



OWNER'S MANUAL

Safety and Reference

LED TV*

* LG LED TV applies LCD screen with LED backlights.

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



(1801-REV00)

www.lg.com

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Warning! Safety instructions



CAUTION

RISK OF ELECTRIC SHOCK
DO NOT OPEN



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

 This symbol 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.

 This symbol is intended to alert the user to the presence of important operating and maintenance (servicing) instructions in the literature accompanying the appliance.

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

- TO PREVENT THE SPREAD OF FIRE, KEEP CANDLES OR OTHER ITEMS WITH OPEN FLAMES AWAY FROM THIS PRODUCT AT ALL TIMES.
 - **Do not place the TV and/or remote control in the following environments:**
 - Keep the product away from direct sunlight.
 - An area with high humidity such as a bathroom.
 - Near any heat source such as stoves and other devices that produce heat.
 - Near kitchen counters or humidifiers where they can easily be exposed to steam or oil.
 - An area exposed to rain or wind.
 - 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).
 - Near flammable objects such as gasoline or candles, or expose the TV to direct air conditioning.
 - Do not install in excessively dusty places.
- Otherwise, this may result in fire, electric shock, combustion/explosion, malfunction or product deformation.

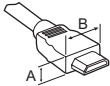
• Ventilation

- Install your TV where there is proper ventilation. Do not install in a confined space such as a bookcase.
- Do not install the product on a carpet or cushion.
- Do not block or cover the product with cloth or other materials while unit is plugged in.
- Take care not to touch the ventilation openings. When watching the TV for a long period, the ventilation openings may become hot.
- 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 device.
- Do not move the TV whilst the Power cord is plugged in.
- Do not use a damaged or loosely fitting power cord.
- Be sure do grasp the plug when unplugging the power cord. Do not pull on the power cord to unplug the TV.
- Do not connect too many devices to the same AC power outlet as this could result in fire or electric shock.
- **Disconnecting the Device from the Main Power**
 - The power plug is the disconnecting device. In case of an emergency, the power plug must remain readily accessible.
- Do not let your children climb or cling onto the TV. Otherwise, the TV may fall over, which may cause serious injury.
- **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 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

- **Grounding** (Except for devices which are not grounded.)
 - TV with a three-prong grounded AC plug must be connected to a three-prong grounded AC outlet. Ensure that you connect the earth ground wire to prevent possible electric shock.
 - Never touch this apparatus or antenna during a lightning storm. You may be electrocuted.
 - Make sure the power cord is connected securely to the TV and wall socket if not secured damage to the Plug and socket may occur and in extreme cases a fire may break out.
 - Do not insert metallic or inflammable objects into the product. If a foreign object is dropped into the product, unplug the power cord and contact the customer service.
 - Do not touch the end of the power cord while it is plugged in. You may be electrocuted.
 - **If any of the following occur, unplug the product immediately and contact your local customer service.**
 - The product has been damaged.
 - If water or another substance enters the product (like an AC adapter, power cord, or TV).
 - If you smell smoke or other odors coming from the TV.
 - When lightning storms or when unused for long periods of time. Even the TV is turned off by remote control or button, AC power source is connected to the unit if not unplugged in.
 - Do not use high voltage electrical equipment near the TV (e.g., a bug zapper). This may result in product malfunction.
 - Do not attempt to modify this product in any way without written authorization from LG Electronics. Accidental fire or electric shock can occur. Contact your local customer service for service or repair. Unauthorized modification could void the user's authority to operate this product.
 - Use only an authorized attachments / accessories approved by LG Electronics. Otherwise, this may result in fire, electric shock, malfunction, or product damage.
 - Never disassemble the AC adapter or power cord. This may result in fire or electric shock.
 - Handle the adapter carefully to avoid dropping or striking it. An impact could damage the adapter.
 - To reduce the risk of fire or electrical shock, do not touch the TV with wet hands. If the power cord prongs are wet or covered with dust, dry the power plug completely or wipe dust off.
- **Batteries**
 - Store the accessories (battery, etc.) in a safe location out of the reach of children.
 - Do not short circuit, disassemble, or allow the batteries to overheat. Do not dispose of batteries in a fire. Batteries should not be exposed to excessive heat.
 - **Moving**
 - When 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. Otherwise, this may result in product damage, fire hazard or injury.
 - Keep the packing anti-moisture material or vinyl packing out of the reach of children.
 - Do not allow an impact shock, any objects to fall into the product, and do not drop anything onto the screen.
 - Do not press strongly upon the panel with a hand or a sharp object such as a nail, pencil, or pen, or make a scratch on it. It may cause damage to screen.
 - **Cleaning**
 - When cleaning, unplug the power cord and wipe gently with a soft/dry cloth. Do not spray water or other liquids directly on the TV. Do not clean your TV with chemicals including glass cleaner, any type of air freshener, insecticide, lubricants, wax (car, industrial), abrasive, thinner, benzene, alcohol etc., which can damage the product and/or its panel. Otherwise, this may result in electric shock or product damage.

Preparing

- If the TV is turned on for the first time after it was shipped from the factory, initialization of the TV may take a few minutes.
- Image shown may differ from your TV.
- Your TV's OSD (On Screen Display) may differ slightly from that shown in this manual.
- The available menus and options may differ from the input source or product model that you are using.
- New features may be added to this TV in the future.
- The device must be easily accessed to a location outlet near the access. Some devices are not made by turning on / off button, turning off the device and unplugging the power cord.
- 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.
- For an optimal connection, HDMI cables and USB devices should have bezels less than 10 mm thick and 18 mm width. Use an extension cable that supports USB 2.0 if the USB cable or USB memory stick does not fit into your TV's USB port.



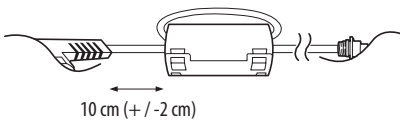
* A ≤ 10 mm

* B ≤ 18 mm

- Use a certified cable with the HDMI logo attached.
- If you do not use a certified HDMI cable, the screen may not display or a connection error may occur. (Recommended HDMI Cable Types)
 - High-Speed HDMI[®]/TM Cable (3 m or less)
 - High-Speed HDMI[®]/TM Cable with Ethernet (3 m or less)
- How to use the ferrite core (Depending on model)
 - Use the ferrite core to reduce the electromagnetic interference in the power cord. Wind the power cord on the ferrite core once.

[Wall side]

[TV side]



10 cm (+ / -2 cm)

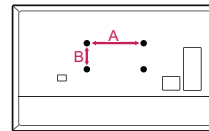
Separate Purchase

Separate purchase items can be changed or modified for quality improvement without any notification. Contact your dealer to buy these items. These devices only work with certain models.

The model name or design may be changed depending on the upgrade of product functions, manufacturer's circumstances or policies. (Depending on model)

Wall Mounting Bracket

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



Model	32LK50*	43LK50*
VESA (A x B) (mm)	100 x 100	200 x 200
Standard screw	M4	M6
Number of screws	4	4
Wall mount bracket	LSW140B	LSW240B MSW240
Model	28TK43*	
VESA (A x B) (mm)	100 x 100	
Standard screw	M4	
Number of screws	4	
Wall mount bracket	RW120	

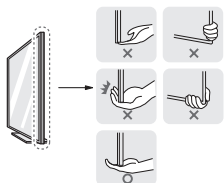
Lifting and moving the TV

Please note the following advice to prevent the TV from being scratched or damaged and for safe transportation regardless of its type and size.

- 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 avoid damage.



- Hold the side 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.
- Do not apply excessive pressure to cause flexing / bending of frame chassis as it may damage screen.
- When handling the TV, be careful not to damage the protruding buttons.

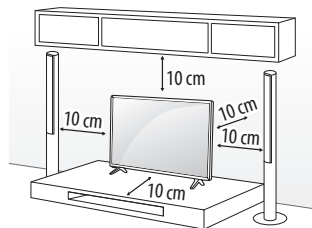


- Avoid touching the screen at all times, as this may result in damage to the screen.
- Do not move the TV by holding the cable holders, as the cable holders may break, and injuries and damage to the TV may occur.
- When attaching the stand to the TV set, place the screen facing down on a cushioned table or flat surface to protect the screen from scratches.

Mounting on the Table

1 Lift and tilt the TV into its upright position on a table.

- Leave a 10 cm (minimum) space from the wall for proper ventilation.



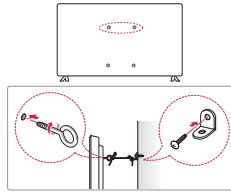
(Depending on model)

2 Connect the power cord to a wall outlet.



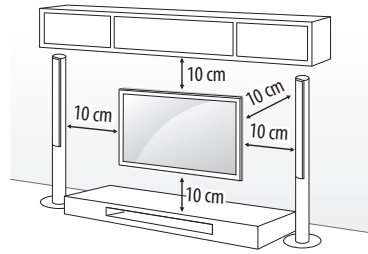
- Do not apply foreign substances (oils, lubricants, etc.) to the screw parts when assembling the product. (Doing so may damage the product.)
- If you install the TV on a stand, you need to take actions to prevent the product from overturning. Otherwise, the product may fall over, which may cause injury.
- Do not use any unapproved items to ensure the safety and product life span.
- Any damage or injuries caused by using unapproved items are not covered by the warranty.
- Make sure that the screws are inserted correctly and fastened securely. (If they are not fastened securely enough, the TV may tilt forward after being installed.) Do not use too much force and over tighten the screws; otherwise screw may be damaged and not tighten correctly.

Securing TV to the Wall



(Depending on model)

- 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.
 - Use a platform or cabinet that is strong and large enough to support the TV securely.
 - Brackets, bolts and ropes are not provided. You can obtain additional accessories from your local dealer.



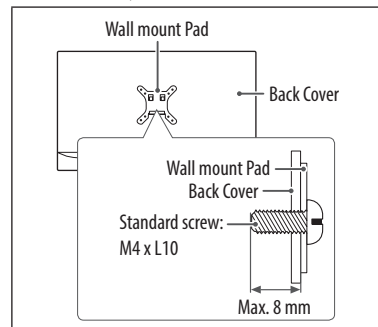
(Depending on model)



- Remove the stand before installing the TV on a wall mount by performing the stand attachment in reverse.
- For more information of screws and wall mount bracket, refer to the Separate Purchase.
- If you intend to mount the product to a wall, attach VESA standard mounting interface (optional parts) to the back of the product. When you install the set to use the wall mounting bracket (optional parts), fix it carefully so as not to drop.
- 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 install this product on a wall if it could be exposed to oil or oil mist. This may damage the product and cause it to fall.
- Screw length from outer surface of back cover should be under 8 mm. (Only 28TK43*)

Mounting to the 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. LG recommends that wall mounting be performed by a qualified professional installer. We recommend the use of LG's wall mount bracket. LG's wall mount bracket is easy to move with cables connected. When you do not use LG's wall mount bracket, please use a wall mount bracket where the device is adequately secured to the wall with enough space to allow connectivity to external devices. It is advised to connect all the cables before installing fixed wall mounts.



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.

Antenna/Cable

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

- Use a signal splitter to use more than 2 TVs.
- If the image quality is poor, install a signal amplifier properly to improve the image quality.
- If the image quality is poor with an antenna connected, try to realign the antenna in the correct direction.
- An antenna cable and converter are not supplied.

Satellite dish

Connect the TV to a satellite dish to a satellite socket with a satellite RF cable (75 Ω). (Depending on model)

CI module

View the encrypted (pay) services in digital TV mode. (Depending on model)

- Check if the CI module is inserted into the PCMCIA card slot in the right direction. If the module is not inserted properly, this can cause damage to the TV and the PCMCIA card slot.
- If the TV does not display any video and audio when CI+ CAM is connected, please contact to the Terrestrial/Cable/Satellite Service Operator.

Other connections

Connect your TV to external devices. For the best picture and audio quality, connect the external device and the TV with the HDMI cable. Some separate cable is not provided.

HDMI

- Supported HDMI Audio format (Depending on model):
AC-3 (Max bit rate: 640 Kbps),
Dolby Digital / Dolby Digital Plus (32 kHz, 44.1 kHz, 48 kHz),
PCM (48 KHz, 44.1 KHz, 32 KHz)

USB

Some USB Hubs may not work. If a USB device connected using a USB Hub is not detected, connect it to the USB port on the TV directly.

External Devices

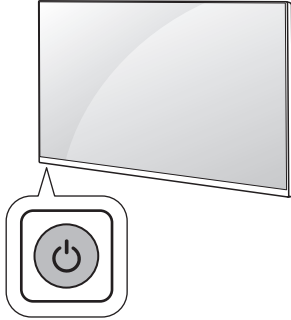
Available external devices are: Blu-ray player, HD receivers, DVD players, VCRs, audio systems, USB storage devices, PC, gaming devices, and other external devices.

- The external device connection may differ from the model.
 - Connect external devices to the TV regardless of the order of the TV port.
 - If you record a TV program on a Blu-ray/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.
 - Refer to the external equipment's manual for operating instructions.
 - If you connect a gaming device to the TV, use the cable supplied with the gaming device.
 - 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.
 - In PC mode, some resolution settings may not work properly depending on the graphics card.
 - When connecting via a wired LAN, it is recommended to use a CAT 7 cable. (Only when LAN port is provided.)
- ⚠
- Do not drop the product or let it fall over when connecting external devices. Otherwise, this may result in injury or damage to the product.
 - When connecting external devices such as video game consoles, make sure the connecting cables are long enough. Otherwise, the product may fall over, which may cause injury or damage the product.

Using Button

ENGLISH

You can simply operate the TV functions, using the button. (Depending on model)



Basic functions

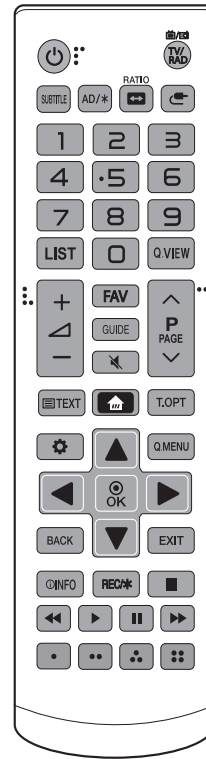


Using Remote Control

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.

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



(Some buttons and services may not be provided depending on models or regions.)

 **(POWER)** Turns the TV on or off.

TV/RAD  Selects Radio, TV and DTV programme.

SUBTITLE Recalls your preferred subtitle in digital mode.

AD/* Audio descriptions function will be enabled.


RATIO  Resizes an image.

 **(INPUT)** Changes the input source.

Number buttons Enters numbers.

LIST Accesses the saved programme list.



Q.VIEW Returns to the previously viewed programme.



 Adjusts the volume level.

FAV Accesses your favourite programme list.

GUIDE Shows programme guide.


 **(MUTE)** Mutes all sounds.

 **P**  Scrolls through the saved programmes.

 **PAGE**  Moves to the previous or next screen.

Teletext buttons  **TEXT, T.OPT** These buttons are used for teletext.

 **(HOME)** Accesses the Home menu.

 **(Settings)** Accesses the Settings menu.


Q.MENU Accesses the Quick menus.

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

 **OK** Selects menus or options and confirms your input.

BACK Returns to the previous level.

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

 **INFO** Views the information of the current programme and screen.

REC/* This function is not supported.

Control buttons  Controls media contents.

 These access special functions in some menus.



- Do not mix new batteries with old batteries. This may cause the batteries to overheat and leak.
- Failure to match the correct polarities of the battery may cause the battery to burst or leak, resulting in fire, personal injury, or ambient pollution.
- This apparatus uses batteries. In your community there might be regulations that require you to dispose of these batteries properly due to environmental considerations. Please contact your local authorities for disposal or recycling information.
- Batteries inside or inside the product shall not be exposed to excessive heat such as sunshine, fire or the like.

Settings

Automatically Setting Up Programme

 **(Settings)**  **SETUP**  **Auto Tuning**

Automatically tunes the programmes.

- If Input Source is not connected properly, programme registration may not work.
- **Auto Tuning** only finds programmes that are currently broadcasting.
- If **Lock System** is turned on, a pop-up window will appear asking for password.

To use Energy Saving feature

 **(Settings)**  **PICTURE**  **Energy Saving**

Reduces power consumption by adjusting screen brightness.

- **Off:** Turns off the Energy Saving mode.
- **Minimum / Medium / Maximum:** Applies the pre-set Energy Saving mode.
- **Screen Off:** Screen is turned off and only sound is played. Press any button except Power button on the remote control to turn the screen back on.

To select Picture Mode

 **(Settings)**  **PICTURE**  **Picture Mode**

Select the picture mode optimized for the viewing environment or the programme.

- **Vivid:** Heightens contrast, brightness and sharpness to display vivid images.
- **Standard:** Displays images in standard levels of contrast, brightness and sharpness.
- **Eco:** The Energy Saver feature changes settings on the TV to reduce power consumption.
- **Cinema:** Displays the optimum picture for movie.
- **Sport:** [Depending on model]
Optimizes the video image for high and dynamic actions by emphasizing primary colours such as white, grass, or sky blue.
- **Game:** Displays the optimum picture for game.
- Depending on input signal, available range of picture modes may differ.

Fine-tuning Picture Mode

⚙️ (Settings) ⇨ PICTURE ⇨ Picture Mode

This feature allows you to adjust the selected picture mode in detail.

- **Backlight:** Controls the level of screen brightness by adjusting the backlight. The closer to 100, the brighter the screen.
- **Contrast:** Adjusts the contrast of the bright and dark areas of the picture. The closer to 100, the higher the contrast.
- **Brightness:** Adjusts the overall screen brightness. The closer to 100, the brighter the screen.
- **Sharpness:** Adjusts the sharpness of the image. The closer to 50, the sharper and clearer the image.
- **Colour:** Tones down or up the colours displayed on the screen. The closer to 100, the deeper the colour.
- **Tint:** Adjusts the colour balance between red and green displayed on the screen. The closer to Red 50, the more red the colour will be. The closer to Green 50, the more green the colour will be.
- **Colour Temp.:** Adjusts the colour temperature from cold to warm.
- Depending on input signal or other picture settings, the range of detailed items for adjustment may differ.

To set advanced control

⚙️ (Settings) ⇨ PICTURE ⇨ Picture Mode ⇨ Advanced Control

Calibrates the screen for each picture mode or adjusts picture settings for a special screen.

- **Dynamic Contrast:** Adjusts the contrast to the optimal level according to the brightness of the image.
- **Dynamic Colour:** Adjusts colours to make the image appear in more natural colours.
- **Gamma:** Sets the gradation curve according to the output of picture signal in relation to the input signal.
- Depending on input signal or other picture settings, the range of detailed items for adjustment may differ.

To set additional picture options

⚙️ (Settings) ⇨ PICTURE ⇨ Picture Mode ⇨ Picture Option

Adjusts detailed setting for images.

- **Noise Reduction:** Eliminates noise in the picture.
- **MPEG Noise Reduction:** Eliminates noise generated while creating digital picture signals.
- **Black Level:** Adjusts the brightness and contrast of the screen to suit the black level of the input picture by using the blackness (black level) of the screen.
- **Real Cinema:** Optimizes the screen for movie viewing.
- Depending on input signal or other picture settings, the range of detailed items for adjustment may differ.

Resetting picture settings

⚙️ (Settings) ⇨ PICTURE ⇨ Picture Mode ⇨ Picture Reset

Resets picture settings that the user customizes. Each picture mode is reset. Select the picture mode you wish to reset.

To adjust Aspect Ratio

⚙️ (Settings) ⇨ PICTURE ⇨ Aspect Ratio

Selects the screen aspect ratio.

- **16:9:** Displays an aspect ratio of 16:9.
- **Just Scan:** Displays video images in the original size without removing parts of the edge of the image.
 - In DTV, Component, HDMI, and DVI (over 720p) mode, **Just Scan** is available.
- **Original:** Changes the aspect ratio to 4:3 or 16:9 depending on the input video signal.
- **Full Wide:** When TV receives the wide screen signal, it will let you adjust the picture horizontally or vertically, in a linear proportion, to fill the entire screen fully. 4:3 and 14:9 video is supported in full screen without any video distortion through DTV input.
 - In Analogue/DTV mode, **Full Wide** is available.
- **4:3:** Displays an aspect ratio of 4:3.
- **14:9:** You can view a picture format of 14:9 or a general TV programme in the 14:9 mode. The 14:9 screen is viewed in the same way as in 4:3, but is moved up or down.
- **Zoom:** Resizes images to fit the screen width. The top and bottom parts of the image may be cut off.

Selecting Sound Mode

⚙️ (Settings) ⇒ AUDIO ⇒ Sound Mode

Adjusts TV audio to an optimal level based on a selected sound mode.

- **Standard:** Optimizes the sound for all types of content.
- **News:** Boosts voice clarity from the TV.
- **Music:** [Depending on model] Optimizes the sound for music.
- **Cinema:** Optimizes the sound for cinemas.
- **Sport:** [Depending on model] Optimizes the sound for sports.
- **Game:** Optimizes the sound for gameplay.

Using the Sound Effect function

⚙️ (Settings) ⇒ AUDIO ⇒ Sound Effect

The user can select various sound effects.

- **Treble:** Controls the dominant sounds in the output.
- **Bass:** Controls the softer sounds in the output.
- **Balance:** Adjusts left/right audio balance.
- **Reset:** Initialize the applied effect under the Sound Effect menu.

To set Auto Volume

⚙️ (Settings) ⇒ AUDIO ⇒ Auto Volume

Sets **Auto Volume** to **On**. Varying volume output from programme to programme is automatically adjusted for convenient TV watching when clicking through different programme.

To use Digital Sound Out

⚙️ (Settings) ⇒ AUDIO ⇒ Digital Sound Out

Sets up Digital Sound Out.

Item	Audio Input	Digital Audio Output
PCM	All	PCM
Auto	MPEG Dolby Digital	PCM Dolby Digital

- Supported DTV Audio:
MPEG,
Dolby Digital / Dolby Digital Plus (32 kHz, 44.1 kHz, 48 kHz),
HE-AAC

Using the TV speakers

⚙️ (Settings) ⇒ AUDIO ⇒ TV Speakers

[This feature is available only for models with built-in TV speakers.]

- **On:** Audio is played through the TV's internal speakers.
- **Off:** Audio is played through the Optical Digital Output port only.
 - In **Off** mode, **Sound Mode**, **Sound Effect** and **Auto Volume** function will be disabled.

Using Manual Tuning

⚙️ (Settings) ⇒ SETUP ⇒ Manual Tuning

Adjusts programmes manually and saves the results.

For digital broadcasting, signal strength and signal quality can be checked.

For analogue broadcasting, you can set up station names and use fine tuning (except for Satellite mode). Normally fine tuning is only necessary if reception is poor.

Editing programmes

⚙️ (Settings) ⇒ SETUP ⇒ Programme Edit

Edits the saved programmes.

Set as favourite programme, block/unblock programme, skip programme etc. of the selected programme.

To select Programme mode

⚙️ (Settings) ⇒ SETUP ⇒ Programme Mode

This function allows you to watch a tuned programme in **Antenna**, **Cable**, **Satellite** mode.

- You can only watch programmes in the selected mode.

About CI Information

⚙️ (Settings) ⇒ SETUP ⇒ CI Information

[This feature is available on certain models only.]

- This function enables you to watch some encrypted services (pay services).
- If you remove the CI Module, you cannot watch pay services.
- CI (Common Interface) functions may not be possible depending upon the country broadcasting circumstances.
- When the module is inserted into the CI slot, you can access the module menu.
- To purchase a module and smart card, contact your dealer.
- When the TV is turned on after inserting a CI Module, you may not have any video and audio output in scrambled programme. The Smart Card may not be compatible with the CI module.
- When using a CAM(Conditional Access Module), please make sure it meets fully the requirements of either DVB-CI or CI plus.
- An abnormal process of CAM(Conditional Access Module) may cause a bad picture.
- [This feature is available on certain models only.] If the TV does not display any video and audio when CI+ CAM is connected, please contact to the Terrestrial / Cable / Satellite Service Operator.

To set Cable DTV

⚙️ (Settings) ⇒ SETUP ⇒ Cable DTV Setting

[If the Programme Mode is set to Cable]

- **Service Operator:** Select Service Operator.
- **Channel Auto Update:** This function allows you to automatically update the channel.

To set Satellite

⚙️ (Settings) ⇒ SETUP ⇒ Satellite Setting

[If the Programme Mode is set to Satellite]

You can add/delete/set the satellite you want

To edit Transponder

⚙️ (Settings) ⇒ SETUP ⇒ Transponder Edit

[If the Programme Mode is set to Satellite]

You can add/modify/delete a transponder.

To set current time

⚙️ (Settings) ⇒ TIME ⇒ Clock

Checks or changes the time while watching TV.

- **Auto:** Synchronizes the TV clock to the digital time information sent by the TV station.
- **Manual:** Sets the time and date manually if the auto setup does not correspond to the current time.

To set the TV to turn on and off automatically

⚙️ (Settings) ⇒ TIME ⇒ Off Time / On Time

You can set the Power On/Off time for the TV.

Select **Off** if you are not going to set **Off Time / On Time**.

- To use **Off Time / On Time**, set the current time correctly.
- Even when the **On Time** function is on, the TV will turn off automatically in 120 minutes when no button is pressed within that time.

To use Sleep Timer

⚙️ (Settings) ⇒ TIME ⇒ Sleep Timer

Turns off the TV after a preset number of minutes.

To cancel the **Sleep Timer**, select **Off**.

To set Automatic Standby

⚙️ (Settings) ⇒ TIME ⇒ Automatic Standby

[This function is available on certain models or in certain countries only]

If you do not press any button on the TV or remote control for a certain period, the TV will automatically switch to standby mode.

- This function does not work on **Store Mode** or while software update.

To set password

⚙️ (Settings) ⇨ LOCK ⇨ Set Password

Sets or changes the TV password.

- The initial password is set to '0000'.
- When France is selected for Country, password is not '0000' but '1234'.
- When France is selected for Country, password cannot be set to '0000'.

To lock system

⚙️ (Settings) ⇨ LOCK ⇨ Lock System

Permits only specific programmes by blocking programmes or external input.

First set **Lock System to On**.

- **Parental Guidance** (Only DTV): This function operates according to information from the broadcaster. Therefore if the signal has incorrect information, this function does not operate. Prevents children from watching certain adult TV programmes according to the ratings limit set. Enter a password to watch a blocked programme. Ratings differ by country.
- **Input Block**: Blocks the input sources.

To set Language

⚙️ (Settings) ⇨ OPTION ⇨ Language(Language)

You can select the language of the menu displayed on the screen and the digital sound broadcasting.

- **Menu Language**: Selects a language for the display text.
- **Audio Language**: [In Digital mode Only][The configurable items differ depending on country.] Selects the desired language when watching digital broadcasting containing several voice languages.
- **Subtitle Language**: [In Digital mode Only] Use the Subtitle function when two or more subtitle languages are broadcast.
 - If subtitle data in a selected language is not broadcast, the default language subtitle will be displayed.
- **Text Language**: [In Digital mode Only][The configurable items differ depending on country.] Use the Text language function when two or more Text languages are broadcast.
 - If teletext data in a selected language is not broadcast, the default Text language will be displayed.
 - If you select the wrong local country, teletext may not appear correctly on the screen and some problems may occur during teletext operation.

To set the Location

⚙️ (Settings) ⇨ OPTION ⇨ Country

[This feature is available in certain countries only.]

Sets the country that the TV uses.

TV settings are changed according to the broadcast environment of the selected country.

- If the country setting is changed, the **Auto Tuning** information screen may appear.
- In a country that Digital broadcasting regulation isn't fixed, some DTV functions may not work depending on digital broadcasting circumstances.
- If the country setting is set to "--", European terrestrial digital standard broadcasting programmes are available, but some DTV functions may not work properly.

To select audio commentary or subtitles

⚙️ (Settings) ⇨ OPTION ⇨ Disability Assistance

Audio commentary or subtitles are provided for those who are hard of hearing or visually impaired.

- **Hard of Hearing** (🗣️): This function is used for the hearing impaired. If it is set to on, the subtitle is displayed by default.
- **Audio Description**: This function is for the blind, and provides explanatory audio describing the current situation in a TV programme in addition to the basic audio. When **Audio Description** is selected **On**, basic audio and Audio Description are provided only for those programmes that have Audio Description included.

To set Subtitle

⚙️ (Settings) ⇨ OPTION ⇨ Subtitle

View subtitles when the TV station provides subtitled programing.

Subtitle sets and changes subtitles to **Off**, **On** or **Auto**.

- **Off**: Disable subtitle display.
- **On**: Enable subtitle display.
- **Auto**: Subtitle display automatically.

To specify Factory Reset

⚙️ (Settings) ⇒ OPTION ⇒ Factory Reset

All stored information is deleted and TV settings are reset.

TV turns itself off and back on, and all settings are reset.

- When **Lock System** is in place, a pop-up window appears and asks for password.
- Do not turn off the power during initialization.

To change the TV Mode

⚙️ (Settings) ⇒ OPTION ⇒ Mode Setting

Selects **Home Mode** or **Store Mode**.

When in use in home, please select **Home Mode**.

Store Mode is for store display.

To obtain the source code

⚙️ (Settings) ⇒ OPTION ⇒ LGE Open Source Software Notice

To display the open source licenses, that is contained in this product.

To update the software

⚙️ (Settings) ⇒ OPTION ⇒ System info.

Selects **USB Update**, **OAD Update** or **FW Version**. The firmware will download and install. Upon completion of the update, your LG TV will restart.

- **USB Update:** Updates software via USB device.
- **OAD Update:** Selects **On** / **Off** to update the operation software using the OAD (Over Air Download) Update.
Automatic update mode means TV will update software automatically, when software was downloaded completed.
- **FW Version:** Checks the software version and Product/Service information.

To use My Media

🏠 (HOME) ⇒ MY MEDIA ⇒ All Media / Movie List / Photo List / Music List

Selects a file from the list. Displays the file that you choose.

Sets play related settings by checking option during disk playback.

To remove the USB device

Q.MENU ⇒ USB Device

Select a USB storage device that you want to remove.

When you see a message that the USB device has been removed, separate the device from the TV.

- Once a USB device has been selected for removal, it can no longer be read. Remove the USB storage device and then re-connect it.

Using a USB storage device - warning

- If the USB storage device has a built-in auto recognition program or uses its own driver, it may not work.
- Some USB storage devices may not work or may work incorrectly.
- Use only USB storage devices formatted with the Windows FAT32 or NTFS File System.
- For external USB HDDs, it is recommended that you use devices with a rated voltage of less than 5 V and a rated current of less than 500 mA.
- It is recommended that you use USB memory sticks of 32 GB or less and USB HDDs of 2 TB or less.
- If a USB HDD with power-saving function does not work properly, turn the power off and on. For more information, refer to the user manual of the USB HDD.
- Data in the USB storage device can be damaged, so be sure to back up important files to other devices. Data maintenance is the user's responsibility and the manufacturer is not responsible for data loss.

My Media supporting file

- Maximum data transfer rate: 20 Mbps (Mega bit per second)
- External supported subtitle formats: .srt (SubRip), .smi (SAMI), .sub (SubViewer¹, MicroDVD, DVDsubtitleSystem, Subldx(Vobsub)), .ass/.ssa (SubStation Alpha), .txt (TempPlayer)

1 SubViewer: Only support SubViewer 1.0 & 2.0

Supported Video Formats

- Maximum: 1920 x 1080 @ 30p (Only Motion JPEG 640 x 480 @ 30p)

Extension	Codec	
.asf, .wmv	Video	VC-1 (WMV3, WVC1)
	Audio	WMA7,8,9 Standard
.avi, .xvid	Video	MPEG2, MPEG4 Part2, XviD, H.264/AVC
	Audio	HE-AAC, LPCM, ADPCM, Dolby Digital (AC3), MP3
.ts, .trp, .tp	Video	H.264/AVC, MPEG2, HEVC
	Audio	MP3, Dolby Digital (AC3), AAC, HE-AAC
.vob	Video	MPEG1, MPEG2
	Audio	Dolby Digital (AC3), DVD LPCM
.mp4, .mov	Video	MPEG4 Part2, XVID, H.264/AVC, HEVC
	Audio	AAC, MP3
.mkv	Video	MPEG2, MPEG4 Part2, H.264/AVC, HEVC
	Audio	HE-AAC, Dolby Digital (AC3), MP3, LPCM
.mpg, .mpeg	Video	MPEG1, MPEG2
	Audio	Dolby Digital (AC3), LPCM
.dat	Video	MPEG1
	Audio	MP2
.flv	Video	Sorenson H.263, H.264/AVC
	Audio	MP3, AAC

Supported Audio Formats

Extension	Item	Info
.mp3	Bit rate	32 Kbps - 320 Kbps
	Sample freq.	8 kHz - 48 kHz
	Support	MPEG1 Layer2, MPEG1 Layer3, MPEG2, MPEG2.5
.wma	Bit rate	4 Kbps - 320 Kbps
	Sample freq.	8 kHz - 48 kHz
	Support	WMA

Supported Photo Formats

Extension	Item	Resolution
2D (jpeg)	Available file type	SOF0: Baseline, SOF1: Extend Sequential, SOF2: Progressive
	Photo size	Minimum: 64 x 64, Maximum (Baseline Type): 8192 (W) x 8192 (H), Maximum (Extend Sequential Type): 15360 (W) x 8640 (H), Maximum (Progressive Type): 1024 (W) x 768 (H)

Troubleshooting

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 ⊖).

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.

The TV turns off suddenly.

- Check the power control settings. The power supply may be interrupted.
- Check if the auto-off function is activated on the settings related time.
- If there is no signal while the TV is on, the TV will turn off automatically after 15 minutes of inactivity.

When connecting to the PC (HDMI), no signal is detected.

- Turn the TV off/on using the remote control.
- Reconnect the HDMI cable.
- Restart the PC with the TV on.

Abnormal Display

- If the product feels cold to the touch, there may be a small “flicker” when it is turned on. This is normal, there is nothing wrong with product.
- This panel is an advanced product that contains millions of pixels. You may see tiny black dots and/or brightly coloured dots (red, blue or green) at a size of 1 ppm on the panel. This does not indicate a malfunction and does not affect the performance and reliability of the product. This phenomenon also occurs in third-party products and is not subject to exchange or refund.
- You may find different brightness and color of the panel depending on your viewing position (left/right/top/down). This phenomenon occurs due to the characteristic of the panel. It is not related with the product performance, and it is not malfunction.
- Displaying a still image for a prolonged period of time may cause image sticking. Avoid displaying a fixed image on the TV screen for a long period of time.

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.

Specifications

(Depending on country)

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Broadcasting Specifications				
	Digital TV			Analogue TV
Television system	DVB-T/T2 DVB-C DVB-S/S2			PAL B/G/I/D/K SECAM L
Channel coverage (Band)	DVB-S/S2	DVB-C	DVB-T/T2	46 ~ 862 MHz
	950 ~ 2,150 MHz	46 ~ 890 MHz	VHF III: 174 ~ 230 MHz UHF IV: 470 ~ 606 MHz UHF V: 606 ~ 862 MHz	
Maximum number of storable programmes	4,000	1,100		
External antenna impedance	75 Ω			
CI Module (W x H x D)	100.0 mm x 55.0 mm x 5.0 mm			

Environment condition	
Operating Temperature	0 °C to 40 °C
Operating Humidity	Less than 80 %
Storage Temperature	-20 °C to 60 °C
Storage Humidity	Less than 85 %

HDMI-DTV supported mode

Resolution	Horizontal Frequency (kHz)	Vertical Frequency (Hz)
640 x 480p	31.47	59.94
	31.50	60.00
720 (1440) x 480i	15.73	59.94
	15.75	60.00
720 x 480p	31.47	59.94
	31.50	60.00
720 (1440) x 576i	15.63	50.00
720 x 576p	31.25	50.00
1280 x 720p	44.96	59.94
	45.00	60.00
	37.50	50.00
1920 x 1080i	33.72	59.94
	33.75	60.00
	28.13	50.00
1920 x 1080p	67.43	59.94
	67.50	60.00
	56.25	50.00
	26.97	23.976
	27.00	24.00
	33.72	29.97
	33.75	30.00

HDMI-PC supported mode

Resolution	Horizontal Frequency (kHz)	Vertical Frequency (Hz)
720 x 400	31.469	70.08
640 x 480	31.469	59.94
800 x 600	37.879	60.31
1024 x 768	48.363	60.00
1280 x 720	45.00	60.00
1360 x 768	47.712	60.015
1366 x 768 ¹	47.712	59.79
1280 x 1024 ² (FHD only)	63.981	60.020
1920 x 1080 ² (FHD only)	67.50	60.00

¹ Only 28TK43*, 32LK50*

² Only 43LK50*

Component port connecting information

Component ports on the TV	Y	P _B	P _R
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Video output ports on DVD player	Y	P _B	P _R
	Y	B-Y	R-Y
	Y	Cb	Cr
	Y	Pb	Pr

Signal	Component
480i / 576i	0
480p / 576p	0
720p / 1080i	0
1080p	0 (Only 50 Hz / 60 Hz)

Resolution	Horizontal Frequency (kHz)	Vertical Frequency (Hz)
720 (1440) x 480i	15.73	59.94
	15.75	60.00
720 x 480p	31.47	59.94
	31.50	60.00
720 (1440) x 576i	15.63	50.00
720 x 576p	31.25	50.00
1280 x 720p	44.96	59.94
	45.00	60.00
	37.50	50.00
1920 x 1080i	33.72	59.94
	33.75	60.00
	28.13	50.00
1920 x 1080p	67.43	59.94
	67.50	60.00
	56.25	50.00

Open Source Software Notice Information

To obtain the source code under GPL, LGPL, MPL, and other open source licenses, that is contained in this product, please visit <http://opensource.lge.com>.

In addition to the source code, all referred license terms, warranty disclaimers and copyright notices are available for download.

LG Electronics will also provide open source code to you on CD-ROM for a charge covering the cost of performing such distribution (such as the cost of media, shipping, and handling) upon email request to opensource@lge.com.

This offer is valid for a period of three years after our last shipment of this product. This offer is valid to anyone in receipt of this information.

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