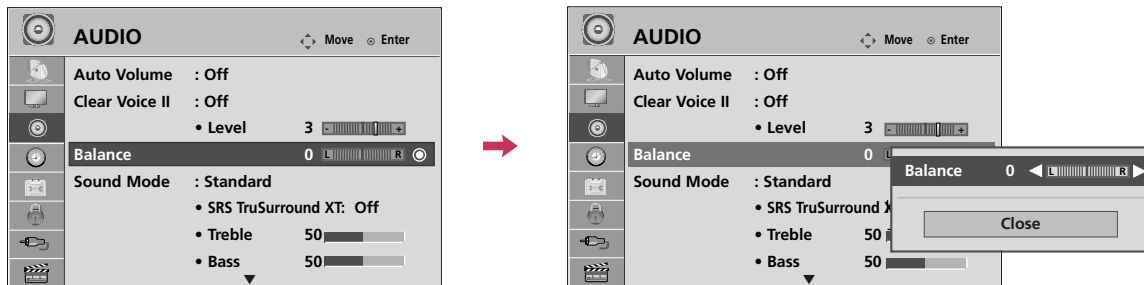
Select this option to sound realistic.









- 1   Select **AUDIO**.
- 2   Select **SRS TruSurround XT**.
- 3   Select **On or Off**.
- 4  Return to the previous menu.
-  Return to TV viewing.

- If sound quality or volume is not at the level you want, it is recommended to use a separate home theater system or amp to cope with different user environments.
- If you select “**Clear Voice II-On**”, **SRS TruSurround XT** feature will not work.
- **SRS TruSurround XT**: TruSurround XT is a patented SRS technology that solves the problem of playing 5.1 multichannel content over two speakers.

# BALANCE

Adjust the left/right sound of speaker to suit your taste and room situations.

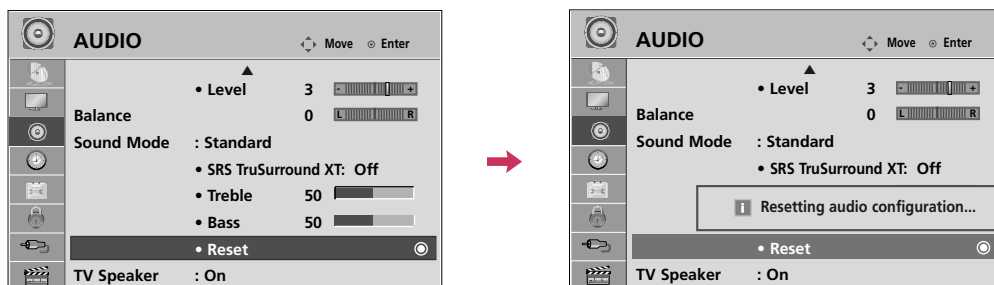








- 1   Select **AUDIO**.
- 2   Select **Balance**.
- 3   Make appropriate adjustments.
- 4  Return to the previous menu.
-  Return to TV viewing.



## AUDIO RESET

Settings of the selected Sound Mode return to the default factory settings.



- 1   Select **AUDIO**.
- 2   Select **Reset**.
- 3  Initialize the adjusted value.
- 4  Return to TV viewing.





# SOUND & LANGUAGE CONTROL

## STEREO/SAP BROADCAST SETUP





On analog signals, this TV can receive MTS stereo programs and any SAP (Secondary Audio Program) that accompanies the stereo program if the station transmits an additional sound signal. Mono sound is automatically used if the broadcast is only in Mono.



### Analog TV

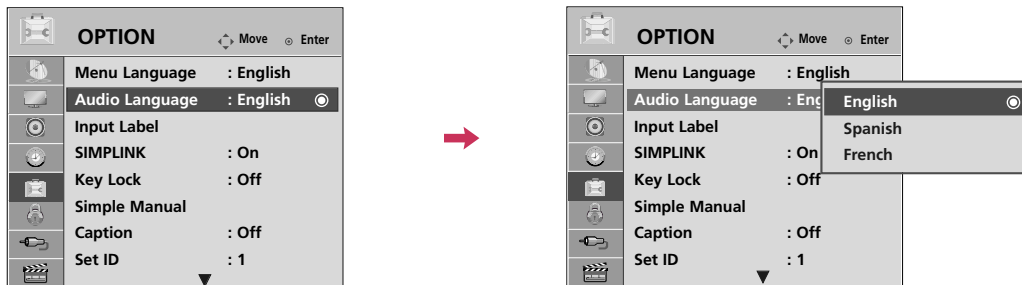
- 1   Select **SAP**.
- 2  Select **Mono, Stereo, or SAP**.
- 3  Return to TV viewing.









### Digital TV

- 1   Select **Multi Audio**.
- 2  Select other languages.
- 3  Return to TV viewing.

# AUDIO LANGUAGE

Other languages may be available if a digital signal is provided by the broadcasting station.  
This feature operates only in DTV/CADTV mode.

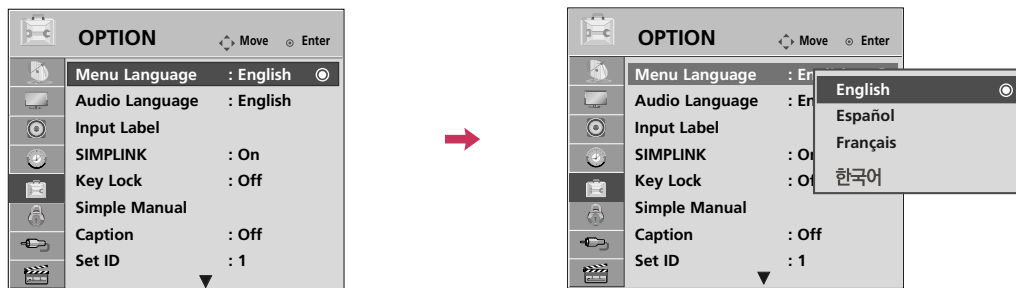










- 1   Select **OPTION**.
- 2   Select **Audio Language**.
- 3   Select your desired language.
- 4  Return to the previous menu.
-  Return to TV viewing.

# SOUND & LANGUAGE CONTROL

## ON-SCREEN MENUS LANGUAGE SELECTION

The menus can be shown on the screen in the selected language.

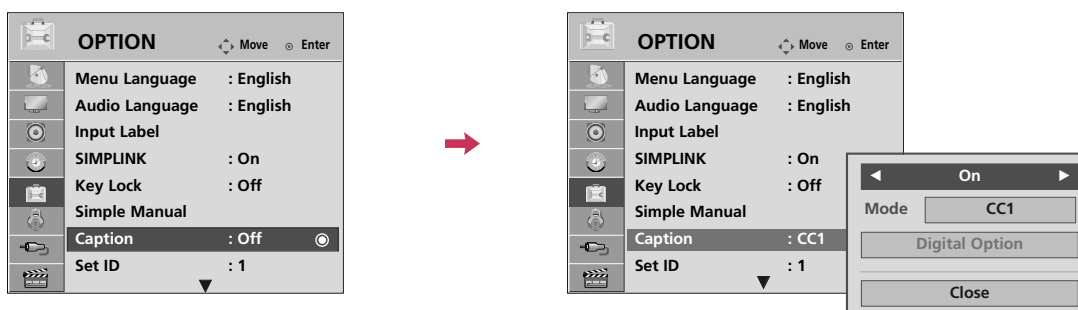












- 1   Select **OPTION**.
- 2   Select **Menu Language**.
- 3   Select your desired language.  
From this point on, the on-screen menus will be shown in the selected language.
- 4  Return to the previous menu.
-  Return to TV viewing.

## CAPTION MODE

### Analog Broadcasting System Captions

Captions are provided to help the hearing impaired watch TV. Select a caption mode for displaying captioning information if provided on a program. Analog caption displays information at any position on the screen and is usually the program's dialog. Caption/Text, if provided by the broadcaster, would be available for both digital and analog channels on the Antenna/Cable. This TV is programmed to memorize the caption/text mode which was last set when you turned the power off. This function is only available when **Caption Mode** is set **On**.



- 1   Select **OPTION**.
- 2   Select **Caption**.
- 3   Select **On**.
- 4   Select **CC1-4** or **Text1-4**.
- 5  Return to the previous menu.
-  Return to TV viewing.

- When selecting **Off**, Sub-menus for Analog, DTV, and Digital Option become disabled.

#### ■ CAPTION

The term for the words that scroll across the bottom of the TV screen; usually the audio portion of the program provided for the hearing impaired.

#### ■ TEXT

The term for the words that appear in a large black frame and almost cover the entire screen; usually messages provided by the broadcaster.

# TIME SETTING

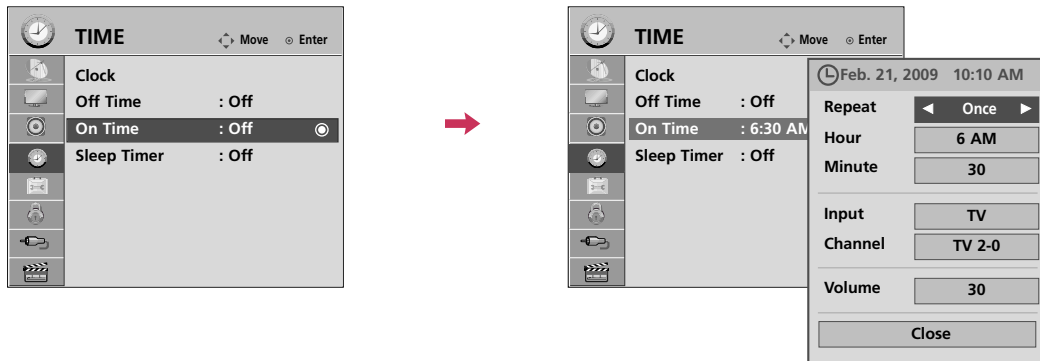
## AUTO ON/OFF TIME SETTING

This function operates only if the current time has been set.

The **Off Time** function overrides the **On Time** function if they are both set to the same time.

The TV must be in standby mode for the **On Time** to work.

If you do not press any button within 2 hours after the TV turns on with the **On Time** function, the TV will automatically revert to standby mode.



- 1 Select **TIME**.
- 2 Select **Off Time** or **On Time**.
- 3 Select **Repeat**.
- 4 Select **Off, Once, Daily, Mon.~Fri., Mon.~Sat., Sat.~ Sun., or Sun..**
- 5 Select and set **Hour** or **Minute**.
- 6 Return to the previous menu.
- Return to TV viewing.

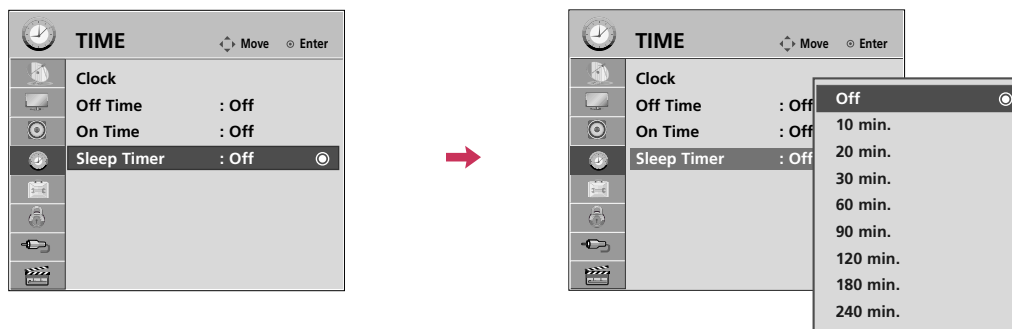
- To cancel **On/Off Time** function, select **Off**.
- Only for On Time function









- 1 Select **Input**.
- 2 Select the desired input source.
- 3 When Selecting **TV**: set the channel at turn-on.
- 4 Adjust to sound level at turn-on.

## SLEEP TIMER SETTING

The Sleep Timer turns the TV off at the preset time.

Note that this setting is cleared when the TV is turned off.



- 1   Select **TIME**.
- 2   Select **Sleep Timer**.
- 3   Make appropriate adjustments.
- 4  Return to the previous menu.
-  Return to TV viewing.

- To cancel the **Sleep Timer**, select **Off**.
- You can also adjust **Sleep Timer** in the **Q.MENU**.

# PARENTAL CONTROL / RATINGS

Parental Control can be used to block specific channels, ratings and other viewing sources.

The Parental Control Function (V-Chip) is used to block program viewing based on the ratings sent by the broadcasting station. The default setting is to allow all programs to be viewed. Viewing can be blocked by choosing the type of the program and the categories. It is also possible to block all program viewing for a time period. To use this function, the following must be done :

1. Set ratings and categories to be blocked.
2. Specify a password
3. Enable the lock

## V-Chip rating and categories

Rating guidelines are provided by broadcasting stations. Most television programs and television movies can be blocked by TV Rating and/or Individual Categories. Movies that have been shown at the theaters or direct-to-video movies use the Movie Rating System (MPAA) only.

## Ratings for Television programs including made-for-TV movies:

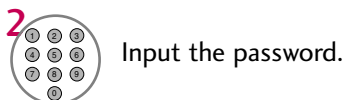
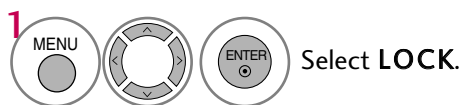
- TV-G (General audience)
- TV-PG (Parental guidance suggested)
- TV-14 (Parents strongly cautioned)
- TV-MA (Mature audience only)
- TV-Y (All children)
- TV-Y7 (Children 7 years older)

## SET PASSWORD & LOCK SYSTEM

### Setting up Your Password

Set up blocking schemes to block specific channels, ratings, and external viewing sources.

A password is required to gain access to this menu.

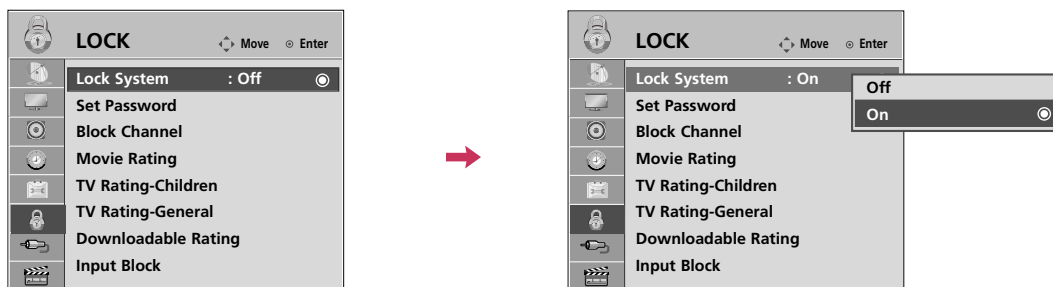


- Enter the password as requested.
- The TV is set up with the initial password "0-0-0-0".



## Lock System

Enables or disables the blocking scheme you set up previously.



1 Select **LOCK**.

2 Input the password.

3 Select **Lock System**.

4 Select **On** or **Off**.

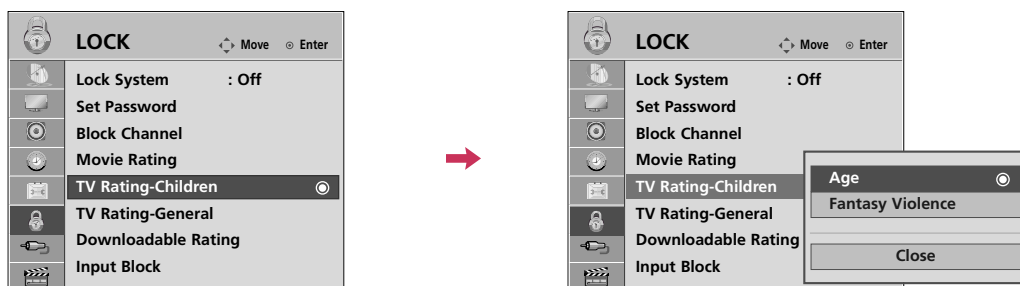
5 Return to the previous menu.

Return to TV viewing.

■ When you select **On**, the Lock System is enable.

## TV Rating Children - For USA

Prevents children from watching certain children's TV programs, according to the ratings limit set. The children rating does not apply to other TV programs. Unless you block certain TV programs intended for mature audiences in the TV Rating - sub menu, your children can view those programs.



1 Select **LOCK**.

2 Input the password.

3 Select **TV Rating-Children**.

4 Select **Age** or **Fantasy Violence**.

5 Select block options.

6 Return to the previous menu.

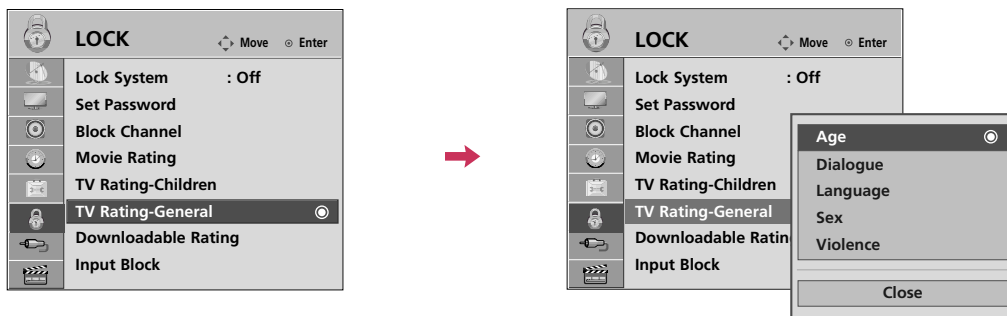
Return to TV viewing.












- Age (applies to TV-Y, TV-Y7)
- Fantasy Violence (applies to TV-Y7)

# PARENTAL CONTROL / RATINGS

## TV Rating General - For USA

Based on the ratings, blocks certain TV programs that you and your family do not want to view.



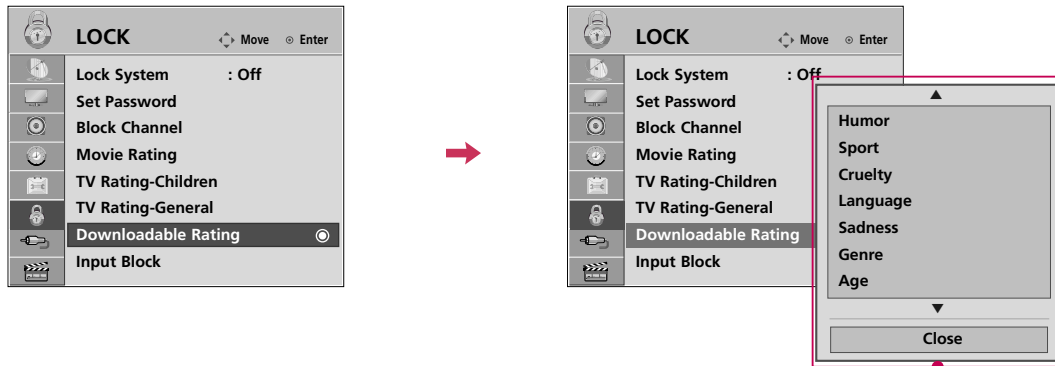
- 1    Select **LOCK**.
- 2  Input the password.
- 3  Select **TV Rating-General**.
- 4   Select **Age, Dialogue, Language, Sex or Violence**.
- 5   Select block options.
- 6  Return to the previous menu.
-  Return to TV viewing.

- Age (applies to TV-G,TV-PG,TV-14,TV-MA).
- Dialogue-sexual dialogue (applies to TV-PG,TV-14).
- Language-adult language (applies to TV-PG, TV-14, TV-MA).
- Sex-sexual situations (applies to TV-PG, TV-14, TV-MA).
- Violence (applies to TV-PG, TV-14, TV-MA).

# DOWNLOADABLE RATING

This function is available only for digital channels.

This function operates only when TV has received Region5 Rating data.



- Based on rating table, your TV's OSD (On Screen Display) may differ slightly from what is shown in this manual.

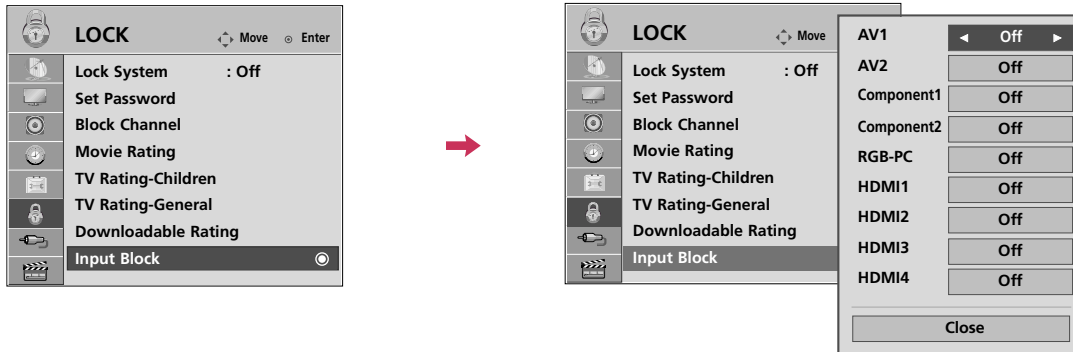
1. Select **LOCK**.
  2. Input the password.
  3. Select **Downloadable Rating**.
  4. Select desired **Downloadable Rating** option.
  5. Select desired option and block it.
  6. Return to the previous menu.
- Return to TV viewing.











- If a Downloadable rating is locked, enter the password to unlock it temporarily.

# PARENTAL CONTROL / RATINGS

## EXTERNAL INPUT BLOCKING

Enables you to block an input.



- 1    Select **LOCK**.
- 2  Input the password.
- 3  Select **Input Block**.
- 4   Select input source.
- 5  Select **On** or **Off**.
- 6  Return to the previous menu.
-  Return to TV viewing.

## PRODUCT SPECIFICATIONS

MODELS		42LH90 (42LH90-UB)	47LH90 (47LH90-UB)	55LH90 (55LH90-UB)
Dimensions (Width x Height x Depth)	With stand	41.9 x 30.5 x 14.2 inches 1065.9 x 776.0 x 361.7 mm	46.4 x 33.5 x 15.7 inches 1179.0 x 851.4 x 398.8 mm	54.0 x 37.9 x 17.8 inches 1373.0 x 964.3 x 454.2 mm
	Without stand	41.9 x 28.2 x 3.7 inches 1065.9 x 716.4 x 94.4 mm	46.4 x 30.7 x 4.1 inches 1179.0 x 780.6 x 105.9 mm	54.0 x 34.9 x 4.2 inches 1373.0 x 888.5 x 106.9 mm
Weight	With stand	51.1 lbs / 23.2 kg	60.1 lbs / 27.3 kg	90.1 lbs / 40.9 kg
	Without stand	42.9 lbs / 19.5 kg	51.8 lbs / 23.5 kg	78.2 lbs / 35.5 kg
MODELS		42SL80 (42SL85-UA)	47SL80 (47SL85-UA)	55SL80 (55SL80-UB)
Dimensions (Width x Height x Depth)	With stand	39.4 x 27.1 x 11.2 inches 1001.2 x 688.7 x 286.5 mm	43.6 x 29.6 x 11.2 inches 1109.6 x 752.7 x 286.5 mm	50.4 x 33.6 x 12.6 inches 1279.0 x 853.3 x 320.2 mm
	Without stand	39.4 x 24.5 x 1.7 inches 1001.2 x 623.2 x 45.0 mm	43.6 x 26.9 x 1.7 inches 1109.6 x 685.3 x 45.5 mm	50.4 x 30.7 x 1.8 inches 1279.0 x 780.5 x 45.5 mm
Weight	With stand	54.8 lbs / 24.9 kg	65.9 lbs / 29.9 kg	82.0 lbs / 37.2 kg
	Without stand	46.0 lbs / 20.9 kg	57.0 lbs / 25.9 kg	70.5 lbs / 32.0 kg
MODELS		42SL90 (42SL90-UA)	47SL90 (47SL90-UA)	
Dimensions (Width x Height x Depth)	With stand	39.7 x 27.3 x 11.3 inches 1009.2 x 694.5 x 286.5 mm	44.1 x 29.8 x 11.3 inches 1119.6 x 757.1 x 286.5 mm	
	Without stand	39.7 x 24.8 x 1.2 inches 1009.2 x 629.2 x 29.3 mm	44.1 x 27.2 x 1.2 inches 1119.6 x 691.3 x 29.3 mm	
Weight	With stand	54.2 lbs / 24.6 kg	62.8 lbs / 28.5 kg	
	Without stand	44.3 lbs / 20.1 kg	52.9 lbs / 24.0 kg	
Power requirement Television System Program Coverage External Antenna Impedance		AC100-240V ~ 50/60Hz NTSC-M, ATSC, 64 & 256 QAM VHF 2-13, UHF 14-69, CATV 1-135, DTV 2-69, CADTV 1-135 75 ohm		
Environment condition	Operating Temperature Operating Humidity	32 ~ 104°F (0 ~ 40°C) Less than 80%		
	Storage Temperature Storage Humidity	-4 ~ 140°F (-20 ~ 60°C) Less than 85%		

■ The specifications shown above may be changed without prior notice for quality improvement.

**LG Electronics Inc.**