LG
Life's Good

OWNER'S MANUAL

LED LCD TV / LCD TV / PLASMA TV

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

LED LCD TV MODELS

19LV2500
22LV2500
26LV2500
32LV2500
26LV2520
32LV2520
47LW5000
55LW5000
32LV3500
37LV3500
42LV3500
47LV3500
55LV3500
32LV3520
42LV3520
55LV5300

LCD TV MODELS

26LK330
32LK330
32LK430
42LK430
32LK450
37LK450
42LK450
47LK450
42LK520
47LK520
55LK520

PLASMA TV MODELS

42PW340
50PW340
42PW350
50PW350
50PZ200
60PZ200
42PW350U
50PW350U
42PW350R
50PW350R

P/NO : SAC34134216 (1103-REV10)

www.lg.com

LICENSES

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ABOUT DIVX VIDEO-ON-DEMAND: This DivX Certified® device must be registered in order to play purchased DivX Video-on-Demand (VOD) movies. To obtain your registration code, locate the DivX VOD section in your device setup menu. Go to vod.divx.com for more information on how to complete your registration.

“DivX Certified® to play DivX® video up to HD 1080p, including premium content.”

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7,295,673; 7,460,668; 7,515,710; 7,519,274”

ENGLISH

NOTE

- : Plasma TV : LED LCD TV, LCD TV
- Image shown may differ from your TV.
- Your TV's OSD (On Screen Display) may differ slightly from that shown in this manual.

IMPORTANT SAFETY INSTRUCTIONS

Always comply with the following precautions to avoid dangerous situations and ensure peak performance of your product.



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

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

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

WARNING/CAUTION

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

Read these instructions.
Keep these instructions.
Heed all warning.
Follow all instruction.



- Do not use this apparatus near water.



- Clean only with dry cloth.



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



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



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



ENGLISH

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



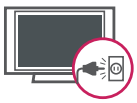
- Only use attachments/accessories specified by the manufacturer.



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



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



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



- Never touch this apparatus or antenna during a thunder or lightning storm.
- When mounting a TV on the wall, make sure not to install the TV by hanging the power and signal cables on the back of the TV.
- Do not allow an impact shock or any objects to fall into the product, and do not drop anything onto the screen.
- CAUTION concerning the Power Cord:
  It is recommended 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 service. 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 move the TV with the power cord plugged in. Do not use a damaged or loose power cord. Be sure do grasp the plug when unplugging the power cord. Do not pull on the power cord to unplug the TV.



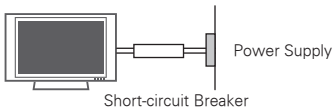
- **Warning** - To reduce the risk of fire or electrical shock, do not expose this product to rain, moisture or other liquids. Do not touch the TV with wet hands. Do not install this product near flammable objects such as gasoline or candles, or expose the TV to direct air conditioning.



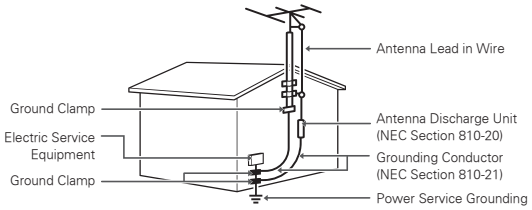
- Do not expose to dripping or splashing and do not place objects filled with liquids, such as vases, cups, etc. on or over the apparatus (e.g. on shelves above the unit).



- **Grounding**
  Ensure that you connect the earth ground wire to prevent possible electric shock (i.e. a TV with a three-prong grounded AC plug must be connected to a three-prong 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.

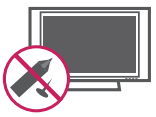


- **DISCONNECTING DEVICE FROM THE MAIN POWER**
  The power outlet must remain readily accessed in the event the device needs to be unplugged.
- As long as this unit is connected to the AC wall outlet, it is not disconnected from the AC power source even if the unit is turned off.
- Do not attempt to modify this product in any way without written authorization from LG Electronics. Unauthorized modification could void the user's authority to operate this product.
- **ANTENNAS Outdoor antenna grounding**
  (Can differ by country):
  If an outdoor antenna is installed, follow the precautions below. An outdoor antenna system should not be located in the vicinity of overhead power lines or other electric light or power circuits, or where it can come in contact with such power lines or circuits as death or serious injury can occur. Be sure the antenna system is grounded so as to provide some protection against voltage surges and built-up static charges. Section 810 of the National Electrical Code (NEC) in the U.S.A. provides information with respect to proper grounding of the mast and supporting structure, grounding of the lead-in wire to an antenna discharge unit, size of grounding conductors, location of antenna discharge unit, connection to grounding electrodes and requirements for the grounding electrode.
  Antenna grounding according to the National Electrical Code, ANSI/NFPA 70



NEC: National Electrical Code

- **Cleaning**
  When cleaning, unplug the power cord and wipe 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 benzine.
- **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 or put stress on the front panel of the TV.
- **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 while plugged. Do not install in excessively dusty places.
- If you smell smoke or other odors coming from the TV, unplug the power cord contact an authorized service center.
- Do not press strongly upon the panel with hand or sharp object such as nail, pencil or pen, or make a scratch on it.
- Keep the product away from direct sunlight.



- **Dot Defect**
  The Plasma or LCD panel is a high technology product with resolution of two million to six million pixels. In a very few cases, you could see fine dots on the screen while you're viewing the TV. Those dots are deactivated pixels and do not affect the performance and reliability of the TV.
- **Generated Sound**
  "Cracking" noise: A cracking noise that occurs when watching or turning off the TV is generated by plastic thermal contraction due to temperature and humidity. This noise is common for products where thermal deformation is required.
  Electrical circuit humming/panel buzzing: A low level noise is generated from a high-speed switching circuit, which supplies a large amount of current to operate a product. It varies depending on the product.
  This generated sound does not affect the performance and reliability of the product.
- Take care not to touch the ventilation openings. When watching the TV for a long period, the ventilation openings may become hot. This does not affect the performance of the product or cause defects in the product.
- **Viewing 3D Imaging (For 3D TV)**
  - When viewing 3D imaging, watch the TV from an effective viewing angle and within the appropriate distance. If you exceed this viewing angle or distance, you may not be able to view the 3D imaging. Furthermore, the 3D imaging may not display if it is viewed while you are lying down.
  - If you watch the 3D imaging too closely or for a long period of time, it may harm your eyesight.
  - Watching the TV or playing video games that incorporate 3D imaging with the 3D glasses for a long period of time can cause drowsiness, headaches or fatigue to you and/or your eyes. If you have a headache, or otherwise feel fatigued or drowsy, stop watching the TV and take a rest.
  - Pregnant woman, seniors, persons with heart problems or persons who experience frequent drowsiness should refrain from watching 3D TV.
  - Some 3D imaging may cause you to duck or dodge the image displayed in the video. Therefore, it is best if you do not watch 3D TV near fragile objects or near any objects that can be knocked over easily.
  - Please prevent children under the age of 5 from watching 3D TV. It may affect their vision development.
  - Warning for photosensitization seizure: Some viewers may experience a seizure or epilepsy when exposed to certain factors, including flashing lights or images in TV or video games. If you or anybody from your family has a history of epilepsy or seizure, please consult with your doctor before watching 3D TV.
    Also certain symptoms can occur in unspecified conditions without any previous history. If you experience any of the following symptoms, immediately stop watching the 3D imaging and consult a doctor: dizziness or lightheadedness, visual transition or altered vision, visual or facial instability, such as eye or muscle twitching, unconscious action, convulsion, loss of conscience, confusion or disorientation, loss of directional sense, cramps, or nausea. Parents should monitor their children, including teenagers, for these symptoms as they may be more sensitive to the effects of watching 3D TV.
    Risk of photosensitization seizure can be reduced with the following actions.
  - Take frequent breaks from watching 3D TV.
  - For those who have vision that is different in each eye, they should watch the TV after taking vision correction measures.
  - Watch the TV so that your eyes are on the same level as the 3D screen and refrain from sitting too closely to the TV.
  - Do not watch the 3D imaging when tired or sick, and avoid watching the 3D imaging for a long period of time.
  - Do not wear the 3D glasses for any other purpose than viewing 3D imaging on a 3D TV.
  - Some viewers may feel disoriented after watching 3D TV. Therefore, after you watch 3D TV, take a moment to regain awareness of your situation before moving.

- 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 TV'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.

DISPOSAL (Hg lamp only used in LCD TVs)

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.

For USA and Canada

FCC NOTICE

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

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

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) this device may not cause harmful interference and (2) this device must accept any interference received, including interference that may cause undesired operation of the device.
Any changes or modifications in construction of this device which are not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

NOTE TO CABLE/TV INSTALLER

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

TABLE OF CONTENTS

2 LICENSES

3 IMPORTANT SAFETY INSTRUCTIONS

8 TABLE OF CONTENTS

10 ASSEMBLING AND PREPARING

10 Unpacking
14 Optional Extras
15 Parts and buttons
23 Lifting and moving the TV
23 Setting up the TV
23 - Attaching the stand
28 - Mounting on a table
30 - Mounting on a wall
31 - Tidying cables

32 REMOTE CONTROL

36 WATCHING TV

36 Connecting to an antenna or cable
36 - Connecting an antenna or basic cable
36 - Connecting a cable box
37 Connecting to the AC/DC adapter
37 Turning the TV on for the first time
38 Watching TV
38 Managing channels
38 - Setting up channels
39 - Using favorite channels
40 - Checking current program info
42 Using additional options
42 - Adjusting aspect ratio
43 - Changing AV modes
43 - Using the input list
44 - Locking the buttons on the TV (Child Lock)
44 Using the quick menu
45 Using the customer support
45 - Testing the Picture / Sound
45 - Using the product or service information

46 3D IMAGING (FOR 3D TV)

46 3D Technology
47 - When using 3D Glasses
47 - 3D Imaging Viewing Range
48 Viewing 3D Imaging

50 ENTERTAINMENT

50 - Connecting USB storage devices
51 - Browsing files
53 - Viewing Videos
56 - DivX registration code
57 - Viewing Photos
59 - Listening to music

61 CUSTOMIZING TV SETTINGS

61 The Main Menus
62 Customizing Settings
62 - CHANNEL Settings
63 - PICTURE Settings
67 - AUDIO Settings
68 - TIME Settings
69 - LOCK Settings
71 - OPTION Settings

73 MAKING CONNECTIONS

74 Connection Overview
75 Connecting to a HD receiver, DVD, or VCR player
75 - HDMI Connection
75 - DVI to HDMI Connection
76 - Component Connection
76 - Composite Connection

77 Connecting to a PC
77 - HDMI Connection
77 - DVI to HDMI Connection
78 - RGB Connection
79 Connecting to an Audio System
79 - Digital optical audio connection
79 Connecting to a USB
79 Connecting to a Headphone ( )
80 SIMPLINK Connection
80 - Activating and Using the SIMPLINK menus

81 MAINTENANCE

81 Cleaning Your TV
81 - Screen and frame
81 - Cabinet and stand
81 - Power cord
81 Preventing “Image burn” or “Burn-in” on your TV screen

82 TROUBLESHOOTING

84 SPECIFICATIONS

90 IR CODES

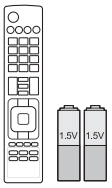
92 EXTERNAL CONTROL DEVICE SETUP

100 OPEN SOURCE LICENSE

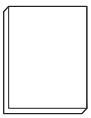
ASSEMBLING AND PREPARING

Unpacking

Check your product box for the following items. If there are any missing accessories, contact the local dealer where you purchased your product. The illustrations in this manual may differ from the actual product and item.



Remote control and batteries (AAA)



Owner's manual



CD manual



Polishing cloth[1]
(Depending on model)

1 Gently wipe the spots on the cabinet with the polishing cloth.

PW340, PW350, PW350U, PW350R, PZ200 series

(Other models)



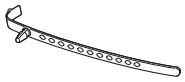
M4 x 26 M5 x 14.5

(For 60PZ200)



M4 x 28 M5 x 24

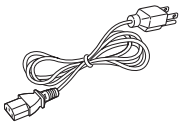
Screw for assembly



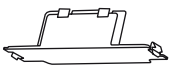
Cable holder



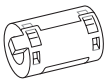
Power Cord holder



Power Cord



Protection cover



Ferrite core
(Depending on model)



Protection cover tape

32LV2500, 32LV2520, LV3500, LV3520, LW5000 series

(32LV2500, 32LV2520)



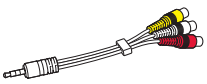
M4 x 14

(LV3500, LV3520, LW5000 series)

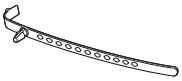


M4 x 12

Screw for assembly



Composite gender cable



Cable holder
(Depending on model)

(For 32LV2500, 32LV2520, 32/37LV3500, 32LV3520)



Screw for fixing

(For LW5000 series)



3D Glasses[1]
(AG-P110, AG-F110)

1 The number of 3D glasses may differ depending on the model.

19/22/26LV2500, 26LV2520 series

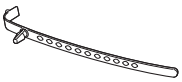


M4 x 16

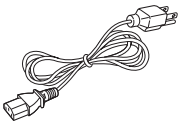


M4 x 6

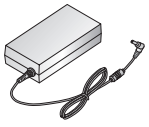
Screw for assembly



Cable holder
(Depending on model)



Power Cord



AC/DC Adapter

ENGLISH

LK330, LK430, LK450, LK520 series


x 8

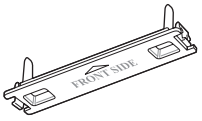
M4 x 20

Screw for assembly

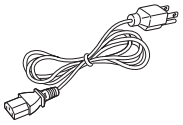
(Except 47LK450, 47/55LK520)



Screw for fixing



Protection cover



Power Cord

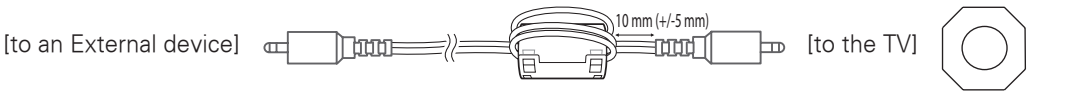
CAUTION

- Do not use any unapproved items to ensure the safety and product life span.
- Any damages or injuries by using unapproved items are not covered by the warranty.

NOTE

- The items supplied with your product may vary depending on the model.
- Product specifications or contents of this manual may be changed without prior notice due to upgrade of product functions.
- (Plasma) How to use the ferrite core

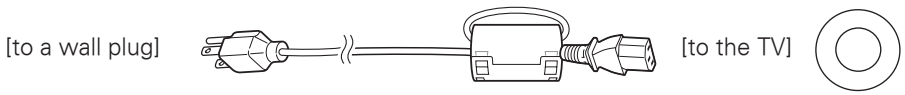
  1 Use the ferrite core to reduce the electromagnetic interference in the PC audio cable.
  Wind the PC audio cable on the ferrite core thrice. Place the ferrite core close to the TV.



[Figure 1]

[Cross Section of Ferrite Core]

  2 Use the ferrite core to reduce the electromagnetic interference in the power cable.
  Wind the power cable on the ferrite core once. Place the ferrite core close to the TV.



[Figure 2]

[Cross Section of Ferrite Core]

  3 Use the ferrite core to reduce the electromagnetic interference in the power cable.
  Wind the power cable on the ferrite core once. Place the ferrite core close to the TV and a wall plug.

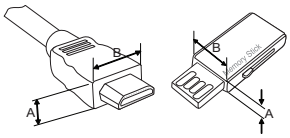


[Figure 3]

[Cross Section of Ferrite Core]

  - If there is one ferrite core, follow as shown in Figure 1.
  - If there are two ferrite cores, follow as shown in Figures 1 and 2.
  - If there are three ferrite cores, follow as shown in Figures 1 and 3.

- (LCD) For an optimal connection, HDMI cables and USB devices should have bezels less than 10 mm (0.39 inches) thick and 18 mm (0.7 inches) width.



*A ≦ 10 mm (0.39 inches)
*B ≦ 18 mm (0.7 inches)

ENGLISH

Optional Extras

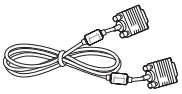
Optional extras can be changed or modified for quality improvement without any notification.
Contact your dealer for buying these items.
This device only works with compatible LG Plasma TV, LED LCD TV or LCD TV.



3D Glasses[1]
(AG-S230, AG-S250, AG-S270)



3D Glasses[2]
(AG-P110, AG-F110)

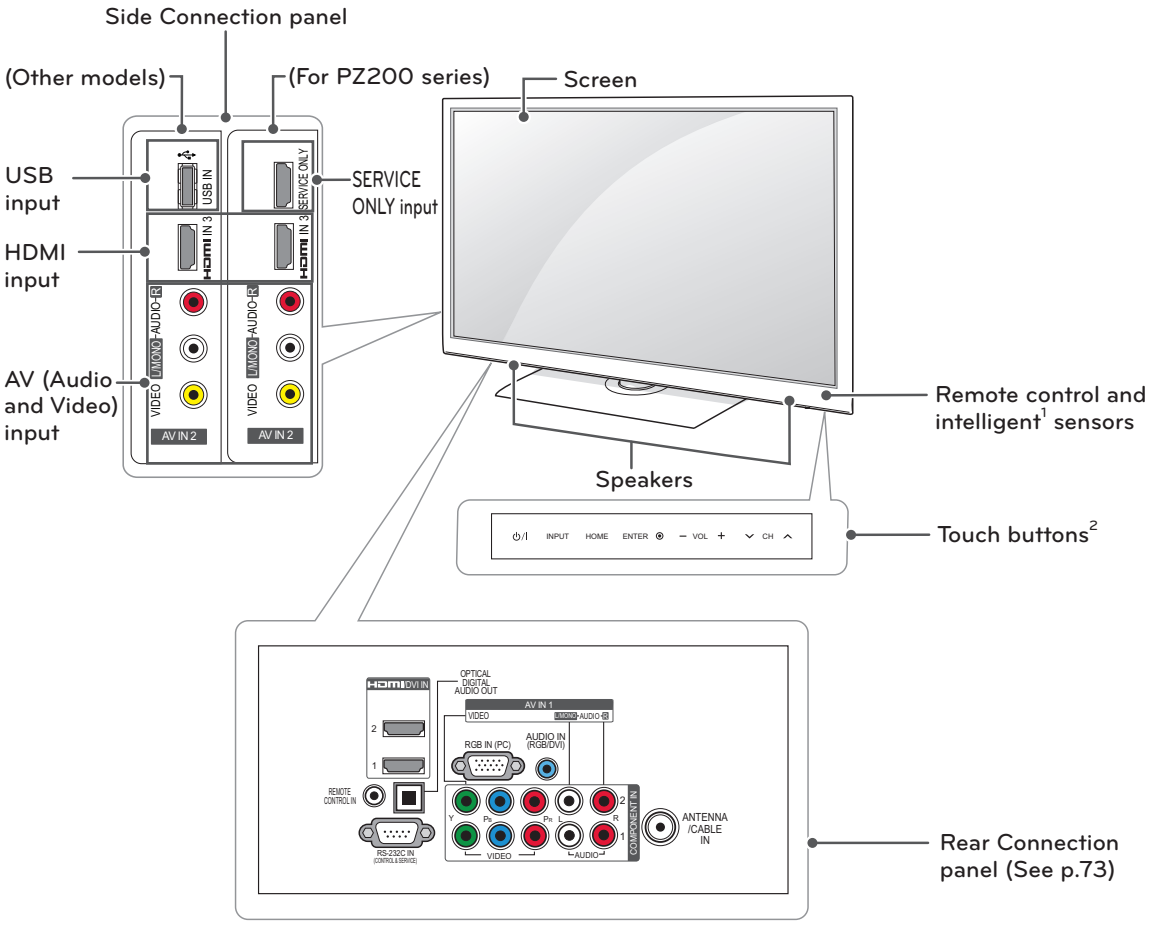


D-sub 15 pin signal cable[3]

1 Supports PW340, PW350, PW350R, PW350U, PZ200 series
2 Supports LW5000 series
3 When using the VGA (D-sub 15 pin signal cable) PC connection, use the shielded signal interface cable with a ferrite core to maintain standards compliance for the product.

Parts and buttons

PW340, PW350, PW350U, PW350R, PZ200 series

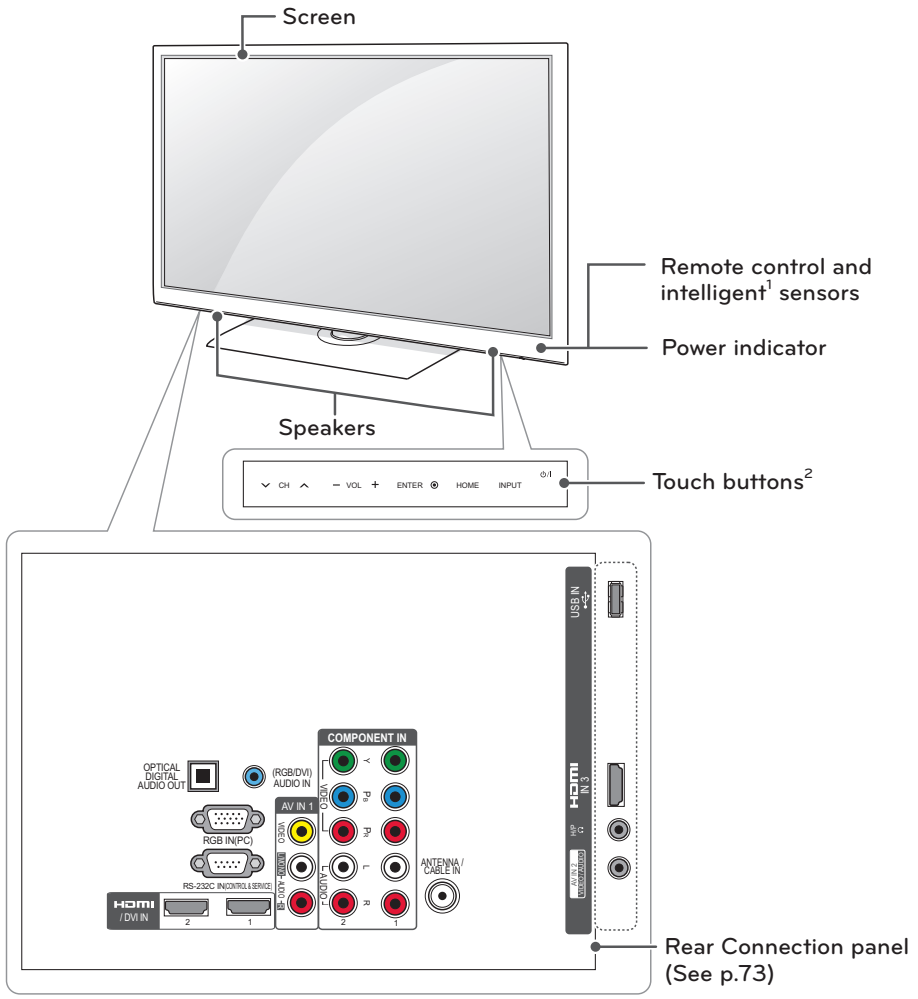


Touch button[2]	Description
⏻ / I	Turns the power on or off.
INPUT	Changes the input source.
HOME	Accesses the main menus, or saves your input and exits the menus.
ENTER ⊙	Selects the highlighted menu option or confirms an input.
- VOL +	Adjusts the volume level.
v CH ^	Scrolls through the saved channels.

1 Intelligent sensor - Adjusts the image quality and brightness based on the surrounding environment.
2 All of the buttons are touch sensitive and can be operated through simple touch with your finger.

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32LV2500, 32LV2520, LV3500, LV3520, LW5000 series



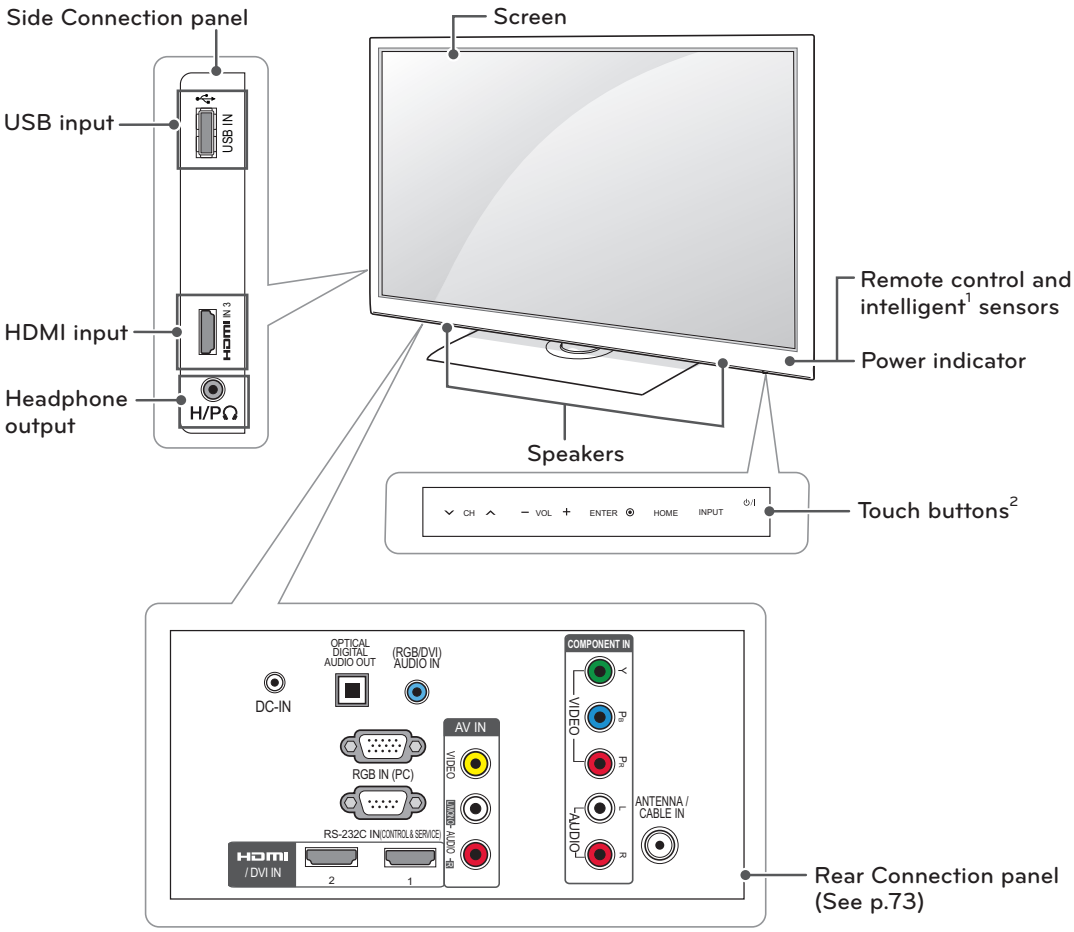
Touch button[2]	Description
⏻ / I	Turns the power on or off.
INPUT	Changes the input source.
HOME	Accesses the main menus, or saves your input and exits the menus.
ENTER ⊙	Selects the highlighted menu option or confirms an input.
- VOL +	Adjusts the volume level.
v CH ^	Scrolls through the saved channels.

1 Intelligent sensor - Adjusts the image quality and brightness based on the surrounding environment.
2 All of the buttons are touch sensitive and can be operated through simple touch with your finger.

NOTE

- You can set the power indicator light to on or off by selecting **OPTION** in the main menus.

19/22/26LV2500, 26LV2520 series



Touch button[2]	Description
⏻ / I	Turns the power on or off.
INPUT	Changes the input source.
HOME	Accesses the main menus, or saves your input and exits the menus.
ENTER ⊙	Selects the highlighted menu option or confirms an input.
- VOL +	Adjusts the volume level.
v CH ^	Scrolls through the saved channels.

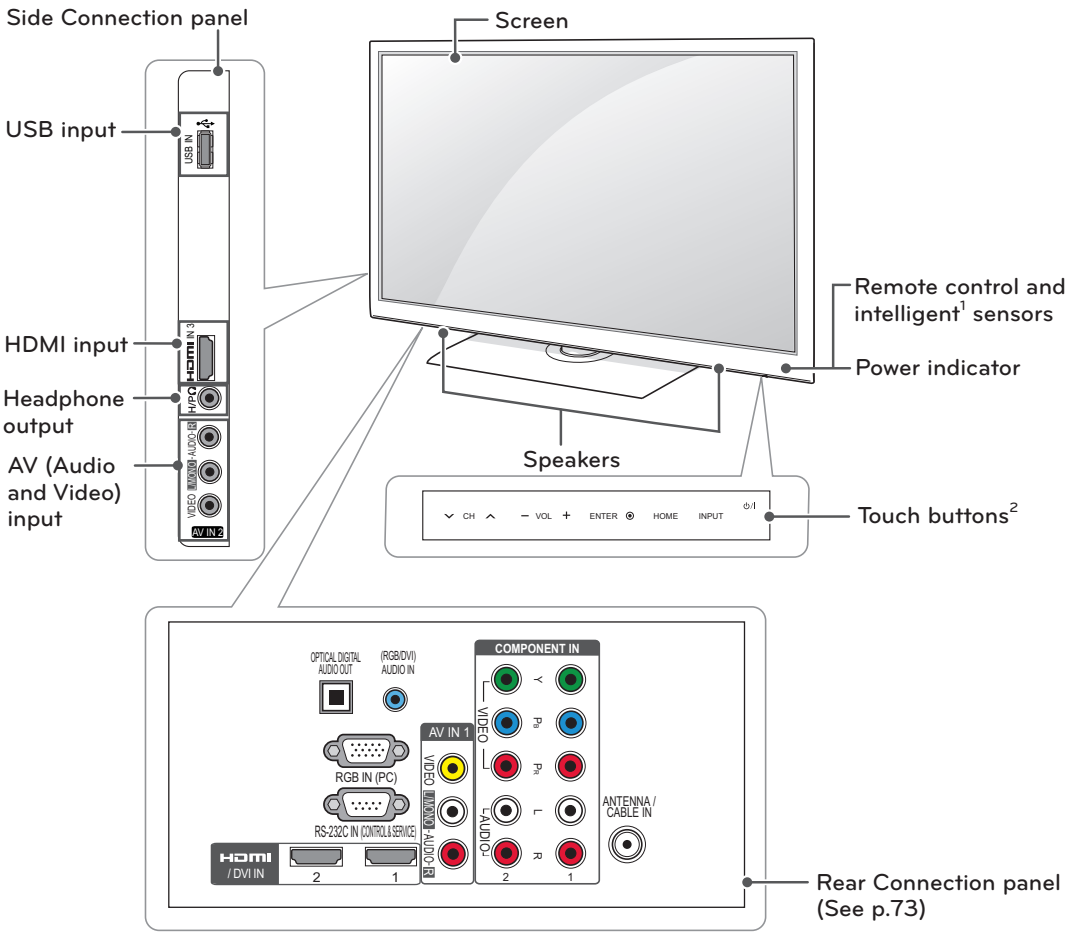
1 Intelligent sensor - Adjusts the image quality and brightness based on the surrounding environment.
2 All of the buttons are touch sensitive and can be operated through simple touch with your finger.

NOTE

- You can set the power indicator light to on or off by selecting **OPTION** in the main menus.

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LK450 series



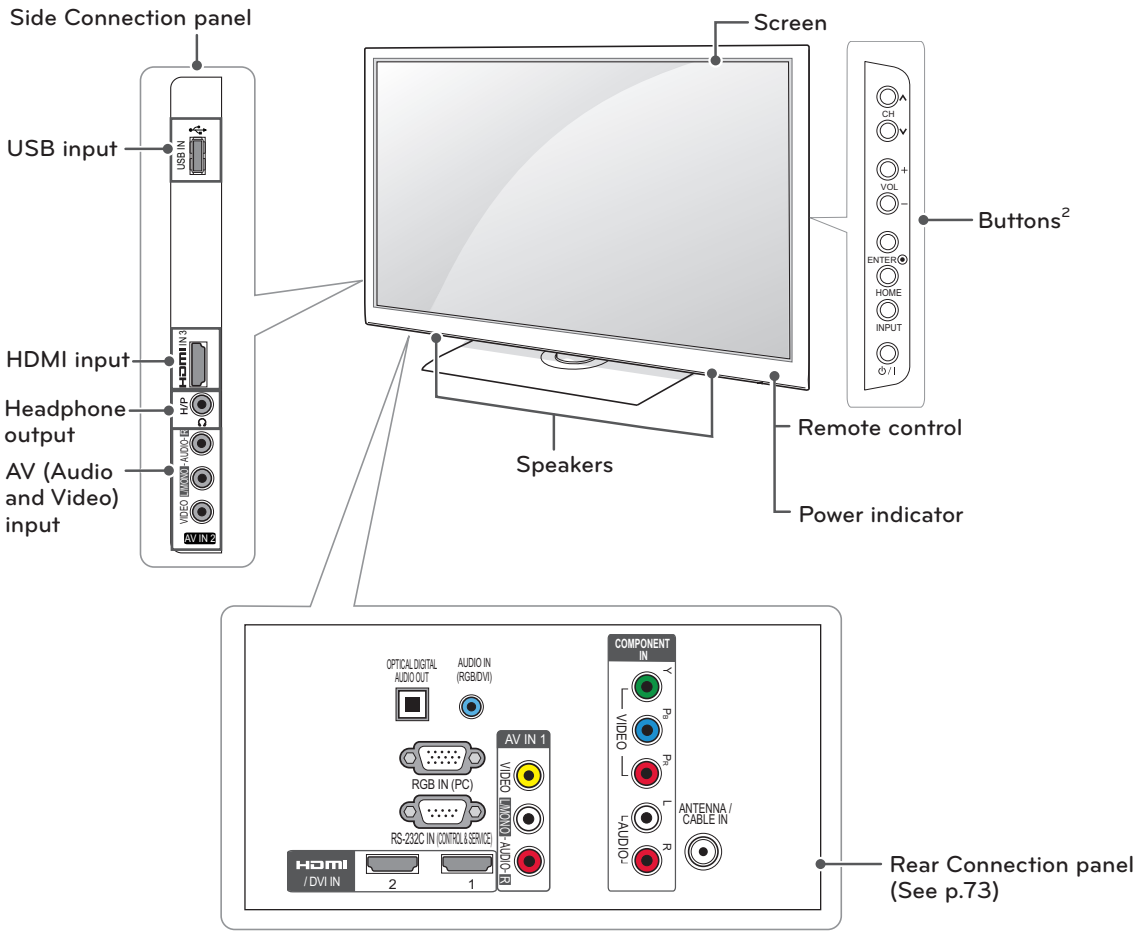
Touch button[2]	Description
⏻ / I	Turns the power on or off.
INPUT	Changes the input source.
HOME	Accesses the main menus, or saves your input and exits the menus.
ENTER ⊙	Selects the highlighted menu option or confirms an input.
- VOL +	Adjusts the volume level.
v CH ^	Scrolls through the saved channels.

1 Intelligent sensor - Adjusts the image quality and brightness based on the surrounding environment.
2 All of the buttons are touch sensitive and can be operated through simple touch with your finger.

NOTE

- You can set the power indicator light to on or off by selecting **OPTION** in the main menus.

26LK330



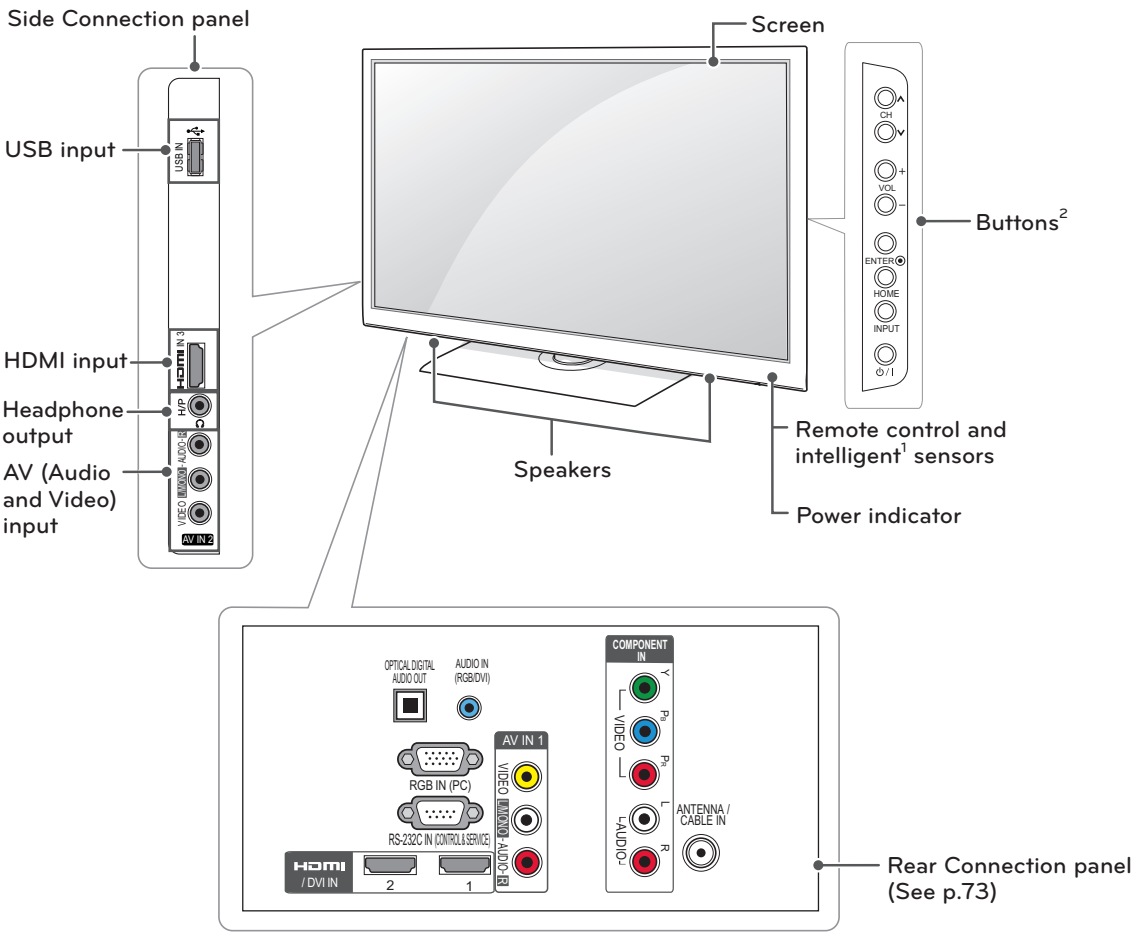
Button[2]	Description
⏻ / I	Turns the power on or off.
INPUT	Changes the input source.
HOME	Accesses the main menus, or saves your input and exits the menus.
ENTER ⊙	Selects the highlighted menu option or confirms an input.
- VOL +	Adjusts the volume level.
v CH ^	Scrolls through the saved channels.

NOTE

- You can set the power indicator light to on or off by selecting **OPTION** in the main menus.

ENGLISH

32LK330



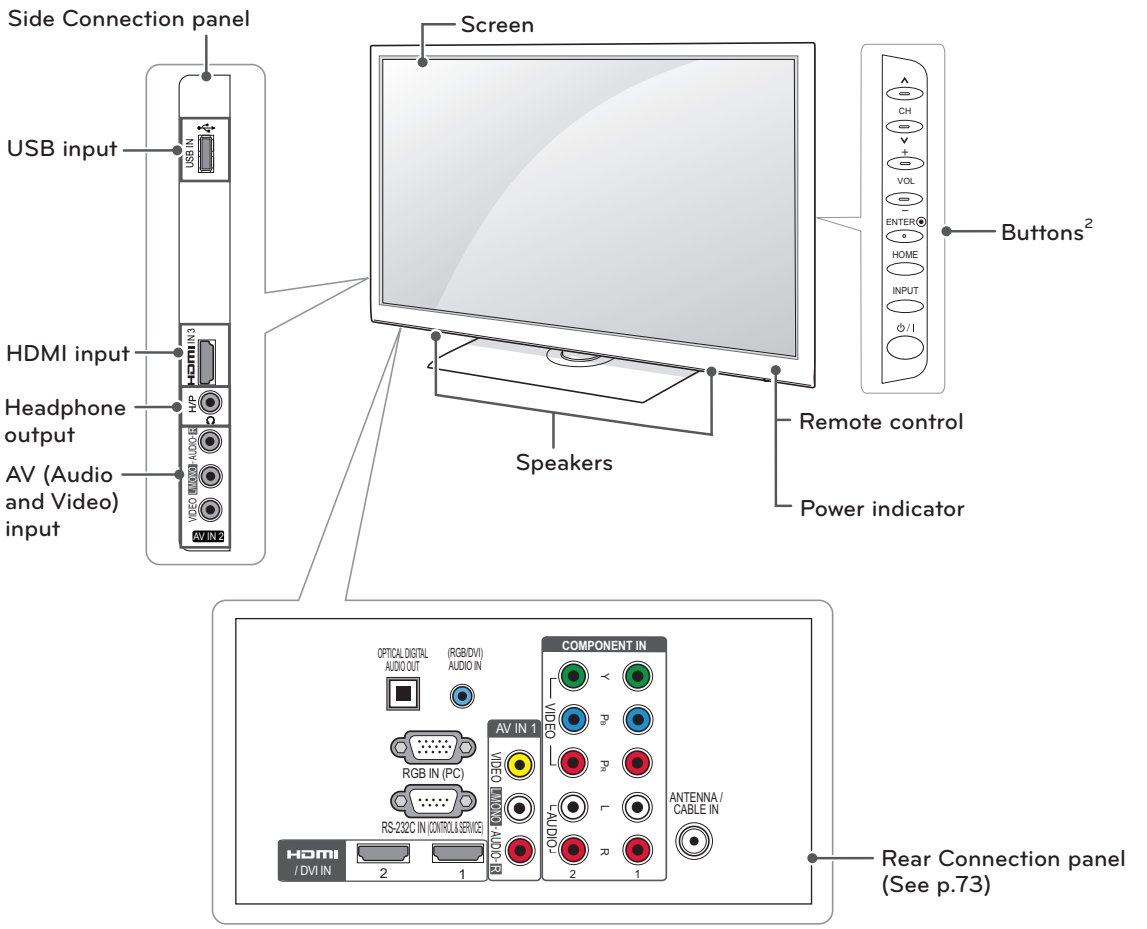
Button[2]	Description
⏻ / I	Turns the power on or off.
INPUT	Changes the input source.
HOME	Accesses the main menus, or saves your input and exits the menus.
ENTER ⊙	Selects the highlighted menu option or confirms an input.
- VOL +	Adjusts the volume level.
v CH ^	Scrolls through the saved channels.

1 Intelligent sensor - Adjusts the image quality and brightness based on the surrounding environment.

NOTE

- You can set the power indicator light to on or off by selecting **OPTION** in the main menus.

LK430 series



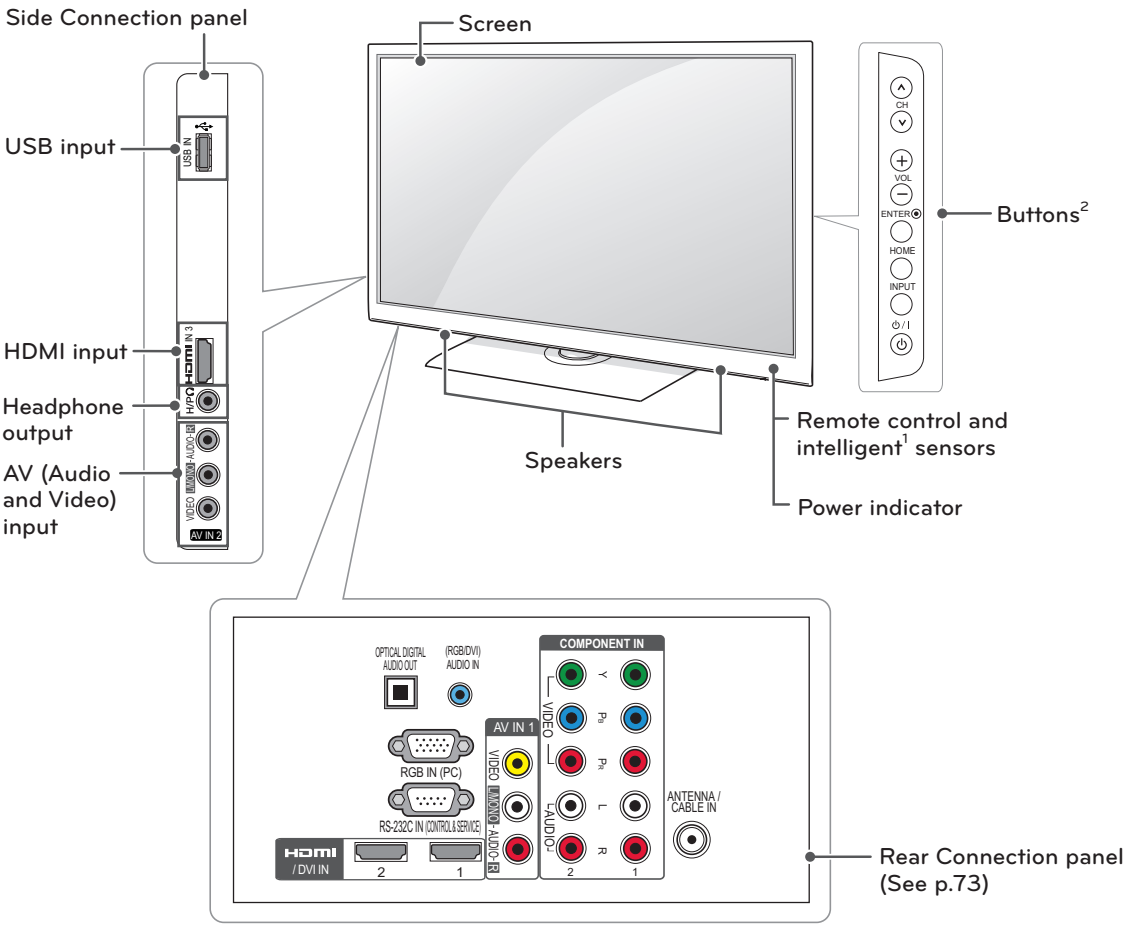
Button[2]	Description
⏻ / I	Turns the power on or off.
INPUT	Changes the input source.
HOME	Accesses the main menus, or saves your input and exits the menus.
ENTER ⊙	Selects the highlighted menu option or confirms an input.
- VOL +	Adjusts the volume level.
v CH ^	Scrolls through the saved channels.

NOTE

- You can set the power indicator light to on or off by selecting **OPTION** in the main menus.

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LK520 series



Button[2]	Description
⏻ / I	Turns the power on or off.
INPUT	Changes the input source.
HOME	Accesses the main menus, or saves your input and exits the menus.
ENTER ⊙	Selects the highlighted menu option or confirms an input.
- VOL +	Adjusts the volume level.
∨ CH ∧	Scrolls through the saved channels.

1 Intelligent sensor - Adjusts the image quality and brightness based on the surrounding environment.

NOTE

- You can set the power indicator light to on or off by selecting **OPTION** in the main menus.

Lifting and moving the TV

When moving or lifting the TV, read the following to prevent the TV from being scratched or damaged and for save transportation regardless of its type and size.

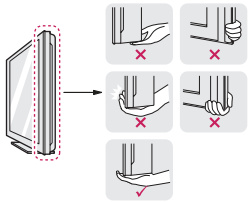
CAUTION

- Avoid touching the screen at all times, as this may result in damage to the screen.

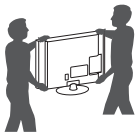
- It is recommended to move the TV in the box or packing material that the TV originally came in.
- Before moving or lifting the TV, disconnect the power cord and all cables.
- When holding the TV, the screen should face away from you to prevent damage.



- Hold the top and bottom of the TV frame firmly. Make sure not to hold the transparent part, speaker, or speaker grill area.



- When transporting a large TV, there should be at least 2 people.
- When transporting the TV by hand, hold the TV as shown in the following illustration.



- When transporting the TV, do not expose the TV to jolts or excessive vibration.
- When transporting the TV, keep the TV upright, never turn the TV on its side or tilt towards the left or right.

Setting up the TV

Put your TV on a pedestal stand and mount the TV on a table or wall.

Attaching the stand

If you are not mounting the TV to a wall, use the following instructions to attach the stand.

PW340, PW350, PW350U, PW350R, PZ200 series

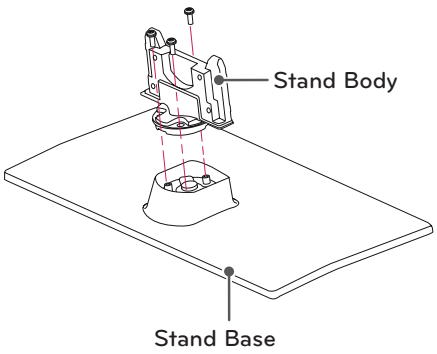
1 Lay the TV with the screen side down on a flat surface.

CAUTION

- Lay a foam mat or soft protective cloth on the surface to protect the screen from damage. Make sure no objects press against the screen.

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

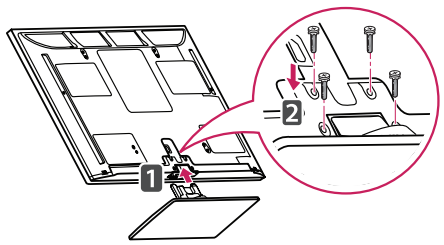
Model	Screw for assembly	Number of screws
42/50PW340 42/50PW350 42/50PW350U 42/50PW350R 50PZ200	M5 x 14.5	3
60PZ200	M5 x 24	3



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3 Secure the TV and the stand with the 4 screws.

Model	Screw for assembly	Number of screws
42/50PW340 42/50PW350 42/50PW350U 42/50PW350R 50PZ200	M4 x 26	4
60PZ200	M4 x 28	4



CAUTION

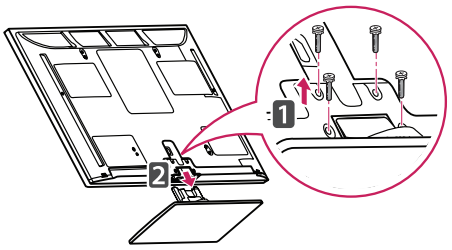
- Tighten the screws firmly to prevent the TV from tilting forward. Do not over tighten.

To detach the stand,

1 Lay the TV with the screen side down on a flat surface.

2 Remove the 4 screws and pull the stand away from the TV.

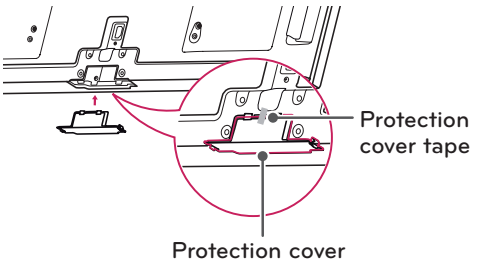
Model	Screw for assembly	Number of screws
42/50PW340 42/50PW350 42/50PW350U 42/50PW350R 50PZ200	M4 x 26	4
60PZ200	M4 x 28	4



3 Push the supplied protection cover into the opening at the bottom of the TV until it locks in place.

Attach the protection cover tape.

- This will protect the opening from accumulating dust and dirt.
- When installing the wall mounting bracket, use the Protection cover.



32LV2500, 32LV2520, LV3500, LV3520, LW5000 series

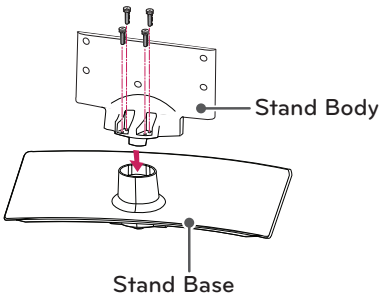
1 Lay the TV with the screen side down on a flat surface.

CAUTION

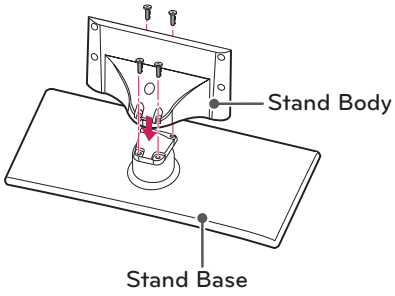
- Lay a foam mat or soft protective cloth on the surface to protect the screen from damage. Make sure no objects press against the screen.

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

Model	Screw for assembly	Number of screws
32LV2500 32LV2520	M4 x 14	4

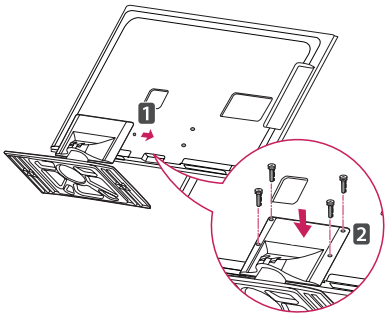


Model	Screw for assembly	Number of screws
LV3500, LV3520, LW5000 series	M4 x 12	4



3 Secure the TV and the stand with the 4 screws.

Model	Screw for assembly	Number of screws
32LV2500 32LV2520	M4 x 14	4
LV3500, LV3520, LW5000 series	M4 x 12	4



CAUTION

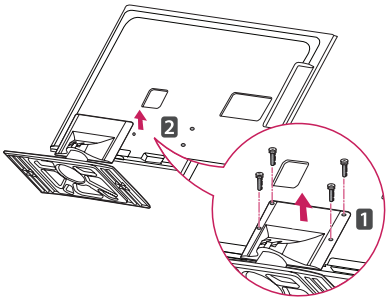
- Tighten the screws firmly to prevent the TV from tilting forward. Do not over tighten.

To detach the stand,

1 Lay the TV with the screen side down on a flat surface.

2 Remove the 4 screws and pull the stand away from the TV.

Model	Screw for assembly	Number of screws
32LV2500 32LV2520	M4 x 14	4
LV3500, LV3520, LW5000 series	M4 x 12	4



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19/22/26LV2500, 26LV2520 series

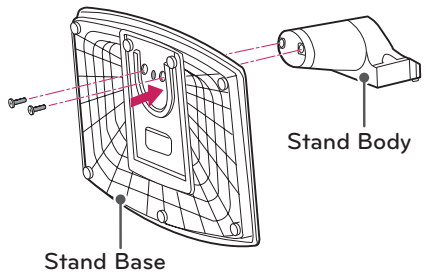
1 Lay the TV with the screen side down on a flat surface.

CAUTION

- Lay a foam mat or soft protective cloth on the surface to protect the screen from damage. Make sure no objects press against the screen.

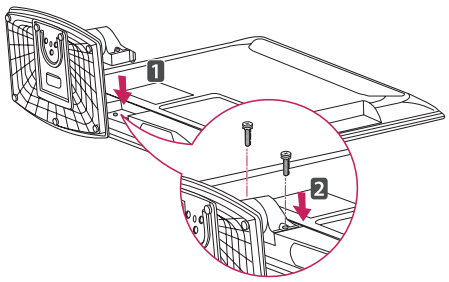
2 Assemble the parts of the STAND BODY with the STAND BASE of the TV.

Screw for assembly	Number of screws
M4 x 6	2



3 Secure the TV and the stand with the 2 screws.

Screw for assembly	Number of screws
M4 x 16	2



CAUTION

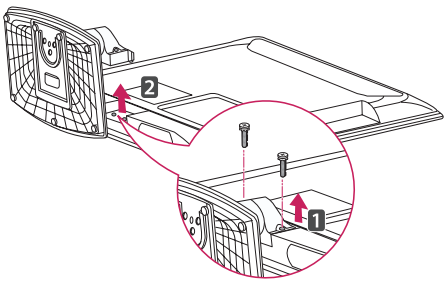
- Tighten the screws firmly to prevent the TV from tilting forward. Do not over tighten.

To detach the stand,

1 Lay the TV with the screen side down on a flat surface.

2 Remove the 2 screws and pull the stand away from the TV.

Screw for assembly	Number of screws
M4 x 16	2



LK330, LK430, LK450, LK520 series

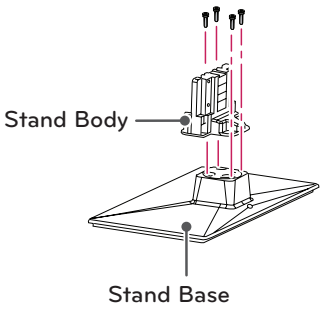
1 Lay the TV with the screen side down on a flat surface.

CAUTION

- Lay a foam mat or soft protective cloth on the surface to protect the screen from damage. Make sure no objects press against the screen.

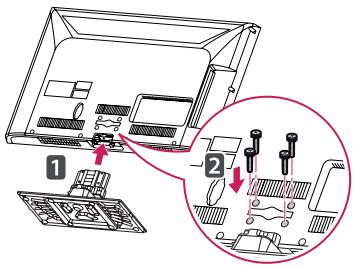
2 Assemble the parts of the STAND BODY with the STAND BASE of the TV.

Screw for assembly	Number of screws
M4 x 20	4



3 Secure the TV and the stand with the 4 screws.

Screw for assembly	Number of screws
M4 x 20	4



CAUTION

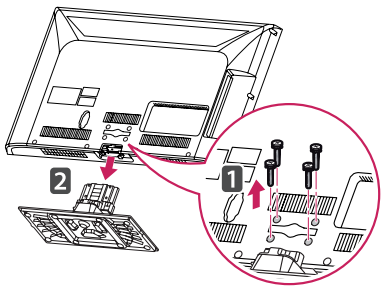
- Tighten the screws firmly to prevent the TV from tilting forward. Do not over tighten.

To detach the stand,

1 Lay the TV with the screen side down on a flat surface.

2 Remove the 4 screws and pull the stand away from the TV.

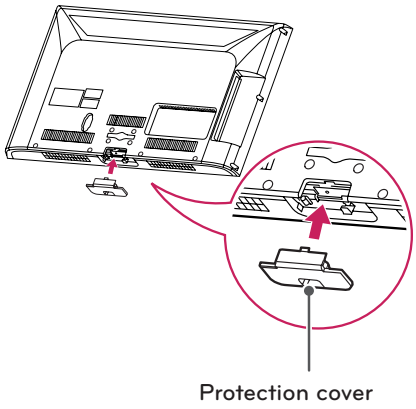
Screw for assembly	Number of screws
M4 x 20	4



3 Push the supplied protection cover into the opening at the bottom of the TV until it locks in place.

This will protect the opening from accumulating dust and dirt.

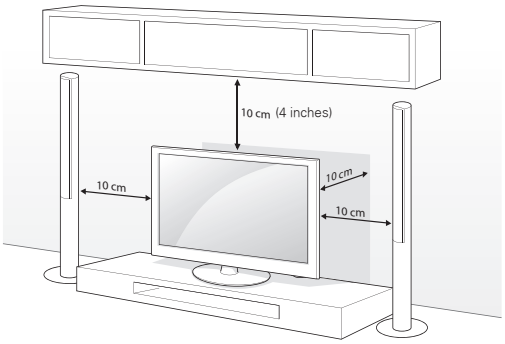
When installing the wall mounting bracket, use the Protection cover.



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Mounting on a table

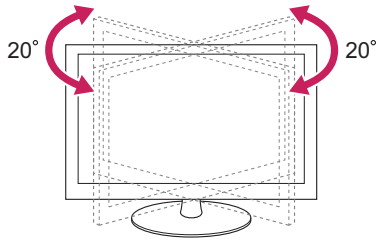
1 Lift and tilt the TV into its upright position on a table.
- Leave a 10 cm (4 inches) (minimum) space from the wall for proper ventilation.



2 Connect the power cord to a wall outlet.

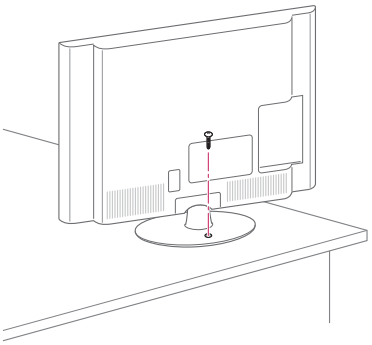
CAUTION
- Do not place the TV near or on sources of heat, as this may result in fire or other damage.

NOTE
- Swivel 20 degrees to the left or right and adjust the angle of the TV to suit your view.



Securing the TV to a table (For 26/32LK330, 32/42LK430, 32/37/42LK450, 42LK520, 32LV2500, 32LV2520, 32/37LV3500, 32LV3520)

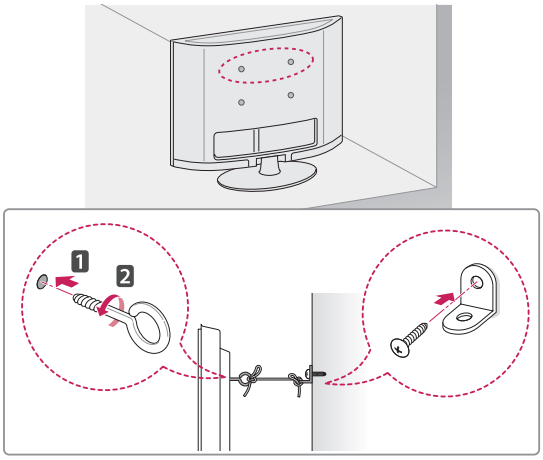
Fix the TV to a table to prevent from tilting forward, damage, and potential injury.
Mount the TV on a table, and then insert and tighten the supplied screw on the rear of the stand.



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

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Securing the TV to a wall (optional)



1 Insert and tighten the eye-bolts, or TV brackets and bolts on the back of the TV.
- If there are bolts inserted at the eye-bolts position, remove the bolts first.

2 Mount the wall brackets with the bolts to the wall.
Match the location of the wall bracket and the eye-bolts on the rear of the TV.

3 Connect the eye-bolts and wall brackets tightly with a sturdy rope.
Make sure to keep the rope horizontal with the flat surface.

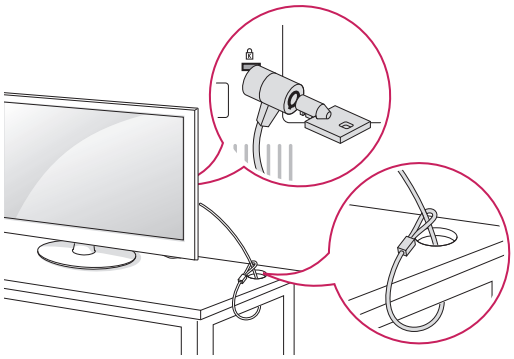
CAUTION
- Make sure that children do not climb on or hang on the TV.

NOTE
- Use a platform or cabinet that is strong and large enough to support the TV securely.
- Brackets, bolts and ropes are optional. You can obtain additional accessories from your local dealer.

Using the Kensington security system (optional)

The Kensington security system connector is located at the rear of the TV. For more information of installation and using, refer to the manual provided with the Kensington security system or visit http://www.kensington.com.

Connect the Kensington security system cable between the TV and a table.

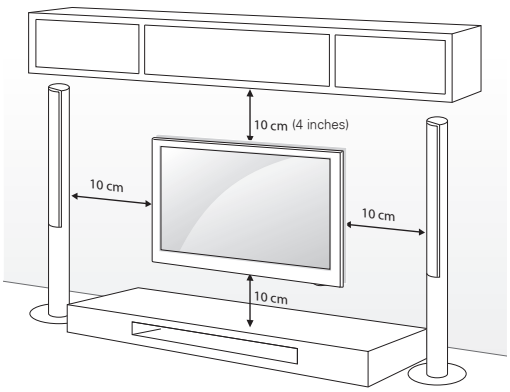


NOTE
- The Kensington security system is optional. You can obtain additional accessories from your local dealer.

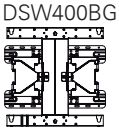
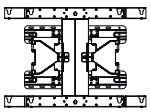
ENGLISH

Mounting on a wall

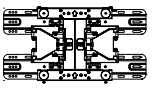
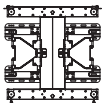
Attach an optional wall mount bracket at the rear of the TV carefully and install the wall mount bracket on a solid wall perpendicular to the floor. When you attach the TV to other building materials, please contact qualified personnel. We recommend that you use an LG brand wall mount when mounting the TV to a wall.



Make sure to use screws and wall mounts that meet the VESA standard. Standard dimensions for the wall mount kits are described in the following table.

Model	42/50PW340 42/50PW350 42/50PW350U 42/50PW350R 50PZ200	60PZ200
VESA	400 x 400	600 x 400
Standard screw	M6	M8
Number of screws	4	4
Wall mount bracket (optional)	PSW400B, PSW400BG, DSW400BG 	PSW600B 

Model	19/22/26LV2500 26LV2520 26LK330	32LV2500 32LV2520 32LV3500 32LV3520 32LK330 32LK430 32LK450
VESA	100 x 100	200 x 100
Standard screw	M4	M4
Number of screws	4	4
Wall mount bracket (optional)	LSW100B, LSW100BG 	LSW100B, LSW100BG 

Model	37LV3500 42LK430 37/42/47LK450 42/47LK520	42/47/55LV3500 42LV3520 55LK520 47/55LW5000
VESA	200 x 200	400 x 400
Standard screw	M6	M6
Number of screws	4	4
Wall mount bracket (optional)	LSW200B, LSW200BG 	LSW400B, LSW400BG, DSW400BG 

CAUTION

- Disconnect the power first, and then move or install the TV. Otherwise electric shock may occur.
- If you install the TV on a ceiling or slanted wall, it may fall and result in severe injury. Use an authorized LG wall mount and contact the local dealer or qualified personnel.
- Do not over tighten the screws as this may cause damage to the TV and void your warranty.
- Use the screws and wall mounts that meet the VESA standard. Any damages or injuries by misuse or using an improper accessory are not covered by the warranty.

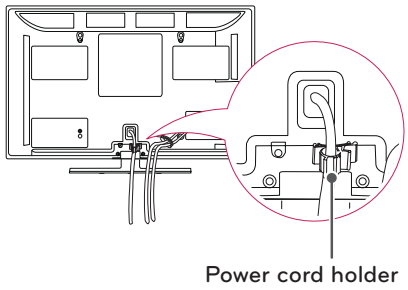
NOTE

- Use the screws that are listed on the VESA standard screw specifications.
- The wall mount kit includes an installation manual and necessary parts.
- The wall mount bracket is optional. You can obtain additional accessories from your local dealer.
- The length of screws may differ depending on the wall mount. Make sure to use the proper length.
- For more information, refer to the manual supplied with the wall mount.

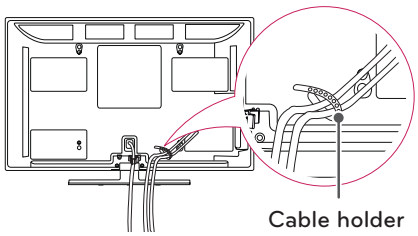
Tidying cables

PW340, PW350, PW350U, PW350R, PZ200 series

1 Install the power cord holder and power cord. It will help prevent the power cable from being removed by accident.



2 Gather and bind the cables with the cable holder.

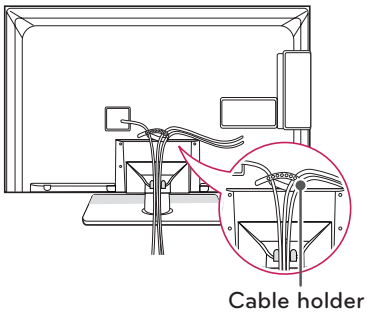


CAUTION

- Do not move the TV by holding the cable holder and power cord holder, as the cable holders may break, and injuries and damage to the TV may occur.

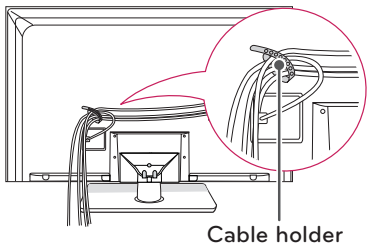
19/22/26LV2500, 26LV2520 series

1 Gather and bind the cables with the cable holder.



32LV2500, 32LV2520, LV3500, LV3520, LW5000 series

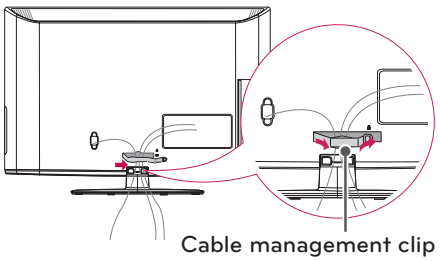
1 Gather and bind the cables with the cable holder on the TV back cover.



LK330, LK430, LK450, LK520 series

1 Gather and bind the cables with the cable management clip.

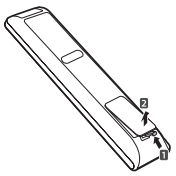
2 Fix the cable management clip firmly to the TV.



ENGLISH

REMOTE CONTROL

The descriptions in this manual are based on the buttons on the remote control. Please read this manual carefully and use the TV correctly.
To replace batteries, open the battery cover, replace batteries (1.5 V AAA) matching the ⊕ and ⊖ ends to the label inside the compartment, and close the battery cover. To remove the batteries, perform the installation actions in reverse.



CAUTION

- Do not mix old and new batteries, as this may damage the remote control.

Make sure to point the remote control toward at the remote control sensor on the TV.



⏻ (POWER)
Turns the TV on or off.

ENERGY SAVING (See p.63)
Adjusts the Energy Saving settings.

AV MODE (See p.43)
Selects an AV mode.

INPUT (See p.43)
Rotates through inputs.
Also switches the TV on from standby.

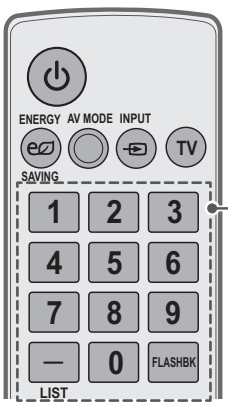
TV
Returns to the last TV channel.



Number button
Enters numbers.

LIST (See p.39)
Accesses the saved channel list.

Q.VIEW
Alternates between the two last channels selected (pressing repeatedly).

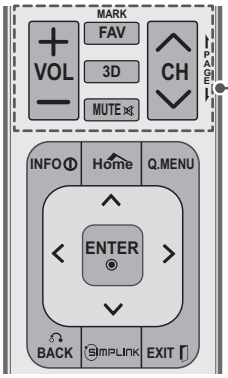


Number button
Enters numbers.

LIST (See p.39)
Accesses the saved channel list.

- (Dash)
Inserts a dash between numbers such as 2-1 and 2-2.

FLASHBK
Alternates between the two last channels selected (pressing repeatedly).



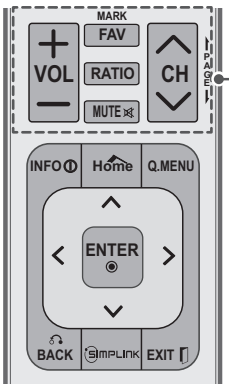
VOL
Adjusts the volume level.

MARK
Selects a menu or option.
FAV (See p.39)
Accesses your favorite channel list.

3D (For 3D TV) (See p.46)
Used for viewing 3D video.

MUTE
Mutes all sounds.

CH
Scrolls through the saved channels.
PAGE
Moves to the previous or next screen.



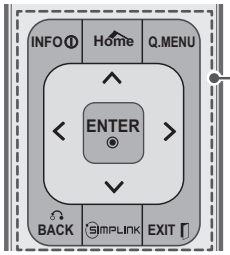
VOL
Adjusts the volume level.

MARK
Selects a menu or option.
FAV (See p.39)
Accesses your favorite channel list.

RATIO (See p.42)
Resizes an image.

MUTE
Mutes all sounds.

CH
Scrolls through the saved channels.
PAGE
Moves to the previous or next screen.



INFO (See p.40)
Views the information of the current program and screen.

Home
Accesses the main menus, or saves your input and exit the menus.

Q. MENU (See p.44)
Accesses the quick menu.

Navigation buttons (up/down/left/right)
Scrolls through menus or options.

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

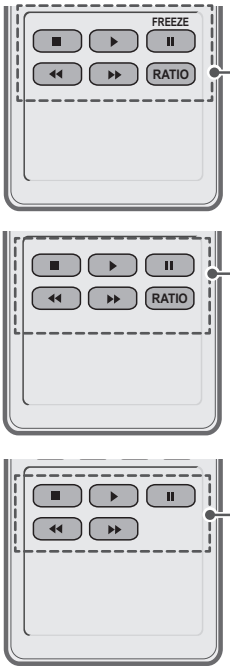
SIMPLINK (See p.80)
Accesses the AV devices connected to the TV;
Opens the SIMPLINK menu.

EXIT
Clears all on-screen displays and returns to TV viewing.



Colored buttons
These access special functions in some menus.

3D SETTING (For 3D TV) (See p.48)
Used for viewing 3D video.



Control buttons
Controls the SIMPLINK compatible devices (USB,SIMPLINK).

FREEZE (Plasma)
Freezes the current frame (Not supported when using USB Mode and Simplink.).

RATIO (See p.42)
Resizes an image.

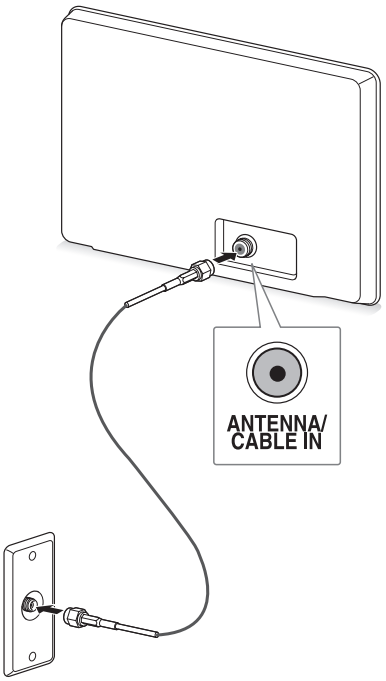
WATCHING TV

Connecting to an antenna or cable

Connect an antenna, cable, or cable box to watch TV while referring to the following. The illustrations may differ from the actual items and a RF cable is optional.

Connecting an antenna or basic cable

Connect the TV to a wall antenna socket with an RF cable (75 Ω).

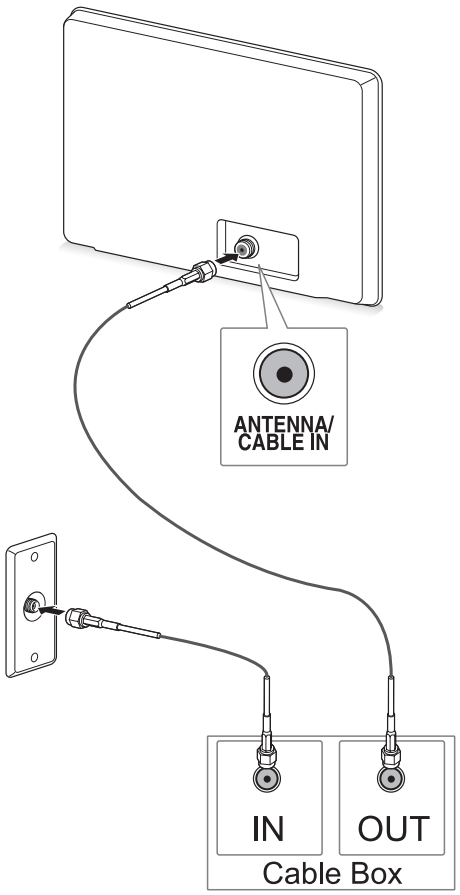


NOTE

- Use a signal splitter to use more than 2 TVs.
- Visit http://lgknowledgebase.com for more information about the antenna and cable connection. Search for antenna.

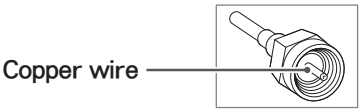
Connecting a cable box

Connect the TV to a cable box and the cable box to a wall antenna socket with 2 RF cables (75 Ω).



CAUTION

- Make sure not to bend the copper wire of the RF cable.

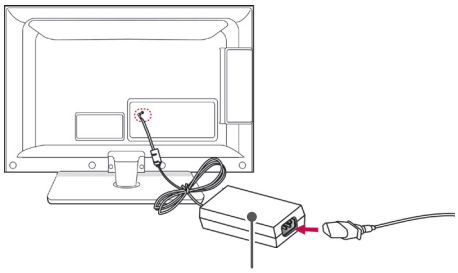


- Complete all connections between devices, and then connect the power cord to the power outlet to prevent damage to your TV.

ENGLISH

Connecting to the AC/DC adapter

(For 19/22/26LV2500, 26LV2520)



AC/DC Adaptor

1 Connect the AC/DC adapter plug to the power input jack on the TV.

2 Connect the power cord to the AC/DC adapter first, then plug the power cord into the wall power outlet.

CAUTION

- Please be sure to connect the TV to the AC/DC power adapter before connecting the TV's power plug to a wall power outlet.

Turning the TV on for the first time

When you turn the TV on for the first time, the Initial setting screen appears. Select a language and customize the basic settings.

1 Connect the power cord to a power outlet. The Power indicator turns red and the TV switches to Standby mode.

2 In Standby mode, press the power button on the remote control to turn the TV on. The Initial setting screen appears if you turn the TV on for the first time.

NOTE

- You can also access **Initial Setting** by accessing **OPTION** in the main menu.

3 Follow the on-screen instructions to customize your TV settings according to your preferences.

Language	Selects a language to display.
⇩	
Mode Setting	Selects **Home Use** for the home environment.
⇩	
Power Indicator	Sets the standby light. (For LED LCD TV)
⇩	
Time Zone	Selects the time zone and daylight saving.
⇩	
Auto Tuning	Scans and saves available channels automatically.

NOTE

- To display images in the best quality for your home environment, select **Home Use**.
- **Store Demo** is suitable for the retail environment.
- If you select **Store Demo**, any customized settings will switch back to the default settings of **Store Demo** in 5 minutes.
- **Power Indicator** feature is disabled in Store Demo mode.

4 When the basic settings are complete, press **ENTER**.

NOTE

- If you do not complete the Initial setting, it will appear whenever the TV turns on.
- Disconnect the power cord from the power outlet when you do not use the TV for a long period of time.

5 To turn the TV off, press the power button on the remote control.

ENGLISH

Watching TV

1 In Standby mode, press the power button on the remote control to turn the TV on.

2 Press **INPUT** and select TV.

3 Control the TV using the following buttons while you are watching TV.

Button	Description
CH (^, v)	Scrolls through saved channels.
LIST[1]	Selects a channel on the saved channel list.
0 - 9	Selects a channel by entering numbers.
VOL (+, -)	Adjusts the volume level.
MUTE	Mutes all sounds.
AV MODE[2]	Selects an AV mode (See p.43).
Q.MENU	Accesses the quick menus (See p.44).
FLASHBK or Q.VIEW	Alternates between the last two channels selected.
RATIO	Resizes an image (See p.42).
FREEZE	Freezes the current frame while you are watching TV (Plasma).

1 The Lock icon (🔒) appears in front of a channel blocked with parental control.
2 Each **AV mode** has the optimized image and sound settings. If you select **Off**, the image and sound settings will be restored to the previously customized settings.

4 To turn the TV off, press the power button on the remote control.
The TV switches to Standby mode.

Managing channels

*The Digital broadcasting (DTV, Cable DTV) is not available for Philippines.

Setting up channels

Storing channels

To store channels automatically,

1 Press **Home** to access the main menus.

2 Press the Navigation buttons to scroll to **CHANNEL** and press **ENTER**.

3 Press the Navigation buttons to scroll to **Auto Tuning** and press **ENTER**.

4 Select **Start** to start automatic tuning.
The TV scans and saves available channels automatically.

NOTE
- If the TV scans and saves channels, the previously saved channels will be overwritten.

5 When you are finished, press **EXIT**.
When you return to the previous menu, press **BACK**.

To store channels manually,

1 Press **Home** to access the main menus.

2 Press the Navigation buttons to scroll **CHANNEL** and press **ENTER**.

3 Press the Navigation buttons to scroll to **Manual Tuning** and press **ENTER**.

4 Scroll through the channel types, and then add or delete channels.

5 When you are finished, press **EXIT**.
When you return to the previous menu, press **BACK**.

NOTE
- If the TV scans a blocked channel, you will be prompted to enter your password to keep the channel scanned.
- You can store up to 1000 channels. The number of channels that you can store differs depending on the broadcasting signal environment.
- The channels are stored in the order of **DTV**, **TV, Cable DTV** and **Cable TV**.

ENGLISH

Editing your channel list

1 Press **Home** to access the main menus.

2 Press the Navigation buttons to scroll to **CHANNEL** and press **ENTER**.

3 Press the Navigation buttons to scroll to **Channel Edit** and press **ENTER**.

4 Edit channels using the following buttons.

Button	Description
^	Highlights the channel type.
^, v, < , >	Scrolls through channel types or channels.
ENTER	Selects the highlighted channel to view.
CH (^, v)	Moves to the previous or next page.
Blue button	Adds or deletes a channel. The deleted channel displays in blue.
FAV	Registers or cancels the current channel in favorite channel list.
Q.MENU	Selects your desired favorite channel group.
Yellow button	Blocks or unblocks a channel.

5 When you are finished, press **EXIT**.
When you return to the previous menu, press **BACK**.

Selecting a channel on the channel list

1 Press **LIST** to access the channel list.
- To move to the previous or next page, press **CH** (^, v).
- To tune to the "**CHANNEL** menu - **Channel Edit**", press **Blue** button.

2 Select a channel you want and press **ENTER**.

NOTE
- The Lock icon (🔒) appears in front of a channel blocked with parental control.
- If you select the blocked channel, you will be prompted to enter your password.

Using favorite channels

Add the channels that you watch frequently to the favorite list.

Setting up your favorite list

1 Select a channel to add to the favorite list.

2 Press **FAV**.

3 Press the Navigation buttons to select your desired favorite channel group.

4 Press the **Yellow** button to register or cancel the current channel in favorite channel list.
Press the **Blue** button to move to **Channel Edit**.

5 Press the Navigation buttons to scroll to **Favorite**.

6 Press **ENTER** to add the selected channel to the favorite list.

7 When you are finished, press **EXIT**.

NOTE
- You can also setup Favorite List in the **CHANNEL** menu - **Channel Edit**.

Selecting a channel on the favorite list

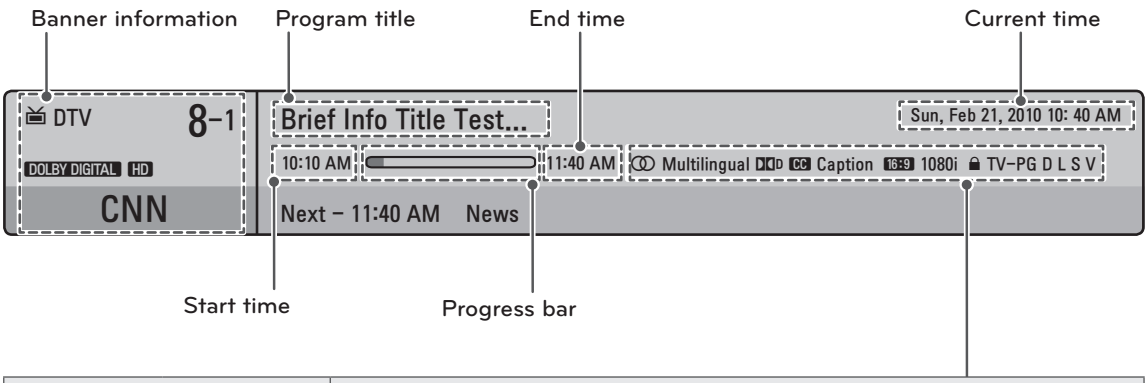
1 Press **FAV** to access the favorite list.
- To move to the previous or next page, press **CH** (^, v).

2 Select a channel you want and press **ENTER**.

ENGLISH

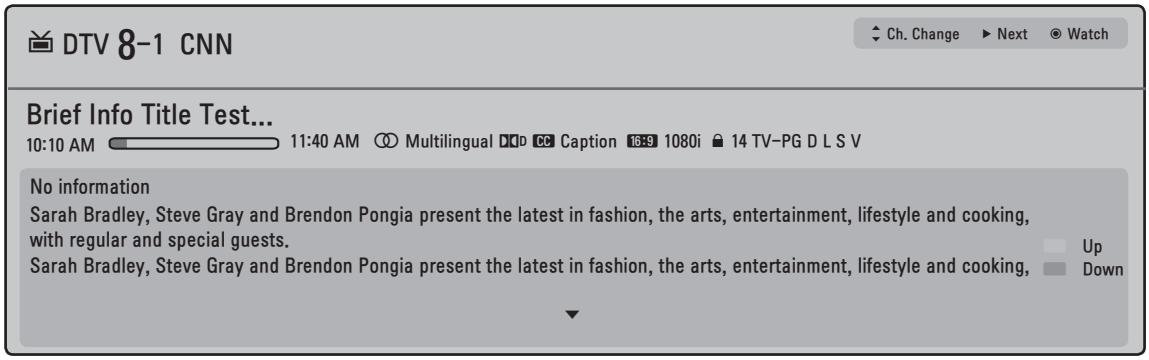
Checking current program info

Press **ENTER** to view the information of the currently program while you are watching.
The following information appears at the top of the screen.



Icon		Description
Multilingual		The program contains two or more audio language services. You can change the audio language using the quick menu.
Dolby Digital		The program contains a Dolby Digital audio signal in TV and HDMI input sources.
Caption	CC	The program contains one or more language caption services. You can change the caption language using the quick menu.
Aspect ratio	4:3 16:9	The original aspect ratio of the video is 4:3. The original aspect ratio of the video is 16:9 (wide).
Resolution	480i 480p 720p 1080i 1080p	The video resolution is 720 x 480i. The video resolution is 720 x 480p. The video resolution is 1280 x 720p. The video resolution is 1920 x 1080i. The video resolution is 1920 x 1080p.
Rating		The program contains Rating information. See "LOCK Settings" on p.69.

ENGLISH



Button	Description
INFO	Shows current channel information.
< or >	Shows previous or next channel information.
^ or v	Changes a channel.

Using additional options

Adjusting aspect ratio

Resize an image t at its optimal size by pressing **RATIO** while you are watching TV.

NOTE

- You can also change the image size by pressing **Q. MENU** or accessing **Aspect Ratio** in the **PICTURE** menu.
- The available ratio varies depending on the input source.
  - The input sources: HDMI-PC and RGB-PC support 4:3 and 16:9.
  - The input sources: HDMI-PC 1920 X 1080 supports all of the aspect ratios.

- **16:9**: Resizes images to fit the screen width.



- **Just Scan**: Displays video images in the original size without cutting off the edges.



NOTE

- If you select **Just Scan**, you may see image noises at the edge or edges of the screen.
- The input sources: DTV, Component, HDMI-DTV, and DVI-DTV (720p/1080i/1080p) support Just Scan.

- **4:3**: Resizes images to the previous standard 4:3.



- **Set By Program**: Displays images in the same aspect ratio as the original image.

(4:3 ➞ 4:3)



(16:9 ➞ 16:9)



- **Zoom**: Formats an image to fit the screen width. The top and bottom of the image may not appear.



NOTE

If you access, **Aspect Ratio** in the **Quick** menus,

- Press **<** or **>** to stretch an image vertically.
- Press **∧** or **∨** to move the zoom focus up or down.

- **Cinema Zoom**: Formats an image to the cinemascope ratio, 2.35:1.
  - To change the ratio of the cinema zoom, press **<** or **>** and its range is from 1 to 16.
  - To move the zoom focus up or down, press **∧** or **∨**.



NOTE

- If you enlarge or reduce an image, the image may be distorted.

Changing AV modes

Each **AV mode** has optimized image and sound settings.
Press **AV MODE** repeatedly to select an appropriate mode.

Mode	Description
Off	Changes to the previously customized settings.
Cinema	Uses the optimized image and sound settings for a cinematic look.
Sport	Uses the optimized image and sound settings for dynamic action sports.
Game	Uses the optimized image and sound settings for fast gaming. When playing a video game using PlayStation or Xbox. it is recommended to use the Game mode. When in Game mode, functions related to picture quality will be optimized for playing games.

Using the input list

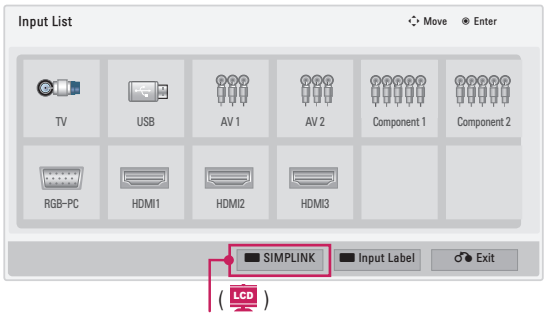
Selecting an input source

1 Press **INPUT** to access the input sources.
- The connected device displays on each input source.

NOTE

• You can also access the input source list by selecting **INPUT** in the **Home** menu.

2 Press the Navigation buttons to scroll to one of the input sources and press **ENTER**.



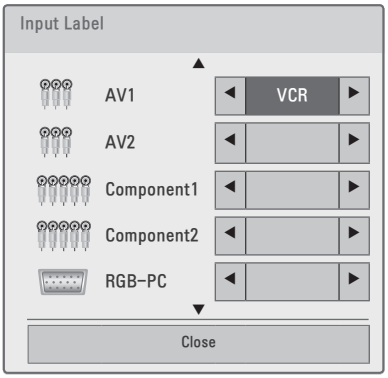
(LCD)

Input source	Description
TV	Watch TV over the air, cable, and digital cable broadcast.
USB	Play media files from a thumb drive.
AV	Watch video from a VCR or other external devices.
Component	Watch video from a DVD or other external devices, or through a digital set-top box.
RGB-PC	Use the TV as a computer monitor.
HDMI	Watches video from a HTS or other high definition devices.

The disconnected input sources will be gray.
- To add an input label, press the **Blue** button. You can easily identify a device connected to each input source.
- If you connect a new external device to the TV, a pop-up window appears. Select Yes on the pop-up window to switch to that input source.
- To access the SIMPLINK, press the **Red** button. If you select "SIMPLINK and On", the pop-up window for the HDMI input will not display. (LCD)

Adding an Input label

Add a label to an input source so that you can easily identify a device connected to each input source.



1 Press **INPUT** to access the input sources.

2 Press the Navigation buttons to scroll to one of the input sources.

3 Press the **Blue** button.

4 Press the Navigation buttons to scroll to one of the input labels and press **ENTER**.

5 When you are finished, press **EXIT**.
When you return to the previous menu, press **BACK**.

ENGLISH

Locking the buttons on the TV (Child Lock)

Lock the buttons on the TV to prevent any unwanted operations or accidents by children.

1 Press **Home** to access the main menus.

2 Press the Navigation buttons to scroll to **LOCK** and press **ENTER**.

3 Input password.

4 Press the Navigation buttons to scroll to **Key Lock** and press **ENTER**.

5 Select **On** to activate the **Key lock** feature.
- To deactivate the **Key lock** feature, select **Off**.

6 When you are finished, press **EXIT**.
When you return to the previous menu, press **BACK**.

NOTE

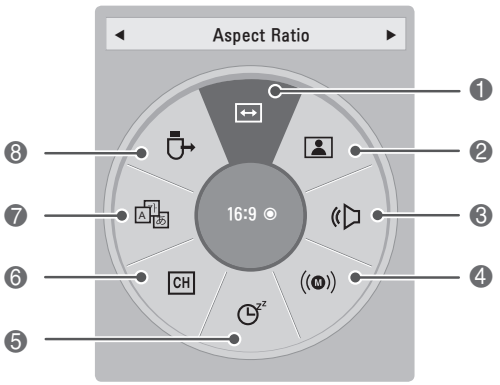
- The TV is programmed to remember the last setting after you turn the TV off.
- If you turn the TV off with the Key lock feature activated, ⏻, **INPUT**, **CH** (^, v) or Number buttons on the remote control.
- If you press any button on the TV with the Key lock feature activated, ⚠ Key Lock appears on the screen.

Using the quick menu

Customize frequently used menus.

1 Press **Q. MENU** to access the quick menus.

2 Press the Navigation buttons to scroll through the following menus.



	Menu	Description
1	Aspect Ratio	Changes the image size.
2	Picture Mode (Depending on model)	Changes the image mode.
3	Sound Mode	Changes the sound mode.
4	Multi Audio	Changes the audio language (Digital signal).
	SAP	Changes the MTS sound (Analog signal).
5	Sleep Timer	Sets the length of time until the TV to turns off.
6	Del/Add	Edits the channels to add or delete the channel.
7	Caption	Activates or deactivate the subtitles.
8	USB Device	Ejects a USB device when a USB device is connected.

NOTE

- The available menus and options may differ from the input source that you are using.

3 Press the Navigation buttons to scroll to the option you want.

4 When you are finished, press **Q. MENU**.

Using the customer support

Testing the Picture / Sound

To execute picture and sound tests.

1 Press **Home** to access the main menus.

2 Press the **Red** button to access **Customer Support**.

3 Press the Navigation buttons to scroll **Picture Test** or **Sound Test** and press **ENTER**.

4 If you have any problem, press the Navigation buttons to scroll to **Yes** and press **ENTER**.

5 When you are finished, press **EXIT**.
When you return to the previous menu, press **BACK**.

Using the product or service information

To check the product or service information

1 Press **Home** to access the main menus.

2 Press the **Red** button to access **Customer Support** and press **ENTER**.

3 Press the Navigation buttons to scroll **Product/ Service Info.**.
You can check the various product/Service infomation based on your model.

4 When you are finished, press **EXIT**.
When you return to the previous menu, press **BACK**.

3D IMAGING (FOR 3D TV)

3D Technology

This TV can display in 3D via 3D broadcasting or when the TV is connected to a compatible device, such as a Blu-ray 3D Player. The viewer must wear compatible 3D glasses in order to see these images in 3D format.

WARNING

- When watching 3D images, you should maintain a distance of at least twice the screen width, and you should also be able to see all of the screen at eye level.
- If you watch the 3D imaging too closely or for a long period of time, it may harm your eyesight.
- Watching the TV or playing video games that incorporate 3D imaging with the 3D glasses for a long period of time can cause drowsiness, headaches or fatigue to you and/or your eyes. If you have a headache, or otherwise feel fatigued or drowsy, stop watching the TV and take a rest.
- Pregnant woman, seniors, persons with heart problems or persons who experience frequent drowsiness should refrain from watching 3D TV.
- Some 3D imaging may cause you to duck or dodge the image displayed in the video. Therefore, it is best if you do not watch 3D TV near fragile objects or near any objects that can be knocked over easily.
- Please prevent children under the age of 5 from watching 3D TV. It may affect their vision development.
- Warning for photosensitization seizure:
  Some viewers may experience a seizure or epilepsy when exposed to certain factors, including flashing lights or images in TV or video games. If you or anybody from your family has a history of epilepsy or seizure, please consult with your doctor before watching 3D TV.
  Also certain symptoms can occur in unspecified conditions without any previous history. If you experience any of the following symptoms, immediately stop watching the 3D imaging and consult a doctor: dizziness or lightheadedness, visual transition or altered vision, visual or facial instability, such as eye or muscle twitching, unconscious action, convulsion, loss of conscience, confusion or disorientation, loss of directional sense, cramps, or nausea. Parents should monitor their children, including teenagers, for these symptoms as they may be more sensitive to the effects of watching 3D TV.
- Risk of photosensitization seizure can be reduced with the following actions.
  - » Take frequent breaks from watching 3D TV.
  - » For those who have vision that is different in each eye, they should watch the TV after taking vision correction measures.
  - » Watch the TV so that your eyes are on the same level as the 3D screen and refrain from sitting too closely to the TV.
  - » Do not watch the 3D imaging when tired or sick, and avoid watching the 3D imaging for a long period of time.
  - » Do not wear the 3D glasses for any other purpose than viewing 3D imaging on a 3D TV.
  - » Some viewers may feel disoriented after watching 3D TV. Therefore, after you watch 3D TV, take a moment to regain awareness of your situation before moving.

NOTE

- To watch the TV in 3D, you must put on your 3D glasses. For best results, you should wear LG Brand 3D glasses. The 3D imaging may not display properly when using another brand of 3D glasses. Please see the 3D glasses manual for instructions on how to use the 3D glasses.
- After powering on the TV, a few seconds may be needed for your TV to calibrate.
- It may take a moment for you to see the 3D imaging if you look away from the TV and then revert your eyes back to the 3D program. (For Plasma TV)
- If there is an obstacle between the TV and the 3D glasses, the 3D imaging may not display properly. (For Plasma TV)
- Do not use the TV in close proximity to other electronic equipments and RF equipments. (For Plasma TV)
- When watching 2D images, it is recommended to take off the 3D glasses. If you watch 2D images with the 3D glasses on, you may see distorted images.

When using 3D Glasses

CAUTION

- 3D glasses are sold separately. Refer to the 3D glasses manual for operating instructions.
- Do not use the 3D glasses to replace your corrective glasses, sunglasses or protective goggles.
- Do not store the 3D glasses in hot or cold locations.
- Do not drop objects onto the 3D glasses. Do not drop or bend the glasses.
- Since the lenses of the 3D glasses are easily scratched, make sure to clean only with a soft cloth. Shake off any dust before using the cloth since the glasses are easily scratched.

3D Imaging Viewing Range

(For Plasma TV)

TV size, viewing angle & other circumstances may change the viewing distance and the angle of view.

Viewing Distance	Viewing Angle
2 m - 10 m (6.5 ft - 32.8 ft)	120 ° (When the viewing distance is 2 m (6.5 ft))

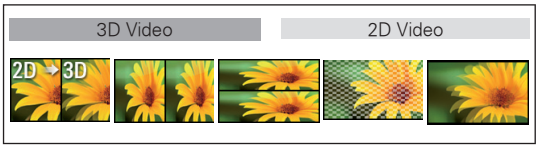
ENGLISH

Viewing 3D Imaging

View 3D mode for 3D images

1 Play the 3D video or select 3D channel.
(2D to 3D mode is available with all contents.)

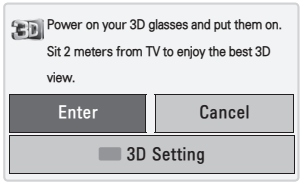
2 Press 3D and select same type in your displayed picture on the screen.
(Select type on "3D Video" tab.)



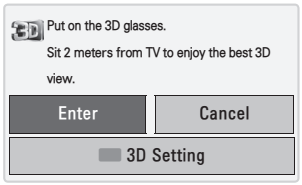
NOTE

- Turn on the 3D mode automatically for HDMI input playing the 3D blueray titles.

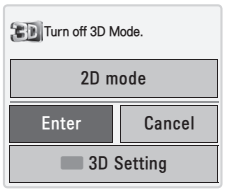
3 Press **ENTER** on displayed information window.



or



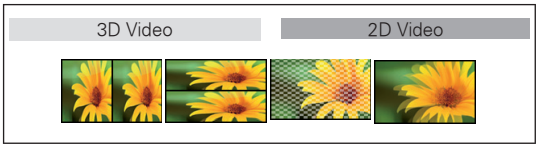
4 To turn off the 3D mode, press 3D and select **ENTER**.



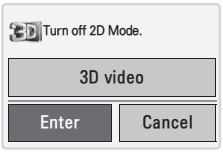
View 2D mode for 3D images

1 Play the 3D video or select 3D channel.

2 Press 3D and select same type in your displayed picture on the screen.
(Select type on "2D Video" tab.)



3 To turn off the 2D mode, press 3D and select **ENTER**.



Using 3D quick menu option

1 Press **3D SETTING**.

2 Use the following options while viewing 3D imaging.

Button (Depending on model)	Description
3D Picture Size	Cuts off the outer edges of the picture and stretch it to fit the full screen in 3D mode.
3D Depth	Adjusts the distance between the object and the background in the picture to enhance the 3D effect in 2D to 3D mode.
3D Viewpoint	Brings the picture (including both the object and background images) to the front or back to enhance the 3D effect in 3D mode.
3D Picture Balance	Adjusts the color and brightness difference between the right and left sides of the picture in 3D mode.
3D Picture Correction	Changes the order of images in the right and left sides of the picture in 3D mode.

CAUTION

- Some menus may not work while watching the TV in 3D.
- The 3D imaging mode is disabled automatically when switching DTV channels.
- The screen may not be displayed properly if you view 2D DTV images in 3D imaging mode.
- 3D effect can be seen when 3D Mode is selected appropriately for the 3D input signal supplied to the TV.
- For *mpo files (3D camera files), the 3D imaging mode is enabled automatically.
- 3D may not be displayed properly for some PC graphics cards.

NOTE

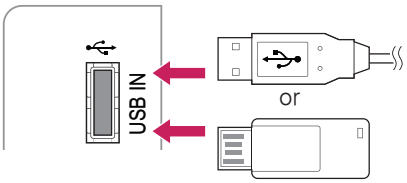
(LCD)

- If you select 3D mode, “Power indicator” is turned off automatically.
- While watching 3D imaging, you cannot adjust video/audio settings using the menu.
- You can only choose “Standard → Cinema → Game” with the **AV MODE** button on the remote control. **AV Mode** is set as **Standard** while playing in 3D.
- If you’d like to play the BGM using *.mpo file(3D camera file), In advance, the contents path for BGM should be set on full-sized photo view screen which isn’t *.mpo file(3D camera file).
- Picture mode is set as Standard, Energy Saving Off if entering to 3D mode.

ENTERTAINMENT

Connecting USB storage devices

Connect USB storage devices such as a USB flash drive or external hard drive to the TV and use multimedia features (See "Browsing files" on p. 51). Connect a USB flash drive or USB memory card reader to the TV as shown in the following illustration.



To disconnect a USB storage device, make sure to end the connection properly to prevent damages to the TV or files.

1. Press **Q.MENU** to access the quick menus.
2. Press the Navigation buttons to scroll to **USB Device** and press **ENTER**.
3. Disconnect the USB storage device only when the message says that it is safe to remove.

CAUTION

- Do not turn the TV off or remove a USB storage device while the USB storage device is connected to the TV, as this could result in loss of files or damage to the USB storage device.
- Back up your files saved on a USB storage device frequently, as you may lose or damage the files and this may be not covered by the warranty.

Tips for using USB storage devices

- The TV recognizes only a USB storage device.
- If you connect a USB storage device to the TV through a USB hub, your TV may not recognize the USB storage device.
- The TV may not recognize a USB storage device that requires a special driver.
- The recognition speed of a USB storage device may differ depending on the device.
- Only use a USB storage device which has normal music or image files.
- Use only USB storage devices that are formatted as a FAT 32 or NTFS file system.
- If you format a USB storage device as a NTFS file system, you cannot delete the saved files.
- You may need to connect a USB storage device to an external power supply with a power adapter.
- If the TV does not recognize a connected USB storage device, replace the cable and try again. Do not use an excessively long cable.
- The TV does not support some USB storage devices properly.
- You can use a multi-partition (up to 4) USB storage device.
- You can use up to 4 USB storage devices at a time by using a USB multi-card reader.
- The file alignment method of a USB storage device is similar to the one of Window XP.
- You cannot create or delete a folder saved in a USB storage device directly on the TV.
- The number of characters for a file name is up to 100 English characters.
- If there are too many folders and files in one folder, it may not operate properly.
- The recommended capacity for a USB external hard disk is 1 TB or less and for a USB storage device is 32 GB or less.
- If a USB external hard disk with the Energy Saving feature does not work, turn the USB external hard disk off and on again to make it work properly. For more information, refer to the user manual of the USB external hard disk.
- USB storage devices below USB 2.0 are supported as well. But they may not work properly in the movie list.
- The electrostatic can cause USB device's malfunction. In this case, USB Device has to be plugged again.

Browsing files

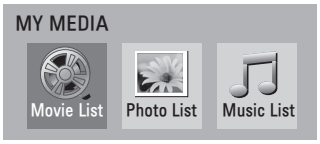
Access the photo, music, or movie lists and browse files.

1 Connect a USB storage device.

2 Press **Home** to access the main menus.

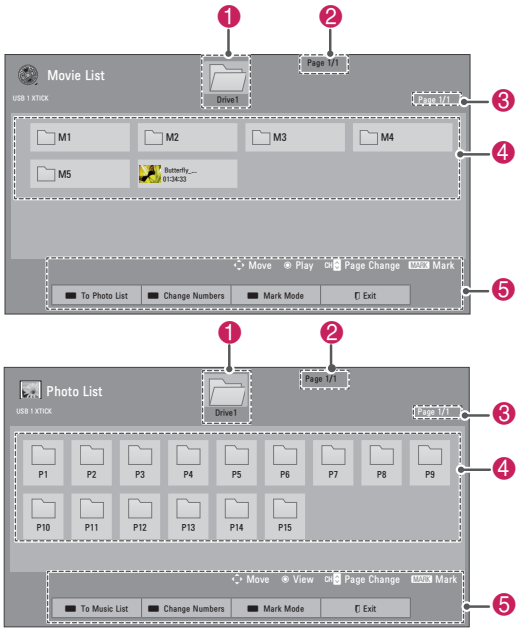
3 Press the Navigation buttons to scroll to **MY MEDIA** and press **ENTER**.

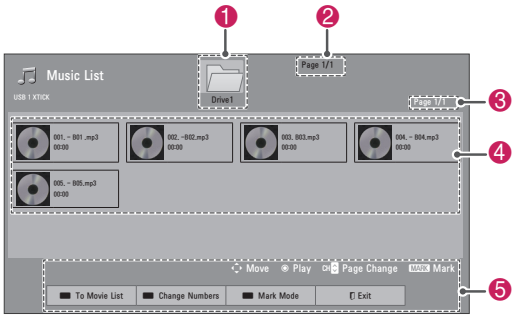
4 Press Navigation buttons to scroll to **MOVIE LIST**, **PHOTO LIST**, or **MUSIC LIST** and press **ENTER**.



5 Select **Drive1** to access the connected USB storage device.

6 Press the Navigation buttons to Select a folder/ file you want.





No.	Description
❶	Moves to the upper level folder.
❷	Current page number/total number of pages
❸	Current page number/total number of pages
❹	Contents under the folder focused on ❶
❺	Available buttons on the remote control
Button	**Description**
Green button	Moves to **Photo List**, **Music List**, or **Movie List**.
Yellow button	**Change Numbers**: Changes the number or thumbnails displayed at a time.
Blue button	Allows you to mark certain files.

Tips for using USB storage devices

Type	Supported File Formats
Video	• MPG, MPEG, DAT, TS, TRP, TP, VOD, MP4, MOV, MKV, DivX, AVI, Motion JPEG (AVI, MP4, MKV), ASF, WMV, FLV • Resolution: under 1920 pixel (width) x 1080 pixel (height) • Frame Rate: under 30 frame/sec (1920 x 1080), under 60 frame/sec (1280 x 720) • Max bitrate of playable movie file: 20 Mbps (Mega bit per second) • Bit rate of audio format: within 32 kbps to 320 kbps (MP3) • Supported subtitle format: *.smi, *.srt, *.sub (MicroDVD, SubViewer 1.0/2.0), *.ass, *ssa, *txt (TMPlayer), *.psb (PowerDivX)

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<table>
<tr><th>Type</th><th colspan="4">Supported File Formats</th></tr>
<tr><td>Photo</td><td colspan="4">• JPG
• Available size
Baseline: 64 pixel (W) x 64 pixel (H) - 15360 pixel (W) x 8640 pixel (H)
Progressive: 64 pixel (W) x 64 pixel (H) - 1920 pixel (W) x 1440 pixel (H)
* Do not use the progressive option when saving JPG files on your PC.
• It may take some time to open high-resolution images in full screen.</td></tr>
<tr><td></td><td colspan="4">For 3D TV</td></tr>
<tr><td></td><td></td><td>File Extensions</td><td>Item</td><td>Profile</td></tr>
<tr><td></td><td>2D</td><td>jpeg
jpg
jpe</td><td>Supproted file format</td><td>• SOF0: baseline
• SOF1: Extend Sequential
• SOF2: Progressive</td></tr>
<tr><td></td><td></td><td></td><td>Photo size</td><td>• Min: 64 x 64
• Max - Normal Type: 15360 (W) x 8640 (H)
• Progressive Type: 1920 (W) x 1440 (H)</td></tr>
<tr><td></td><td>3D</td><td>mpo</td><td>Supproted file format</td><td>• mpo</td></tr>
<tr><td></td><td></td><td></td><td>Photo size</td><td>• 4:3 size: 3,648 x 2,736
2,592 x 1,944
2,048 x 1,536
• 3:2 size: 3,648 x 2,432</td></tr>
<tr><td>Music</td><td colspan="4">• MP3
• Bit rate range 32 Kbps - 320 Kbps
• Sampling rate (Sampling Frequency)
MPEG1 layer 3: 32 kHz, 44.1 kHz, 48 kHz
MPEG2 layer 3: 16 kHz, 22.05 kHz, 24 kHz
MPEG2.5 layer 3: 8 kHz, 11.025 kHz, 12 kHz
* A copy-protected file will not play.</td></tr>
</table>

Viewing Videos

Your TV can display video files from a USB storage device.

1 Press **Home** to access the main menus.

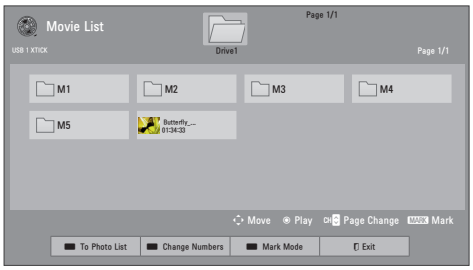
2 Press the Navigation buttons to scroll to **MY MEDIA** and press **ENTER**.

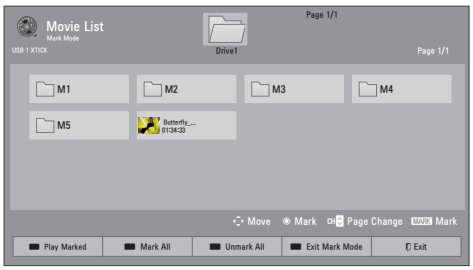
3 Press the Navigation buttons to scroll to **Movie List** and press **ENTER**.

4 Select **Drive1** to access the connected USB storage device.

5 Press the Navigation buttons to scroll to a folder/file you want and press **ENTER**.

6 Play a movie by using the following menus/ buttons.





Button	Description
Navigation button	Scrolls through the files.
ENTER	Plays the highlighted file or enters the mark mode.
CH (∧, ∨)	Moves to the previous or next page.
MARK	Enters the mark mode.
Menu	**Description**
Play Marked	Plays the selected video.
Mark All	Selects all files.
Unmark All	Clears all of your selections.
Exit Mark Mode	Exit the Mark Mode.

NOTE

- : Abnormal files are displayed using this graphic.
- : Non-supported files are displayed using this graphic.

7 Control playback by using the following buttons.



Button	Description
■	Stops the playback.
▶	Plays a video.
❚❚	Pauses or resumes the playback.
◀◀	Scans backward in a file.
▶▶	Scans forward in a file.
❚❚ and ▶▶	Plays videos in slow motion.
< or >	Skips to specific points in a file during playback. The time of a specific point will appear on the status bar. In some files, this function may not work properly.
ENERGY SAVING	Increases or deceases the brightness of your screen.
Q.MENU	Shows the Option menu (See p.54).
AV MODE	Selects the desired source.
BACK	Hides the menu on screen. To see the menu again, press ENTER button to display.
EXIT	Returns to TV viewing.

Tips for playing video files

- Some user-created subtitles may not work properly.
- Subtitles may not display some special characters or HTML tags.
- Subtitles in the non-supported languages are unavailable.
- The time information in an external subtitle file should be arranged in ascending order to play.

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- The screen may suffer from temporary interruptions such as image stoppage or faster playback when you change the audio language.
- If you play a damaged video file, the video file may not be played correctly or some player functions may not be unavailable.
- The TV may not properly play the video files produced with certain encoders.
- If the recorded file does not have video or audio, either video or audio is not outputted
- If the TV plays the recorded file without video or audio, either video or audio is not outputted.
- The TV may not smoothly play the video files with a resolution higher than the supported resolution for each frame.
- The TV may not properly play the video files not included on the specified type and format.
- The TV may not play the files encoded with GMC (Global Motion Compensation) or quarter-pel motion estimation.
- The TV supports the only files saved in ASCII code in subtitles.
- The maximum number of characters displayed on each subtitle line is 250 (Korean), 500 (English), and 500 (Numbers).
- The TV supports the only 10,000 sync blocks within the subtitle file.
- The TV supports the H.264 codec up to the profile level 4.1.
- The TV does not support DTS audio codec.
- The TV cannot play a video file whose size is larger than 30 GB.
- If you play a video file through the USB connection that does not support the high speed, the video player may not work properly.
- The TV supports a USB storage device whose version is lower than 2.0. However, the USB storage device may not work properly in the movie list.
- The video file and its subtitle should be in the same folder and the name of the video file and subtitle should be identical.
- You can adjust the image by using **ENERGY SAVING** and **AV MODE**. But you cannot customize image options of each mode.
- The TV may not play the video files in the supported file format depending on the encoded condition.
- The TV will not play the video files that has a damaged index or no index.

Q.MENU options for movie list

1 Press **Q. MENU**.
A pop-up window will appear.

2 Press the Navigation buttons to scroll to movie list option and press **ENTER**.

3 Press the Navigation buttons to scroll to one of the following options and press **ENTER**.

Set Video Play.

Option	Description	
Picture Size	Selects your desired picture format for videos. • **Full Mode**: Files are played in full screen mode according to the aspect ratio of video. • **Original Mode**: Files are played in their native size.	
Audio Language	Changes the Language Group of the audio for video files. Files with a single audio track cannot be selected.	
Subtitle Language	The subtitles can be turned on or off.	
Language	Activated for SMI subtitles and can select the language within the subtitle.	
Code Page	Subtitle font selection. When set to default, contents are displayed in the language set in "Option - Language - Menu Language."	
	Subtitle Language Group	Supported Language
	Latin1	English, Spanish, French
	Korean	English, Korean
Sync	If the video is not synchronized with the captions, it can be adjusted by 0.5 second.	
Position	Move the location of the subtitles.	
Size	Changes the subtitle font size.	
Repeat	Turn on/off repeat function of movie playback. When turned on, the file within the folder will be played back repeatedly. When turned off, if the next file name is similar to the previous file, it can be played sequentially.	

NOTE

- When replaying a video file after stopping, select “Yes” to restart where it previously stopped.
- If continuous series files exist within the folder, the next file will automatically be played. But, this excludes cases when the Repeat function of Movie List Option is turned “On” (See p.54) or when set as **Play Marked**.

Set Video.

Allows you to change Video presets. (Refer to "PICTURE Settings" on p.63).

Set Audio.

Allows you to change Audio presets. (Refer to "AUDIO Settings" on p.67).

DivX registration code

Registering the DivX code

The DivX registration code allows you to rent or purchase the latest movies at www.divx.com/vod. To play a rented or purchased DivX file, the file's registration code should be same as your TV's DivX registration code.

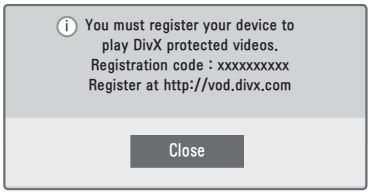
1 Press **Home** to access the main menus.

2 Press the Navigation buttons to scroll to **MY MEDIA** and press **ENTER**.

3 Press the **Blue** button.

4 Press the Navigation buttons to scroll to **DivX VOD Registration** and press **ENTER**.

5 View the registration code of your TV.



6 When you are finished, press **ENTER**.

NOTE

- While you are checking the registration code, some buttons may not work.
- If you use the DivX registration code of another device, you cannot play the rented or purchased DivX file. Make sure to use the DivX registration code assigned to your TV.
- The video or audio files that are not converted by the standard DivX codec may be corrupted or not be played.
- The DivX VOD code allows you to activate up to 6 devices under one account.

Deactivating the DivX feature

You can deactivate all of the devices through the web server and block devices from activating. Delete the existing authentication information to receive a new DivX user authentication for the TV. Once this function is executed, a DivX user authentication is required again to see DivX DRM files.

1 Press **Home** to access the main menus.

2 Press the Navigation buttons to scroll to **MY MEDIA** and press **ENTER**.

3 Press the **Blue** button.

4 Press the Navigation buttons to scroll to **DivX Deregistration** and press **ENTER**.

5 Select **Yes** to confirm.



6 When you are finished, press **EXIT**.
When you return to the previous menu, press **BACK**.

Viewing Photos

You can view image files saved on a USB storage device. The displays on the screen may differ based on the model.

1 Press **Home** to access the main menus.

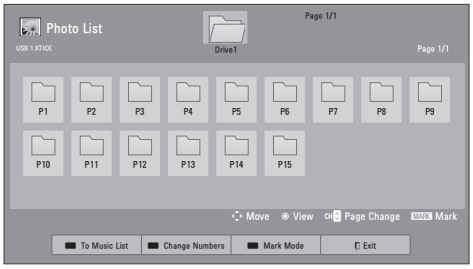
2 Press the Navigation buttons to scroll to **MY MEDIA** and press **ENTER**.

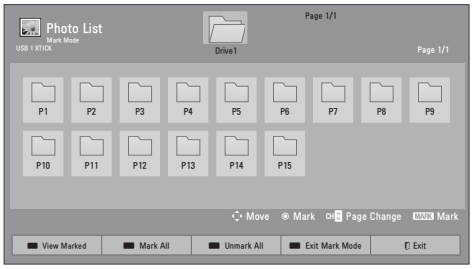
3 Press the Navigation buttons to scroll to **Photo List** and press **ENTER**.

4 Select **Drive1** to access the connected USB storage device.

5 Press the Navigation buttons to scroll to a folder/file you want and press **ENTER**.

6 View photos by using the following menus/ buttons.





Button	Description
Navigation button	Scrolls the file.
ENTER	Views the highlighted file or enters the mark mode.
CH (∧, ∨)	Moves to the previous or next page.
MARK	Enters the mark mode.
Menu	**Description**
View Marked	Views the selected photo.
Mark All	Selects all files
Unmark All	Clears all of your selections.
Exit Mark Mode	Exits the Mark Mode.

NOTE

- : Abnormal files are displayed using this graphic.
- : Non-supported files are displayed using this graphic.

7 The following options are available while viewing photos.



Option	Description
Slideshow	• Starts or stops a slideshow with selected photos. • If there are no selected photos, all photos saved in the current folder display during a slideshow. • To set a slideshow speed, select Option.
BGM (Background Music)	• Turns the background music on or off. To set the background music folder, select Option. **NOTE** • You can't change or set-up the BGM while viewing the *.mpo files (3D camera file).
↻ (Rotate)	Rotates photos clockwise (90°, 180°, 270°, 360°). **NOTE** • The supported photo size is limited. You cannot rotate a photo if the resolution of the rotated width is larger than the supported resolution size.
(Zoom In)	Views the photo by zoom in 2, 4 times by using **Blue** button.
(ENERGY SAVING)	Increases or decreases the brightness of your screen.
Option	Shows the Option menu (See p.58).
Hide	Hides the option window. To display the options, press **ENTER**.
Exit	Moves to the previous menu screen.

ENGLISH

NOTE

- Option values changed in Photo List do not affect Movie List and Music List.
- Option values changed in Photo List or Music List are changed likewise in Photo List and Music List, but not Movie List.

Q.MENU options for photo list

1 Press **Q. MENU**.
A pop-up window will appears.

2 Press the Navigation buttons to scroll to photo list option and press **ENTER**.

3 Press the Navigation buttons to scroll to one of the following options and press **ENTER**.

Set Photo View.

Option	Description
Slide Speed	Selects a slideshow speed (Fast, Medium, Slow).
BGM	Selects a music folder for the background music. • Repeat • Random **NOTE** • You cannot change the music folder while the background music is playing.

Set Video.

Allows you to change Video presets. (Refer to "PICTURE Settings" on p.63).

Set Audio.

Allows you to change Audio presets. (Refer to "AUDIO Settings" on p.67).

Listening to music

1 Press **Home** to access the main menus.

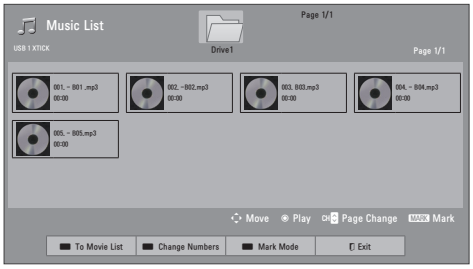
2 Press the Navigation buttons to scroll to **MY MEDIA** and press **ENTER**.

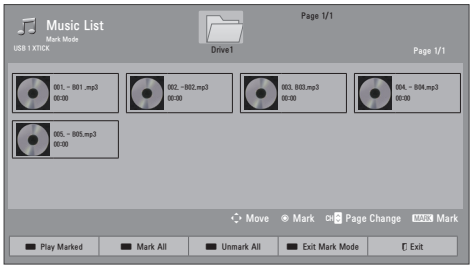
3 Press the Navigation buttons to scroll to **Music List** and press **ENTER**.

4 Select **Drive1** to access the connected USB storage device.

5 Press the Navigation buttons to scroll to a folder/file you want and press **ENTER**.

6 Play music by using the following menus/ buttons.





Button	Description
Navigation button	Scrolls through the files.
ENTER	Plays the highlighted file or enters the mark mode.
CH (∧, ∨)	Moves to the previous or next page.
MARK	Enters the mark mode.
Menu	**Description**
Play Marked	Plays the selected music file.
Mark All	Selects all files.
Unmark All	Clears all of your selections.
Exit Mark Mode	Exits the Mark Mode.

NOTE

- : Abnormal files are displayed using this graphic.
- : Non-supported files are displayed using this graphic.

7 Control playback by using the following buttons.

Button	Description
■	Stops playback.
▶	Plays a music file.
❚❚	Pauses or resumes playback.
◀◀	Skips to the previous file.
▶▶	Skips to the next file.
Play with Photo	Displays photos during playback.
(ENERGY SAVING)	Increases or deceases the brightness of your screen.
Option	Shows the Option menu (See p.60).
Hide	Hides the option window. To display the options, press **ENTER**.
Exit	Moves to the previous menu screen.

ENGLISH

Q.MENU options for music list

1 Press **Q. MENU**.
A pop-up window will appears.

2 Press the Navigation buttons to scroll to music list option and press **ENTER**.

3 Press the Navigation buttons to scroll to one of the following options and press **ENTER**.

NOTE

- Option values changed in Movie List does not affect the Photo List and Music List.
- Option value changed in Photo List and Music List are changed likewise in Photo List and Music List.

Set Audio Play.

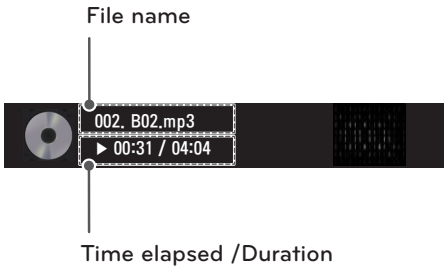
Select Repeat or Random option.

Set Audio.

Allows you to change Audio presets. (Refer to "AUDIO Settings" on p.67).

NOTE

- The TV will not play copy protected files.
- If the TV is not in use for some time during playback, the information box as a screensaver will appear to prevent image burn.
  To return to the Music list screen, press **ENTER** or **BACK**.



ENGLISH

CUSTOMIZING TV SETTINGS

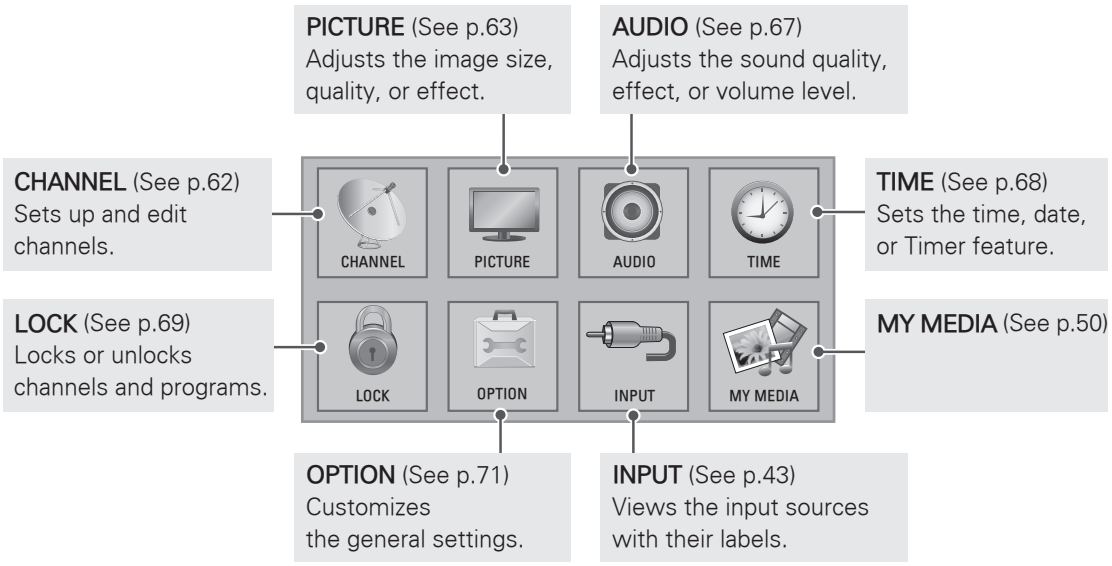
The Main Menus

1 Press **Home** to access the main menus.

2 Press the Navigation buttons to scroll to one of the following menus and press **ENTER**.

3 Press the Navigation buttons to scroll to the setting or option you want and press **ENTER**.

4 When you are finished, press **EXIT**.



ENGLISH

Customizing Settings

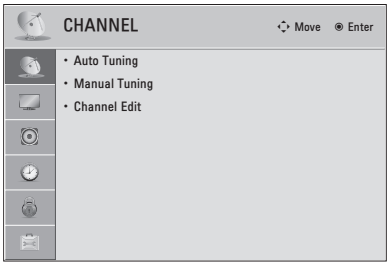
CHANNEL Settings

1 Press **Home** to access the main menus.

2 Press the Navigation buttons to scroll to **CHANNEL** and press **ENTER**.

3 Press the Navigation buttons to scroll to the setting or option you want and press **ENTER**.
- To return to the previous level, press **BACK**.

4 When you are finished, press **EXIT**.



The available channel settings are described in the following.

Setting	Description
Auto Tuning	Tunes and stores all available channels through antennas or cable inputs (See p.38).
Manual Tuning	Tunes and stores the channels you want manually (See p.38).
Channel Edit	Adds or deletes channels on the channel (See p.39).

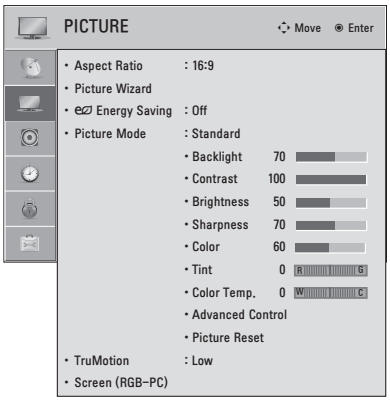
PICTURE Settings

1 Press **Home** to access the main menus.

2 Press the Navigation buttons to scroll to **CHANNEL** and press **ENTER**.

3 Press the Navigation buttons to scroll to the setting or option you want and press **ENTER**.
- To return to the previous level, press **BACK**.

4 When you are finished, press **EXIT**.



The available picture settings are described in the following.

Setting	Description	
Aspect Ratio	Changes the image size to view images at its optimal size (See p.42).	
Picture Wizard	Adjusts the image quality and calibrates the screen. The customized options will be saved as **Expert1** in the **Picture Mode**. **NOTE** • If you use **Picture Wizard**, the **Energy saving** feature will turn off automatically. • To reset changes made by **Picture Wizard**, operate **Picture Reset** when **Picture Mode** is on **Expert1**.	
Energy Saving	Reduces the power consumption by adjusting the screen brightness. **NOTE** • When selecting **Auto** or **Maximum**, **Backlight** will not work.	
	Option	
	Auto (LCD)	The backlight is adjusted automatically corresponding to the surroundings when selecting **Auto** using the **Intelligent sensor** feature.
	Intelligent sensor (Plasma)	The most suitable picture is automatically adjusted according to the surrounding conditions.
	Off	Select if this feature is not necessary.
	Minimum/ Medium/Maximum	Selects the brightness level.
	Screen off	The screen turns off in 3 seconds. Pressing any button of the remote control will turn on the screen again.

ENGLISH

Setting	Description		
Picture Mode	Selects one of the preset image or customizes options in each mode for the best TV screen performance. You are also able to customize advanced options of each mode. The available preset picture modes vary depending on the TV.		
	Mode		
	Intelligent Sensor (LCD)		Sets the TV to adjust the image settings, such as contrast, brightness, sharpness, color, or tint, automatically corresponding to the surrounding environments.
	Vivid		Adjusts the video image for the retail environment by enhancing the contrast, brightness, color, and sharpness.
	Standard		Adjusts the image for the normal environment.
	APS (Plasma)		Maximizes video images reducing power consumption without hurting picture quality.
	Cinema		Optimizes the video image for a cinematic look to enjoy movies as if you are in a movie theater.
	Sport		Optimizes video images for high and dynamic actions by emphasizing primary colors such as white, grass, or sky blue.
	Game		Optimizes the video image for a fast gaming screen such as PCs or games.
	Photo (Depending on model)		Optimizes the still image like a photo file in USB mode. » e.g.) when connecting the external device like a DSLR.
	Expert		Adjusts the detailed video image settings for video experts as well as general viewers.
	NOTE • If you select **Intelligent Senesor**, the option of the **Energy saving** feature will switch to **Auto** automatically (LCD).		
TruMotion (Depending on model)	Advance video technology that provides clearer, smoother images, even during fast action scenes creating a more stable structure for a crisper picture. TruMotion works with all inputs except PC mode. If you enable “TruMotion”, noise may appear on the screen. If this occurs, set “TruMotion” to “Off”. If you select "Picture Mode-Game", set "TruMotion" to "Off".		
	Option		
	High		Provides smoother picture movement.
	Low		Provides smooth picture movement. Use this setting for standard use.
	Off		Turn off TruMotion operation.
	User	De-Judder	Adjusts noise of the screen.
		De-Blur	Adjusts after-image of the screen.
SCREEN (RGB-PC)	Customizes the PC display options.		
	Option		
	Resolution		Selects a proper resolution when your PC uses 1024 X 768, 1280 X 768, or 1360 X 768 resolution.
	Auto Configure		Sets the TV to optimize the options automatically for the TV display.
	Position		Locates the image at the proper position.
	Size		Adjusts the image size.
	Phase		Eliminates horizontal streaking.
	Reset		Restores the options to the default setting.

Basic Image Options

Setting	Description
Backlight ( )	Adjusts the brightness of the screen by controlling the LCD backlight. If you decrease the brightness level, the screen becomes darker and the power consumption will be reduced without any video signal loss. NOTE • If you use the "**Energy saving** - **Off**, **Minimum**, **Medium**", **Backlight** will be available.
Contrast	Increases or decreases the amplitude of the video signal. You may use Contrast when the bright part of the picture is saturated.
Brightness	Adjusts the base level of the signal in the picture.
Sharpness	Adjusts the level of crispness in the edges between the light and dark areas of the picture. The lower the level, the softer the image.
Color	Adjusts intensity of all colors.
Tint	Adjusts the balance between red and green levels.
Color Temp.	Sets to warm to enhance hotter colors such as red, or set to cool to enhance cooler colors such as blue.
Advanced Control	Customizes the advanced options.
Picture Reset	Restores the options of each mode to the factory default.

Advanced Image Options (Depending on model)

Setting	Description
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 and green white look more vivid.
Skin Color	It detects the skin area of video and adjusts it to express a natural skin color.
Noise Reduction	Reduces screen noise without compromising video quality.
Digital Noise Reduction	Removes noise caused by compressing video.
Gamma	You can adjust brightness of dark area and middle gray level area of the picture. » Low: Make the dark and middle gray level areas brighter. » Medium: Express the original picture level. » High: Make the dark and middle gray level area darker.
Black Level	Sets black level of the screen to proper level. » Low: The reflection of the screen gets darker. » High: The reflection of the screen gets brighter.
Clear White	Makes the white area of screen brighter and more white.
Eye Care	Adjusts the brightness of the screen to prevent the screen from being too bright. Dims extremely bright pictures. This feature is enabled in "Picture Mode-Standard, Sport, Game".
Real Cinema or Film Mode	Makes video clips recorded in film look more natural by eliminating judder effect. DVD and Blu-ray movies are filmed at 24 frames per second (fps). With LG Real Cinema, every frame is consistently processed 5 times in 1/24 of a second producing 120 fps with TruMotion or 2 times in 1/24 of a second producing 48 fps without TruMotion, thus totally eliminating the judder effect. This function can also work when TruMotion is off.

<table>
<tr><th>Setting</th><th colspan="3">Description</th></tr>
<tr><td rowspan="2">Color Gamut</td><td colspan="3">Advanced Control
Maximizess the utilization of color to increase color quality.
» Standard: Displays standard set of colors.
» Wide: Increase number of colors used.</td></tr>
<tr><td colspan="3">Expert Control
Displays color domain of the signal.
» Standard: Displays standard set of colors.
» Wide: Increase number of colors used.
» EBU: Mode to display EBU standard color area. (LCD)
» SMPTE: Mode to display SMPTE standard color area. (LCD)
» BT709: Mode to display BT709 standard color area. (LCD)</td></tr>
<tr><td>Edge Enhancer</td><td colspan="3">Shows clearer and distinctive yet natural edges of the video.
This function works well over Sharpness UI 60 value.</td></tr>
<tr><td>xvYCC</td><td colspan="3">This is produces richer colors.
This feature represents rich colors as much as a conventional video signal.
This function is enabled in “Picture mode - Cinema, Expert” when xvYCC signal is inputted through HDMI.</td></tr>
<tr><td>Color Filter</td><td colspan="3">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.</td></tr>
<tr><td>Expert Pattern</td><td colspan="3">This is the pattern used for expert adjustment.
This function is enabled in “Picture Mode - Expert” when you watch DTV.</td></tr>
<tr><td rowspan="3">Color Temperature</td><td colspan="3">Adjusts the overall color of the screen by changing the white baseline.</td></tr>
<tr><td>Plasma</td><td rowspan="2">a. Gamma : Select Low, Medium, High
b. Method : 2 Points
• Pattern: Inner, Outer
• Red/Green/ Blue Contrast, Red/Green/Blue Brightness
d. Apply to all inputs</td><td>c. Method : 20 Point IRE
• IRE (Institute of Radio Engineers) is the unit to display the size of the video signal and can be set among 0, 5, 10, 15 - 100 Plasma TV. You can adjust Red, Green or Blue according to each setting.
• Red/Green/Blue: The adjustment range is -50 - +50.</td></tr>
<tr><td>LCD</td><td>c. Method : 10 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 0, 10, 20, 30 - 100. You can adjust Red, Green or Blue according to each setting.
• Luminance: 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.</td></tr>
<tr><td>Color Management System</td><td colspan="3">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/Magenta/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.</td></tr>
</table>

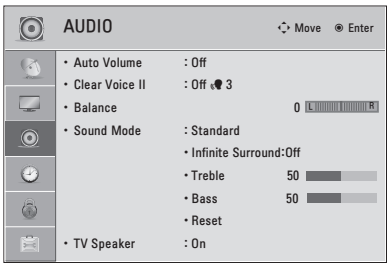
AUDIO Settings

1 Press **Home** to access the main menus.

2 Press the Navigation buttons to scroll to **AUDIO** and press **ENTER**.

3 Press the Navigation buttons to scroll to the setting or option you want and press **ENTER**.
- To return to the previous level, press **BACK**.

4 When you are finished, press **EXIT**.



The available audio settings are described in the following.

Setting	Description	
Auto Volume	Activates the Auto Volume feature to keep the volume level consistent whenever you change channels. The volume level may not be consistent due to different signal conditions of broadcasting stations.	
Clear Voice II	Sets whether to enhance human voice clarity. You can adjust the level of clarity when you set this feature on.	
Balance	Adjusts balance between the left and right speakers according to your room environment.	
Sound Mode	Selects one of the preset sound modes or customizes options in each mode.	
	Mode	
	Standard	Select when you want standard-quality sound.
	Music	Select when you listen to music.
	Cinema	Select when you watch movies.
	Sport	Select when you watch sports events.
	Game	Select when you play games.
	NOTE • 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. • If the Clear Voice II feature is on, **Infinite Surround** will not be activated.	
	Option	
	Infinite Surround	Infinite Surround is a patented LG proprietary sound processing technology that strives immersive 5.1 surround sound with just two front speakers.
	Treble	Controls the dominant sounds in the output. When you turn up the treble, it will increase the output to the higher frequency range.
	Bass	Controls the softer sounds in the output. When you turn up the bass, it will increase the output to the lower frequency range.
	Reset	Resets the sound mode to the default setting.
TV Speaker	Turns on the internal speaker of the TV when using an external Hi-Fi system. You can use the TV speaker as an audio output device even if there is no video input.	

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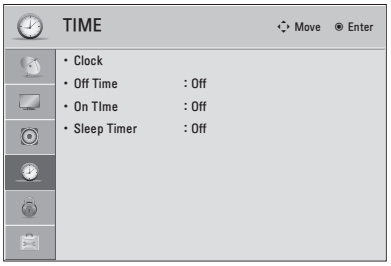
TIME Settings

1 Press **Home** to access the main menus.

2 Press the Navigation buttons to scroll to **TIME** and press **ENTER**.

3 Press the Navigation buttons to scroll to the setting or option you want and press **ENTER**.
- To return to the previous level, press **BACK**.

4 When you are finished, press **EXIT**.



The available time settings are described in the following

Setting	Description
Clock	Sets the time, date, time zone, and daylight-saving time feature. The time will be set automatically according to a digital channel signal which includes time information provided by the broadcasting station. If not, set the time and date manually.
Off Time/On Time	Sets the time to turn on or off the TV automatically. To use this function, you should set the current time and date in advance. **NOTE** • If you do not press any button within 2 hours after the TV turns on by the On Time feature, the TV enters the Standby mode automatically. • If you set both Off time and On time features to the same time, the Off time feature overrides the On time feature.
Sleep Timer	Sets the length of time until the TV to turns off. When you turn the TV off and turn it on again, the Sleep timer faature will be set to off.

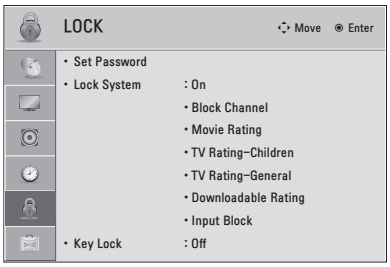
LOCK Settings

1 Press **Home** to access the main menus.

2 Press the Navigation buttons to scroll to **LOCK** and press **ENTER**.

3 Press the Navigation buttons to scroll to the setting or option you want and press **ENTER**.
- To return to the previous level, press **BACK**.

4 When you are finished, press **EXIT**.



The available lock settings are described in the following.

Setting	Description	
Lock System	Activates or deactivates the lock system.	
Set Password	Changes the 4-digit password. The default PIN is "0 0 0 0". If you forget your password, press "0-3-2-5" on the remote control.	
Block Channel	Blocks the channels that contain inappropriate contents for children by pressing the **Yellow** button. The Lock icon appears in front of the blocked channels. The channels can be selected but the screen blank and the audio is muted. To watch a locked channel, enter the password.	
Movie Rating	Blocks the movies that are only broadcasted on the TV and contain inappropriate contents, based on the Motion Picture Association of America (MPAA) rating.	
	Rating	
	G	General audiences – All ages admitted
	PG	Parental guidance suggested – Some material may not be suitable for children
	PG-13	Patents strongly cautioned – Some material may be inappropriate for children under 13
	R	Restricted – Under 17 requires accompanying parent or adult guardian
	NC-17	No one 17 and under admitted
	X	Adults only
	Blocking Off	Permits all programs
TV Rating-Children (Depending on model)	Blocks the children's TV programs that parents do not want their children to watch. To block other TV programs, you should set the TV Rating-General feature.	
	Rating	
	Age	TV-Y (All children, including children from ages 2-6) TV-Y7 (Directed to older children, suitable for children age 6 and above)
	Fantasy Violence	TY-Y7 (Directed to older children – Fantasy violence, suitable for children age 6 and above, containing more intense or combative fantasy violence)

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Setting	Description	
TV Rating-General (Depending on model)	Blocks the TV programs that you want based on the ratings by using the Parental Control Function (V-Chip). **NOTE** • The V-Chip electronically reads TV program ratings and allows parents to block program that are unsuitable for children.	
	Rating	
	Age	TV-G (General audience, suitable for all ages) TV-PG (Parental guidance suggested, containing material that are unsuitable for younger children) TV-14 (Parents strongly cautioned, containing material that are unsuitable for children age 14 and under) TV-MA (Mature audience only, unsuitable for children age under 17)
	Dialog (suggestive dialogue)	TV-PG or TV-14
	Language (coarse language)	TV-PG, TV-14, or TV-MA
	Sex (sexual situation)	TV-PG, TV-14, or TV-MA
	Violence	TV-PG, TV-14, or TV-MA
TV Rating-English (Depending on model)	Selecting Canadian English rating system.	
	Rating	
	E	Exempt
	C	Children
	C8+	Children eight years and older
	G	General programming, suitable for all audiences
	PG	Parental Guidance
	14+	Viewers 14 years and older
	18+	Adult programming
	Blocking Off	Permits all programs
TV Rating-French (Depending on model)	Selecting Canadian French rating system.	
	Rating	
	E	Exempt
	G	General
	8ans+	General-Not convenient for little children
	13ans+	Not convenient for children of 13 years and younger
	16ans+	Not convenient for children of 16 years and younger
	18ans+	This programs is only for adults
	Blocking Off	Permits all programs
Downloadable Rating	This function operates only when TV has received Region5 Rating data. The name of the rating option may differ. **NOTE** • This feature is available only for digital channels.	
Input Block	Blocks the input sources.	
Key Lock	Locks or unlocks the buttons on the TV.	

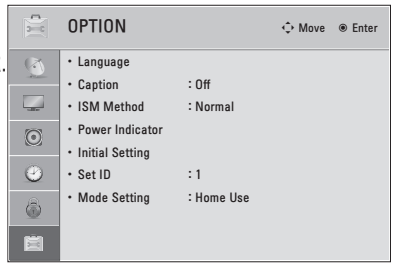
OPTION Settings

1 Press **Home** to access the main menus.

2 Press the Navigation buttons to scroll to **OPTION** and press **ENTER**.

3 Press the Navigation buttons to scroll to the setting or option you want and press **ENTER**.
- To return to the previous level, press **BACK**.

4 When you are finished, press **EXIT**.



The available general settings are described in the following.

Setting	Description	
Language	Selects a desired language.	
	Option	
	Menu Language	Selects a language for the display text.
	Audio Language	Selects an audio language for your program. This feature operates only in the DTV or CADTV mode.
Caption	Sets whether to display captions and customize your option in each mode.	
	Mode	
	CC 1-4 (Closed Captioning)	Displays the audio portion of a TV program as text on the TV screen. CC1 is the most common mode in use. - Field 1 data channels: two Captions (CC1, CC2) and two Text (T1, T2). - Field 2 data channels: two Captions (CC3, CC4) and two Text (T1, T2).
	Text 1-4	
	Service 1-6	This is only available for the digital broadcasting system.
	Option (For DTV, CADTV)	
	Size	Selects the word size.
	Font	Selects a typeface for the text.
	Text Color	Selects a color for the text.
	Text Opacity	Adjusts the opacity for the text color.
	Bg Color	Selects a background color.
	Bg Opacity	Adjusts the opacity for the background color.
	Edge Type	Selects an edge type.
	Edge Color	Selects a color for the edges.
Power Indicator (LED LCD TV)	Sets to turn on or off the indicator light on the TV.	
	Option	
	Standby Light	Sets to turn on or off the indicator light in Standby mode.
	Power Light	Sets to turn on or off the indicator light when you turn on the power.

ENGLISH

Setting	Description	
ISM Method (Plasma)	Prevents image sticking or removes a ghost image. A frozen still picture displayed on the screen for prolonged periods can result in a ghost image.	
	Mode	
	Normal	Sets it if image sticking is never a problem.
	Orbiter	Avoids a ghost image on the screen. The image will move every 2 minutes to help prevent ghost images. However, it is best not to allow any fixed image to remain on the screen.
	Color Wash	Removes a ghost image on the screen. 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	Removes a ghost image on 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.
Initial Setting	Resets the TV to factory default and erases all stored channels. Customizes the TV settings to suit your preference. The initial setup screen will appear when you turn on the TV for the first time. **NOTE** • When selecting “Lock System - On”in the LOCK menu, the message to enter the password appears. • If you forget your password, press “0-3-2-5” on the remote control.	
	Setting	
	Language	Selects a desired language.
	Mode Setting	Selects **Home Use** for the home environment. Selects **Store Demo** for the retail environment. Selects **Demo Mode** to set to show special features of the TV. You can cancel the demo mode by pressing any buttons except the Volume and Mute buttons. **NOTE** • When selecting Store Demo, Demo Mode will be activated.
	Power Indicator (LED LCD TV)	Turns the power indicator light on or off.
	Time Zone	Sets the time zone and daylight saving.
	Auto Tuning	Scans and saves available channels automatically.
Set ID	Adds an ID to the connected devices.	
Mode Setting	Default selection is “Home Use”. We recommend setting the TV to “Home Use” mode for the best picture in your home environment.	
	Option	
	Home Use	Selects it for the home environment.
	Store Demo	Selects it for the retail environment.
	Demo Mode	Sets to show special features of the TV. You can cancel the demo mode by pressing any buttons except the Volume and Mute buttons.

MAKING CONNECTIONS

Connect various external devices to the TV and switch input modes to select an external device. For more information of external device's connection, refer to the manual provided with each device.
Available external devices are: HD receivers, DVD players, VCRs, audio systems, USB storage devices, PC, gaming devices, and other external devices.

NOTE

- If you record a TV program on a DVD recorder or VCR, make sure to connect the TV signal input cable to the TV through a DVD recorder or VCR. For more information of recording, refer to the manual provided with the connected device.
- The external device connection may differ from the model.
- Connect external devices to the TV regardless of the order of the TV port.

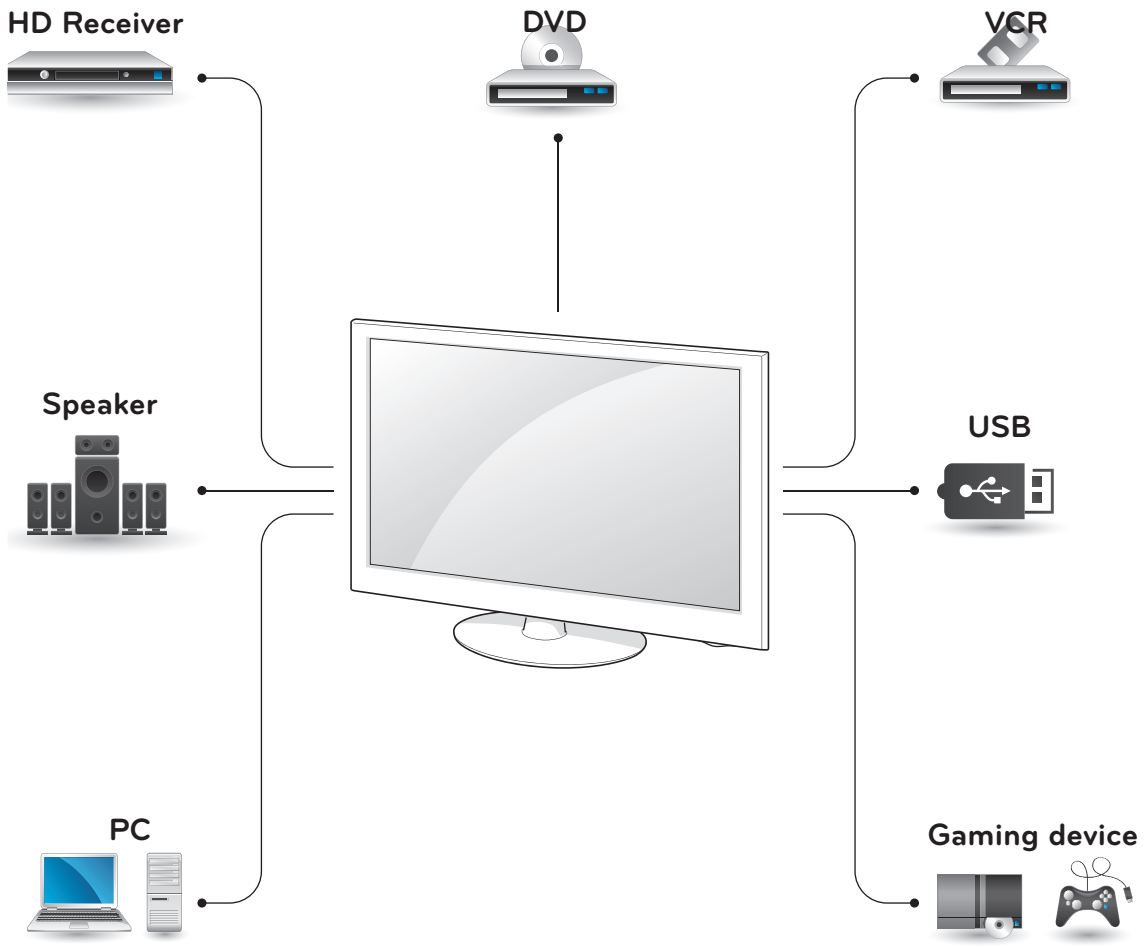
Connection Overview

Connect various external devices to the ports on the TV back panel.

1 Find an external device you want to connect to your TV as shown on the following illustration.

2 Check the connection type of the external device.

3 Go to the appropriate illustration and check the connection details.



HDMI – See p.75
DVI – See p.75
Component – See p.76
Composite – See p.76
Digital – See p.79
RGB – See p.78
Memory storage – See p.79
Memory card reader – See p.79

NOTE

- If you connect a gaming device to the TV, use the cable supplied with the gaming device.
- Refer to the external equipment's manual for operating instructions.

- This part of MAKING CONNECTIONS mainly uses picture for PW350, LV3500 series.

Connecting to a HD receiver, DVD, or VCR player

Connect a HD receiver, DVD, or VCR player to the TV and select an appropriate input mode.

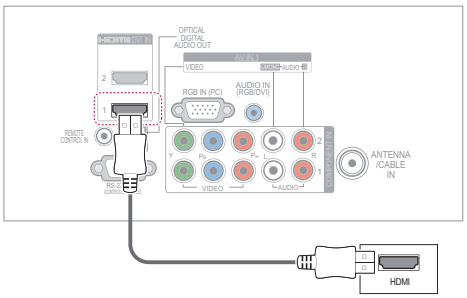
HDMI Connection

Transmits the digital video and audio signals from an external device to the TV. Connect the external device and the TV with the HDMI cable as shown in the following illustration.

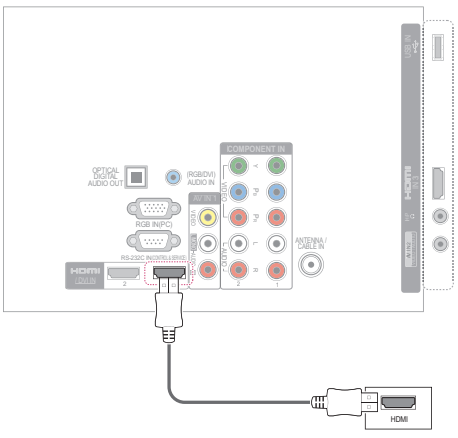
NOTE

- Use the latest High Speed HDMI™ Cable with CEC (Customer Electronics Control) function.
- High Speed HDMI™ Cables are tested to carry an HD signal up to 1080p and higher.

PW350 series



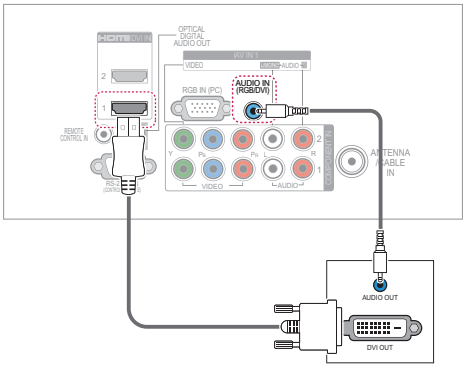
LV3500 series



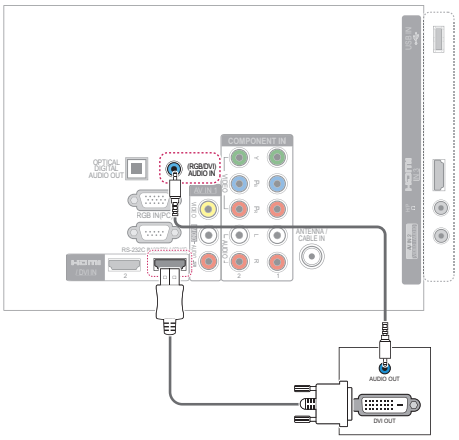
DVI to HDMI Connection

Transmits the digital video signal from an external device to the TV. Connect the external device and the TV with the DVI-HDMI cable as shown in the following illustration. To transmit an audio signal, connect an audio cable.

PW350 series



LV3500 series

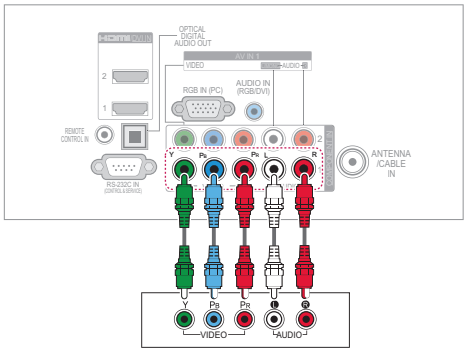


ENGLISH

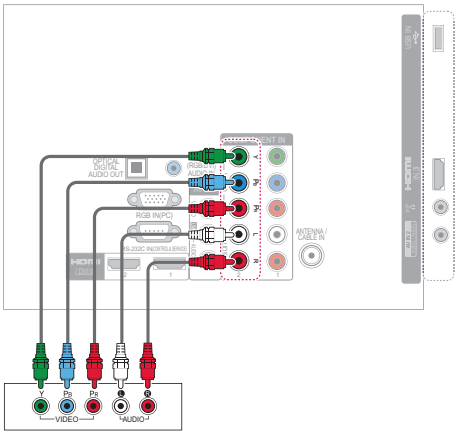
Component Connection

Transmits the analog video and audio signals from an external device to the TV. Connect the external device and the TV with the component cable as shown in the following illustration.

PW350 series



LV3500 series



NOTE

- If cables are installed incorrectly, it could case the image to display in black and white or with distorted color. Check to ensure the cable are matched with the corresponding color connection.

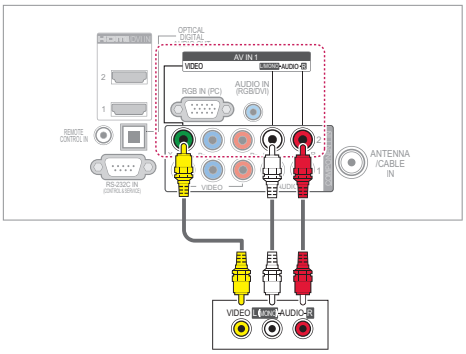
Composite Connection

Transmits the analog video and audio signals from an external device to the TV. Connect the external device and the TV with the composite cable as shown in the following illustration.

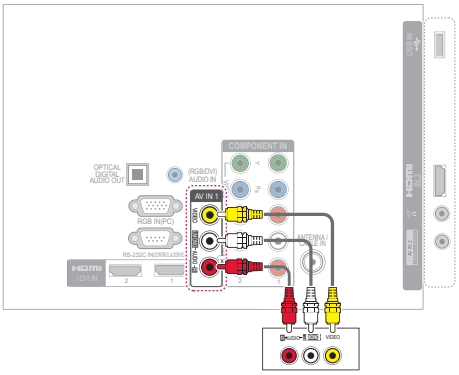
NOTE

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

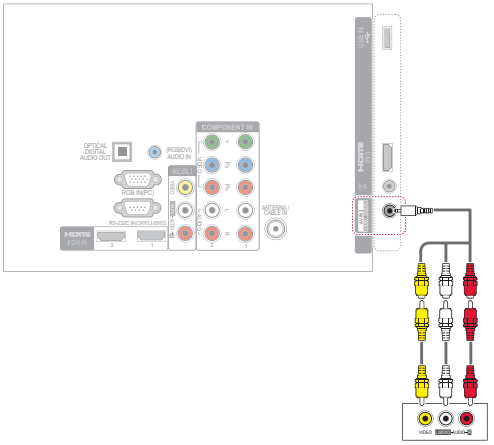
PW350 series



LV3500 series



(For only 32LV2500, 32LV2520, LV3500, LV3520, LW5000 series)



Connecting to a PC

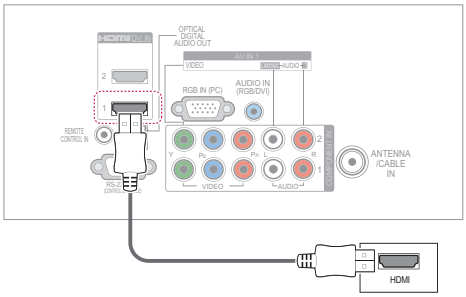
NOTE

- It is recommended to use the TV set with the HDMI connection for the best image quality.

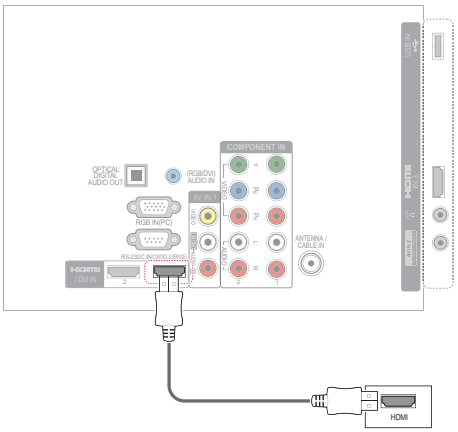
HDMI Connection

Transmits the digital video and audio signals from your PC to the TV. Connect the PC and the TV with the HDMI cable as shown in the following illustration.

PW350 series



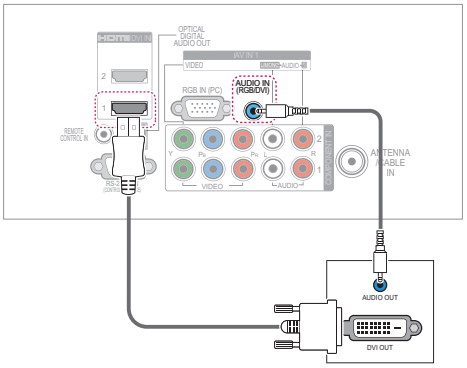
LV3500 series



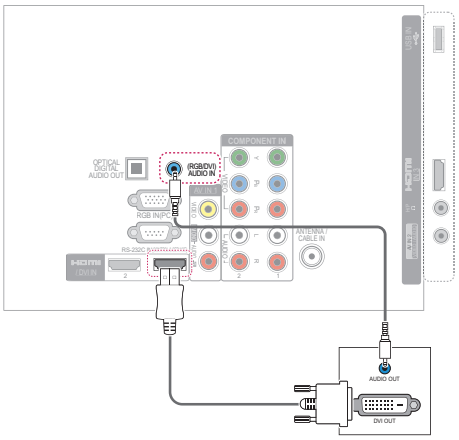
DVI to HDMI Connection

Transmits the digital video signal from your PC to the TV. Connect the PC and the TV with the DVI-HDMI cable as shown in the following illustration. To transmit an audio signal, connect an audio cable.

PW350 series



LV3500 series

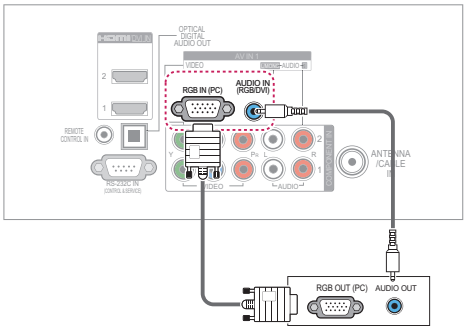


ENGLISH

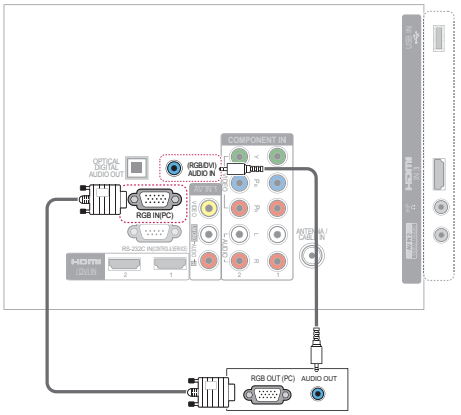
RGB Connection

Transmits the analog video signal from your PC to the TV. Connect the PC and the TV with the D-sub 15 pin signal cable as shown in the following illustrations. To transmit an audio signal, connect an audio cable.

PW350 series



LV3500 series



NOTE

- To get the best picture quality, adjust the PC graphics card to

LCD	Resolution
22LV2500, LV3500, LV3520, LW5000, LK430, LK450, LK520 series	1920x1080
Other models	1360x768

Plasma	Resolution
PZ200 series	1920x1080
Other models	1024x768

- 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.
- When selecting HDMI-PC, set the “Input Label - PC” in the INPUT menu.

Connecting to an Audio System

Use an optional external audio system instead of the built-in speaker.

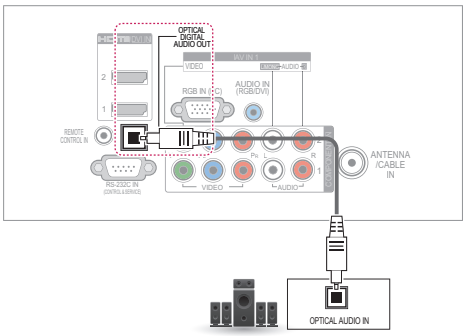
NOTE

- If you use an optional external audio device instead of the built-in speaker, set the TV speaker feature to off (See p.67).

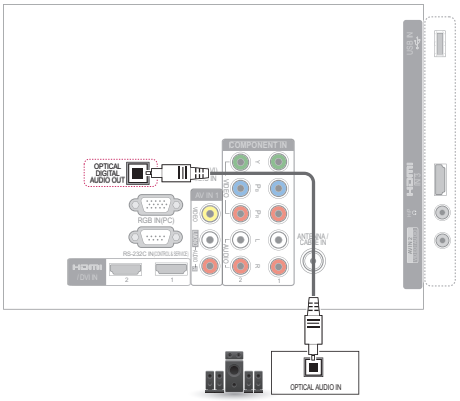
Digital optical audio connection

Transmits the digital audio signal from the TV to an external device. Connect the external device and the TV with the optical audio cable as shown in the following illustration.

PW350 series

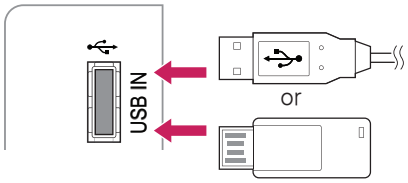


LV3500 series



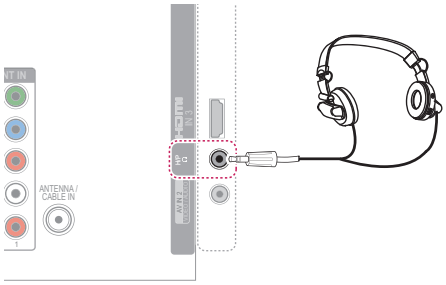
Connecting to a USB

Connect a USB storage device such as a USB flash memory, external hard drive or a USB memory card reader to the TV and access the My media menu to use various multimedia files. See "Connecting USB storage devices" on p.50 and "Browsing files" on p. 51.



Connecting to a Headphone (LCD)

Listen to the sound through a headphone.



NOTE

- AUDIO menu options are disabled when connecting a headphone.
- When changing AV MODE with a headphone connected, the change is applied to video but not to audio.
- Optical Digital Audio Out is not available when connecting a headphone.
- Headphone impedance: 16 Ω
- Max audio output: 10 mW to 15 mW
- Headphone jack size: 0.35 cm (0.13 inches)

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SIMPLINK Connection

Use the TV remote control to play and control the AV device connected with the HDMI cable through HDMI-CEC. Your TV only works with the devices that support HDMI-CEC. But only devices with the SIMPLINK logo are fully supported.

Connect one end of the HDMI cable to the HDMI/DVI IN or HDMI IN terminal on the rear of the TV and the other end to the SIMPLINK device.

NOTE

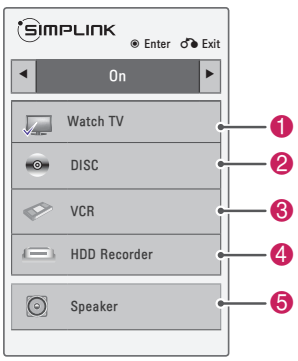
- If the connected device does not support HDMI-CEC, the SIMPLINK feature is unavailable.
- To operate SIMPLINK, you should use an High Speed HDMI cable with the CEC (Consumer Electronics Control) function.
- SIMPLINK may not work properly if you a third-party device that has an HDMI-CEC function.

Activating and Using the SIMPLINK menus

1 Press **SIMPLINK** to access the SIMPLINK menus.

2 Press the Navigation buttons to select to **On**.

3 Press the Navigation buttons to scroll to one of the devices and press **ENTER**.



No.	Description
1	Displays the previously viewed TV channel.
2	Plays discs. When multiple discs are available, the title of the disc appears at the bottom of the screen.
3	Controls the connected VCR.
4	HDD recordings playback: Controls the recording stored in HDD.
5	Audio out to home theater speaker or Audio out to TV: Changes the audio output between Home theater speaker and TV speaker.

- A check mark appears in front of the selected device.
- Available devices display in a bright color.
- Unavailable devices display in grey.

4 Control the selected AV device.

- 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 the TV.
- Disc playback: Control connected AV devices by pressing the Navigation buttons, **ENTER**, ▶, ■, ❚❚, ◀◀ and ▶▶.
- 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 automatically turn on.

NOTE

- If you change the input source by pressing **INPUT**, the progressing function of the SIMPLINK device will stop.
- If you select a device that has the home theater feature, the sound output automatically switches to the home theater speaker and the TV speaker turns off.
- If a connected SIMPLINK home theater system does not play the audio from the TV, connect the DIGITAL AUDIO OUT terminal on the rear of the TV to the DIGITAL AUDIO IN terminal on the back of the SIMPLINK device with an optical cable.

MAINTENANCE

Update and clean your TV regularly to keep the best performance and to extend the product lifespan.

Cleaning Your TV

CAUTION

- Make sure to turn the power off and disconnect the power cord and all other cables first.
- When the TV is left unattended and unused for a long time, disconnect the power cord from the wall outlet to prevent possible damage from lightning or power surges.

Screen and frame

To remove dust or light dirt, wipe the surface with a dry, clean, and soft cloth.
To remove major dirt, wipe the surface with a soft cloth dampened in clean water or a diluted mild detergent. Then wipe immediately with a dry cloth.

CAUTION

- Do not push, rub, or hit the surface with your fingernail or a sharp object, as this may result in scratches on the screen and image distortions.
- Do not use any chemicals, such as waxes, benzene, alcohol, thinners, insecticides, air fresheners, lubricants, as these may damage the screen's finish and cause discoloration.

Cabinet and stand

To remove dust or light dirt, wipe the cabinet with a dry, clean, and soft cloth.
To remove major dirt, wipe the cabinet with a soft cloth dampened in a clean water or water containing a small amount of mild detergent. Then wipe immediately with a dry cloth.

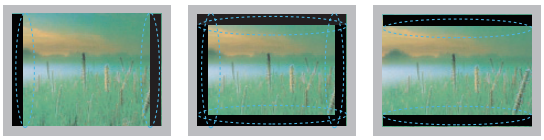
CAUTION

- Do not spray liquid onto the surface. If water enters the TV, it may result in fire, electric shock, or malfunction.
- Do not use any chemicals as this may deteriorate the surface.

Power cord

Remove the accumulated dust or dirt on the power cord regularly.

Preventing "Image burn" or "Burn-in" on your TV screen



- If a fixed image displays on the TV screen for a long period of time, it will be imprinted and become a permanent disfigurement on the screen. This is "image burn" or "burn-in" and not covered by the warranty.
- If the aspect ratio of the TV is set to 4:3 for a long period of time, image burn may occur on the letterboxed area of the screen.
- Avoid displaying a fixed image on the TV screen for a long period of time (2 or more hours for LCD, 1 or more hours for the Plasma TV) to prevent image burn.

TROUBLESHOOTING

General

Problem	Resolution
Cannot control the TV with the remote control.	• Check the remote control sensor on the product and try again. • Check if there is any obstacle between the product and the remote control. • Check if the batteries are still working and properly installed (⊕ to ⊕, ⊖ to ⊖). • Check if the appropriate input mode such as TV or VCR is set for using the remote control.
No image display and no sound is produced.	• Check if the product is turned on. • Check if the power cord is connected to a wall outlet. • Check if there is a problem in the wall outlet by connecting other products.
Image appears slowly when the TV turns on.	• The image is muted during the product startup process. This is normal. If the image does not appear in a few minutes, unplug the TV for 30 seconds and try again. If the image still does not appear, contact the authorized service center in your local area.
Cannot connect external devices.	• Refer to the "Connection Overview" and connect an external device.
The TV turns off suddenly.	• Check the power control settings. The power supply may be interrupted. • Check if the Auto sleep feature is activated in the Time settings. Refer to the "Sleep Timer". • If there is no signal while the TV is on, the TV will turn off automatically after 15 minutes of inactivity.

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Audio

Problem	Resolution
No sound is produced while images are displaying.	• Press **VOL +** or **-** button. • Check if the sound is muted by pressing **MUTE**. • Scroll to other channels. There may a problem with the broadcast. • Check if the TV Speaker feature is activated in the menu option.
No output from one of the speakers	• Adjust Balance in the menu option.
Unusual sound from inside the TV is produced.	• A change in ambient humidity or temperature may result in an unusual noise when the product turns on or off. There is no problem with your product.

Video

Problem	Resolution
An image displays in black and white or the color quality is poor.	• Adjust the color setting in the menu option. • Keep a sufficient distance between this product and other electronic products. • Scroll to other channels. There may a problem with the broadcast.
Horizontal or vertical bars appears or images blur	• Check if there are local interferences such as an electrical appliance or power tool.
Lines or streaks appear on images	• Check the antenna or aim the antenna to the proper direction.
Afterimages (ghosts) appear when the product turns off	• Pixels may have been damaged from a fixed image displayed for a long time (image burn). Use a screen saver to prevent the pixel damage on the screen.
The power is on but the screen appears extremely dark.	• Adjust the brightness and contrast in the menu option.
"No Signal" appears on the screen.	• Check if the signal cable is connected between the TV and products properly. • Check the selected input source by pressing INPUT.
Black spots appear on the screen.	• Several pixels in red, green, white, or black may appear on the screen that can attribute to the characteristics of the LCD panel. • This is normal.
The display offset is wrong.	• Adjust the position setting in the Picture menu. • Check if the video card resolution and frequency are supported by the product. If the frequency is out of range, set to the recommended resolution using the display settings on the external device.
Thin lines appear in the background of the screen.	• Check the video cable connections.
Horizontal noises appear or characters blur.	• Adjust the Phase setting in the menu option. Refer to the "SCREEN (RGB-PC)".
The reception on some channels is poor	• Scroll to other channels. There may a problem with the broadcast. • The station signal may be weak. Aim the antenna to the proper direction. • Check if there is local interferences such as an electrical appliance or power tool.

Movie

Problem	Resolution
The file does not appear on the Movie List.	• Check whether the extension is supported.
Message is displayed saying "This file is invalid" or the audio is working normally but the video is not working normally.	• Check whether the file is playing normally on a PC. (Check whether the file is damaged.) • Check whether the resolution is supported. • Check whether the video/audio codec is supported. • Check whether the frame rate is supported.
Message is displayed saying "Unsupported Audio" or the video is working normally but the audio is not working normally.	• Check whether the file is playing normally on a PC. (Check whether the file is damaged.) • Check whether the audio codec is supported. • Check whether the bit rate is supported. • Check whether the sample rate is supported.
Subtitle is not working.	• Check whether the file is playing normally on a PC. (Check whether the file is damaged.) • Check whether the video file and subtitle file name are the same. • Check whether the video file and subtitle file are located in the same folder. • Check whether the subtitle file is supported. • Check whether the language is supported. (When you open the subtitle file in Memo Pad, you can check the language of the subtitle file.)

SPECIFICATIONS

Product specifications may be changed without prior notice due to upgrade of product functions.

Television System		NTSC-M, ATSC, 64 & 256 QAM	
Program Coverage		VHF 2-13, UHF 14-69, CATV 1-135, DTV 2-69, CADTV 1-135	
External Antenna Impedance		75 Ω	
Environment condition	Operating Temperature	0 - 40 °C	
	Operating Humidity	Less than 80 %	
	Storage Temperature	-20 - 60 °C	
	Storage Humidity	Less than 85 %	
MODELS		42PW340 (42PW340-UB)	50PW340 (50PW340-UB)
		42PW350 (42PW350-UE)	50PW350 (50PW350-UE)
		42PW350U (42PW350U-UC)	50PW350U (50PW350U-UC)
		42PW350R (42PW350R-MA)	50PW350R (50PW350R-MA)
Dimensions (W x H x D)	With stand	991.8 mm x 667.0 mm x 230.5 mm (39.0 inch x 26.2 inch x 9.0 inch)	1176.1 mm x 774.7 mm x 289.8 mm (46.3inch x 30.5 inch x 11.4 inch)
	Without stand	991.8 mm x 613.8 mm x 52.5 mm (39.0 inch x 24.1 inch x 2.0 inch)	1176.1 mm x 716.5 mm x 52.5 mm (46.3 inch x 28.2 inch x 2.0 inch)
Weight	With stand	21.5 kg (47.3 lbs)	29.6 kg (65.2 lbs)
	Without stand	20.0 kg (44.0 lbs)	27.3 kg (60.1 lbs)
Current Value / Power consumption		2.3 A / 230 W	3.0 A / 300 W
Power requirement		AC100 - 240 V ~ 50/60 Hz	
MODELS		50PZ200 (50PZ200-UA)	60PZ200 (60PZ200-UA)
Dimensions (W x H x D)	With stand	1171.9 mm x 770.9 mm x 289.8 mm (46.1 inch x 30.3 inch x 11.4 inch)	1390.8 mm x 905.2 mm x 334.7 mm (54.7 inch x 35.6 inch x 13.1 inch)
	Without stand	1171.9 mm x 712.2 mm x 52.5 mm (46.1 inch x 28.0 inch x 2.0 inch)	1390.8 mm x 835.5 mm x 52.5 mm (54.7 inch x 32.8 inch x 2.0 inch)
Weight	With stand	29.8 kg (65.6 lbs)	42.6 kg (93.9 lbs)
	Without stand	27.5 kg (60.6 lbs)	38.5 kg (84.8 lbs)
Current Value / Power consumption		3.5 A / 350 W	5.3 A / 530 W
Power requirement		AC100 - 240 V ~ 50/60 Hz	

MODELS		47LW5000 (47LW5000-UC)	55LW5000 (55LW5000-UC)
Dimensions (W x H x D)	With stand	1108.0 mm x 746.0 mm x 256.0 mm (43.6 inch x 29.3 inch x 10.0 inch)	1286.0 mm x 847.0 mm x 338.0 mm (50.6 inch x 33.3 inch x 13.3 inch)
	Without stand	1108.0 mm x 677.0 mm x 30.4 mm (43.6 inch x 26.6 inch x 1.1 inch)	1286.0 mm x 778.0 mm x 30.4 mm (50.6 inch x 30.6 inch x 1.1 inch)
Weight	With stand	20.9 kg (46.0 lbs)	25.5 kg (56.2 lbs)
	Without stand	18.7 kg (41.2 lbs)	21.4 kg (47.1 lbs)
Current Value / Power consumption		1.4 A / 140 W	1.6 A / 160 W
Power requirement		USA, Canada, Mexico: AC 120 V ~ 50 / 60 Hz Other Country: AC 100 - 240 V ~ 50 / 60 Hz	

MODELS		19LV2500 (19LV2500-UA)	22LV2500 (22LV2500-UA)	26LV2520 (26LV2520-UC) 26LV2500 (26LV2500-UA)
Dimensions (W x H x D)	With stand	455.2 mm x 354.5 mm x 150.7 mm (17.9 inch x 13.9 inch x 5.9 inch)	471.2 mm x 365.9 mm x 155.4 mm (18.5 inch x 14.4 inch x 6.1 inch)	635.6 mm x 475.0 mm x 178.0 mm (25.0 inch x 18.7 inch x 7.0 inch)
	Without stand	455.2 mm x 313.1 mm x 40.9 mm (17.9 inch x 12.3 inch x 1.6 inch)	471.2 mm x 315.5 mm x 40.9 mm (18.5 inch x 12.4 inch x 1.6 inch)	635.6 mm x 413.5 mm x 40.9 mm (25.0 inch x 16.2 inch x 1.6 inch)
Weight	With stand	2.7 kg (5.9 lbs)	3.4 kg (7.4 lbs)	5.4 kg (11.9 lbs)
	Without stand	2.5 kg (5.5 lbs)	3.2 kg (7.0 lbs)	5.0 kg (11.0 lbs)
Current Value / Power consumption		1.4 A / 38 W	1.7 A / 40 W	1.8 A / 50 W
Power requirement		24 V ⎓, 1.4 A	24 V⎓, 1.7 A	24 V⎓, 1.8 A
Adapter (DC Power)		In: AC 100 - 240 V ~ 50/60 Hz		
		Out: DC 24 V, 2.5 A		

MODELS		32LV2520 (32LV2520-UC) 32LV2500 (32LV2500-UA)
Dimensions (W x H x D)	With stand	777.0 mm x 552.0 mm x 234.0 mm (30.5 inch x 21.7 inch x 9.2 inch)
	Without stand	777.0 mm x 501.0 mm x 35.4 mm (30.5 inch x 19.7 inch x 1.3 inch)
Weight	With stand	11.9 kg (26.2 lbs)
	Without stand	10.7 kg (23.5 lbs)
Current Value / Power consumption		0.7 A / 70 W
Power requirement		USA, Canada, Mexico: AC 120 V ~ 50 / 60 Hz Other Country: AC 100 - 240 V ~ 50 / 60 Hz

MODELS		32LV3500 (32LV3500-UA) 32LV3520 (32LV3520-UC)	37LV3500 (37LV3500-UA)
Dimensions (W x H x D)	With stand	764.0 mm x 545.0 mm x 240.0 mm (30.0 inch x 21.4 inch x 9.4 inch)	888.0 mm x 614.0 mm x 240.0 mm (34.9 inch x 24.1 inch x 9.4 inch)
	Without stand	764.0 mm x 484.0 mm x 35.4 mm (30.0 inch x 19.0 inch x 1.3 inch)	888.0 mm x 553.0 mm x 35.4 mm (34.9 inch x 21.7 inch x 1.3 inch)
Weight	With stand	11.4 kg (25.1 lbs)	13.5 kg (29.7 lbs)
	Without stand	9.6 kg (21.1 lbs)	11.7 kg (25.7 lbs)
Current Value / Power consumption		0.8 A / 80 W	1.0 A / 100 W
Power requirement		USA, Canada, Mexico: AC 120 V ~ 50 / 60 Hz Other Country: AC 100 - 240 V ~ 50 / 60 Hz	

MODELS		42LV3500 (42LV3500-UA) 42LV3520 (42LV3520-UC)	47LV3500 (47LV3500-UA)
Dimensions (W x H x D)	With stand	998.0 mm x 684.0 mm x 256.0 mm (39.2 inch x 26.9 inch x 10.0 inch)	1108.0 mm x 746.0 mm x 256.0 mm (43.6 inch x 29.3 inch x 10.0 inch)
	Without stand	998.0 mm x 615.0 mm x 30.4 mm (39.2 inch x 24.2 inch x 1.1 inch)	1108.0 mm x 677.0 mm x 30.4 mm (43.6 inch x 26.6 inch x 1.1 inch)
Weight	With stand	15.5 kg (34.1 lbs)	20.9 kg (46.0 lbs)
	Without stand	13.3 kg (29.3 lbs)	18.7 kg (41.2 lbs)
Current Value / Power consumption		1.1 A / 110 W	1.4 A / 140 W
Power requirement		USA, Canada, Mexico: AC 120 V ~ 50 / 60 Hz Other Country: AC 100 - 240 V ~ 50 / 60 Hz	

MODELS		55LV3500 (55LV3500-UA)
Dimensions (W x H x D)	With stand	1286.0 mm x 847.0 mm x 338.0 mm (50.6 inch x 33.3 inch x 13.3 inch)
	Without stand	1286.0 mm x 778.0 mm x 30.4 mm (50.6 inch x 30.6 inch x 1.1 inch)
Weight	With stand	25.5 kg (56.2 lbs)
	Without stand	21.4 kg (47.1 lbs)
Current Value / Power consumption		1.6 A / 160 W
Power requirement		USA, Canada, Mexico: AC 120 V ~ 50 / 60 Hz Other Country: AC 100 - 240 V ~ 50 / 60 Hz

MODELS		26LK330 (26LK330-UB)	32LK330 (32LK330-UB)
Dimensions (W x H x D)	With stand	663.0 mm x 484.0 mm x 206.8 mm (26.1 inch x 19.0 inch x 8.1 inch)	800.0 mm x 565.0 mm x 206.8 mm (31.4 inch x 22.2 inch x 8.1 inch)
	Without stand	663.0 mm x 423.0 mm x 79.9 mm (26.1 inch x 16.6 inch x 3.1 inch)	800.0 mm x 509.0 mm x 73.8 mm (31.4 inch x 20.0 inch x 2.9 inch)
Weight	With stand	7.3 kg (16.0 lbs)	9.2 kg (20.2 lbs)
	Without stand	6.2 kg (13.6 lbs)	8.2 kg (18.0 lbs)
Current Value / Power consumption		1.0 A / 100 W	1.2 A / 120 W
Power requirement		AC100 - 240 V ~ 50/60 Hz	

MODELS		32LK430 (32LK430-UA)	42LK430 (42LK430-UA)
Dimensions (W x H x D)	With stand	799.0 mm x 555.0 mm x 207.0 mm (31.4 inch x 21.8 inch x 8.1 inch)	1023.0 mm x 685.0 mm x 261.0 mm (40.2 inch x 26.9 inch x 10.2 inch)
	Without stand	799.0 mm x 506.0 mm x 73.5 mm (31.4 inch x 19.9 inch x 2.8 inch)	1023.0 mm x 635.0 mm x 76.6 mm (40.2 inch x 25.0 inch x 3.0 inch)
Weight	With stand	9.1 kg (20.0 lbs)	15.1 kg (33.2 lbs)
	Without stand	8.1 kg (17.8 lbs)	13.5 kg (29.7 lbs)
Current Value / Power consumption		1.2 A / 120 W	1.8 A / 180 W
Power requirement		AC100 - 240 V ~ 50/60 Hz	

MODELS		32LK450 (32LK450-UB)	37LK450 (37LK450-UB)
Dimensions (W x H x D)	With stand	795.0 mm x 568.0 mm x 207.0 mm (31.2 inch x 22.3 inch x 8.1 inch)	913.0 mm x 639.0 mm x 265.0 mm (35.9 inch x 25.1 inch x 10.4 inch)
	Without stand	795.0 mm x 504.0 mm x 73.5 mm (31.2 inch x 19.8 inch x 2.8 inch)	913.0 mm x 571.0 mm x 77.4 mm (35.9 inch x 22.4 inch x 3.0 inch)
Weight	With stand	9.6 kg (21.1 lbs)	12.8 kg (28.2 lbs)
	Without stand	8.5 kg (18.7 lbs)	11.1 kg (24.4 lbs)
Current Value / Power consumption		1.2 A / 120 W	1.6 A / 160 W
Power requirement		AC100 - 240 V ~ 50/60 Hz	

MODELS		42LK450 (42LK450-UB)	47LK450 (47LK450-UB)
Dimensions (W x H x D)	With stand	1019.0 mm x 698.0 mm x 265.0 mm (40.1 inch x 27.4 inch x 10.4 inch)	1132.0 mm x 762.0 mm x 265.0 mm (44.5 inch x 30.0 inch x 10.4 inch)
	Without stand	1019.0 mm x 631.0 mm x 76.5 mm (40.1 inch x 24.8 inch x 3.0 inch)	1132.0 mm x 695.0 mm x 76.5 mm (44.5 inch x 27.3 inch x 3.0 inch)
Weight	With stand	15.1 kg (33.2 lbs)	19.0 kg (41.8 lbs)
	Without stand	13.4 kg (29.5 lbs)	17.3 kg (38.1 lbs)
Current Value / Power consumption		1.8 A / 180 W	2.3 A / 230 W
Power requirement		AC100 - 240 V ~ 50/60 Hz	

MODELS		42LK520 (42LK520-UA)	47LK520 (47LK520-UA)
Dimensions (W x H x D)	With stand	1024.0 mm x 685.0 mm x 261.0 mm (40.3 inch x 26.9 inch x 10.2 inch)	1137.0 mm x 758.0 x 270.0 mm (44.7 inch x 29.8 inch x 10.6 inch)
	Without stand	1024.0 mm x 621.0 mm x 76.8 mm (40.3 inch x 24.4 inch x 3.0 inch)	1137.0 mm x 685.0 mm x 76.8 mm (44.7 inch x 26.9 inch x 3.0 inch)
Weight	With stand	15.5 kg (34.1 lbs)	20.3 kg (44.7 lbs)
	Without stand	13.9 kg (30.6 lbs)	18.3 kg (40.3 lbs)
Current Value / Power consumption		2.0 A / 200 W	2.5 A / 250 W
Power requirement		AC100 - 240 V ~ 50/60 Hz	

MODELS		55LK520 (55LK520-UA)
Dimensions (W x H x D)	With stand	1329.0 mm x 872.0 mm x 330.0 mm (52.3 inch x 34.3 inch x 12.9 inch)
	Without stand	1329.0 mm x 796.0 mm x 96.5 mm (52.3 inch x 31.3 inch x 3.7 inch)
Weight	With stand	33.0 kg (72.7 lbs)
	Without stand	29.8 kg (65.6 lbs)
Current Value / Power consumption		3.2 A / 320 W
Power requirement		AC100 - 240 V ~ 50/60 Hz

RF module (BM-LDS201) specification (For PW340, PW350, PW350U, PW350R, PZ200 series)

For TV By using a 2.4 GHz bandwidth radio frequency(RF).

- Output: 1 dBm or lower
- Maximum Communication Distance: 10 m (30 ft) in an open space
- Bandwidth: 2.4 GHz (2.4035 GHz - 2.4783 GHz)
- Transfer Rate: 250 kbps
- FCC ID of RF module inside TV
  FCC ID: BEJLDS201

CE

RGB (PC), HDMI (PC) supported mode (Plasma)

Resolution	Horizontal Frequency (KHz)	Vertical Frequency (Hz)
720x400	31.469	70.08
640x480	31.469	59.94
800x600	37.879	60.31
1024x768	48.363	60.00
1360x768	47.712	60.015
1280x1024	63.981	60.02
1920x1080 RGB-PC	66.587	59.934
1920x1080 HDMI-PC	67.5	60.00

For 50/60PZ200

RGB (PC), HDMI (PC) supported mode (LCD)

Resolution	Horizontal Frequency (KHz)	Vertical Frequency (Hz)
720x400	31.469	70.08
640x480	31.469	59.94
800x600	37.879	60.31
1024x768	48.363	60.00
1360x768	47.712	60.015
1280x768 RGB-PC	47.776	59.870
1280x1024	63.981	60.02
1920x1080 RGB-PC	66.587	59.934
1920x1080 HDMI-PC	67.5	60.00

For 22LV2500, 32/37/42/47/55LV3500, 32/42LV3520, 47/55LW5000, 32/42LK430, 32/37/42/47LK450, 42/47/55LK520

HDMI (DTV) supported mode (Plasma LCD)

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

Component port connecting information

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

Component supported mode (Plasma LCD)

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

Video Supported Formats

File / Extension name	Video Decoder	Audio Codec	Max Resolution
mpg, mpeg	MPEG1, MPEG2	MP2, MP3, Dolby Digital, LPCM	1920 x 1080 @ 30p (Only Motion JPEG 640x480@30p)
dat	MPEG1	MP2	
ts, trp, tp	MPEG2, H.264, AVS, VC1	MP2, MP3, Dolby Digital, AAC, HE-AAC	
vob	MPEG1, 2	MP2, MP3, Dolby Digital, LPCM	
mp4, mov	MPEG4,DivX 3.11, DivX 4.12, DivX 5.x, DivX 6, Xvid 1.00, Xvid 1.01, Xvid 1.02, Xvid 1.03, Xvid 1.10-beta1/2H.264	AAC, HE-AAC, MP3	
mkv	H.264, MPEG-1,2,4	MP2, MP3, Dolby Digital, AAC HE-AAC, LPCM	
divx, avi	MPEG2, MPEG4, DivX 3.11, DivX 4, DivX 5, DivX 6, Xvid 1.00, Xvid 1.01, Xvid 1.02, Xvid 1.03, Xvid 1.10-beta1/2H.264	MP2, MP3, Dolby Digital, LPCM, ADPCM, AAC, HE-AAC	
Motion JPEG (avi, mp4, mkv)	JPEG	LPCM, ADPCM	
asf, wmv	VC1	WMA	
flv	Sorenson H.263, H264	MP3, AAC	

3D Supported Formats (For 3D TV)

	Signal	Resolution	Horizontal Frequency (kHz)	Vertical Frequency (Hz)	Playable 3D video format
HDMI Input	720p	1280x720	44.96 / 45.00	59.94 / 60.00	Top & Bottom, Side by Side
			89.90 / 90.00		HDMI 3D Frame Packing
	1080i	1920x1080	33.72 / 33.75		Top & Bottom, Side by Side
	1080p		67.432 / 67.50		Top & Bottom, Side by Side, Checker Board Single Frame Sequential
			27.00	24.00	Top & Bottom, Side by Side, Checker Board
			53.95 / 54.00	23.98 / 24.00	HDMI 3D Frame Packing
			33.75	30.00	Top & Bottom, Side by Side Checker Board
USB Input	1080p	1920x1080	33.75	30.00	Top & Bottom, Side by Side Checker Board, MPO (Photo)
	Resolution				Playable 3D video format
	Other Resolution (For Plasma TV)				Top & Bottom, Side by Side
PC Input (PZ200, LW5000 series)	1920x1080		66.587	59.93	Top & Bottom, Side by Side
Component (For Plasma TV)	720p	1280x720	44.96 / 45.00	59.94 / 60.00	Top & Bottom, Side by Side
	1080i	1920x1080	33.72 / 33.75	59.94 / 60.00	
	Signal				Playable 3D video format
DTV	720p, 1080i				Top & Bottom, Side by Side

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IR CODES

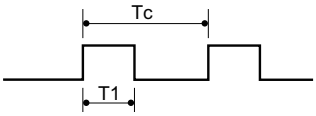
(Depending on model)

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

Remote Control IR Codes

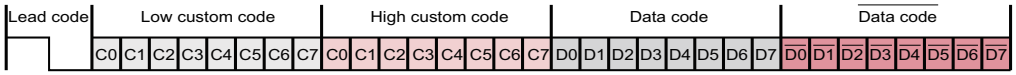
Output waveform

Single pulse, modulated with 37.917kHz signal at 455kHz

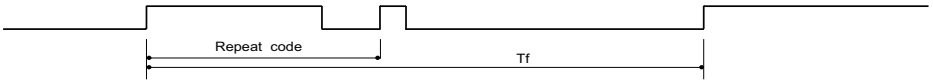


Frame configuration

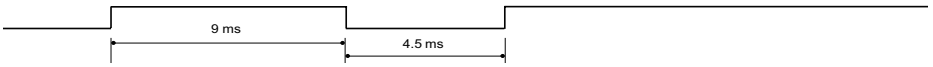
1st frame



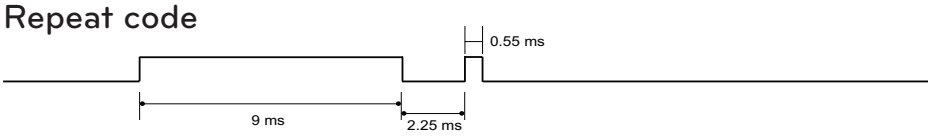
Repeat frame



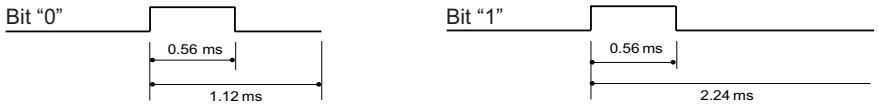
Lead code



Repeat code

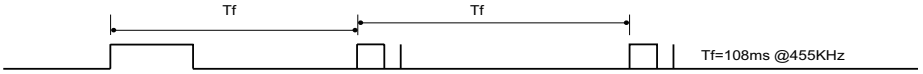


Bit description



Frame interval: Tf

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



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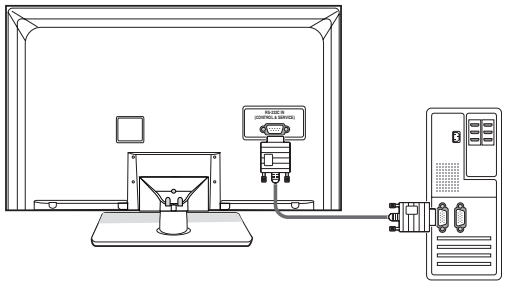
Code (Hexa)	Function	Note	Code (Hexa)	Function	Note
08	POWER	Remote control Button (Power On/Off)	0F	TV	Remote control Button
			DC	3D	Remote control Button
45	Q.MENU	Remote control Button	5B	EXIT	Remote control Button
43	Home	Remote control Button	D6	TV	Discrete IR Code (TV Input Selection)
0B	INPUT	Remote control Button			
10 - 19	Number Key 0-9	Remote control Button	C4	POWER ON	Discrete IR Code (Only Power On)
4C	- (Dash)/LIST	Remote control Button			
1A	FLASHBK or Q.VIEW	Remote control Button	C5	POWER OFF	Discrete IR Code (Only Power Off)
9	MUTE/DELETE	Remote control Button			
2	VOL +	Remote control Button	5A	AV1	Discrete IR Code (AV1 Input Selection)
3	VOL -	Remote control Button			
0	CH ∧	Remote control Button	D0	AV2	Discrete IR Code (AV2 Input Selection)
1	CH ∨	Remote control Button			
1E	FAV/MARK	Remote control Button	BF	COMPONENT1	Discrete IR Code (Component1 Input Selection)
40	∧	Remote control Button			
41	∨	Remote control Button	D4	COMPONENT2	Discrete IR Code (Component2 Input Selection)
7	<	Remote control Button			
6	>	Remote control Button	D5	RGB-PC	Discrete IR Code (RGB-PC Input Selection)
44	ENTER	Remote control Button			
28	BACK	Remote control Button	CE	HDMI1	Discrete IR Code (HDMI1 Input Selection)
79	RATIO	Remote control Button			
BA (Plasma)	FREEZE	Remote control Button	CC	HDMI2	Discrete IR Code (HDMI2 Input Selection)
95	ENERGY SAVING	Remote control Button			
7E	SIMPLINK	Remote control Button	E9	HDMI3	Discrete IR Code (HDMI3 Input Selection)
AA	INFO	Remote control Button			
30	AV MODE	Remote control Button	DA	HDMI4	Discrete IR Code (HDMI4 Input Selection)
72	RED	Remote control Button			
71	GREEN	Remote control Button	76	Ratio 4:3	Discrete IR Code (Only 4:3 Mode)
63	YELLOW	Remote control Button			
61	BLUE	Remote control Button	77	Ratio 16:9	Discrete IR Code (Only 16:9 Mode)
B1	■	Remote control Button			
B0	▶	Remote control Button	AF	Ratio Zoom	Discrete IR Code (Only Zoom Mode)
BA	⏸	Remote control Button			
8E	▶▶	Remote control Button			
8F	◀◀	Remote control Button			

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EXTERNAL CONTROL DEVICE SETUP

RS-232C Setup

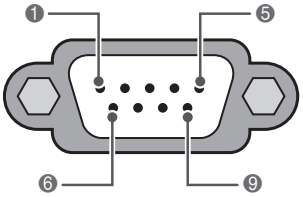
Connect the RS-232C (serial port) input jack to an external control device (such as a computer or an A/V control system) to control the product's functions externally.
Connect the serial port of the control device to the RS-232C jack on the product back panel.



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 connection cables are not supplied with the product.

Type of connector; D-Sub 9-Pin Male

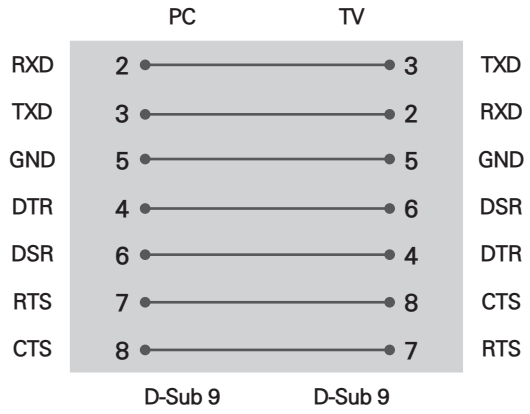


RS-232C IN
(CONTROL & SERVICE)

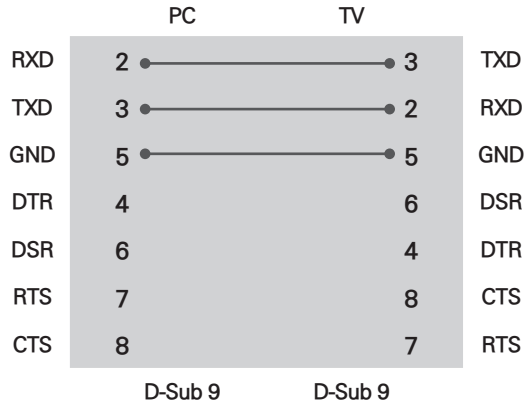
No.	Pin name
1	No connection
2	RXD (Receive data)
3	TXD (Transmit data)
4	DTR (DTE side ready)
5	GND
6	DSR (DCE side ready)
7	RTS (Ready to send)
8	CTS (Clear to send)
9	No Connection

RS-232C configurations

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

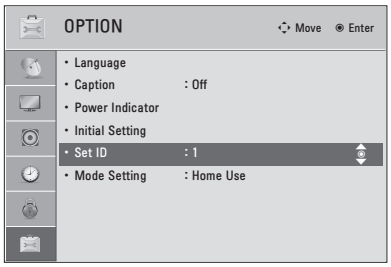


3-Wire Configurations(Not standard)



Set ID

Set ID number.



1 Press **Home** to access the main menus.

2 Press the Navigation buttons to scroll to **OPTION** and press **ENTER**.

3 Press the Navigation buttons to scroll to **Set ID** and press **ENTER**.

4 Scroll left or right to select a set ID number and select **CLOSE**. The adjustment range is 1-99.

5 When you are finished, press **EXIT**.

*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

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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.

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	(See p.96)	15. Bass	k	s	00 - 64
03. Aspect Ratio	k	c	(See p.96)	16. Balance	k	t	00 - 64
04. Screen Mute	k	d	00 - 01	17. 3D (For 3D TV)	x	t	(See p.97)
05. Volume Mute	k	e	00 - 01	18. Color Temperature	x	u	00 - 64
06. Volume Control	k	f	00 - 64	19. Extended 3D (For 3D TV)	x	v	(See p.97)
07. Contrast	k	g	00 - 64	20. ISM Method (Plasma)	j	p	(See p.98)
08. Brightness	k	h	00 - 64	21. Energy Saving	j	q	(See p.98)
09. Color	k	i	00 - 64	22. Auto Configuration	j	u	(See p.98)
10. Tint	k	j	00 - 64	24. Channel Add/Del	m	b	00 - 01
11. Sharpness	k	k	00 - 64	25. Key	m	c	(See p.98)
12. OSD Select	k	l	00 - 01	26. Backlight (LCD)	m	g	00 - 64
13. Remote Control Lock Mode	k	m	00 - 01				

	COMMAND1	COMMAND2	DATA00 (Hexadecimal)	DATA01 (Hexadecimal)	DATA02 (Hexadecimal)	DATA03 (Hexadecimal)	DATA04 (Hexadecimal)	DATA05 (Hexadecimal)
23. 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 set ID number in Option menu. Adjustment range is 1~ 99. When selecting Set ID '0', every connected the set 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, set will not send the status during the standby mode.

OK Acknowledgement

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

The set 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, set 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 set 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, set 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 set.

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, set 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 set.

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

Data 00: DTV (Antenna) Data 01: DTV (Cable)
Data 10: Analog (Antenna) Data 11: Analog (Cable)
Data 20: AV or AV1 Data 21: AV2
Data 40: Component or Component1
Data 41: Component2
Data 60: RGB-PC Data 90: HDMI1
Data 91: HDMI2 Data 92: HDMI3
Data 93: HDMI4

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 Data: 09: Just scan
Data 02: 16:9 Data: 10: Cinema Zoom 1
Data 04: Zoom ⋮
Data 06: Set by program Data 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".

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".

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".

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

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".

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".

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".

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 Monitor set, use this mode. When main power is on/off, remote control lock is released. If 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".

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".
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".

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

17. 3D (Command: x t) (For 3D TV)

To change 3D mode for TV.

Transmission [x][t][ ][Set ID][ ][Data01][ ][Data02][ ][Data03][ ][Data04][Cr]

Data1
00: 3D On 01: 3D Off
02: 3D to 2D 03: 2D to 3D
Data2
00: Top and Bottom 01: Side by Side
02: Check Board 03: Frame Sequential
Data3
00: Right to Left
01: Left to Right
Data4
3D Depth: Min : 00 ~ Max : 14
(*transmit by Hexadecimal code)
*If data1 is 00(3D On), data4 has no meaning.
*If data1 is 01(3D Off) or 02(3D to 2D), data2, data3 and data4 have no meaning.
*If data1 is 03(2D to 3D), data2 and data3 have no meaning.

Data 1	Data 2	Data 3	Data 4
00	o	o	x
01	x	x	x
02	x	x	x
03	x	x	o

x : Don't care

Acknowledgement [t][ ][OK][Data01][Data02][Data03][Data04][x][t][ ][NG][Data01][x]

18. Color Temperature (Command: x u)

To adjust color temperature.
You can also adjust color temperature in the PICTURE menu.

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

Data Min: 00 ~ Max: 64 (*transmit by Hexadecimal code)
*Refer to "Real data mapping".

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

19. Extended 3D (Command: x v) (For 3D TV)

To change 3D option for TV.

Transmission [x][v][ ][Set ID][ ][Data01][ ][Data02][Cr]

Data1: 3D option
00: 3D Picture Correction
01: 3D Depth (2D to 3D Only)
02: 3D Viewpoint
03: 3D Picture Size
04: 3D Picture Balance
05: 3D Optimization
Data2: It has own range for each 3D option determined by Data1.
1) When Data1 is 00
00: Right to Left 01: Left to Right
2) When Data1 is 01, 02
Data Min: 00 ~ Max: 14 (*transmit by Hexadecimal code)
3) When Data1 is 03
00: Just Scan 01: 16:9
4) When Data1 is 04
00: Off 01: On
5) When Data1 is 05
Data Min: 00 ~ Max: 02 (*transmit by Hexadecimal code)

Acknowledgement [v][ ][OK][Data1][Data2][x]
[v][ ][NG][Data1][x]

* Use the feature depending on your model.

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20. ISM Method (Command: j p) (Plasma)

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]

21. Energy Saving (Command: j q)

To control the energy saving function.

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

Data 00: off
01: Minimum
02: Medium
03: Maximum
04: Auto/Intelligent sensor (depending on model)
05: Screen off

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

22. 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 01: To set

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

23. Channel Tuning (Command: m a)

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

Transmission [m][a][ ][Set ID][ ][Data00][ ][Data01][ ][Data02][ ][Data03][ ][Data04][ ][Data05][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 ATSC tuner automatically maps the channel to the Major number, the Physical number is not required when sending a command.
Data 00: Physical Channel Number
NTSC air: 02~45, NTSC cable: 01, 0E~7D
ATSC air: 01~45, ATSC cable: 01~87
Data 01 & 02: Major Channel Number
Data 01: High byte Data 02: Low byte
Two bytes are available for the Major and Minor, normally only the second byte is used.
Data 03 & 04: Minor Channel Number
Not needed for NTSC.
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 (NTSC) 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 (ATSC) 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

* Use the feature depending on your model.

24. 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]

25. Key (Command: m c)

To send IR remote key code.

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

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

When TV is in the standby mode, TV will turn on by POWER button of remote control only.

26. Backlight (Command: m g) (LCD)

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".

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

* Table List (Channel Tuning)

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	NTSC Air
1	Sub	1	One	1	No Use	x	0	0	0	1	NTSC Cable
						x	0	0	1	0	ATSC Air
						x	0	0	1	1	ATSC Cable_std
						x	0	1	0	0	ATSC Cable_hrc
						x	0	1	0	1	ATSC Cable_irc
						x	0	1	1	0	ATSC cable_auto
						x	0	1	1	1	Reserved
						x	x	x	x	x	...
						x	1	1	1	1	Reserved

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