

# LCD TV

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

32LD650H 32LG710H 37LG710H 37LD650H 42LD650H 42LG710H 47LD650H

55LD650H

www.lg.com P/NO: SAC34134301 (1006-REV01)

# **WARNING / CAUTION**





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

A

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 in construction of this device which are 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.



Do not use this apparatus near water.



Clean only with a dry cloth.



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



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



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.



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



Only use attachments/accessories specified by the manufacturer.



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.





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



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.



- Never touch this apparatus or antenna during a thunder or lighting storm.
- 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.
- Do not allow an impact shock or any objects to fall into the product, and do not drop onto the screen with something.
- 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.



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.



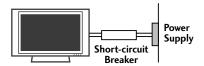
Do not expose to dripping or splashing and do not place objects filled with liquids, such as vases, cups, etc. on or over the apparatus (e.g. on shelves above the unit).



# **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 grouned 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.

#### 10 ANTENNAS

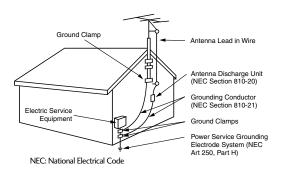
#### Outdoor antenna grounding

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



20 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.

21 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. 22 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.

- Take care not to touch the ventilation openings. When watching the TV for a long period, the ventilation openings may become hot.
- If you smell smoke or other odors coming from the TV or hear strange sounds, unplug the power cord contact an authorized service center.
- Do not press strongly upon the panel with a hand or sharp object such as nail, pencil or pen, or make a scratch on it.



Keep the product away from direct sunlight.

#### For LCD TV

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.

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# FEATURES OF THIS TV

■ This feature is not available for all models.



High-definition television. High-resolution digital television broadcast and playback system composed of roughly a million or more pixels, 16:9 aspect-ratio screens, and AC3 digital audio. A subset of digital television, HDTV formats include 1080i and 720p resolutions.



Unlike other sensors which can only sense brightness of ambient light, LG's "Intelligent Sensor" uses 4,096 sensing steps to evaluate its surroundings. Using a sophisticated algorithm, the LG processes picture quality elements including brightness, contrast, color, sharpness and white balance. The result is a picture optimized for it's surroundings, more pleasing to watch and which can also save up to 50% in power consumption.



View videos and photos and listen to music on your TV through USB 2.0 ('videos' dependent on model).



LG TV include a unique invisible speaker system, tuned by renowned audio expert, Mr. Mark Levinson. Speakers are embedded in strategic spots behind the front cabinet and use minute vibrations to turn the entire front bezel into the speaker system. The result is a clean, polished look, and enhanced audio by increasing the "sweet spot", giving a wider and richer sound field.



Manufactured under license from Dolby Laboratories. "Dolby "and the double-D symbol are trademarks of Dolby Laboratories.



Figure is a trademark of SRS Labs, Inc.

TruSurround XT technology is incorporated under license from SRS Labs, Inc.



Automatically enhances and amplifies the sound of human voice frequency range to help keep dialogue audible when background noise swells.



HDMI, the HDMI logo and High-Definition Multimedia Interface are trademarks or registered trademarks of HDMI Licensing LLC."



Matches the original frame rate of the film for a more film-like experience

# IMPORTANT INFORMATION TO PREVENT "IMAGE BURN '/ BURN-IN" ON YOUR TV SCREEN

- When a fixed image (e.g. logos, screen menus, video game, and computer display) is displayed on the TV for an extended period, it can become permanently imprinted on the screen. This phenomenon is known as "image burn" or "burn-in." Image burn is not covered under the manufacturer's warranty.
- In order to prevent image burn, avoid displaying a fixed image on your TV screen for a prolonged period (2 or more hours for LCD, 1 or more hours for Plasma).
- Image burn can also occur on the letterboxed areas of your TV if you use the 4:3 aspect ratio setting for an extended period.







#### **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.







CD Manual



Torx plus

Star head screw





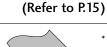
**Protective Bracket and** Screw for Power Cord (Refer to P.17, P.18)



Remote Control, **Batteries** 



**Power Cord** 



**Polishing Cloth** (Not included with all models.)

- \* Wipe spots on the exterior only with the polishing cloth.
- \* Do not wipe roughly when removing stains. 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.





Screws for stand assembly (Refer to P.15)



Cable Holder (Refer to P.17)



Screw for stand fixing (Refer to P.20)



**Protection Cover** (Refer to P.15)





Plug in type Holder (Refer to P.17)

#### For 32/37/42/47/55LD650H



(For 32/37/42LD650H)







(For 32/37/42LD650H)

(Refer to P.18)

Screws for stand assembly Cable Holder Screw for stand fixing Protection Cover Plug in type Holder (Refer to P.16) (Refer to P.18) (Refer to P.20) (Refer to P.16)

(For 32/37/42LD650H) (For 32/37/42LD650H) (For 32/37/42LD650H)



x 2



Screws for stand fixing (Refer to P.20)

Washers for stand fixing (Refer to P.20)

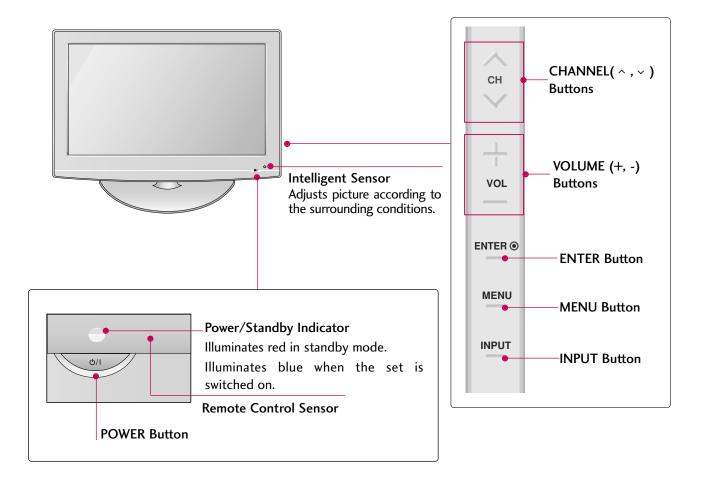
Nuts for stand fixing

(Refer to P.20)

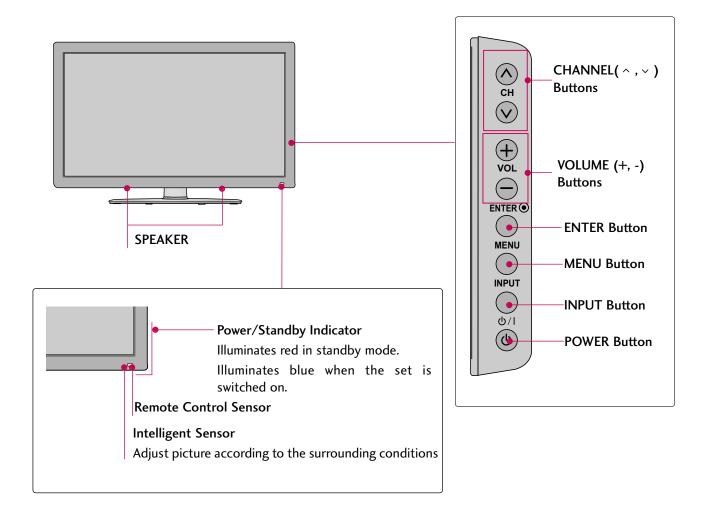
# FRONT PANEL INFORMATION

■ Image shown may differ from your TV.

#### 32/37/42LG710H



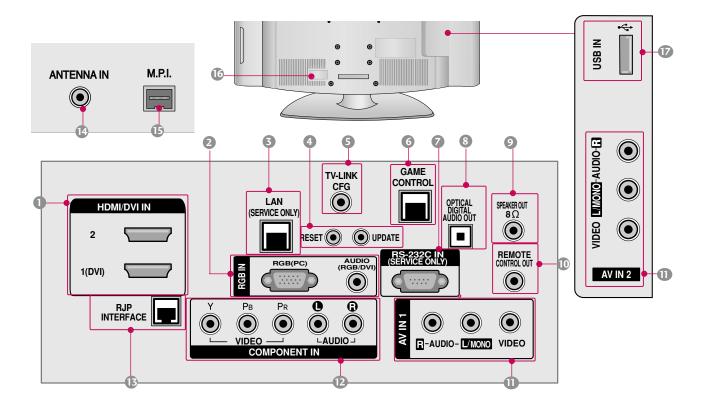
#### 32/37/42/47/55LD650H



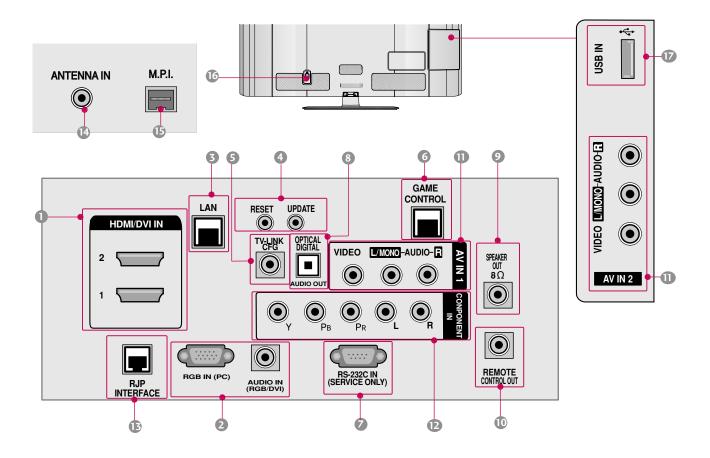
# **BACK PANEL INFORMATION**

■ Image shown may differ from your TV.

#### 32/37/42LG710H



#### 32/37/42/47/55LD650H



HDMI/DVI IN

Digital Connection. Supports HD video and Digital audio.

Accepts DVI video using an adapter or HDMI to DVI cable (not included)

RGB (PC)

Analog PC Connection. Uses a D-sub 15 pin cable (VGA cable).

AUDIO (RGB/DVI)

1/8" headphone jack for analog PC audio input.

Stan (SERVICE ONLY)
For connecting to a control network.

RESET

Performs a hardware reset.

**UPDATE** 

Enables/disables software downloads and debug mode.

**5** TV - LINK CFG

Computer input for programming Free To Guest services.

**G** GAME CONTROL

Input port for third party game Controllers.

RS-232C IN (SERVICE ONLY)

Used for software updates.

OPTICAL DIGITAL AUDIO OUT

Optical digital audio output for use with amps and home theater systems.

Note: In standby mode, this port doesn't work.

**9** SPEAKER OUT  $8\Omega$ 

For use with external speakers.

**10 REMOTE CONTROL OUT** 

IR output for controlling an auxiliary device.

MAV (Audio/Video) IN 1/2

Analog composite connection. Supports standard definition video only (480i).

COMPONENT IN

Analog Connection. Supports HD.
Uses a red, green, and blue cable for video & a red and white cable for audio.

RJP INTERFACE (REMOTE JACK PACK PORT) Connect this to an LG remote jack pack system.

**M** ANTENNA IN

Connect an antenna to receive over-the-air (OTA) signals.

**ⓑ** M.P. I.

Allows VOD/PPV devices or set-top boxes to control the TV. (Except 47/55LD650H)

16 Power Cord Socket

AC power input.

Caution: Never attempt to operate the TV on DC power.

**USB IN** 

Used for viewing multimedia files.

# STAND INSTRUCTION

■ Image shown may differ from your TV.

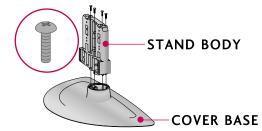
#### 32/37/42LG710H

#### **INSTALLATION**

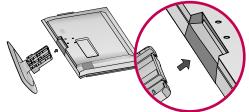
Carefully place the TV screen side down on a cushioned surface to protect the screen from damage.

Assemble the STAND RODY

Assemble the STAND BODY to the COVER BASE with the included screws.



Insert the stand as shown.



4



Tighten the stand with the four screws (provided as parts of the TV).



or



Tighten the two of these four screws and the two Torx plus star head screws

(provided as parts of the TV) to secure the TV. Tighten the two Torx plus star head screws with a star head driver bit (not provided as parts of the TV).

#### NOTE

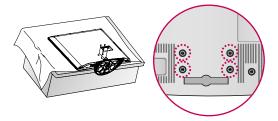
▶ Make sure the screws in the stand are fully tightened. (If not tightened fully, the product could tilt forward and fall). But do not over tighten, over-tightening can damage the threads on the screws.

#### **DETACHMENT**

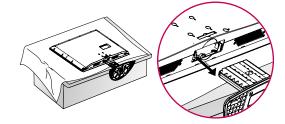
Carefully place the TV screen side down on a cushioned surface to protect the screen from damage.



Remove the four screws that hold the base on.

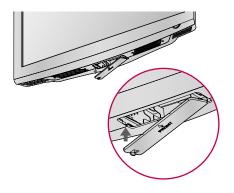


Detach the stand from TV.



#### **PROTECTION COVER**

After removing the stand, install the included **protection cover** over the hole for the stand. Press the **PROTECTION COVER** into the TV until you hear it click.



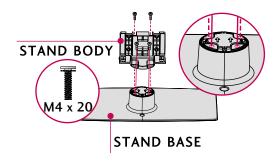
#### 32/37/42/47/55LD650H

#### **INSTALLATION**

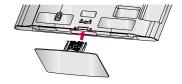
1 Carefully place the TV screen side down on a cushioned surface to protect the screen from damage.



Assemble the parts of the STAND BODY with the STAND BASE of the TV.



3 Assemble the TV as shown.



4 Install the 4 screws into the holes shown.

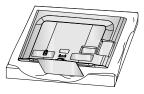


#### NOTE

▶ When assembling the desk type stand, make sure the screws are fully tightened (If not tightened fully, the TV can tilt forward after the protuct installation). Do not over tighten.

#### **DETACHMENT**

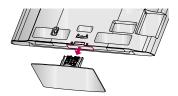
Carefully place the TV screen side down on a cushioned surface to protect the screen from damage.



Remove the screws that hold the stand on.



**3** Detach the stand from TV.



#### PROTECTION COVER

After removing the stand, install the included **protection cover** over the hole for the stand. Press the **PROTECTION COVER** into the TV until you hear it click.



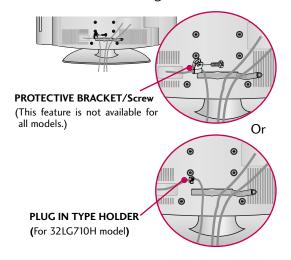
#### CABLE MANAGEMENT

■ Image shown may differ from your TV.

#### 32/37/42LG710H

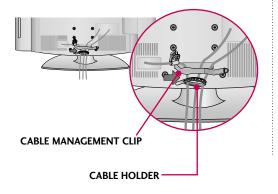
Connect the cables as needed after reading the section titled **EXTERNAL EQUIPMENT SETUP**.

To help prevent the power cable from being removed by accident, secure the power cable with the included **PROTECTIVE BRACKET**/Screw. The 32LG710H uses a **Plug in type**Holder instead of using a screw.

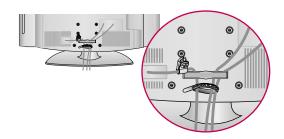


2 Install the CABLE MANAGEMENT CLIP as shown.

If a **CABLE HOLDER** was included with your TV, install it as shown.



Put the cables inside the CABLE MANAGEMENT CLIP and snap it closed.

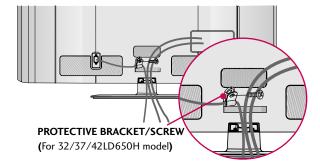


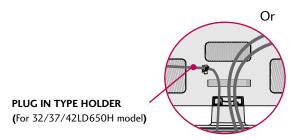
#### NOTE

- ▶ Do not hold the CABLE MANAGEMENT CLIP when moving the TV.
  - If the TV is dropped, you may be injured or the product may be broken.
- ➤ With some TVs, the PLUG IN TYPE HOLDER and the CABLE HOLDER are included. If these holders are inserted into the hole provided on back of the TV, they cannot be removed.

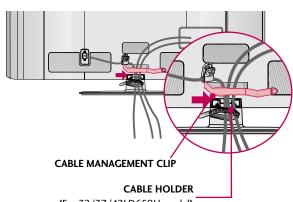
#### 32/37/42/47/55LD650H

To connect the cables as necessary.
To connect additional equipment, see the EXTERNAL EQUIPMENT SETUP section.
For 32/37/42LD650H: To help prevent the power cable from being removed by accident, secure the power cable with the included PROTECTIVE BRACKET /SCREW. The 32/37/42LD650H use a Plug in type Holder instead of using a screw.

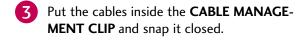




Open the CABLE MANAGEMENT CLIP as shown.

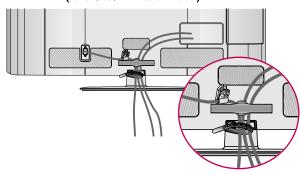


(For 32/37/42LD650H model)



#### NOTE

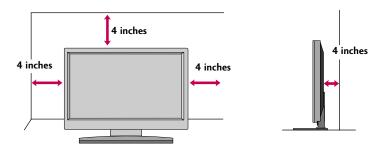
- ▶ Do not hold the CABLE MANAGEMENT CLIP when moving the TV.
  - If the TV is dropped, you may be injured or the product may be broken.
- ➤ With some TVs, the PLUG IN TYPE HOLDER and the CABLE HOLDER are included. If these holders are inserted into the hole provided on back of the TV, they cannot be removed.



# **DESKTOP PEDESTAL INSTALLATION**

■ Image shown may differ from your TV.

For proper ventilation, allow a clearance of 4 inches on all four sides.

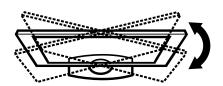


#### **A** CAUTION

- ▶ Ensure adequate ventilation by following the clearance recommendations.
- ▶ Do not mount near or above any type of heat source.

# **SWIVEL STAND**

The TV can be conveniently swivelled on its stand to the left or right to provide the optimum viewing angle.

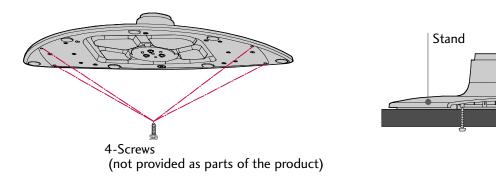


20°: 47/55LD650H 90°: Other Models

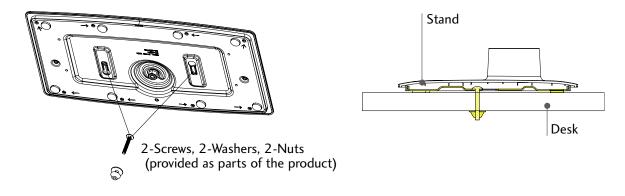
# ATTACHING THE TV TO A DESK

The TV should be attached to a desk so it cannot be pulled in a forward/backward direction, potentially causing injury or damaging the product.

#### 32/37/42LG710H

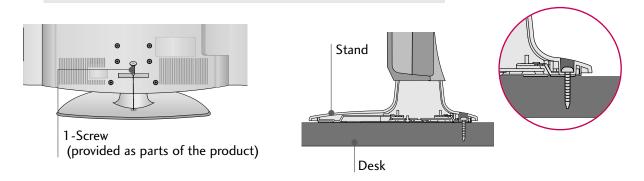


#### 32/37/42LD650H



Desk

- Recommended screw size: M5 x L (\*L: Table depth + 8~10 mm) ex) Table depth: 15mm, Screw: M5 x 25
- Do not over tighten.



#### **WARNING**

➤ To prevent TV from falling over, the TV should be securely attached to the floor/wall per installation instructions. Tipping, shaking, or rocking the TV may cause injury.

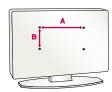
# **VESA WALL MOUNTING**

Install your wall mount on a solid wall perpendicular to the floor. When attaching to other building materials, please contact your nearest installer.

If installed on a ceiling or slanted wall, it may fall and result in severe personal injury.

We recommend that you use an LG brand wall mount when mounting the TV to a wall.

LG recommends that wall mounting be performed by a qualified professional installer.



Model	VESA (A * B)	Standard Screw	Quantity		nting Bracket eparately)
32LG710H	200 * 100	M4	4	RW230	AW-47LG30M
37LG710H, 42LG710H	200 * 200	М6	4	AW-47	ZLG30M
32LD650H	200 * 100	M4	4	LSW100B,	LSW100BG
37LD650H, 42LD650H, 47LD650H	200 * 200	M6	4		LSW200BG
55LD650H	400 * 400	M6	4	E: :: 	LSW400BG

#### NOTE

- Screw length needed depends on the wall mount used. For further information, refer to the instructions included with the mount.
- Standard dimensions for wall mount kits are shown in the table.
- When purchasing our wall mount kit, a detailed installation manual and all parts necessary for assembly are provided.
- ▶ Do not use screws longer then the standard dimension, as they may cause damage to the inside to the TV.
- ► 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 tighten the screws too much. It may damage the TV or allow the TV to a fall and cause personal injury. LG is not liable for these kinds of accidents.
- LG is not liable for TV damage or personal injury when a non-VESA or non specified wall mount is used or the consumer fails to follow the TV installation instructions.

#### **A** CAUTION

Do not install your wall mount kit while the TV is plugged in. It may result in personal injury due to electric shock.

#### WARNING

▶ To prevent injury, this apparatus must be securely attached to the wall in accordance with the installation instructions.

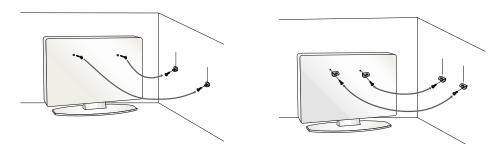
# SECURING THE TV TO THE WALL TO PREVENT FALLING WHEN THE TV IS USED ON A STAND

- You should purchase necessary components to prevent the TV from tipping over (when not using a wall mount).
- Image shown may differ from your TV.

We recommend that you set up the TV close to a wall so it cannot fall over if pushed backwards.

Additionally, we recommend that the TV be attached to a wall so it cannot be pulled in a forward direction, potentially causing injury or damaging the product.

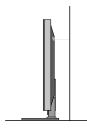
Caution: Please make sure that children don't climb on or hang from the TV.



- Insert the eye-bolts (or TV brackets and bolts) to tighten the product to the wall as shown in the picture.
  - \* If your product has the bolts in the eye-bolts position before inserting the eye-bolts, loosen the bolts.
  - \* Insert the eye-bolts or TV brackets/bolts and tighten them securely in the upper holes.

    Secure the wall brackets with the bolts (sold separately) to the wall. Match the height of the bracket that is mounted on the wall to the holes in the product.

    Ensure the eye-bolts or brackets are tightened securely.



■ Use a sturdy rope (sold separately) to tie the product. It is safer to tie the rope so it becomes horizontal between the wall and the product.

# NOTE

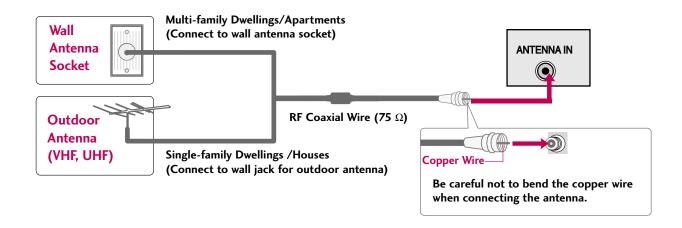
- ▶ Use a platform or cabinet strong enough and large enough to support the size and weight of the TV.
- ▶ To use the TV safely make sure that the height of the bracket on the wall and the one on the TV are the same.

■ To prevent damage, do not connect to the power outlet until all connections are made between the devices.

# ANTENNA OR CABLE CONNECTION

# 1. Antenna (Analog or Digital)

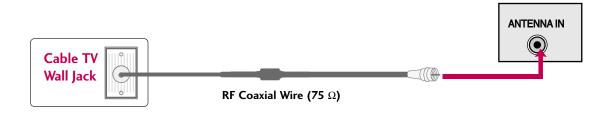
This image refers to using a Wall Antenna Socket or Outdoor Antenna without a Cable Box Connection.



- For optimum picture quality, adjust the antenna direction if needed.
- 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.

#### 2. Cable

This image refers to using a cable connection without a cable box.



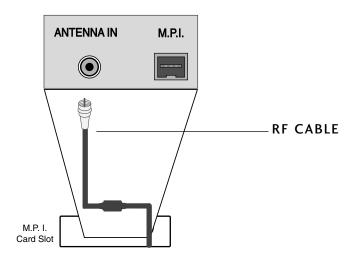
- If you experience a poor signal when using cable, make sure the RF cable is screwed in completely. Contact your cable company is a poor signal persists.

# MPI CARD SLOT / PPV CARD INSTALLATION Except 47/55LD650H

The MPI card is equipped with an RF jack for antenna/cable signal source connection. This card can be removed and replaced with a third-party PPV (Pay-Per-View) card.

#### MPI Card Removal / PPV Card Installation

- 1. Remove the two MPI card retainer screws.
- 2. Pull out current MPI card far enough so that the RF cable can be detached from the old card.
- 3. Detach RF cable.
- 4. Place new PPV card into slot and slide it in far enough to reconnect RF cable.
- 5. Insert card all the way into the slot making sure it is fully seated into back plane connector.
- 6. Replace the two card retainer screws.



#### **▲ WARNING**

▶ There is an RF cable connected to the back of the card. Remove the card slowly.

# **EXTERNAL EQUIPMENT SETUP**

- To prevent the equipment damage, never plug in any power cords until you have finished connecting all equipment.
- Image shown may differ from your TV.

# **HD RECEIVER SETUP**

This TV can receive Digital Over-the-air or 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, refer to the figure as shown below.

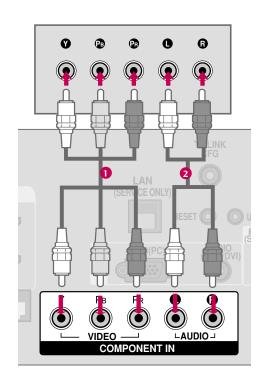
# **Component Connection**

#### 1. How to connect

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

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

Resolution	Horizontal Frequency(KHz)	Vertical Frequency(Hz)
720x480i	15.73 15.73	59.94 60.00
720x480p	31.47 31.47	59.94 60.00
1280x720p	44.96 45.00	59.94 60.00
1920x1080i	33.72 33.75	59.94 60.00

#### **HDMI Connection**

#### 1. How to connect

- Connect the digital set-top box to HDMI/DVI IN 1 (DVI) or 2 jack on the TV.
- 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 HDMI1 or HDMI2 input source with using the INPUT button on the remote control.

# HDMI/DVI IN 2 1(DVI) HDMI-DTV OUTPUT

#### NOTE

- ▶ If the HDMI cables don't support High Speed HDMI, it can cause flickers or no screen display. In this case use the latest cables that support High Speed HDMI.
- ► HDMI mode supports PCM, Dolby Digital audio format.

#### HDMI-DTV

Resolution	Horizontal Frequency(KHz)	Vertical Frequency(Hz)
720x480p	31.47 31.47	59.94 60.00
1280x720p	44.96 45.00	59.94 60.00
1920x1080i	33.72 33.75	59.94 60.00

# **EXTERNAL EQUIPMENT SETUP**

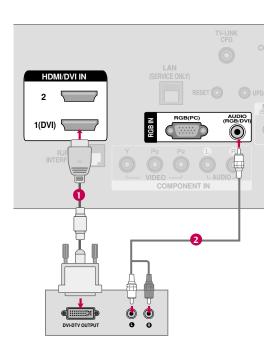
#### **DVI to HDMI Connection**

#### 1. How to connect

- Connect the DVI output of the digital set-top box to the HDMI/DVI IN 1 (DVI) jack on the TV.
- Connect the audio output of the digital set-top box to the AUDIO (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 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.

#### **DVD SETUP**

## **Component Connection**

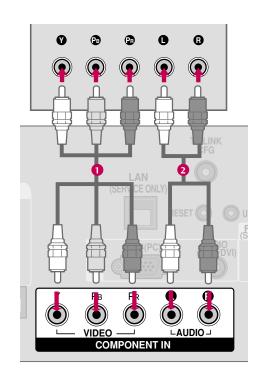
#### 1. How to connect

- Connect the video outputs (Y, PB, PR) of the DVD to the COMPONENT IN VIDEO jacks on the TV.

  Match the jack colors (Y = green, PB = blue, and PR = red).
- Connect the audio outputs of the DVD to the COMPONENT IN AUDIO jacks on the TV.

#### 2. How to use

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



#### **Component Input ports**

To get better picture quality, connect a DVD player to the component input ports as shown below.

Component ports on the TV	Y	Рв	PR
	Y	Рв	P <sub>R</sub>
Video output ports	Y	В-Ү	R-Y
on DVD player	Y	СЬ	Cr
	Y	Pb	Pr

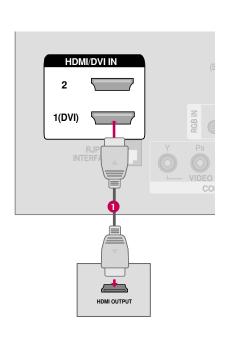
#### **HDMI Connection**

#### 1. How to connect

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

#### 2. How to use

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



# **EXTERNAL EQUIPMENT SETUP**

#### **VCR SETUP**

■ To avoid picture noise (interference), leave an adequate distance between the VCR and TV.

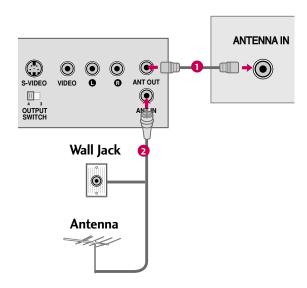
#### **Antenna Connection**

#### 1. How to connect

- Connect the RF antenna out socket of the VCR to the **ANTENNA IN** socket on the TV.
- 2 Connect the antenna cable to the RF antenna in socket of the VCR.

#### 2. How to use

- Set VCR output switch to 3 or 4 and then tune TV to the same channel number.
- Insert a video tape into the VCR and press PLAY on the VCR. (Refer to the VCR owner's manual.)



# Composite (RCA) Connection

#### 1. How to connect

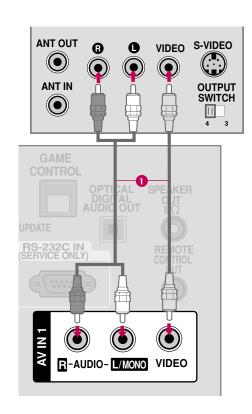
Connect the AUDIO/VIDEO jacks between TV and VCR. Match the jack colors (Video = yellow, Audio Left = white, and Audio Right = red)

#### 2. How to use

- Insert a video tape into the VCR and press PLAY on the VCR. (Refer to the VCR owner's manual.)
- Select the AV1 input source on the TV using the INPUT button on the remote control.
- If connected to AV IN 2, select AV2 input source on the TV.

#### NOTE

► If you have a mono VCR, connect the audio cable from the VCR to the AUDIO-L/MONO jack of the TV.



## OTHER A/V SOURCE SETUP

#### 1. How to connect

Connect the AUDIO/VIDEO jacks between TV and external equipment.

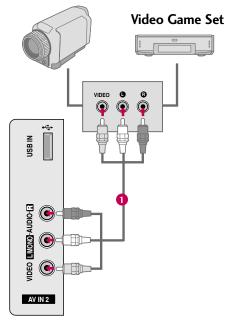
Match the jack colors.

(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.

# Camcorder



# **AUDIO OUT CONNECTION**

Send the TV's audio to external audio equipment via the Audio Output port.

#### 1. How to connect

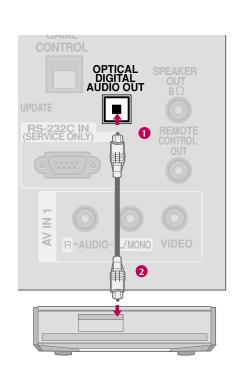
- Connect one end of the optical cable to the TV's OPTI-CAL DIGITAL AUDIO OUT.
- Connect the other end of the optical cable to the digital audio input on the audio equipment.
- Set the "TV Speaker option Off" in the AUDIO menu. (p.73). See the external audio equipment instruction manual for operation.

#### NOTE

When connecting with external audio equipment, such as amplifiers or speakers, you can turn the TV speakers off in the menu. (▶ p.73)

#### CAUTION

- ▶ Do not look into the optical output port. Looking at the laser beam may damage your vision.
- ► Audio with ACP(Audio Copy Protection) function my block digital audio output.



# **EXTERNAL EQUIPMENT SETUP**

# **PC SETUP**

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

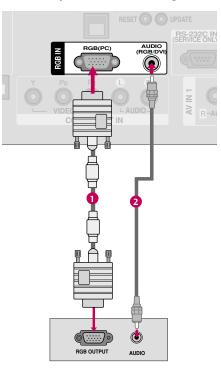
# VGA (D-Sub 15 pin) Connection

#### 1. How to connect

- Connect the VGA output of the PC to the RGB (PC) jack on the TV.
- Connect the PC audio output to the AUDIO (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.



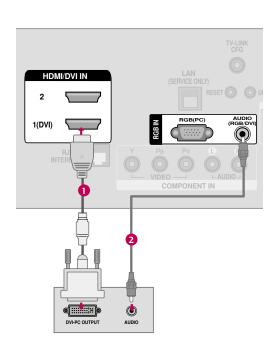
#### **DVI to HDMI Connection**

#### 1. How to connect

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

#### 2. How to use

- Turn on the PC and the TV.
- Select the HDMI1 input source on the TV using the INPUT button on the remote control.



#### NOTES

- ➤ To get the best picture quality, adjust the PC graphics card to 1360x768.
- ▶ Depending on the graphics card, DOS mode may not work if a 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. When you use too long RGB-PC cable, there might be a noise on the screen.
- Avoid keeping a fixed image on the screen for a long period of time. The fixed image could become permanently imprinted on the screen.
- ► The synchronization input form for Horizontal and Vertical frequencies is separate.
- ▶ Depending on the graphics card, some resolution settings may not allow the image to be positioned on the screen properly.

# Supported Display Specifications RGB-PC

Resolution F	Horizontal requency(KHz)	Vertical Frequency(Hz)
720x400	31.469	70.08
640x480	31.469 37.861	59.94 72.80
800x600	37.879 48.077	60.31 72.18
1024x768	48.363 56.476	60.00 70.06
1280x768	47.776 60.289	59.870 74.893
1360x768	47.712	60.015
1280x1024	63.981 79.976	60.020 75.025
1920x1080	66.587	59.934

#### Depending on models

#### HDMI-PC

Resolution	Horizontal Frequency(KHz)	Vertical Frequency(Hz)
720x400	31.469	70.08
640x480	31.469	59.94
800x600	35.156 37.879	56.25 60.31
1024x768	48.363	60.00
1280x768	47.776	59.87
1360x768	47.712	60.015
1280x1024	63.981	60.02
1920x1080	67.50	60.00

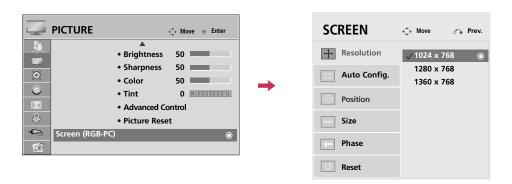
Depending on models

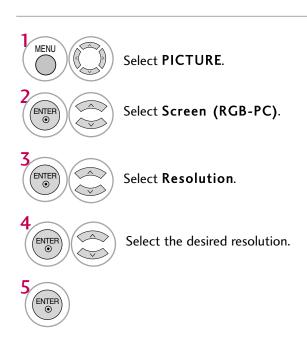
# **EXTERNAL EQUIPMENT SETUP**

# Screen Setup for PC mode

# **Selecting Resolution**

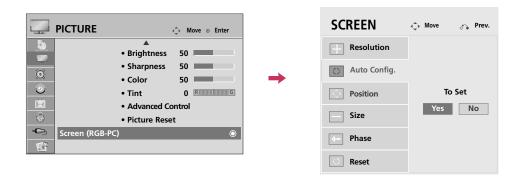
When using RGB-PC input, change the resolution in the menus to match the PC's. The **Position**, **Phase**, and **Size** can also be adjusted.





# **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.













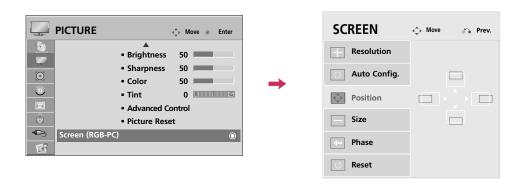
- If the position of the image is still not correct, try Auto adjustment again.
- If picture needs to be adjusted again after Auto adjustment in RGB-PC, you can adjust the **Position**, **Size** or **Phase**.

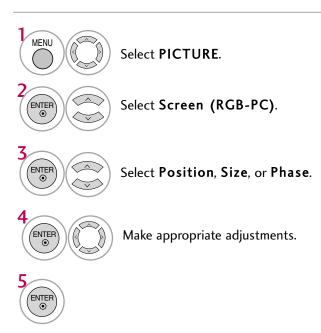
# **EXTERNAL EQUIPMENT SETUP**

# 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.

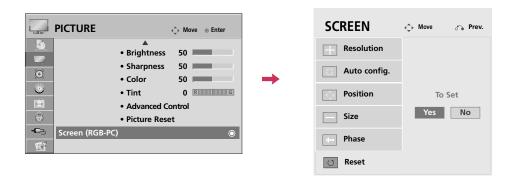


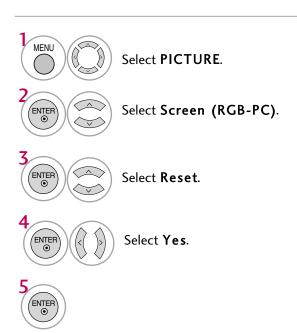


- **Position**: This function is to adjust picture to left/right and up/down as you prefer.
- **Size**: This function is to minimize any vertical bars or stripes visible on the screen background. And the horizontal screen size will also change.
- **Phase**: This function allows you to remove any horizontal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





# WATCHING TV / CHANNEL CONTROL

### REMOTE CONTROL FUNCTIONS

When using the remote control, aim it at the remote control sensor on the TV.

**POWER** Turns your TV or any other programmed equipment on or off, depending on mode.

TV/STB/DVD/VCR Select the remote's operating mode: TV, STB, DVD, or VCR

GUIDE Displays and removes the electronic channel guide.

**PORTAL** Displays and removes the hotel interactive menu.

**INFO** Displays information about the selected or current event.

NUMBER button Enter channel numbers or other numbers required. Also supports characters.

— (DASH) Used to enter a program number for multiple program channels such as 2-1, 2-2, etc.

**FLASHBK** Tune to the last channel or input viewed.

VCR/DVD/USB Control video cassette recorders or DVD players or USB. control buttons

PIP Toggles through picture-in-picture options.

RATIO Change the aspect ratio. ▶ p.58

TIMER Turns the TV off in a set amount o f time. ▶ p.84

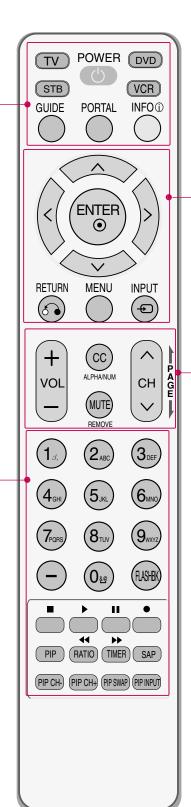
SAP • Analog mode: Selects MTS sound (Mono, Stereo, or a SAP) ▶ p.75

• DTV mode: Changes the audio language.

PIP CH +/- Changes the PIP channel.

PIP SWAP Exchange the main/sub images.

PIP INPUT Select the connected input source for the sub-picture.



THUMBSTICK (Up/Down/Left Right/ENTER) Navigate the on-screen menus and adjust the system settings to your preference.

**RETURN** Clears all on-screen displays and returns to TV viewing from any menu.

MENU Displays the main menu.

INPUT External input modes rotate in regular sequence: TV, AV1-2, Component, RGB-PC, HDMI1 and HDMI2.

VOLUME UP Increase/decrease the sound level. /DOWN

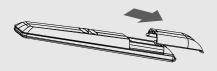
CC Select a closed caption. ▶ p.82

MUTE Switch the sound on or off. ▶ p.40

CHANNEL Select available channels. UP/DOWN

 $\ensuremath{\mathsf{PAGE}}$  Move from one full set of screen information to the next one.  $\ensuremath{\mathsf{UP/DOWN}}$ 

### **Installing Batteries**



- Open the battery compartment cover on the back side and install the batteries matching correct polarity (+with +,-with -).
- Install two 1.5V AAA batteries. Don't mix old or used batteries with new ones.
- Close cover.

# WATCHING TV / CHANNEL CONTROL

### TURNING ON TV

- 1 First, connect power cord correctly.
  - At this moment, the TV switches to standby mode.
  - In standby mode to turn TV on, press the ₺/। button on the TV or press the POWER button on the remote control.
- Select the viewing source by using the INPUT button on the remote control.
  - This TV is programmed to remember which power state it was last set to, even if the power cord is out.
- When finished using the TV, press the POWER button on the remote control. The TV reverts to standby mode.
  - NOTE
  - If you intend to be away on vacation, disconnect the power plug from the wall power outlet.

### CHANNEL SELECTION

Press the CH( $\land$  or  $\lor$ ) or NUMBER buttons to select a channel number.

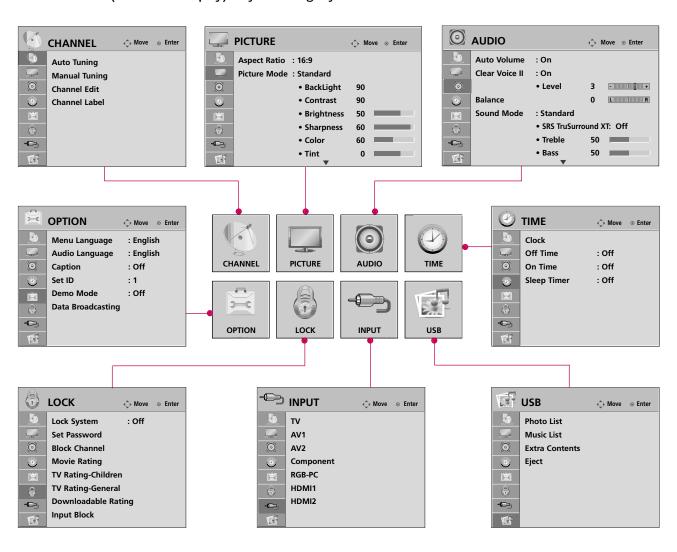
# **VOLUME ADJUSTMENT**

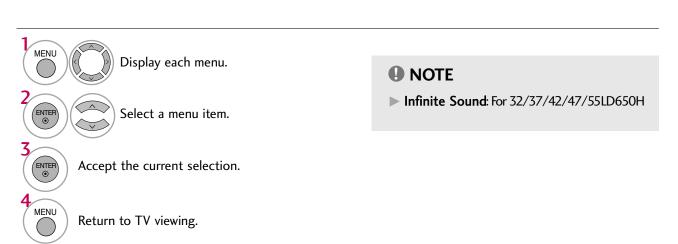
Adjust the volume to suit your personal preference.

- Press the VOL (+ or -) button to adjust the volume.
- If you want to switch the sound off, press the MUTE button.
- You can cancel the Mute function by pressing the MUTE or VOL (+ or -) button.

### **ON-SCREEN MENUS SELECTION**

Your TV's OSD (On Screen Display) may differ slightly from that shown in this manual.





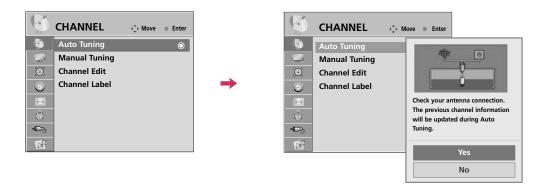
# WATCHING TV / CHANNEL CONTROL

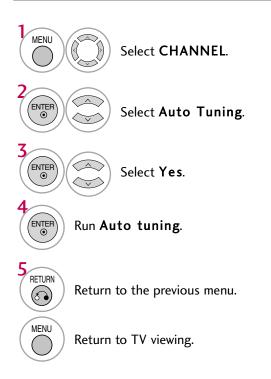
### CHANNEL SETUP

# **Auto Scan (Auto Tuning)**

Automatically finds all channels available through antenna or cable inputs and stores them in memory on the channel list.

Run Auto Tuning again after any Antenna/Cable connection changes.

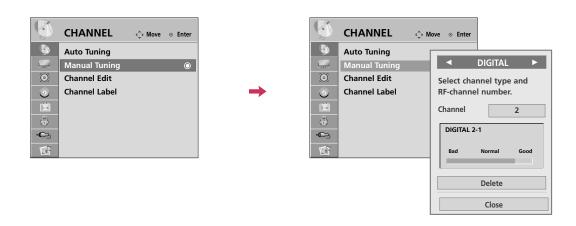




A password is required to gain access to Auto Tuning menu if the Lock System is turned on.

# Add/Delete Channel (Manual Tuning)

If selecting DIGITAL input signal, you can view the on-screen signal strength monitor to see the quality of the signal being received.





Select CHANNEL.



Select Manual Tuning.



Select **DIGITAL** or **ANALOG**.



Select channel you want to add or delete.



Select **Add** or **Delete**.



Return to the previous menu.



Return to TV viewing.

A password is required to gain access to Manual Tuning menu if the Lock System is turned on.

# WATCHING TV / CHANNEL CONTROL

# **Channel Editing**

The channels in the Channel Edit List are displayed in black and the channels deleted from the Channel Edit List are displayed in blue. When a channel number is deleted, it means that you will be unable to select it using  $CH \land \lor$  button during TV viewing.

If you wish to select the deleted channel, directly enter the channel number with the NUMBER buttons or select it in the **Channel Edit** menu.







Select CHANNEL.



Select Channel Edit.



Select a channel.



Select channel you want to add or delete.



Return to the previous menu.



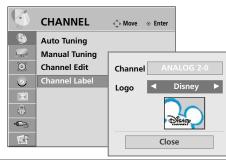
Return to TV viewing.

### **CHANNEL LABEL**

Choose preset labels for your channels.

If a channel label is provided on the signal from the broadcasting station, the TV displays a short name for a channel even if you didn't preset a label for the channel.







Select CHANNEL.



Select Channel Label.



Select a Channel.



Select a channel to set logo.



Select the appropriate logo for the channel.



Return to the previous menu.



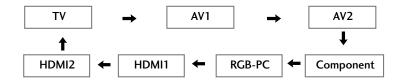
Return to TV viewing.

### **INPUT LIST**





Select the desired input source.

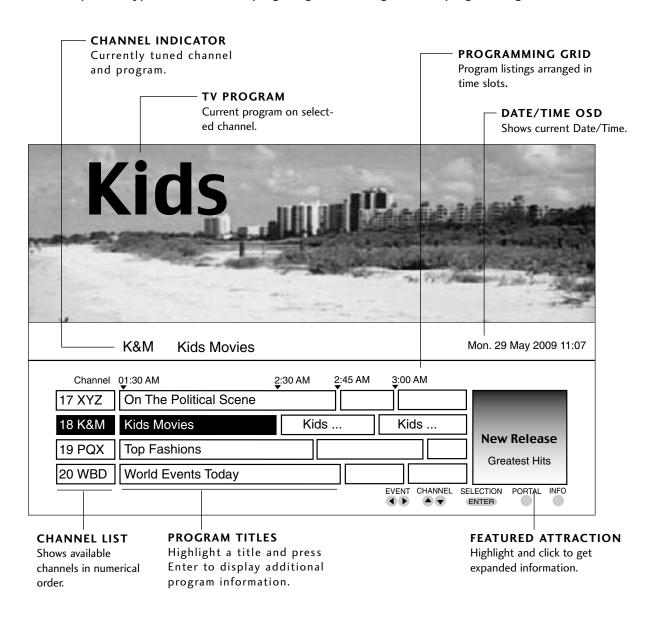


- **TV**: Select it to watch over-the-air, cable and digital cable broadcasts.
- AV1 2: Select them to watch a VCR or other external equipment.
- **Component**: Select them to watch DVD or a Digital set-top box.
- **RGB-PC**: Select it to view PC input.
- **HDMI1-2**: Select them to watch high definition devices.

# WATCHING TV / CHANNEL CONTROL

### **EXAMPLE ELECTRONIC PROGRAM GUIDE**

This is an example of a typical TV electronic program guide showing available programming.





Select GUIDE button to shows available TV programs.



Select a Channel.

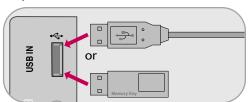
### **USB**

■ 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 or Music List or Extra contents. 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 playback of JPG pictures and MP3 audio.



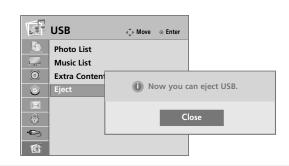
Select PHOTO LIST or MUSIC LIST or EXTRA CONTENTS.

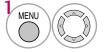




# When removing the USB device







Select **USB**.



Select **Eject**.





Return to the previous menu.



Return to TV viewing.

#### Precautions with USB devices.

- ▶ 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 0.4A) 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.
- ▶ When using a USB HDD via the USB extensing cable, connect a support electric power source.

### PHOTO LIST

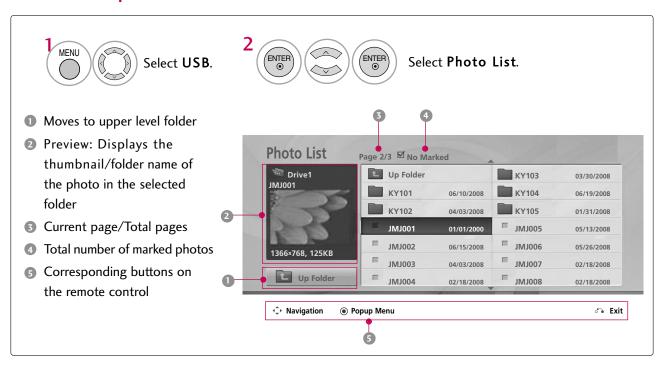
This TV only supports picture in JPEG(.jpg) format.

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

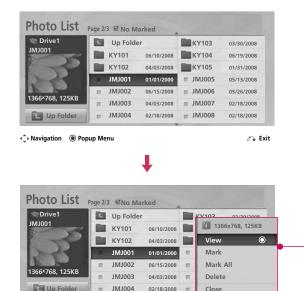
#### Supported photo file: \*.JPG

- You can view JPG files only.
- Only baseline scan is supported among JPG.
- Supported JPG size: 64 pixel (width) x 64 pixel (height) to 15360 pixel (width) x 8640 pixel (height)

### **Screen Components**



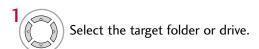
### Photo Selection and Popup Menu



ా Exit

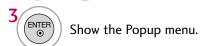
When you select a file (not folder), this PopUp menu is displayed.

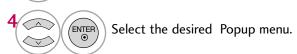
- ▶ **View**: Display the selected item.
- ► Mark: Use to mark a photo.
- ► Unmark Use to unmark a photo.
- ► Mark All: Mark all photos on the screen.
- ► Unmark All: Deselect all marked photos.
- ▶ **Delete** or **Delete Marked**: Delete the selected photo item.
- ► Close: Close the pop-up menu.





Select the desired photos.





When one or more photos are marked, you can view individual photos or a slide show of the marked photos. If no photos are marked, you can view all photos individually or all photos in the folder in a slide show.

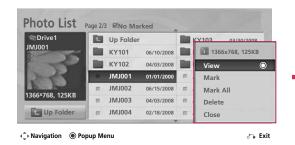
### **Full Screen Menu**

You can change the Photo List view so that it fills the screen. More operations are available in full screen mode.











The aspect ratio of a photo may change the size of the photo displayed on the screen in full size.

Press the **RETURN** button to move to the previous menu screen.



Select the target folder or drive.



Select the desired photos.



Show the Popup menu.



Select View.



The selected photo is displayed in full size.

■ Use the **CH** ∧ ∨ button to navigate in the photo page.





Select the Slideshow, BGM, U(Rotate), Delete, Option, or Hide.

- Use < > button to select the previous or next photo.
- Use ∧ ∨ < > button to select and control the menu on the full-sized screen.

- ➤ **Slideshow**: Selected photos are displayed during the slide show. If no photo is selected, all photos in the current folder are displayed during slide show.
  - Set the time interval of the slide show in **Option**.
- **BGM**: Listen to music while viewing photos in full size.
  - Set the BGM device and album in **Option**.
- ▶ **\*\*\* (Rotate)**: Rotate photos.
  - Rotates the photo 90°, 180°, 270°, 360° clockwise.
- ▶ **Delete**: Delete photos.
- ▶ Option: Set values for Slide Speed and Music Album.
  - Use  $\land \lor < \gt$  button and ENTER button to set values. Then go to Enter and press ENTER to save the settings.
  - You cannot change **Music Album** while BGM is playing.
- ▶ **Hide** : Hide the menu on the full-sized screen.
  - To see the menu again on the full-sized screen, press **ENTER** button to display.



### **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

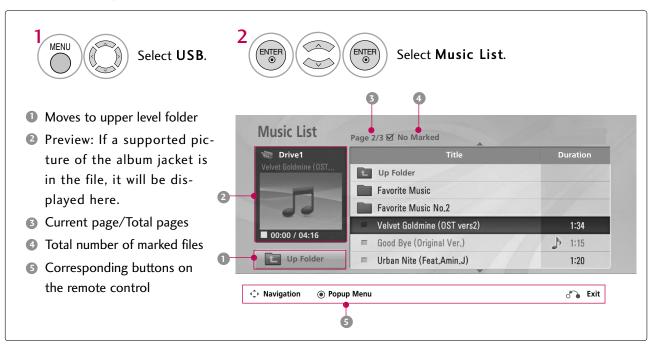
• Sampling rate (Sampling Frequency)

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**



### 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: Use to mark a file.
- ► Unmark: Use to unmark a file.
- ► 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.



Select the target folder or drive.





Select the desired musics.



Show the Popup menu.





Select the desired Popup menu.



Return to TV viewing.

- Use the **CH** ^ button to navigate in the music page.
- 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.
- Files downloaded from a paid service with copyright protection are not supported and will not play.
- ▶ Press **ENTER**, or **RETURN** button to stop the screen saver.

### **EXTRA CONTENTS**

Extra Contents will be activated when Data Channel service is available.







Select Extra Contents.

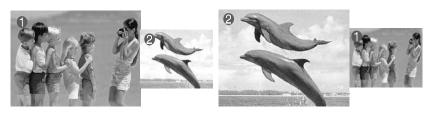
### NOTE

- ▶ Pro:Centric contents in USB memory stick can be played.
- ► For more information. contact to Customer Support.(www.lgcommercial.com)

# **PICTURE CONTROL**

# PIP (PICTURE-IN-PICTURE)

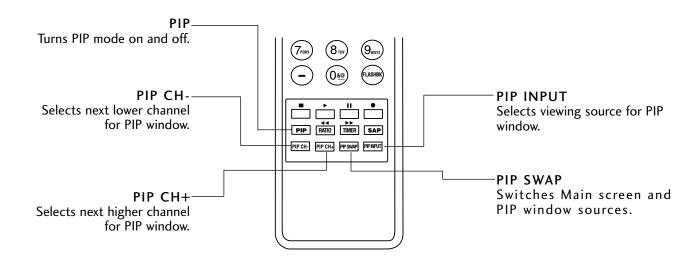
PIP enables the end user to view two sources on the screen at the same time. The end user can switch between the Main and Sub picture sizes.



■ Note: Actual size of Main screen and PIP inset may be different than shown above.

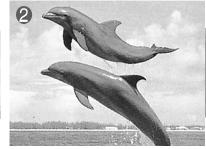
#### PIP Operation

- 1. Connect auxiliary source(s) to TV connections panel.
- 2. Enter Installer menu to be sure source(s) is enabled.
- 3. Use the interactive remote provided in the room to operate PIP.
- 4. Press PIP on remote.
  Use the PIP function keys to operate the available PIP features.
- 5. To exit PIP mode, simply press PIP.











Main Picture Source	Available Sub Picture Sources
TV	AV1, AV2, HDMI1, HDMI2
AV1 or AV2	TV, AV1 or AV2, HDMI1, HDMI2
HDMI1 or HDMI2	TV, AV1, AV2, HDMI1 or HDMI2
Component, RGB-PC	TV, AV1, AV2, HDMI1, HDMI2

# PICTURE CONTROL

# PICTURE SIZE (ASPECT RATIO) CONTROL

This feature lets you choose the way an analog picture with a 4:3 aspect ratio is displayed on your TV. 

• RGB-PC input source can only use 4:3 or 16:9 aspect ratio.





Press the RATIO button repeatedly to select the picture options: Set By Program, 4:3, 16:9, Zoom, Just Scan.



Return to TV viewing.

■ You can also adjust **Aspect Ratio** in the **PICTURE** menu.

# Set by program

Selects the proper picture proportion to match the source's image.

$$(4:3 \rightarrow 4:3)$$



(16:9→ 16:9)



#### 4:3

Choose 4:3 when you want to view a picture with an original 4:3 aspect ratio.



#### 16:9

Adjust the picture horizontally, in a linear proportion to fill the entire screen.



# PICTURE CONTROL

#### Zoom

Choose Zoom when you want to view the picture without any alteration. However, the top and bottom portions of the picture will be cropped.



#### Just Scan

Normally the edges of video signals are cropped 1-2%. Just Scan turns off this cropping and shows the complete video.

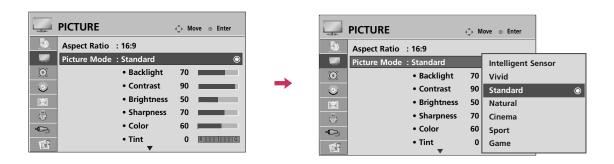
Notes: If there is noise on the edges of the original signal, it will be visible when Just Scan is activated.

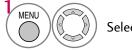
Just Scan operates only with DTV/CADTV/HDMI-DTV/DVI-DTV (720p/1080i), Component(720p/1080i) input sources.



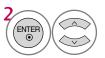
# PRESET PICTURE SETTINGS (PICTURE MODE)

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.

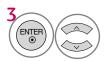




Select PICTURE.



Select **Picture Mode**.



Select Intelligent Sensor, Vivid, Standard, Natural, Cinema, Sport or Game.



Return to the previous menu.



Return to TV viewing.

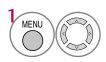
- When selecting Intelligent Sensor is changed to Auto automatically.
- When selecting Intelligent Sensor, it is changed contrast, brightness, sharpness, color and tint automatically.
- Vivid, Standard, Natural, Cinema, Sport, and Game Settings are preset for the optimum picture quality at the factory.
- 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: This mode optimizes video for watching movies.
- **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.

### PICTURE CONTROL

# MANUAL PICTURE ADJUSTMENT - USER MODE

Adjust the picture appearance to suit your preference and viewing situations. This feature is disable in "Picture Mode-Intelligent Sensor".





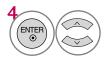
Select PICTURE.



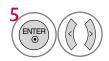
Select Picture Mode.



Select Vivid, Standard, Natural, Cinema, Sport or Game.



Select Backlight, Contrast, Brightness, Sharpness, Color, or Tint.



Make appropriate adjustments.



Return to the previous menu.



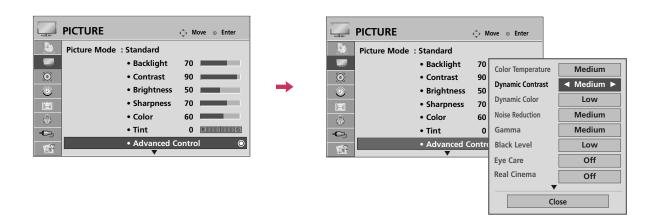
Return to TV viewing.

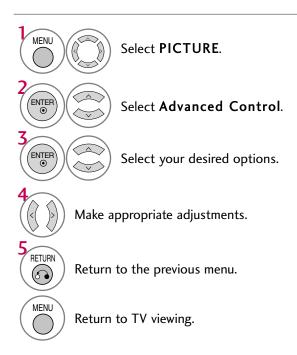
- Backlight: This function adjusts the brightness of LCD panel, to control the brightness of the screen. Adjusting the backlight is recommended when setting the brightness of the set. When decreasing the backlight, the brightness of the black becomes darker without any loss in video signal and the power 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 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.



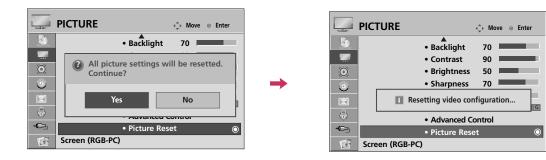


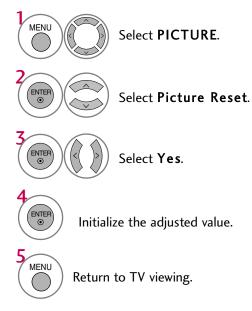
# PICTURE CONTROL

Color Temperature	Set to warm to enhance hotter colors such as red, or set to cool to enhance cooler colors such as blue.
Dynamic Contrast	Adjusts the contrast to keep it at the best level according to the brightness of the screen. The picture is improved by making bright parts brighter and dark parts darker.
Dynamic Color	Adjusts screen colors so that they look livelier, richer and clearer. This feature enhances hue, saturation and luminance so that red, blue, green and white look more vivid.
Noise Reduction	■ Reduces screen noise without compromising video quality.
Gamma	Low: Make dark and middle gray level area of the picture brighter.  Medium: Express original picture levels.  High: Make dark and middle gray level area of the picture darker.  You can adjust brightness of dark area and middle gray level area of the picture.
Black Level	Low: The reflection of the screen gets darker.  High: The reflection of the screen gets brighter.  ■ Set black level of the screen to proper level.  ■ This function enables to select 'Low' or 'High' in the following mode: AV (NTSC-M), HDMI or Component.
Eye Care	<ul> <li>Adjust the brightness of the screen to prevent the screen from being too bright. Dims extremely bright pictures.</li> <li>This feature is disabled in "Picture Mode-Intelligent Sensor, Vivid, Cinema".</li> </ul>
Real Cinema	■ Makes video clips recorded in film look more natural by eliminating judder effect.
Color Gamut	Standard: Displays standard set of colors.  Wide: Increase number of colors used.  Maximize the utilization of color to increase color quality.

# **PICTURE RESET**

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

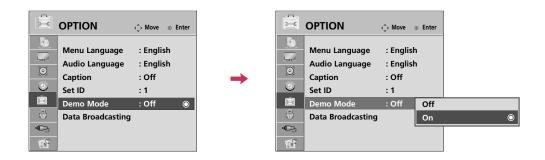


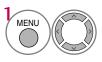


# PICTURE CONTROL

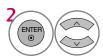
### **DEMO MODE**

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

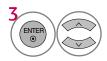




Select **OPTION**.



Select **Demo Mode**.



Select **On** to show the various feature of the TV.



Return to TV viewing.

After a while, **Demo Mode** starts.

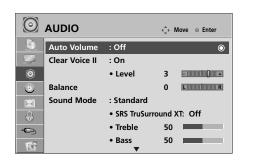
If you want to stop the demo, press any button (Except VOL +, - and MUTE button).

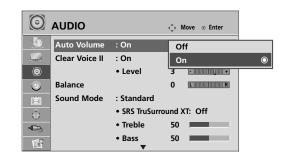
# **SOUND & LANGUAGE CONTROL**

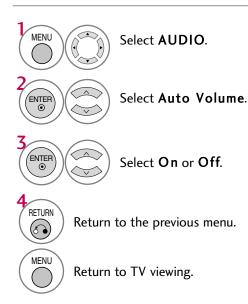
# **AUTO VOLUME LEVELER (AUTO VOLUME)**

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.



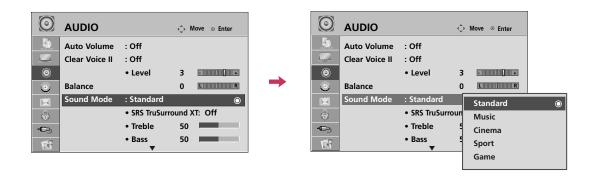




# **SOUND & LANGUAGE CONTROL**

# PRESET SOUND SETTINGS (SOUND MODE)

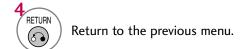
Sound Mode lets you enjoy the best sound without any special adjustment as the TV sets the appropriate sound options based on the program content.

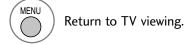








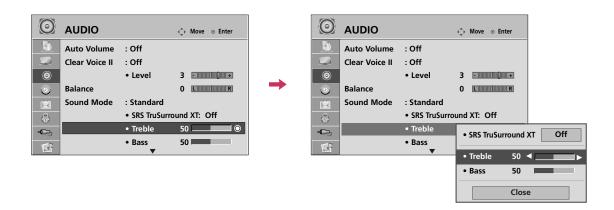




- Standard, Music, Cinema, Sport, and Game are preset for optimum sound quality at the factory.
   Standard: Offers standard-quality sound.
   Music: Optimizes sound for listening to
- Cinema: Optimizes sound for watching movies.
- **Sport**: Optimizes sound for watching sports events.
- Game: Optimizes sound for playing games.

# SOUND SETTING ADJUSTMENT - USER MODE

Adjust the sound to suit your taste and room situations.



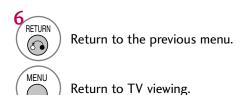








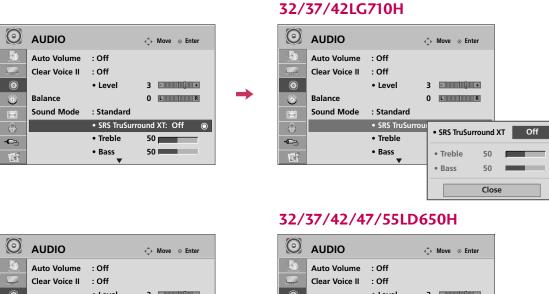


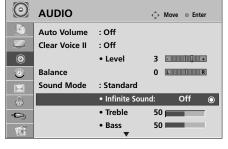


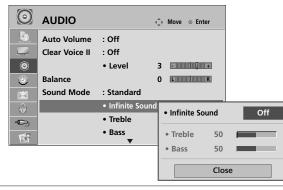
### SOUND &LANGUAGE CONTROL

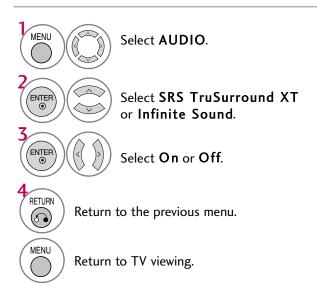
#### SRS TRUSURROUND XT / INFINITE SOUND

Takes advantage of any multi-channel format without needing to add extra speakers or equipment. Dialog clarity, bass enrichment, and the addition of stereo audio enhancement produces an immersive sound experience from standard stereo material.





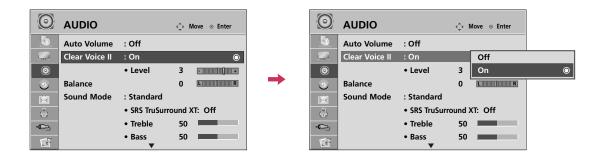


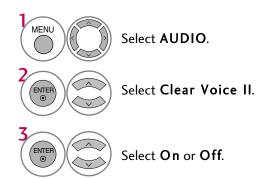


- If sound quality or volume is not at the level you want, it is recommended to use a separate home theater system or amp to cope with different user environments.
- If you select "Clear Voice II-On", SRS TruSurround XT feature will not work.
- SRS TruSurround XT: TruSurround XT is a patented SRS technology that solves the problem of playing 5.1 multichannel content over two speakers.
- Infinite Sound: Infinite Sound is a patented LG proprietary sound processing technology that strives immersive 5.1 surround sound with just two front speakers. (For 32/37/42/47/55LD650H)

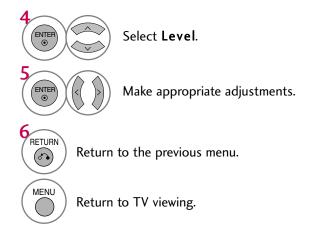
### **CLEAR VOICE II**

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





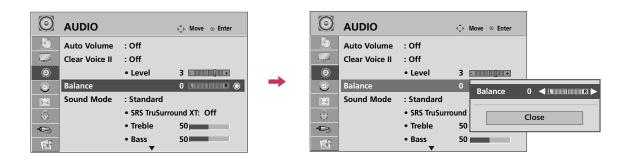
# Adjustment for Clear Voice II Level With selecting $\mathbf{O}\,\mathbf{n}$

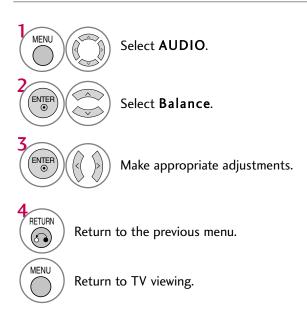


# **SOUND & LANGUAGE CONTROL**

### **BALANCE**

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



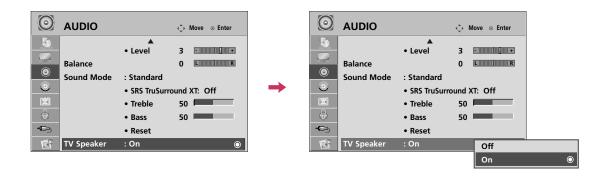


### TV SPEAKERS ON/OFF SETUP

If you wish to use an external Hi-Fi system or a SRS System, turn off the TV's internal speakers.

In AV, Component, RGB and HDMI with HDMI to DVI cable, the TV speaker can be operational even when there is no video signal.

Turn the TV speakers off if using external audio equipment.

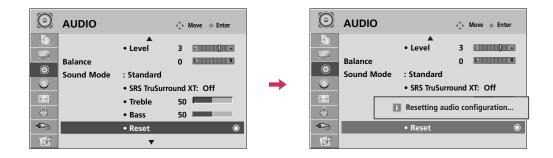


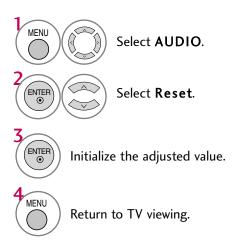


# **SOUND & LANGUAGE CONTROL**

# **AUDIO RESET**

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





### STEREO/SAP BROADCAST SETUP

For Analog only: 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.

If other languages are available on the digital signal, select them with the SAP button.





Each time you press the SAP button, Mono, Stereo, or SAP appear in turn.



Return to TV viewing.