MFL59166615-Edit1-en 12/22/09 6:42 PM Page 1

LG
Life's Good

LED LCD TV
OWNER'S MANUAL

42LH90QD
47LH90QD
55LH90QD
42SL90QD
47SL90QD

LCD TV | PLASMA TV
OWNER'S MANUAL

32LH70YD
42LH70YD
47LH70YD
32LH35FD
37LH35FD
42LH35FD
42LH50YD
47LH50YD
55LH50YD
32SL80YD
42SL80YD
47SL80YD
55SL80YD
42PQ60D
50PQ60D
50PS80BD
60PS80BD

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

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

Record it below should you ever need service.

Model:

Serial:

P/NO : MFL59166615 (0912-REV01)

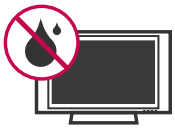
SAFETY INSTRUCTIONS

IMPORTANT SAFETY INSTRUCTIONS

Read these instructions.
Keep these instructions.
Heed all warnings.
Follow all instructions.



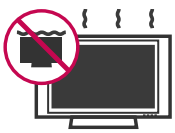
1. Do not use this apparatus near water.



2. Clean only with dry cloth.



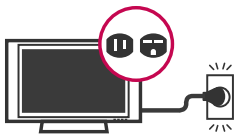
3. Do not block any ventilation openings. Install in accordance with the manufacturer's instructions.



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



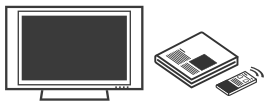
5. Do not defeat the safety purpose of the polarized or grounding-type plug. A polarized plug has two blades with one wider than the other. A grounding type plug has two blades and a third grounding prong, The wide blade or the third prong are provided for your safety. If the provided plug does not fit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



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



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

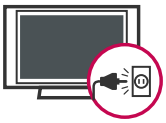


8. Use only with the cart, stand, tripod, bracket, or table specified by the manufacturer, or sold with the apparatus. When a cart is used, use caution when moving the cart/apparatus combination to avoid injury from tip-over.

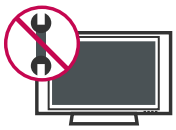




9 Unplug this apparatus during lighting storms or when unused for long periods of time.



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.



11 Never touch this apparatus or antenna during a thunder or lighting 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.



SAFETY INSTRUCTIONS

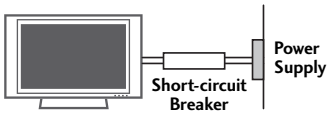
16 Do not expose to dripping or splashing and do not place objects filled with liquids, such as vases, cups, etc. on or over the apparatus (e.g. on shelves above the unit).



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.

26 For LCD TV

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

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

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

ON DISPOSAL

(Only Hg lamp used LCD TV)

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

CONTENTS

SAFETY INSTRUCTIONS 2
FEATURE OF THIS TV 8

PREPARATION

Accessories 9
Front Panel Information 10
Back Panel Information 16
Stand Instruction 19
VESA Wall Mounting 27
Cable Management 28
Attaching the TV to a Desk 32
Desktop Pedestal Installation 33
Swivel Stand 33
Securing the TV to the wall to prevent falling when the TV is used on a stand 34
Antenna or Cable Connection 35

EXTERNAL EQUIPMENT SETUP

HD Receiver Setup 36
DVD Setup 39
VCR Setup 41
Other A/V Source Setup 42
PC Setup 43
USB Connection 49
Audio Out Connection 49

WATCHING TV / CHANNEL CONTROL

Remote Control Functions 50
Turning On the TV 56
Channel Selection 56
Volume Adjustment 56
Initial Setting 57
On-Screen Menus Selection 58
Quick Menu 60
Channel Setup
- Auto Scan (Auto Tuning) 61
- Add / Delete Channel (Manual Tuning) 62
- Channel Editing 63

Channel List 64
Favorite Channel Setup 65
Favorite Channel List 65
Brief Information 66
Scan Option 67
System Color 68
Input List 69
Input Label 70
AV Mode 71
Simple Manual 71
SIMPLINK 72
EPG 74

BLUETOOTH

Bluetooth 77
Setting the Bluetooth 78
Setting TV Pin 79
Connecting the Bluetooth Headset 80
Managing Registered Bluetooth Device 82
My Bluetooth Information 83
Viewing the Photos with Bluetooth Device 84
Listening the Musics with Bluetooth Device 85

TIME MACHINE

Precautions when using the USB Device 86
Time Machine (Pause & Replay of Live TV) 87
Recording 91
Schedule 95
Recorded TV 97

MULTIMEDIA

Entry Modes 100
Photo List 101
Music List 105
Movie List 108
DivX Registration Code 113
Deactivation 114

PICTURE CONTROL

Picture Size (Aspect Ratio) Control 115
Picture Wizard 118
Preset Picture Settings(Picture Mode) 120
Manual Picture Adjustment - User Mode 121
Picture Improvement Technology 122
Expert Picture Control 123
Energy Saving 126
Picture Reset 127
Image Sticking Minimization(ISM) Method 128
Power Indicator 129
LED Local Dimming 129
Demo Mode 130

SOUND & LANGUAGE CONTROL

Auto Volume Leveler (Auto Volume) 131
Clear Voice II 132
Preset Sound Settings (Sound Mode) 133
Sound Setting Adjustment - User Mode 134
Balance 135
TV Speakers On/Off Setup 136
Digital Audio Out 137
Audio Reset 138
Stereo/SAP Broadcast Setup 139
Audio Language 140
On-Screen Menus Language Selection 141
Caption Mode
- Analog Broadcasting System Captions 142
- Digital Broadcasting System Captions 143

TIME SETTING

Clock Setting
- Auto Clock Setup 144
- Manual Clock Setup 145
Auto On/Off Time Setting 146
Sleep Timer Setting 147

PARENTAL CONTROL / RATINGS

Set Password & Lock System 148
Channel Blocking 151
Rating(Movie Rating) 152
External Input Blocking 153
Key lock 154

APPENDIX

Troubleshooting 155
Maintenance 156
Product Specifications 157
Programming the Remote Control 159
IR Codes 162
External Control Through RS-232C 164
Open Source License 172

FEATURE OF THIS TV

■ This feature is not available for all models.

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

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

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

The AV Mode optimizes the picture into Cinema, Sports, and game Mode according to the video and audio content. The viewer has the ability to quickly choose the correct mode for the picture they are viewing.

Listen to TV with wireless headset, or enjoy viewing your mobile phone photos on your TV.
(This feature is not available for all models.)

Advance 120Hz panel provides clearer, smoother images, even during fast action scenes creating a more stable structure for a crisper picture.

TruMotion 240Hz displays 240 scenes per second by combining advanced 120Hz technology with scanning backlight. This technology is verified from Intertek &TüV Rheinland.

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

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

Displays HDTV programs in full 1920 x 1080p resolution for a more detailed picture.
(This feature is not available for all models.)

THX Cinema mode is recommended for watching movies. Designed for use in a dark room.
(This feature is not available for all models.)

"DivX Certified to play DivX video up to HD 1080p, including premium content"

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.

! 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.

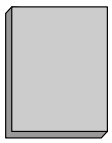


PREPARATION

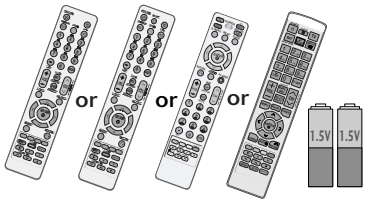
ACCESSORIES

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

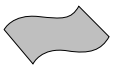


Remote Control, Batteries



Power Cord

Not included with all models



Polishing Cloth

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

LCD TV models

For 32/42/47LH70**

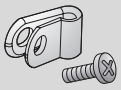


USB Extension Cable

* Make sure to use the provided USB extension cable, Which is specially designed for a slim fit.



Cable Management Clip (Refer to p.29)

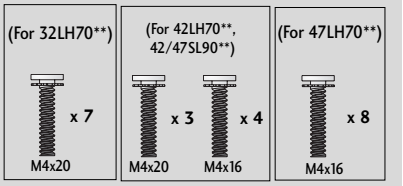


Protective Bracket and Bolt for Power Cord (Refer to P.28)

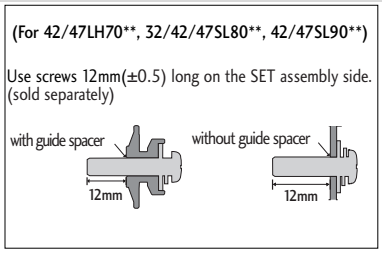
(For 42/47LH70**)



Stand Rear Cover (Refer to p.19, 20)



Bolts for stand assembly (Refer to p. 19, p. 25)

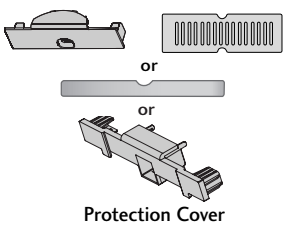


(For 32/42/47/55SL80**, 42/47SL90**)



Cable Holder

(Except 42/47SL90**)



Protection Cover

(Except 55LH50**, 55LH90**, 32/42/47LH70**)



(for 32/42/47SL80**)



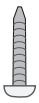
Bolts for stand assembly (Refer to P.21, P.23, P.24)

(For 32/42/47/55SL80**,42/47SL90**)



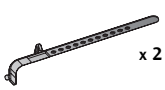
Cable Management Clip (Refer to P.29, P.30)

(Except 42/47LH70**, 47/55LH50**, 47/55LH90**)

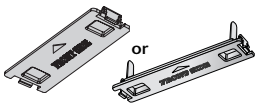


Screw for stand fixing (Refer to P.32)

PLASMA TV models

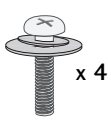


Cable Holder



Protection Cover (Refer to P.26)

(Except 60PS80**)



Bolts for stand assembly (Refer to P.26)

(For 50/60PS80**)



Cable management clip (Refer to P.31)

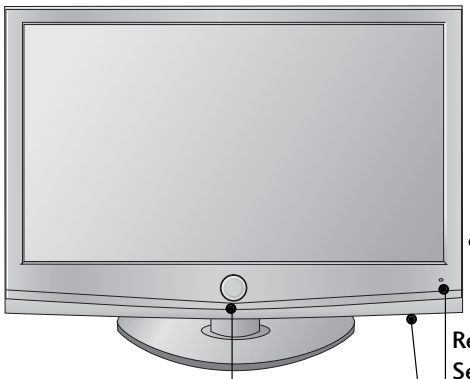
PREPARATION

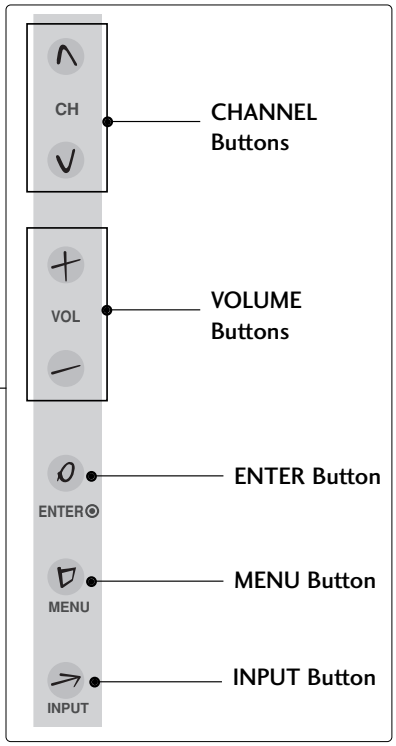
FRONT PANEL INFORMATION

■ Image shown may differ from your TV.

LCD TV Models -

32/42/47LH70**

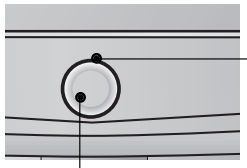




Remote Control Sensor,

Intelligent Sensor

Adjusts picture according to the surrounding conditions



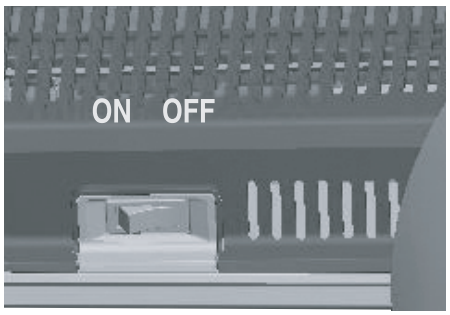
Moving LED

POWER Button (Touch Sensor) ,

Power/Standby Indicator

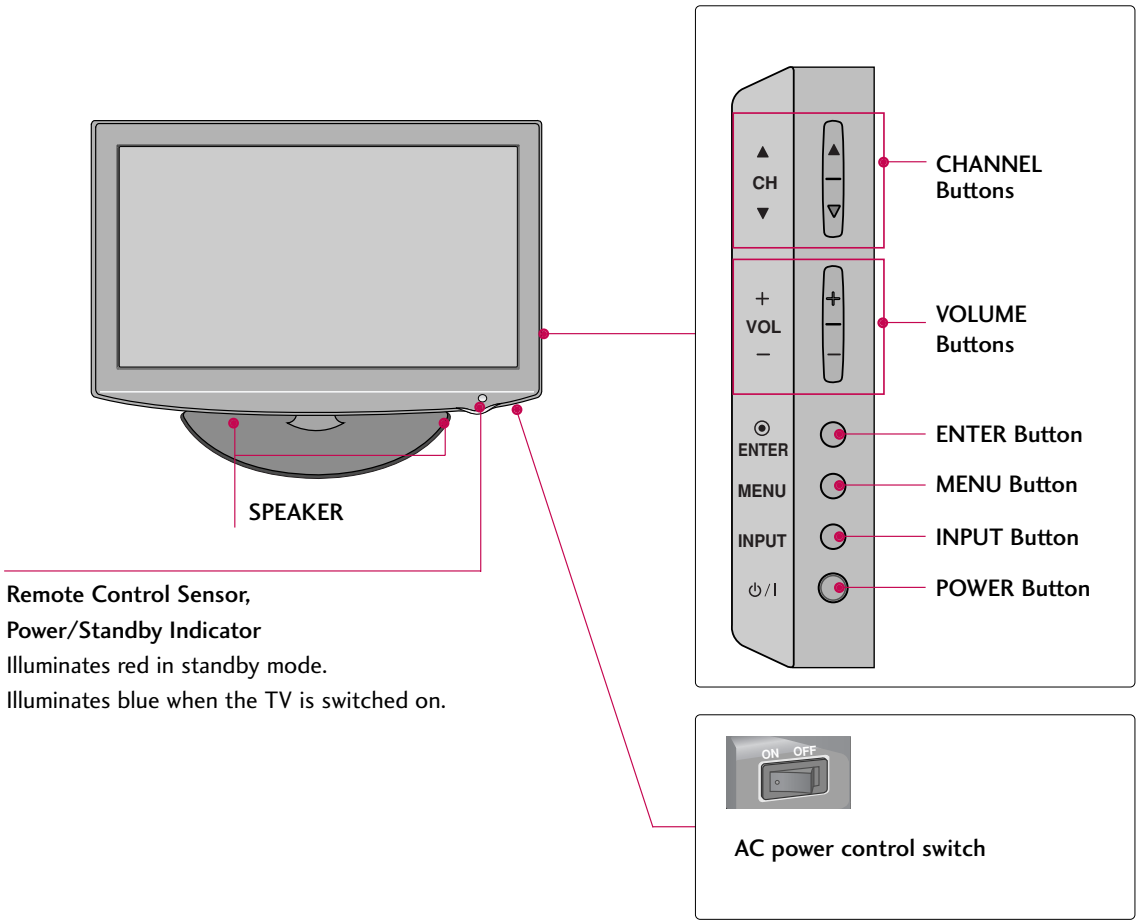
Illuminates red in standby mode.

Illuminates white when the TV is switched on.



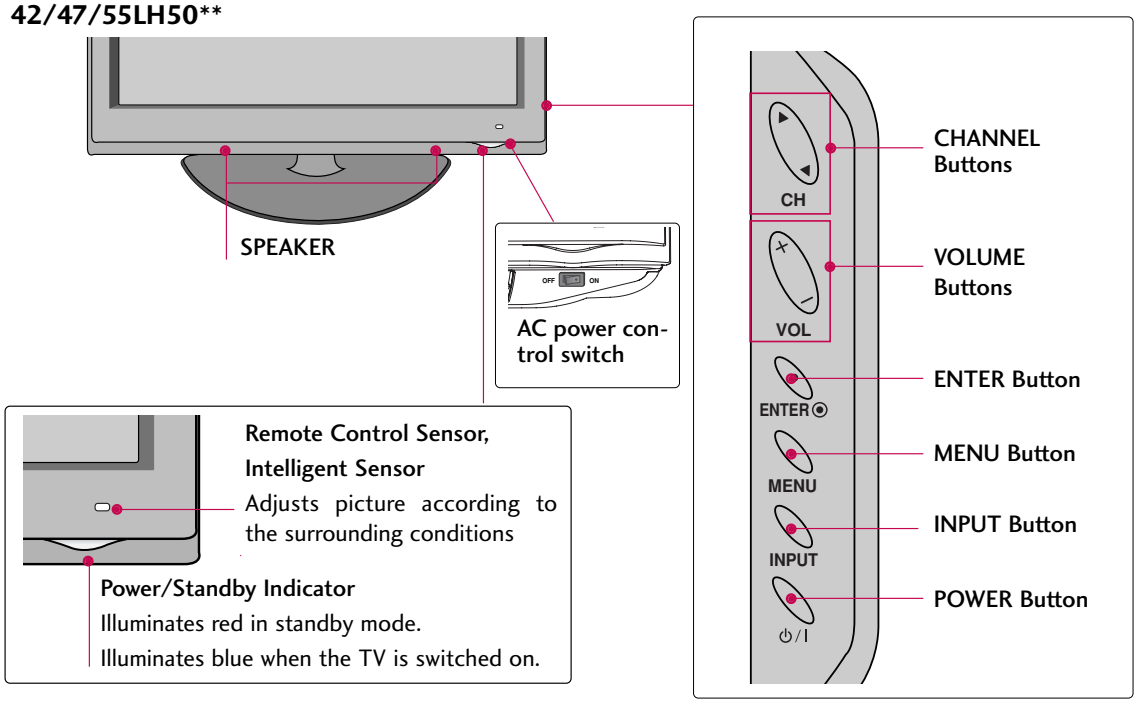
AC power control switch

32/37/42LH35**

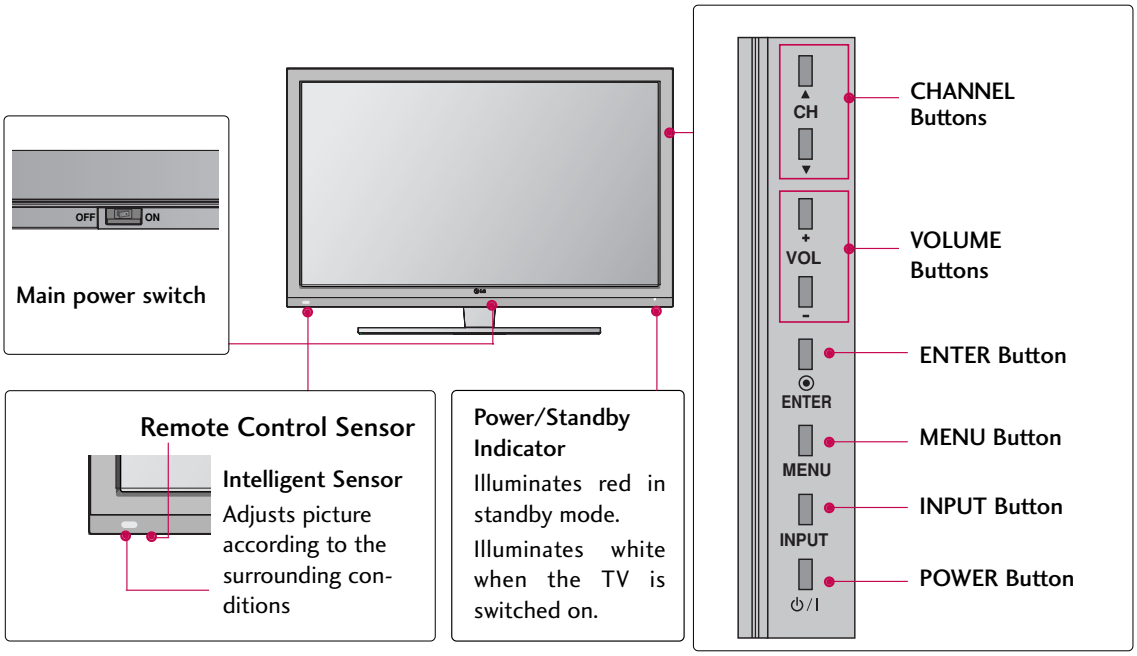

CH
CHANNEL Buttons
VOL
VOLUME Buttons
ENTER
ENTER Button
MENU
MENU Button
INPUT
INPUT Button
POWER Button
SPEAKER
Remote Control Sensor,
Power/Standby Indicator
Illuminates red in standby mode.
Illuminates blue when the TV is switched on.
ON OFF
AC power control switch

PREPARATION

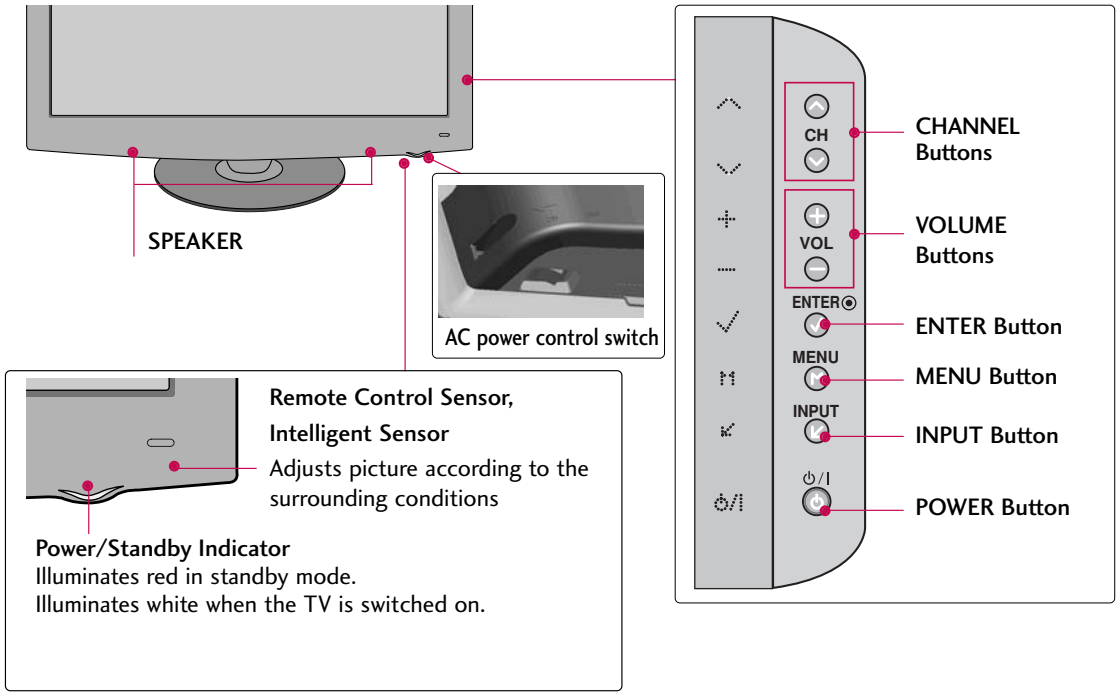
42/47/55LH50**



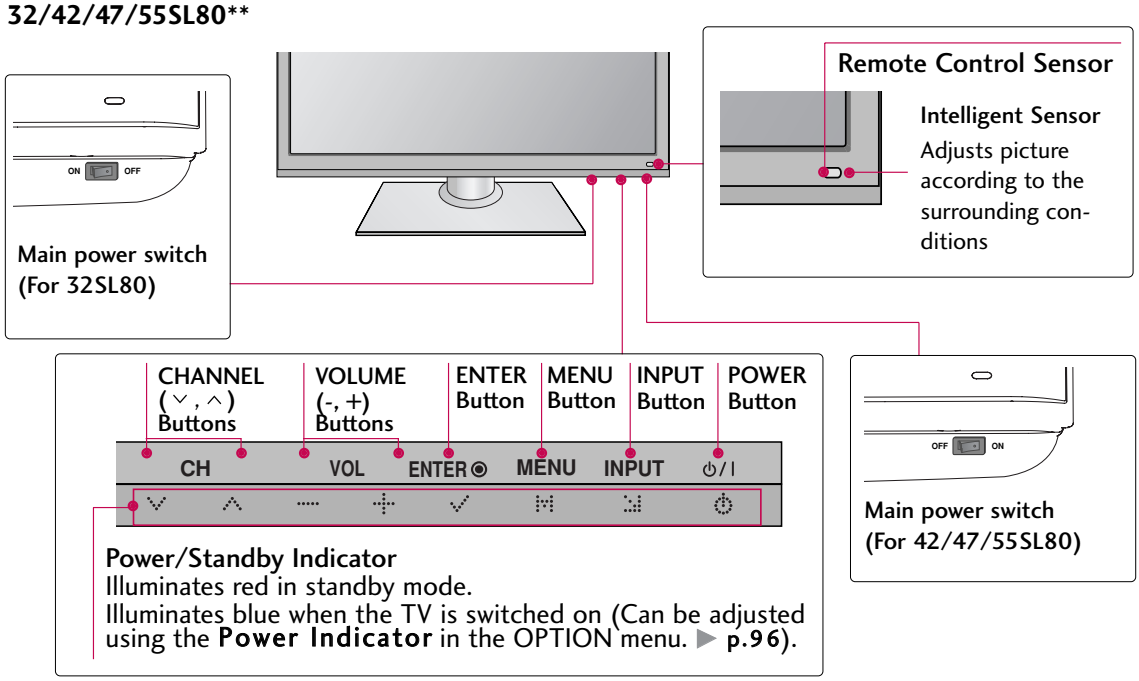
42/47SL90**



42/47/55LH90**



32/42/47/55SL80**



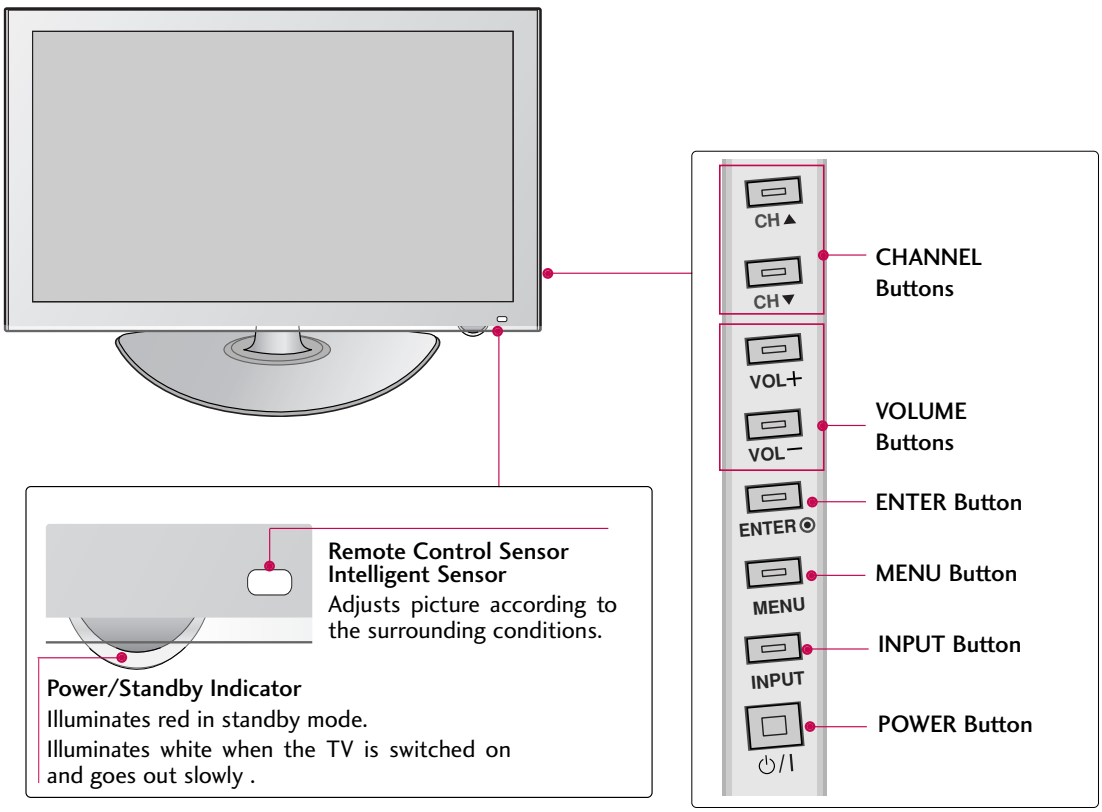
PREPARATION

PLASMA TV Models -

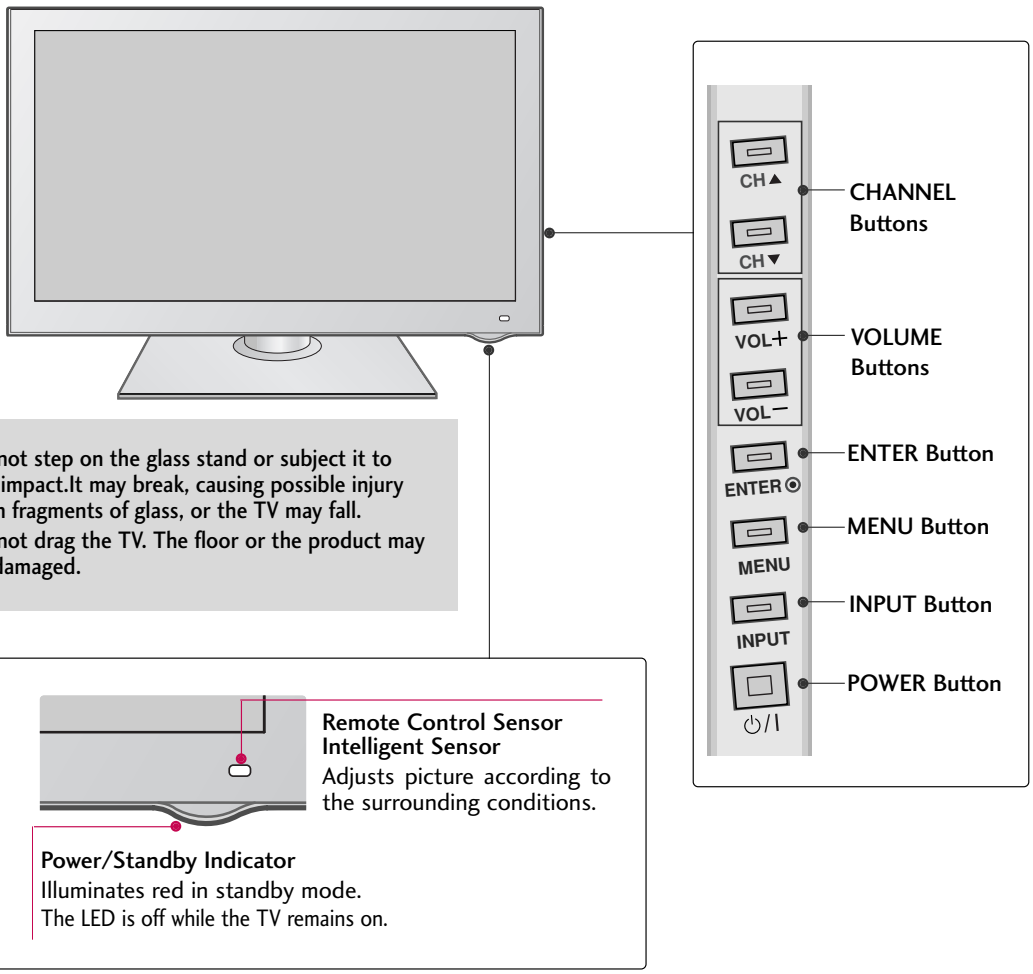
⚠ CAUTION

▶ When the TV cannot be turned on with the remote control, press the ⏻/I (power) button on the TV. (The remote control will not work when the ⏻/I (power) button on the TV is switched off.)

42/50PQ60



42/50PS80**



- 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.

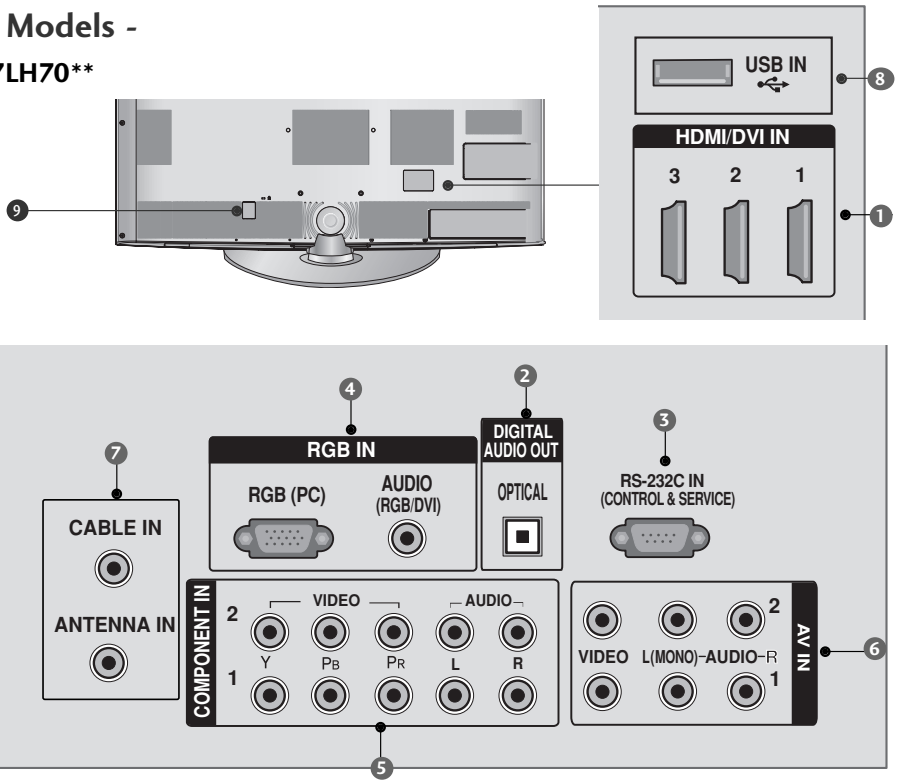
MFL59166615-Edit1-en 12/2/09 3:38 PM Page 16

BACK PANEL INFORMATION

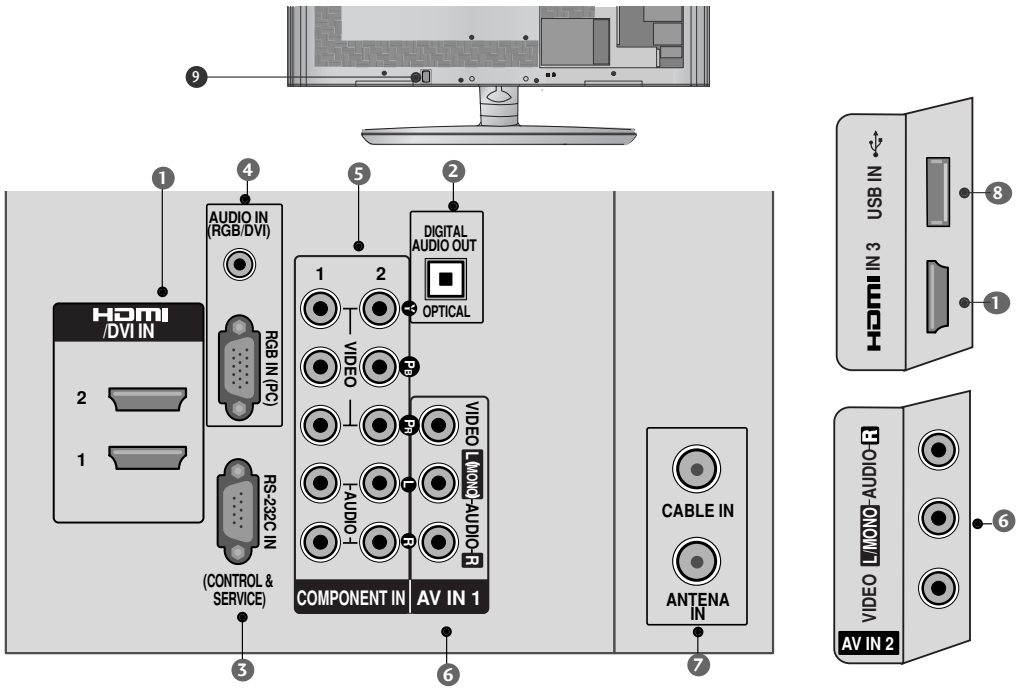
■ Image shown may differ from your TV.

LCD TV Models -

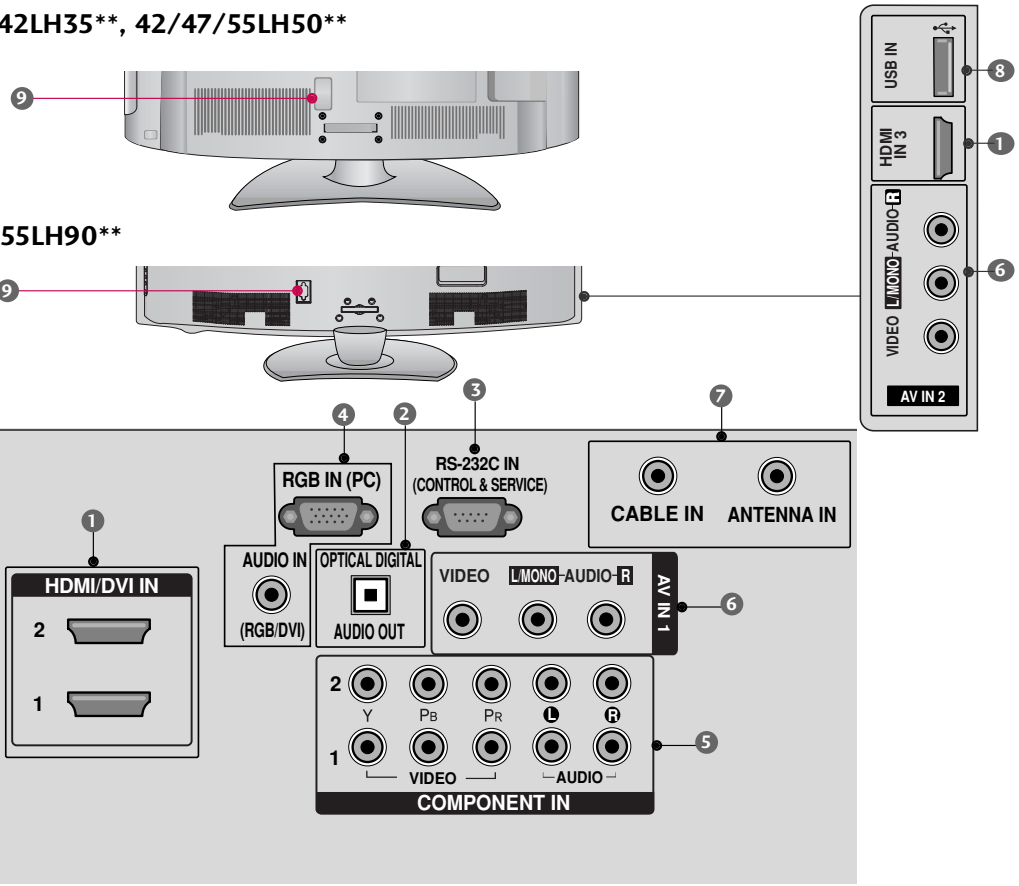
32/42/47LH70**



32/37/42/47/55SL80**

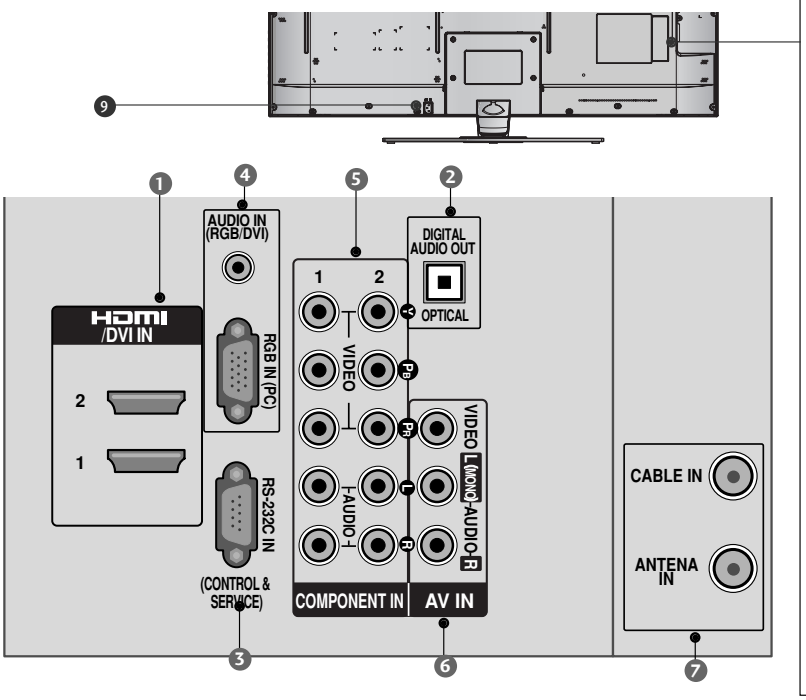


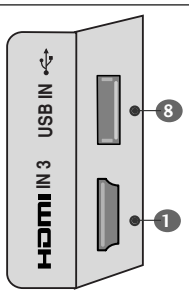
32/37/42LH35, 42/47/55LH50****



42/47LH90**

42/47SL90**



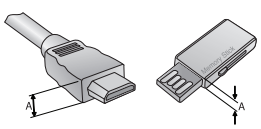


⚠ CAUTION

For HDMI IN 3 and USB IN

- For an optimal connection, HDMI cables and USB devices should have bezels less than 0.39 inches (10mm) Thick.

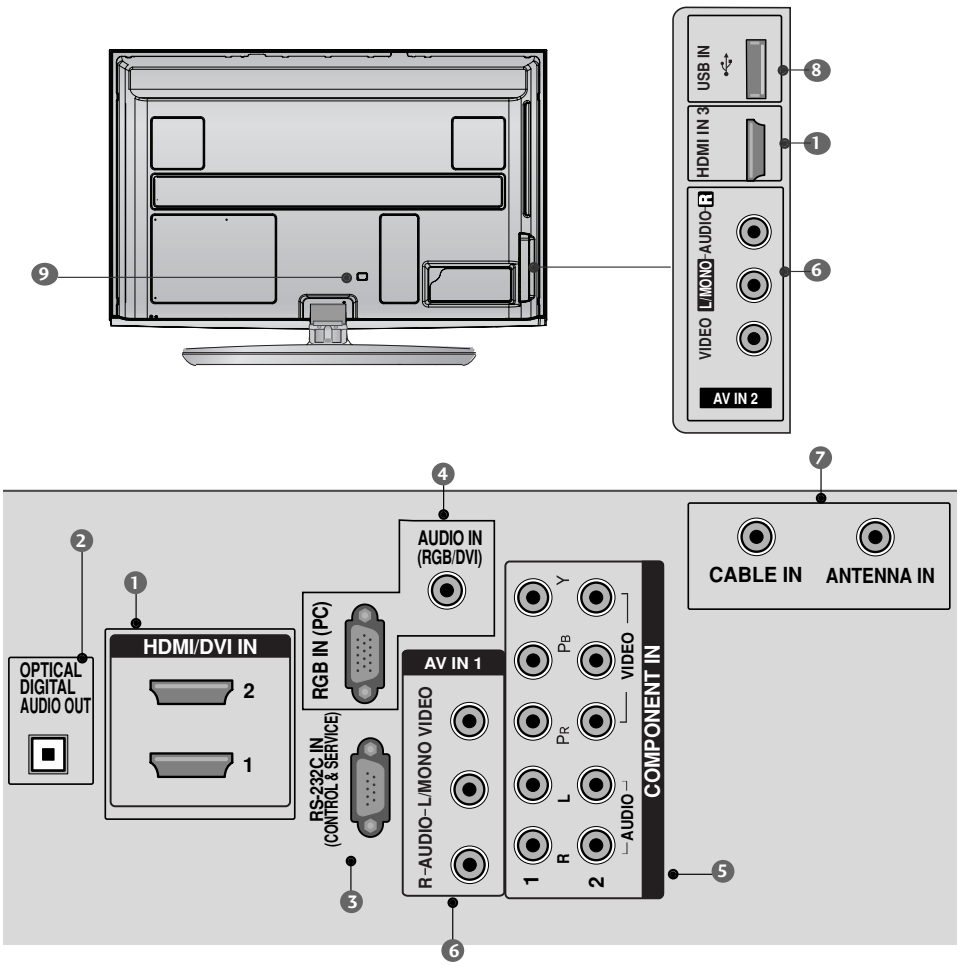
*A ≦0.39 inches (10mm)



MFL59166615-Edit1-en 12/2/09 3:38 PM Page 18

PREPARATION

PLASMA TV Models



1 HDMI/DVI IN, HDMI IN
Digital Connection.
Supports HD video and Digital audio. Doesn't support 480i.
Accepts DVI video using an adapter or HDMI to DVI cable (not included).

2 OPTICAL DIGITAL AUDIO OUT
Digital optical audio output for use with amps and home theater systems.
Note: In standby mode, this port doesn't work.

3 RS-232C IN (CONTROL & SERVICE) PORT
Used by third party devices.

4 AUDIO IN (RGB/DVI)
1/8" (0.32 cm) headphone jack for analog PC audio input.
RGB IN (PC)
Analog PC Connection. Uses a D-sub 15 pin cable (VGA cable).

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

6 AV (Audio/Video) IN
Analog composite connection. Supports standard definition video only.

7 ANTENNA/CABLE IN
Connect over-the air signals to this jack.
Connect cable signals to this jack.

8 USB IN
Used for viewing photos and listening to MP3 and playing movies.

9 Power Cord Socket
For operation with AC power.
Caution: Never attempt to operate the TV on DC power.

STAND INSTRUCTION

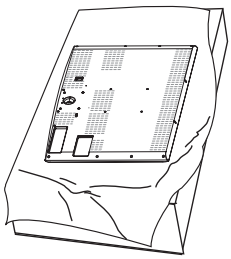
▪ Image shown may differ from your TV.

LCD TV Models -

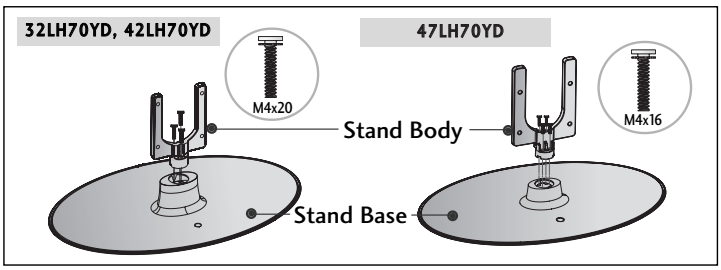
32/42/47LH70**

INSTALLATION

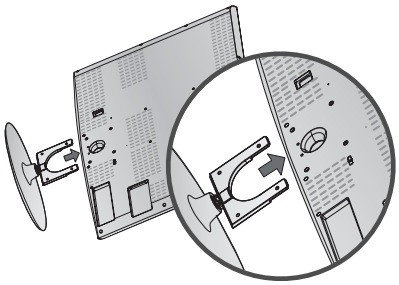
1 Carefully place the TV screen side down on a cushioned surface to protect the screen from damage.



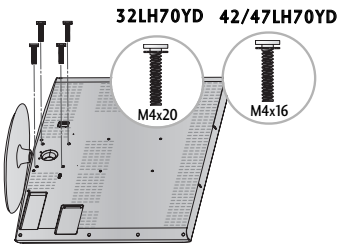
2 Assemble the parts of the **STAND BODY** with the **COVER BASE** of the TV.



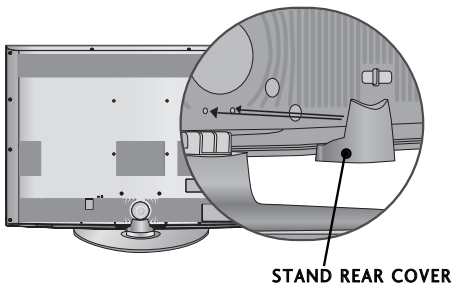
3 Assemble the TV as shown.



4 Fix the 4 bolts securely using the holes in the back of the TV.



5 Install the **STAND REAR COVER** as shown.



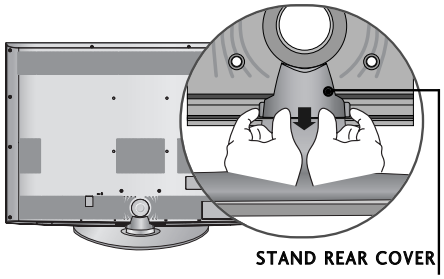
NOTE

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

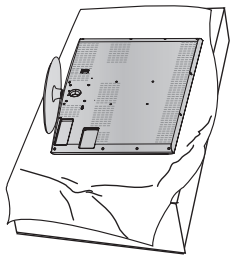
PREPARATION

DETACHMENT

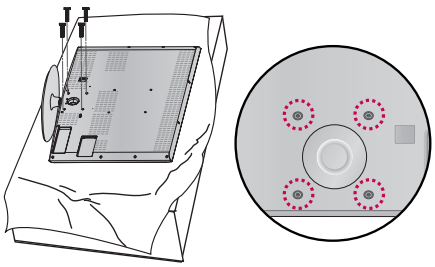
1 Detach the **STAND REAR COVER** as shown. Grip the knob in your fingers and pull it.



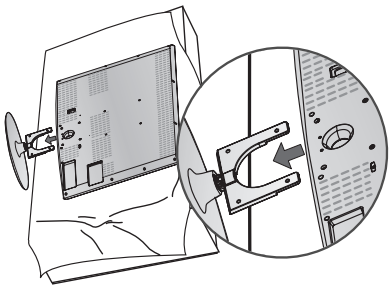
2 Carefully place the TV screen side down on a cushioned surface to protect the screen from damage.



3 Loose the bolts from TV.

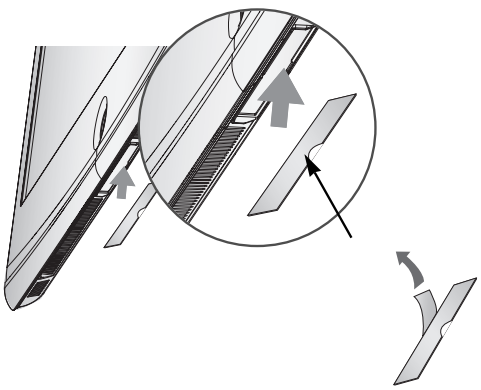


4 Detach the stand from TV.



PROTECTION COVER

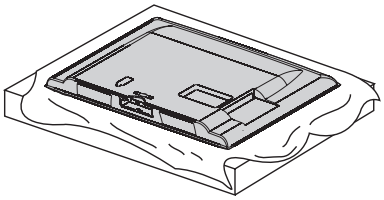
After removing the protection paper from the protection cover, adhere it to the TV as shown.



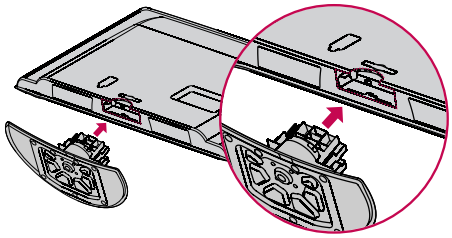
32/37/42LH35, 42/47/55LH50****

INSTALLATION (Except 55LH50**)

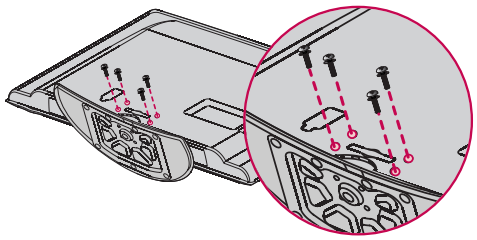
1 Carefully place the TV screen side down on a cushioned surface to protect the screen from damage.



2 Assemble the TV as shown.



3 Fix the 4 bolts securely using the holes in the back of the TV.



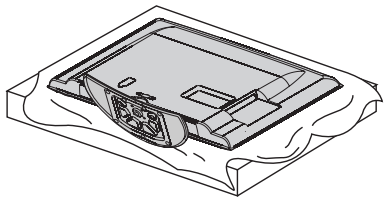
NOTE

- When assembling the desk type stand, make sure the bolt is fully tightened (If not tightened fully, the TV can tilt forward after the product installation). Do not over tighten.

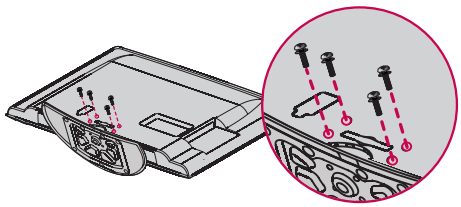
PREPARATION

DETACHMENT

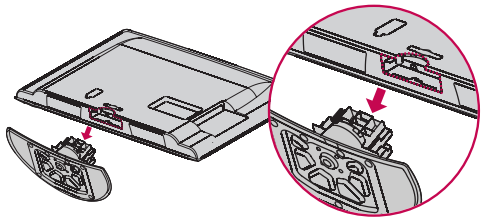
1. Carefully place the TV screen side down on a cushioned surface to protect the screen from damage.



2. Loose the bolts from TV.

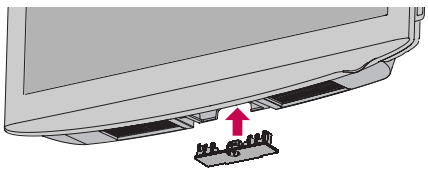


3. Detach the stand from TV.



PROTECTION COVER

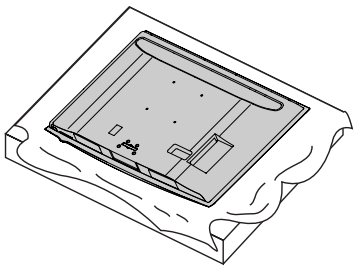
After removing the stand, install the included **protection cover** over the hole for the stand. Press the **PROTECTION COVER** into the TV until you hear it click.



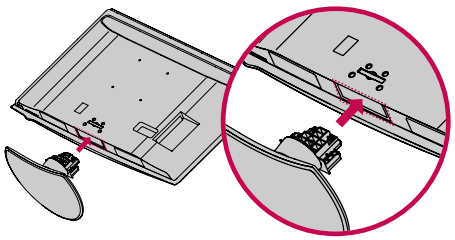
42/47/55LH90**

INSTALLATION (Except 55LH90**)

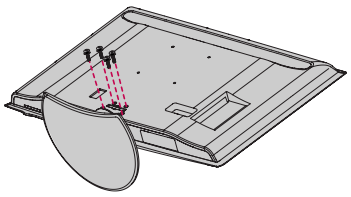
1 Carefully place the TV screen side down on a cushioned surface to protect the screen from damage.



2 Assemble the TV as shown.



3 Fix the 4 bolts securely using the holes in the back of the TV.

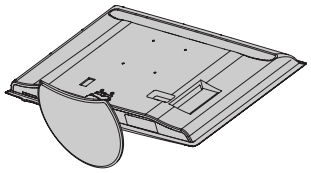


NOTE

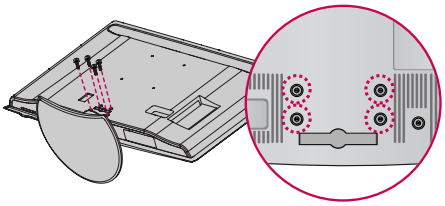
- When assembling the desk type stand, make sure the bolt is fully tightened (If not tightened fully, the TV can tilt forward after the product installation). Do not over tighten.

DETACHMENT

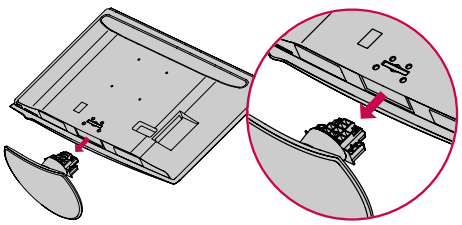
1 Carefully place the TV screen side down on a cushioned surface to protect the screen from damage.



2 Loose the bolts from TV.

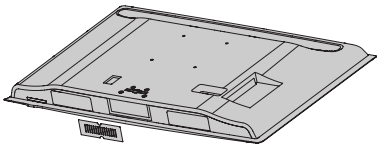


3 Detach the stand from TV.



PROTECTION COVER

4 Insert the **PROTECTION COVER** into the TV. After removing the protection paper from the protection cover, adhere it to the TV as shown.

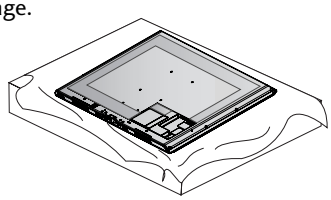


PREPARATION

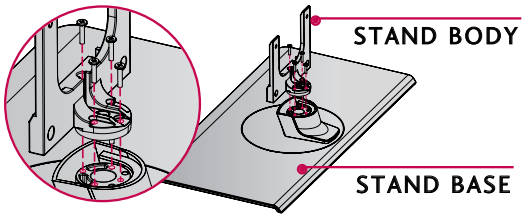
For 32/42/47/55SL80***

INSTALLATION (Except 55SL80**)

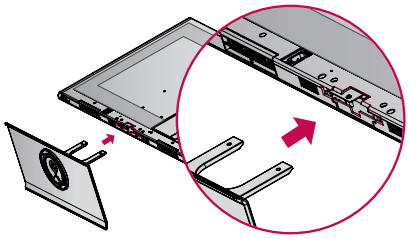
1. Carefully place the TV screen side down on a cushioned surface to protect the screen from damage.



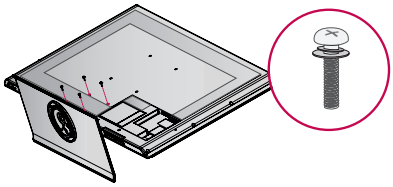
2. Assemble the parts of the **Stand Body** with the **Stand Base** of the TV.



3. Assemble the TV as shown.



4. Fix the 4 screws securely using the holes in the back of the TV.

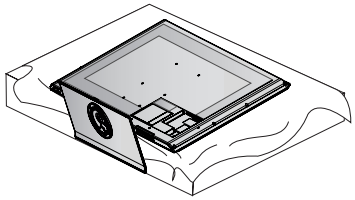


NOTE

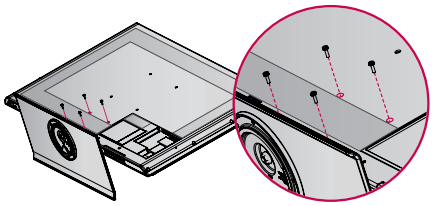
- When assembling the desk type stand, make sure the screws are fully tightened (If not tightened fully, the TV can tilt forward after the product installation). Do not over tighten.

DETACHMENT

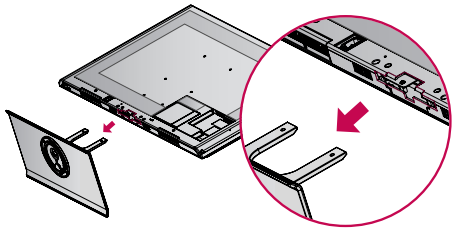
1. Carefully place the TV screen side down on a cushioned surface to protect the screen from damage.



2. Remove the screws from the TV.

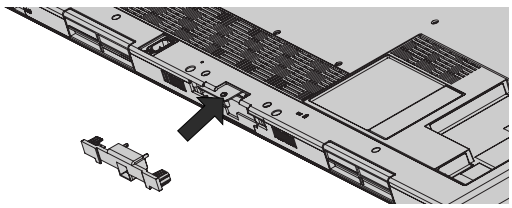


3. Detach the stand from TV.



PROTECTION COVER

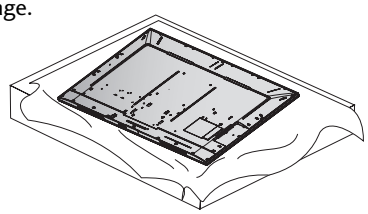
4. After removing the stand, install the included **protection cover** over the hole for the stand. Press the **PROTECTION COVER** into the TV until you hear it click.



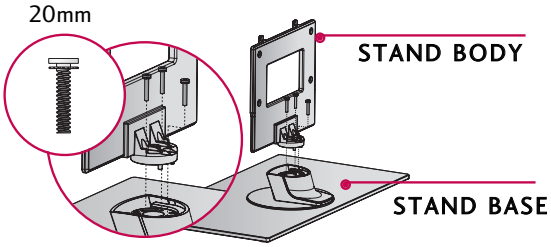
For 42/47SL90**

INSTALLATION

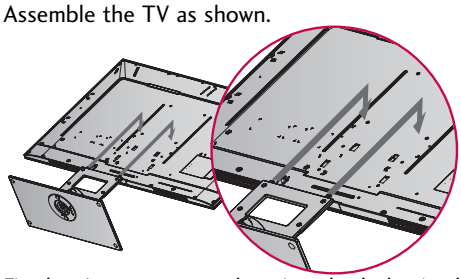
1. Carefully place the TV screen side down on a cushioned surface to protect the screen from damage.



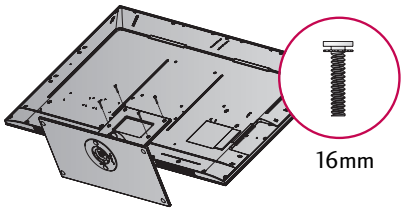
2. Assemble the parts of the **Stand Body** with the **Stand Base** of the TV.



3. Assemble the TV as shown.



4. Fix the 4 screws securely using the holes in the back of the TV.

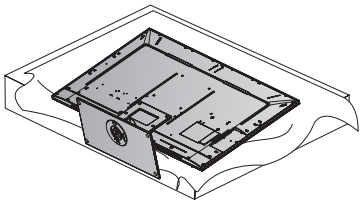


NOTE

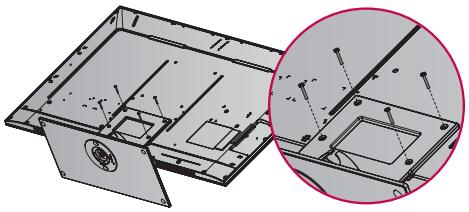
- When assembling the desk type stand, make sure the screws are fully tightened (If not tightened fully, the TV can tilt forward after the product installation). Do not over tighten.

DETACHMENT

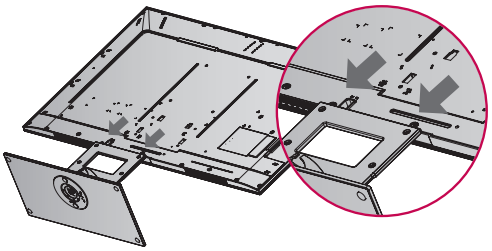
1. Carefully place the TV screen side down on a cushioned surface to protect the screen from damage.



2. Remove the screws from the TV.



3. Detach the stand from TV.

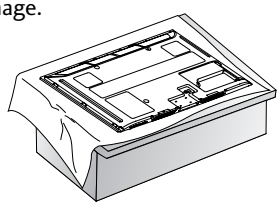


PREPARATION

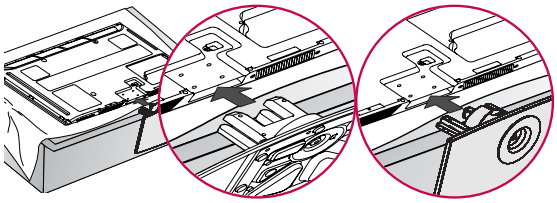
PLASMA TV Models

INSTALLATION

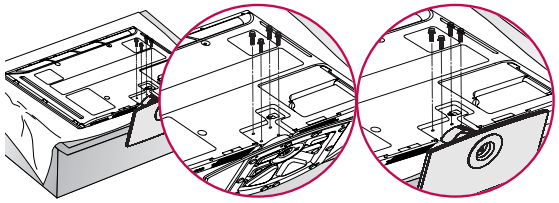
1 Carefully place the TV screen side down on a cushioned surface to protect the screen from damage.



2 Assemble the TV as shown.



3 Fix the 4 bolts securely using the holes in the back of the TV.



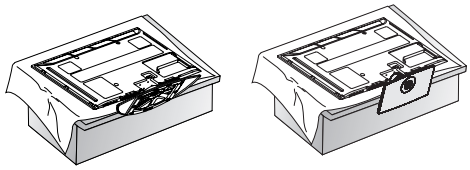
NOTE



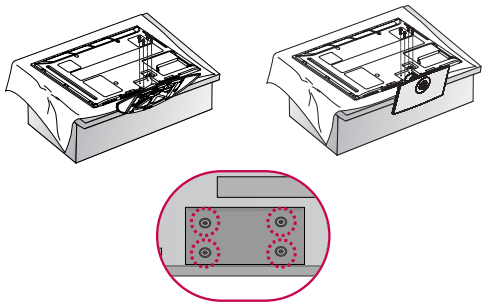
- When assembling the stand, make sure to distinguish and assemble the front and rear side of the stand correctly.
- When assembling the desk type stand, check whether the bolt is fully tightened. (If not tightened fully, the product can tilt forward after the product installation). If you tighten the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

DETACHMENT

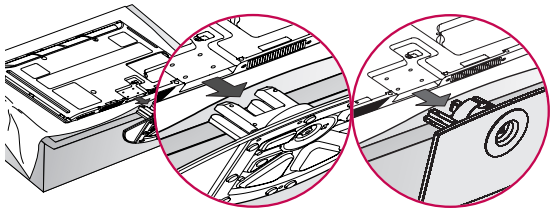
1 Carefully place the TV screen side down on a cushioned surface to protect the screen from damage.



2 Loose the bolts from TV.

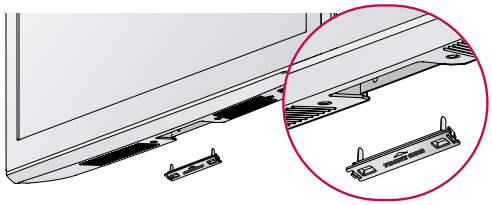


3 Detach the stand from TV.



PROTECTION COVER

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



VESA WALL MOUNTING

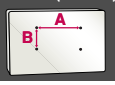
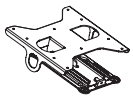
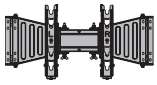
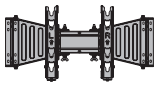
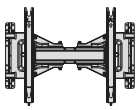
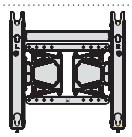
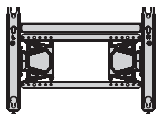
Install your wall mount on a solid wall perpendicular to the floor. When attaching to other building materials, please contact your nearest installer.

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.

First you connect the USB extension cable to the USB IN terminal, and then hang it on the wall.(For 32/42/47LH70**)

	Model	VESA (A * B) 	Standard Screw	Quantity	Wall Mounting Bracket (sold separately)
LCD TV Models	32LH70**, 32LH35**,32SL80**	200 * 100	M4	4	 RW230  AW-47LG30M
	42LH70**, 47LH70**, 37LH35**, 42LH35**, 42LH50**, 47LH50**, 42LH90**, 47LH90**, 42SL80**, 47SL80**, 42SL90**, 47SL90**	200 * 200	M6	4	 AW-47LG30M
	55LH50**, 55LH90**55SL80**	400 * 400	M6	4	 AW-55LH40M
PLASMA TV Models	42PQ60*, 50PQ60*, 50PS80**	400 * 400	M6	4	 **AW-50PG60MS**
	60PS80**	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 then the standard dimension, as they may cause damage to the inside to the TV.
- For wall mounts that do not comply with the VESA standard screw specifications, the length of the screws may differ depending on their specifications.
- Do not use screws that do not comply with the VESA standard screw specifications.
  Do not 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.

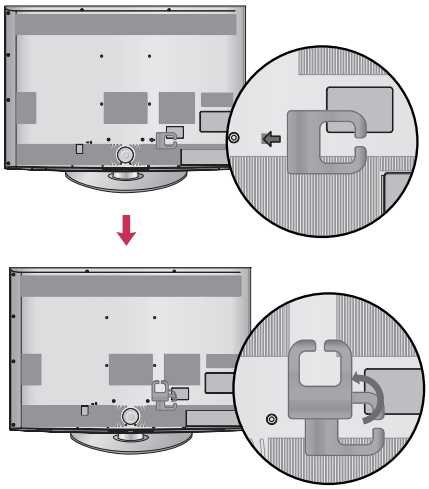
PREPARATION

CABLE MANAGEMENT

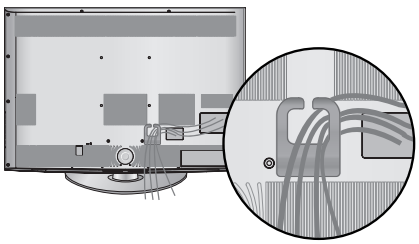
■ Image shown may differ from your TV.

LCD TV Models -

32/42/47LH70**



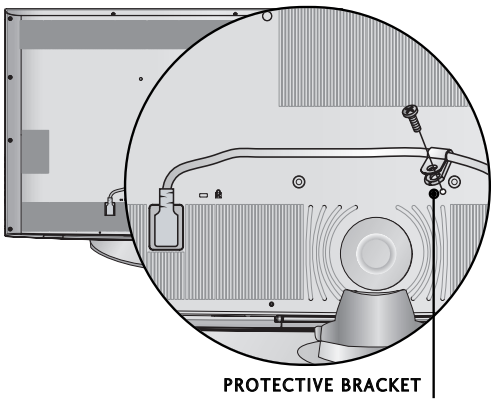
1. Align the hole with the tab on the **CABLE MANAGEMENT CLIP**.
   Turn the **CABLE MANAGEMENT CLIP** as shown.
   Note: This cable management clip can be broken by excessive pressure.



2. Connect the cables as necessary.
   To connect additional equipment, see the **EXTERNAL EQUIPMENT SETUP** section.

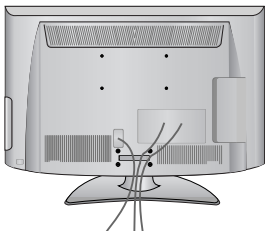
HOW TO SECURE THE POWER CABLE

Secure the power cable with the **PROTECTIVE BRACKET** and the bolt as shown. It will help prevent the power cable from being removed by accident.

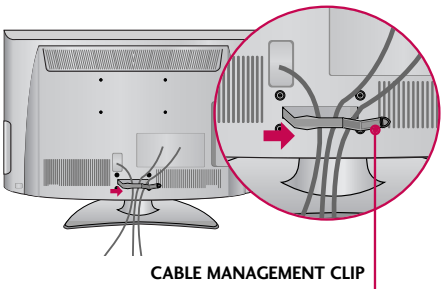


32/37/42LH35, 42/47/55LH50**, 42/47/55LH90****

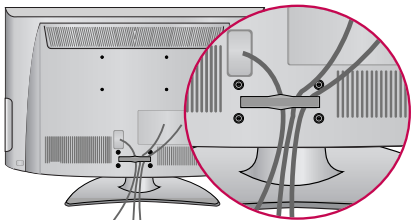
1 Connect the cables as necessary.
To connect additional equipment, see the **EXTERNAL EQUIPMENT SETUP** section.



2 Install the **CABLE MANAGEMENT CLIP** as shown.



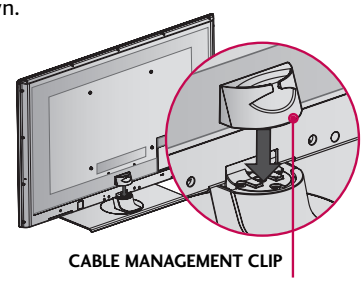
3 Put the cables inside the **CABLE MANAGEMENT CLIP** and snap it closed.



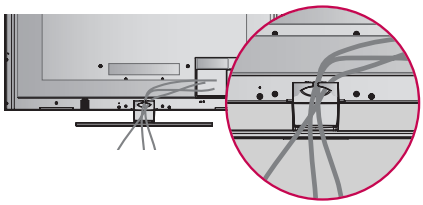
32/42/47/55SL80**

FOR DESK-TYPE STAND

1 Install the **CABLE MANAGEMENT CLIP** as shown.

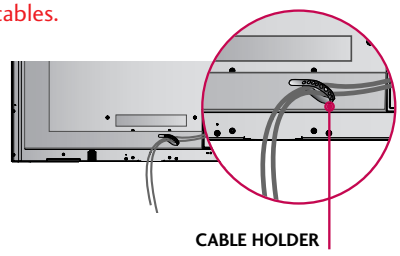


2 Connect the cables as necessary.
To connect additional equipment, see the **EXTERNAL EQUIPMENT SETUP** section.



FOR WALL MOUNT

1 Connect the cables as necessary.
To connect additional equipment, see the **EXTERNAL EQUIPMENT SETUP** section.
Install **CABLE HOLDER** as shown and bundle the cables.



NOTE

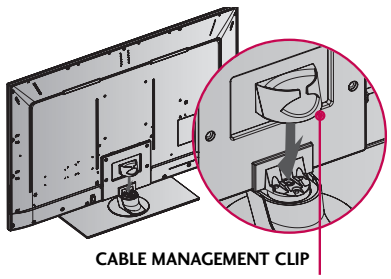
▶ Do not hold the **CABLE MANAGEMENT CLIP** when moving the TV.
- If the TV is dropped, you may be injured or the product may be broken.

PREPARATION

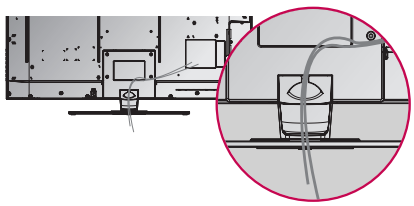
42/47SL90**

FOR DESK-TYPE STAND

1 Install the **CABLE MANAGEMENT CLIP** as shown.

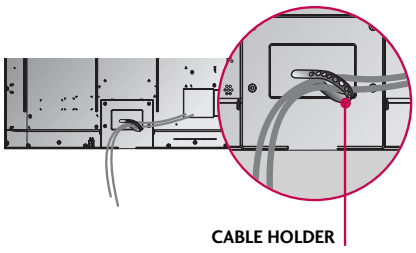


2 Connect the cables as necessary.
To connect additional equipment, see the **EXTERNAL EQUIPMENT SETUP** section.



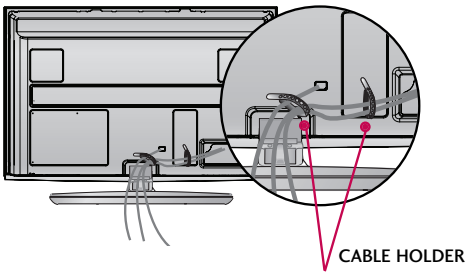
FOR WALL MOUNT

1 Connect the cables as necessary.
To connect additional equipment, see the **EXTERNAL EQUIPMENT SETUP** section.
Install **CABLE HOLDER** as shown and bundle the cables.



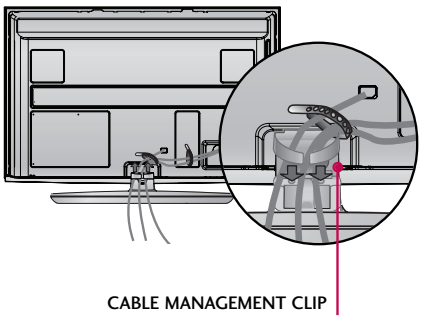
PLASMA TV Models

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



(For 50/60PS80)**

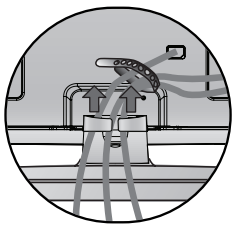
2 Install the **CABLE MANAGEMENT CLIP** as shown.



(For 50/60PS80)**

HOW TO REMOVE THE CABLE MANAGEMENT CLIP

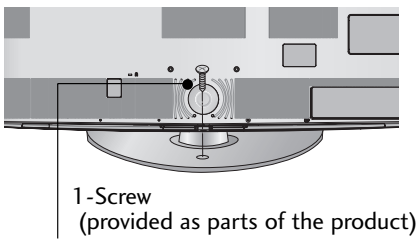
▶ Hold the **CABLE MANAGEMENT CLIP** with both hands and pull it upward.



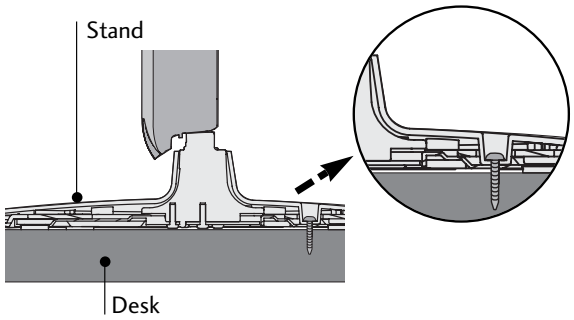
PREPARATION

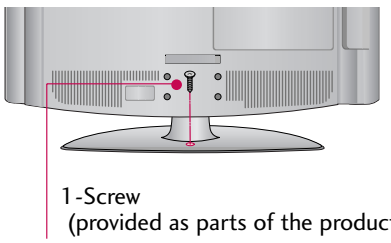
ATTACHING THE TV TO A DESK (Except 42/47LH70**, 47/55LH50**, 47/55LH90**, 32/42/47/55SL80**, 42/47SL90**, PLASMA TV models)

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

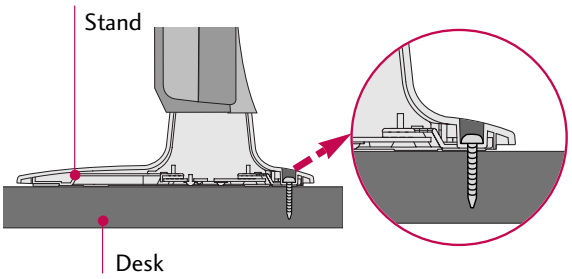


1-Screw
(provided as parts of the product)





1-Screw
(provided as parts of the product)



⚠ WARNING

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

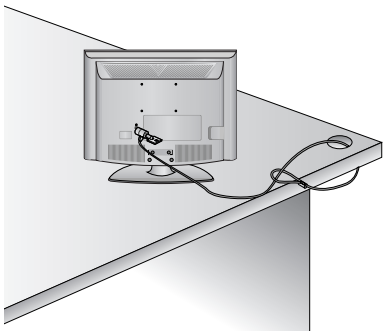
KENSINGTON SECURITY SYSTEM (Except 42/47SL90**)

■ This feature is not available for all models.

- The TV is equipped with a Kensington Security System connector on the back panel. Connect the Kensington Security System cable as shown below.
- For the detailed installation and use of the Kensington Security System, refer to the user's guide provided with the Kensington Security System.

  For further information, contact **http://www.kensington.com**, the internet homepage of the Kensington company. Kensington sells security systems for expensive electronic equipment such as note-book PCs and LCD projectors.

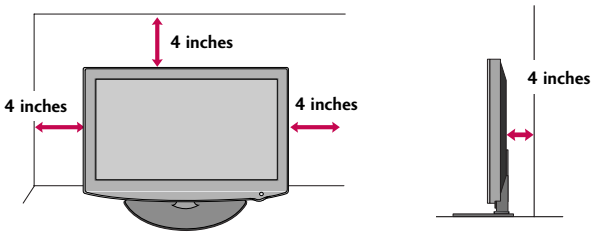
NOTE: The Kensington Security System is an optional accessory.



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.



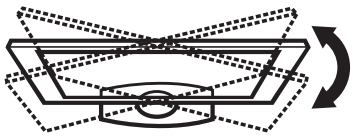
⚠ CAUTION

- 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.)

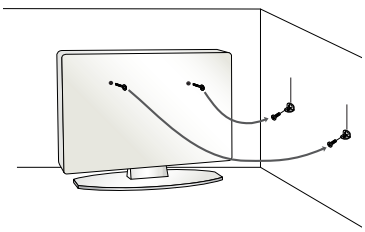
After installing the TV, you can adjust the TV set manually to the left or right direction by 20 degrees to suit your viewing position.

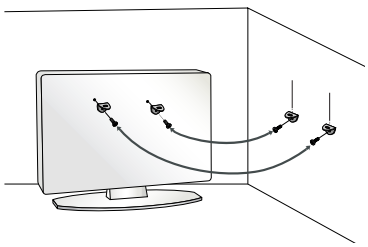


SECURING THE TV TO THE WALL TO PREVENT FALLING WHEN THE TV IS USED ON A STAND

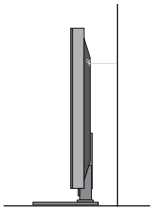
- You should purchase necessary components to prevent the TV from tipping over (when not using a wall mount).
- Image shown may differ from your TV.

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.

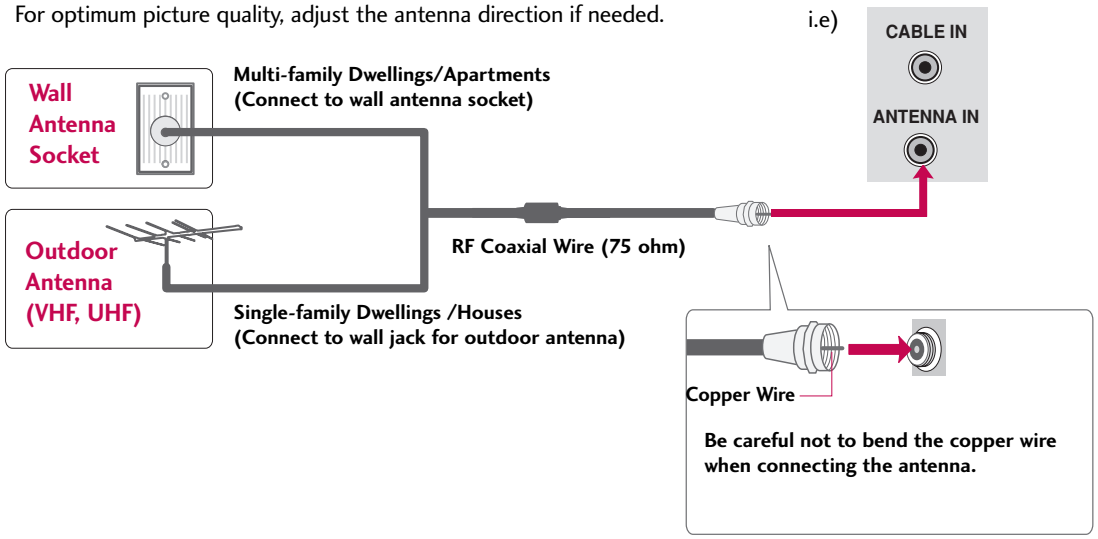
- To prevent damage do not connect to the power outlet until all connections are made between the devices.
- Image shown may differ from your TV.

ANTENNA OR CABLE CONNECTION

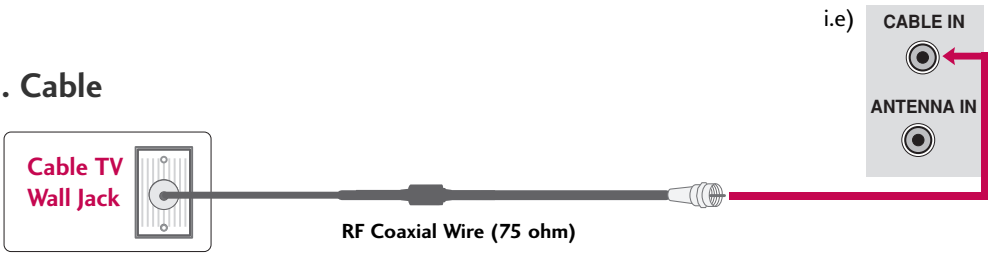
1. Antenna (Analog or Digital)

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

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



2. Cable



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

EXTERNAL EQUIPMENT SETUP

- To prevent the equipment damage, never plug in any power cords until you have finished connecting all equipment.
- Image shown may differ from your TV.
- This part of EXTERNAL EQUIPMENT SETUP mainly use picture for 32/42/47LH70** models.

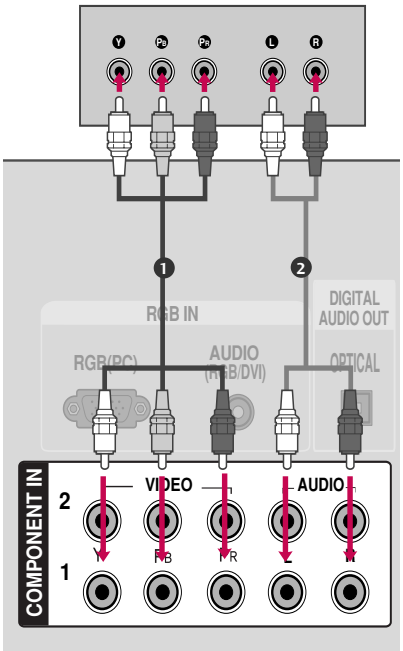
HD RECEIVER SETUP

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

Component Connection

1. How to connect

1. Connect the video outputs (Y, PB, PR) of the digital set-top box to the **COMPONENT IN VIDEO 1** 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 **Component 1** input source on the TV using the **INPUT** button on the remote control.
- If connected to **COMPONENT IN2** input, select the **Component 2** input source on the TV.

Supported Resolutions

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

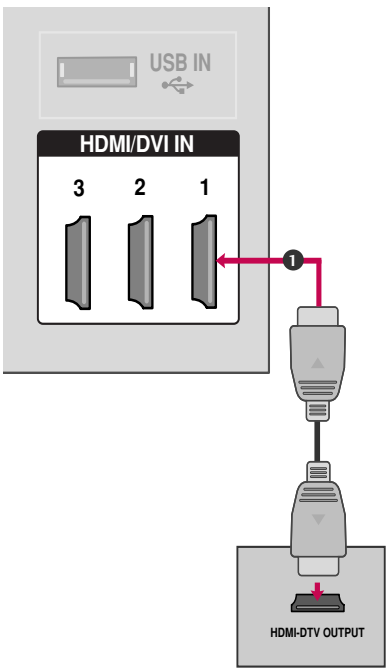
Y, CB/PB, CR/PR

Resolution	Horizontal Frequency(KHz)	Vertical Frequency(Hz)
720x480i	15.73	59.94
	15.73	60.00
720x480p	31.47	59.94
	31.50	60.00
1280x720p	44.96	59.94
	45.00	60.00
1920x1080i	33.72	59.94
	33.75	60.00
1920x1080p	26.97	23.976
	27.00	24.00
	33.71	29.97
	33.75	30.00
	67.432	59.939
	67.50	60.00
	28.125	25.00
	56.25	50.00

HDMI Connection

1. How to connect

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

HDMI-DTV

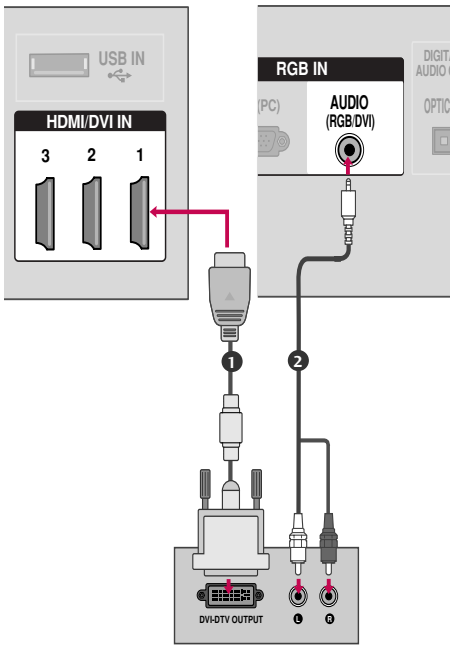
Resolution	Horizontal Frequency(KHz)	Vertical Frequency(Hz)
720x480p	31.47	59.94
	31.50	60.00
1280x720p	44.96	59.94
	45.00	60.00
1920x1080i	33.72	59.94
	33.75	60.00
1920x1080p	27.00	24.00
	33.75	30.00
	67.432	59.939
	67.50	60.00
	56.25	50.00
	26.97	23.976
	33.71	29.97
	28.125	25.00

EXTERNAL EQUIPMENT SETUP

DVI to HDMI Connection

1. How to connect

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



2. How to use

- Turn on the digital set-top box. (Refer to the owner's manual for the digital set-top box.)
- Select the **HDMI1**, **2**, or **3** input source on the TV using the **INPUT** button on the remote control.

NOTE

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

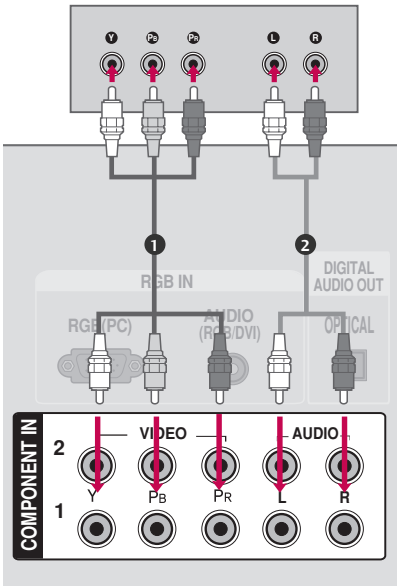
DVD SETUP

Component Connection

1. How to connect

1. Connect the video outputs (Y, P_B, P_R) of the DVD to the **COMPONENT IN VIDEO1** jacks on the TV.
   Match the jack colors (Y = green, P_B = blue, and P_R = red).

2. Connect the audio outputs of the DVD to the **COMPONENT IN AUDIO1** jacks on the TV.



2. How to use

- Turn on the DVD player, insert a DVD.
- Select the **Component 1** input source on the TV using the **INPUT** button on the remote control.
- If connected to **COMPONENT IN 2** input, select the **Component 2** 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.

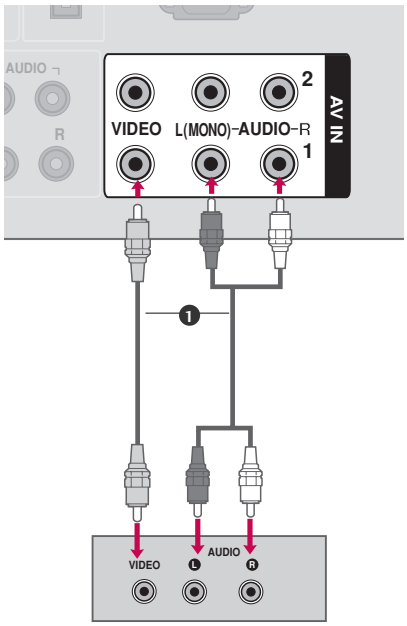
Component ports on the TV	Y	P_B	P_R
Video output ports on DVD player	Y	P_B	P_R
	Y	B-Y	R-Y
	Y	Cb	Cr
	Y	Pb	Pr

EXTERNAL EQUIPMENT SETUP

Composite (RCA) Connection

1. How to connect

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



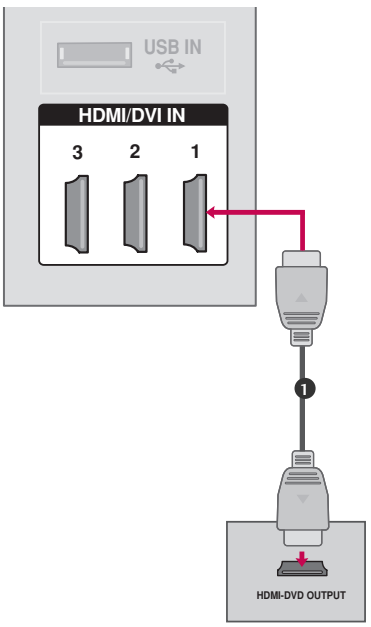
2. How to use

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

HDMI Connection

1. How to connect

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

NOTE

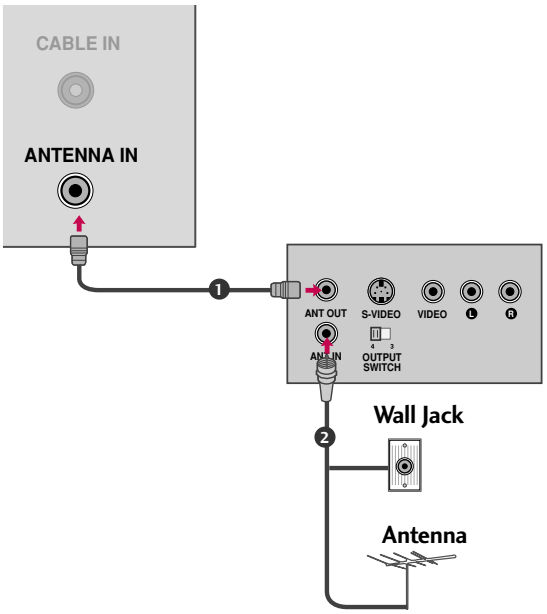
▶ Check HDMI cable over version 1.3.
If the HDMI cables don't support HDMI version 1.3, it can cause flickers or no screen display. In this case use the latest cables that support HDMI version 1.3.

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.



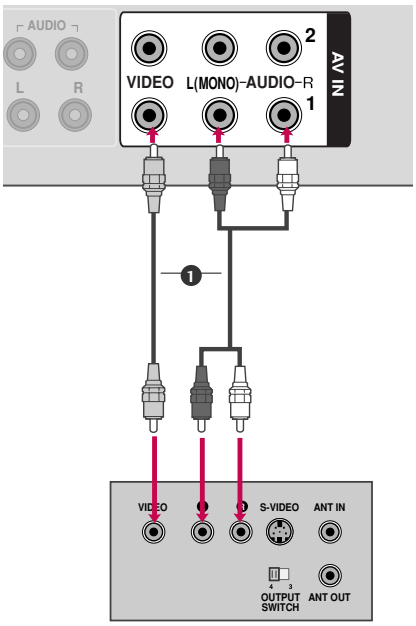
2. How to use

- 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 IN2**, 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.

EXTERNAL EQUIPMENT SETUP

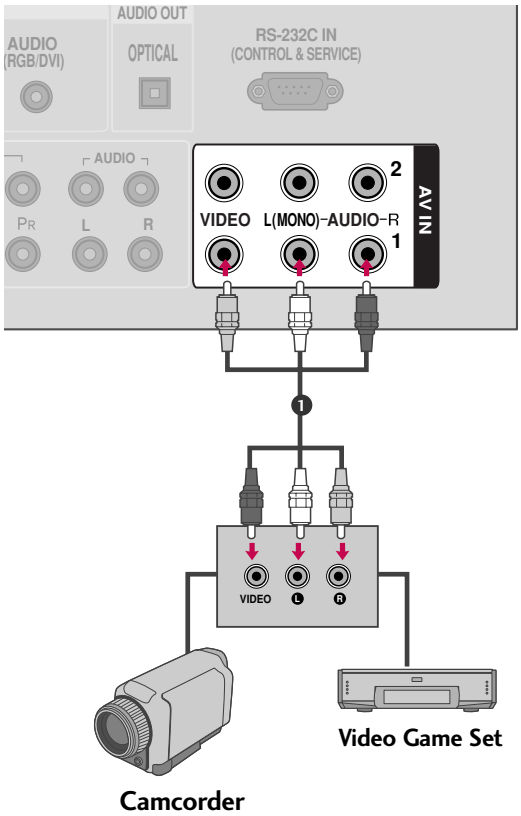
OTHER A/V SOURCE SETUP

1. How to connect

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

2. How to use

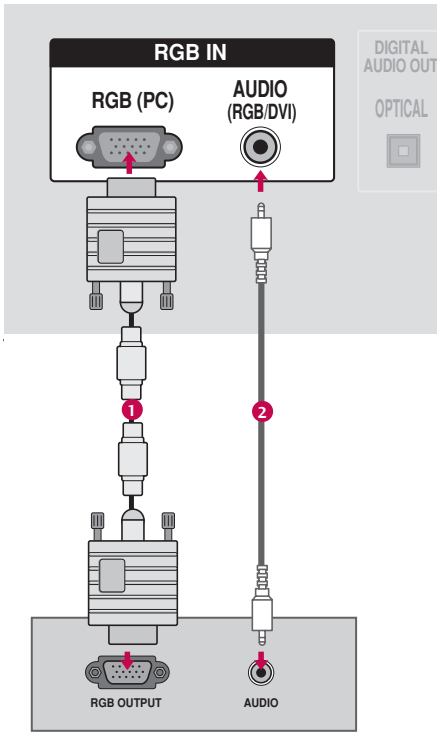
- Select the **AV2** input source on the TV using the **INPUT** button on the remote control.
- If connected to **AV IN1** input, select the **AV1** input source on the TV.
- Operate the corresponding external equipment.



PC SETUP

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

VGA (D-Sub 15 pin) Connection



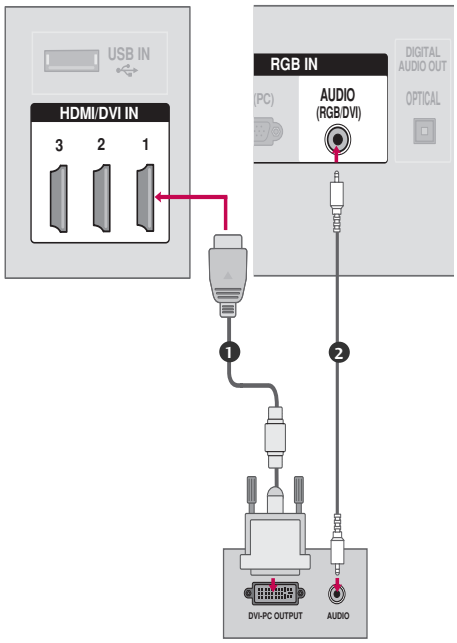
1. How to connect

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

2. How to use

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

DVI to HDMI Connection



1. How to connect

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

2. How to use

- Turn on the PC and the TV.
- Select the **HDMI1**, **2**, or **3** input source on the TV using the **INPUT** button on the remote control.

EXTERNAL EQUIPMENT SETUP

NOTES

- To get the the best picture quality, adjust the PC graphics card to 1920x1080 or 1360x768(For 42/50PQ60*).
- 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 may 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.
- If there are overscan in HDMI-PC 1920x1080 or 1360x768(For 42/50PQ60*)., change aspect ratio to **Just scan**.
- When the selecting HDMI-PC, set the “Input Label - PC” in the OPTION menu.

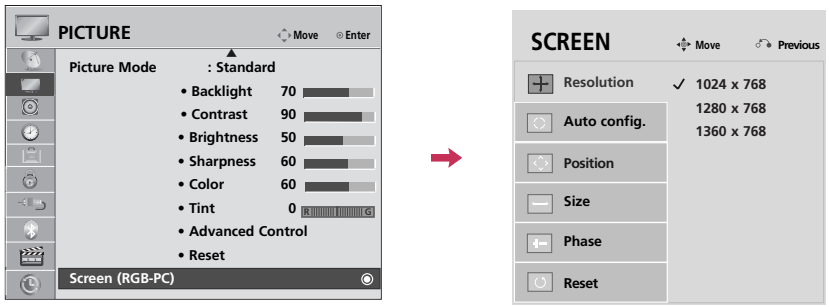
Supported Display Specifications (RGB-PC, HDMI-PC)

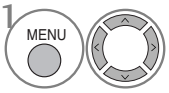
Resolution	Horizontal Frequency(KHz)	Vertical Frequency(Hz)
640x350	31.468	70.09
720x400	31.469	70.08
640x480	31.469	59.94
800x600	35.156 37.879	56.25 60.31
1024x768	48.363	60.00
1280x768	47.776	59.87
1280x1024	63.981	60.02
1360x768	47.712	60.015
1600x1200	75.00	60.00
1920x1080	67.5	60.00

Screen Setup for PC mode

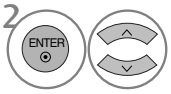
Selecting Resolution

You can choose the resolution in RGB-PC mode.
The **Position**, **Phase**, and **Size** can also be adjusted.

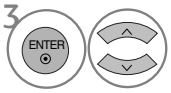




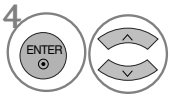
Select **PICTURE**.



Select **Screen(RGB-PC)**.



Select **Resolution**.



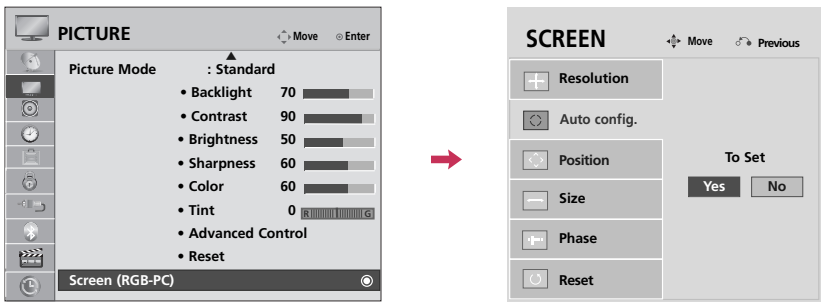
Select the desired resolution.



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 MENU Select **PICTURE**.

2 ENTER Select **Screen(RGB-PC)**.

3 ENTER Select **Auto config.**.

4 ENTER Select **Yes**.

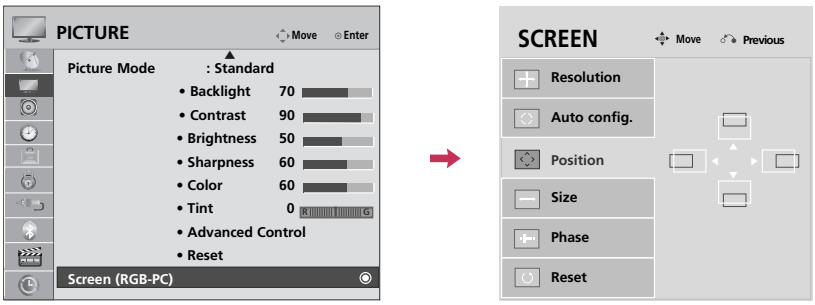
5 ENTER

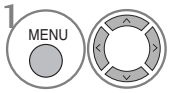
- If the position of the image is still not correct, try Auto adjustment again.
- If picture needs to be adjusted again after Auto adjustment in RGB-PC, you can adjust the **Position**, **Size** or **Phase**.
- Because the image with the black background may fail the auto adjustment, use the image with the bright background.

Adjustment for screen Position, Size, and Phase

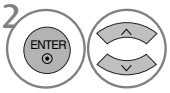
If the picture is not clear after auto adjustment and especially if characters are still trembling, adjust the picture phase manually.

This feature operates only in RGB-PC mode.

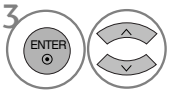




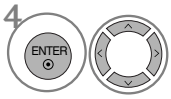
Select **PICTURE**.



Select **Screen(RGB-PC)**.



Select **Position**, **Size**, or **Phase**.



Make appropriate adjustments.

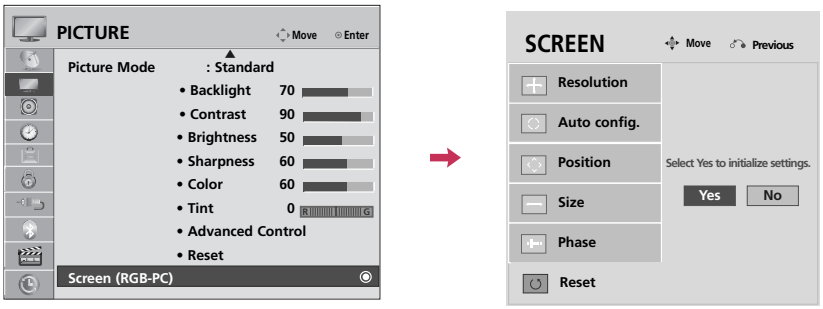


- **Position**: This function is to adjust picture to left/right and up/down as you prefer.
- **Size**: This function is to minimize any vertical bars or stripes visible on the screen background. And the horizontal screen size will also change.
- **Phase**: This function allows you to remove any horizontal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



1 MENU Select **PICTURE**.

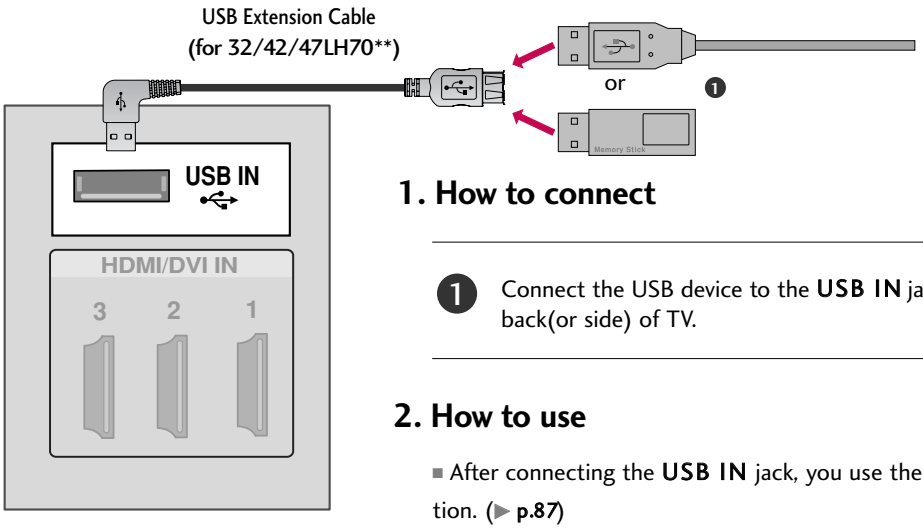
2 ENTER Select **Screen(RGB-PC)**.

3 ENTER Select **Reset**.

4 ENTER Select **Yes**.

5 ENTER

USB CONNECTION



1. How to connect

1 Connect the USB device to the **USB IN** jack on the back(or side) of TV.

2. How to use

■ After connecting the **USB IN** jack, you use the USB function. (▶ **p.87**)

AUDIO OUT CONNECTION

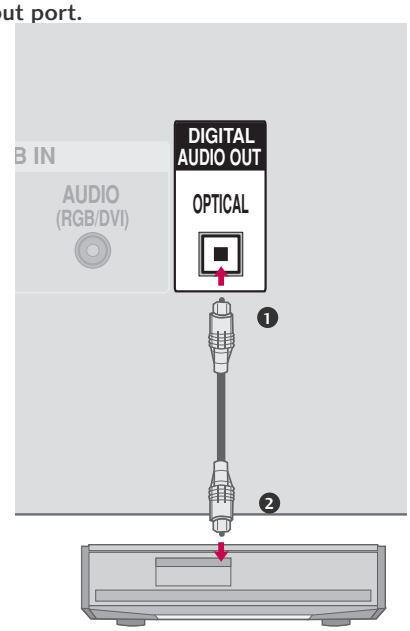
Send the TV's audio to external audio equipment via the Audio Output port.

1. How to connect

1 Connect one end of the optical or coaxial cable to the TV port of **OPTICAL DIGITAL AUDIO OUT**.

2 Connect the other end of the optical cable to the digital audio input on the audio equipment.

3 Set the "TV Speaker option - Off" in the AUDIO menu. (▶ **p.132**). See the external audio equipment instruction manual for operation.



NOTE

▶ When connecting with external audio equipments, such as amplifiers or speakers, you can turn the TV speakers off in the menu. (▶ **p.136**)

CAUTION

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

WATCHING TV / CHANNEL CONTROL

REMOTE CONTROL FUNCTIONS

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

TV/STB Select the remote operating mode: TV, or STB.

POWER Switches the TV ON from standby or standby from ON.

Q.MENU Opens the list of Quick Menu options. ▶ **p.60**

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

INPUT Selects external sources that are available, Switches the TV on from standby mode. ▶ **p.69**

ENERGY SAVING Adjusts the Energy Saving.

GUIDE Displays the program event according to time scheduler. ▶ **p.74**

VOLUME UP /DOWN Adjusts the volume.

MARK Select files that you want to delete or move. ▶ **p.102**

FAV Scroll through the programmed Favorite channels. ▶ **p.65**

CHAR/NUM, DELETE Used to edit program title in REC.LIST and schedule list.

MUTE Switches the sound on or off. ▶ **p.56**

CHANNEL UP/DOWN Changes the channel.

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

DVR, USB, Control buttons
- Use for USB (PHOTO LIST, MUSIC LIST and MOVIE LIST.) or DVR function.



THUMBSTICK (Up/Down/Left Right/ENTER) Navigates the on-screen menus and adjusts the system settings to your preference.
Time Machine control - < , > (Jump thumbnail)

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

INFO Displays the information of watching program.

AV MODE Selects and sets Video and Audio modes. ▶ **p.71**

NUMBER/ character button
- Directly tune to the channel by numeric button.
- Use for character/number input.

— (DASH) Used to enter a program number for multiple program channels such as 5-1, 5-2, etc.

LIST Displays a list of the programmed all channels.

Q.VIEW Tunes to the last channel viewed.

REPEAT Used in the TIME MACHINE menu function.

Time Machine/ SIMPLINK control buttons
- ◀◀ (Rewind), ▶▶ (Fast Forward), ▶ (Playback), II (Pause)
- Controls the SIMPLINK compatible devices.

(Freezes the current frame by pressing the II (Pause) button. (For PLASMA TV Models))

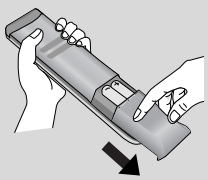
● (Record) Selects button to record the watching program.

■ (Stop) Stops processing of time machine function. (Playback, Record, etc)

LIVE TV Return to the live.

SIMPLINK Shows the list of SIMPLINK devices connected to the TV. ▶ **p.72**

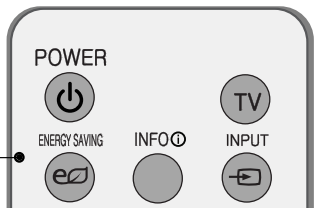
Installing Batteries



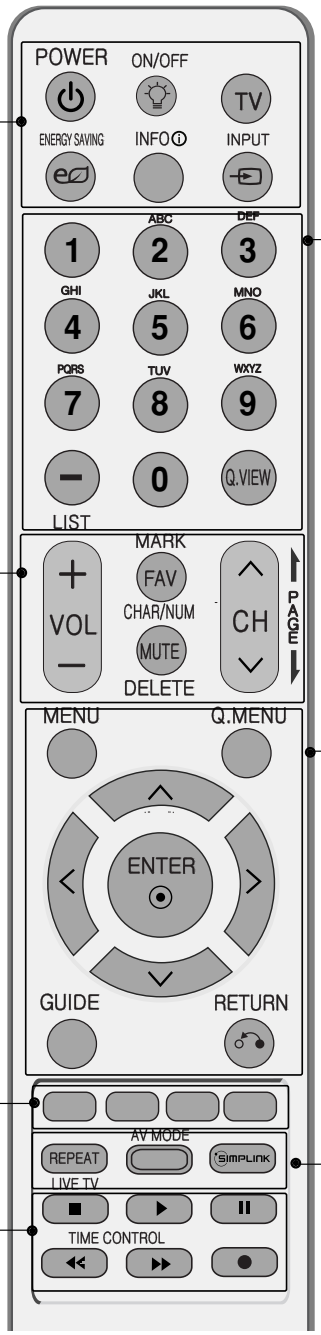
- Open the battery compartment cover on the back side and install the batteries matching correct polarity (+with +,-with -).
- Install two 1.5V AAA batteries. Don't mix old or used batteries with new ones.
- Close cover.

WATCHING TV / CHANNEL CONTROL

For 32/42/47/55SL80**



For 42/47/55LH90QD



POWER	Switches the TV ON from standby or standby from ON.
ENERGY SAVING	Adjusts the Energy Saving.
BACKLIT	Illuminates the remote control buttons of selected mode.
INFO	Displays the information of watching program.
TV	Select the remote operating mode: TV.
INPUT	Selects external sources that are available, Switches the TV on from standby mode. ▶ **p.69**

VOLUME UP /DOWN	Adjusts the volume.
MARK	Select files that you want to delete or move. ▶ **p.102**
FAV	Scroll through the programmed Favorite channels. ▶ **p.65**
CHAR/NUM, DELETE	Used to edit program title in REC.LIST and schedule list.
MUTE	Switches the sound on or off. ▶ **p.56**
CHANNEL UP/DOWN	Changes the channel.
PAGE UP/DOWN	Moves from one full set of screen information to the next one.

DVR, USB, Control buttons	Use for USB (PHOTO LIST, MUSIC LIST and MOVIE LIST.) or DVR function.

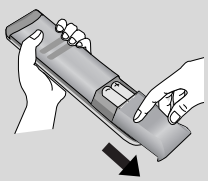
Time Machine/ SIMPLINK control buttons	◀◀ (Rewind), ▶▶ (Fast Forward), ▶ (Playback), II (Pause) Controls the SIMPLINK compatible devices. (Freezes the current frame by pressing the II (Pause) button. (For PLASMA TV Models))
● (Record)	Selects button to record the watching program.
■ (Stop)	Stops processing of time machine function. (Playback, Record, etc)

NUMBER/ character button	◦ Directly tune to the channel by numeric button. ◦ Use for character/number input.
— (DASH)	Used to enter a program number for multiple program channels such as 5-1, 5-2, etc.
LIST	Displays a list of the programmed all channels.
Q.VIEW	Tunes to the last channel viewed.

MENU	Displays the main menu or clears all on-screen displays and return to TV viewing.
Q.MENU	Opens the list of Quick Menu options. ▶ **p.60**
THUMBSTICK (Up/Down/Left Right/ENTER)	Navigates the on-screen menus and adjusts the system settings to your preference. Time Machine control - < , > (Jump thumbnail)
GUIDE	Displays the program event according to time scheduler.▶ **p.74**
RETURN	Allows the user to move return one step in an interactive application or other user interaction function.

REPEAT	Used in the TIME MACHINE menu function.
AV MODE	Selects and sets Video and Audio modes. ▶ **p.71**
SIMPLINK	Shows the list of SIMPLINK devices connected to the TV. ▶ **p.72**
LIVE TV	Return to the live.

Installing Batteries



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

WATCHING TV / CHANNEL CONTROL

REMOTE CONTROL FUNCTIONS

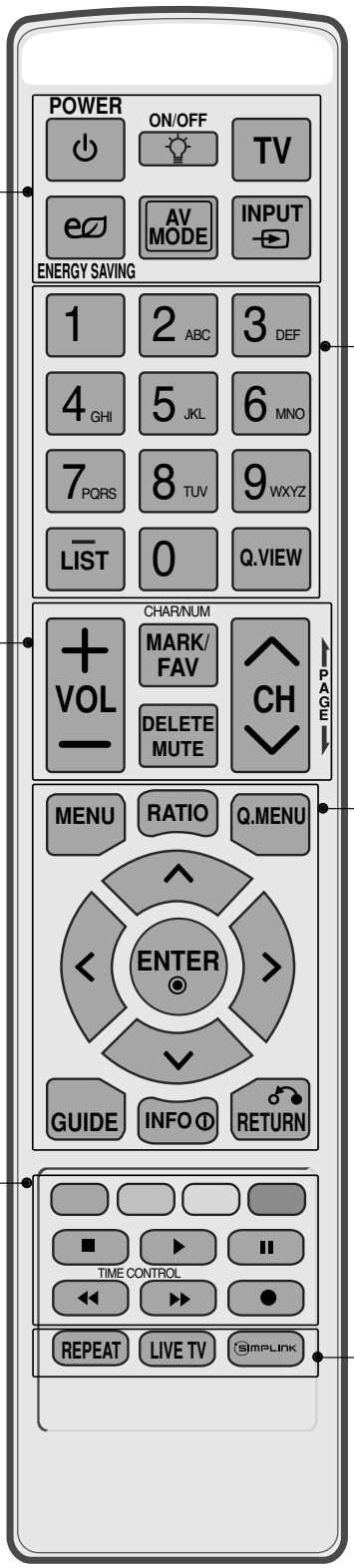
When using the remote control, aim it at the remote control sensor on the TV.

For 42/47SL90**

POWER	Switches the TV ON from standby or standby from ON.
ENERGY SAVING	Adjusts the Energy Saving.
ON/OFF	Illuminates the remote control buttons.
AV MODE	Selects and sets Video and Audio modes. ▶ **p.71**
TV	Select the remote operating mode: TV.
INPUT	Selects external sources that are available, Switches the TV on from standby mode. ▶ **p.69**

VOLUME UP /DOWN	Adjusts the volume.
MARK	Select files that you want to delete or move. ▶ **p.102**
FAV	Scroll through the programmed Favorite channels. ▶ **p.65**
CHAR/NUM, DELETE	Used to edit program title in REC.LIST and schedule list.
MUTE	Switches the sound on or off. ▶ **p.56**
CHANNEL UP/DOWN	Changes the channel.
PAGE UP/DOWN	Moves from one full set of screen information to the next one.

DVR, USB, Control buttons	Use for USB (PHOTO LIST, MUSIC LIST and MOVIE LIST.) or DVR function.
Time Machine/ SIMPLINK control buttons	◦ ◀◀ (Rewind), ▶▶ (Fast Forward), ▶ (Playback), II (Pause) ◦ Controls the SIMPLINK compatible devices. (Freezes the current frame by pressing the II (Pause) button. (For PLASMA TV Models))
● (Record)	Selects button to record the watching program.
■ (Stop)	Stops processing of time machine function. (Playback, Record, etc)

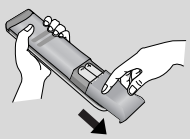


NUMBER/ character button	◦ Directly tune to the channel by numeric button. ◦ Use for character/number input.
— (DASH)	Used to enter a program number for multiple program channels such as 5-1, 5-2, etc.
LIST	Displays a list of the programmed all channels.
Q.VIEW	Tunes to the last channel viewed.

MENU	Displays the main menu or clears all on-screen displays and return to TV viewing.
RATIO	Changes the aspect ratio.
Q.MENU	Opens the list of Quick Menu options. ▶ **p.60**
THUMBSTICK (Up/Down/Left Right/ENTER)	Navigates the on-screen menus and adjusts the system settings to your preference. Time Machine control - < , > (Jump thumbnail)
GUIDE	Displays the program event according to time scheduler.▶ **p.74**
INFO	Displays the information of watching program.
RETURN	Allows the user to move return one step in an interactive application or other user interaction function.

REPEAT	Used in the TIME MACHINE menu function.
LIVE TV	Return to the live.
SIMPLINK	Shows the list of SIMPLINK devices connected to the TV. ▶ **p.72**

Installing Batteries

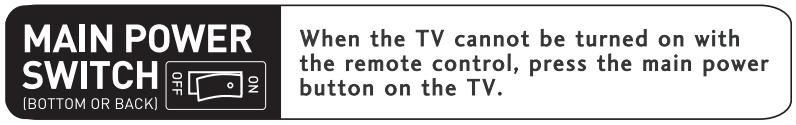


- Open the battery compartment cover on the back side and install the batteries matching correct polarity (+with +,-with -).
- Install two 1.5V AAA batteries. Don't mix old or used batteries with new ones.
- Close cover.

WATCHING TV / CHANNEL CONTROL

TURNING ON THE TV

1. First, connect power cord correctly.
   And switch the **AC power control switch** on TV. (For LCD TV Models)
   At this moment, the TV switches to standby mode.
   - In standby mode to turn TV on, press the ⏻/I (For LCD TV Models) , **INPUT**, **CH (▲▼** or ^ v **)** button on the TV or press the **POWER**, **INPUT**, **CH (** ^ or v **)**, **Number (0~9)** button on the remote control.



2. Select the viewing source by using the **INPUT** button on the remote control.
3. When finished using the TV, press the **POWER** button on the remote control. The TV reverts to standby mode.

NOTE

- If you intend to be away on vacation, disconnect the power plug from the wall power outlet.
- If you do not complete the **Initial setting**, it will appear whenever the TV is switched on until the **Initial setting** procedure is completed.

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** or **VOL (+** or **-)** button.

INITIAL SETTING

This Function guides the user to easily set the essential items for viewing the TV for the first time when purchasing the TV. If 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.

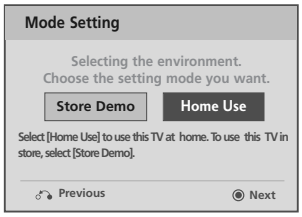
Step1. Language Selecting



1 Select **Menu Language** or **Audio Language**.

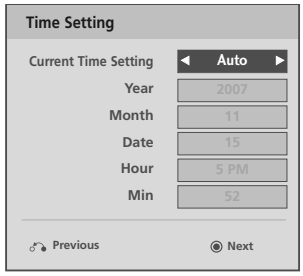
2 ENTER Select your desired language.

Step2. Mode setting



1 ENTER Select **Home Use** mode.

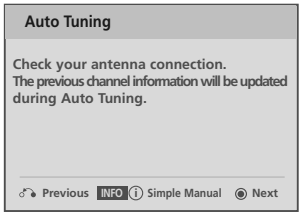
Step3. Time setting



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

2 ENTER Select desired time option.

Step4. Auto Tuning



1 ENTER Start **Auto Tuning**.

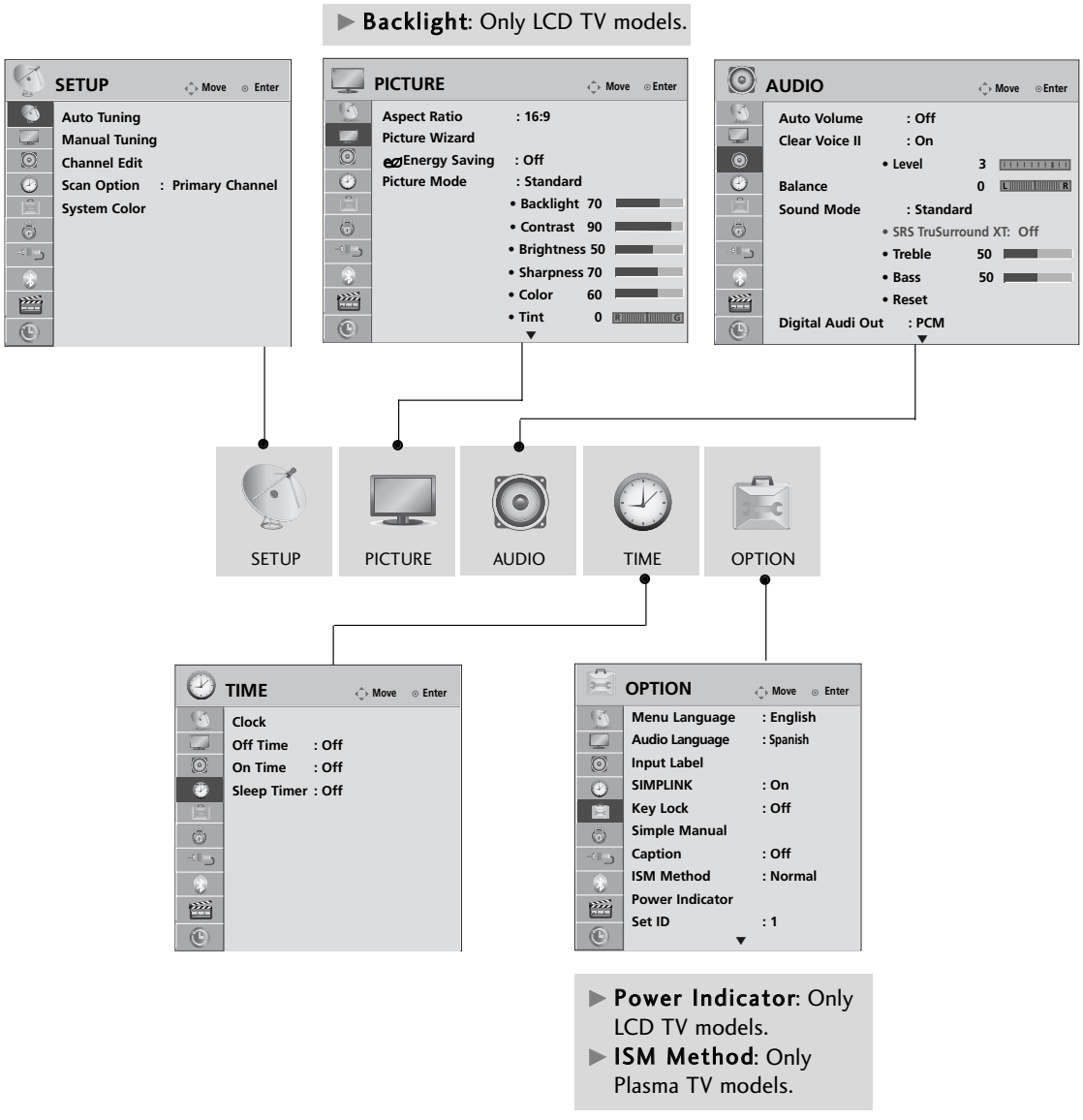
NOTE

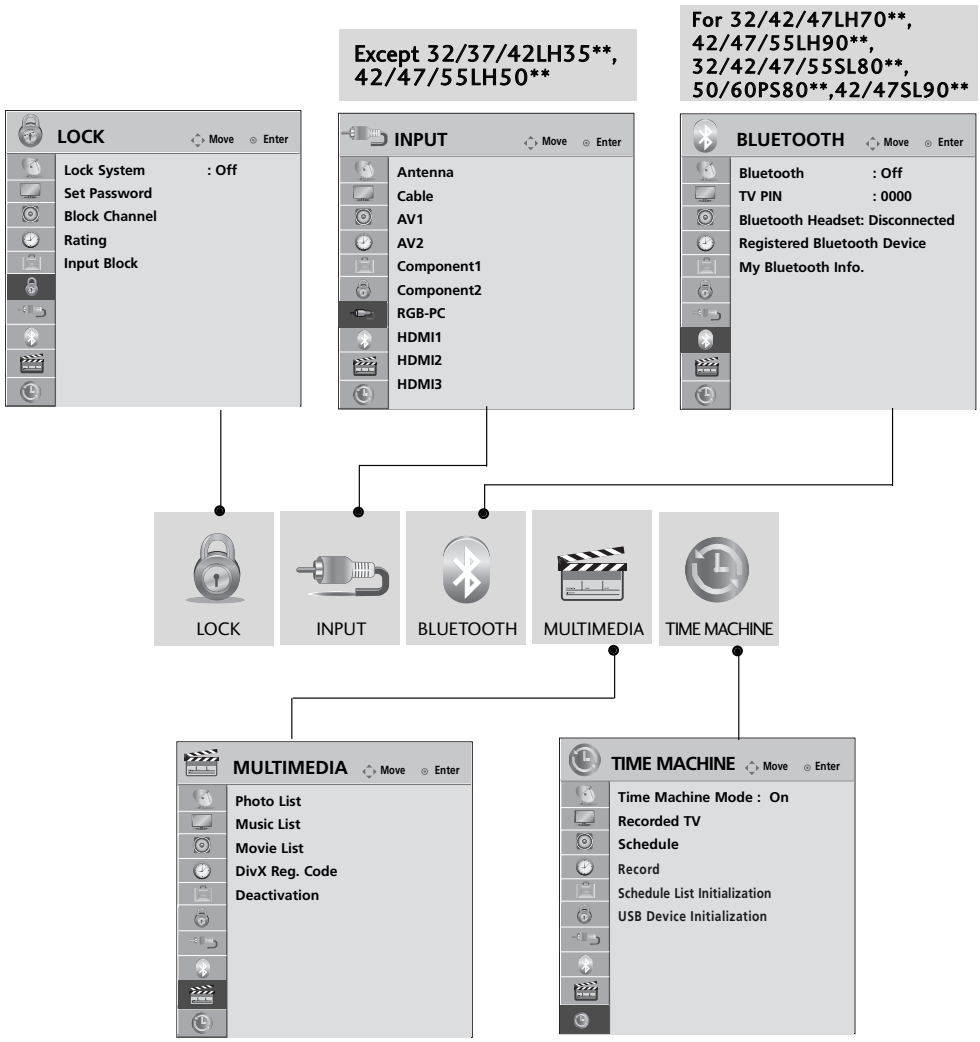
▶ You can also adjust **Initial Setting** in the **OPTION** menu.

MFL59166615-Edit1-en 12/2/09 3:38 PM Page 58

ON-SCREEN MENUS SELECTION

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





1 MENU Display each menu.

2 ENTER Select a menu item.

3 ENTER Accept the current selection.

4 MENU Return to TV viewing.

WATCHING TV / CHANNEL CONTROL

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.
- **Clear Voice II**: By differentiating the human sound range from others, it helps make human voices sound better.
- **Picture Mode**: Selects the picture depend on the viewing environment.
- **Sound Mode**: Selects the sound for type of program.
- **Multi Audio**: Changes the audio language.(Digital signal)
  SAP: Selects MTS sound. (Analog signal)
- **Sleep Timer**: Select the amount of time before your TV turns off automatically.
- **Ch. Add/Delete/Fav**: Select channel you want to add/delete or add the channel to the Favorite List.
- **USB Device**: Select "Eject" in order to eject USB device.



1 Q. MENU  Display each menu.

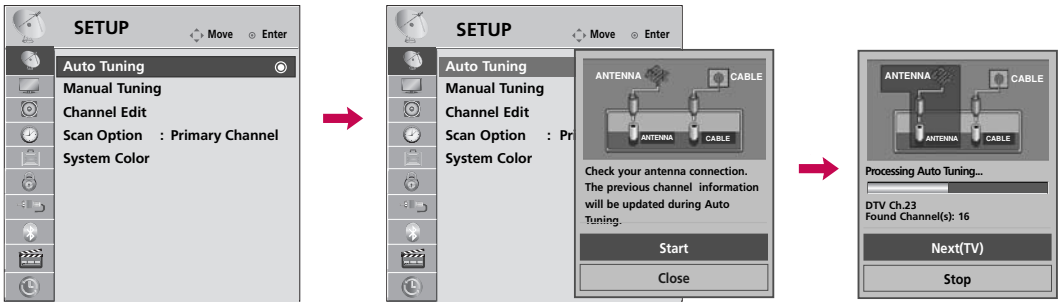
2  Make appropriate adjustments.

3 Q. MENU Return to TV viewing.

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.



1 MENU — Select **SETUP**.

2 ENTER — Select **Auto Tuning**.

3 ENTER — Select **Start**.

4 ENTER — Run **Auto tuning**.

5 RETURN — Return to the previous menu.

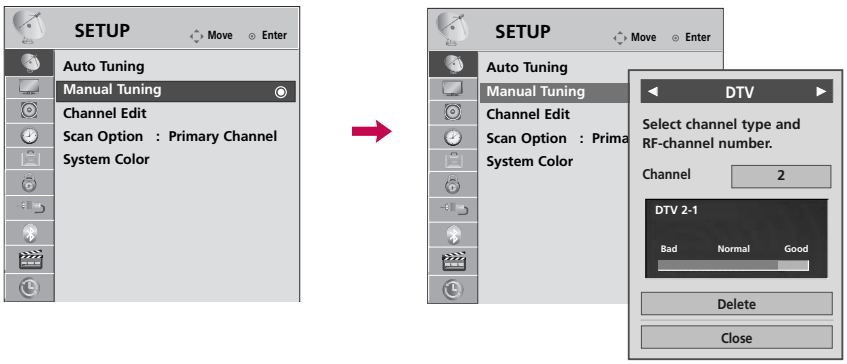
MENU — Return to TV viewing.

- 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 500.
- It is subject to change depending on the broadcasting signal environment.

WATCHING TV / CHANNEL CONTROL

Add/Delete Channel (Manual Tuning)

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



1 MENU — Select **SETUP**.

2 ENTER — Select **Manual Tuning**.

3 ENTER — Select **TV**, **DTV**, or **CATV**.

4 — Select channel you want to add or delete.

5 ENTER — Select **Add** or **Delete**.

6 RETURN — Return to the previous menu.

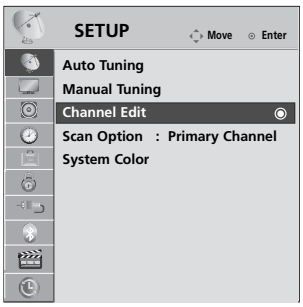
MENU — Return to TV viewing.

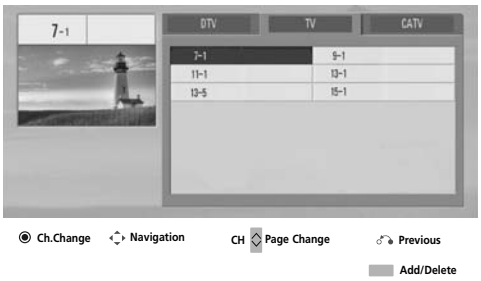
- The TV will ask for a password if parental control has been activated (LOCK Menu). Use the password you set up in the LOCK Menu to allow a channel search.
- When setting the Auto tuning or Manual tuning, the number of maximum channel you can store is 500.
- It is subject to change depending on the broadcasting signal environment.

Channel Editing

When a channel number is deleted, it means that you will be unable to select it using CH ∧ ∨ 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 MENU Select **SETUP**.

2 ENTER Select **Channel Edit**.

3 ENTER Select a channel.

4 REPEAT BLUE Add or delete a channel.

5 RETURN Return to the previous menu.

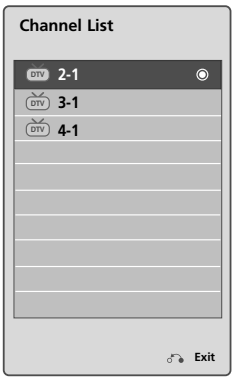
MENU Return to TV viewing.

WATCHING TV / CHANNEL CONTROL

CHANNEL LIST

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

This padlock is displayed when the channel is locked with parental control



Displaying Channel List

1 LIST

Display the **Channel List**.

Selecting a channel in the channel list

1

Select a channel.

2 ENTER

Switch to the chosen channel number.

Paging through a channel list

1 CH

Turn the pages.

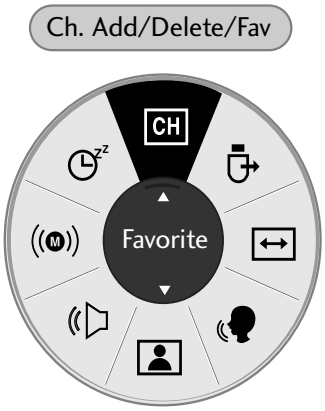
2 RETURN

Return to TV viewing.

FAVORITE CHANNEL SETUP

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

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



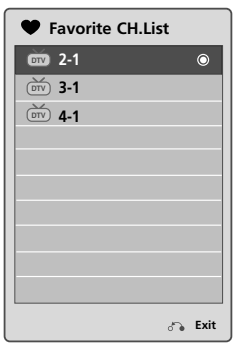
1 or Select your desired channel.

2 Q. MENU Select **Ch. Add/Delete/Fav**.

3 Select **Favorite**.

4 Q. MENU Return to TV viewing.

FAVORITE CHANNEL LIST



This padlock is displayed when the channel is locked with parental control

Displaying the favorite channel list

1 MARK FAV CH/NUM Display the Favorite channel list.

Selecting a channel in the favorite channel list

1 Select a channel.

2 ENTER Switch to the chosen channel number.

Paging through a favorite channel list

1 Turn the pages.

2 RETURN Return to TV viewing.

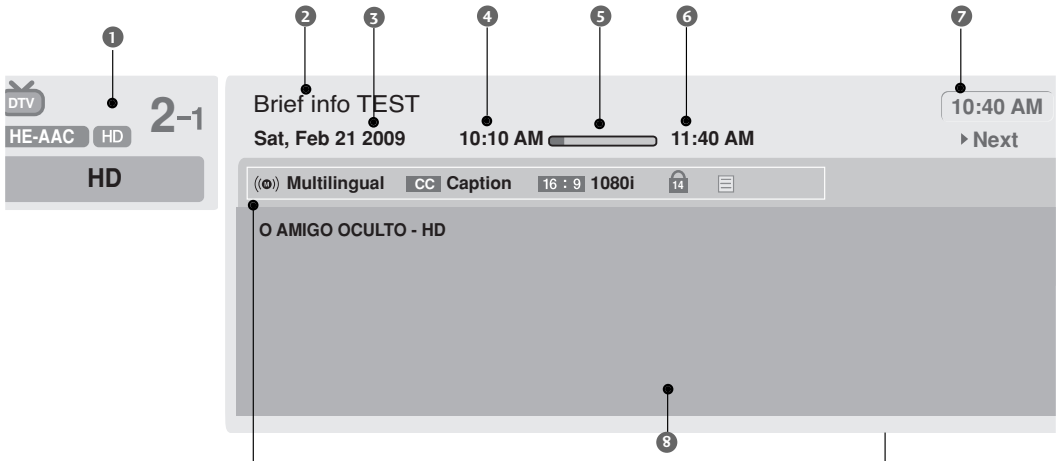
WATCHING TV / CHANNEL CONTROL

BRIEF INFORMATION

Brief Info shows the present screen information.

1 INFO Show the Brief Info on the screen.

2 RETURN Return to TV viewing



Multilingual : The program contains two or more audio services. Use the **Q.MENU** menu to select wanted Audio.

CC **Caption** : The program contains one or more caption services.

4:3 The original aspect ratio of the video is 4:3

16:9 The original aspect ratio of the video is 16:9 (wide)

480i
480p
720p
1080i
Video Resolution

14 Blocking conditions by age - **L**(There is no block), **10**(Block if age is under 10 years old), **12**(Block if age is under 12 years old), **14**(Block if age is under 14 years old), **16**(Block if age is under 16 years old), **18**(Block if age is under 18 years old).

Description

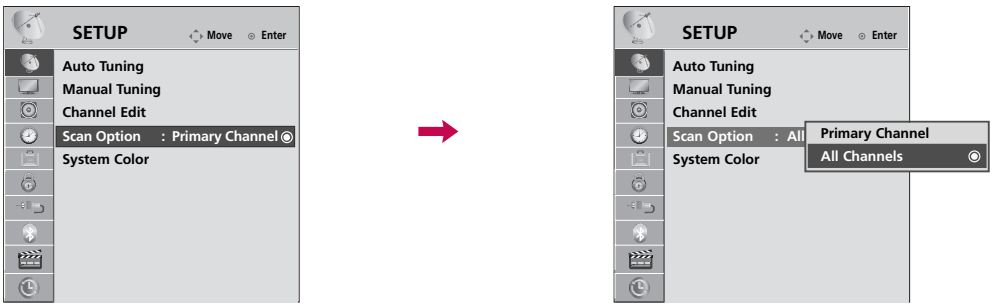
1. Banner information
2. Program title
3. Day, Month, Year
4. Program start time
5. Program progress bar
6. Program finish time
7. Present time
8. Program information

SCAN OPTION

*This feature is not available for all models.

Whether to search all channels or the first channel of virtual channels is switched with the  when one or more virtual channels exist at one physical channel.

Primary Channel: Only scan the first channel of virtual channels.
All Channel: Scan full channel.



1 MENU Select **SETUP**.

2 ENTER Select **Scan Option**.

3 ENTER Select **Primary Channel** or **All Channels**.

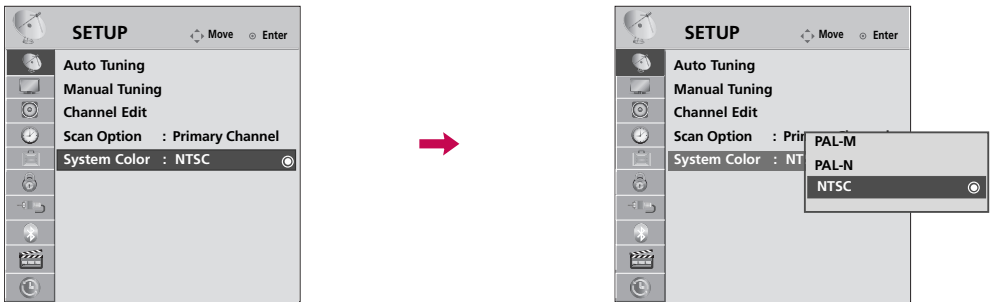
4 RETURN Return to the previous menu.

MENU Return to TV viewing.

WATCHING TV / CHANNEL CONTROL

SYSTEM COLOR

This function set color suited the each signal.
This feature is disable in digital channel.
Multi : This feature only operates in AV input.



1 MENU Select **SETUP**.

2 ENTER Select **System Color**.

3 ENTER Select **PAL-M**, **PAL-N** or **NTSC**.

4 RETURN Return to the previous menu.

MENU Return to TV viewing.

INPUT LIST

Only these input signals which are connected to a TV can be activated and selected.



1 INPUT ENTER

Select the desired input source.

- You can also select the desired input source in the **INPUT** menu.

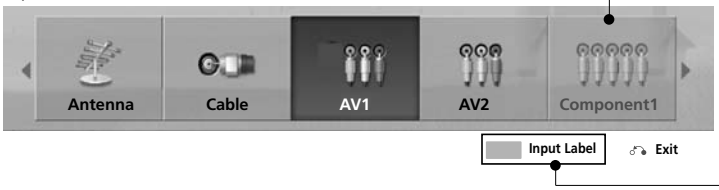
(Except 42/47SL90**)

Antenna → Cable → AV1 → AV2 → Component1 → Component2 → RGB-PC → HDMI1 → HDMI2 → HDMI3 → Antenna

(For 42/47SL90**)

Antenna → Cable → AV → Component1 → Component2 → RGB-PC → HDMI1 → HDMI2 → HDMI3 → Antenna

ie)



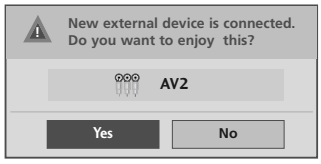
Disconnected inputs are inactive (grayed out)

Select a desired input source (except **Antenna** or **Cable**). Then, you can select your desired **Input Label** with using Blue button. ▶ **p.70**

ie) In case of changing the input label with using Blue button



- When new external device is connected, this popup menu is displayed automatically.
  If selecting **Yes**, you can select input source that you want to appreciate.
- But, when selecting "**SIMPLINK** - **On**" in **OPTION** menu, popup menu for HDMI input will not be displayed.

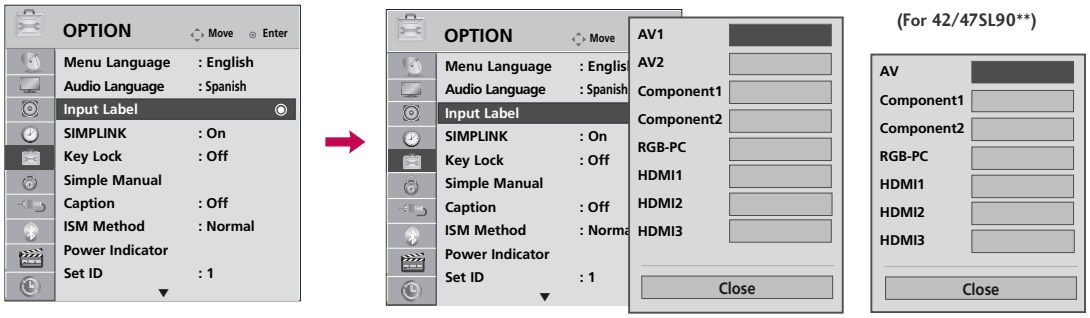


- **Antenna**: Select it to watch over-the-air broadcasts.
- **Cable**: Select it to watch cable.
- **AV**: Select them to watch a VCR or other external equipment.
- **Component**: Select them to watch DVD or a Digital set-top box.
- **RGB-PC**: Select it to view PC input.
- **HDMI**: Select them to 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.
Available label: VCR -> DVD -> Set Top Box -> Satellite -> Cable Box -> Game -> PC -> HD-DVD -> Blu-ray.



With using OPTION menu

1 MENU — Select **OPTION**.

2 ENTER — Select **Input Label**.

3 ENTER — Select the source.

4 Select the label.

5 RETURN — Return to the previous menu.

MENU — Return to TV viewing.

With using INPUT button

1 INPUT — Select the source.

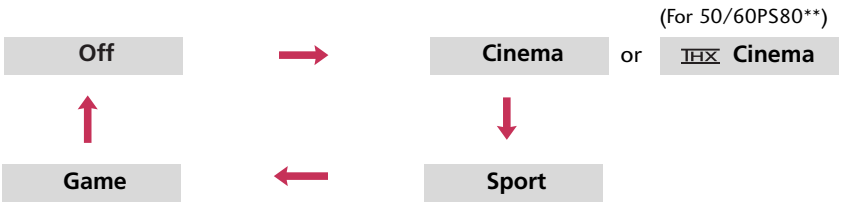
2 REPEAT / BLUE — Select the label.

3 RETURN — Return to the previous menu.

MENU — Return to TV viewing.

AV MODE

You can select the optimal images and sounds.



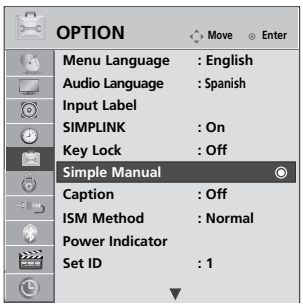
1 AV MODE Press the **AV MODE** button repeatedly to select the desired source.

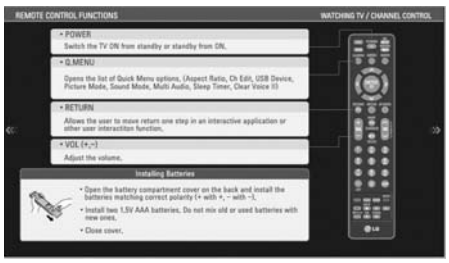
2 RETURN Return to TV viewing.

- If you select "**Cinema** / THX **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.

SIMPLE MANUAL

You can easily and effectively access the TV information by viewing a simple manual on the TV.
During the Simple Manual operation, audio will be muted.
On recording, this feature is disable.





1 MENU Select **OPTION**.

2 ENTER Select **Simple Manual**.

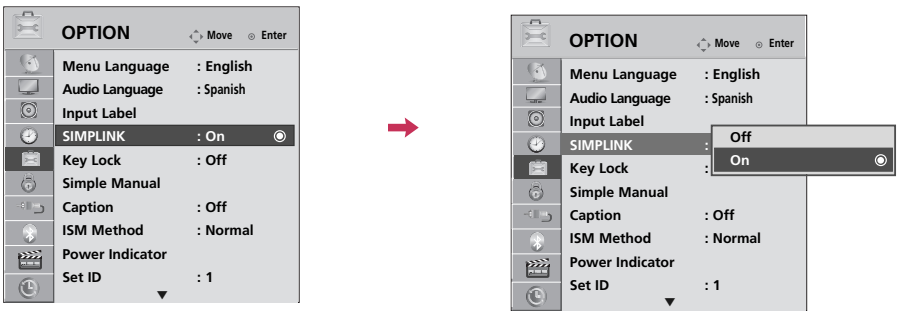
3 ENTER Select the part of the manual you want to see.

4 RETURN Return to TV viewing.

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 SIMPLINK logo are fully supported.

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



1 MENU Select **OPTION**.

2 ENTER Select **SIMPLINK**.

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

4 RETURN Return to the previous menu.

MENU Return to TV viewing.

NOTE

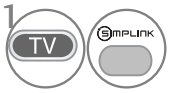
- Connect the HDMI/DVI IN or HDMI IN terminal of the TV to the rear terminal (HDMI terminal) of the SIMPLINK device with the HDMI cable.
- When you switch the Input source with the INPUT button on the remote control, the SIMPLINK device will stop.
- When you select a device with home theater functionality, the sound output automatically switches to the home theater speakers and the TV speakers are turned off.
- If a connected SIMPLINK home theater system doesn't play the audio from the TV, connect the DIGITAL AUDIO OUT terminal on the back of the TV to the DIGITAL AUDIO IN terminal on the back of the SIMPLINK device with an OPTICAL cable.

SIMPLINK Functions

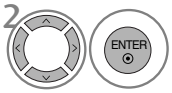
- **Direct Play:** After connecting AV devices to the TV, you can directly control the devices and play media without additional settings.
- **Select AV device:** Enables you to select one of the AV devices connected to TV.
- **Disc playback:** Control connected AV devices by pressing the ^ v < >, **ENTER**, ▶, ■, II, ◀◀ and ▶▶ 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 the equipment with Simplink function connected HDMI terminal starts to play, The TV will change automatically to turn on mode.

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

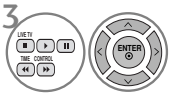
Note: To operate SIMPLINK, an HDMI cable over Version 1.3 with *CEC function should be used. (*CEC: Consumer Electronics Control).



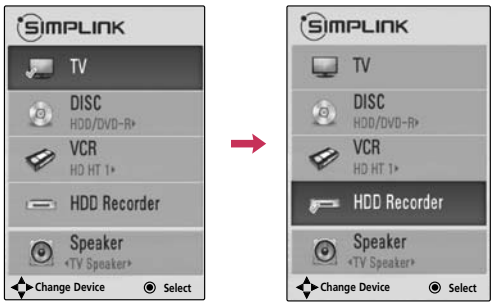
Display **SIMPLINK** menu.



Select the desired device.



Control connected AV devices.



SIMPLINK Menu

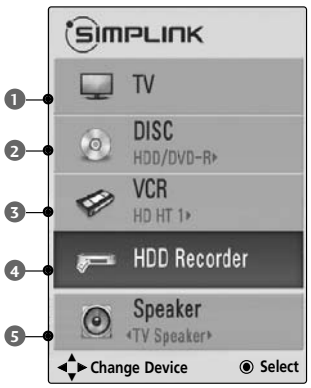
❶ **TV viewing**: Switch to the previous TV channel regardless of the current mode.

❷ **DISC playback**: Select and play discs. When multiple discs are available, the titles of discs are conveniently displayed at the bottom of the screen.

❸ **VCR playback**: Control the connected VCR.

❹ **HDD Recordings playback**: Control recordings stored in HDD.

❺ **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)

MFL59166615-Edit1-en 12/2/09 3:38 PM Page 74

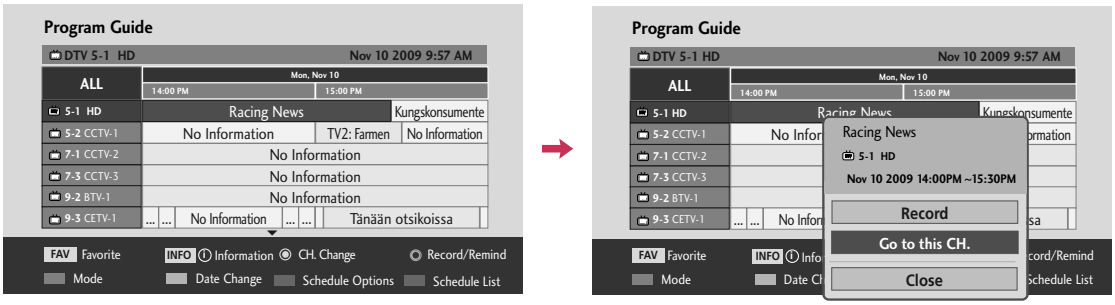
EPG (ELECTRONIC PROGRAM GUIDE) (IN DIGITAL MODE)

This system has an Electronic Program Guide (EPG) to help your navigation through all the possible viewing options.

The EPG supplies information such as program listings, start and end times for all available services. In addition, detailed information about the program is often available in the EPG (the availability and amount of these program details will vary, depending on the particular broadcaster).

This function can be used only when the EPG information is broadcast by broadcasting companies

The EPG displays the program details for next 8 days.



1 GUIDE — Display the **Program Guide**.

2 — Select the desired program.

3 YELLOW — Show the Popup menu.

4 ENTER — Select the desired Popup menu.

■ If the TV is unplugged once or turn off with the AC power control switch (or ⏻/I (power) button) on the TV, the reserved program reminding will not work.

■ When you press the **YELLOW** button from the currently broadcasting program, 'Record', 'Go to this CH.', 'Close' will be displayed.

■ When you press the **YELLOW** button from the program after the current time that is not reserved, 'Record', 'Remind', 'Close' will be displayed.

■ When you press the **YELLOW** button from the reserved program reminding, 'Record', Cancel Remind', 'Close' will be displayed.

• When you press the **YELLOW** button from the reserved program recording, 'Cancel Record', 'Remind', 'Close' will be displayed.

■ When you press the **YELLOW** button from the currently broadcasting program recording, 'Cancel Record', 'Go to this CH.', 'Close' will be displayed.

Button Function in NOW/NEXT Guide Mode



Change EPG mode.



Move to schedule option popup.



Switch the Schedule list On or off.



Change channel (Go to this channel).


Change NOW&NEXT Mode.


Set Record/Remind.


Select the Broadcast Program.



Page Up/Down.



Switch off EPG.



The detail information on or off.



Change the favorite program mode.

Button Function in 8Day Guide Mode



Change EPG mode.



Enter Date setting mode.



Move to schedule option popup.



Switch the Schedule list On or off.



Change channel (Go to this channel).


Select a Program.


Select the Broadcast Program.



Page Up/Down.



Switch off EPG.



The detail information on or off.



Change the favorite program mode.


Set Record/Remind.

Button Function in Date Change Mode



Switch off Date setting mode.


Select a date and change to the selected date.



Switch off EPG.

WATCHING TV / CHANNEL CONTROL

Button Function in Detailed Information Menu



Move to schedule option popup.



Text Up/Down.



Switch off EPG.



The detail information on or off.

Button Function in Schedule List Mode



Change to Guide mode.



Select Schedule list.

BLUETOOTH

■ This function is only ussed for **32/42/47LH70****, **42/47/55LH90****, **32/42/47/55SL80**** **50/60PS80**** , **42/47SL90**** models.

Bluetooth?

Bluetooth is a short distance networking technology using 2.4 GHz frequency to connect various types of information devices such as computers, cell phones and PDAs, as well as digital appliances through wireless connection, without having to connect any cable, to enable data exchange.

With the Bluetooth communication function, you can connect the Bluetooth enabled wireless headset or receive images(only JPEG), listen to music from the Bluetooth enabled cell phone using this TV.

- Communication Spec.: Bluetooth Specification Version 2.1 + EDR (Enhanced Data Rate)
- Output: Bluetooth Specification Power Class 2
- Maximum Communication Range: Line of open sight approx. 10 m (30 ft)
- Frequency Band: 2.4 GHz band (2.4 GHz ~ 2.4835 GHz)
- Bluetooth Module: RBFS-B921A
- Compatible Bluetooth Profile: A2DP (Advanced Audio Distribution Profile)
  OPP (Object Push Profile)
  GAVDP (Generic Audio/Video Distribution Profile)
  HSP (Headset Profile)
  BIP (Basic Imaging Profile)
  FTP (File Transfer Profile)

Precautions when using the Bluetooth

▶ Use within 10m(-45˚~ 45˚) range.
If you use the device out of the range or within the range with obstacles, it can result in communication error.

▶ Communication error can occur depending on the surrounding devices.

▶ Products using the same frequency of 2.4 GHz (Wireless LAN, microwave oven etc.), can cause communication error by using the same frequency bandwidth.

▶ The device search time differs depending on the number of Bluetooth devices and the operating situation.

▶ The probability of search increases with less number of devices.

▶ Electromagnetic wave can be interfered with applicable wireless devices.

▶ Because applicable wireless devices have the possibility of electromagnetic wave interference, they cannot provide services related to human life.

▶ You can only connect one Bluetooth device at a time.

▶ You cannot receive photos(only JPEG) or listen to music from other Bluetooth devices while using the Bluetooth headset.

▶ For details of Bluetooth, refer to the user manual of the Bluetooth device.

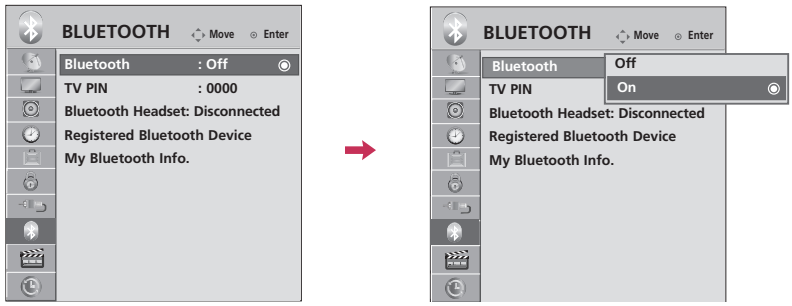
▶ Operation is subject to the following two conditions: (1) This device may not cause (harmful) interference, and (2) this device must accept any interference received, including interference that may cause undesired operation (of the device).

QDID(Qualified Design Identity): B015199

BLUETOOTH

SETTING THE BLUETOOTH

The Bluetooth feature on this TV allows you to listen to the wireless audio using Bluetooth headphones. It will also connect with a Bluetooth equipped device to view phones.



1 MENU Select **BLUETOOTH**.

2 ENTER Select **Bluetooth**.

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

4 ENTER Start **Bluetooth**. — Turning on bluetooth...

5 RETURN Return to the previous menu.

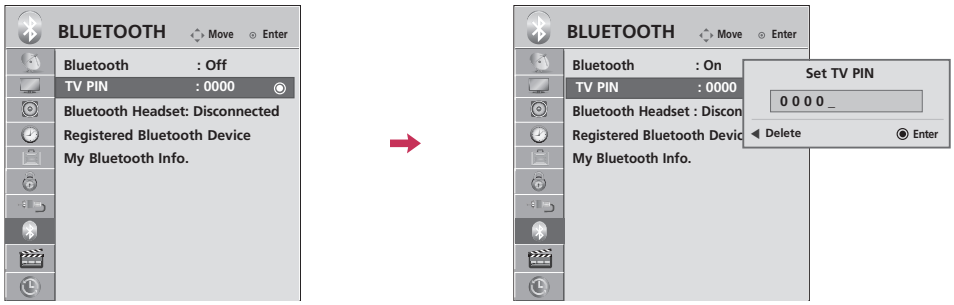
MENU Return to TV viewing.

SETTING TV PIN

To accept a connection from an external Bluetooth device or to connect to an external Bluetooth device, the PIN needs to be entered.

For details on how to set the PIN of the external Bluetooth device, refer to the user manual of the applicable device.

The TV PIN is composed of numbers of up to 10 digits.
The TV PIN must have more than 1 digit.



1 MENU Select **BLUETOOTH**.

2 ENTER Select **TV PIN**.

3 ENTER Select the desired PIN number.
PIN number can support up to maximum of 10 digits.

4 RETURN Return to the previous menu.

MENU Return to TV viewing.

▶ Press the < button to delete digits one by one.

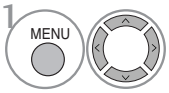
BLUETOOTH

CONNECTING THE BLUETOOTH HEADSET

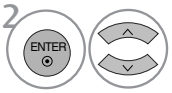
When you select the Bluetooth headset, you can listen to the TV audio in the Bluetooth headset through wireless communication.
You must pair it with any new Bluetooth device before the first use. For details, refer to the user manual of the applicable device.
A maximum of 12 devices can be paired.

Connecting a new Bluetooth headset

You can only search for the new Bluetooth headset only when no headset is already connected.
When you run the search, it will show you the list of all Bluetooth headsets responding.
After a new Bluetooth device is searched, the PIN number is validated to connect the device. For details, refer to the user manual of the applicable device.

1 

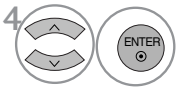
Select **BLUETOOTH**.

2 

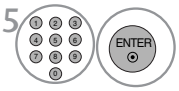
Select **Bluetooth Headset**.

3 

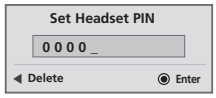
Search the Bluetooth headset.
- If you want to stop, press the **ENTER** button.

4 

Select the desired Bluetooth headset.

5 

Set the PIN number .

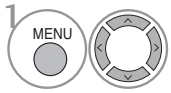


Connect the Bluetooth headset.

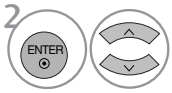


Connecting the Bluetooth headset already registered

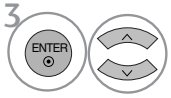
Bluetooth headsets are listed in the order most recently used with the headset currently in use listed at the top.
When connecting the Bluetooth device already registered, you can select and connect directly without any PIN validation.

1 

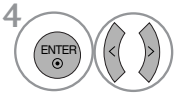
Select **BLUETOOTH**.

2 

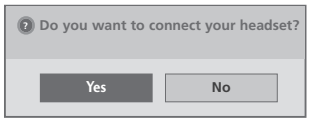
Select **Bluetooth Headset**.

3 

Select the Bluetooth headset in the list.

4 

Select **Yes**.



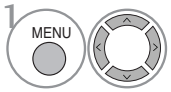
5 

Connect the Bluetooth headset.

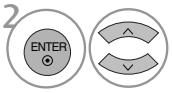
► After connecting/using the Bluetooth headset, the headset setting will be the **Disconnected** condition automatically when you turn off the power of the TV and then turn on.

► After connecting the Bluetooth headset, the TV speaker is switched to Mute condition and the sound will only be generated from the headset.

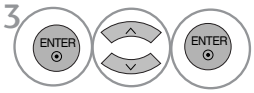
Disconnecting the Bluetooth headset



Select **BLUETOOTH**.



Select **Bluetooth Headset**.



Disconnect the Bluetooth headset.

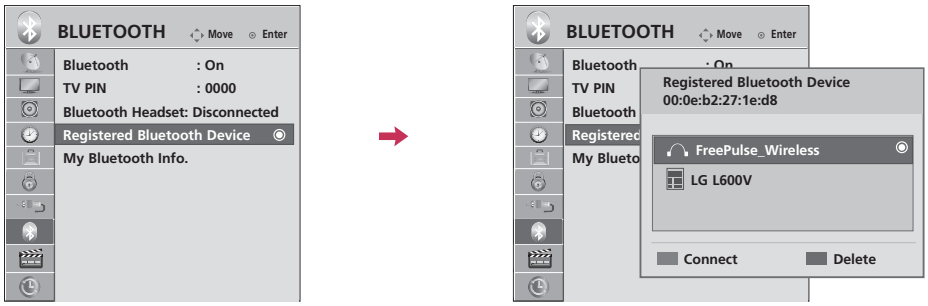
NOTE

- LG recommends the following headset models.
  -Mono/Stereo : FUSION FNC : BT-55D / MOVON : MF 120, MF 300 / LUBIX : UBHS-LC1 / Motorola : H680, S605 / BLUETREK : X2 / PLANTRONICS : VOYAGER 510 / Samsung : SBH170, WEP500 / Nokia : BH-501 / Sony : HBH-GV435 / Apple : iPhone
  There might be an audio delay, depending on the buffer memory size of the headset.
- The stereo/mono headsets officially certified to be Bluetooth compatible can be searched and connected.
- The stereo/mono headsets that support A2DP or HSP functionality can be connected.
- If the surrounding environment of the TV is as follows, the device may not be searched or connected properly.
  -If there is strong electromagnetic interference.
  -If there are many Bluetooth devices in the area.
  -If the headset is turned off, not in place or has an error.
  -Because products such as microwave oven, wireless LAN, plasma light, gas range etc., use the same frequency range, it can cause communication errors.
- Only one Bluetooth device can be connected at a time.
- Connection that is lost due to the TV being turned off etc. will not be automatically recovered. Try connecting the applicable device again.
- Some operations can be slower while operating the headset.
- Even if you choose simplink Home Theater after using the headset during Simplink operation, the unit will not automatically switch to Home Theater speakers.
- When the headset connection continuously fails, pair the device one more time.
- The audio quality of mono headsets will not be as good as that for stereo headsets.
- Mono headsets may suffer from noise as the distance from the TV increases, because they use a different transmission method compared with stereo headsets.
- When a Bluetooth headset is in use, the Volume +/- and Mute keys do not work, and the Audio menu returns to the default value and is disabled.
- It doest support the optical power, when connected the Bluetooth headset.
- On operating USB multimedia, you cannot the Bluetooth headset.
- When using the Bluetooth, the recommended capacity is 30GB or less for a USB device.

BLUETOOTH

MANAGING REGISTERED BLUETOOTH DEVICE

If there are no devices registered, Registered Bluetooth Device menu will be deactivated and cannot be used.
When 12 devices are registered, you cannot register any more devices, and the external device will no longer be able to pair up with the TV. In this case, you should delete one (disconnect first if a device is connected to the TV) and then you can register another device.



1 MENU Select **BLUETOOTH**.

2 ENTER Select **Registered Bluetooth Device**.

3 ENTER Check the registered Bluetooth device.

Connecting the registered Bluetooth device

1 Select the registered Bluetooth device you want.

2 REPEAT BLUE Connect the bluetooth device.

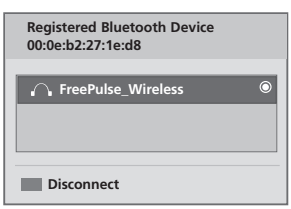
3 ENTER Select **Yes**.

Deleting the registered Bluetooth device

■ **Disconnecting the registered Bluetooth device**

1 Select the connected Bluetooth device.

2 REPEAT BLUE Disconnect the bluetooth device.

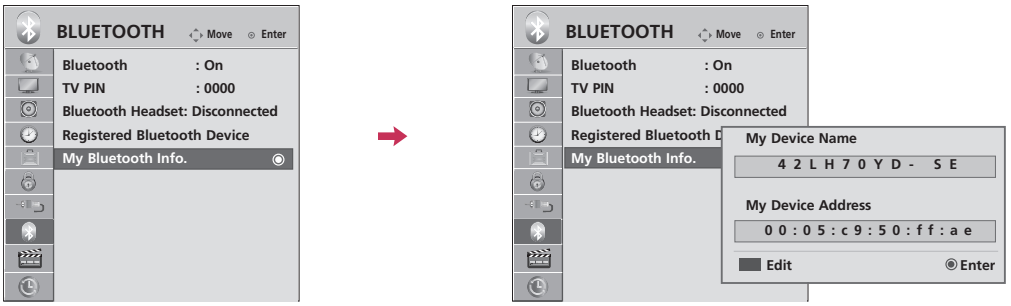


■ **Deleting the registered Bluetooth device**

3 RED ENTER Select **Yes**.

MY BLUETOOTH INFORMATION

This function provides the My Bluetooth Information to the user.
"Edit" will be available when TV is not connected with any device.



1 MENU Select **BLUETOOTH**.

2 ENTER Select **My Bluetooth Info.**.

3 ENTER REPEAT BLUE Edit the information.

4 ENTER Save.

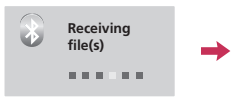
5 RETURN Return to the previous menu.

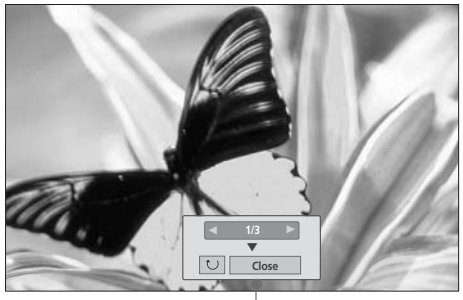
MENU Return to TV viewing.

BLUETOOTH

VIEWING THE PHOTOS WITH BLUETOOTH DEVICE

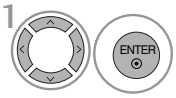
You can view the photos(***.JPG**) that were received from an external Bluetooth device to the TV.
To see the detailed informations about connecting the external Bluetooth device, refer to the user manual of the applicable device.
The On Screen Display on your model may be slightly different.





▶ **(Rotate)**: Rotate photos.
- Every time you press **ENTER** button on **(Rotate)**, rotates the photo 90° clockwise.

▶ **Close** : Close the pop-up menu.
- when you press the ENTER button, it will appear again.

1 

Select the each menu.

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

NOTE

▶ Supported maximum photo size is up to 10MB.
▶ You cannot receive the photos while using the Bluetooth headset or listening to the musics from Bluetooth device.
▶ On receiving the photos, press the **RETURN** button to stop. At this time, all photos received will be deleted.
▶ Some Bluetooth devices may not support sending the photos.

LISTENING THE MUSICS WITH BLUETOOTH DEVICE

You can listen to the musics(**A2DP**) that were received from an external Bluetooth device to the TV.
To see the detailed informations about connecting the external Bluetooth device, refer to the user manual of the applicable device.



1 

Adjust the volume.
- If you want to switch the sound off, press the **MUTE** button.

2 

Return to TV viewing.

NOTE

- ► You cannot listen to the musics while using the Bluetooth headset or receiving the photos .
- ► Some Bluetooth devices may not support listening the music via TV speaker system.

MFL59166615-Edit2-en 12/2/09 6:55 PM Page 86

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.
- In case of several paritions or a card reader, up to four memory cards are concurrently recognizable.
- 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.
- Only use a USB storage device which has normal music files, image files or movie files.
- Please use only a USB storage device which was formatted as a FAT16, FAT32 or 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.
- 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 operate properly.
- The TV will display up to 128 characters of a files name.
- Please backup important files because data on USB device may be damaged. Data management is consumer's responsibility and as a result, the manufacturer does not cover data damage.
- The recommended capacity is 1TB or less for a USB HDD and 40GB or over for USB memory.

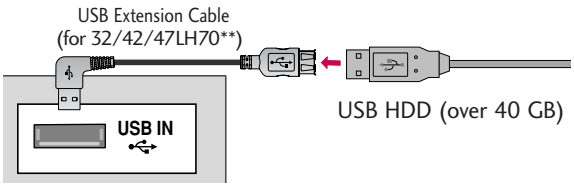
  Any device with more than the recommended capacity may not work properly.
- Playing a movie via a USB connection that doesn't support high speed may not work properly.
- USB storage devices below USB 2.0 are supported as well. But they may not work properly in the movie list.
- Please maintain the stability of external HDD by using the HDD benchmarking tool in order to guarantee smooth action of HDD.
- The HDD benchmarking tools is checking the performance of HDD that is read/write rate, access time, stability. It will be able to search at website and use easily it after download the HDD benchmarking tool.

TIME MACHINE(PAUSE & REPLAY OF LIVE TV)

This function allows the unit to automatically record live TV and make it available for viewing at any time.
With the Time Machine turned on, you may pause and rewind normal TV viewing at any time without missing any of the live broadcast.
(Time Machine and Recording functions may not work if the signal strength is weak.)

This function is only operated after initializating USB Device.

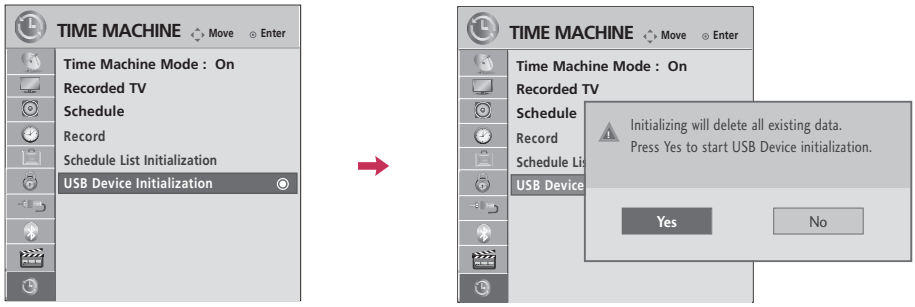
1 Connect the USB device to the **USB IN** jacks on the back(or side) of TV.



2 To use the USB device (over 40 GB) for Timemachine, execute **USB Device Initialization**.

- It initializes the HDD connected to the USB as disk mode for Timemachine.
- It is activated only when the USB HDD available for Timemachine is connected.
- When **USB Device Initialization** is executed, all the data stored in the USB device is deleted.
- While performing **USB Device Initialization**, do not remove the USB device. It may cause error on the TV and the storage device.

USB device Initialization



1 MENU — Select **TIME MACHINE**.

2 ENTER — Select **USB Device Initialization**.

3 ENTER ENTER — Select **Yes**.

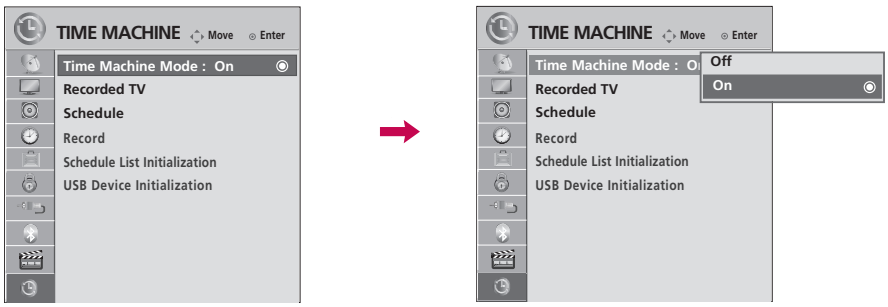
• When initialization is completed, a popup notice of completion is displayed and the connected USB HDD is available for Timemachine.

NOTE

- ▶ Depending on the capacity of the USB device, the initialization time may vary.
- ▶ The initialized USB device is not recognized by the PC.
- ▶ When a USB device of less than 40 GB is connected, the USB Device Initialization is not activated.
- ▶ Supported maximum external HDD size for back-up is up to 1TB.

TIME MACHINE

Time Machine Mode



1 MENU Select **TIME MACHINE**.

2 ENTER Select **Time Machine Mode**.

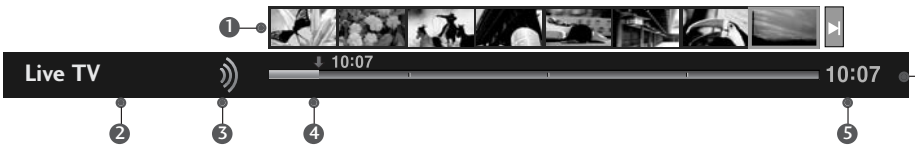
3 ENTER Select **On** or **Off**.

4 RETURN Return to the previous menu.

MENU Return to TV viewing.

▶ Time Machine Mode is available in DTV mode.

Time Machine Progress



1 After selecting **Time Machine** Mode On, press the **ENTER** button.

- As soon as Time Machine starts, a progress bar indicating the current recording status is displayed in the bottom of the screen.
- Press the **RETURN** button to hide the 'Progress Bar' or press the **ENTER** button to display the 'Progress Bar'.
- This function is preserved even change a program on progressing the Time Machine.

2 When finished enter the **Time Machine** Mode menu and then turn **Time Machine** Mode Off.

The 'Progress Bar'?

This function indicates what Time Machine reviewing is possible, a current on-screen and live broadcasting position.

1. Preview
2. Current Status while using the Time Machine
3. Current operating function while using the Time Machine

Playback	Direct view +
Fast forward	Direct view -
Rewind	By one screen
Pause	Slow playback

4. Current location and progress time in playback
5. Total progress time of the Time Machine

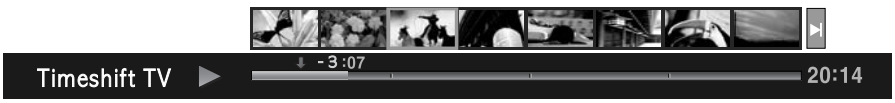
NOTE

- In order to save hard-disk space, nothing is saved when there is no signal.
- Time Machine can be used for maximum of 2 hours.
- You can't do the channel change or input conversion on recording.
- When turning power on, it may take up to a maximum of 3 minutes to initialize the HDD.
- Recording or playing the recorded program may not initiate for a copy-protected program.
- Instant recording time is set to 3 hours and supported maximum time is up to 5 hours.

TIME MACHINE

Playback during the Time Machine

During the Time Machine play, the following options are available.



Use of remote control

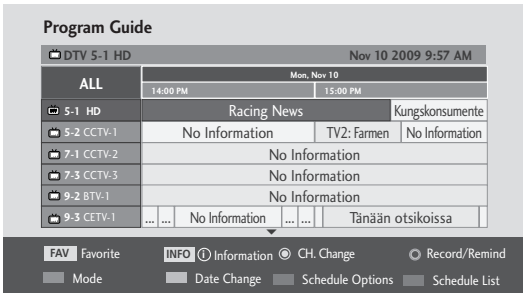
You can playback the temporarily saved part in various methods during the Time Machine.

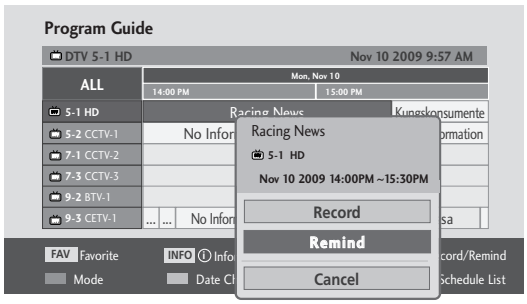
	During playback, repeatedly, press the **REW(◀◀)** or **FF(▶▶)** button to speed up. ■ Every time you press the button, the search speed will increase by stage(up to 5 stages).
	During playback, press the **Pause(II)** button. ■ Pause screen is displayed. ■ Every time you press the **Pause(II)** button from the pause screen, it will move screen by screen. (**II▶**) ■ Press the **Pause(II)** button and then use the **FF(▶▶)** button for slow motion. (**I▶**)
	When you move the cursor using the Time Machine (**<** , **>**) button during playback, and then press the **ENTER** button, the screen will directly play at the applicable screen where the cursor is located. (,)
	To view the current live broadcast, press the **LIVE TV** button during playback.

RECORDING

Use this function when you cannot watch the desired program due to being out.

Recording or Reminding function in the Program Guide





1 GUIDE Display the **Program Guide**.

2 Select desired program.

3 YELLOW ENTER Select **Record** or **Remind**.

4 RETURN Return to TV viewing.

■ You can also select **Record** or **Remind** by pressing the button repeatedly on the remote control.

Record (red) → Remind (blue) → Off

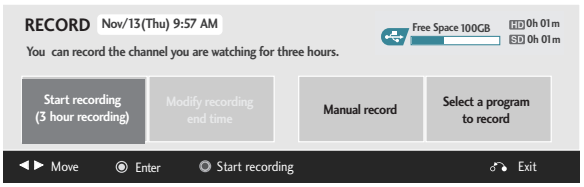
NOTE

- ▶ If you turn off the power during the recording, the program being recorded may not be saved. Therefore it is good to press the Stop (■) button and check the reserved/recorded list, and then turn off the power.
- ▶ Recording cannot be reserved for a period less than 10 seconds.
- ▶ Because the title and time of the program for Record/Remind is based on the information transmitted from the broadcasting station, they may be different than the actual ones depending on the situation of the broadcasting station.
- ▶ Recording time may differ depending on resolution of input signal or USB HDD capacity.
- ▶ When it is time for the reserved recording to start and the power of the TV is turned off, the TV will turn on the power of the part required for the recording and proceed to the reservation.
- ▶ When it is time for the reserved recording to start and the Immediate recording is in progress, the recording of the program currently being recorded will be stopped and saved, and then proceed to the reserved recording.
- ▶ If the TV is unplugged once or turn off with the AC power control switch (or ⏻/I (power) button) on the TV, the reserved recording will not work.

TIME MACHINE

Start/Stop record

You can record the channel you are watching for three hours.





1 When watching the program, Select it you wish to record.

2 Display the recording setting.

- You can also select this setting in the **Record** menu.

3 or ENTER Start the recording.

- During recording, Rec DTV 2-1 is displayed.

4 LIVE TV ENTER Select **Yes** to stop the recording.

- You can also select **Stop recording** using the button .

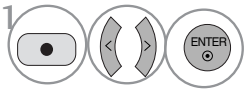
5 RETURN Return to TV viewing.



Modify recording end time

You can shorten or extend the recording time.

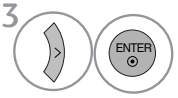




During recording ,
Select the **Modify recording end time**.



Set the Recording End Time.



Select the **Close**.

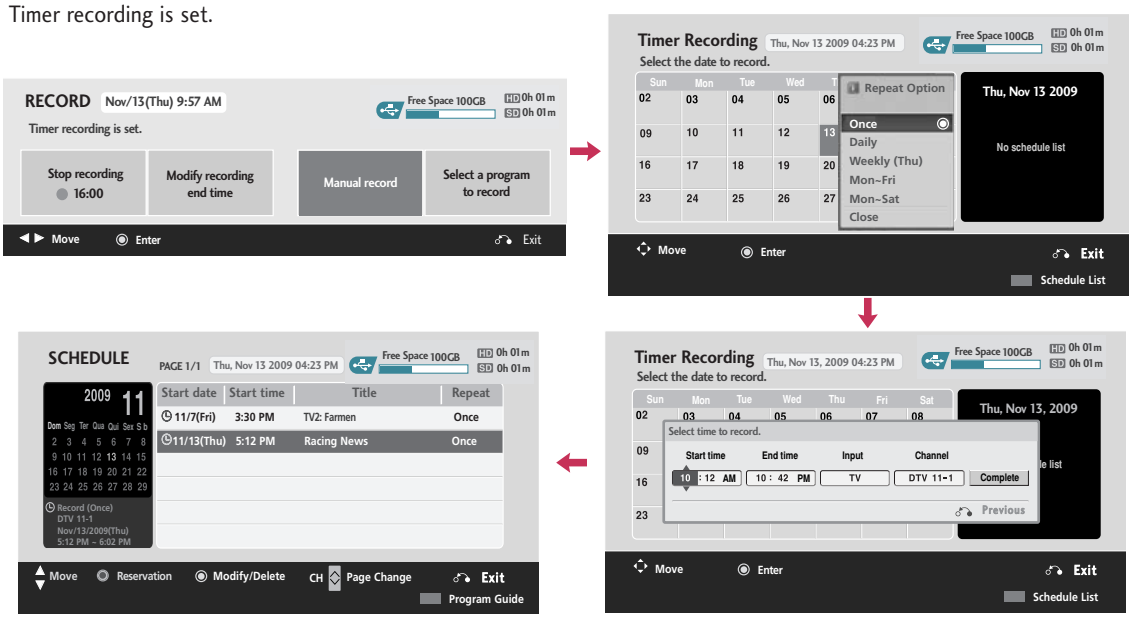
NOTE

- When recording, if the available storage space is not sufficient, the recording will automatically Stop.
- Recordings of less than 10 seconds will not be saved.
- To save disk space while recording broadcasts, no data will be saved if there is no signal.
- The recording function will not initiate for a copy-protected program.
- The displayed time may differ slightly from the actual time.
- When there is no signal or a film source is being viewed, the displayed time may differ slightly from the actual time.

TIME MACHINE

Manual record

This function is easy to register to reserved recording.
Timer recording is set.



1 Select the **Manual record**.

2 Select **Date**.

3 Select the repeat option.

4 Set the desired **Start Time**, **End Time**, **Input** and **Channel**.

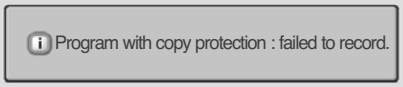
5 Select the **Complete**.

6 Display the Schedule List.

7 Return to TV viewing.

NOTE

▶ Recording is not possible with copy-protected programs.



▶ When a poor quality external source is recorded the quality of the recording will not be optimal.

▶ Manual Recording available time is maximum 3 hours and minimum 2 minutes.

▶ When broadcasting station send the wrong time information, reserved recording may be failed.

▶ If different channels are set for the same time for on time and reserved recording, this TV is powered on to the reserved recording channel.

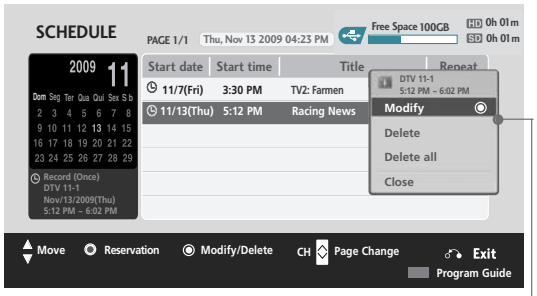
SCHEDULE

Schedule List

This function is used to show scheduled recordings.

You can store up to 30 programs.





When you select a desired item, this PopUp menu is displayed.

- ▶ **Modify**: Edit the contents of **Start date/Start time/End time/Title/Repeat**.
  You must press the **RETURN** button to save the edited contents.
  This feature is disable in reserved reminding.
- ▶ **Delete**: Delete the selected item in the list.
- ▶ **Delete all**: Delete all items in the list.
- ▶ **Close**: Close the pop-up menu.

1 MENU Select **TIME MACHINE**.

2 ENTER Select **Schedule**.

3 ENTER Select a desired item in the schedule list.

4 ENTER Show the Popup menu.

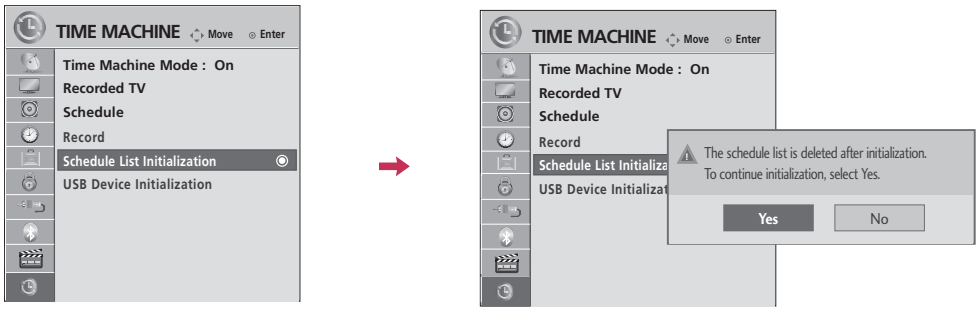
5 ENTER Select the desired Popup menu.

6 RETURN Return to TV viewing.

TIME MACHINE

Schedule List Initialization

This function is to reset the schedule list.



1 MENU Select **TIME MACHINE**.

2 ENTER Select **Schedule List Initialization**.

3 ENTER Select **Yes**.
Start the Schedule List Initialization.

4 RETURN Return to the previous menu.

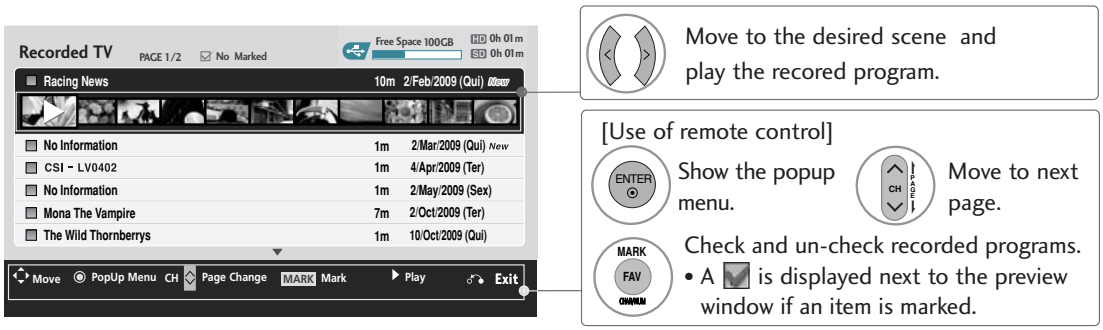
MENU Return to TV viewing.

RECORDED TV

You can view the recorded program list at a glance.

The recorded program stored in the USB device can be played.

Recorded List



1 MENU Select **TIME MACHINE**.

2 ENTER Select **Recorded TV**.

3 ENTER Select a recorded program.

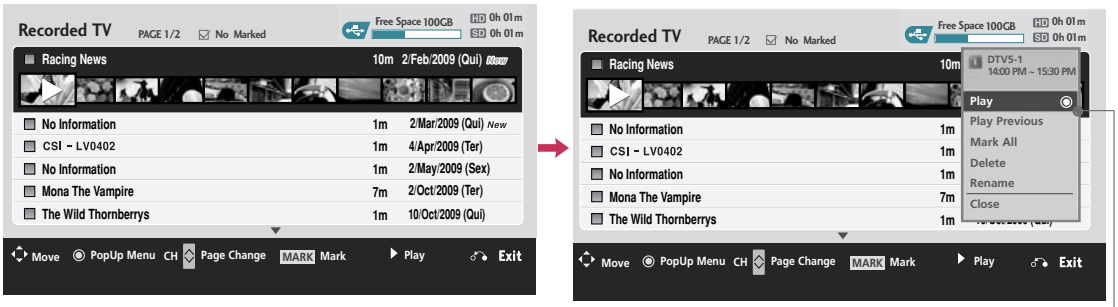
4 RETURN Return to TV viewing.

NOTE

- If there is a bad sector in the disk, part or all of the items of the **Recording list** can be deleted.
- Maximum number of recordings within the Recording list is 200. When the number of recordings in the Recording list is 200, you cannot record any more.
- When the full duration of the recording is played back, the screen will stay in the stopped condition for 10 seconds and then automatically end the playback.
- The recording can be played back even during the recording/reserved recording.
- During the playback of the recording, the hard disk can generate a certain level of noise. This noise is irrelevant from the performance and reliability of the product and is normal for a hard drive to have a certain level of noise.

TIME MACHINE

Recorded program Selection and Popup Menu



- ▶ **Play** : Playback of selected recorded programs.
- ▶ **Play Previous** : Resumes playing at the previously stopped point.
- ▶ **Mark All** : Mark all recorded programs in the list.
- ▶ **Unmark All** : Change marked recorded programs to unmarked recorded programs.
- ▶ **Delete** : Delete the selected recorded programs.
- ▶ **Rename** : Edit recorded program title.
- ▶ **Close** : Close the pop-up menu.



1 Select a desired recorded program.

2 ENTER Show the Popup menu.

3 ENTER Select the desired Popup menu.

4 RETURN Return to TV viewing.

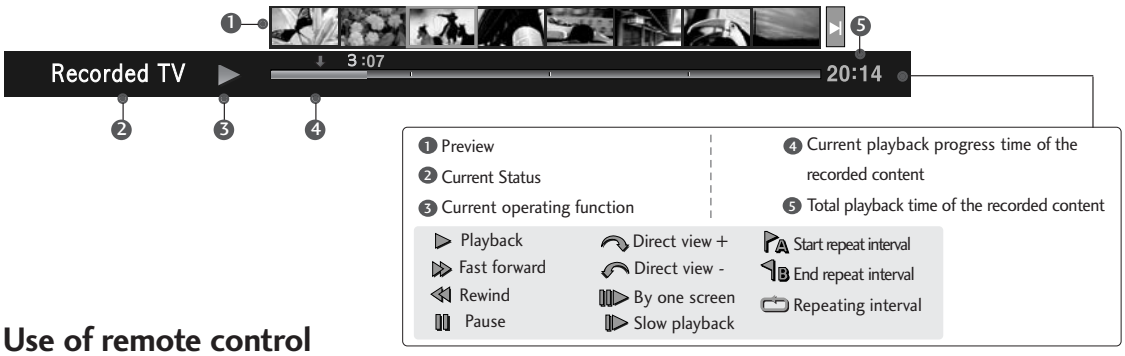
Playing Recorded programs

You can play a selected program from the recorded list.

1 Play a recorded program.

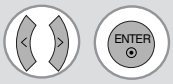
When you press the **ENTER** button during the playback, the information of the recorded program you are current watching will be displayed at the top of the screen and a progress bar showing the current status of the playback at the bottom of the screen. (Playback status is displayed as follows.)

■ To remove the progress bar, press the **ENTER** button.



Use of remote control

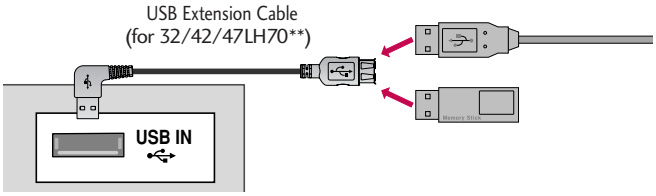
You can adjust various method during the recorded program play.

	During playback, repeatedly, press the **REW(◀◀)** or **FF(▶▶)** button to speed up. ■ Every time you press the button, the search speed will increase by stage.(up to 5 stages)
	During playback, press the **Pause(II)** button. ■ Pause screen is displayed. ■ Every time you press the **Pause(II)** button from the pause screen, it will move screen by screen. (**II▶**) ■ Press the **Pause(II)** button and then use the **FF(▶▶)** button for slow motion. (**I▶**) ■ If you don't press any button 10 minutes after the pause, it will return to the playback.
	When you move the cursor using the Time Machine (**<** , **>**) button during playback, and then press the **ENTER** button, the screen will directly play at the applicable screen where the cursor is located. (,)
	When you press the **LIVE TV** button, the playback will end and you can watch the TV.
	Press the **REPEAT** button at the starting point where you want to set the Interval repeat and press it again at the ending point. To cancel the playback for the interval repeat, press the **REPEAT** button one more time. ■ The start of the Interval repeat is displayed as A and end of the Interval repeat as B in the recording progress bar at the bottom of the screen. Start and end of the Interval repeat can be set both in forward and reverse direction. ■ Interval shorter than 10 seconds cannot be set. ■ When the Interval repeat is canceled, it will return to normal playback from the end point of the interval.
	To return to normal playback, press the **PLAY(▶)** button.

ENTRY MODES

When you connect a USB device, this screen is displayed automatically.
In USB device, you can not add a new folder or delete the existing folder.

1 Connect the USB device to the **USB IN** jacks on the back(or side) of TV.



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



3 ENTER

When removing the USB device

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

1 Q. MENU Select **USB Device**.

2 ENTER Select **Eject** .

NOTE

▶ The screen saver feature runs when the moving, deleting or copying operation of a photo, music or movie file continues for a long time.(For Plasma TV models)

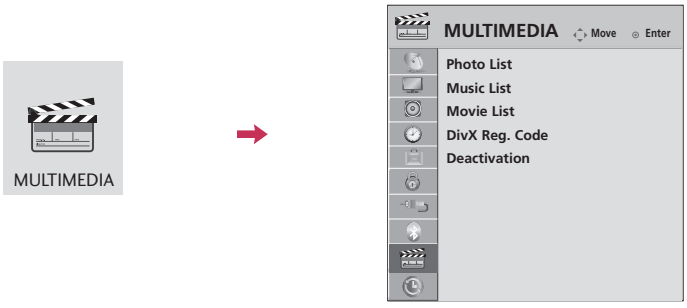
PHOTO LIST

You can view .JPG files from the USB devices.
The On Screen Display on your model may be slightly different.
This function is not operated after initializating USB Device.

PHOTO(*.JPEG) supporting file

Baseline: 64 x 64 ~ 15360 x 8640

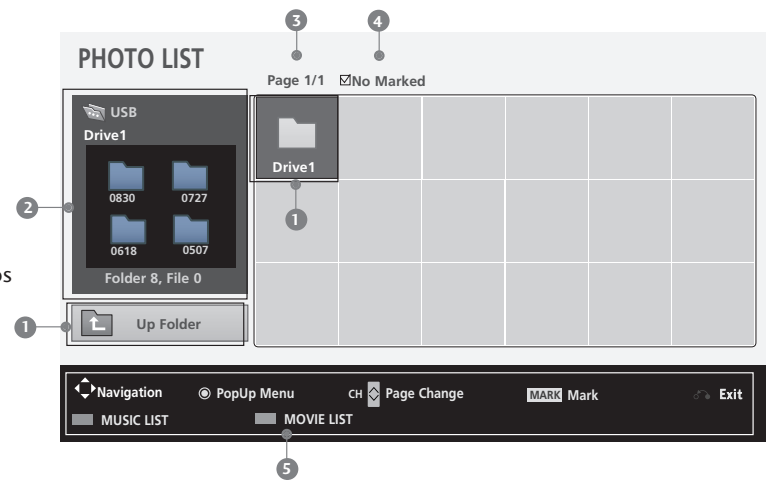
- You can play JPEG files only.
- Non-supported files are displayed in the form of bitmap.
- This TV will not be able to decode some JPG images saved using the progressive option.



1 MENU Select **MULTIMEDIA**.

2 ENTER ENTER Select **Photo List**.

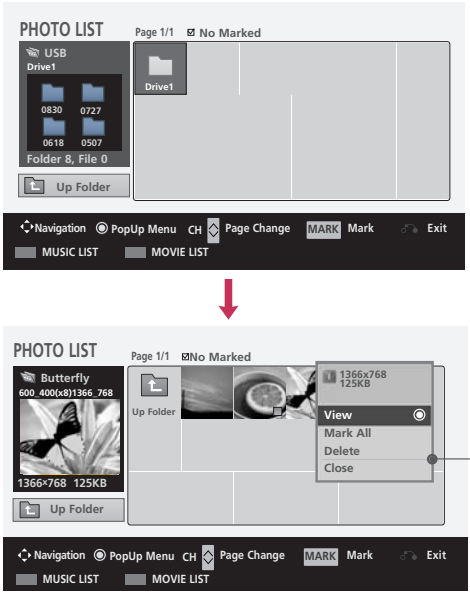
Screen Components



1. Moves to upper level folder
2. Preview: Display the thumbnail/folder name of the photo in the selected folder
3. Current page/Total pages
4. Total number of marked photos
5. Corresponding buttons on the remote control

MULTIMEDIA

Photo Selection and Popup Menu



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

- ▶ **View**: Display the selected item.
- ▶ **Mark All**: Mark all photos on the screen.
- ▶ **Unmark All**: Deselect all marked photos.
- ▶ **Delete**: Delete the selected photo item(except NTFS file system).
- ▶ **Close**: Close the pop-up menu.

1 Select the target folder or drive.

2 Select the desired photos.

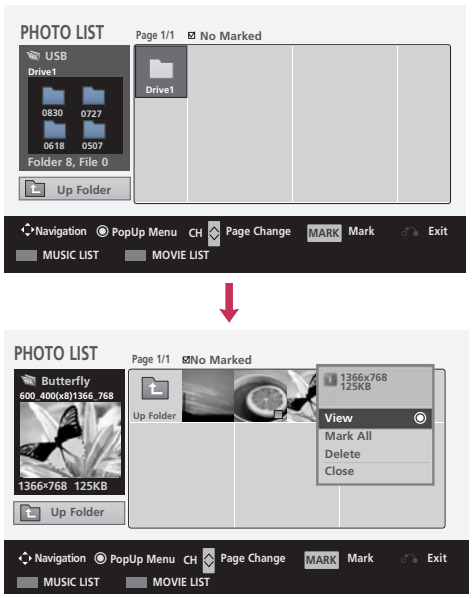
3 Show the pop-up menu.

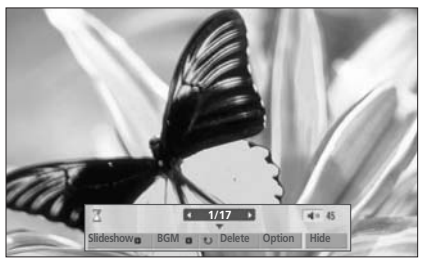
4 Select the desired Popup menu.

- Use the **CH** ∧ ∨ button to navigate 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.

Full Screen Menu

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





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

1 Select the target folder or drive.

2 Select the desired photos.

3 Show the pop-up menu.

4 Select **View**.

5 The selected photo is displayed in full size.

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

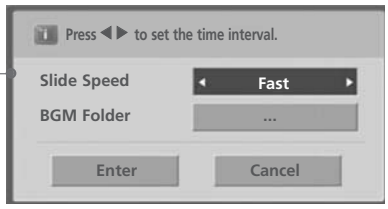
MULTIMEDIA



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

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

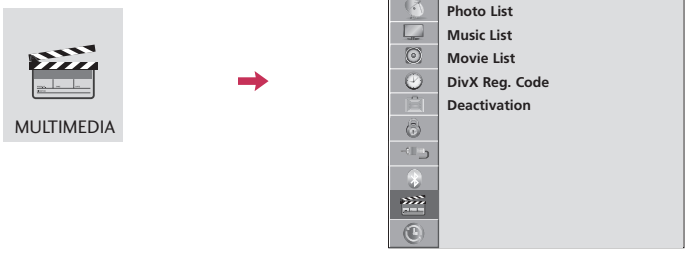
- ▶ **Slideshow**: Selected photos are displayed during the slide show. If no photo is selected, all photos in the current folder are displayed during slide show.
  - Set the time interval of the slide show in **Option**.
- ▶ **BGM**: Listen to music while viewing photos in full size.
  - Set the BGM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



MUSIC LIST

You can use the Music List menu to play MP3 files form.
This TV cannot play back copy-protected files.
The On Screen Display on your model may be slightly different.

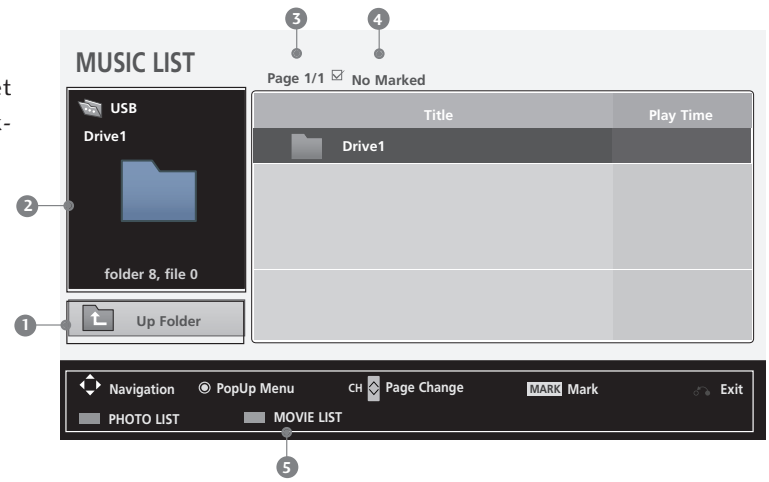
Supported music file: *.MP3
- Bit rate range 40Kbps ~ 320Kbps
- Sampling rate (Sampling Frequency)
  MPEG1 : 32, 44.1, 48KHz
  MPEG2 : 16, 24, 22.05KHz



1 MENU Select **MULTIMEDIA**.

2 ENTER ENTER Select **Music List**.

Screen Components

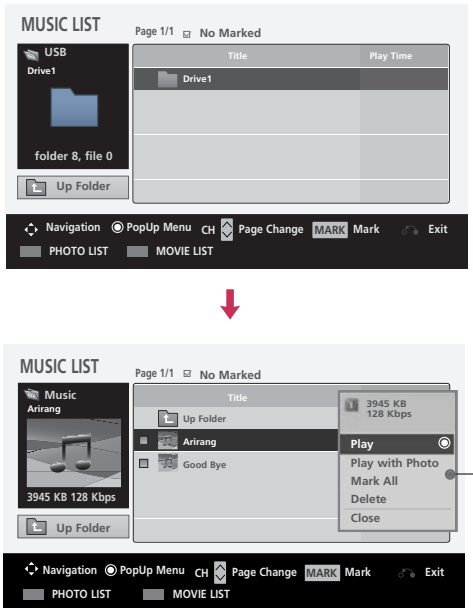


1. Moves to upper level folder
2. Preview: If any album jacket for the file exists, this jacket is displayed.
3. Current page/Total pages
4. Total number of marked musics
5. Corresponding buttons on the remote control

MULTIMEDIA

Music Selection and Popup Menu

Up to 6 music titles are listed per page.



- ▶ **Play** (During stop): Play the selected music. Once a song finishes playing, the next selected one will be played. When there are no selected musics to play, the next one in the current folder will be played. If you go to a different folder and press the **ENTER** button, the current music in playback will stop.
- ▶ **Stop Play** (During playback): Stop playing musics.
- ▶ **Play with Photo**: Start playing the selected musics and then move to the Photo List.
- ▶ **Mark All**: Mark all musics in the folder.
- ▶ **Unmark All**: Deselect all marked music.
- ▶ **Delete**: Delete the selected music.
- ▶ **Cancel**: Close the pop-up menu.

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

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

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



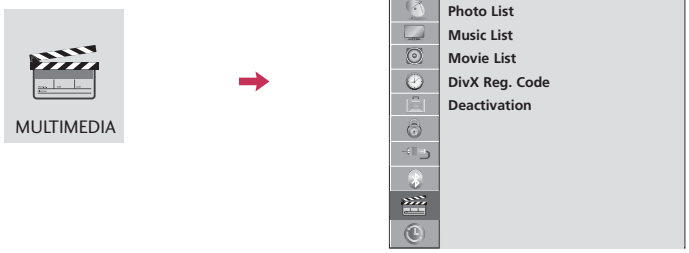
NOTE

- When music is playing, ♪ is displayed in front of the music play time.
- A damaged or corrupted music file that cannot be played displays 00:00 as the play time.
- Music files with copy-protection will not play.
- Press **ENTER**, ■ , or **RETURN** button to stop the screen saver.
- This TV can not play music files less than 16 Kbytes.

MULTIMEDIA

MOVIE LIST

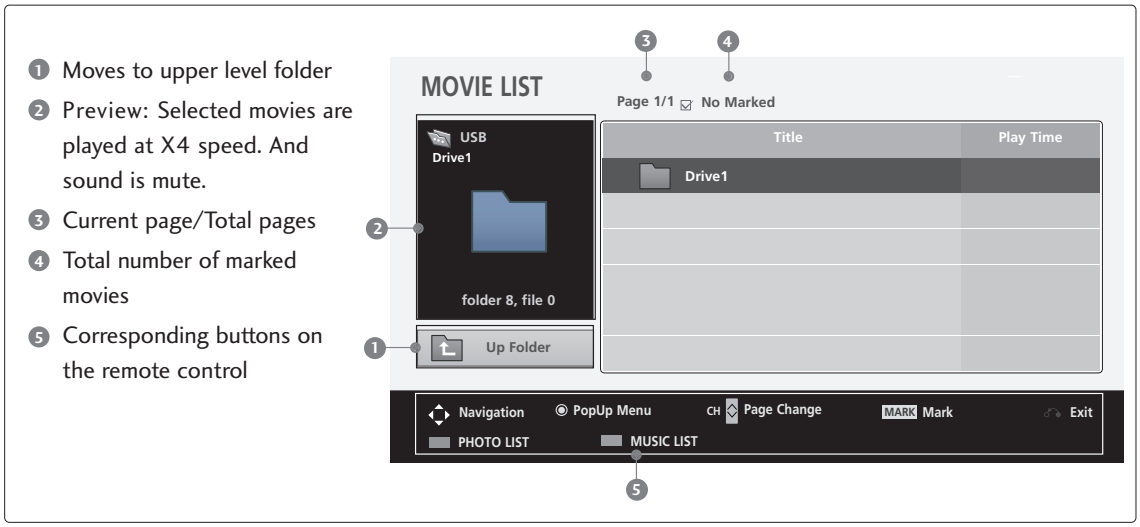
The movie list is activated once USB devices are detected.
It is used when playing movie files on TV.
Displays the movies in the USB devices and supports play.
Allows playback of all movies in the folder and user desired files.
It is a movie list that displays folder information and DivX file.



1 MENU Select **MULTIMEDIA**.

2 ENTER ENTER Select **Movie List**.

Screen Components



Movie Selection and Popup Menu

Up to 6 movie titles are listed per page.



- ▶ **Play** (During stop): Play the selected movie. Once a movie finishes playing, the next selected one will be played. When there are no selected movies to play, the next one in the current folder will be played. If you go to a different folder and press the **ENTER** button, the current movie in playback will stop.
- ▶ **Mark All**: Mark all movies in the folder.
- ▶ **Unmark All**: Deselect all marked movie.
- ▶ **Delete**: Delete the selected movie.
- ▶ **Close**: Close the pop-up menu.

1 Select the target folder or drive.

2 Select the desired movies.

3 Show the Popup menu.

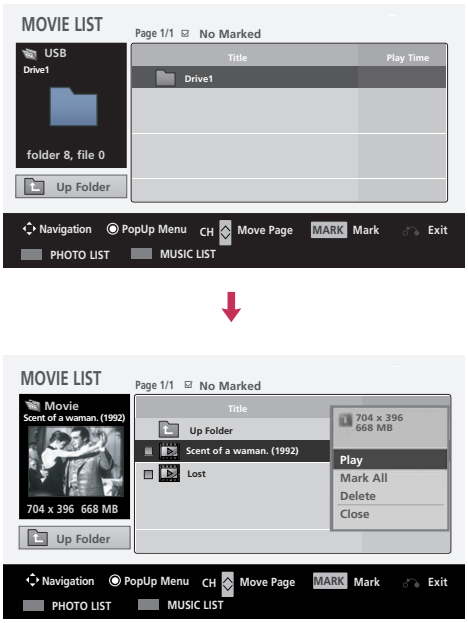
4 Select the desired Popup menu.

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

MULTIMEDIA

Playing the Movie

You can adjust various method during the movie play.





INFO Display the DivX Banner in the top of the screen.

1 Select the target folder or drive.

2 ENTER Select the desired movies.

3 ENTER Show the pop-up menu.

4 Select **Play**.

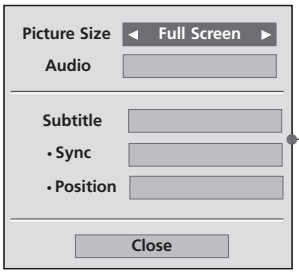
5 ENTER Display the current movie status progress bar in the bottom of the screen.

[Use of remote control]

◀◀ ▶▶	Press the **REW(◀◀)** button to rewind. Press the **FF(▶▶)** button to forward fast.
II	Press the **Pause(II)** button to pause the screen.
LIVE TV ■	Press the **Stop(■)** button to stop.
II ▶▶	Press the **Pause(II)** button and then use the **FF(▶▶)** button for slow motion.

Option Menu Selection

During the movie play, the following options are available.



▶ **Picture Size**: Select the Full screen or Original size.

▶ **Audio**: Select the language.
But, the file with only one audio can not be selected.

▶ **Subtitle**: The subtitle can be turned on or off.
If there are two or more subtitles, you can select one of them.

Subtitle Language	Support Language
Latin1	English, Spanish, French, German, Italian, Swedish, Finnish, Dutch, Portuguese, Danish, Romanian, Norwegian, Albanian, Gaelic, Welsh, Irish, Catalan,Valencian

- **Sync**: When the video is not synchronized with the caption, it can be adjusted by the unit of 0.5 second.
- **Position**: Move the location of the subtitle.

6 RED Display the **Option** menu.

7 Select the desired movie option.

8 Make appropriate adjustments.

9 ENTER Select **Close**.

Precautions when playing the DivX

Subtitle format : *.smi/ *.srt/ *.sub(MicroDVD, SubViewer 1.0/ 2.0)/ *.ass/ *.ssa/*.txt(TMPlayer), *.psb(PowerDivx)

Maximum supported DivX bitrate : 20Mbps(Mega bit per second)

- Specific subtitles created by the user may not be operated normally.
- Some special characters are not supported in subtitles.
- HTML tags are not supported in subtitles.
- Only the files saved in ASCII CODE is supported in subtitles.
- Subtitles in languages other than the supported languages are not available.
- **Time information in an external subtitle file should be arranged in ascending order to be played.**
- Damaged movie files may not be played, and certain functions could be limited during the playback.
- Playback for movie file exceeding 30GB (Giga Byte) is not supported.
- If the video and audio structure of recorded file is not interleaved, either video or audio is outputted.
- H.264 codec is supported up to profile level 4.1.
- Files encoded with GMC(Global Motion Compensation) or quarter pel motion estimation may not 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.
- Even the supported codec may not be played depending on the encoded condition.
- Files had with not index may not be operated normally.

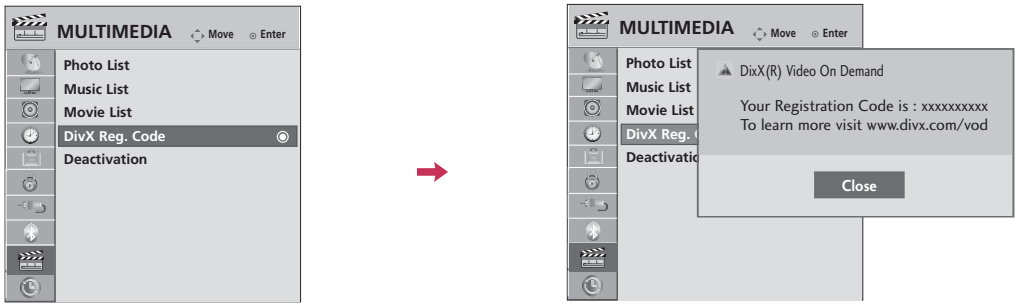
MULTIMEDIA

Supported Movie File

File Extensions	A/V	Codec	Profile/Level Support	Explanation
.asf .wmv .wma	Video	VC-1 Advanced Profile	Advanced Profile@Level 3 (e.g. 720p60, 1080i60, 1080p30)	Only streams compliant to SMPTE 421M VC-1 standard are supported.
		VC-1 Simple and Main Profiles	Simple Profile@Medium Level (eg. CIF, QVGA) Main Profile@High Level (e.g. 1080p30)	
	Audio	WMA Standard		
		WMA 9 Professional		
.divx .avi	Video	DivX3.11		Global motion compensation or quarterpel motion estimation does not supported. Streams using this syntax are not supported.
		DivX4 DivX5 DivX6	Advanced Simple Profile (e.g. 720p/1080i)	
		XViD		
		H.264 / AVC	Main Profile@ Level 4.1 High Profile@ Level 4.1 (e.g. 720p60, 1080i60, 1080p30)	
	Audio	MPEG-1 Layer I, II MPEG-1 Layer III(MP3) AC-3		
.mp4 .m4a .m4v	Video	H.264 / AVC	Main Profile@ Level 4.1 High Profile@ Level 4.1 (e.g. 720p60, 1080i60, 1080p30)	Global motion compensation or quarterpel motion estimation does not supported. Streams using this syntax are not supported.
		MPEG-4 Part 2	Advanced Simple Profile (e.g. 720p/1080i)	
	Audio	AAC	AAC-LC and AAC-HE	
.mkv	Video	H.264 / AVC	Main Profile@ Level 4.1 High Profile@ Level 4.1 (e.g. 720p60, 1080i60, 1080p30)	Most of the MKV content available is encoded by the open source x264 codec.
	Audio	AAC	AAC-LC and AAC-HE	
		AC-3		
.ts .trp .tp	Video	H.264 / AVC	Main Profile@ Level 4.1 High Profile@ Level 4.1 (e.g. 720p60, 1080i60, 1080p30)	
		MPEG-2	Main Profile@High Level(eg. 720p60, 1080i60)	
		VC-1	Simple Profile@Medium Level (e.g. CIF, QVGA) Main Profile@High Level (e.g. 1080p30) Advanced Profile@Level3 (e.g. 720p60, 1080i60, 1080p30)	Only streams compliant to SMPTE 421M VC-1 standard are supported.
	Audio	MPEG-1 Layer I, II MPEG-1 Layer III(MP3) AC-3		
		AAC	AAC-LC and AAC-HE	
.vob	Video	MPEG-1		
		MPEG-2	Main Profile@High Level (eg. 720p60, 1080i60)	
	Audio	AC-3 MPEG-1 Layer I, II DVD-LPCM		
.mpg	Video	MPEG-1 MPEG-2	Main Profile@High Level (eg. 720p60, 1080i60)	Only streams compliant configured properly for TS, PS or ES
	Audio	MPEG-1 Layer I, II		

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.



1 MENU Select **MULTIMEDIA**.

2 ENTER Select **DivX Reg.Code**.

3 ENTER

4 RETURN Return to the previous menu.

MENU Return to TV viewing.

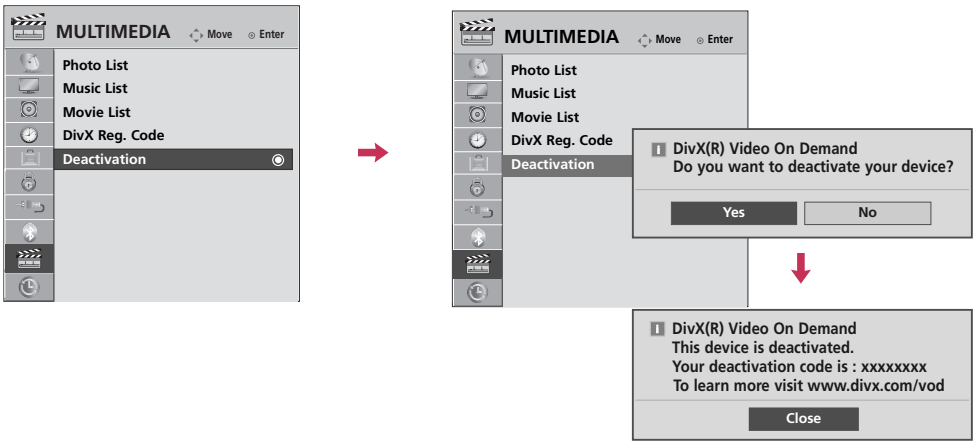
NOTE

- 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.)
- The video or audio of a file converted based on a standard other than the DivX codec standard may be corrupted or unable to be played.

MULTIMEDIA

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 MENU Select **MULTIMEDIA**.

2 ENTER Select **Deactivation**.

3 ENTER ENTER Select **Yes** or **No**.

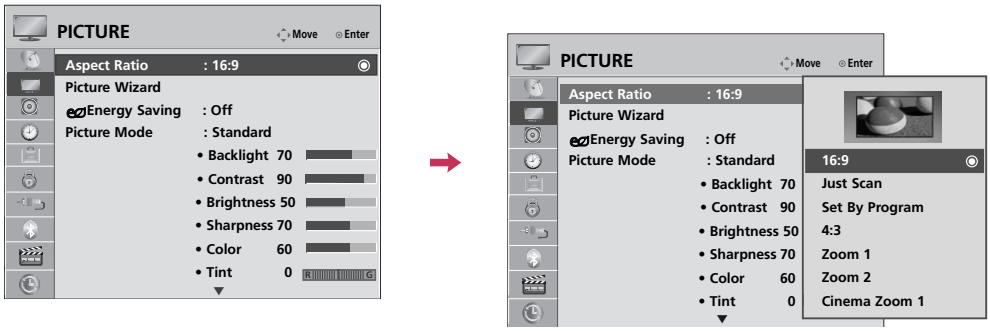
4 RETURN Return to the previous menu.

MENU Return to TV viewing.

PICTURE SIZE (ASPECT RATIO) CONTROL

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

- **RGB-PC input source use 4:3 or 16:9 aspect ratio.**



1 MENU Select **PICTURE**.

2 ENTER Select **Aspect Ratio**.

3 ENTER Select the desired picture format.

4 RETURN Return to the previous menu.

MENU Return to TV viewing.

- You can also adjust **Aspect Ratio** in the **Q-Menu**.

PICTURE CONTROL

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.

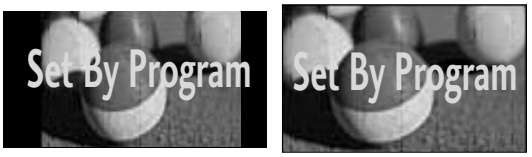
Just Scan operates only in DTV/Component/HDMI-DTV/DVI-DTV (720p/1080i/1080p) input source.



Set By Program

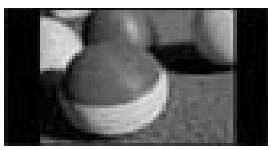
Selects the proper picture proportion to match the source's image.

(4:3➞ 4:3) (16:9➞ 16:9)



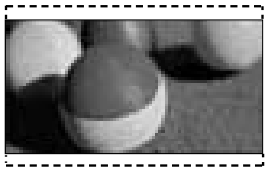
4:3

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



Zoom 1

Choose Zoom 1 when you want the picture to be altered, both vertically extended and cropped. The picture taking a halfway trade off between alteration and screen coverage.



Zoom 2

With this function, when the SD screen is sent to the HD with black at the left side and the right side, this screen can be extended to be fully displayed with no black area.

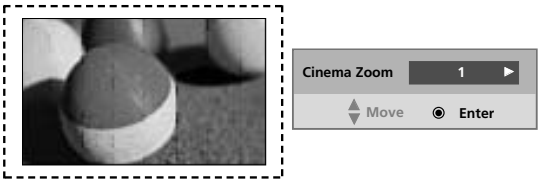
It is enabled only at the DTV HD broadcasting. (It is the reference for displaying 'HD' at the channel banner if the height is greater than 480.)



Cinema **Zoom**

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 proportion of Cinema Zoom. The adjustment range is 1-16.
- ▲ or ▼ button: Move the image on the screen.

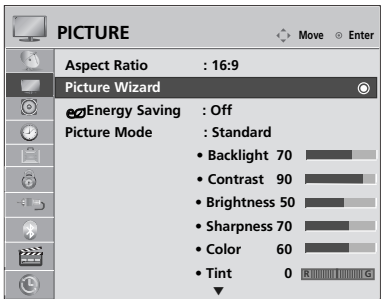


PICTURE WIZARD

This feature lets you adjust the picture quality of the original image.

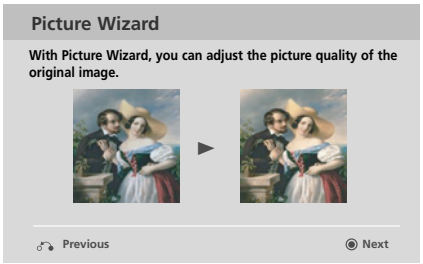
Use this to calibrate the screen quality by adjusting the Black and White Level etc. You can calibrate the screen quality by easily following each step.

When you adjust the image to **Low**, **Recommended** or **High**, you can see the example of the changes you made.

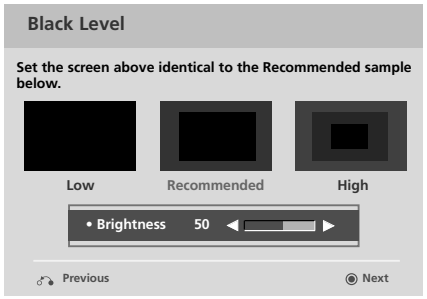


1 MENU Select **PICTURE**.

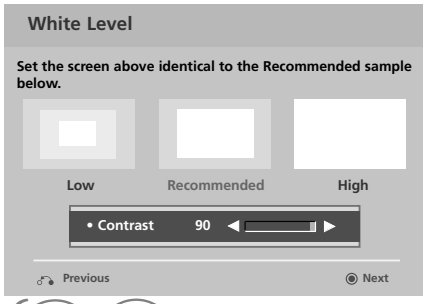
2 ENTER Select **Picture Wizard**.



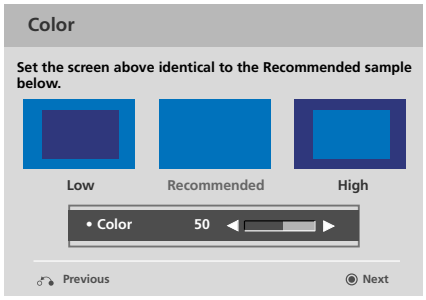
4 ENTER Adjust **Picture Wizard**.



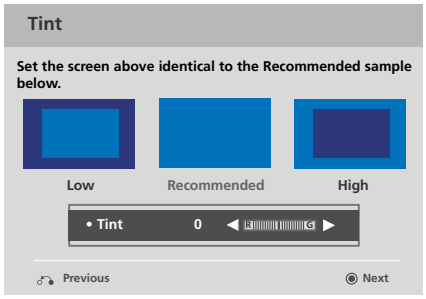
5 ENTER Adjust **Black Level**.



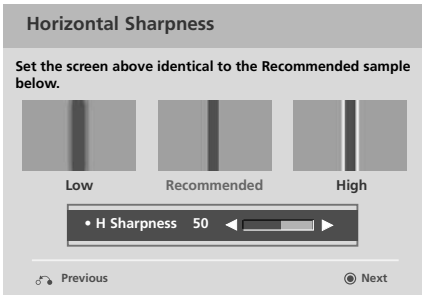
6 ENTER Adjust **White Level**.



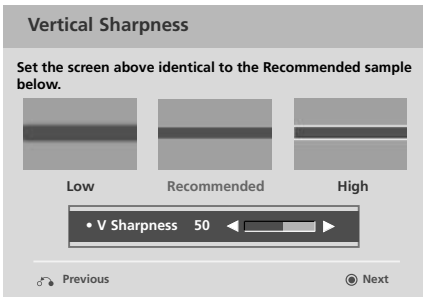
7 ENTER Adjust **Color**.



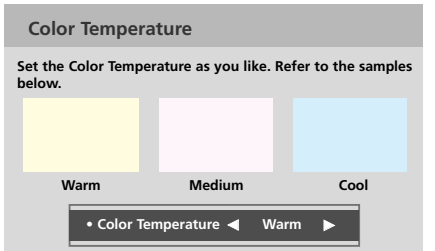
8 ENTER Adjust **Tint**.



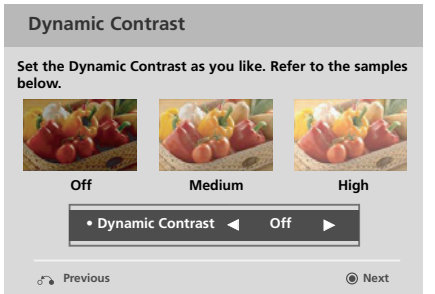
9 ENTER Adjust **Horizontal Sharpness**.



10 ENTER Adjust **Vertical Sharpness**.



11 ENTER Adjust **Color Temperature**.

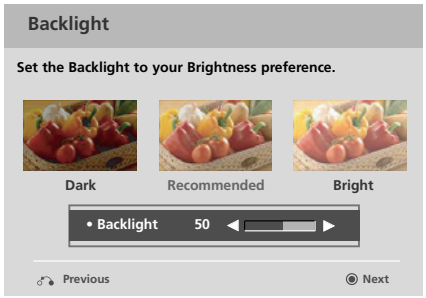


12 ENTER Adjust **Dynamic Contrast**.

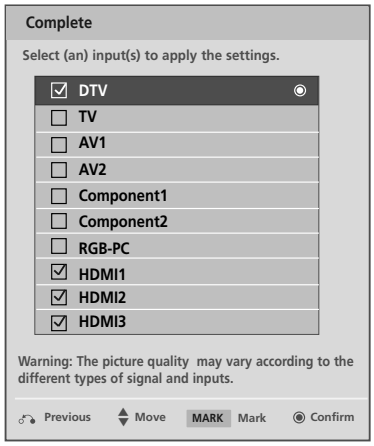


13 ENTER Adjust **Color Gain**.

For 42/47SL90**

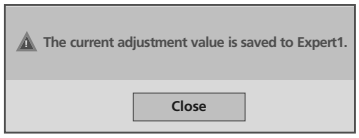


14 ENTER Adjust **Backlight**. (For LCD TV models)



15 MARK FAV Select input source to apply the settings.

16 ENTER Save.



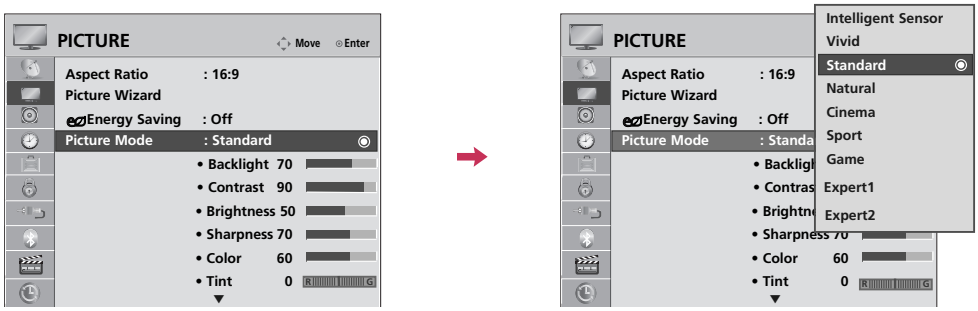
17 ENTER Finish the Picture Wizard.

■ If you stop the setting before the final step, the changes will not be saved to the TV.

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 MENU — Select **PICTURE**.

2 ENTER — Select **Picture Mode**.

3 ENTER — Select **Intelligent Sensor** (Except 42/50PQ60**, 50/60PS80**, 32/37/42LH35**), **Vivid**, **Standard**, **Natural** (For LCD TV Models), **Cinema** (or THX **Cinema**), **Sport**, or **Game**.

4 RETURN — Return to the previous menu.

MENU — Return to TV viewing.

- When selecting **Intelligent Sensor**, **Energy Saving** is changed to **Auto** automatically (For LCD TV Models).
- When selecting **Intelligent Sensor**, it is changed contrast, brightness, sharpness, color and tint automatically (Except 42/50PQ60**, 50/60PS80**, 32/37/42LH35**).
- **Vivid**, **Standard**, **Natural** (For LCD TV Models), **Cinema** (or THX **Cinema**), **Sport**, and **Game** Settings are preset for the optimum picture quality at the factory.
- **Intelligent Sensor** (Except 42/50PQ60**, 50/60PS80**, 32/37/42LH35**): The most suitable picture is automatically adjusted according to the surrounding conditions.
- **Vivid**: This is the mode to maximize the effect of the video in the general user. Strengthen the contrast, brightness, color and sharpness for vivid picture.
- **Standard**: This is the mode to realize optimum viewing condition for the retail store.
- **Natural** (For LCD TV Models): This is the mode to display the most natural screen status.
- **Cinema**: This mode optimizes video for watching movies.
- **Sport**: This is the video mode to emphasize dynamic video and primary color (e.g, white, uniform, grass, sky blue etc.) by realizing the optimal screen for sports.
- **Game**: This is the mode to realize fast response speed in a fast gaming screen.
- **Expert**: This is the mode to adjust the video in detail for video quality expert and general user.
- THX Cinema (For 50/60PS80**): This is cinema quality mode to provide you the experience of watching a movie at home. The user will be able enjoy the best level of satisfactory screen quality in any movie without any separate adjustments. THX Cinema expresses the optimal screen quality when it is darkest.
- When selecting THX **Cinema**, Aspect ratio changes to Just scan.
- You can also adjust **Picture Mode** in the **Q.MENU**.

- THX (Thomlinson Holman's Experiment) is the audio and video certification standard of THX established by George Lucas and Thomlinson.
  This is the product to be certified in THX display area and guarantees screen quality that exceeds the display standard specification in both hardware and software.

MANUAL PICTURE ADJUSTMENT-USER MODE

Adjust the picture appearance to suit your preference and viewing situations.
This feature is disable in "Picture Mode-Intelligent Sensor"(For LCD TV Models)
For 50/60PS80: This feature is disabled in "Picture Mode- THX Cinema".**



1 MENU Select **PICTURE**.

2 ENTER Select **Picture Mode**.

3 ENTER Select **Vivid**, **Standard**, **Natural**(For LCD TV models), **Cinema**(or THX **Cinema**), **Sport**, or **Game**.

4 ENTER Select **Backlight**(For LCD TV models), **Contrast**, **Brightness**, **Sharpness**, **Color**, or **Tint**.

5 ENTER Make appropriate adjustments.

6 RETURN Return to the previous menu.

MENU Return to TV viewing.

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

PICTURE CONTROL

PICTURE IMPROVEMENT TECHNOLOGY

You can calibrate the screen for each Picture Mode or set the video value according to the special video screen.
You can set the video seeing differently for each input.
To reset to the factory default after making adjustments to each input source, execute the **Reset** function for each Picture Mode.



1 MENU Select **PICTURE**.

2 ENTER Select **Advanced Control**.

3 ENTER Select your desired options.

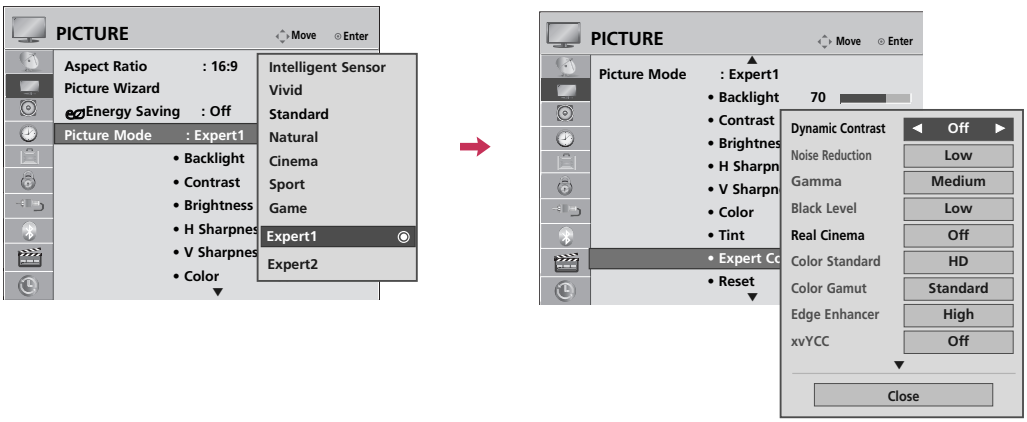
4 Make appropriate adjustments.

5 RETURN Return to the previous menu.

MENU Return to TV viewing.

EXPERT PICTURE CONTROL

By segmenting categories, Expert1 and Expert2 provide more categories which users can set as they see fit, offering the optimal picture quality for users.
This may also be used be a professional to help optimize the TV performance in the environment the TV is in.



1 MENU Select **PICTURE**.

2 ENTER Select **Picture Mode**.

3 ENTER Select **Expert1**, or **Expert2**.

4 ENTER Select **Expert Control**.

5 ENTER Select your desired menu option.

6 Make appropriate adjustments.

7 RETURN Return to the previous menu.

MENU Return to TV viewing.

PICTURE CONTROL

Color Temperature (Advanced Control)	■ Set to warm to enhance hotter colors such as red, or set to cool to make picture bluish.
Dynamic Contrast	■ Adjusts the contrast to keep it at the best level according to the brightness of the screen. The picture is improved by making bright parts brighter and dark parts darker.
Dynamic Color	■ Adjusts screen colors so that they look livelier, richer and clearer. This feature enhances hue, saturation and luminance so that red, blue, green and white look more vivid.
Noise Reduction	■ Reduces screen noise without compromising video quality.
Gamma	*Low : Make dark and middle gray level area of the picture brighter.* *Medium: Express original picture levels.* *High: Make dark and middle gray level area of the picture darker.* ■ You can adjust brightness of dark area and middle gray level area of the picture.
Black Level	*Low: The reflection of the screen gets darker.* *High: The reflection of the screen gets brighter.* *Auto: Realizing the black level of the screen and set it to High or Low automatically.* ■ Set black level of the screen to proper level. ■ This function enables to select 'Low' or 'High' in the following mode: AV (NTSC-M), HDMI or Component. Otherwise, 'Black level' is set to 'Auto'.
Eye Care (For LCD TV models)	■ Adjust the brightness of the screen to prevent the screen from being too bright. Dims extremely bright pictures. ■ This feature is disabled in "**Picture Mode-Vivid**, **Cinema**".
Real Cinema(LCD TV models) or Film Mode(PLASMA TV models)	■ Makes video clips recorded in film look more natural. ■ DVD and Blu-ray movies are filmed at 24 frames per second.
TruMotion (Except 32/37/42LH35**, PLASMA TV models)	*High: Provides smoother picture movement.* *Low: Provides smooth picture movement. Use this setting for standard use.* *Off: Use this setting when "High" and "Low" setting result in noise.* ■ TruMotion works with all inputs except PC mode. ■ If you enable "TruMotion", noise may appear on the screen.
Color Gamut	*Standard: Displays standard color area.* *Wide: Mode to use and set the rich color area of the display.* ■ Maximize the utilization of color to increase color quality.

Edge Enhancer	■ Show clearer and distinctive yet natural corners of the video.
Color Standard	■ Convert the color of a different video to HD color.
Color Filter	■ This is the function to filter the specific colors of the video. You can use the RGB filter to set color saturation and hue accurately.
xvYCC	*This feature is not available for all models.* ■ This is the function to express richer color. ■ This feature represents rich color as much as conventional video signal. ■ This function is enabled in "**Picture mode** - **Cinema**, **Expert**" when xvYCC signal is inputted through HDMI(1080p).
Expert Pattern	■ This is the pattern necessary for expert adjustment. ■ This function is enabled in "**Picture Mode** - **Expert**" when you watch DTV.
White Balance (Expert control) Color Temperature (Expert control) : Only 42/47/55SL80**, 42/47SL90**	■ This is the function to adjust the overall color of the screen to the feeling you want. a. Method : 2 Points - Pattern: Inner, Outer - Red/Green/Blue Contrast, Red/Green/Blue Brightness: The adjustment range is -50 - +50. b. Method : LCD TV models: 10 Point IRE, PLASMA TV models: 20 Point IRE - Pattern: Inner, Outer - IRE (Institute of Radio Engineers) is the unit to display the size of the video signal and can be set among 10, 20, 30 - 100(LCD TV models) or 5, 10, 15 - 95, 100(PLASMA TV models). You can adjust Red, Green or Blue according to each setting. - Luminance(For LCD TV models): This function displays calculated luminance value for 2.2 gamma. You can input luminance value you want at 100 IRE, than the target luminance value for 2.2 gamma is displayed at every 10 steps from 10 IRE to 90 IRE. - Red/Green/Blue: The adjustment range is -50 - +50.
Color Management System	■ As the tool used by the experts to make adjustments by using the test patterns, this does not affect other colors but can be used to selectively adjust the 6 color areas (Red/Green/Blue/Cyan/Mgt/Yellow). Color difference may not be distinctive even when you make the adjustments for the general video. Adjusts Red/Green/Blue/Yellow/Cyan, Magenta. - Red/Green/Blue/Yellow/Cyan, Magenta Color: The adjustment range is -30 - +30. - Red/Green/Blue/Yellow/Cyan, Magenta Tint: The adjustment range is -30 - +30. - This feature is disable in RGB-PC and HDMI-PC mode.
OPC (For LCD TV models)	*This feature is not available for all models.* ■ As the technology to reduce the power consumption while keeping the same brightness, this has the effect of reducing power consumption, improvement in contrast.

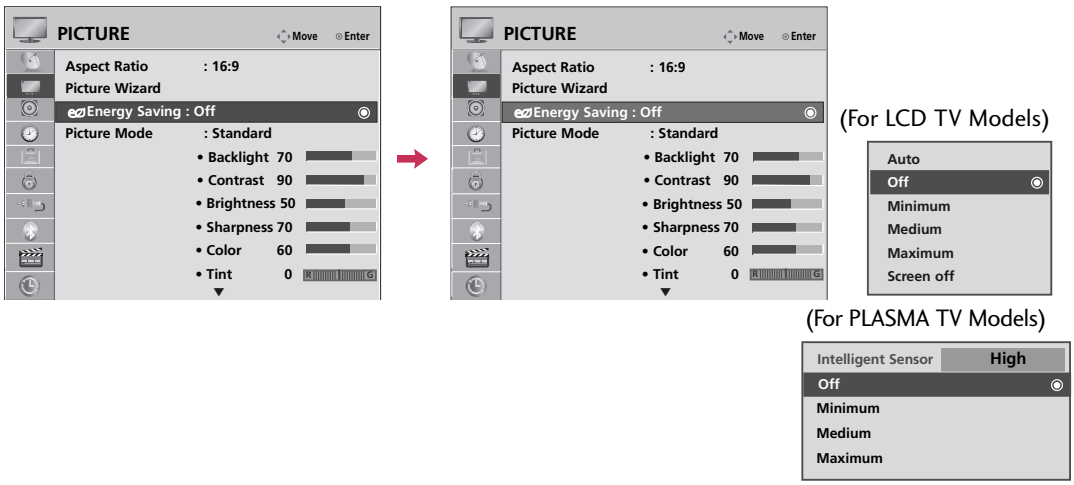
PICTURE CONTROL

ENERGY SAVING

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

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

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



1 MENU — Select **PICTURE**.

2 ENTER — Select **Energy Saving**.

3 ENTER — (LCD TV Models)
Select **Auto** (Except 32/37/42LH35**), **Off**, **Minimum**, **Medium**, **Maximum**, or **Screen Off**.

(PLASMA TV Models)
Select **Intelligent Sensor** ( ) Select **Low**, **Middle**, or **High**.), **Off**, **Minimum**, **Medium** or **Maximum**.

4 RETURN — Return to the previous menu.

MENU — Return to TV viewing.

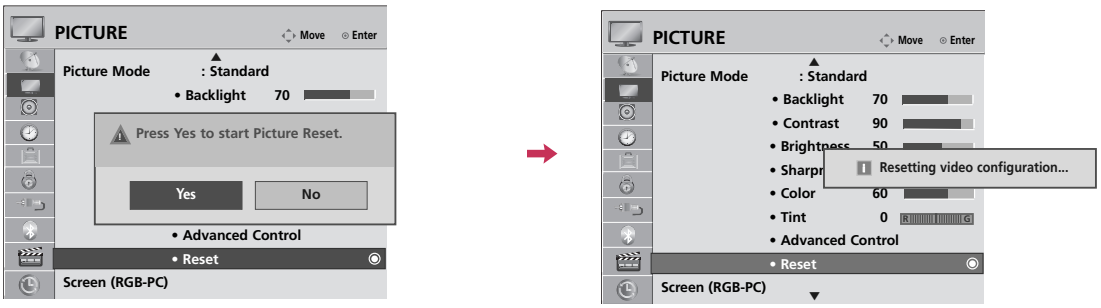
(For LCD TV Models)

- When selecting **Screen off**, screen is turned off after 3 seconds. At this time, if you press any button, screen is turned on.
- If you adjust "**Energy Saving-Auto**, **Minimum**, **Medium**, **Maximum**", **Backlight** feature will not work.
- When selecting **Auto**, **Backlight** is automatically adjusted through **Intelligent sensor** according to the surrounding conditions.

- You can also adjust the **ENERGY SAVING** button on the remote control.

PICTURE RESET

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



1 MENU Select **PICTURE**.

2 ENTER Select **Reset**.

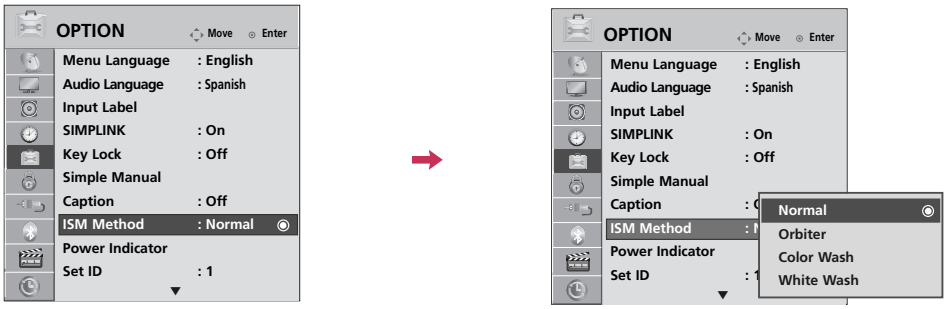
3 ENTER Select **Yes**.

4 ENTER Initialize the adjusted value.

5 MENU Return to TV viewing.

IMAGE STICKING MINIMIZATION (ISM) METHOD
(For PLASMA TV Models)

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 MENU Select **OPTION**.

2 ENTER Select **ISM Method**.

3 ENTER Select **Normal, Orbiter, Color Wash** or **White Wash.**

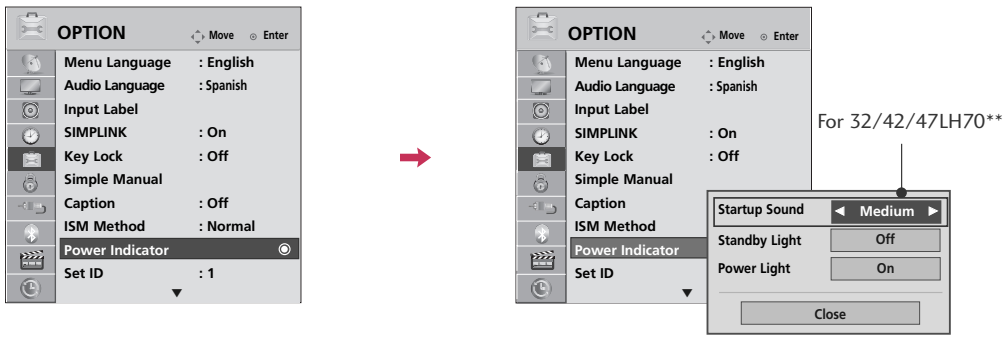
4 MENU Initialize the adjusted value.

- **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 see the after image on all colors. Once it has been corrected it will not be visible in any color.
- **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 White Wash. To return to normal viewing, press the any button.

POWER INDICATOR
(For 32/42/47LH70**, 32/42/47/55SL80** , 42/47SL90** Models)



1 MENU — Select **OPTION**.

2 ENTER — Select **Power Indicator**.

3 ENTER — Select **Startup Sound**, **Standby Light** or **Power Light**.

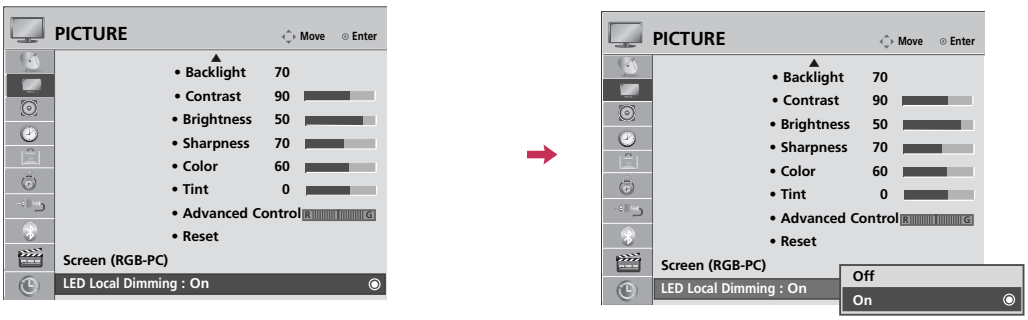
4 — Select your desired options.

5 RETURN — Return to the previous menu.

MENU — Return to TV viewing.

LED LOCAL DIMMING
(For 42/47/55LH90** Models)

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



1 MENU — Select **PICTURE**.

2 ENTER — Select **LED Local Dimming**.

3 ENTER — Select **On** or **Off**.

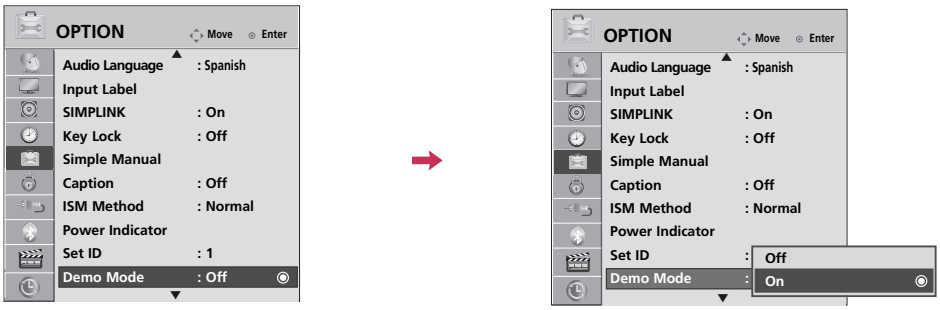
5 RETURN — Return to the previous menu.

MENU — Return to TV viewing.

PICTURE CONTROL

DEMO MODE

Displays a slide show to explain the various feature of this TV.
This feature is disabled in "**Initial Setting-Home Use**".



1 MENU Select **OPTION**.

2 ENTER Select **Demo Mode**.

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

4 MENU Return to TV viewing.

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

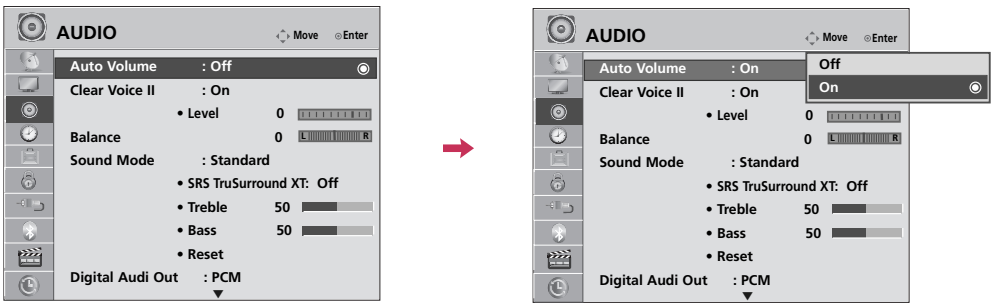
If you want to stop the demo, press any button (Except VOL +, - and MUTE button).

SOUND & LANGUAGE CONTROL

AUTO VOLUME LEVELER (AUTO VOLUME)

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

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



1 MENU Select **AUDIO**.

2 ENTER Select **Auto Volume**.

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

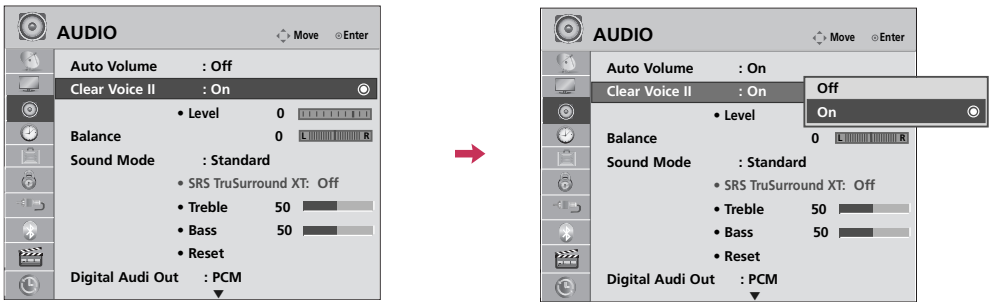
4 RETURN Return to the previous menu.

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 MENU Select **AUDIO**.

2 ENTER Select **Clear Voice II**.

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

■ If you select "**Clear Voice II-On**", **SRS TruSurround XT** feature will not work.

Adjustment for Clear Voice II Level With selecting On

5 ENTER Select **Level**.

6 ENTER Make appropriate adjustments.



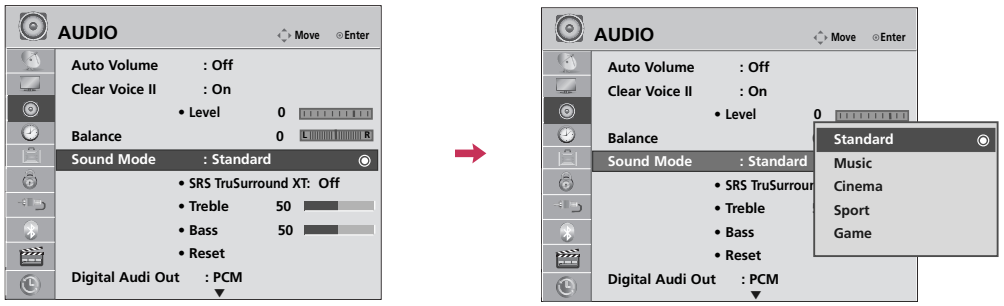
7 RETURN Return to the previous menu.

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 and are not adjustable.



1 MENU Select **AUDIO**.

2 ENTER Select **Sound Mode**.

3 ENTER Select **Standard**, **Music**, **Cinema**, **Sport**, or **Game**.

4 RETURN Return to the previous menu.

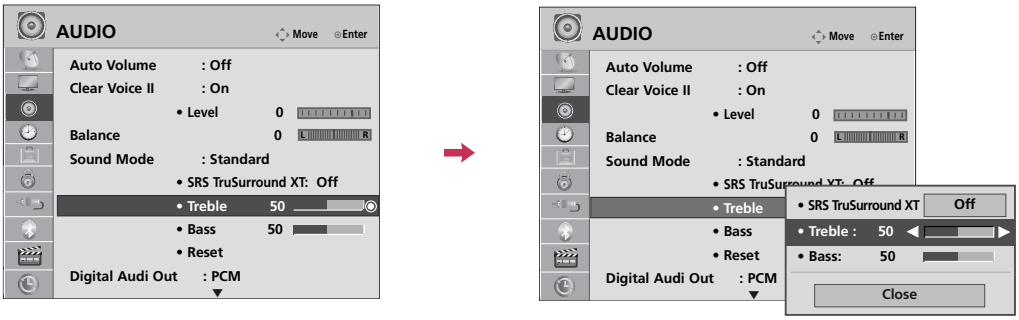
MENU Return to TV viewing.

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

SOUND & LANGUAGE CONTROL

SOUND SETTING ADJUSTMENT - USER MODE

Adjust the sound to suit your taste and room situations.



1 MENU Select **AUDIO**.

2 ENTER Select **Sound Mode**.

3 ENTER Select **Standard**, **Music**, **Cinema**, **Sport**, or **Game**.

4 ENTER Select **Treble** or **Bass**.

5 ENTER Make appropriate adjustments.

6 RETURN Return to the previous menu.

MENU Return to TV viewing.

SRS TRUSURROUND XT

1 MENU Select **AUDIO**.

2 ENTER Select **SRS TruSurround XT**

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

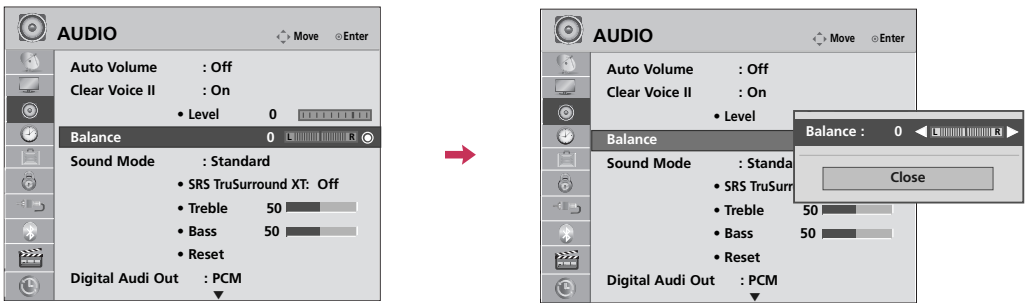
4 RETURN Return to the previous menu.

MENU Return to TV viewing.

- If you select "**Clear Voice II-On**", **SRS TruSurround XT** feature will not work.
- **SRS TruSurround XT**: Takes advantage of any multi-channel format without needing to add extra speakers or equipment. Dialog clarity, bass enrichment, and the addition of stereo audio enhancement produces an immersive sound experience from standard stereo material.
- If sound quality or volume is not at the level you want, it is recommended to use a separate home theater system or amplifier to cope with different user environments.

BALANCE

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



1 MENU — Select **AUDIO**.

2 ENTER — Select **Balance**.

3 ENTER — Make appropriate adjustments.

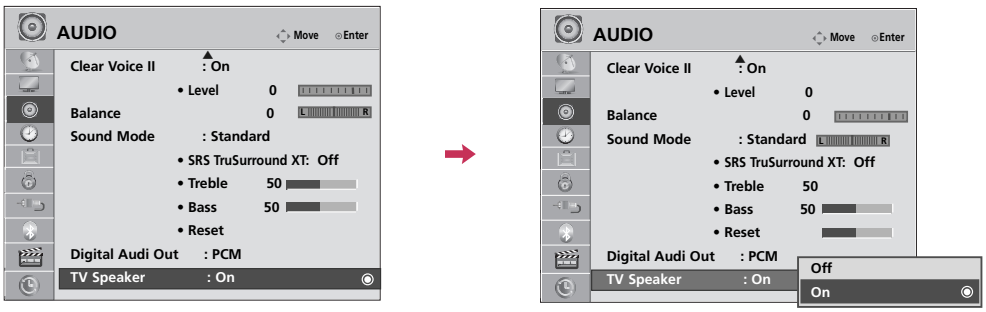
4 RETURN — Return to the previous menu.

MENU — Return to TV viewing.

SOUND & LANGUAGE CONTROL

TV SPEAKERS ON/OFF SETUP

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



1 MENU Select **AUDIO**.

2 ENTER Select **TV Speaker**.

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

4 RETURN Return to the previous menu.

MENU Return to TV viewing.

NOTE

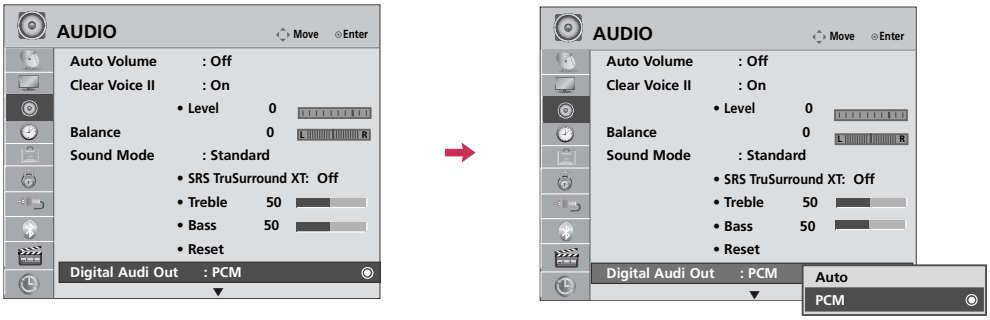
▶ Some menus in **AUDIO** are disabled when TV Speaker is set to Off.

DIGITAL AUDIO OUT

This function is setting the Dolby digital/PCM to connect the audio outputs.

If you select "Digital Audio Out - Auto" when Dolby digital is available, SPDIF (Sony Philips Digital InterFace) output will be Dolby Digital.

If you select "Digital Audio Out - Auto" when Dolby digital is not available, SPDIF output will be PCM (Pulse-code modulation).



1 MENU Select **AUDIO**.

2 ENTER Select **Digital Audio Out**.

3 ENTER Select **Auto** or **PCM**.

4 RETURN Return to the previous menu.

MENU Return to TV viewing.

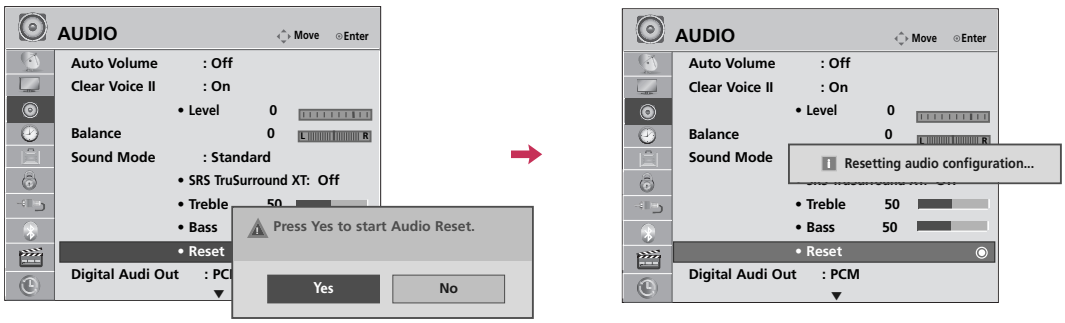
Item	Audio Input	Digital Audio output
Auto (Speaker On)	MPEG DD HE-AAC	PCM DD PCM
Auto (Speaker Off)	MPEG DD HE-AAC	PCM DD DD
PCM	PCM	PCM

* To set "SPDIF OUT - Dolby Digital" in DTV input signal, select "Digital Audio Out - Auto" and "TV Speaker - Off".

SOUND & LANGUAGE CONTROL

AUDIO RESET

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



1 MENU Select **AUDIO**.

2 ENTER Select **Reset**.

3 ENTER Select **Yes**.

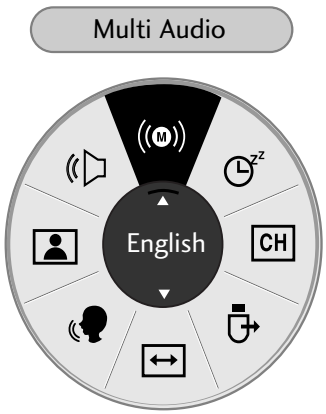
4 ENTER Initialize the adjusted value.

5 RETURN Return to the previous menu.

MENU 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.



Analog TV

1 Q. MENU Select **SAP**.

2 Select **Mono**, **Stereo**, or **SAP**.

3 Q. MENU Return to TV viewing.

Digital TV

1 Q. MENU Select **Multi Audio**.

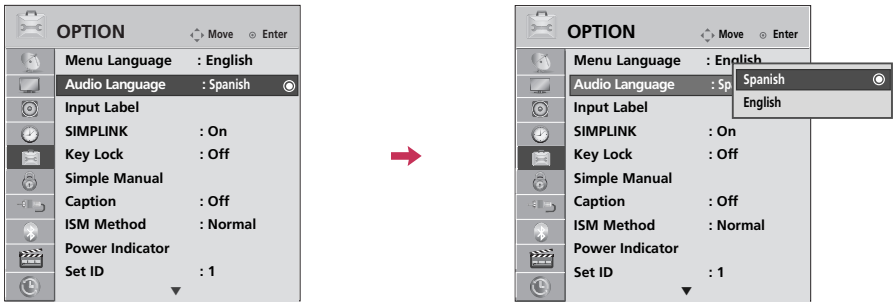
2 Select other languages.

3 Q. MENU Return to TV viewing.

SOUND & LANGUAGE CONTROL

AUDIO LANGUAGE

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



1 MENU Select **OPTION**.

2 ENTER Select **Audio Language**.

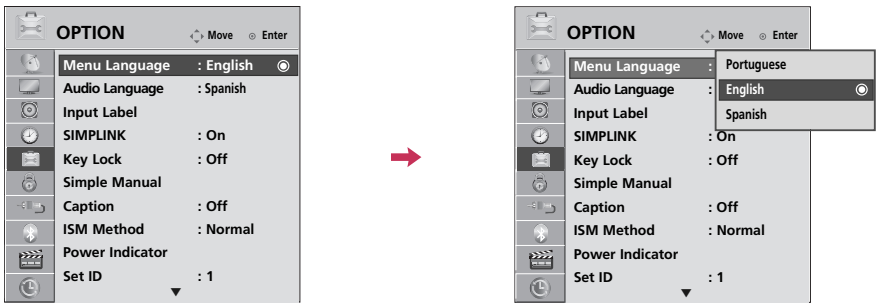
3 ENTER Select your desired language.

4 RETURN Return to the previous menu.

MENU Return to TV viewing.

ON-SCREEN MENUS LANGUAGE SELECTION

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



1 MENU Select **OPTION**.

2 ENTER Select **Menu Language**.

3 ENTER Select your desired language.
From this point on, the on-screen menus will be shown in the selected language.

4 RETURN Return to the previous menu.

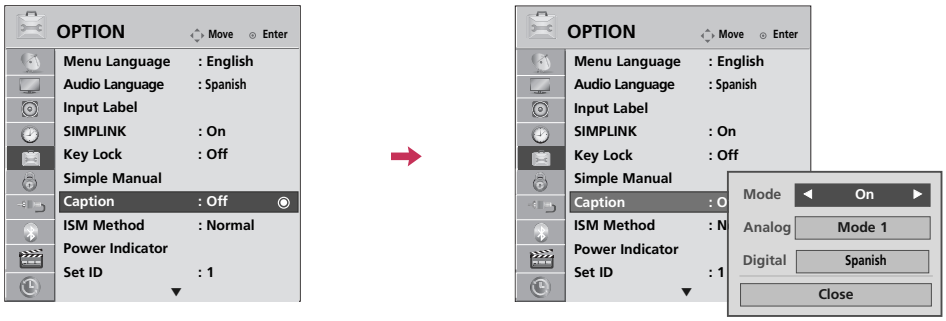
MENU Return to TV viewing.

SOUND & LANGUAGE CONTROL

CAPTION MODE

Analog Broadcasting System Captions

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



1 MENU Select **OPTION**.

2 ENTER Select **Caption**.

3 ENTER Select **Mode** - **On**.

4 Select **Analog**.

5 Select **Mode1**-**2** or **Text1**-**2**.

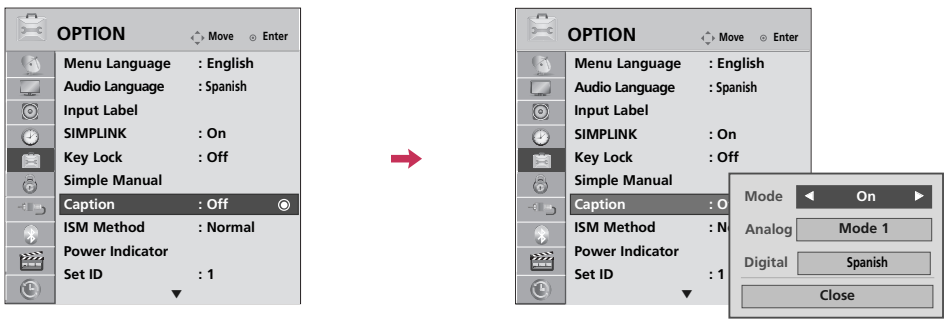
6 RETURN Return to the previous menu.

MENU Return to TV viewing.

- **MODE**
  The term for the words that scroll across the bottom of the TV screen; usually the audio portion of the program provided for the hearing impaired.
- **TEXT**
  The term for the words that appear in a large black frame and almost cover the entire screen; usually messages provided by the broadcaster.

Digital Broadcasting System Captions

Choose the language you want the DTV Captions to appear in.
Other Languages can be chosen for digital sources only if they are included on the program.
This function in only available when Caption Mode is set On.



1 MENU Select **OPTION**.

2 ENTER Select **Caption**.

3 ENTER Select **Mode** - **On**.

4 Select **Digital**.

5 Select **Spanish**, or **English**.

6 RETURN Return to the previous menu.

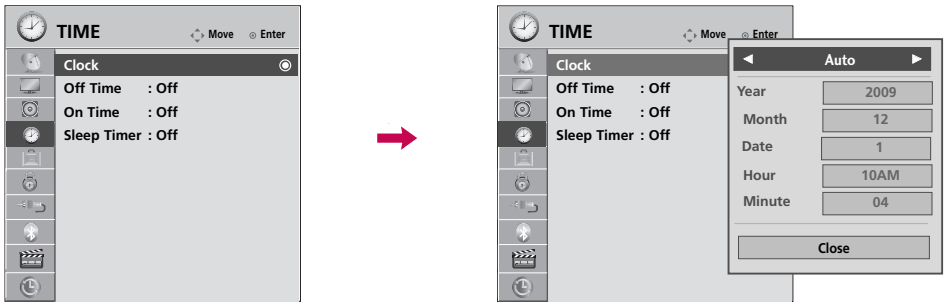
MENU Return to TV viewing.

TIME SETTING

CLOCK SETTING

Auto Clock Setup

The time is set automatically from a digital channel signal.
The digital channel signal includes information for the current time provided by the broadcasting station.
Set the clock manually if the current time is set incorrectly by the auto clock function.



1 MENU — Select **TIME**.

2 ENTER — Select **Clock**.

3 ENTER — Select **Auto**.

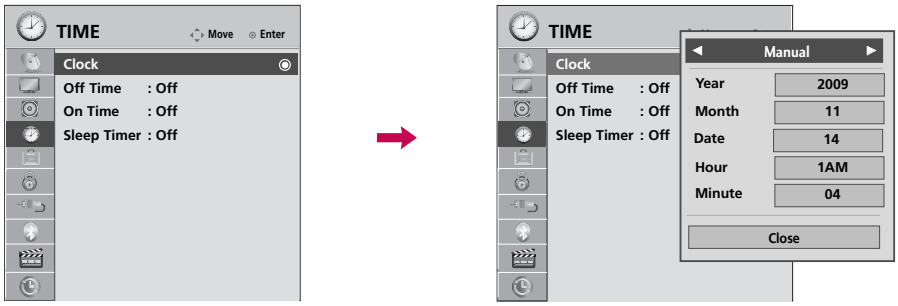
4 — Select **Auto**, **Off**, **On**.

5 RETURN — Return to the previous menu.

MENU — Return to TV viewing.

Manual Clock Setup

If the current time setting is wrong, set the clock manually.



1 MENU Select **TIME**.

2 ENTER Select **Clock**.

3 ENTER Select **Manual**.

4 Select the Year, Month, Date, Hour, or Minutes option.

5 Set the Year, Month, Date, Hour, or Minutes option.

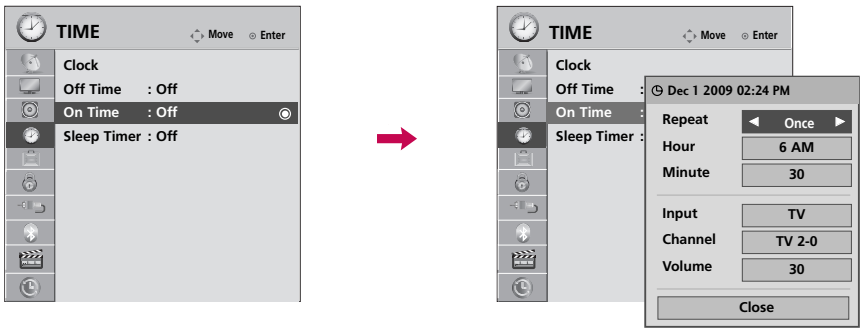
6 RETURN Return to the previous menu.

MENU Return to TV viewing.

TIME SETTING

AUTO ON/OFF TIME SETTING

This function operates only if the current time has been set.
The Off Time function overrides the On Time function if they are both set to the same time.
The TV must be in standby mode for the On Time to work.
If you do not press any button within 2 hours after the TV turns on with the On Time function, the TV will automatically revert to standby mode.



1 MENU — Select **TIME**.

2 ENTER — Select **Off time** or **On time**.

3 ENTER — Select **Repeat**.

4 — Select **Off**, **Once**, **Everyday**, **Mon.~Fri.**, **Mon.~Sat.**, **Sat.~Sun.**, or **Sunday**.

5 — Select and set **Hour** or **Minute**.

6 RETURN — Return to the previous menu.

MENU — Return to TV viewing.

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

1 ENTER — Select **Input**.

2 — Select the desired input source.

3 — When Selecting **TV**: set the channel at turn-on.

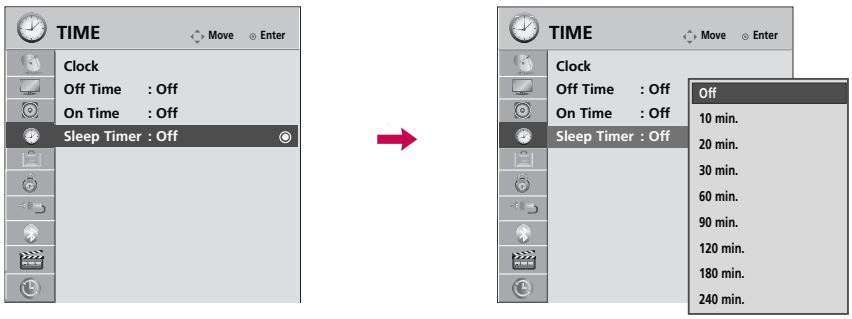
4 — Adjust to sound level at turn-on.

NOTE

▶ If different channels are set for the same time for **on time** and reserved recording, this TV is powered on to the reserved recording channel.

SLEEP TIMER SETTING

The Sleep Timer turns the TV off at the preset time.
Note that this setting is cleared when the TV is turned off.



1 MENU Select **TIME**.

2 ENTER Select **Sleep Timer**.

3 ENTER Select **Off**, **10**, **20**, **30**, **60**, **90**, **120**, **180**, or **240** minutes.

4 RETURN Return to the previous menu.

MENU Return to TV viewing.

- You can also adjust **Sleep Timer** in the **Q-Menu**.

PARENTAL CONTROL / RATINGS

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

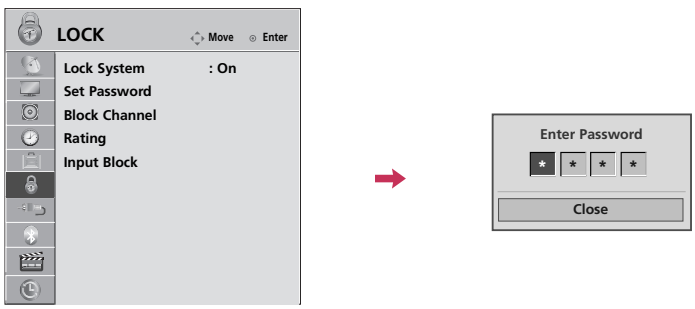
The Parental Control Function is used to block program viewing based on the ratings sent by the broadcasting station. The default setting is to allow all programs to be viewed. Viewing can be blocked by choosing the type of the program and the categories. It is also possible to block all program viewing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

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

SET PASSWORD & LOCK SYSTEM

Setting up Your Password

Set up blocking schemes to block specific channels, ratings, and external viewing sources.
A password is required to gain access to this menu.



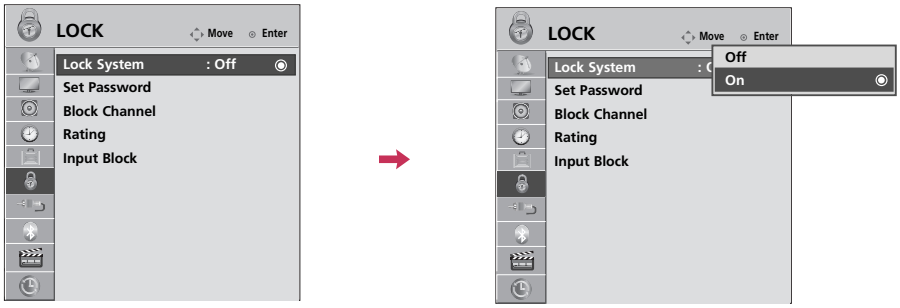
1 MENU ENTER Select **LOCK**.

2 Input the password.

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

Lock System

Enables or disables the blocking scheme you set up previously.



1 MENU ENTER Select **LOCK**.

2 Input the password.

3 Select **Lock System**.

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

5 RETURN Return to the previous menu.

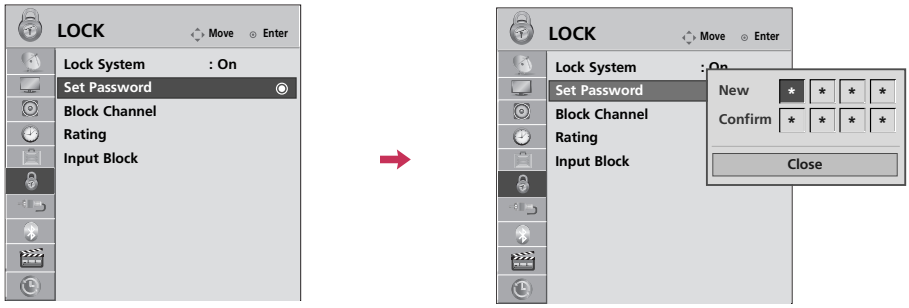
MENU Return to TV viewing.

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

PARENTAL CONTROL / RATINGS

Set Password

Change the password by inputting a new password twice.



1 MENU ENTER Select **LOCK**.

2 Input the password.

3 Select **Set password**.

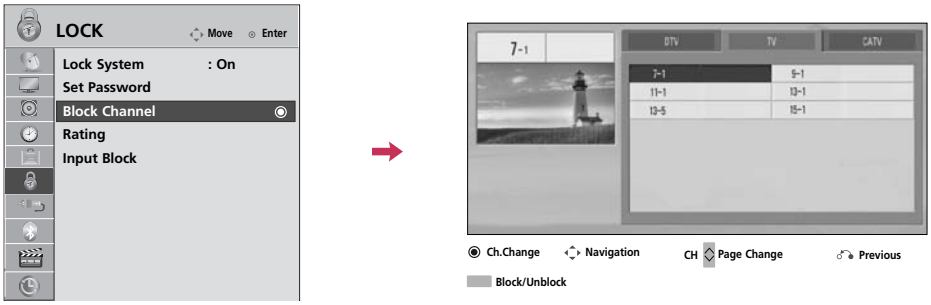
4 ENTER Choose any 4 digits for your new password.
As soon as the 4 digits are entered, re-enter the same 4 digits on the **Confirm**.

5 RETURN Return to the previous menu.

MENU Return to TV viewing.

CHANNEL BLOCKING

Blocks any channels that you do not want to watch or that you do not want your children to watch.



1 MENU ENTER Select **LOCK**.

2 Input the password.

3 Select **Block Channel**.

4 ENTER Select a channel to block or unblock.

5 RED Block or unblock a channel.

6 RETURN Return to the previous menu.

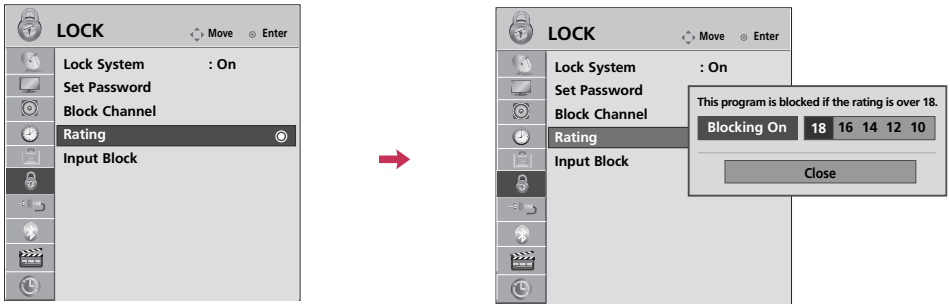
MENU Return to TV viewing.

■ After setting the **Block Channel**, Press the **ENTER** button to enter the password. And then the locked channel is temporarily unlocked.

PARENTAL CONTROL / RATINGS

RATING (Movie Rating)

Blocks movies according to the movie ratings limits specified, so children cannot view certain movies. You can set the ratings limit by blocking out all the movies with the ratings above a specified level. Keep in mind that the movie ratings limit only applies to movies shown on TV, not TV programs, such as soap operas.



1 MENU ENTER Select **LOCK**.

2 Input the password.

3 Select **Rating**.

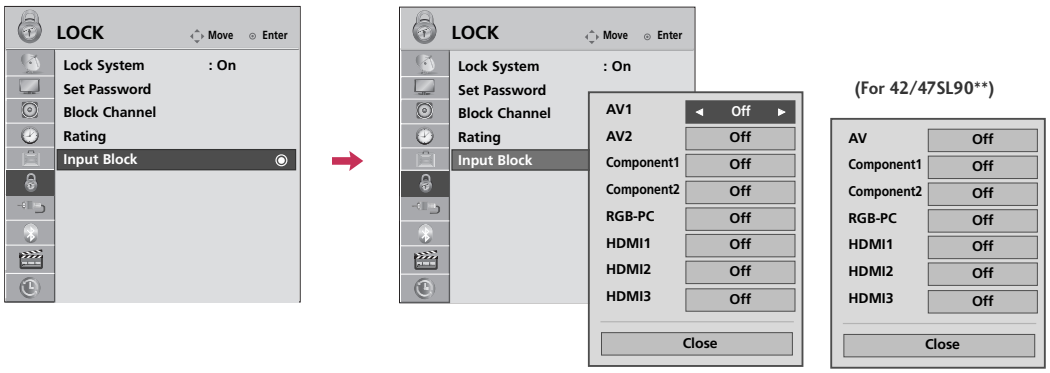
4 ENTER Select the **Blocking Off** or **18**, **16**, **14**, **12** or **10**.

5 RETURN Return to the previous menu.

MENU Return to TV viewing.

EXTERNAL INPUT BLOCKING

Enables you to block an input.



1 MENU ENTER Select **LOCK**.

2 Input the password.

3 Select **Input Block**.

4 ENTER Select input source.

5 Select **On** or **Off**.

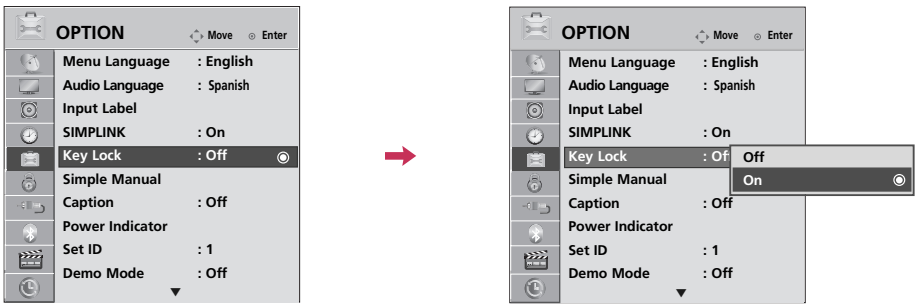
6 RETURN Return to the previous menu.

MENU Return to TV viewing.

PARENTAL CONTROL / RATINGS

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 MENU Select **OPTION**.

2 ENTER Select **Key Lock**.

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

4 RETURN Return to the previous menu.

MENU Return to TV viewing.

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

APPENDIX

TROUBLESHOOTING

The operation does not work normally.	
The remote control doesn't work	■ 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. *This feature is not available for all models.
Power is suddenly turned off	■ 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	■ 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	■ 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	■ Adjust Color in menu option. ■ Keep a sufficient distance between the product and the 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	■ Check for local interference such as an electrical appliance or power tool.
Poor reception on some channels	■ 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	■ Check antenna (Change the direction of the antenna).
No picture when connecting HDMI	■ Check HDMI cable over version 1.3. 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.

APPENDIX

The audio does not work.	
Picture OK & No sound	■ 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	■ Adjust Balance in menu option.
Unusual sound from inside the product	■ 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/USB	■ 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	■ Adjust resolution, horizontal frequency, or vertical frequency. ■ Check the input source.
Vertical bar or stripe on background & Horizontal Noise & Incorrect position	■ Work the Auto configure or adjust clock, phase, or H/V position. (Option)
Screen color is unstable or single color	■ 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

	MODEL	**42PQ60D** (42PQ60D-SA)	**50PQ60D** (50PQ60D-SA)	**50PS80BD** (50PS80BD-SA)
Dimensions (Width x Height x Depth)	With stand	40.9 x 28.5 x 12.1 inches 1040.8 x 725.8 x 308.0 mm	48.3 x 32.4 x 13.8 inches 1228.8 x 824.6 x 353.0 mm	48.4 x 32.9x 12.2 inches 1228.0 x 835.8 x 309 mm
	Without stand	40.9 x 26.3 x 3.0 inches 1040.8 x 669.2 x 76.8 mm	48.3 x 30.3 x 3.1 inches 1228.8 x 772.0 x 78.9 mm	48.4 x 31.3 x 3.1 inches 1228.0x 795.1 x 78.9 mm
Weight	With stand Without stand	55.7 lbs / 25.3 kg 51.3 lbs / 23.3 kg	77.1 lbs / 35.0 kg 71.6 lbs / 32.5 kg	84.4 lbs / 38.3 kg 75.6 lbs / 34.3kg

	MODEL	**60PS80BD** (60PS80BD-SA)	**32SL80YD** (32SL80YD-SA)	**42SL80YD** (42SL80YD-SA)
Dimensions (Width x Height x Depth)	With stand	57.7 x 38.9 x 14.6 inches 1465.4x 986.4 x 371 mm	30.1 x 21.6 x 8.8 inches 764.8 x 550.2 x 224.8 mm	39.4 x 27.1 x 10.3 inches 1001.2 x 688.7 x 261.0 mm
	Without stand	57.7 x 36.5 x 3.2 inches 1465.4 x 926.7 x 82.1 mm	30.1 x 19.3 x 1.9 inches 764.8 x 490.4 x 49.8 mm	39.4 x 24.5 x 1.7 inches 1001.2 x 623.2 x 45.0 mm
Weight	With stand Without stand	116.4 lbs / 52.8kg 101.4 lbs / 46.0kg	28.4 lbs / 12.9 kg 24.6 lbs / 11.2 kg	46.3 lbs / 21.0 kg 41.2 lbs / 18.7 kg

	MODEL	**47SL80YD** (47SL80YD-SA)	**55SL80YD** (55SL80YD-SA)
Dimensions (Width x Height x Depth)	With stand	43.7 x 29.6 x 12.6 inches 1109.6 x 751.2 x 320.2 mm	50.4 x 33.5 x 12.6 inches 1279.0 x 853.3 x 320.2 mm
	Without stand	43.6 x 26.9 x 1.7 inches 1109.6 x 685.3 x 45.5mm	50.3 x 30.7 x 1.7 inches 1279.0 x 780.5 x 45.0 mm
Weight	With stand Without stand	58.6 lbs / 26.6 kg 52.2 lbs / 23.7 kg	87.9 lbs / 39.9 kg 76.4 lbs / 34.7 kg
Power requirement Television System Program Coverage External Antenna Impedance		AC100-240V ~ 50/60Hz NTSC, PAL-M/N, SBTVD VHF 2-13, UHF 14-69, CATV 1-135 75 ohm	
Environment condition	Operating Temperature Operating Humidity	32 ~ 104°F (0 ~ 40°C) Less than 80%	
	Storage Temperature Storage Humidity	-4 ~ 140°F (-20 ~ 60°C) Less than 85%	

APPENDIX

MODEL		32LH70YD (32LH70YD-SH)	42LH70YD (42LH70YD-SE)	47LH70YD (47LH70YD-SE)
Dimensions (Width x Height x Depth)	With stand	31.6 x 24.9 x 11.2 inches 803 x 632.9 x 284.8 mm	39.7 x 29.6x 13.1 inches 1009.7 x 753.6 x 334.4 mm	44.2 x 32.5 x 14.7 inches 1123.6 x 824.4x 372.8 mm
	Without stand	31.6 x 23 x 2.9 inches 803 x 584.2 x 75mm	39.7 x 27.3 x 1.5inches 1009.7 x 695.4 x 39.7 mm	44.2 x 30.2 x 1.6inches 1123.6 x 765.7x 40.9 mm
Weight	With stand Without stand	29.7 lbs / 13.5kg 25.5 lbs / 11.6kg	43.7 lbs / 19.8 kg 37.9lbs / 17.2 kg	58.2 lbs / 26.4 kg 50.2 lbs / 22.8 kg

MODELS		32LH35FD (32LH35FD-SF)	37LH35FD (37LH35FD-SF)	42LH35FD (42LH35FD-SF)	42LH50YD (42LH50YD-SA)
Dimensions (Width x Height x Depth)	With stand	31.6 x 22.9 x 8.8 inches 805.0 x 583.0 x 224.0 mm	36.2 x 25.9 x 11.6 inches 922.0 x 659.0 x 297.0 mm	40.4 x 28.1 x 11.6 inches 1028.0 x 715.4 x 297.0 mm	41.4 x 28.3 x 11.6 inches 1052.2 x 719.1 x 296.2mm
	Without stand	31.6 x 20.9 x 3.1 inches 805.0 x 531.0 x 79.9 mm	36.2 x 23.4 x 3.4 inches 922.0 x 596.0 x 88.0 mm	40.4 x 25.9 x 3.4 inches 1028.0 x 658.6 x 88.7 mm	41.5 x 25.8 x 3.5 inches 1052.2 x 657.3 x 90.8mm
Weight	With stand Without stand	26.6 lbs / 12.1 kg 24.2 lbs / 11.0 kg	32.8 lbs / 14.9 kg 28.8 lbs / 13.1 kg	39.6 lbs / 18.0 kg 35.7 lbs / 16.2 kg	41.8 lbs / 19.0 kg 37.9 lbs / 17.2 kg

MODELS		47LH50YD (47LH50YD-SA)	55LH50YD (55LH50YD-SA)	42SL90QD (42SL90QD-SA)	47SL90QD (47SL90QD-SA)
Dimensions (Width x Height x Depth)	With stand	46.1 x 31.0 x 13.2 inches 1173.4 x 789.7 x 337.4 mm	53.4 x 35.4 x 16.6 inches 1357.0 x 901.0 x 423.0 mm	39.7 x 27.3 x 11.3 inches 1009.2 x 694.5 x 286.5 mm	44.1 x 29.8 x 11.3 inches 1119.6 x 757.1 x 286.5 mm
	Without stand	46.1 x 28.4 x 3.9 inches 1173.4 x 723.4 x 100.8 mm	53.4 x 32.8 x 4.3 inches 1357.0 x 835.4 x 109.6 mm	39.7 x 24.8 x 1.2 inches 1009.2 x 629.7 x 29.3 mm	44.1 x 27.2 x 1.2 inches 1119.6 x 691.3 x 29.3 mm
Weight	With stand Without stand	51.5 lbs / 23.4 kg 45.8 lbs / 20.8 kg	80.2 lbs / 36.4 kg 72.5 lbs / 32.9 kg	54.2 lbs / 24.6 kg 44.3 lbs / 20.1 kg	62.8 lbs / 28.5 kg 52.9 lbs / 24.0 kg

MODELS		42LH90QD (42LH90QD-SA)	47LH90QD (47LH90QD-SA)	55LH90QD (55LH90QD-SA)
Dimensions (Width x Height x Depth)	With stand	41.9 x 30.5 x 14.2 inches 1065.9 x 776.0 x 361.7 mm	46.4 x 33.5 x 15.7 inches 1179.0 x 851.4 x 398.8 mm	54.0 x 37.9 x 17.8 inches 1373.0 x 964.3 x 454.2 mm
	Without stand	41.9 x 28.2 x 3.7 inches 1065.9 x 716.4 x 94.4 mm	46.4 x 30.7 x 4.1 inches 1179.0 x 780.6 x 105.9 mm	54.0 x 34.9 x 4.2 inches 1373.0 x 888.5 x 106.9 mm
Weight	With stand Without stand	51.1 lbs / 23.2kg 42.9 lbs / 19.5 kg	60.1 lbs / 27.3kg 51.8 lbs / 23.5kg	90.1 lbs / 40.9 kg 78.2 lbs / 35.5 kg
Power requirement Television System Program Coverage External Antenna Impedance		AC100-240V ~ 50/60Hz NTSC, PAL-M/N, SBTVD VHF 2-13, UHF 14-69, CATV 1-135 75 ohm		
Environment condition	Operating Temperature Operating Humidity	32 ~ 104°F (0 ~ 40°C) Less than 80%		
	Storage Temperature Storage Humidity	-4 ~ 140°F (-20 ~ 60°C) Less than 85%		

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

PROGRAMMING THE REMOTE CONTROL

The provided universal remote control can be programmed to operate most remote-controllable devices.
Note that the remote may not control all models of other brands.

Programming a code into a remote mode

1. Testing your remote control.
   To find out whether your remote control can operate other components without programming, turn on a component such as a STB and press the corresponding mode button (such as a **STB**) on the remote control, while pointing at the component. Test the **POWER** and **CH** ∧ ∨ buttons to see if the component responds correctly. If the component does not operate correctly, the remote control requires programming to operate the device.

2. Turn on the component to be programmed, then press the corresponding mode button (such as **STB**) on the remote control. The remote control button of the desired device is illuminated.

3. Press the **MENU** and **MUTE** buttons simultaneously, and the remote control is ready to be programmed with the code.

4. Enter a code number using the number buttons on the remote control. Programming code numbers for the corresponding component can be found on the following pages. If the code is correct, the device will turn off.

5. Press the **MENU** button to store the code.

6. Test the remote control functions to see if the component responds correctly. If not, repeat from step 2.

APPENDIX

Remote Control Code

VCR

Brand	Codes				Brand	Codes				Brand	Codes			
AIWA	034				MAGNAVOX	031	033	034	041	SAMSUNG	032	040	102	104
AKAI	016	043	046	124		067	068				105	107	109	112
	125	146			MARANTZ	012	031	033	067		113	115	120	122
AMPRO	072					069					125			
ANAM	031	033	103		MARTA	101				SANSUI	022	043	048	135
AUDIO DYNAMICS	012	023	039	043	MATSUI	027	030			SANYO	003	007	010	014
BROKSONIC	035	037	129		MEI	031	033				102	134		
CANON	028	031	033		MEMOREX	003	010	014	031	SCOTT	017	037	112	129
CAPEHART	108					033	034	053	072		131			
CRAIG	003	040	135			101	102	134	139	SEARS	003	008	009	010
CURTIS MATHES	031	033	041		MGA	045	046	059			013	014	017	020
DAEWOO	005	007	010	064	MINOLTA	013	020				031	042	073	081
	065	108	110	111	MITSUBISHI	013	020	045	046		101			
	112	116	117	119		049	051	059	061	SHARP	031	054	149	
DAYTRON	108					151				SHINTOM	024			
DBX	012	023	039	043	MTC	034	040			SONY	003	009	031	052
DYNATECH	034	053			MULTITECH	024	034				056	057	058	076
ELECTROHOME	059				NEC	012	023	039	043		077	078	149	
EMERSON	006	017	025	027		048				SOUNDESIGN	034			
	029	031	034	035	NORDMENDE	043				STS	013			
	036	037	046	101	OPTONICA	053	054			SYLVANIA	031	033	034	059
	129	131	138	153	PANASONIC	066	070	074	083		067			
FISHER	003	008	009	010		133	140	145		SYMPHONIC	034			
FUNAI	034									TANDY	010	034		
GE	031	033	063	072	PENTAX	013	020	031	033	TATUNG	039	043		
	107	109	144	147		063				TEAC	034	039	043	
GO VIDEO	132	136			PHILCO	031	034	067		TECHNICS	031	033	070	
HARMAN KARDON		012	045		PHILIPS	031	033	034	054	TEKNIKA	019	031	033	034
HITACHI	004	018	026	034		067	071	101			101			
	043	063	137	150	PILOT	101				THOMAS	034			
INSTANTREPLAY	031	033			PIONEER	013	021	048		TMK	006			
JCL	031	033			PORTLAND	108				TOSHIBA	008	013	042	047
JCPENNY	012	013	015	033	PULSAR	072					059	082	112	131
	040	066	101		QUARTZ	011	014			TOTEVISION	040	101		
JENSEN	043				QUASAR	033	066	075	145	UNITECH	040			
JVC	012	031	033	043	RCA	013	020	033	034	VECTOR RESEARCH	012			
	048	050	055	060		040	041	062	063	VICTOR	048			
	130	150	152			107	109	140	144	VIDEO CONCEPTS	012	034	046	
KENWOOD	014	034	039	043		145	147			VIDEOSONIC	040			
	047	048			REALISTIC	003	008	010	014	WARDS	003	013	017	024
LG (GOLDSTAR)	001	012	013	020		031	033	034	040		031	033	034	040
	101	106	114	123		053	054	101			053	054	131	
LLOYD	034				RICO	058				YAMAHA	012	034	039	043
LXI	003	009	013	014	RUNCO	148				ZENITH	034	048	056	
	017	034	101	106	SALORA	014					058	072	080	101
MAGIN	040													

HDSTB

Brand	Codes	Brand	Codes	Brand	Codes
ALPHASTAR DSR	123	HOUSTON TRACKER	033 037 039 051	PROSAT	072
AMPLICA	050		057 104	RCA	066 106
BIRDVIEW	051 126 129	HUGHES	068	REALISTIC	043 074
CHANNEL MASTER	013 014 015 018	JANIEL	060 147	SAMSUNG	123
	036 055	JERROLD	061	SATELLITE SERVICE CO	028 035 047 057
CHAPARRAL	008 009 012 077	KATHREIN	108		085
CITOH	054	LEGEND	057	SCIENTIFIC ATLANTA	032 138
CURTIS MATHES	050 145	LG	001	SONY	103
DRAKE	005 006 007 010	LUTRON	132	STARCAST	041
	011 052 112 116	LUXOR	062 144	SUPER GUIDE	020 124 125
	141	MACOM	010 059 063 064	TEECOM	023 026 075 087
DX ANTENNA	024 046 056 076		065		088 090 107 130
ECHOSTAR	038 040 057 058	MEMOREX	057		137
	093 094 095 096	NEXTWAVE	028 124 125	TOSHIBA	002 127
	097 098 099 100	NORSAT	069 070	UNIDEN	016 025 042 043
	122	PACE SKY SATELLITE	143		044 045 048 049
ELECTRO HOME	089	PANASONIC	060 142		078 079 080 086
EUROPLUS	114	PANSAT	121		101 135 136
FUJITSU	017 021 022 027	PERSONAL CABLE	117	VIEWSTAR	115
	133 134	PHILIPS	071	WINEGARD	128 146
GENERAL INSTRUMENT	003 004 016 029	PICO	105	ZENITH	081 082 083 084
	031 059 101	PRESIDENT	019 102		091 120
HITACHI	139 140	PRIMESTAR	030 110 111		

DVD

Brand	Codes	Brand	Codes	Brand	Codes
APEX DIGITAL	022	MITSUBISHI	002	RCA	005 006
DENON	020 014	NAD	023	SAMSUNG	011 015
GE	005 006	ONKYO	008 017	SONY	007
HARMAN KARDON	027	PANASONIC	003 009	THOMPSON	005 006
JVC	012	PHILIPS	013	TOSHIBA	019 008
LG	001 010 016 025	PIONEER	004 026	YAMAHA	009 018
MAGNAVOX	013	PROCEED	021	ZENITH	010 016 025
MARANTZ	024	PROSCAN	005 006		

APPENDIX

IR CODES

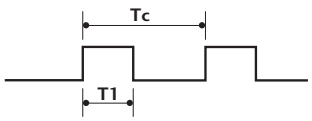
1. How to Connect

■ 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



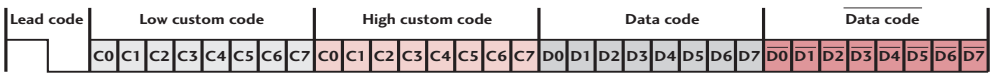
Carrier frequency

FCAR = 1/TC = fOSC/12

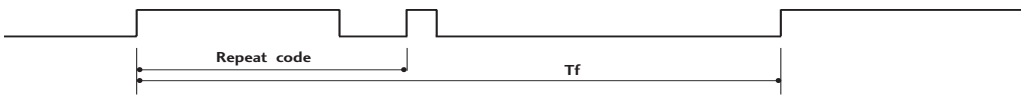
Duty ratio = T1/TC = 1/3

■ **Configuration of frame**

1st frame



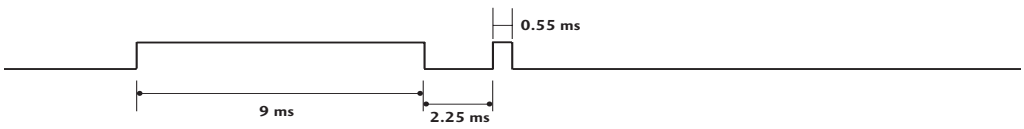
Repeat frame



■ **Lead code**

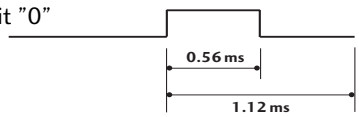


■ **Repeat code**

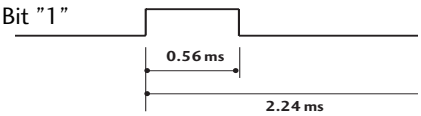


■ **Bit description**

Bit "0"



Bit "1"



■ **Frame interval: Tf**

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



Code (Hexa)	Function	Note	Code (Hexa)	Function	Note
08	POWER	Remote control Button (Power On/Off)	AB	GUIDE	Remote control Button
45	Q.MENU	Remote control Button	AA	INFO	Remote control Button
43	MENU	Remote control Button	D6	TV	Discrete IR Code
0B	INPUT	Remote control Button			(TV Input Selection)
10-19	Number Key 0-9	Remote control Button	C4	POWER ON	Discrete IR Code
4C	- Dash(LIST)	Remote control Button			(Only Power On)
1A	Q.VIEW(FLASHBK)	Remote control Button	C5	POWER OFF	Discrete IR Code
09	MUTE(DELETE)	Remote control Button			(Only Power Off)
02	VOL +	Remote control Button	5A	AV1	Discrete IR Code
03	VOL -	Remote control Button			(AV1 Input Selection)
00	CH ∧	Remote control Button	D0	AV2	Discrete IR Code
01	CH ∨	Remote control Button			(AV2 Input Selection)
1E	FAV(MARK)	Remote control Button	BF	COMPONENT1	Discrete IR Code
40	∧	Remote control Button			(Component1 Input Selection)
41	∨	Remote control Button	D4	COMPONENT2	Discrete IR Code
07	<	Remote control Button			(Component2 Input Selection)
06	>	Remote control Button	D5	RGB-PC	Discrete IR Code
44	ENTER	Remote control Button			(RGB-PC Input Selection)
28	RETURN	Remote control Button	CE	HDMI1	Discrete IR Code
7E	SIMPLINK	Remote control Button			(HDMI1 Input Selection)
30	AV MODE	Remote control Button	CC	HDMI2	Discrete IR Code
B0	PLAY	Remote control Button			(HDMI2 Input Selection)
BA	PAUSE	Remote control Button	E9	HDMI3	Discrete IR Code
B1	STOP(LIVE TV)	Remote control Button			(HDMI3 Input Selection)
BD	REC	Remote control Button	76	Ratio 4:3	Discrete IR Code
8F	REW	Remote control Button			(Only 4:3 Mode)
8E	FF	Remote control Button	77	Ratio 16:9	Discrete IR Code
95	ENERGY SAVING	Remote control Button			(Only 16:9 Mode)
72	Red	Remote control Button	AF	Ratio Zoom	Discrete IR Code
71	Green	Remote control Button			(Only Zoom Mode)
63	Yellow	Remote control Button			
61	Blue(REPEAT)	Remote control Button			

* Use this feature depending on your model.

For 42/47/55LH90**, 32/42/47/55SL80** ,42/47SL90** Models

Code (Hexa)	Function	Note
0F	TV	Remote control Button
61	Blue	Remote control Button
B8	REPEAT	Remote control Button
79	RATIO	Remote control Button
9E	LIVE TV	Remote control Button

(Only 42/47SL90** Models)

APPENDIX

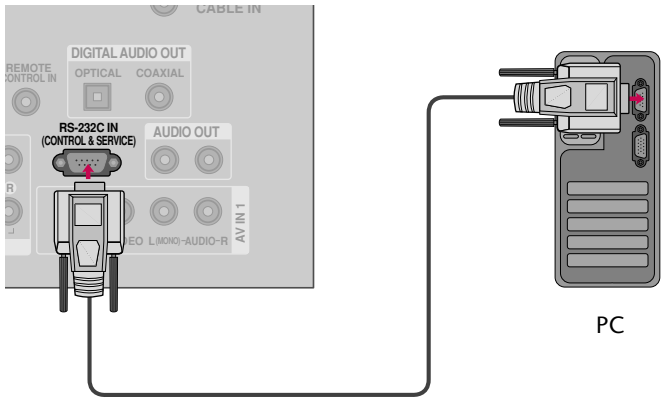
EXTERNAL CONTROL THROUGH RS-232C

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.

RS-232C Setup

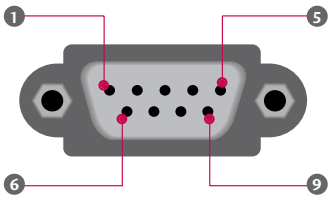
i.e)



PC

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.

NOTE

▶ This product has command echo back in the RS-232C Command.

RS-232C Configurations

Either cable below can be used.

7-Wire Configuration
(Serial female-female NULL modem cable)

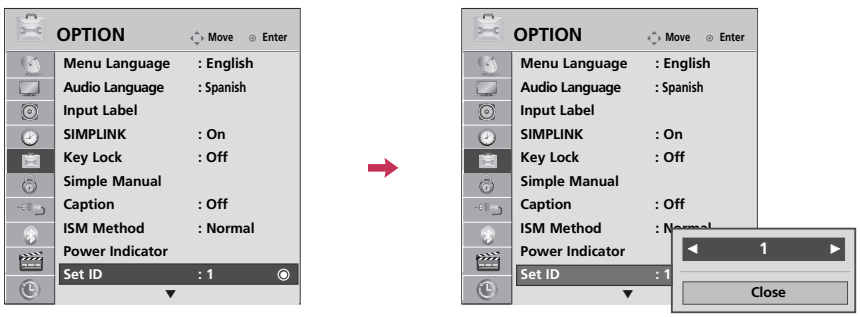
	PC	TV	
RXD	2	3	TXD
TXD	3	2	RXD
GND	5	5	GND
DTR	4	6	DSR
DSR	6	4	DTR
RTS	7	8	CTS
CTS	8	7	RTS
	D-Sub 9	D-Sub 9	

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'



1 MENU — Select **OPTION**.

2 ENTER — Select **Set ID**.

3 ENTER — Choose the desired TV ID number.
The adjustment range of Set ID is 1~99.

4 RETURN — Return to the previous menu.

MENU — Return to TV viewing.

■ Real data mapping
0 : Step 0
⋮
A : Step 10 (SET ID 10)
⋮
F : Step 15 (SET ID 15)
10 : Step 16 (SET ID 16)
⋮
63 : Step 99 (SET ID 99)
64 : Step 100

APPENDIX

Command Reference List

	COMMAND1	COMMAND2	DATA (Hexadecimal)		COMMAND1	COMMAND2	DATA (Hexadecimal)
01. Power	k	a	00 ~ 01	14. Treble	k	r	00 ~ 64
02. Input Select	x	b	(▶ p.163)	15. Bass	k	s	00 ~ 64
03. Aspect Ratio	k	c	(▶ p.163)	16. Balance	k	t	00 ~ 64
04. Screen Mute	k	d	00 ~ 01	17. Color Temperature	k	u	00 ~ 02
05. Volume Mute	k	e	00 ~ 01	18. ISM Method	j	p	(▶ p.164)
06. Volume Control	k	f	00 ~ 64	19. Energy Saving	j	q	00 ~ 01
07. Contrast	k	g	00 ~ 64	20. Auto Configuration	j	u	(▶ p.165)
08. Brightness	k	h	00 ~ 64	22. Channel Add/Del	m	b	00 ~ 01
09. Color	k	i	00 ~ 64	23. Key	m	c	(▶ p.166)
10. Tint	k	j	00 ~ 64	24. Backlight	m	g	00 ~ 64
11. Sharpness	k	k	00 ~ 64				
12. OSD Select	k	l	00 ~ 01				
13. Remote Control Lock Mode	k	m	00 ~ 01				
				For PLASMA TV Models		For LCD TV Models	

	COMMAND1	COMMAND2	DATA00 (Hexadecimal)	DATA01 (Hexadecimal)	DATA02 (Hexadecimal)	DATA03 (Hexadecimal)	DATA04 (Hexadecimal)	DATA05 (Hexadecimal)
21. Channel Tuning	m	a	physical program high	major program low	major low	minor high	minor low	attribute

Transmission / Receiving Protocol

Transmission

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

[Command 1] : First command to control the set.(j, k, m or x)

[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 the TV is controlled. Set ID is indicated as decimal (1~99) on menu and as Hexa decimal (0x0~0x63) on transmission /receiving protocol.

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

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

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

* In this model, TV will not send the status during the standby mode.

OK Acknowledgement

[Command2][ ][Set ID][ ][OK][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.

* In this model, TV will not send the status during the standby mode.
* Data Format

[Command 2] : Use as command.

[Set ID] : Use the small character, if set ID is 10, it will send the '0', 'a'.

[DATA] : Use the small character, if data is 0 x ab, it will send the 'a', 'b'.

[OK] : Use the large character.

Error Acknowledgement

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

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

Data1: Illegal Code

Data2: Not supported function

Data3: Wait more time

* In this model, TV will not send the status during the standby mode.
* Data Format

[Command 2] : Use as command.

[Set ID] : Use the small character, if set ID is 10, it will send the '0', 'a'.

[DATA] : Use the small character, if data is 0 x ab, it 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]

* In a like manner, if other functions transmit 'FF' data based on this format, Acknowledgement data feedback presents status about each function.
* 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. Input Select (Command: x b)

To select input source for TV.

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

Data 00: DTV (Antenna)

Data 10: Analog (Antenna) Data 11: Analog (Cable)

Data 20: AV1 Data 21: AV2

Data 40: Component 1 Data 41: Component 2

Data 60: RGB Data 90: HDMI1

Data 91: HDMI2 Data 92: HDMI3

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

* Use the feature depending on your model.

03. Aspect Ratio (Command: k c)

To adjust the screen format.

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

Data 01: 4:3 06: Set by program

02: 16:9 09: Just scan

04: Zoom1 10: Cinema Zoom1

05: Zoom2 ⋮

1F: Cinema Zoom16

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

04. Screen Mute (Command: k d)

To select screen mute on/off.

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

Data 00: Screen mute off (Picture on), Video-out Mute off

Data 01: Screen mute on (Picture off)

Data 10: Video-out Mute on

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 On Screen Display (OSD).

05. 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]

06. 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 (*transmit by Hexadecimal code)

*Refer to 'Real data mapping'. ▶ p.161.

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

07. 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 (*transmit by Hexadecimal code)

*Refer to 'Real data mapping'. ▶ p.161.

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

08. 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 (*transmit by Hexadecimal code)

*Refer to 'Real data mapping'. ▶ p.161.

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

APPENDIX

09. Color (Command: k i)

To adjust screen color.

You can also adjust color in the PICTURE menu.

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

Data Min: 00 ~ Max: 64 (*transmit by Hexadecimal code)

*Refer to 'Real data mapping'. ▶ p.161.

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

10. Tint (Command: k j)

To adjust screen tint.

You can also adjust tint in the PICTURE menu.

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

Data Red: 00 ~ Green: 64 (*transmit by Hexadecimal code)

*Refer to 'Real data mapping'. ▶ p.161.

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

11. Sharpness (Command: k k)

To adjust screen sharpness.

You can also adjust sharpness in the PICTURE menu.

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

Data Min: 00 ~ Max: 64 (*transmit by Hexadecimal code)

*Refer to 'Real data mapping'. ▶ p.161.

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

12. OSD Select (Command: k l)

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

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

Data 00: OSD off Data 01: OSD on

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

13. Remote Control Lock Mode (Command: k m)

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

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

Data 00: Lock off Data 01: Lock on

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

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.

f Key Lock is on in the standby mode, TV will not turn on by POWER button of remote control and on the TV.

14. Treble (Command: k r)

To adjust treble.

You can also adjust treble in the AUDIO menu.

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

Data Min: 00 ~ Max: 64 (*transmit by Hexadecimal code)

*Refer to 'Real data mapping'. ▶ p.161.

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

15. Bass (Command: k s)

To adjust bass.

You can also adjust bass in the AUDIO menu.

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

Data Min: 00 ~ Max: 64 (*transmit by Hexadecimal code)

*Refer to 'Real data mapping'. ▶ p.161.

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

16. 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 (*transmit by Hexadecimal code)

*Refer to 'Real data mapping'. ▶ p.161.

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

17. Color Temperature (Command: k u)

To adjust color temperature.

You can also adjust color temperature in the PICTURE menu.

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

Data 00: Medium 01: Cool 02: Warm

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

18. ISM Method (Command: j p)

(For PLASMA TV models)

To avoid having a fixed image remain on screen.

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

Data 02: Orbiter 04: White Wash

08: Normal 20: Color Wash

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

18. Energy Saving (Command: j q)

To control the energy saving function.

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

Data 00: Energy saving - off
01: Energy saving - Minimum
02: Energy saving - Medium
03: Energy saving - Maximum
04: Energy saving - Auto — For LCD TV Models (Except 32/37/42LH35**)
05: Energy saving - Screen off — For LCD TV Models
10: Intelligent Sensor: Low
11: Intelligent Sensor: Middle
12: Intelligent Sensor: High — For PLASMA TV Models

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

19. Auto Configuration (Command: j u)

To adjust picture position and minimize image shaking automatically. Auto configuration only works in RGB-PC mode.

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

Data 1: To set

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

20. Channel Tuning (Command: m a)

To tune channel to following physical/major/minor number.

Transmission [m] [a] [ ] [Set ID] [ ] [Data0] [ ] [Data1] [ ] [Data2] [ ] [Data3] [ ] [Data4] [ ] [Data5] [Cr]

Digital channels have a Physical, Major, and Minor channel number. The Physical number is the actual digital channel number, the Major is the number that the channel should be mapped to, and the Minor is the sub-channel. Since the tuner automatically maps the channel to the Major number, the Physical number is not required when sending a command.

Data 0: Physical Channel Number
Analog air: 01~69, Analog cable: 01~135
DTV air: 01~69

Data1 & 2: Major Channel Number
Data1: High byte Data2: Low byte
Two bytes are available for the Major and Minor, normally only the second byte is used.

Data3 & 4: Minor Channel Number
Not needed for NTSC.

APPENDIX

Data05:

7 Main/Sub Picture	6 Two/One Part Channel	5 Using Physical Channel	4 Reserved	3	2	1	0	Step
0 Main	0 Two	0 Use	x	0	0	0	0	Analog air
1 Sub	1 One	1 No Use	x	0	0	0	1	Analog cable
			x	0	0	1	0	DTV air
			x	0	0	1	1	Reserved
			x	0	1	0	0	Reserved
			x	0	1	0	1	Reserved
			x	0	1	1	0	Reserved
			x	0	1	1	1	Reserved
			x	x	x	x	x	...
			x	1	1	1	1	Reserved

The table above lists the binary code which must be converted to Hexadecimal before sending. For example: The binary code to tune the sub source to an NTSC cable channel is "1000 0001", which translates to "81" in Hex.

* 7th bit : For which source do you want to change the channel.
* 6th bit: Use a two part or one part channel. Most cases just use 0 since it's ignored when using NTSC.
* 5th bit: Use 0 with NTSC since it can only use the physical channel number. Normally use 1 for ATSC since most times it doesn't matter what the physical number is.
* 4th bit: Set to 0.
* 3-0 bits: Choose signal type.

* Tune Command Examples:

1. Tune to the analog cable channel 35.
   Data 00 = Physical of 35 = 23
   Data 01 & 02 = No Major = 00 00
   Data 03 & 04 = No Minor = 00 00
   Data 05 = 0000 0001 in binary = 01
   Total = ma 00 23 00 00 00 00 01
2. Tune to the digital local channel 30-3.
   Data 00 = Don't know Physical = 00
   Data 01 & 02 = Major is 30 = 00 1E
   Data 03 & 04 = Minor is 3 = 00 03
   Data 05 = 0010 0010 in binary = 22
   Total = ma 00 00 00 1E 00 03 22

Acknowledgement [a][ ][Set ID][ ][OK][Data00][Data01][Data02][Data03][Data04][Data05][x][a][ ][Set ID][ ][NG][Data00][x]

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

To add and delete the channels

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

Data 00: Channel Delete Data 01: Channel Add

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

22. Key (Command: m c)

To send IR remote key code.

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

Data Key code: ▶ p.159.

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

23. Backlight (Command: m g)

(For LCD TV Models)

To adjust screen backlight.

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

Data Min:00 ~ Max:64 (*transmit by Hexadecimal code)

*Refer to 'Real data mapping'. ▶ p.161.

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

MFL59166615-Edit3-en 12/22/09 6:37 PM Page 171

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