



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 _____



OWNER'S MANUAL PLASMA TV

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

42PJ250R	42PJ350R
50PJ250R	50PJ350R

42PJ260R	50PK550R
50PJ260R	60PK550R

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.

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 soft 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.



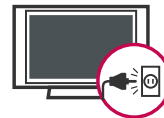
- 7** Only use attachments/accessories specified by the manufacturer.



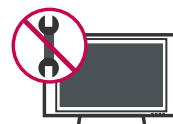
- 8** Use only with the cart, stand, tripod, bracket, or table specified by the manufacturer, or sold with the apparatus. When a cart is used, use caution when moving the cart/apparatus combination to avoid injury from tip-over.



- 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.

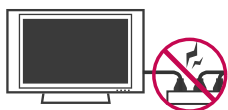
- 14** CAUTION concerning the Power Cord:

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.



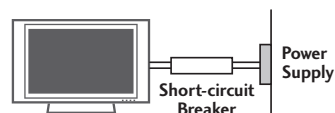
- 16** Do not expose to dripping or splashing and do not place objects filled with liquids, such as vases, cups, etc. on or over the apparatus (e.g. on shelves above the unit).



- 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 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

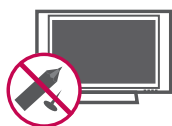
Make sure the product is turned off, unplugged and all cables have been removed. It may take 2 or more people to carry larger TVs. Do not press against or put stress on the front panel of the TV.

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.

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

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



25 Keep the product away from direct sunlight.

CONTENTS

WARNING / CAUTION	2
SAFETY INSTRUCTIONS	3
FEATURE OF THIS TV	8

PREPARATION

Accessories	9
Front Panel Information	10
Back Panel Information	12
Stand Instruction	14
VESA Wall Mounting	16
Cable Arrangement	17
Desktop Pedestal Installation	18
Swivel Stand	18
Securing the TV to the wall to prevent falling when the TV is used on a stand	19
Antenna or Cable Connection	20

EXTERNAL EQUIPMENT SETUP

HD Receiver Setup	21
DVD Setup	24
VCR Setup	26
Other A/V Source Setup	27
USB Connection	28
PC Setup	29
Variable Audio Out	35

WATCHING TV / CHANNEL CONTROL

Remote Control Functions	36
Turning On TV	40
Channel Selection	41
Volume Adjustment	41
Initializing Setup (Mode Setting)	42
On-Screen Menus Selection	43
Quick Menu	45
Channel Setup	
- Auto Scan (Auto Tuning)	46
- Add / Delete Channel (Manual Tuning)	47
- Channel Editing	48
Input List	49
Input Label	50
Channel List	51

Favorite Channel Setup	52
Favorite Channel List	53
AV Mode	54
Key Lock	55
SIMPLINK	56

USB

Entry Modes	58
Photo List	60
Music List	66
Movie List	69
DivX Registration Code	75
Deactivation	77

PICTURE CONTROL

Picture Size (Aspect Ratio) Control	78
Preset Picture Settings (Picture Mode)	80
Manual Picture Adjustment (User Mode)	81
Picture Improvement Technology	82
Energy Saving	84
Picture Reset	85
Image Sticking Minimization (ISM) Method	86
Demo Mode	87
Initial Setting (Factory Reset)	88

SOUND & LANGUAGE CONTROL

Auto Volume Leveler (Auto Volume)	89
Clear Voice II	90
Preset Sound Setting (Sound Mode)	91
Sound Setting Adjustment - User Mode	92
- Infinite Sound	93
Balance	93
TV Speakers On/Off Setup	94
Selecting Audio Out	95
Audio Reset	96
Stereo/SAP Broadcast Setup	97
On-Screen Menus Language Selection	98
Closed Captions	99

TIME SETTING

Clock Setting	
- Clock Setup	100
On/Off Time Setting	101
Sleep Timer Setting	102

APPENDIX

Troubleshooting	103
Maintenance	105
Product Specifications	106
IR Codes	108
External Control Through RS-232C	110

FEATURE OF THIS TV

- This feature is not available for all models.



ABOUT DIVX VIDEO: DivX® is a digital video format created by DivX, Inc. This is an official DivX Certified device that plays DivX video. Visit www.divx.com for more information and software tools to convert your files into DivX video.

ABOUT DIVX VIDEO-ON-DEMAND: This DivX Certified® device must be registered in order to play DivX Video-on-Demand (VOD) content. To generate the registration code, locate the DivX VOD section in the device setup menu. Go to vod.divx.com with this code to complete the registration process and learn more about DivX VOD.

"DivX Certified to play DivX video, including premium content"

"Pat. 7,295,673; 7,460,688; 7,519,274"



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

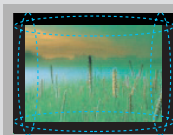
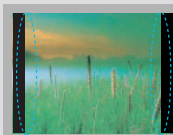


HDMI, the HDMI logo and High-Definition Multimedia Interface are trademarks or registered trademarks of HDMI Licensing LLC."



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.



PREPARATION

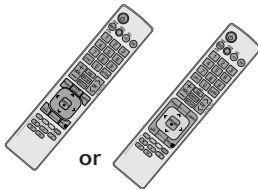
ACCESSORIES

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

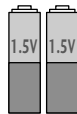
The accessories included may differ from the images below.



Owner's Manual



Remote Control



Batteries
(Some models)



Power Cord

M4x28



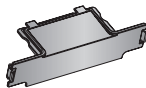
x 4

M5x14



x 3

Bolts for stand assembly
(Refer to P.14)
(Except 60PK550R)



Protection Cover
(Refer to P.15)

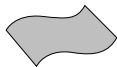


Cable Holder
(Refer to P.17)



RF Adapter
(Some models)

You must connect it to the antenna wire after fixing in Antenna Input. This adapter is only supplied in **Argentina**.



Polishing Cloth

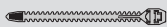
(Not included with all models.)

- * Wipe spots on the exterior only with the polishing cloth.
- * Do not wipe roughly when removing stain. Excessive pressure may cause scratch or discoloration.

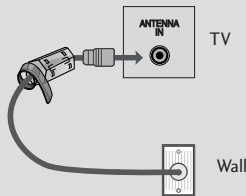


Ferrite Core
(Gray)

(This feature is available only 42PJ*** models.)



Tie Band



Ferrite core can be used to reduce RF noise when connecting the RF cable.
The closer the location of the ferrite core to the "ANTENNA IN", the better it is.



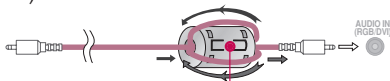
Ferrite Core
(Gray)

(This feature is not available for all models.)

The ferrite core can be used to reduce the electromagnetic waves in the PC Audio cable.

Wind the PC Audio cable on the ferrite core twice, and then plug the cables into the TV as shown in the following picture.

Place the ferrite core close to AUDIO IN(RGB/DVI) jack on the display.



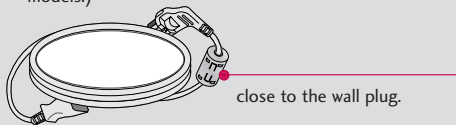
Place the ferrite core close to AUDIO IN(RGB/DVI) jack on the display.



Ferrite Core
(Black)

(This feature is not available for all models.)

Ferrite core can be used to reduce the electromagnetic waves that may interfere with the TV. Install the Ferrite core on the power cable close to the wall plug.

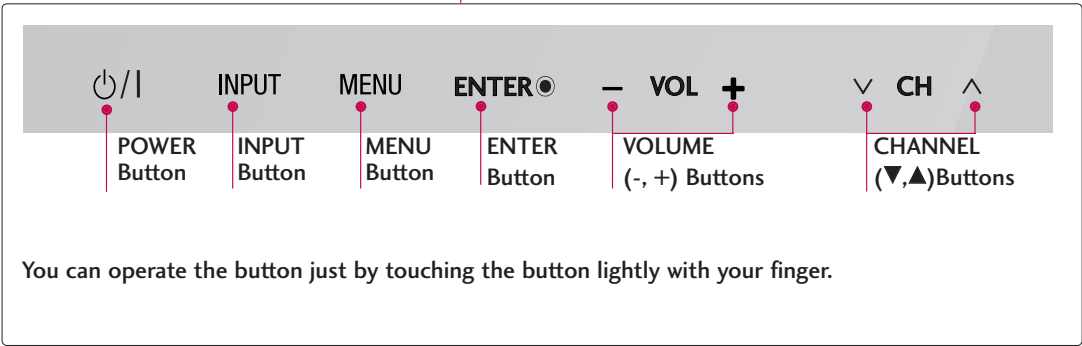
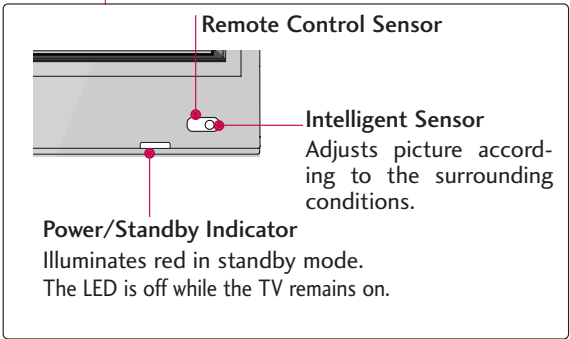
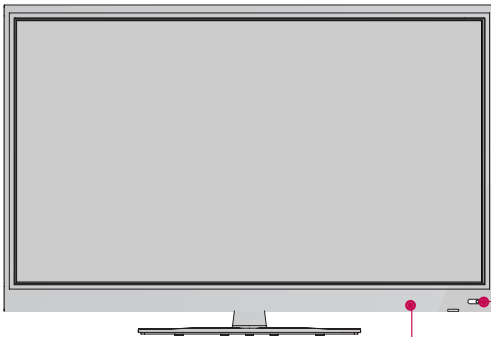


PREPARATION

FRONT PANEL INFORMATION

■ Image shown may differ from your TV.

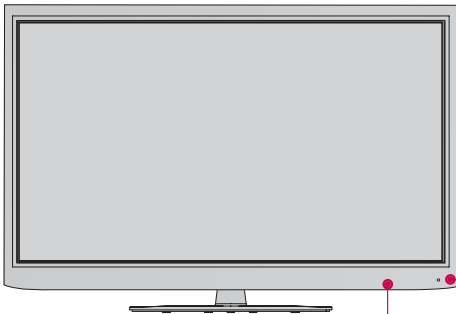
42/50PJ250R, 42/50PJ260R



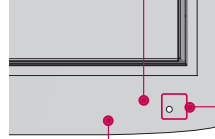
⚠ CAUTION

- ▶ 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.

42/50PJ350R



Remote Control Sensor

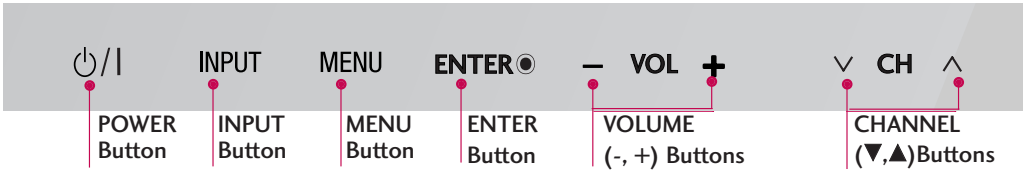


Intelligent Sensor

Adjusts picture according to the surrounding conditions.

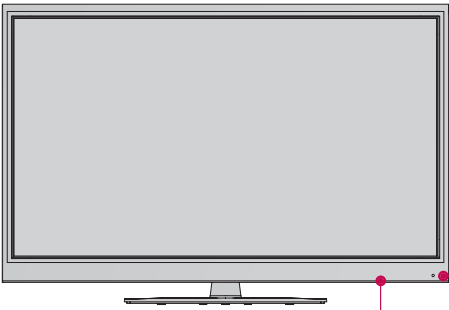
Power/Standby Indicator

Illuminates red in standby mode.
The LED is off while the TV remains on.

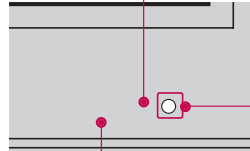


You can operate the button just by touching the button lightly with your finger.

50/60PK550R



Remote Control Sensor

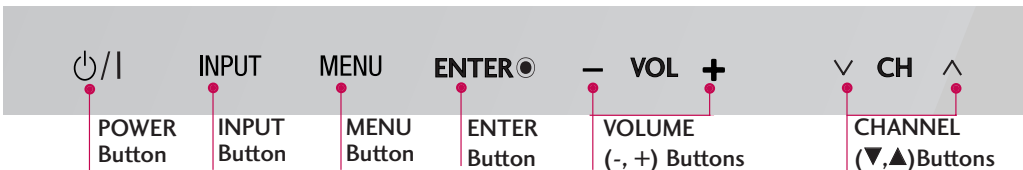


Intelligent Sensor

Adjusts picture according to the surrounding conditions.

Power/Standby Indicator

Illuminates red in standby mode.
The LED is off while the TV remains on.



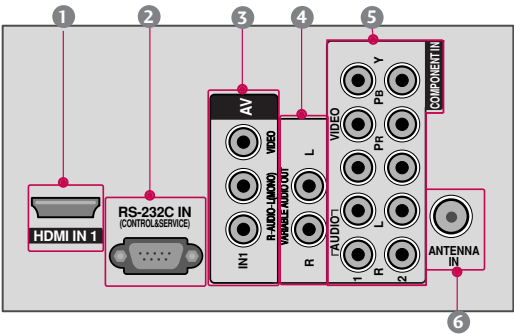
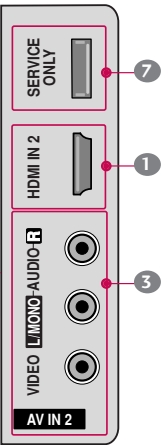
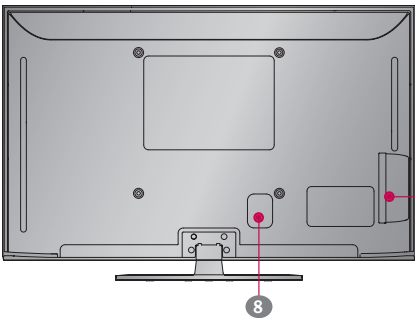
You can operate the button just by touching the button lightly with your finger.

PREPARATION

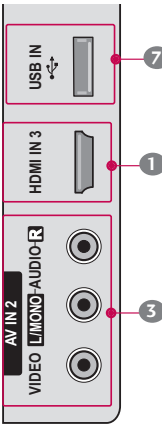
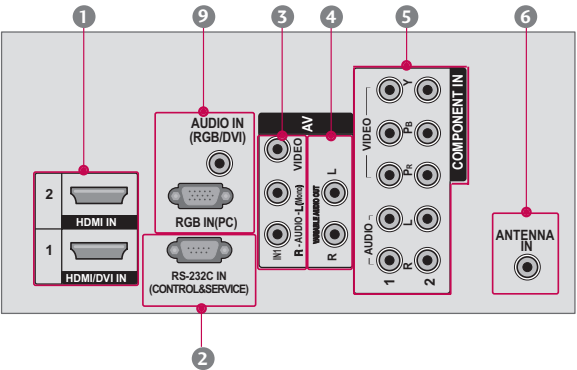
BACK PANEL INFORMATION

■ Image shown may differ from your TV.

For 42/50PJ250R



For 42/50PJ260R, 42/50PJ350R, 50/60PK550R



- ① **HDMI/DVI IN**
Digital Connection. Supports HD video and Digital audio.
Accepts DVI video using an adapter or HDMI to DVI cable (not included)
- ② **RS-232C IN (CONTROL & SERVICE) PORT**
Used by third party devices.
- ③ **AV (Audio/Video) IN**
Analog composite connection. Supports standard definition video only (480i).
- ④ **VARIABLE AUDIO OUT**
Analog audio output for use with amps and home theater systems.
- ⑤ **COMPONENT IN**
Analog Connection. Supports SD/HD.
Uses a red, green, and blue cable for video & red and white for audio.
- ⑥ **ANTENNA IN**
Connect over-the air signals to this jack.
Connect cable signals to this jack.
- ⑦ **USB IN(Except 42/50PJ250R)**
Used for photo, music and movie.
USB IN SERVICE ONLY (For 42/50PJ250R)
Used for software updates.
- ⑧ **Power Cord Socket**
For operation with AC power.
Caution: Never attempt to operate the TV on DC power.
- ⑨ **RGB (PC) (Except 42/50PJ250R)**
Analog PC Connection. Uses a D-sub 15 pin cable (VGA cable).
AUDIO IN (RGB/DVI) (Except 42/50PJ250R)
1/8" (0.32 cm) headphone jack for analog PC audio input.

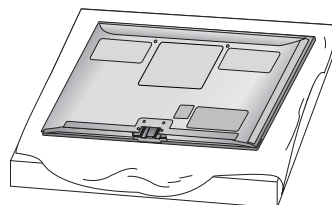
PREPARATION

STAND INSTRUCTION

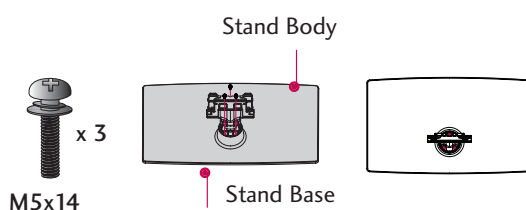
■ Image shown may differ from your TV.

Installation (Except 60PK550R)

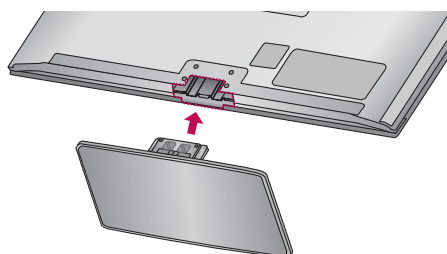
- 1 Carefully place the TV screen side down on a cushioned surface to protect the screen from damage.



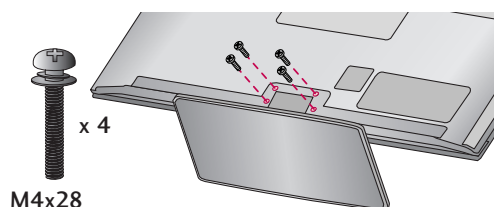
- 2 Assemble the parts of the **Stand Body** with the **Stand Base** of the TV.



- 3 Assemble the TV as shown.



- 4 Assemble the TV as shown and fix the 4 bolts securely using the holes in the back of the TV.

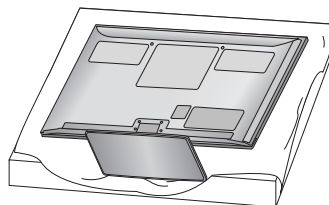


! NOTE

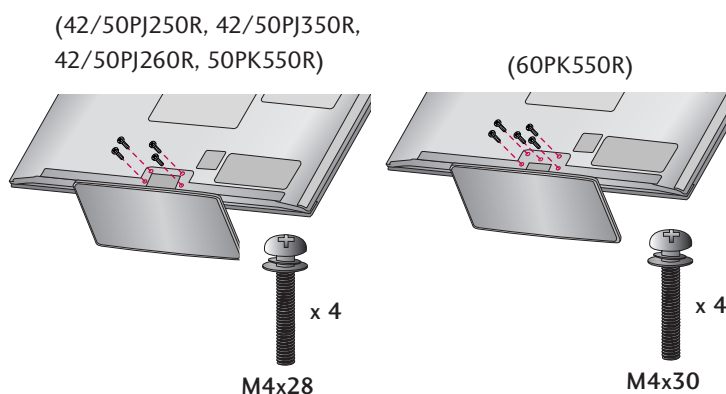
- ▶ When assembling the stand, make sure to distinguish and assemble the front and rear side of the stand correctly.
- ▶ When assembling the desk type stand, check whether the bolt is fully tightened. (If not tightened fully, the product can tilt forward after the product installation). If you tighten the bolt with excessive force, the bolt can deviate from abrasion of the tightening part of the bolt.

Detachment

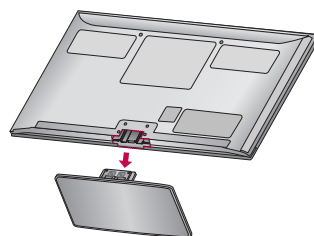
- 1 Carefully place the TV screen side down on a cushioned surface to protect the screen from damage.



- 2 Loosen the bolts from TV.



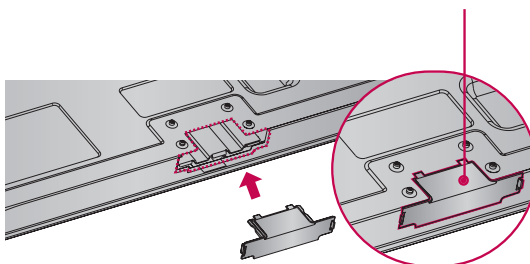
- 3 Detach the stand from TV.



PROTECTION COVER
(Fix a Guide to the Outsides.)

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.



PREPARATION


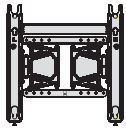
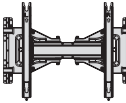
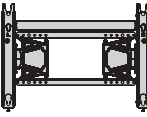
VESA WALL MOUNTING

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	Wall Mounting bracket (sold separately)
42/50PJ250R 42/50PJ260R 50PK550R, 42/50PJ350R	400 * 400	M6	4	 AW-50PG60MS  AW-50PG60M
60PK550R	600 * 400	M8	4	 AW-60PG60MS

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 than 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 use fasten the screws too strongly, this may damage the TV or cause the TV to a fall, leading to 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.



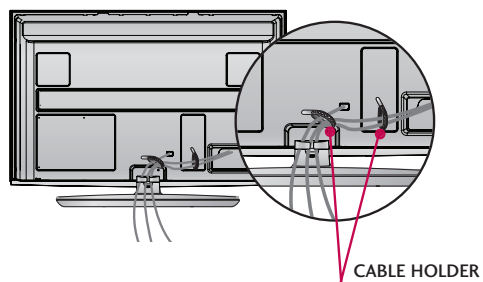
CAUTION

- ▶ Do not install your wall mount kit while your TV is turned on. It may result in personal injury due to electric shock.

CABLE ARRANGEMENT

■ Image shown may differ from your TV.

After connecting the cables as necessary, install **CABLE HOLDER** as shown and bundle the cables.
To connect additional equipment, see **EXTERNAL EQUIPMENT SETUP** section.

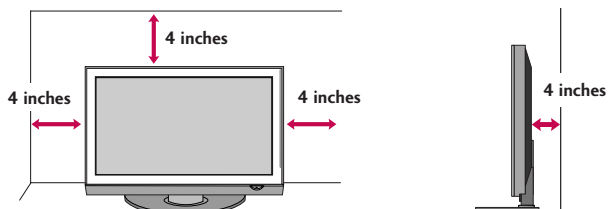


PREPARATION

DESKTOP PEDESTAL INSTALLATION

- Image shown may differ from your TV.

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



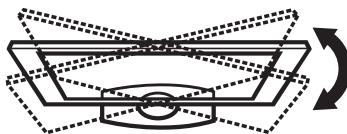
⚠ CAUTION

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

SWIVEL STAND

(This feature is not available for all models.)

After installing the TV, you can adjust the TV manually to the left or right direction by 20 degrees to suit your viewing position.



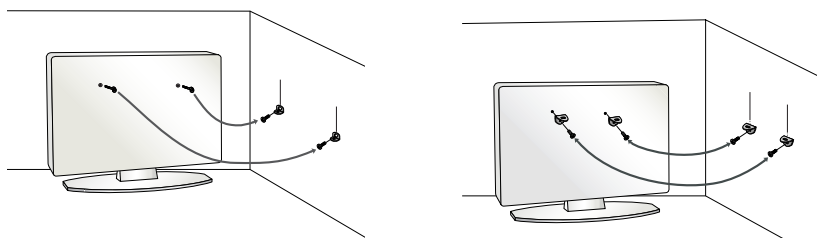
SECURING THE TV TO THE WALL TO PREVENT FALLING WHEN THE TV IS USED ON A STAND

- 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.

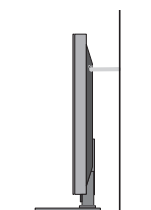
We recommend that you set up the TV close to a wall so it cannot fall over if pushed backwards.

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.

PREPARATION

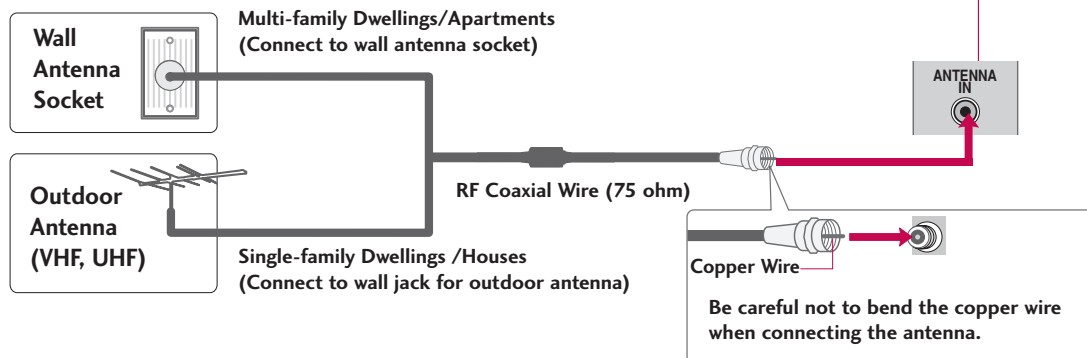
- To prevent damage do not connect to the power outlet until all connections are made between the devices.

ANTENNA OR CABLE CONNECTION

1. Antenna (Analog)

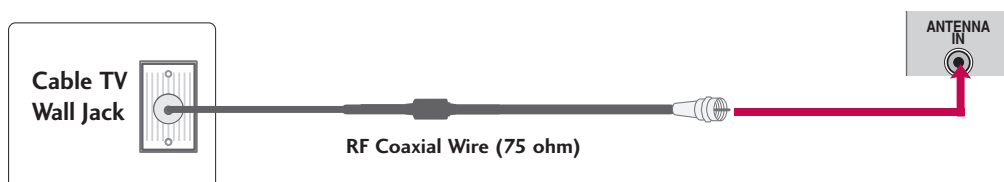
Wall Antenna Socket or Outdoor Antenna without a Cable Box Connection.

For optimum picture quality, adjust 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



EXTERNAL EQUIPMENT SETUP

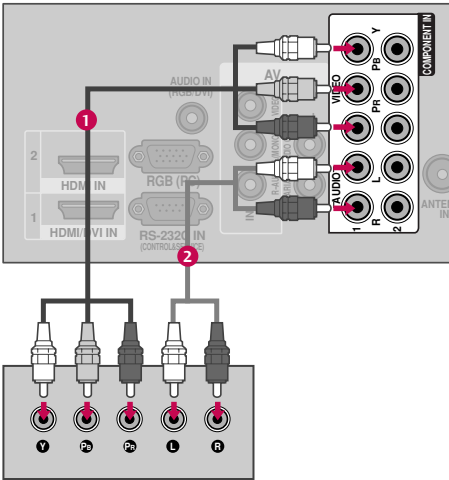
- To prevent the equipment damage, never plug in any power cords until you have finished connecting all equipment.
- Image shown may differ from your TV.

HD RECEIVER SETUP

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** 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** 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** input source on the TV using the **INPUT** button on the remote control.
- If connected to **COMPONENT IN 2** input, select the **Component2** input source on the TV.

Y, CB/PB, CR/PR

Resolution	Horizontal Frequency(KHz)	Vertical Frequency(Hz)
720x480i	15.73	59.94
	15.75	60.00
720x480p	31.47	59.94
	31.50	60.00
720x576i	15.625	50.00
720x576p	31.25	50.00
1280x720p	44.96	59.94
	45.00	60.00
	37.50	50.00
1920x1080i	33.72	59.94
	33.75	60.00
	28.125	50.00
1920x1080p	56.25	50.00
	67.432	59.94
	67.50	60.00

Supported Resolutions

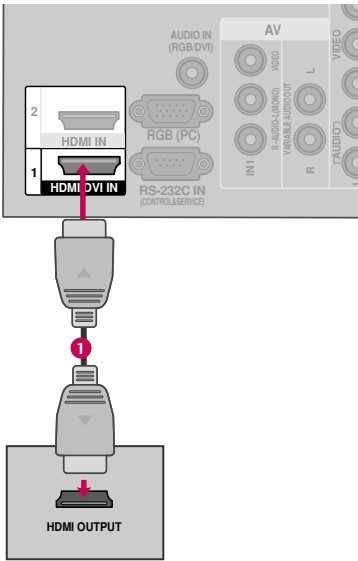
Signal	Component	HDMI
480i	Yes	No
480p	Yes	Yes
576i	Yes	No
576p	Yes	Yes
720p	Yes	Yes
1080i	Yes	Yes
1080p	Yes	Yes

EXTERNAL EQUIPMENT SETUP

HDMI Connection

1. How to connect

- 1 Connect the digital set-top box to **HDMI IN 1***, **HDMI/DVI IN 1***, **HDMI IN 2*** or **HDMI 3*** 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*** or **HDMI3*** input source on the TV using the **INPUT** button on the remote control.

* **HDMI IN 1, HDMI IN 2:** For 42/50PJ250R

* **HDMI/DVI IN 1, HDMI IN 2, HDMI 3:** For 42/50PJ260R, 42/50PJ350R, 50/60PK550R

! 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 audio format only.
- ▶ If the Audio setting is set to Dolby/DTS/Bitstream in some DVDP/STB, make sure to change the setting to PCM.

HDMI-DTV

Resolution	Horizontal Frequency(KHz)	Vertical Frequency(Hz)
720x480i	15.73	59.94
	15.75	60.00
720x480p	31.47	59.94
	31.50	60.00
720x576i	15.625	50.00
720x576p	31.25	50.00
1280x720p	44.96	59.94
	45.00	60.00
	37.50	50.00
1920x1080i	33.72	59.94
	33.75	60.00
	28.125	50.00
1920x1080p	56.25	50.00
	67.432	59.94
	67.50	60.00
	27.00	24.00
	33.75	30.00

DVI to HDMI Connection - *Except 42/50PJ250R*

1. How to connect

- 1 Connect the DVI output of the digital set-top box to the **HDMI/DVI IN 1** jack on the TV.

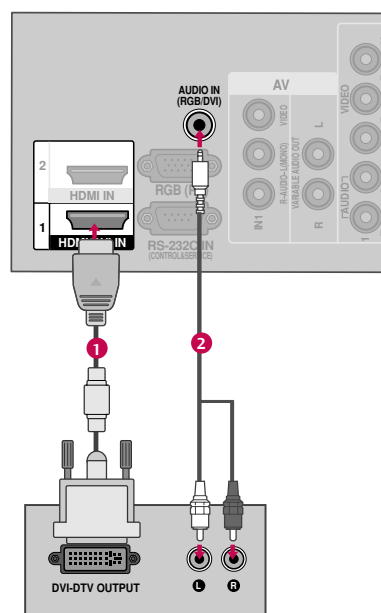
- 2 Connect the audio output of the digital set-top box to the **AUDIO IN (RGB/DVI)** jack on the TV.

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** 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.



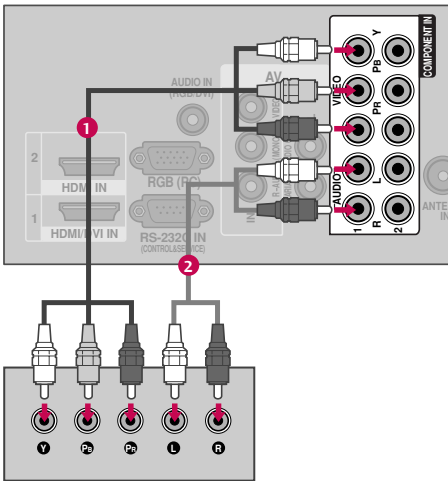
EXTERNAL EQUIPMENT SETUP

DVD SETUP

Component Connection

1. How to connect

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



2. How to use

- Turn on the DVD player, insert a DVD.
- Select the **Component1*** input source on the TV using the **INPUT** button on the remote control.
- If connected to **COMPONENT IN 2** input, select the **Component2** input source on the TV.
- 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	PB	PR
Video output ports on DVD player	Y	PB	PR
	Y	B-Y	R-Y
	Y	Cb	Cr
	Y	Pb	Pr

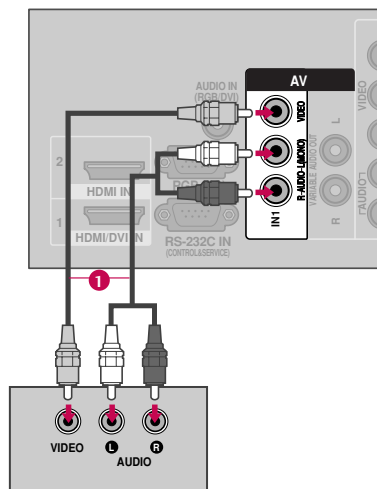
Composite (RCA) Connection

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

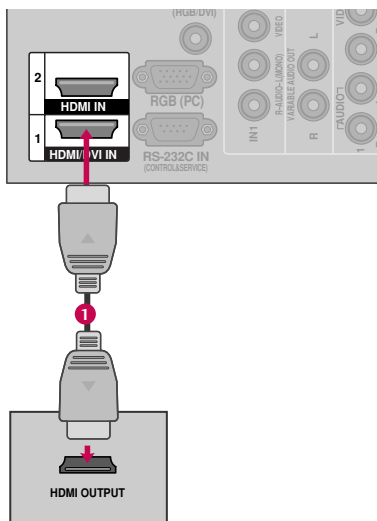
- Turn on the DVD player, insert a DVD.
- Select the **AV1** or **AV2** input source on the TV using the **INPUT** button on the remote control.
- Refer to the DVD player's manual for operating instructions.



HDMI Connection

1. How to connect

- 1 Connect the HDMI output of the DVD to the **HDMI IN 1***, **HDMI/DVI IN 1***, **HDMI IN 2*** or **HDMI 3*** 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*** or **HDMI3*** input source on the TV using the **INPUT** button on the remote control.
- Refer to the DVD player's manual for operating instructions.

* **HDMI IN 1, HDMI IN 2:** For 42/50PJ250R

* **HDMI/DVI IN 1, HDMI IN 2, HDMI 3:** For 42/50PJ260R, 42/50PJ350R, 50/60PK550R

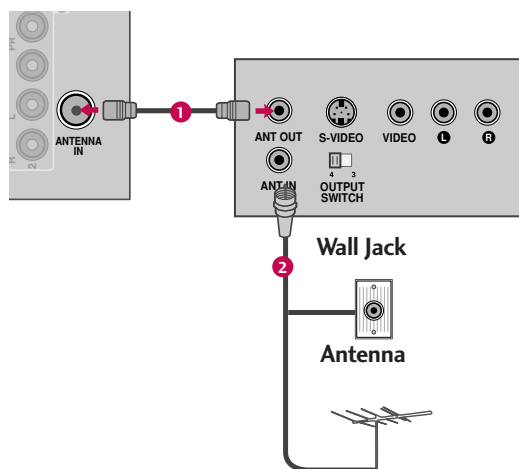
EXTERNAL EQUIPMENT SETUP

VCR SETUP

Antenna Connection

1. How to connect

- 1 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.)

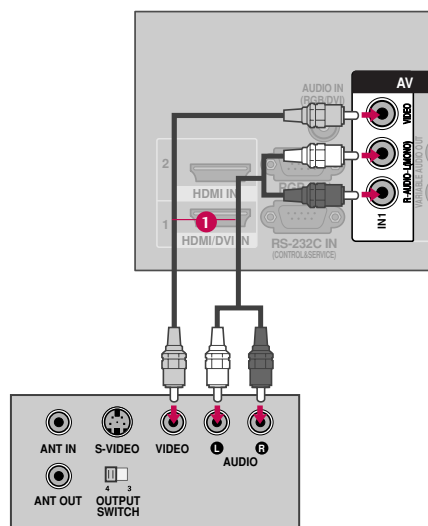
Composite (RCA) Connection

1. How to connect

- 1 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

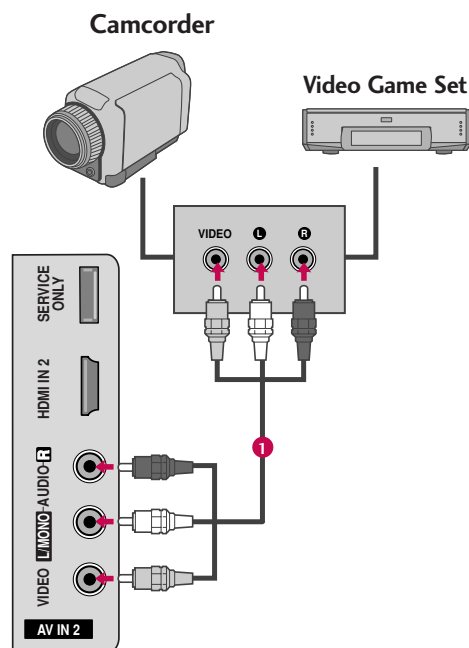
■ Image shown may differ from your TV.

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.



EXTERNAL EQUIPMENT SETUP

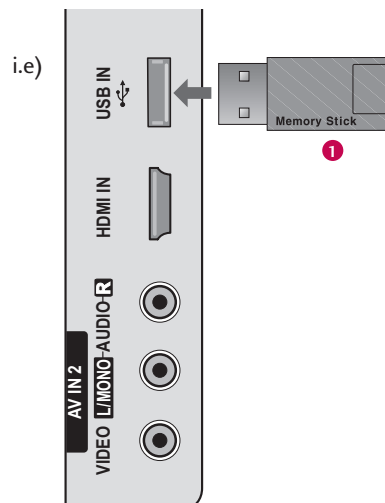
USB CONNECTION - Except 42/50PJ250R

1. How to connect

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

2. How to use

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



PC SETUP - Except 42/50PJ250R

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

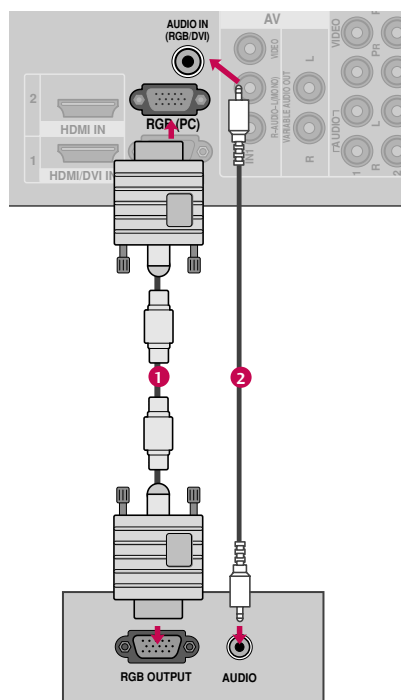
VGA (D-Sub 15 pin) Connection

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.



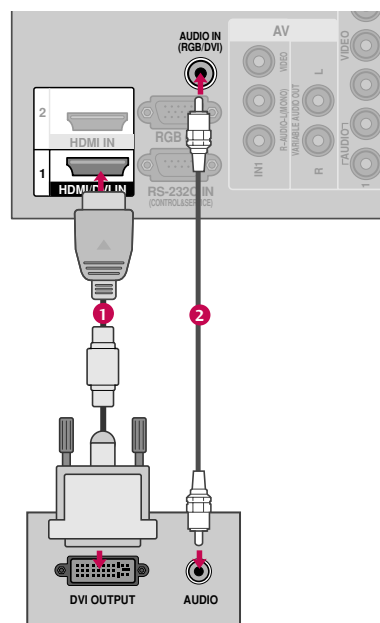
DVI to HDMI Connection

1. How to connect

- 1 Connect the DVI output of the PC to the **HDMI/DVI IN 1** 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 **HDMI 1** input source on the TV using the **INPUT** button on the remote control.



EXTERNAL EQUIPMENT SETUP

- ▶ To get the best picture quality, adjust the PC graphics card to 1024x768(42P)250R/260R/350R), 1365x768(50P)250R/260R/350R), 1920x1080(50/60P)550R).
- ▶ 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.
- ▶ 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, HDMI-PC)

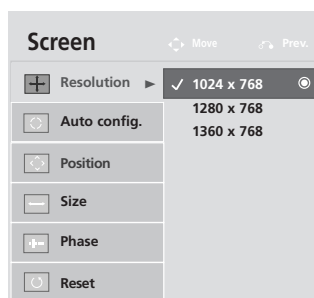
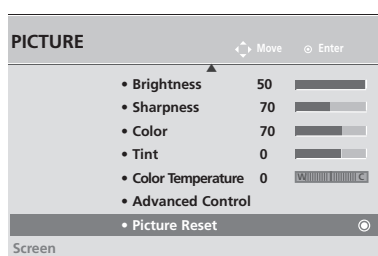
Resolution	Horizontal Frequency(KHz)	Vertical Frequency(Hz)
640x350	31.468	70.09
720x400	31.469	70.09
640x480	31.469	59.94
800x600	37.879	60.317
1024x768	48.363	60.004
1280x768	47.776	59.87
1360x768	47.720	59.799
1280x1024	63.668	59.895
1920x1080	66.587	59.934










Screen Setup for PC mode

Selecting Resolution

You can choose the resolution in RGB mode.

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

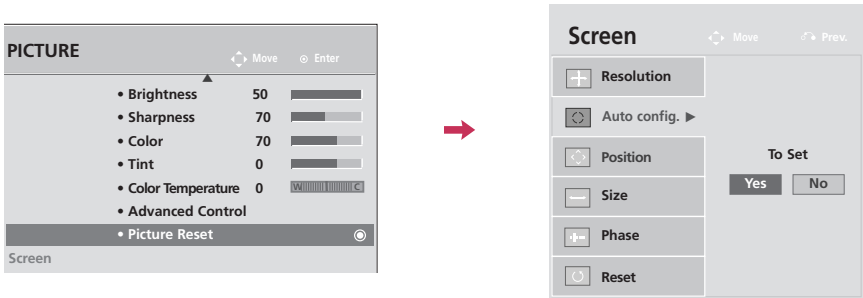


- 1   Select **PICTURE**.
- 2   Select **Screen**.
- 3   Select **Resolution**.
- 4   Select the desired resolution.
- 5 

EXTERNAL EQUIPMENT SETUP

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**.

3   Select **Auto config..**

4   Select **Yes**.

5  Start Auto Configuration.

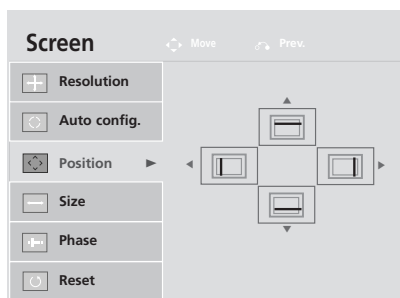
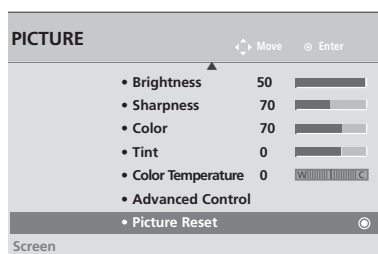
- If the position of the image is still not correct, try Auto adjustment again.
- If picture needs to be adjusted again after Auto adjustment in RGB, you can adjust the **Position**, **Size** or **Phase**.










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.

Position: This feature operates only in Component(except 480i, 576i) and RGB mode.

Size, Phase: This feature operates only in RGB mode.



- 1   Select **PICTURE**.
- 2   Select **Screen**.
- 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.

EXTERNAL EQUIPMENT SETUP

Screen Reset (Reset to original factory values)

Returns **Position**, **Size**, and **Phase** to the default factory settings.
This feature operates only in Component(except 480i, 576i) and RGB mode.



- 1   Select **PICTURE**.
- 2   Select **Screen**.
- 3   Select **Reset**.
- 4   Select **Yes**.
- 5 

VARIABLE AUDIO OUT

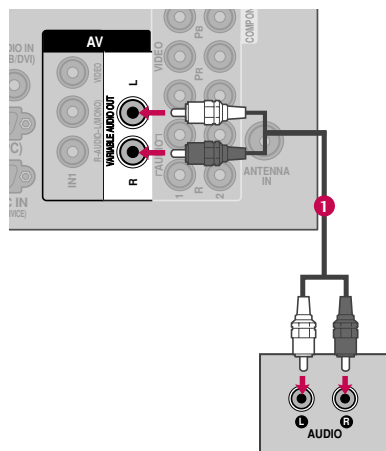
Send the TV's audio to external audio equipment via the Audio Output port.

1. How to connect

- 1 Connect audio outputs to the TV's **VARIABLE AUDIO OUT** jacks.
- 2 Set up your speakers through your analog stereo amplifier, according to the instructions provided with the amplifier.

! NOTE

- When connecting with external audio equipments, such as amplifiers or speakers, you can turn the TV speakers off in the menu. (► p.95)



WATCHING TV / CHANNEL CONTROL

REMOTE CONTROL FUNCTIONS

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

42/50PJ260R, 42/50PJ350R, 50/60PK550R

POWER Turns the TV on from standby or off to standby.

ENERGY SAVING Adjusts the Energy Saving.

AV MODE Toggles through preset Video and Audio modes. ▶ p.54

INPUT Rotates through inputs.
Also switches the TV on from standby. ▶ p.49

TV Select the remote operating mode: TV

NUMBER button Select a Channel.
Selects numbered items in a menu.

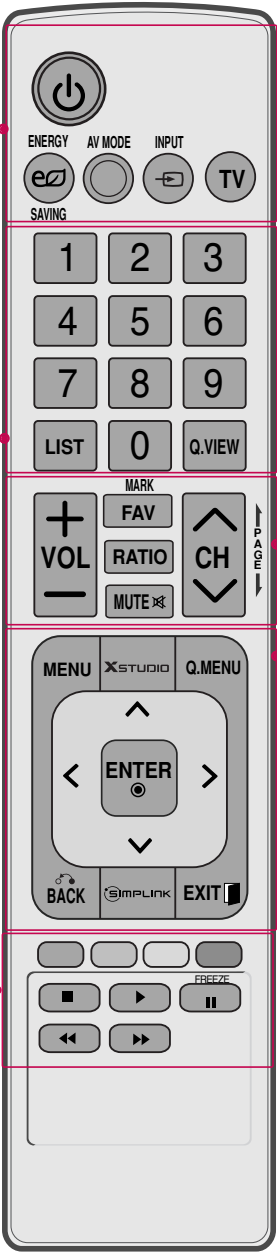
LIST Displays the channel list.

Q.VIEW Tunes to the last channel viewed.

Colored buttons Program edit.

SIMPLINK Control buttons ◀◀ (Rewind), ▶▶ (Fast Forward), ▶ (Playback), || (Pause)
◦ Controls the SIMPLINK compatible devices.

FREEZE Freezes the current frame.



VOLUME UP /DOWN Adjusts the volume.

FAV Scroll through the programmed Favorite channels. ► **p.52**

MARK Select the input to apply the Picture Wizard settings.
Use to mark or unmark a photo/music/movie.

RATIO Changes the aspect ratio.

MUTE Switches the sound on or off. ► **p.41**

CHANNEL UP/DOWN Changes the channel.

PAGE UP/DOWN Moves from one full set of screen information to the next one.

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

MENU Displays the main menu or clears all on-screen displays and returns to TV viewing.

X STUDIO Select the Photo/Music/Movie list.

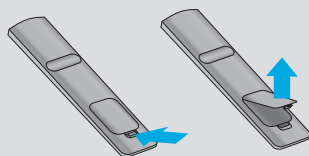
Q.MENU Opens the list of Quick Menu options.

BACK Allows the user to move return one step in an interactive application or other user interaction function.

EXIT Clears all on-screen displays and return to TV viewing from any menu.

SIMPLINK Displays channel information at the top of the screen.

Installing Batteries



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

WATCHING TV / CHANNEL CONTROL

42/50PJ250R

WATCHING TV / CHANNEL CONTROL

POWER Turns the TV on from standby or off to standby.

ENERGY SAVING Adjusts the Energy Saving.

AV MODE Toggles through preset Video and Audio modes. ► p.54

INPUT Rotates through inputs.
Also switches the TV on from standby. ► p.49

TV Select the remote operating mode: TV

NUMBER button Select a Channel.
Selects numbered items in a menu.

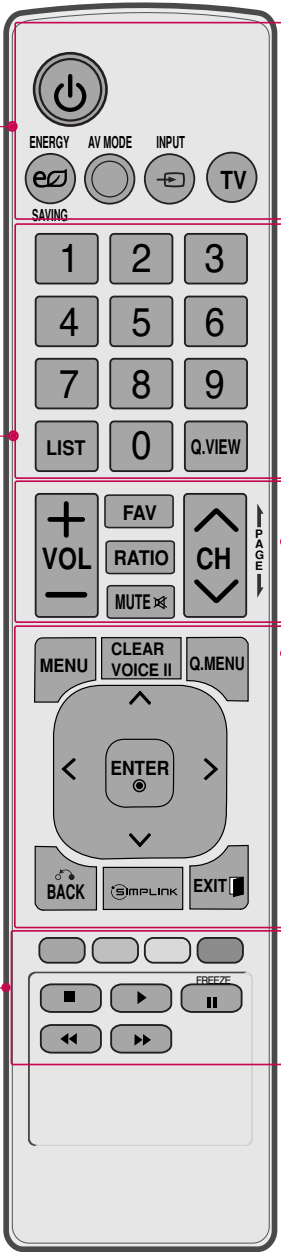
LIST Displays the channel list.

Q.VIEW Tunes to the last channel viewed.

Colored buttons Program edit.

SIMPLINK Control buttons ◀◀ (Rewind), ▶▶ (Fast Forward), ▶ (Playback), || (Pause)
◦ Controls the SIMPLINK compatible devices.

FREEZE Freezes the current frame.



VOLUME UP /DOWN Adjusts the volume.

FAV Scroll through the programmed Favorite channels. ► **p.52**

RATIO Changes the aspect ratio.

MUTE Switches the sound on or off. ► **p.41**

CHANNEL UP/DOWN Changes the channel.

PAGE UP/DOWN Moves from one full set of screen information to the next one.

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

MENU Displays the main menu or clears all on-screen displays and returns to TV viewing.

CLEAR VOICE II It helps users listen to human voices better.

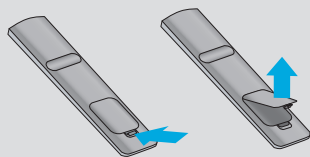
Q.MENU Opens the list of Quick Menu options.

BACK Allows the user to move return one step in an interactive application or other user interaction function.

EXIT Clears all on-screen displays and return to TV viewing from any menu.

SIMPLINK Displays channel information at the top of the screen.






Installing Batteries



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

TURNING ON TV

Turning on TV just after installation

- 1** First, connect the power cord correctly.
At this moment, the TV is in standby mode.
 - In standby mode to turn TV on, press the , **INPUT**, **CH** ( or ) button on the TV or press the **POWER**, **INPUT**, **CH** ( or ), **Number (0~9)** button on the remote control.
 - 2** 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.
-

! NOTE ► If you intend to be away on vacation, disconnect the power plug from the wall power outlet.

CHANNEL SELECTION

- 1 Press the **CH** (^ or v) or **NUMBER** buttons to select a channel number.
-

VOLUME ADJUSTMENT

Adjust the volume to suit your personal preference.

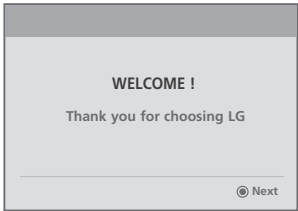
- 1 Press the **VOL** (+ or -) button to adjust the volume.
.....
 - 2 If you want to switch the sound off, press the **MUTE** button.
.....
 - 3 You can cancel the Mute function by pressing the **MUTE**, **VOL** (+ or -) or **AV MODE** button.
-

INITIALIZING SETUP (MODE SETTING)

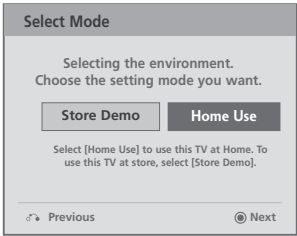
This Function guides the user to easily set the essential items for viewing the TV for the first time when purchasing the TV. It will be displayed on the screen when turning the TV on for the first time. It can also be activated from the user menus.

- 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 **Mode Setting** in the **OPTION** menu.
- Factory defaults are set when you choose “**Home Use**”.

Step1. Welcome



Step3. Mode Setting



Select **Home Use** Mode.



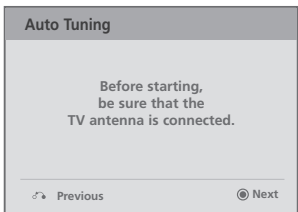
Step2. Selecting Language



Select **Language**.



Step4. Auto Tuning



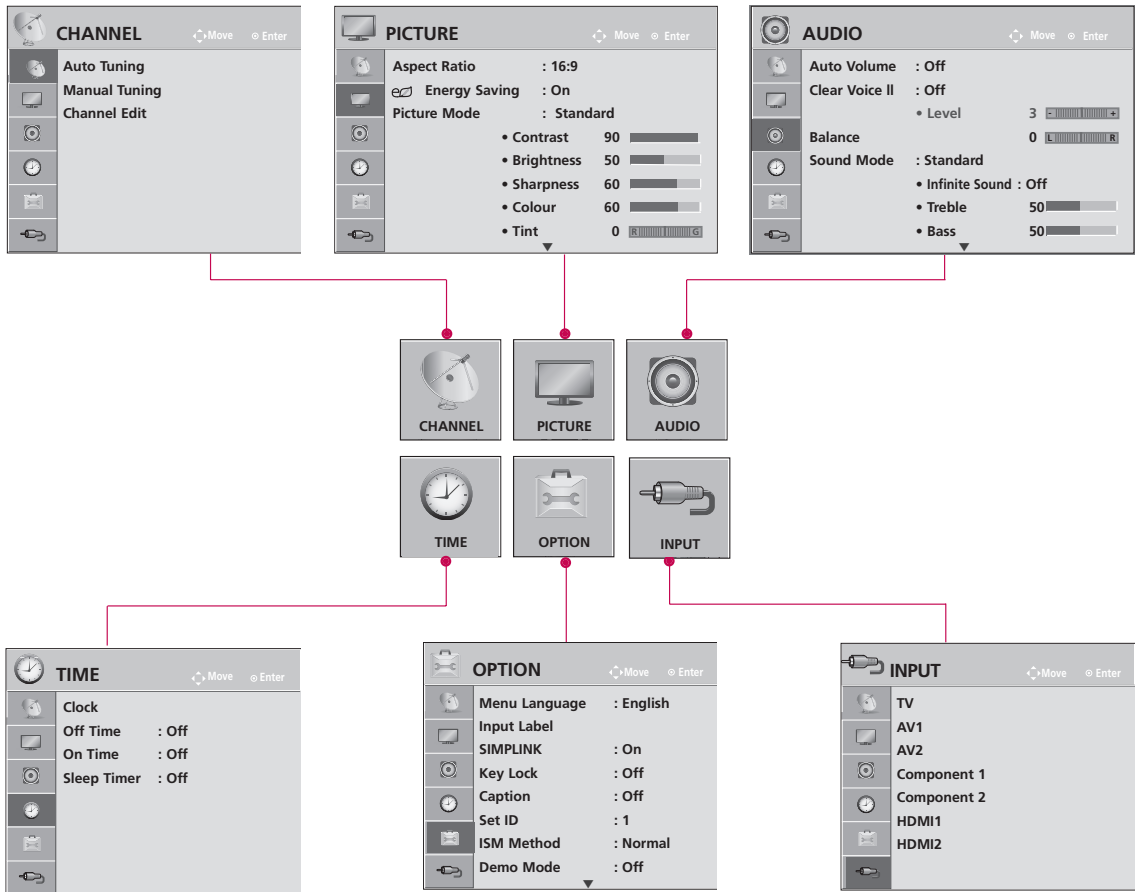
Start **Auto Tuning**.

For 42/50PJ250R

ON-SCREEN MENUS SELECTION AND ADJUSTMENT

■ Image shown may differ from your TV.

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

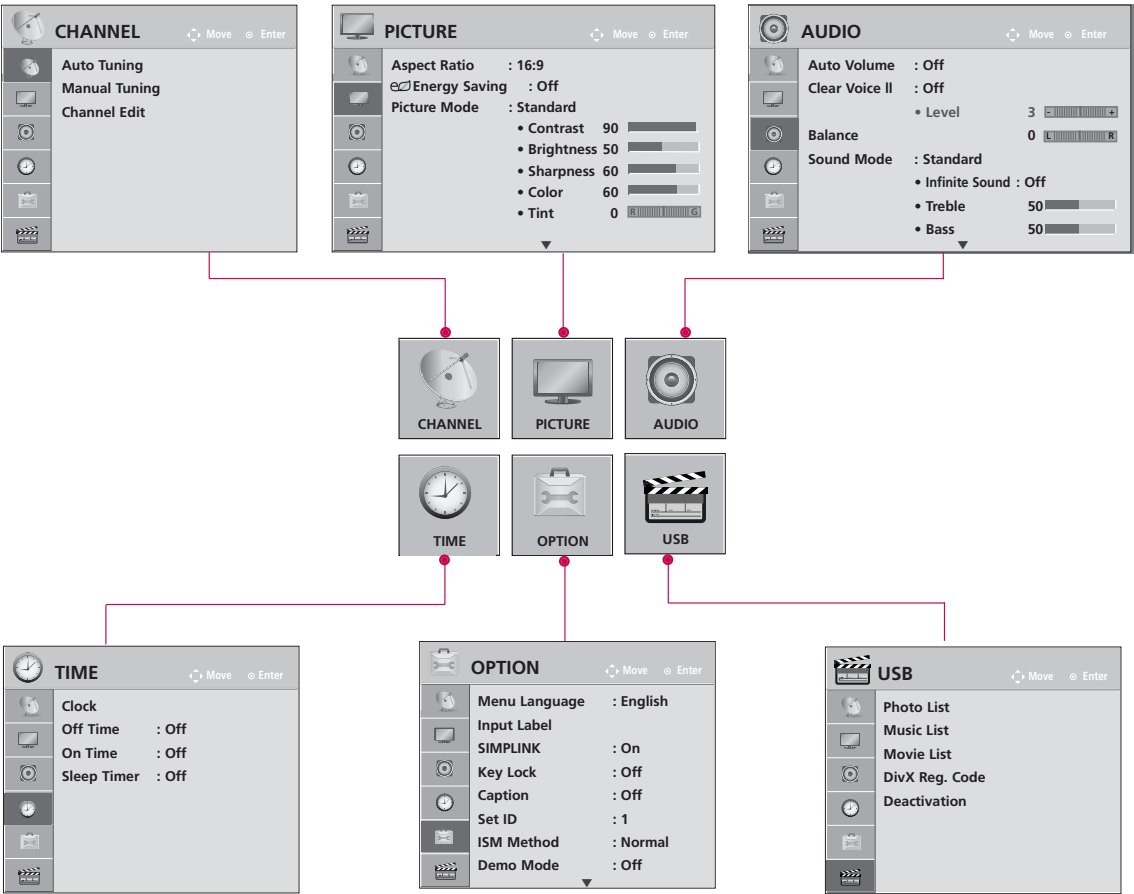








- 1 Display each menu.
- 2 Select a menu item.
- 3 Accept the current selection.
- 4 Return to TV viewing.

WATCHING TV / CHANNEL CONTROL

For 42/50PJ260R, 42/50PJ350R, 50/60PK550R ON-SCREEN MENUS SELECTION AND ADJUSTMENT

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



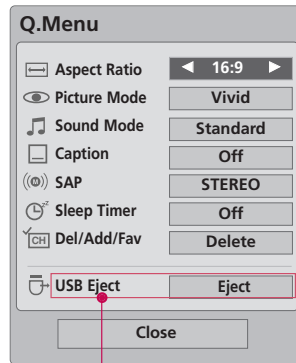
-   Display each menu.
-   Select a menu item.
-  Accept the current selection.
-  Return to TV viewing.

QUICK MENU





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

Q.Menu (Quick Menu) is a menu of features which users might use frequently.

- **Aspect Ratio:** Selects your desired picture format.
- **Picture Mode:** Selects the factory preset picture depending on the viewing environment.
- **Sound Mode:** Selects the factory preset sound for type of program.
- **Caption:** Select on or off.
- **SAP:** Selects MTS sound.
- **Sleep Timer:** Select the amount of time before your TV turns off automatically.
- **Del/Add/Fav:** Select channel you want to add/delete or add the channel to the Favorite List.
- **USB Eject:** Select "Eject" in order to eject a USB device.



Except 42/50PJ250R

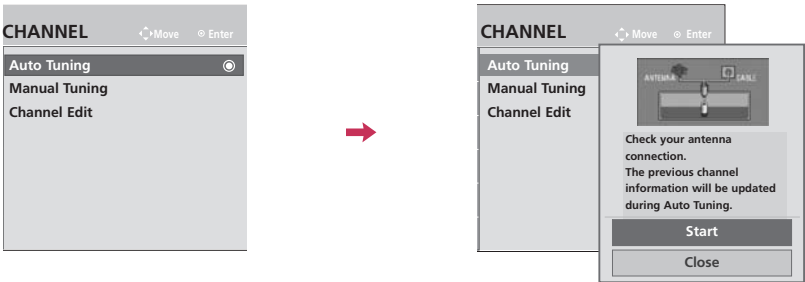
- 1   Display each menu.
- 2  Make appropriate adjustments.
- 3  Return to TV viewing.




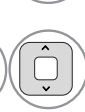

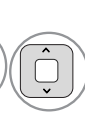



WATCHING TV / CHANNEL CONTROL

CHANNEL SETUP

Auto Scan (Auto Tuning)

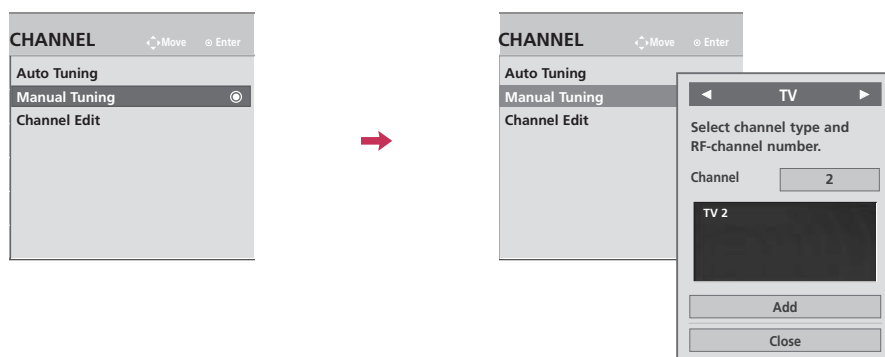
Automatically finds all channels available through antenna or cable inputs, and stores them in memory on the channel list.















-   Select **CHANNEL**.
-   Select **Auto Tuning**.
-   Select **Start**.
-  Run **Auto Tuning**.
-  Return to the previous menu.
-  Return to TV viewing.

- The TV will ask for a password if parental control has been activated (LOCK Menu). Use the password you set up in the LOCK Menu to allow a channel search.
- When setting the Auto tuning or Manual tuning, the number of maximum channel you can store is 200.
It is subject to change depending on the broadcasting signal environment.
- Memorizes all the available channels in the order of DTV, TV, CADTV and CATV.

Add/Delete Channel (Manual Tuning)



- 1   Select **CHANNEL**.
- 2   Select **Manual Tuning**.
- 3   Select **TV** or **CATV**.
- 4   Select channel you want to add or delete.
- 5   Select **Add** or **Delete**.
- 6  Return to the previous menu.
-  Return to TV viewing.

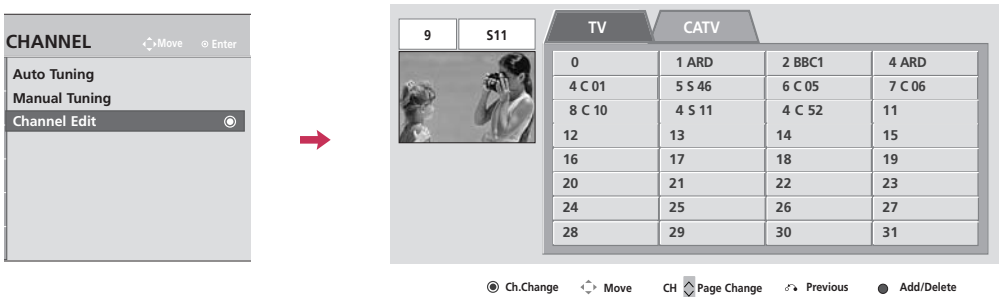
- The TV will ask for a password if parental control has been activated (LOCK Menu). Use the password you set up in the LOCK Menu to allow a channel search.
- When setting the Auto tuning or Manual tuning, the number of maximum channel you can store is 900.
It is subject to change depending on the broadcasting signal environment.
- Memorizes all the available channels in the order of DTV, TV, CADTV and CATV.

Channel Editing

The channels in the Custom List are displayed in black and the channels deleted from the Custom List are displayed in blue.

When a channel number is deleted, it means that you will be unable to select it using CH ^ or v 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.



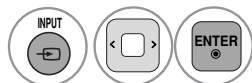
- 1 Select **CHANNEL**.
- 2 Select **Channel Edit**.
- 3 Select a channel.
- 4 Add or delete the channel.
- 5 Return to the previous menu.
- Return to TV viewing.

- Keep pressing the ^ button and use the < or > buttons to move between DTV, TV, CADTV and CATV.
- If the channel list is too long, use the CH ^ or v button to move between pages.

INPUT LIST

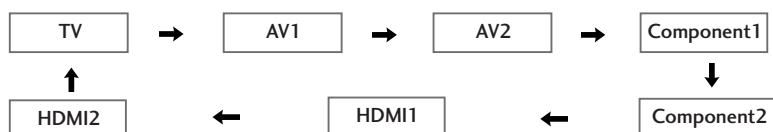


1

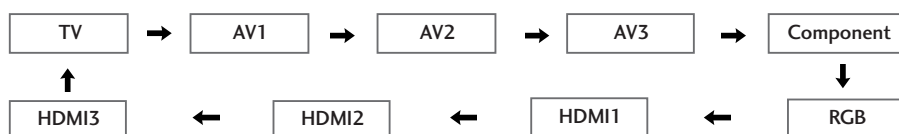


Select the desired input source.

42/50PJ250R



42/50PJ350R,
50/60PK550R

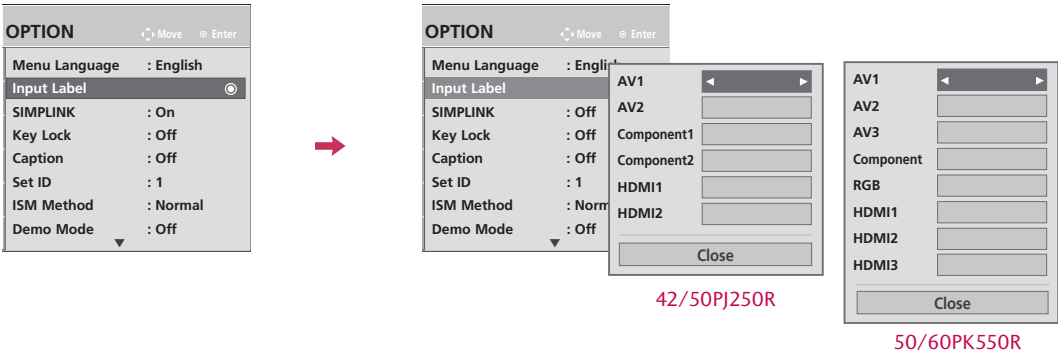


- **TV:** Select it to watch over-the-air and digital cable broadcasts.
- **AV:** Select them to watch a VCR or other external equipment.
- **Component:** Select them to watch DVD or a Digital set-top box.
- **RGB-PC:** Select it to view PC input.
- **HDMI:** Select them to watch high definition devices.

WATCHING TV / CHANNEL CONTROL

INPUT LABEL

You can set a label for each input source when it's not in use.



With using OPTION menu

- 1 Select **OPTION**.
- 2 Select **Input Label**.
- 3 Select the source.
- 4 Select the label.
- 5 Return to the previous menu.
- Return to TV viewing.

With using INPUT button

- 1 Select the source(except **TV**).
- 2 Select the label.
- 3 Return to the previous menu.
- Return to TV viewing.

CHANNEL LIST



You can check channels which are stored in the memory by displaying the channel list.





Displaying Channel List

- 1  Display the **Channel List**.

Selecting a channel in the channel list

- 1  Select a channel.
- 2  Switch to the chosen channel number.

Paging through a channel list

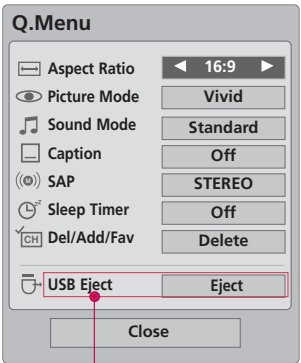
- 1  Turn the pages.
- 2 

WATCHING TV / CHANNEL CONTROL

FAVORITE CHANNEL SETUP

Favorite Channels are a convenient feature that lets you quickly select channels to channels of your choice without waiting for the TV to select through all the in-between channels.

To tune to a favorite channel, press the **FAV** (favorite) button repeatedly.



Except 42/50PJ250R

- 1 or Select your desired channel.
- 2 Select **Del/Add/Fav**.
- 3 Select **Favorite**.
- 4 Return to TV viewing.

FAVORITE CHANNEL LIST



Displaying the favorite channel list



Display the Favorite channel list.

Selecting a channel in the favorite channel list



Select a channel.



Switch to the chosen channel number.

Paging through a favorite channel list



Turn the pages.

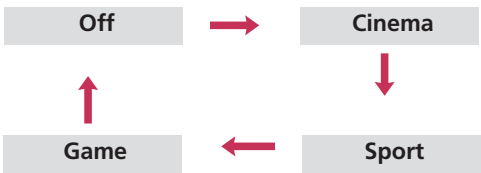


Return to TV viewing.

WATCHING TV / CHANNEL CONTROL

AV MODE

AV Mode toggles through preset Video and Audio settings.



Press the **AV MODE** button repeatedly to select the desired source.

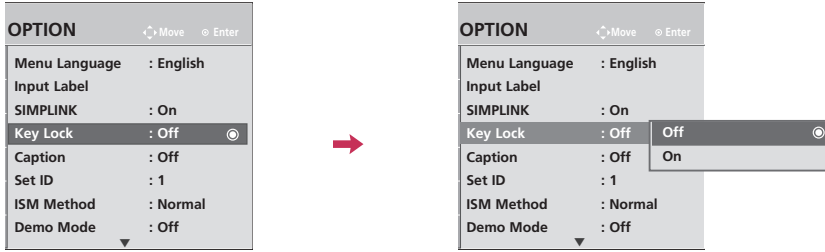
- If you select “**Cinema**” in AV mode, **Cinema** will be selected both for “**PICTURE** menu - Picture Mode” and “**AUDIO** menu - Sound Mode” respectively.
- If you select “**Off**” in AV mode, the “**Picture Mode**” and “**Sound Mode**” return to previous selected value.
- **Off**: Disables the AV MODE.
- **Cinema**: Optimizes video and audio for watching movies.
- **Sport**: Optimizes video and audio for watching sports events.
- **Game**: Optimizes video and audio for playing games.








KEY LOCK



The TV can be set up so that it can only be used with the remote control.

This feature can be used to prevent unauthorized viewing by locking out the front panel controls.

This TV is programmed to remember which option it was last set to even if you turn the TV off.



- 1   Select **OPTION**.
- 2   Select **Key Lock**.
- 3   Select **On** or **Off**.
- 4  Return to the previous menu.
-  Return to TV viewing.

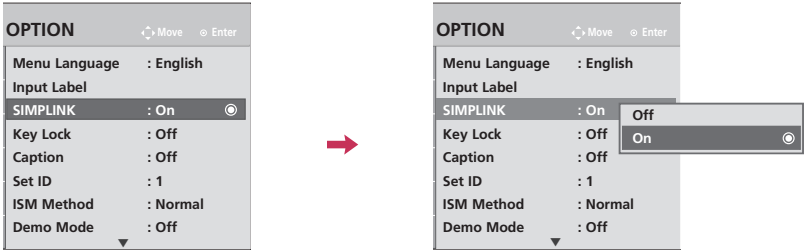
- In **Key Lock 'On'**, if the TV is turned off, to turn on the TV, press the **INPUT**, **CH** ^ v button on the TV or **POWER**, **INPUT**, **CH** ^ v or **NUMBER** buttons on the remote control.
- With the **Key Lock On**, the display '  **Key Lock** ' appears on the screen if any button on the front panel is pressed while viewing the TV (Except /I (power) button).

WATCHING TV / CHANNEL CONTROL



Simplink allows you to control and play other AV devices connected with HDMI cable without additional cables and settings. This TV may work with devices with HDMI-CEC support, but only devices with the are fully supported.

SIMPLINK can be turned on and off in the user menus.



- 1 Select **OPTION**.
- 2 Select **SIMPLINK**.
- 3 Select **On** or **Off**.
- 4 Return to the previous menu.
- Return to TV viewing.

NOTE


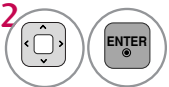
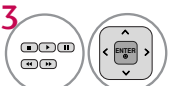
- ▶ Connect the HDMI/DVI IN or HDMI IN terminal of the TV to the rear terminal (HDMI terminal) of the SIMPLINK device with the HDMI cable.
- ▶ When you switch the Input source with the INPUT button on the remote control, the SIMPLINK device will stop.
- ▶ When you select a device with home theater functionality, the sound output automatically switches to the home theater speakers and the TV speakers are turned off.
- ▶ When the unit is connected to SIMPLINK Home Theater, set to Variable Out and turn off the TV Speaker to operate the Home Theater Speaker. At this time, the maximum volume of the Home Theater Speaker is set to the TV volume.

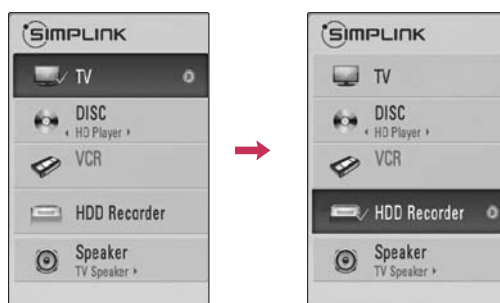
SIMPLINK Functions

- **Direct Play:** After connecting AV devices to the TV, you can directly control the devices and play media without additional settings.
- **Select AV device:** Enables you to select one of the AV devices connected to TV.
- **Disc playback:** Control connected AV devices by pressing the $\wedge \vee < >$, ENTER, \blacktriangleright , \blacksquare , II , \blacktriangleleft and \blacktriangleright buttons.
- **Power off all devices:** When you power off the TV, all connected devices are turned off.
- **Switch audio-out:** Offers an easy way to switch audio-out.
- **Sync Power on:** When you play the connected AV device, TV will automatically turn on.

(A device, which is connected to the TV through a HDMI cable but does not support SIMPLINK, does not provide this function)

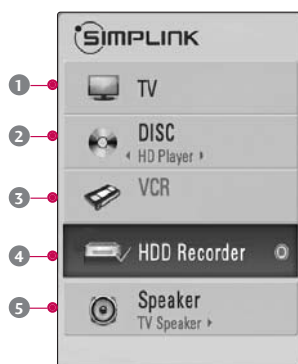
Note: To operate SIMPLINK, an HDMI cable over Version 1.3 with *CEC function should be used. (*CEC: Consumer Electronics Control).

- 1  Display **SIMPLINK** menu.
- 2  Select the desired device.
- 3  Control connected AV devices.



SIMPLINK Menu

- 1 **TV viewing:** Switch to the previous TV channel regardless of the current mode.
- 2 **DISC playback:** Select and play discs. When multiple discs are available, the titles of discs are conveniently displayed at the bottom of the screen.
- 3 **VCR playback:** Control the connected VCR.
- 4 **HDD Recordings playback:** Control recordings stored in HDD.
- 5 **Audio Out to Home Theater speaker/Audio Out to TV:** Select Home Theater speaker or TV speaker for Audio Out.



- ▶ When no device is connected (displayed in gray)
- ▶ Selected Device
- ▶ When a device is connected (displayed in bright color)

USB - Except 42/50PJ250R

- Image shown may differ from your TV.

ENTRY MODE

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

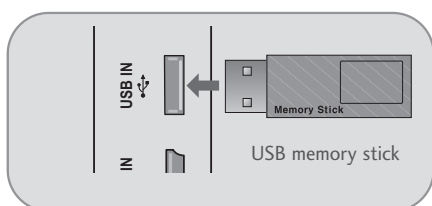
“POP UP MENU” will not be displayed while the OSD including Menu is activated.

In USB device, you can not add a new folder or delete the existing folder.

- Here shown may be somewhat different from your TV.

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

- This TV Supports on JPEG and MP3.



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



- 3

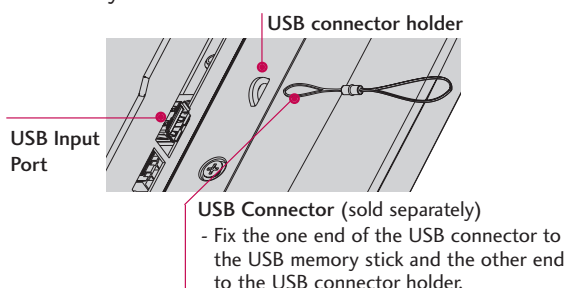
When removing the USB device

Select the USB Eject menu before removing the USB device.

- 1 Select **EJECT**
- 2

NOTE

- In order to avoid losing the USB memory stick, use the USB connector(sold separately) to fix the USB memory stick to the USB connector holder of the TV.



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.
- ▶ 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.
- ▶ Please do not connect the USB storage device which was artificially maneuvered on the PC. The device may cause the product to malfunction or fail to be played. Never forget to use only a USB storage device which has normal music files or image files.
- ▶ Please use only a USB storage device which was formatted as a FAT16, FAT32, NTFS file system provided with the Windows operating system. In case of a storage device formatted as a different utility program 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.
- ▶ Please connect power to a USB storage device 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 operated smoothly.
- ▶ Maximum of 200 files and folders can be recognized.
- ▶ Data in a USB storage device cannot be aligned.
Up to 128 English characters can be recognized as a file name.
- ▶ Please back up the important file because a data of USB device may be damaged. Data management is consumer's responsibility and in consequence the manufactures does not cover the product bearing data damage.
- ▶ If the USB is connected in Standby Mode, specific hard disk will automatically be loaded when the TV is turned on.
- ▶ The recommended capacity is 1 TB or less for a USB external hard disk and 32GB or less for USB memory.
- ▶ TV need more time to detect if the storage size is bigger.
If the USB memory is connected in Standby Mode, power on time would be longer than without 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.
- ▶ When using a USB HDD via the USB extension cable, connect a support electric power source.

PHOTO LIST

You can view .JPG files from USB storage devices.
The On Screen Display on your model may be slightly different.

Supported photo file: *.JPG



Baseline: Max 4800 x no limit

- You can play JPG files only.
- Only baseline scan is supported among JPG. (SOF0, SOF1 only)
- Non-supported files are displayed in the form of bitmap.

USB




Screen Components

1



Select **USB**.

2



Select **Photo List**.

1

Moves to upper level folder

2

Current page/Total pages

3

Total number of marked photos

4


Corresponding buttons on the remote control

Photo List

Page 2/3 ☒ No Marked

Drive1

JMJ001



1366x768, 125KB

Up Folder

Up Folder

KY101 09/10/2008

KY102 09/10/2008

JMJ001 09/10/2008

JMJ002 09/10/2008

JMJ003 09/10/2008

JMJ004 09/10/2008

KY103 09/10/2008

KY104 09/10/2008

KY105 09/10/2008

JMJ005 09/10/2008

JMJ006 09/10/2008

JMJ007 09/10/2008

JMJ008 09/10/2008

Navigation

Popup Menu

Page Change

Mark







Exit

60

Photo Selection and PopUp Menu



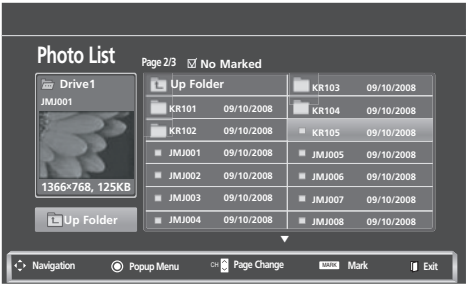
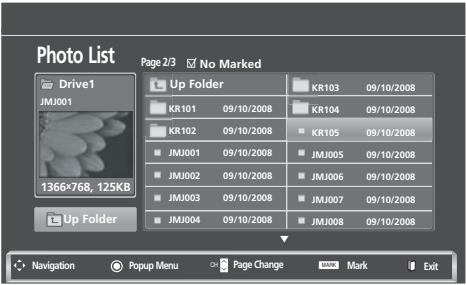
- ▶ **View** : Display the selected item.
- ▶ **Mark All** : Mark all photos on the screen.
- ▶ **Unmark All** : Deselect all marked photos.
- ▶ **Delete** or **Delete Marked** : Delete the selected photo item.
- ▶ **Close** : Close the pop-up menu.

- 1  Select the target folder or drive.
- 2   Select the desired photos.
- 3  Show the PopUp menu.
- 4   Select the desired PopUp menu.







- Use the **CH** ^ v button to navigation in the photo page.
- Use the **MARK** button to mark or unmark a photo. 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.

Set up the menu in Full-Sized Screen

You can change the settings to display photos stored on a USB device, on a full-sized screen.
Detailed operations are available on full-sized photo view screen.




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




6

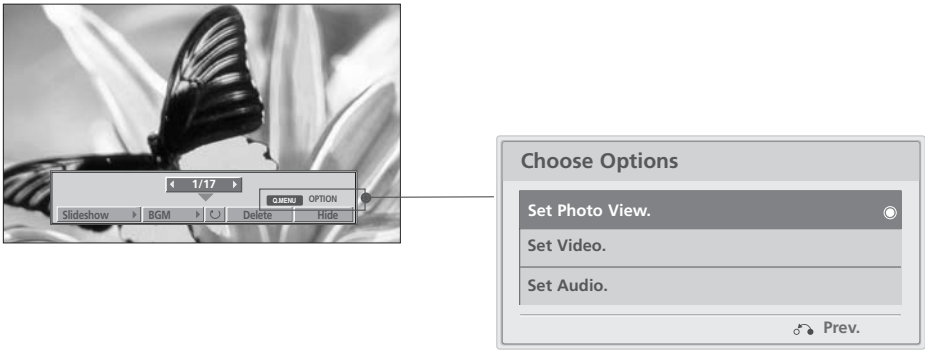


Select the **Slideshow**, **BGM**,  (**Rotate**), **Delete** or **Hide**

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




- **Slideshow** : When no picture is selected, all photos in the current folder are displayed during slide show. When selected, the selected photos 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.
- **Hide** : Hide the menu on the full-sized screen.
 - To see the menu again on the full-sized screen, press **OK** button to display.

Using the Photo List function



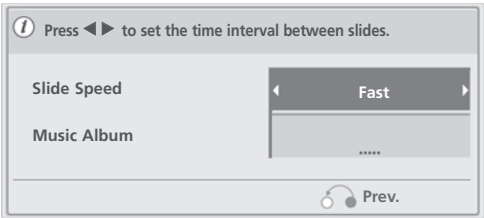
NOTE





► If you select “Off” for TV speaker, **Set Audio** features in Choose Options will not work.

- 1  Show the PopUp menu.
- 2   Select **Set Photo View**, **Set Video** or **Set Audio**.

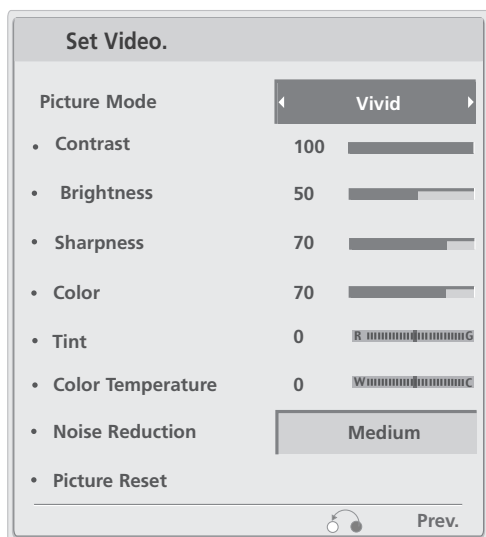
► When you select the **Set Photo View**,





- You cannot change **Music Folder** while BGM is playing.



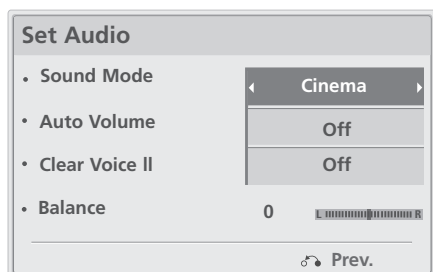
- 1   Show the **Slide Speed** or **Music Album**.
- 2   Make appropriate adjustments.





► When you select the **Set Video**,



- 1   Show the **Picture Mode**.
- 2   Make appropriate adjustments.

► When you select the **Set Audio**,



- 1   Show the **Sound Mode, Auto Volume, Clear Voice II** and **Balance**.
- 2   Make appropriate adjustments.

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
MPEG1 layer 3: 32 KHz ~ 48 KHz

USB




Screen Components

1



Select **USB**.

2



Select **Music List**

1

Moves to upper level folder

2

Current page/Total pages

3

Total number of marked music title


4

Corresponding buttons on the remote control

Music List


Page 2/3 ☒ No Marked ▲

Music S003



00:00/01:34

Up Folder



Title	Duration
Up Folder	
001. S001	03:33
003. S002	04:45
004. S003	01:30
006. S004	02:37
007. S005	01:58

▼

Navigation

● Popup Menu

Page Change

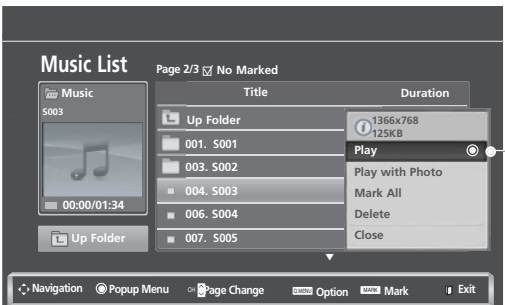
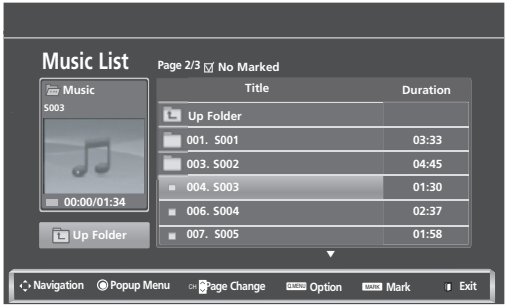
Option

Mark

Exit

Music Selection and PopUp Menu

As shown , up to 6 music titles are listed per page.



► **Play** (During stop) : Play the selected music titles.

Once a music finishes playing, the next selected one will be played. When there are no selected music titles to play, the next one in the current folder will be played.

► **Play Marked** : Play the selected music titles. Once a music finishes playing, the next selected one will be played automatically.

► **Stop Play** (During playback) : Stop the playing music titles.







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

► **Mark All** : Mark all music titles in the folder.

► **Unmark All** : Deselect all marked music titles.

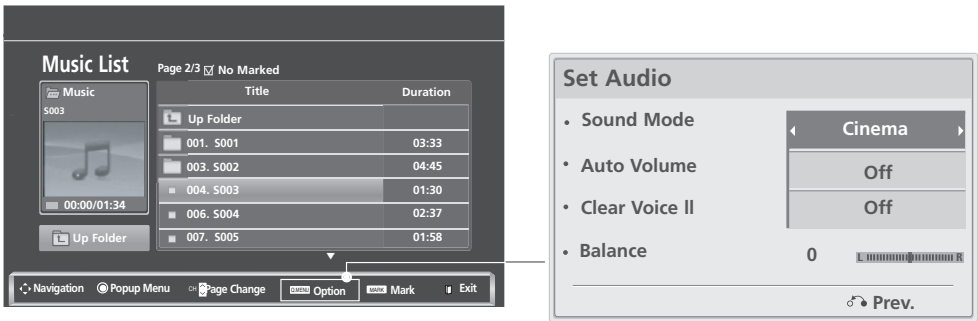
► **Delete** : Delete the selected music titles.

► **Close** : Close the pop-up menu.

- 1  Select the target folder or drive.
- 2   Select the desired music title
- 3  Show the PopUp menu.
- 4   Select the desired PopUp menu.

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

Using the Music List function, play



- 1 Show the **Sound Mode**.
- 2 Make appropriate adjustments.

- If you don't press any button for a while during the playing, the play information box (as shown in the below) will float as a screen saver.
- The 'Screen Saver'?
Screen saver is to prevent screen pixel damage due to an fixed image remaining on the screen for a extended period of time.



! NOTE

- ▶ When music is playing, is displayed in back of the music title.
- ▶ A damaged or corrupted music does not play but displays 00:00 in playtime.
- ▶ A music downloaded from a paid service with copyright protection does not start but displays inappropriate information in playtime.
- ▶ If you press **OK**, **■** buttons, screen saver is stopped.
- ▶ This TV can not play music files less than 32 Kbytes.
- ▶ The **PLAY(▶)**, **Pause(II)**, **■**, **▶▶**, **◀◀** buttons on the remote control are also available in this mode.
- ▶ You can use the **▶▶** button to select the next music and the **◀◀** button to select the previous music.
- ▶ If you select "Off" for TV speaker, **Set Audio** features in Choose Options will not work.

MOVIE LIST

The movie list is activated once USB 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 and user desired files.

Editing such as delete and add is not allowed.

It is a movie list that displays folder information and Divx file.

Supports up to four drives.

MOVIE(*.avi/*.Divx) supporting file

Video format : MPEG1 , MPEG2, MPEG4 (Doesn't support Microsoft MPEG4-V2, V3), DivX 3.xx , DivX 4.xx, DivX 5.xx , DivX VOD (DRM) , XviD, DivX 6.xx(Playback)

Audio format : Mpeg, Mp3, PCM, Dolby Digital.

Sampling frequency : 32k ~ 48kHz

Bit rate : 32k ~ 320kbps



Subtitle format : *.smi/ *.srt/ *.sub(MicroDVD, SubViewer 2.0)/ *.ass/ *.ssa/*.txt(DVD Subtitle System)

- Some user-created subtitles may not work properly.
- Time information in an external subtitle file should be arranged in ascending order to be played.
- 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.
- If the video and audio structure of recorded file is not interleaved, either video or audio is outputted.
- Playing a video via a USB connection that does not 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.
- DivX may not be played depending on its types or recording methods.
- If the video and audio structure of recorded file is not interleaved, either video or audio is outputted.
- **Max bitrate of playable DivX is 4Mbps.**
- Maximum FPS (Frame Per Second) can be reached only at SD level. FPS is 25 FPS (720*576) or 30 FPS (720*480) depending on Resolution.
- Files of 25 FPS or 30 FPS of higher may not be played properly.
- Files encoded with GMC(Global Motion Compensation) may not be played.
- Certain video files created with an encoder may not be played.
- Some of subtitle files that are not ordered in sequence may not be display.

Extension name	Video Codec	Audio Codec	Resolution
mpg, mpeg, mpe, vob, dat	MPEG1, MPEG2	AC3,MPEG,MP3,PCM	720x576@25p 720x480@30p
Avi, divx, m4v	MPEG 4-SP, MPEG4-ASP, Divx 3.xx,Divx 4.xx, Divx 5.xx, Divx 6.xx(Playback), Xvid	AC3,MPEG,MP3,PCM	




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 title

4

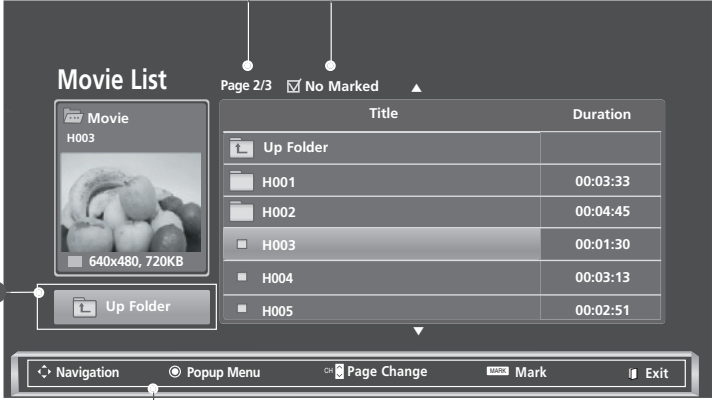
Corresponding buttons on the remote control

2

3

1

4

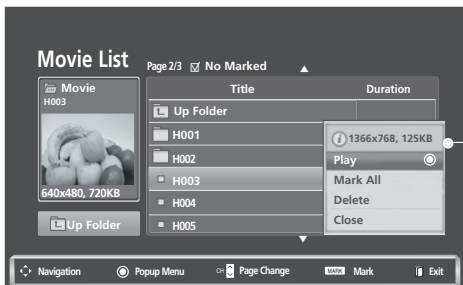
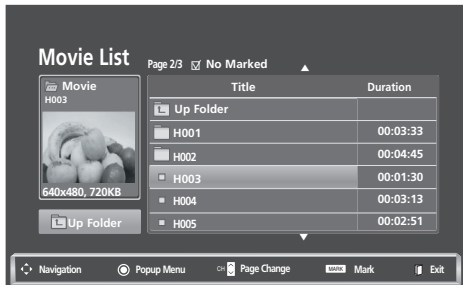


NOTE







- ▶ A DivX movie file and its subtitle file must be located in the same folder.
- ▶ A video file name and its subtitle file name must be identical for it to be displayed.
- ▶ Use the left/right (< / >) keys to move to a specific frame forward or backward while playing a movie.
(The left/right (< / >) keys may not work properly for some files while playing a movie.)

Movie Selection and PopUp Menu

As shown , up to 6 movie titles are listed per page.

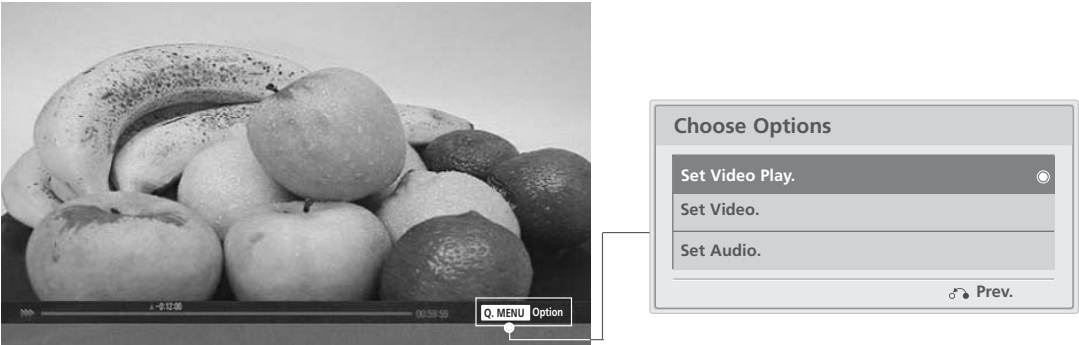





- **Play** : Play the selected movie titles. Divx Play is executed while screen changes.
- **Play Marked** : Play the selected movie titles. Once a movie finishes playing, the next selected one will be played automatically.
- **Mark All** : Mark all movie titles in the folder.
- **Unmark All** : Deselect all marked movie titles.
- **Delete** : Delete the selected movie titles.
- **Close** : Close the pop-up menu.

- 1  Select the target folder or drive.
- 2   Select the desired movie titles.
- 3  Show the PopUp menu.
- 4   Select the desired PopUp menu.

- In the case of files not supported, a message regarding non-supported file is displayed. This file is invalid.

Using the Movie List function, play







- 1  Show the PopUp menu.
- 2   Select **Set Video Play**, **Set Video** or **Set Audio**.

DivX Audio Language & Subtitle Language



- **Picture Size** : Selects your desired picture format during movie play.
- **Audio Language & Subtitle Language** : Changes the Language Group of the audio/subtitle during movie play.
- **Sync** : Adjusts the time synchronisation of the subtitle from -10 secs ~ +10 secs by steps of 0.5 secs during movie play.
- **Position** : Changes the position of the subtitle either up or down during movie play.

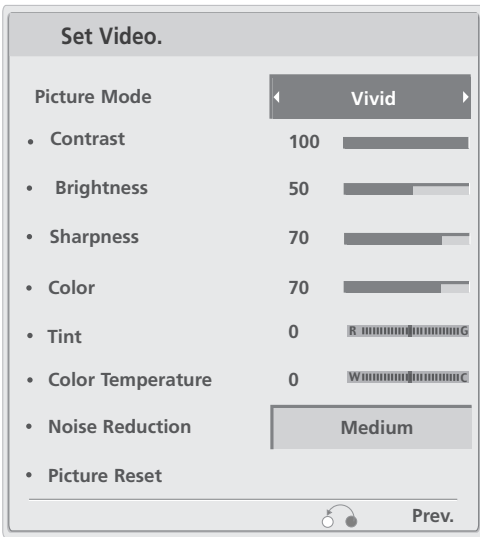
- 1   Show the **Picture Size**, **Audio Language**, or **Subtitle Language**.
- 2   Make appropriate adjustments.

Subtitle Language	Support Language
Latin1	French, Spanish, Catalan Basque, Portuguese, Italian, Albanian, Rhaeto-Romanic, Dutch, German, Danish, Swedish, Norwegian, Finnish, Faroese, Icelandic, Irish, Scottish, English
Latin2	Czech, Hungarian, Ploish, Romanian, Croatian, Slovak, Slovenian, Sorvian
Latin4	Estonian, the Baltic languages Latvian(Lettish) and Lithuanian, Greenlandic and Lappish
Latin5	English, Trukish
Cyrillic	Bulgarian, Byelorussian, Macedonian, Russian, Serbian and pre-1990 (no ghe with upturn) Ukrainian
Greek	English, modern Greek
Hebrew	English, modern Hebrew
Chinese	Chinese
Thai	Thai
Arabic	English, Arabic

! NOTE



- 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.



► When you select the **Set Video**,



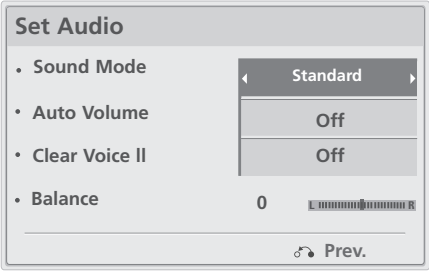
! NOTE

- **APR** mode is not supported in Set Video function.





1   Show the **Picture Mode**.

2   Make appropriate adjustments.





► When you select the **Set Audio**,



USB

- 1   Show the **Sound Mode**, **Auto Volume**, **Clear Voice II** and **Balance**.
- 2   Make appropriate adjustments.

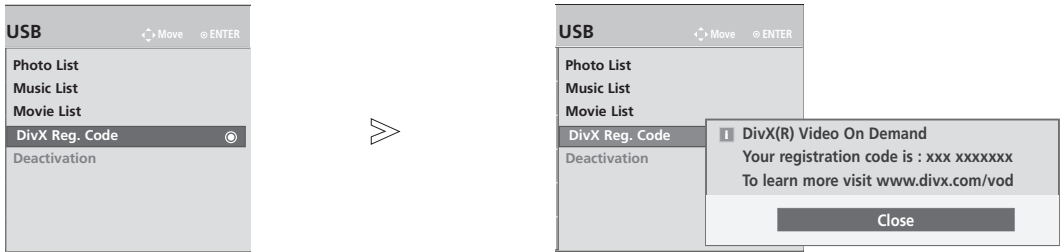
Using the remote control






	<p>When playing,</p> <p>repeatedly, press the REW(◀◀) button to speed up ◀◀ -> ◀◀◀ -> ◀◀◀◀ -> ◀◀◀◀◀ ->◀◀◀◀◀◀.</p> <p>repeatedly, press the FF(▶▶) button to speed up ▶▶-> ▶▶▶ -> ▶▶▶▶ -> ▶▶▶▶▶ -> ▶▶▶▶▶▶.</p> <ul style="list-style-type: none">■ Pressing these buttons repeatedly increases the fast forward/reverse speed.
	<p>During playback, press the Pause(II) button.</p> <ul style="list-style-type: none">■ Still screen is displayed.
	<ul style="list-style-type: none">■ When using the < or > button during playback a cursor indicating the position can be viewed on the screen.
	<p>Press the PLAY(▶) button to return to normal playback.</p>

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.

With a DivX registration code from other 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**.

- Press the **MENU/EXIT** button to return to normal TV viewing.
- Press the **BACK** button to move to the previous menu screen.



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



ABOUT DIVX VIDEO: DivX is a digital video format created by DivX, Inc. This is an official DivX Certified device that plays DivX video. Visit www.divx.com for more information and software tools to convert your files into DivX video.

ABOUT DIVX VIDEO-ON-DEMAND: This DivX Certified device must be registered in order to play DivX Video-on-Demand (VOD) content. To generate the registration code, locate the DivX VOD section in the device setup menu. Go to vod.divx.com with this

code to complete the registration process and learn more about DivX VOD.

DivX Certified to play DivX video, including premium content

"Pat. 7,295,673; 7,460,688; 7,519,274"

! NOTE

Supported movie file

Resolution : under 720x480(720x576) WxH pixels.

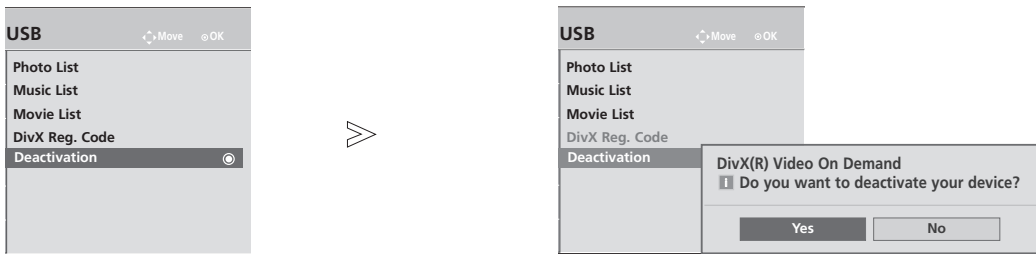
Frame rate : under 30 frames/sec








- ▶ Video Codec : MPEG1, MPEG2, MPEG4 (Doesn't support Microsoft MPEG4-V2, V3), DivX3.xx, DivX4.xx, DivX5.xx, DivX VOD(DRM), XviD, DivX 6.xx (Playback)
- ▶ 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.

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** or **No**.
- 4 

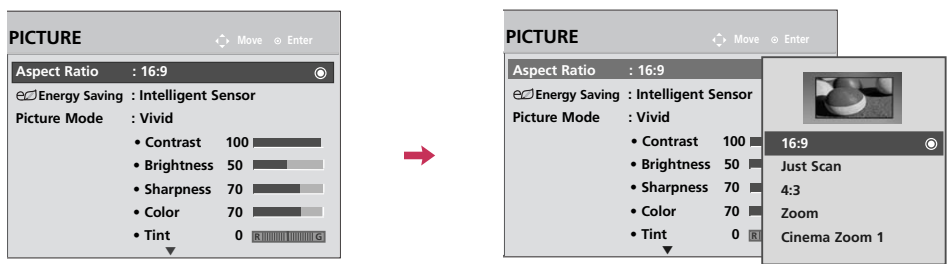
- Press the **MENU/EXIT** button to return to normal TV viewing.
- Press the **BACK** button to move to the previous menu screen.









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 input source use 4:3 or 16:9 aspect ratio.



-   Select **PICTURE**.
-   Select **Aspect Ratio**.
-   Select the desired picture format.
-  Return to the previous menu.
-  Return to TV viewing.

- You can also adjust **Aspect Ratio** in the **Q.MENU**.
- Press the **RATIO** button repeatedly to select the desired picture format.

16:9

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



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 in Component/HDMI/DVI(720p/1080i/1080p) input source.



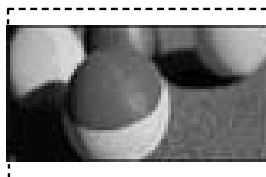
4:3

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



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.



Cinema Zoom1

Choose Cinema Zoom when you want to enlarge the picture in correct proportion.

Note: When enlarging or reducing the picture, the image may become distorted.

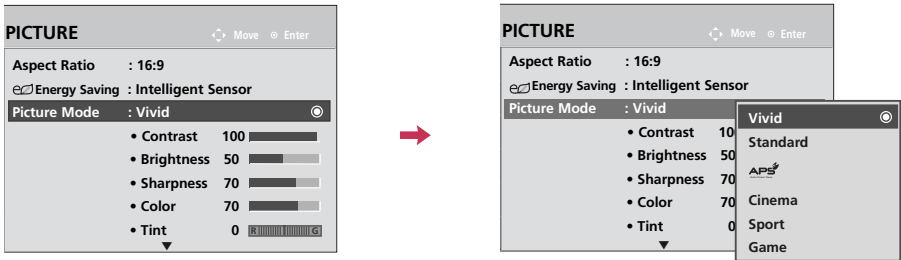
■ < or > button: Adjust enlarge proportion of Cinema Zoom. The adjustment range is 1-16.











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.

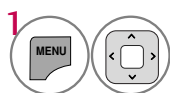
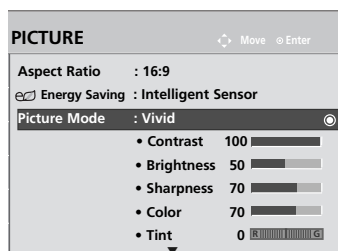


- 1   Select **PICTURE**.
- 2   Select **Picture Mode**.
- 3   Select **Vivid, Standard, APS, Cinema, Sport, or Game**.
- 4  Return to the previous menu.
-  Return to TV viewing.

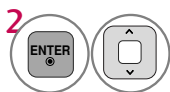
- **Vivid, Standard, APS, Cinema, Sport, and Game** Settings are preset for the optimum picture quality at the factory.
- You can also adjust **Picture Mode** in the **Q. Menu**.
- **Vivid:** This is the mode to maximize the effect of the video in the retail store. Strengthen the contrast, brightness, sharpness and color for vivid picture.
- **Standard:** This is the mode to realize optimum viewing condition for the general user.
- **APS:** This mode maximizes reducing the power consumption without hurting the picture quality.
- **Cinema:** This mode optimizes video for watching movies.
- **Sport:** This is the video mode to emphasize dynamic video and primary color (Ex, 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.

MANUAL PICTURE ADJUSTMENT (USER MODE)

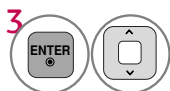
Adjust the picture appearance to suit your preference and viewing situations.



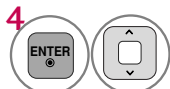
Select **PICTURE**.



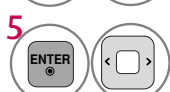
Select **Picture Mode**.



Select **Vivid**, **Standard**, **APR**, **Cinema**, **Sport** or **Game**.



Select **Contrast**, **Brightness**, **Sharpness**, **Color**, **Tint** or **Color Temperature**.



Make appropriate adjustments.



Return to the previous menu.



Return to TV viewing.

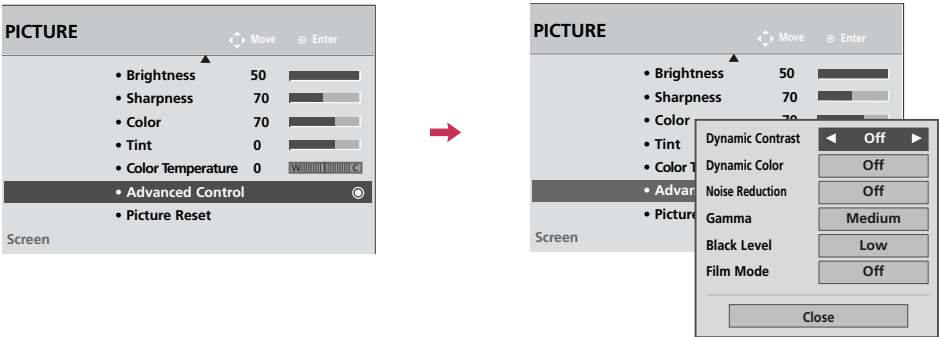
- **Contrast:** Increase or decrease the gradient of the video signal. You may use Contrast when the bright part of picture is saturated.
- **Brightness:** Increases or decreases the black level of video signal. You may use Brightness when the black level of the picture is not visible.
- **Sharpness:** 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.
- **Color Temperature:** Set to warm to enhance hotter colors such as red, or set to cool to make picture bluish.

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.



42/50PJ250R

-   Select **PICTURE**.
-   Select **Advanced Control**.
-   Select your desired options.
-  Select your desired options.
-  Return to the previous menu.
-  Return to TV viewing.

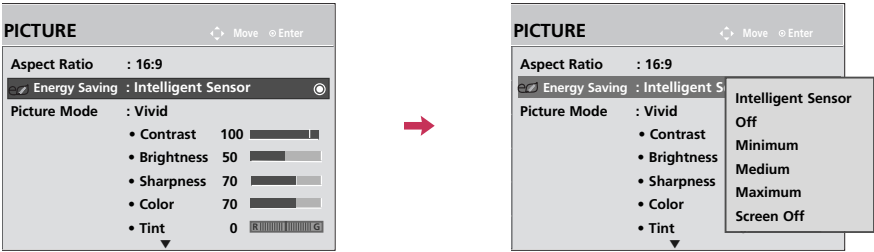
Color Temperature (Except 42/50P/250R)	<ul style="list-style-type: none"> ■ Set to warm to enhance hotter colors such as red, or set to cool to make picture bluish.
Dynamic Contrast	<ul style="list-style-type: none"> ■ Adjusts the contrast to keep it at the best level according to the brightness of the screen. The picture is improved by making bright parts brighter and dark parts darker.
Dynamic Color	<ul style="list-style-type: none"> ■ 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	<ul style="list-style-type: none"> ■ Reduces screen noise without compromising video quality.
Gamma	<p><i>Low : Make dark and middle gray level area of the picture brighter.</i> <i>Medium: Express original picture levels.</i> <i>High: Make dark and middle gray level area of the picture darker.</i></p> <ul style="list-style-type: none"> ■ You can adjust brightness of dark area and middle gray level area of the picture.
Black Level	<p><i>Low: The reflection of the screen gets darker.</i> <i>High: The reflection of the screen gets brighter.</i> <i>Auto: Realizing the black level of the screen and set it to High or Low automatically.</i></p> <ul style="list-style-type: none"> ■ Set black level of the screen to proper level. ■ This function enables to select 'Low' or 'High' in the following mode: TV, AV, HDMI or Component. Otherwise, 'Black level' is set to 'Auto'.
Film Mode	<ul style="list-style-type: none"> ■ Makes video clips recorded in film look more natural. ■ DVD and Blu-ray movies are filmed at 24 frames per second.










PICTURE CONTROL

ENERGY SAVING

It reduces the TV's power consumption.

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



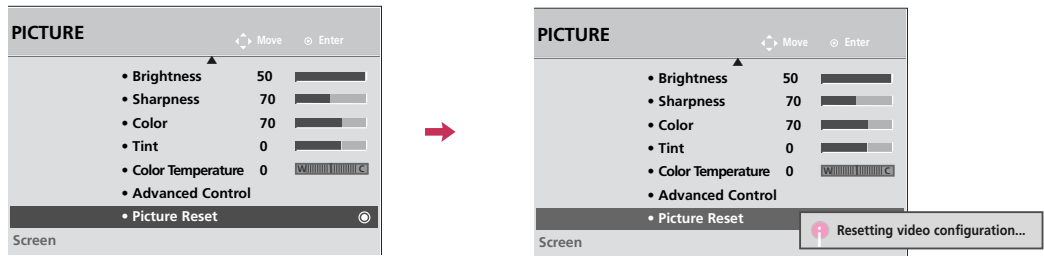
- 1   Select **PICTURE**.
- 2   Select  **Energy Saving**.
- 3   Select **Intelligent Sensor**, **Off**, **Minimum**, **Medium**, **Maximum** or **Screen off**.
- 4  Return to the previous menu.
-  Return to TV viewing.







■ **Intelligent sensor?**

- This function automatically adjusts the brightness of screen to the most suitable picture according to the surrounding conditions.
- You can also press the **ENERGY SAVING** button on the remote control.
- When selecting **Screen off**, TV turned off after 3 seconds.

PICTURE RESET

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

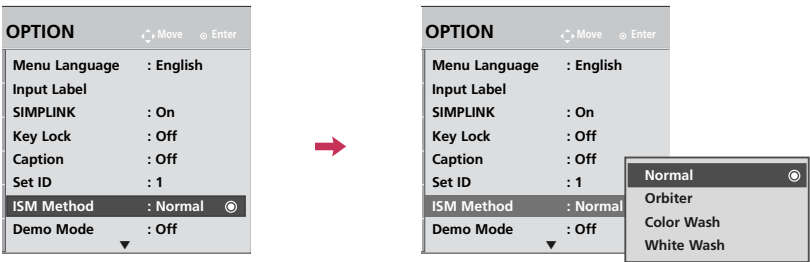


- 1   Select **PICTURE**.
- 2   Select **Picture Reset**.
- 3  Initialize the adjusted value.
- 4  Return to TV viewing.

PICTURE CONTROL

IMAGE STICKING MINIMIZATION (ISM) METHOD

A frozen still picture displayed on the screen for prolonged periods can result in a ghost image. You can use Orbiter to help prevent image sticking. The other two functions are for removing a ghost image.



- 1 Select **OPTION**.
- 2 Select **ISM Method**.
- 3 Select **Normal, Orbiter, Color Wash** or **White Wash**.
- 4 Return to the previous menu.
- Return to TV viewing.

- **Normal:** If image sticking is never a problem, ISM is not necessary - set to Normal.
- **Orbiter:** Orbiter may help prevent ghost images. However, it is best not to allow any fixed image to remain on the screen. To avoid a ghost image on the screen, the image will move every 2 minutes.
- **Color Wash:** The color block with the screen moved a little and the white pattern are alternately displayed. It is difficult to sense the afterimage occurred while the temporary afterimage is removed and the color pattern is operating.
- **White Wash:** White Wash removes ghost images from the screen. Use sparingly. Watch the TV normally for a while before using this feature to see if the ghost image disappears on its own.

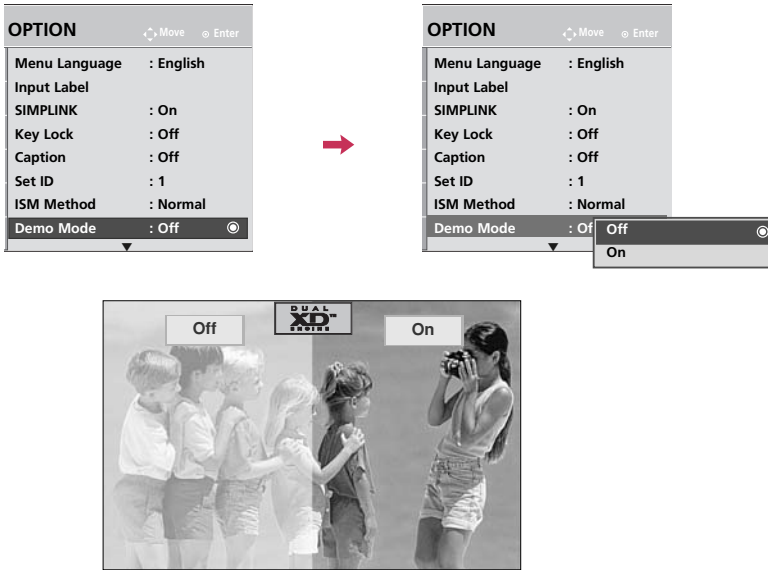
! NOTE








- An excessive ghosted image may be impossible to clear entirely with Color Wash and White Wash. To return to normal viewing, press any button.

DEMO MODE

Use it to see the difference between XD Demo on and XD Demo off.

This feature is disabled in **“Mode Setting - Home Use”**.

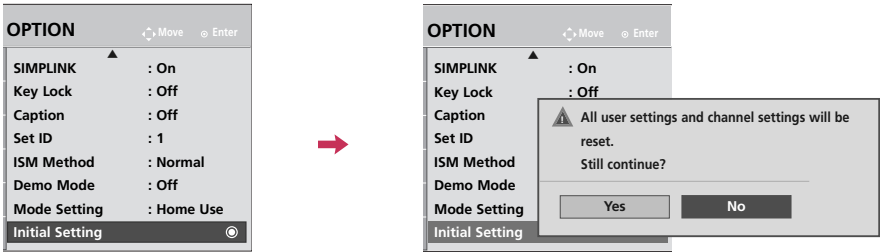










- 1   Select **OPTION**.
- 2   Select **Demo Mode**.
- 3   Select **On**.
Demo Mode starts.
- 4  Return to TV viewing.
If you want to stop the demo, press any button.

PICTURE CONTROL

INITIAL SETTING (FACTORY RESET)

Use to quickly reset all the menu options to their original factory preset values.
All user settings and channel settings will be reset.



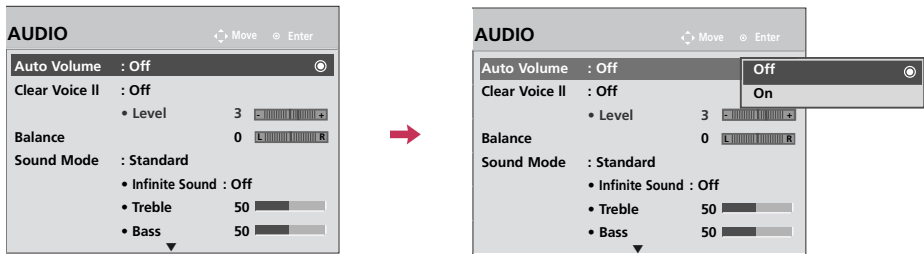
-   Select **OPTION**.
-   Select **Initial Setting**.
-   Select **Yes** or **No**.
-  Return to the previous menu.
-  Return to TV viewing.








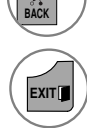
SOUND & LANGUAGE CONTROL

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.

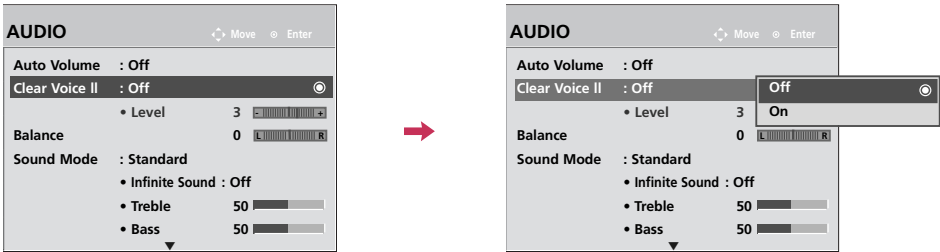


- 1   Select **AUDIO**.
- 2   Select **Auto Volume**.
- 3   Select **On** or **Off**.
- 4  Return to the previous menu.
-  Return to TV viewing.

SOUND & LANGUAGE CONTROL

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**.

- If you select “**Clear Voice II-On**”, **Infinite Sound** feature will not work.
- The adjustment range is -6 ~ 6.

Adjustment for Clear Voice II Level With selecting On

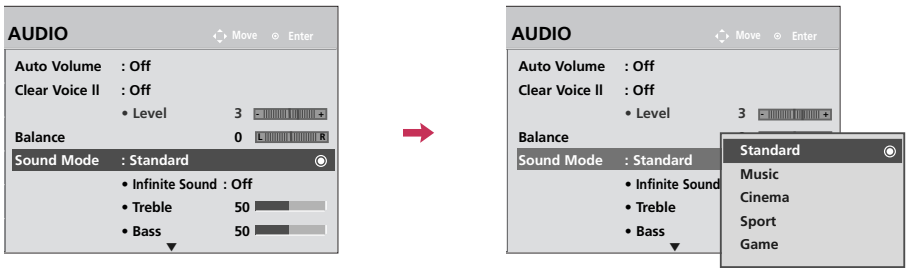
This feature adjusts the voice level.









- 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.

Standard, Music, Cinema, Sport, and Game are preset for optimum sound quality at the factory.



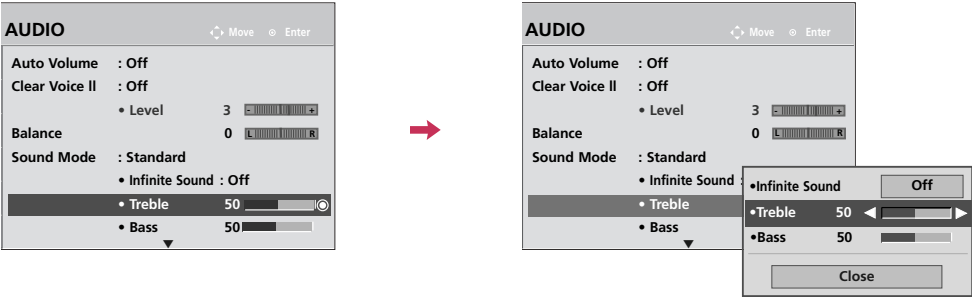
- 1   Select **AUDIO**.
- 2   Select **Sound Mode**.
- 3   Select **Standard, Music, Cinema, Sport, or Game**.
- 4  Return to the previous menu.
-  Return to TV viewing.

- 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.

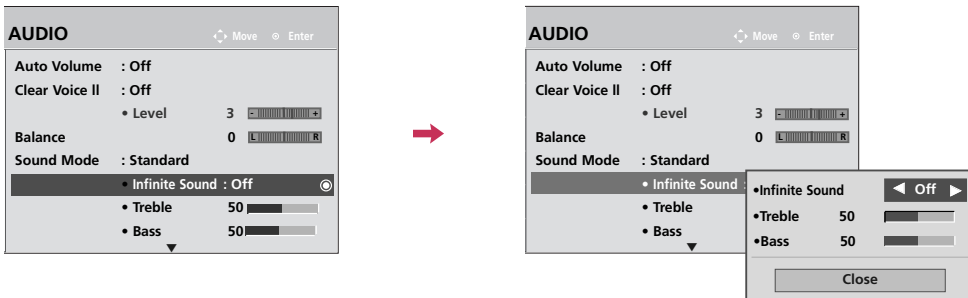


-   Select **AUDIO**.
-   Select **Sound Mode**.
-   Select **Standard, Music, Cinema, Sport, or Game**.
-   Select **Treble or Bass**.
-   Make appropriate adjustments.
-  Return to the previous menu.
-  Return to TV viewing.

INFINITE SOUND

Select this option to sound realistic.


Adjust the sound to suit your taste and room situations.




1   Select **AUDIO**.

2   Select **Infinite Sound**.

3   Select **On** or **Off**.

4  Return to the previous menu.

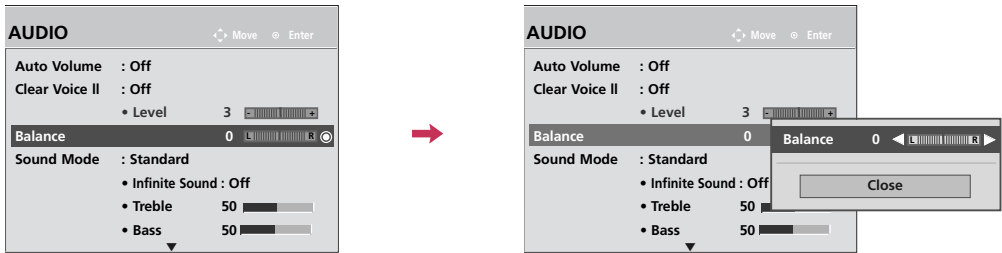
 Return to TV viewing.









■ 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.

SOUND & LANGUAGE CONTROL

BALANCE

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

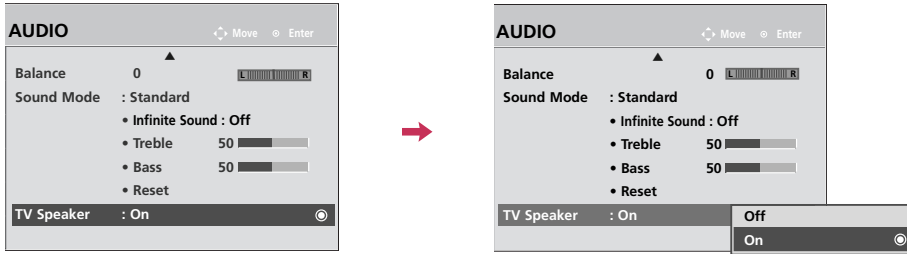



-   Select **AUDIO**.
-   Select **Balance**.
-   Make appropriate adjustments.
-  Return to the previous menu.
-  Return to TV viewing.

TV SPEAKERS ON/OFF SETUP

Turn the TV speakers off if using external audio equipment.

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



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

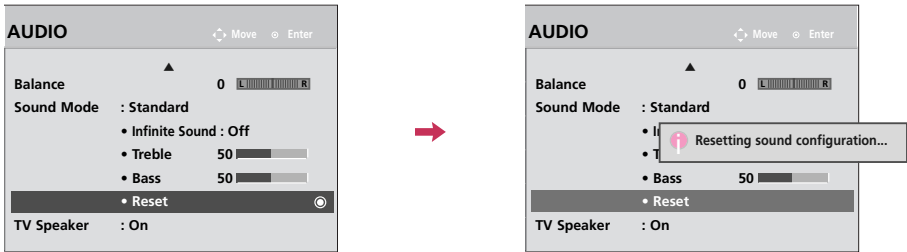
! NOTE







- ▶ When the TV speaker is turned off while the Simplink home theater is operating, the sound output automatically switches to the home theater speaker, but when the TV speaker is turned on, the sound outputs to the TV speaker.

SOUND & LANGUAGE CONTROL

AUDIO RESET

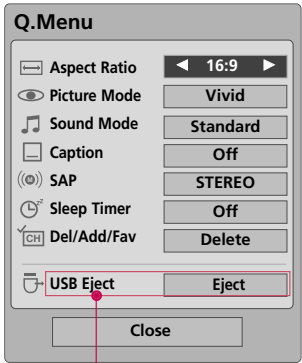
Settings of the selected Sound Mode return to the default factory settings.







-   Select **AUDIO**.
-   Select **Reset**.
-  Initialize the adjusted value.
-  Return to TV viewing.

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.



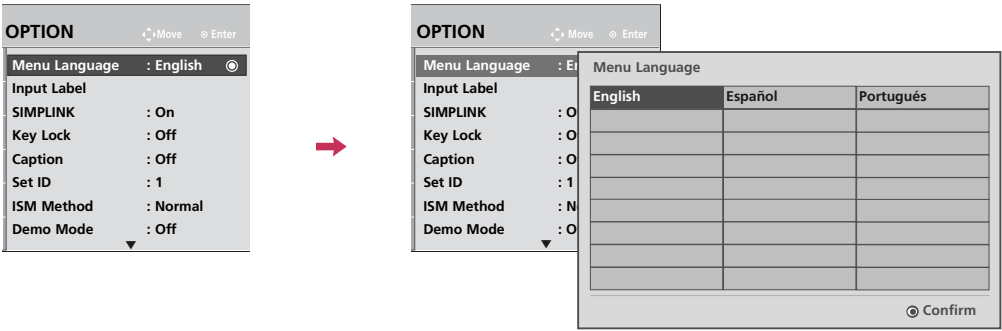
Except 42/50PJ250R









-   Select **SAP**.
-  Select **MONO, STEREO, or SAP**.
-  Return to TV viewing.

SOUND & LANGUAGE CONTROL

ON-SCREEN MENUS LANGUAGE SELECTION

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

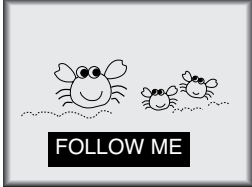


-   Select **OPTION**.
-   Select **Menu Language**.
-   Select your desired language.
From this point on, the on-screen menus will be shown in the selected language.
-  Return to the previous menu.
-  Return to TV viewing.

CLOSED CAPTIONS

Closed captioning is a process which converts the audio portion of a television program into written words which then appear as subtitles on the television screen. Closed captions allow viewers to read the dialogue and narration of television programs.

Using Closed Captions

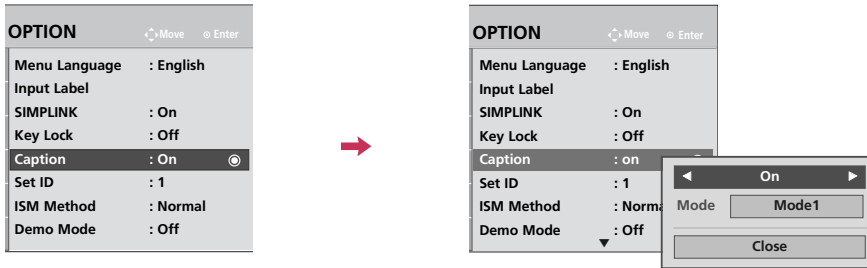


Captions are the subtitles of the dialogue and narration of television programs. For pre-recorded programs, program dialogue can be arranged into captions in advance. Its possible to caption a live program by using a process called real-time captioning, which creates captions instantly. Real-time captioning is normally done by professional reporters using a machine shorthand system and computer for translation into English. Captioning is an effective system for the hearing-impaired, and it can also aid in teaching language skills.

- The picture at left shows a typical caption.

Caption Tips

- Not all TV broadcasts include closed caption signals.
- Sometimes TV stations broadcast four different caption signals on the same channel. By selecting Mode1 to Mode2, you can choose which signal you view. Mode1 is usually the signal with the captions, while another mode might show demonstration or programming information.
- Your TV might not receive caption signals normally in the following situations.



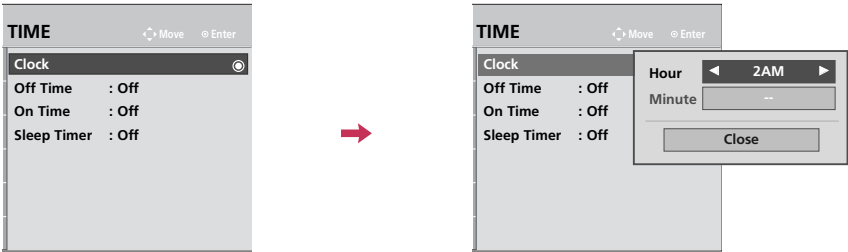
- 1 Select **OPTION**.
- 2 Select **Caption**.
- 3 Select **On** or **Off**.
- 4 Select **Mode1-2** or **Text1-2**.
- 5 Return to the previous menu.
- Return to TV viewing.









TIME SETTING


CLOCK SETTING

Clock Setup

You must set the time correctly before using on/off timer function.



-   Select **TIME**.
-   Select **Clock**.
-   Select and set **Hour** or **Minute**.
-  Return to the previous menu.
-  Return to TV viewing.

■ If this TV is unplugged once or turn off with the  (power) button on the TV, reset the Clock function.

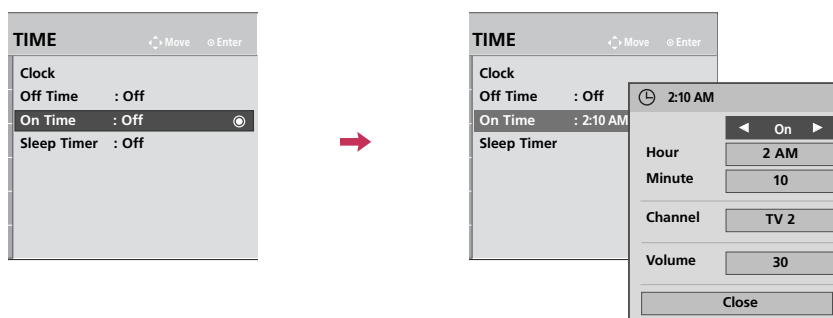
ON/OFF TIME SETTING








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 and set **Hour** or **Minute**.

■ To cancel **On/Off Time** function, select **Off**.

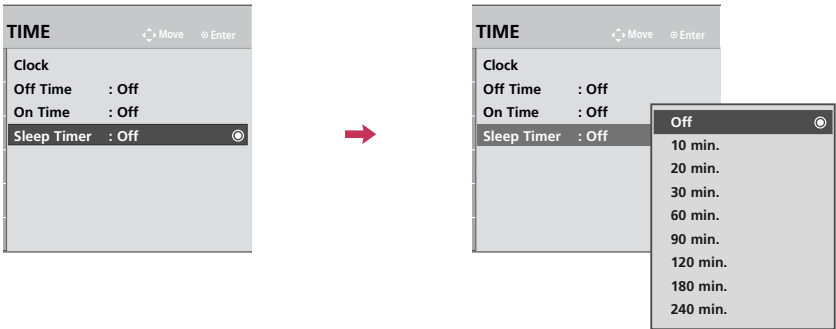
■ Only for On Time function









- 4    Select and set **Channel** or **Volume**.
- 5  Return to the previous menu.
-  Return to TV viewing.

TIME SETTING

SLEEP TIMER SETTING

The Sleep Time 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.

- You can also adjust **Sleep Timer** in the **Q.MENU**.
- Press the **SLEEP** button repeatedly to select the number of minutes. (Except 42/50P/250R)

APPENDIX

TROUBLESHOOTING

The operation does not work normally.	
The remote control doesn't work	<ul style="list-style-type: none">■ Check to see if there is any object between the product and the remote control causing obstruction. Ensure you are pointing the remote control directly at the TV.■ Ensure that the batteries are installed with correct polarity (+ to +, - to -).■ Ensure that the correct remote operating mode is set: TV, VCR etc.■ Install new batteries. <p>*This feature is not available for all models.</p>
Power is suddenly turned off	<ul style="list-style-type: none">■ Is the sleep timer set?■ Check the power control settings. Power interrupted.■ TV will be automatically turned off, in case of no signal for 15 minutes.

The video does not work.	
No picture & No sound	<ul style="list-style-type: none">■ Check whether the product is turned on.■ Try another channel. The problem may be with the broadcast.■ Is the power cord inserted into wall power outlet?■ Check your antenna direction and/or location.■ Test the wall power outlet, plug another product's power cord into the outlet where the product's power cord was plugged in.
Picture appears slowly after switching on	<ul style="list-style-type: none">■ This is normal, the image is muted during the product startup process. Please contact your service center, if the picture has not appeared after five minutes.
No or poor color or poor picture	<ul style="list-style-type: none">■ Adjust Color in menu option.■ Keep a sufficient distance between the product and a VCR.■ Try another channel. The problem may be with the broadcast.■ Are the video cables installed properly?■ Activate any function to restore the brightness of the picture.
Horizontal/vertical bars or picture shaking	<ul style="list-style-type: none">■ Check for local interference such as an electrical appliance or power tool.
Poor reception on some channels	<ul style="list-style-type: none">■ Station or cable product experiencing problems, tune to another station.■ Station signal is weak, reorient antenna to receive weaker station.■ Check for sources of possible interference.
Lines or streaks in pictures	<ul style="list-style-type: none">■ Check antenna (Change the direction of the antenna).
No picture when connecting HDMI	<ul style="list-style-type: none">■ Check HDMI cable over version 1.3. <p>The HDMI cables don't support HDMI version 1.3, it cause flickers or no screen display. In this case use the latest cables that support HDMI version 1.3.</p>

The audio does not work.	
Picture OK & No sound	<ul style="list-style-type: none">■ Press the VOL or VOLUME button.■ Sound muted? Press MUTE button.■ Try another channel. The problem may be with the broadcast.■ Are the audio cables installed properly?
No output from one of the speakers	<ul style="list-style-type: none">■ Adjust Balance in menu option.
Unusual sound from inside the product	<ul style="list-style-type: none">■ A change in ambient humidity or temperature may result in an unusual noise when the product is turned on or off and does not indicate a fault with the product.
No sound when connecting HDMI or USB	<ul style="list-style-type: none">■ Check HDMI cable over version 1.3.■ Check USB cable over version 2.0.■ Use normal MP3 file.

*This feature is not available for all models.

There is a problem in PC mode. (Only PC mode applied)	
The signal is out of range	<ul style="list-style-type: none">■ Adjust resolution, horizontal frequency, or vertical frequency.■ Check the input source.
Vertical bar or stripe on background & Horizontal Noise & Incorrect position	<ul style="list-style-type: none">■ Work the Auto configure or adjust size, phase, or H/V position. (Option)
Screen color is unstable or single color	<ul style="list-style-type: none">■ Check the signal cable.■ Reinstall the PC video card.

MAINTENANCE

Early malfunctions can be prevented. Careful and regular cleaning can extend the amount of time you can enjoy your new TV.

Caution: Be sure to turn the power off and unplug the power cord before you begin any cleaning.

Cleaning the Screen

- 1 Here's a great way to keep the dust off your screen for a while. Wet a soft cloth in a mixture of lukewarm water and a little fabric softener or dish washing detergent. Wring the cloth until it's almost dry, and then use it to wipe the screen.
- 2 Make sure the excess water is off the screen, and then let it air-dry before you turn on your TV.

Cleaning the Cabinet

- To remove dirt or dust, wipe the cabinet with a soft, dry, lint-free cloth.
- Please be sure not to use a wet cloth.

Extended Absence

CAUTION

- If you expect to leave your TV dormant for a long time (such as a vacation), it's a good idea to unplug the power cord to protect against possible damage from lightning or power surges.

PRODUCT SPECIFICATIONS

MODELS		42PJ250R (42PJ250R-MA)	50PJ250R (50PJ250R-MA)
Dimensions (Width x Height x Depth)	With stand	988 x 688.5 x 260 mm 38.8 x 27.1 x 10.2 inches	1171.4 x 781.8 x 309.7 mm 46.1 x 30.7 x 12.1 inches
	Without stand	988 x 617.8 x 55.3 mm 38.8 x 24.3 x 2.1 inches	1171.4 x 720.9 x 55.3 mm 46.1 x 28.3 x 2.1 inches
Weight	With stand	21.6 kg / 47.6 lbs	30.0 kg / 66.1 lbs
	Without stand	20.0 kg / 44.0 lbs	27.6 kg / 60.8 lbs
MODELS		42PJ350R (42PJ350R-MA)	50PJ350R (50PJ350R-MA)
Dimensions (Width x Height x Depth)	With stand	988 x 688.5 x 260 mm 38.9 x 27.1 x 10.2 inches	1171.4 x 781.8 x 309.7 mm 46.1 x 30.7 x 12.2 inches
	Without stand	988 x 617.8 x 55.3 mm 38.8 x 24.3 x 2.2 inches	1171.4 x 720.9 x 55.3 mm 46.1 x 28.4 x 2.2 inches
Weight	With stand	21.6 kg / 47.6 lbs	30.0 kg / 66.1 lbs
	Without stand	20.0 kg / 44.0 lbs	27.6 kg / 60.8 lbs
Power requirement Television System Program Coverage External Antenna Impedance		AC100-240V ~ 50/60Hz NTSC, PAL-M/N VHF 2-13, UHF 14-69, CATV 1-125 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%	

MODELS		42PJ260R (42PJ260R-MA)	50PJ260R (50PJ260R-MA)
Dimensions (Width x Height x Depth)	With stand	988 x 688.5 x 260 mm 38.8 x 27.1 x 10.2 inches	1171.4 x 781.8 x 309.7 mm 46.1 x 30.7 x 12.1 inches
	Without stand	988 x 617.8 x 55.3 mm 38.8 x 24.3 x 2.1 inches	1171.4 x 720.9 x 55.3 mm 46.1 x 28.3 x 2.1 inches
Weight	With stand	21.6 kg / 47.6 lbs	30.0 kg / 66.1 lbs
	Without stand	20.0 kg / 44.0 lbs	27.6 kg / 60.8 lbs
MODELS		50PK550R (50PK550R-MA)	60PK550R (60PK550R-MA)
Dimensions (Width x Height x Depth)	With stand	1171.4 x 786.2 x 309.7 mm 46.1 x 30.9 x 12.1 inches	1392 x 915 x 367 mm 54.8 x 36 x 14.4 inches
	Without stand	1171.4 x 724.4 x 55.3 mm 46.1 x 28.5 x 2.1 inches	1392 x 852 x 55.3 mm 54.8 x 33.5 x 2.1 inches
Weight	With stand	31 kg / 68.3 lbs	49.5 kg / 109.1 lbs
	Without stand	28.6 kg / 63.0 lbs	45.0 kg / 99.2 lbs
Power requirement Television System Program Coverage External Antenna Impedance		AC100-240V ~ 50/60Hz NTSC, PAL-M/N VHF 2-13, UHF 14-69, CATV 1-125 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.

IR CODES

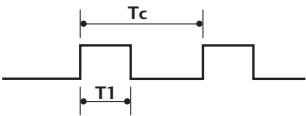
1. How to Connect

- Connect your wired remote control to the Remote Control port on the TV.

2. Remote Control IR Codes

■ Output waveform

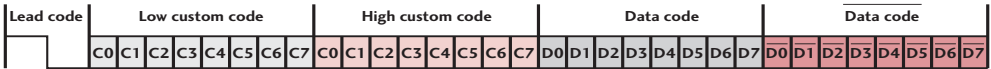
Single pulse, modulated with 37.917KHz signal at 455KHz



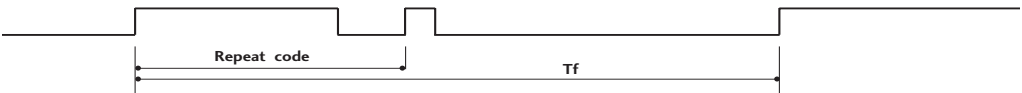
Carrier frequency
 $FCAR = 1/T_c = f_{OSC}/12$
Duty ratio = $T_1/T_c = 1/3$

■ Configuration of frame

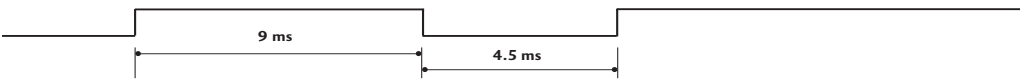
1st frame



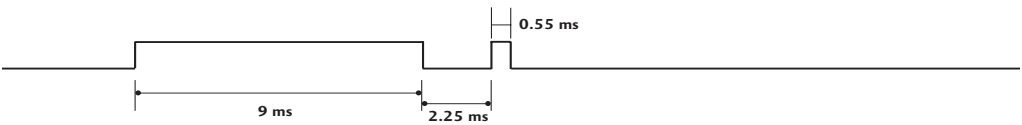
Repeat frame



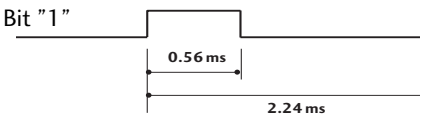
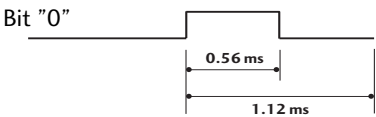
■ Lead code



■ Repeat code

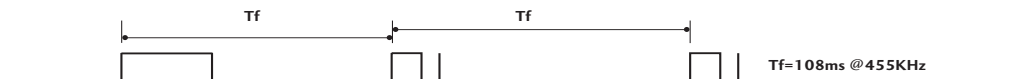


■ Bit description



■ Frame interval: Tf

The waveform is transmitted as long as a key is depressed.



Code (Hexa)	Function	Note
08	POWER	Remote control Button (Power On/Off)
45	Q.MENU	Remote control Button
43	MENU	Remote control Button
0B	INPUT	Remote control Button
10-19	Number Key 0-9	Remote control Button
09	MUTE	Remote control Button
02	VOL +	Remote control Button
03	VOL -	Remote control Button
00	CH ^	Remote control Button
01	CH v	Remote control Button
1E	FAV/MARK	Remote control Button
40	^	Remote control Button
41	v	Remote control Button
07	<	Remote control Button
06	>	Remote control Button
7C	X STUDIO	Remote control Button
44	ENTER	Remote control Button
28	BACK	Remote control Button
7E	SIMPLINK	Remote control Button
30	AV MODE	Remote control Button
79	RATIO	Remote control Button
95	ENERGY SAVING	Remote control Button
53	LIST	Remote control Button
1A	Q.VIEW	Remote control Button
BA	FREEZE	Remote control Button
72	RED	Remote control Button
63	YELLOW (PLAY)	Remote control Button
61	BLUE (PAUSE)	Remote control Button
71	GREEN (STOP)	Remote control Button
8F	Rew ◀◀	Remote control Button
8E	FF ▶▶	Remote control Button
5E	CLEAR VOICE II	Remote control Button
B1	Stop ■	Remote control Button
B0	Play ▶	Remote control Button
0F	TV	Remote control Button
5B	EXIT	Remote control Button

Except 42/50PJ250R

For 42/50PJ250R

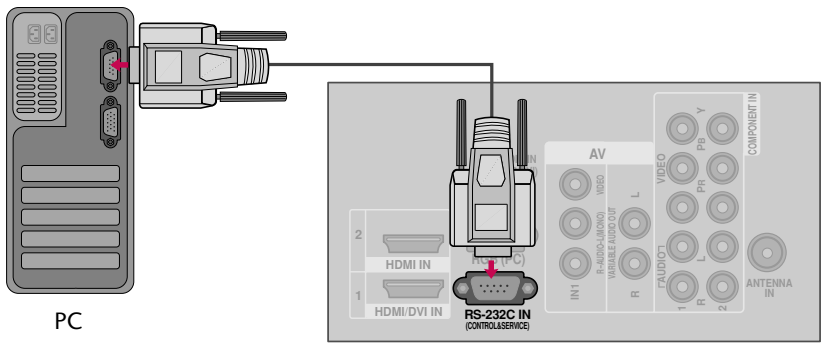
EXTERNAL CONTROL THROUGH RS-232C

The RS-232C port allows you connect the RS-232C input jack to an external control device (such as a computer or an A/V control system) to control the TV's functions externally.

- **Note:** RS-232C on this unit is intended to be used with third party RS-232C control hardware and software. The instructions below are provided to help with programming software or to test functionality using telenet software.
- In USB and Bluetooth mode, it doesn't support RS-232C function.

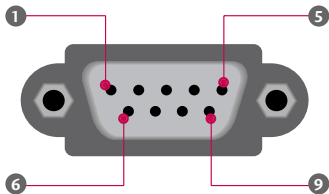
■ Image shown may differ from your TV.

RS-232C Setup



Type of Connector; D-Sub 9-Pin Male

No.	Pin Name
1	No connection
2	RXD (Receive data)
3	TXD (Transmit data)
4	DTR (DTE side ready)
5	GND
6	DSR (DCE side ready)
7	RTS (Ready to send)
8	CTS (Clear to send)
9	No Connection



Communication Parameters

- Baud rate : 9600 bps (UART)
- Data length : 8 bits
- Parity : None
- Stop bit : 1 bit
- Communication code : ASCII code
- Use a crossed (reverse) cable.

RS-232C Configurations

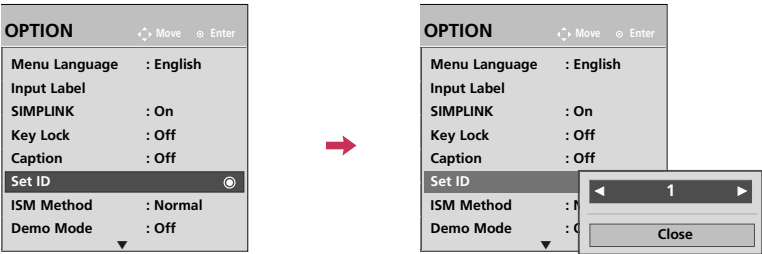
Either cable below can be used.









7-Wire Configuration (Serial female-female NULL modem cable)				
	PC		TV	
RXD	2	●	3	TXD
TXD	3	●	2	RXD
GND	5	●	5	GND
DTR	4	●	6	DSR
DSR	6	●	4	DTR
RTS	7	●	8	CTS
CTS	8	●	7	RTS
	D-Sub 9		D-Sub 9	

3-Wire Configurations (Not standard)				
	PC		TV	
RXD	2	●	3	TXD
TXD	3	●	2	RXD
GND	5	●	5	GND
DTR	4		6	DTR
DSR	6		4	DSR
RTS	7		7	RTS
CTS	8		8	CTS
	D-Sub 9		D-Sub 9	

Set ID

Use this function to specify a TV ID number.
Refer to 'Real Data Mapping'.



-   Select **OPTION**.
-   Select **Set ID**.
-   Choose the desired TV ID number.
The adjustment range of Set ID is 1~99.
-  Return to the previous menu.
-  Return to TV viewing.

* Real data mapping 1

00 : Step 0
⋮
A : Step 10
⋮
F : Step 15
10 : Step 16
⋮
64 : Step 100
⋮
6E : Step 110
⋮
73 : Step 115
74 : Step 116
⋮
C7 : Step 199
⋮
FE : Step 254
FF : Step 255

* Real data mapping 2

00: -30
01: -29
02: -28
⋮
1E: 0
⋮
28: +10
⋮
3A: +28
3B: +29
3C: +30
⋮
4E: N/A
4F: N/A
50: N/A

Command Reference List

COMMAND1		COMMAND2	DATA (Hexadecimal)	COMMAND1		COMMAND2	DATA (Hexadecimal)
01. Power	k	a	00 ~ 01	14. Colour Temperature	x	u	00 ~ 64
02. Aspect Ratio	k	c	Refer to p.113	15. Treble	k	r	00 ~ 64
03. Screen Mute	k	d	00 ~ 01, 10	16. Bass	k	s	00 ~ 64
04. Volume Mute	k	e	00 ~ 01	17. Abnormal Status	k	z	FF
05. Volume Control	k	f	00 ~ 64	18. ISM Method	j	p	Refer to p.115
06. Contrast	k	g	00 ~ 64	19. Auto Configure	j	u	01
07. Brightness	k	h	00 ~ 64	20. Energy Saving	j	q	00 ~ 04
08. Colour	k	i	00 ~ 64	21. Tune Command	m	a	Refer to p.116
09. Tint	k	j	00 ~ 64	22. Channel Add/Del	m	b	00 ~ 01
10. Sharpness	k	k	00 ~ 64	23. Key	m	c	Refer to p.116
11. OSD Select	k	l	00 ~ 01	24. Input select (Main)	x	b	Refer to p.117
12. Remote Control Lock /Key Lock Mode	k	m	00 ~ 01				
13. Balance	k	t	00 ~ 64				

Transmission / Receiving Protocol

Transmission

[Command1][Command2][][Set ID][][Data][Cr]

[Command 1] : First command to control the set.(z)

[Command 2] : Second command to control the set.

[Set ID] : You can adjust the set ID to choose desired TV ID number in Setup menu. Adjustment range is 1~99.
When selecting Set ID '0', every connected TV is controlled. Set ID is indicated as decimal (1~99) on menu and as Hexadecimal (0x0~0x63) on transmission/receiving protocol.

[DATA] : To transmit command data.
Transmit 'FF' data to read status of command.

[Cr] : Carriage Return
ASCII code '0x0D'

[] : ASCII code 'space (0x20)'

OK Acknowledgement

[Command2][][Set ID][][OK/NG][Data][x]

The TV transmits ACK (acknowledgement) based on this format when receiving normal data. At this time, if the data is data read mode, it indicates present status data. If the data is data write mode, it returns the data of the PC computer.

Error Acknowledgement

[Command2][][Set ID][][NG][Data][x]

TV transmits ACK(acknowledgement) based on this format when receiving abnormal data form non-viable functions or communication errors.

[Command 2] : use as command.

[Set ID]: use the small character, if set ID is 10, TV will send the '0', 'a'

[Data]: use the small character, if data is 0xab, TV will send the 'a', 'b.'

[NG]: use the large character.

01. Power (Command: k a)

To control Power On/Off of the TV.

Transmission [k][a][][Set ID][][Data][Cr]

Data 00 : Power Off Data 01 : Power On

Acknowledgement [a][][Set ID][][OK/NG][Data][x]

To show Power On/Off.

Transmission [k][a][][Set ID][][FF][Cr]

Acknowledgement [a][][Set ID][][OK/NG][Data][x]

* If there is the time delay between command and ack message during power on sequence, It should be described like "Note: In this model, TV will send the Acknowledge after power on processing completion. There might be a time delay between command and acknowledge."

02. Aspect Ratio (Command: k c) (Main picture size)

To adjust the screen format. (Main picture format)

You can adjust the screen format using the Aspect Ratio in the PICTURE menu.

Transmission [k][c][][Set ID][][Data][Cr]

Data 01: Normal screen (4:3) Data 09: Just Scan

Data 02: Wide screen (16:9)

Data 04: Zoom

Data 10~1F: Cinema Zoom1~16

Acknowledgement [c][][Set ID][][OK/NG][Data][x]

* Using the RGB-PC, Component or HDMI input, you select either 16:9 or 4:3 screen aspect ratio.

* In HDMI/Component (over 720p)mode, Just Scan is available.

03. Screen Mute (Command: k d)

To select screen mute on/off.

Transmission [k][d][][Set ID][][Data][Cr]

Data 00 : Screen mute off (Picture/Panel on)

Data 01 : Screen mute on (Panel off)

Data 10 : Video mute on (Picture Off)

Acknowledgement [d][][Set ID][][OK/NG][Data][x]

In case of Video-Out mute on only, TV will display On Screen Display(OSD) But, In case of Screen Mute On, TV will not display OSD.

04. Volume Mute (Command: k e)

To control volume mute on/off.

You can also adjust mute using the MUTE button on remote control.

Transmission [k][e][][Set ID][][Data][Cr]

Data 00 : Volume mute on (Volume off)

Data 01 : Volume mute off (Volume on)

Acknowledgement [e][][Set ID][][OK/NG][Data][x]

05. Volume Control (Command: k f)

To adjust volume.

You can also adjust volume with the volume buttons on remote control.

Transmission [k][f][][Set ID][][Data][Cr]

Data Min : 00 ~ Max : 64

Refer to 'Real data mapping 1'.

Acknowledgement [f][][Set ID][][OK/NG][Data][x]

06. Contrast (Command: k g)

To adjust screen contrast.

You can also adjust contrast in the PICTURE menu.

Transmission [k][g][][Set ID][][Data][Cr]

Data Min : 00 ~ Max : 64

Refer to 'Real data mapping 1'.

Acknowledgement [g][][Set ID][][OK][Data][x]

07. Brightness (Command: k h)

To adjust screen brightness.

You can also adjust brightness in the PICTURE menu.

Transmission [k][h][][Set ID][][Data][Cr]

Data Min : 00 ~ Max : 64

Refer to 'Real data mapping 1'.

Acknowledgement [h][][Set ID][][OK/NG][Data][x]

08. Color (Command: k i)

To adjust the screen color.

You can also adjust color in the PICTURE menu.

Transmission [k][i][][Set ID][][Data][Cr]

Data Min : 00 ~ Max : 64

Refer to 'Real data mapping 1'.

Acknowledgement [i][][Set ID][][OK/NG][Data][x]

09. Tint (Command: k j)

To adjust the screen tint.

You can also adjust tint in the PICTURE menu.

Transmission [k][j][][Set ID][][Data][Cr]

Data Red : 00 ~ Green : 64

Refer to 'Real data mapping 1'.

Acknowledgement [j][][Set ID][][OK/NG][Data][x]

10. Sharpness (Command: k k)

To adjust the screen sharpness.

You can also adjust sharpness in the PICTURE menu.

Transmission [k][k][][Set ID][][Data][Cr]

Data Min: 00 ~ Max: 64

Refer to 'Real data mapping 1'.

Acknowledgement [k][][Set ID][][OK/NG][Data][x]

11. OSD Select (Command: k l)

To select OSD (On Screen Display) on/off when controlling remotely.

Transmission [k][l][][Set ID][][Data][Cr]

Data 00: OSD off

Data 01: OSD on

Acknowledgement [l][][Set ID][][OK][Data][x]

12. Remote Control Lock/Key Lock Mode (Command: k m)

To lock the remote control and the front panel controls on the set.

(If you're not using the remote control and front panel controls on the TV, use this mode. When main power is on/off, remote control lock is released.)

Transmission [k][m][][Set ID][][Data][Cr]

Data 00: Lock off

Data 01: Lock on

Acknowledgement [m][][Set ID][][OK/NG][Data][x]

13. Balance (Command: k t)

To adjust balance.

You can also adjust balance in the AUDIO menu.

Transmission [k][t][][Set ID][][Data][Cr]

Data Min: 00 ~ Max: 64

Refer to 'Real data mapping 1'.

Acknowledgement [t][][Set ID][][OK/NG][Data][x]

14. Color Temperature (Command: x u)

To adjust color temperature.

You can also adjust Color Temperature in the PICTURE menu.

Transmission [x][u][][Set ID][][Data][Cr]

Data W50 : 00 ~ C50 : 64

Acknowledgement [u][][Set ID][][OK/NG][Data][x]

15. Treble (Command: k r)

To adjust treble.

Transmission [k][r][][Set ID][][Data][Cr]

Data Min: 00 ~ Max: 64

Refer to 'Real data mapping 1'.

Acknowledgement [r][][Set ID][][OK/NG][Data][x]

16. Bass (Command: k s)

To adjust bass.

Transmission [k][s][][Set ID][][Data][Cr]

Data Min: 00 ~ Max: 64

Refer to 'Real data mapping 1'.

Acknowledgement [s][][Set ID][][OK/NG][Data][x]

17. Abnormal State (Command: k z)

To recognize an abnormal state.

Transmission [k][z][][Set ID][][FF][][Cr]

Data FF: Read

Acknowledgement [z][][Set ID][][OK/NG][Data][x]

Data 00: Normal (Power on and signal exist)

Data 01: No signal (Power on)

Data 02: Turn the TV off by remote control

Data 03: Turn the TV off by sleep time function

Data 04: Turn the TV off by RS-232C function

Data 05: 5V down

Data 06: AC down

Data 08: Turn the TV off by Off time function

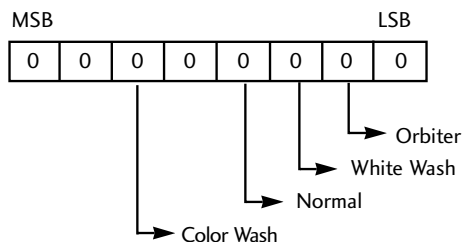
Data 09: Turn the TV off by Auto off function

* This function is "read only".

18. ISM Method (Command: j p)

To avoid having a fixed image remain on screen.

Transmission [j][p][][Set ID][][Data][Cr]



7	6	5	4	3	2	1	0	Function
				0	0	1	0	Orbiter
				0	1	0	0	White Wash
				1	0	0	0	Normal
		1	0	0	0	0	0	Color Wash

Data 02: Orbiter

Data 04: White Wash

Data 08: Normal

Data 20: Color Wash

* More two kinds of function can not be set at a time.

Acknowledgement [p][][Set ID][][OK/NG][Data][x]

19. Auto Configure (Command: j u) -Except 42/50P/250R

To adjust picture position and minimize image

shaking automatically. It works only in RGB (PC)

mode.

Transmission [j][u][][Set ID][][Data][Cr]

Data 01: To set

Acknowledgement [u][][Set ID][][OK/NG][Data][x]

20. Energy Saving (Command: j q)

To reduce the power consumption of the TV.

Transmission [j][q][][Set ID][][Data][][Cr]

Data 00: Off

Data 01: Energy Saving Minimum

Data 02: Energy Saving Medium

Data 03: Energy Saving Maximum

Data 05: Screen Off

Data 10: Intelligent Sensor

Acknowledgement [q][][Set ID][][OK/NG][Data][x]

* Real data mapping 1

00 : Step 0
 ⋮
 A : Step 10
 ⋮
 F : Step 15
 10 : Step 16
 ⋮
 64 : Step 100
 ⋮
 6E : Step 110
 ⋮
 73 : Step 115
 74 : Step 116
 ⋮
 C7 : Step 199
 ⋮
 FE : Step 254
 FF : Step 255

* Real data mapping 2

00: -30
 01: -29
 02: -28
 ⋮
 1E: 0
 ⋮
 28: +10
 ⋮
 3A: +28
 3B: +29
 3C: +30
 ⋮
 4E: N/A
 4F: N/A
 50: N/A

21 . Channel Tuning (Command: m a)

Tune Channel to following Physical/ major/ minor number.

Transmission Data0 :[m][a][][Set ID][][Data0] [][Data1][][Data2][Cr]

Data0 :Physical Channel Number(Transmit by Hexadecimal code)

NTSC air:02-45

NTSC cable:01,0e~7d

Data1 ,Data2 :Major Channel(two part)or Channel Number(one part)

Data1 :High byte

Data2 :Low Byte

Two part channel number: Major number-Minor number One part channel number:

In case of using one part channel number, minor channel does not need.

Data3,Data4 :Minor Channel Number

Not needed for NTSC

Data3 :High byte

Data4 :Low Byte

Data5 :Attribute

7	Main/Sub Picture	6	Two/One Part Channel	5	Using Physical Channel	4 Reserved	3	2	1	0	7
0	Main	0	Two	0	Use	X	0	0	0	0	NTSC air
1	Sub	1	One	1	No Use	X	0	0	0	1	NTSC cable

Example)

1. Analog channel:NTSC cable,channel number(35),main picture

Command:ma oo 23 xx xx xx xx 01

attribute(0x01):main picture,two part(it's not mandatory), using physical channel, NTSC cable xx' data: don't care major and minor channel number in case analog channel tuning.

Acknowledgement [a][][Set ID][][OK][Data0][Data1][Data2][Data3][Data4][Data5][x][a][][Set ID][][NG][Data0][x]

22. Channel Add/Del(Command: m b)

To add and delete the channels.

Transmission [m][b][][Set ID][][Data][Cr]

Data 00 : Channel Delete 01 : Channel Add

Acknowledgement [b][][Set ID][][OK/NG][Data][x]

23. Key (Command: m c)

To send IR remote key code.

Transmission [m][c][][Set ID][][Data][Cr]

Data: Key code - Refer to page 109.

Acknowledgement [c][][Set ID][][OK/NG][Data][x]

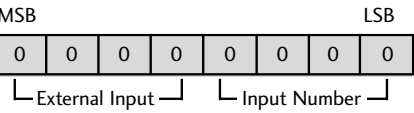
24. Input select (Command: x b)

(Main Picture Input)

To select input source for TV

Transmission [x][b][][][Set ID][][Data][Cr]

Data: Structure



External Input				Data
0	0	0	1	Analog
0	0	1	0	AV
0	1	0	0	Component
0	1	1	0	RGB-PC
1	0	0	1	HDMI

Except 42/50PJ250R

Input Number				Data
0	0	0	0	Input1
0	0	0	1	Input2
0	0	1	0	Input3
0	0	1	1	Input4

Acknowledgement [b][][][Set ID][][OK/NG][Data][x]



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 _____



OWNER'S MANUAL PLASMA TV

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

42PJ250R	42PJ350R
50PJ250R	50PJ350R

42PJ260R	50PK550R
50PJ260R	60PK550R