



OWNER'S MANUAL

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.

55LA9650	55LA9700	84LA9800
65LA9650	65LA9700	

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.



WARNING

If you ignore the warning message, you may be seriously injured or there is a possibility of accident or death.



CAUTION

If you ignore the caution message, you may be slightly injured or the product may be damaged.



NOTE

The note helps you understand and use the product safely. Please read the note carefully before using the product.

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



- Do not use this apparatus near water.



- Clean only with a dry cloth.



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



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



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



- 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.



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



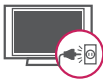
- Only use attachments/accessories specified by the manufacturer.



- 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.



- Do not stick metal objects or any other conductive material into the power cord. Do not touch the end of the power cord while it is plugged in.
- Keep the packing anti-moisture material or vinyl packing out of the reach of children. Anti-moisture material is harmful if swallowed. If swallowed by mistake, force the patient to vomit and visit the nearest hospital. Additionally, vinyl packing can cause suffocation. Keep it out of the reach of children.
- CAUTION concerning the Power Cord (Can differ by country): 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 to 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.



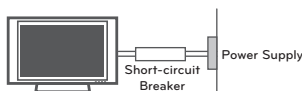
- Do not expose to dripping or splashing and do not place objects filled with liquids, such as vases, cups, etc. on or over the apparatus (e.g. on shelves above the unit).



• Grounding

(Except for devices which are not grounded.)

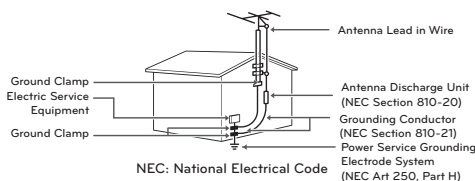
Ensure that you connect the earth ground wire to prevent possible electric shock (i.e. a TV with a three-prong grounded AC plug must be connected to a three-prong grounded AC outlet). If grounding methods are not possible, have a qualified electrician install a separate circuit breaker. Do not try to ground the unit by connecting it to telephone wires, lightning rods, or gas pipes.



- 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.
- **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



• 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 benzene.

• 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 and contact an authorized service center.
- Keep the product away from direct sunlight.
- 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.

- **Disconnecting the Main Power**

The power outlet used with this device must remain easily accessible.

- Store the accessories (battery, etc.) in a safe location out of the reach of children.
- This apparatus use 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.
- Do not dispose of batteries in a fire.
- Do not short circuit, disassemble or allow the batteries to overheat.

- **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.

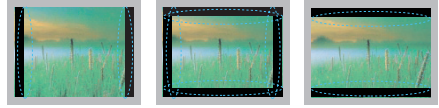
- **Generated Sound**

"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.
- 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.

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.

Viewing 3D Imaging

WARNING

Viewing Environment

- Viewing Time
 - When watching 3D content, take 5 - 15 minute breaks every hour. Viewing 3D content for a long period of time may cause headache, dizziness, fatigue or eye strain.

Those that have a photosensitive seizure or chronic illness

- Some users may experience a seizure or other abnormal symptoms when they are exposed to a flashing light or particular pattern from 3D content.
- Do not watch 3D videos if you feel nauseous, are pregnant and/ or have a chronic illness such as epilepsy, cardiac disorder, or blood pressure disease, etc.
- 3D Content is not recommended for those who suffer from stereo blindness or stereo anomaly. Double images or discomfort in viewing may be experienced.
- If you have strabismus (cross-eyed), amblyopia (weak eyesight) or astigmatism, you may have trouble sensing depth and easily feel fatigue due to double images. It is advised to take frequent breaks than the average adult.
- If your eyesight varies between your right and left eye, revise your eyesight prior to watching 3D content.

Symptoms which require discontinuation or refraining from watching 3D content

- Do not watch 3D content when you feel fatigue from lack of sleep, overwork or intoxication.
- When these symptoms are experienced, stop using/watching 3D content and get enough rest until the symptom subsides.
 - Consult your doctor when the symptoms persist. Symptoms may include headache, eyeball pain, dizziness, nausea, palpitation, blurriness, discomfort, double image, visual inconvenience or fatigue.

CAUTION

Viewing Environment

- Viewing Distance
 - Maintain a distance of at least twice the screen diagonal length when watching 3D content. If you feel discomfort in viewing 3D content, move further away from the TV.

Viewing Age

- Infants / Children
 - Usage/ Viewing 3D content for children under the age of 5 are prohibited.
 - Children under the age of 10 may overreact and become overly excited because their vision is in development (for example: trying to touch the screen or trying to jump into it. Special monitoring and extra attention is required for children watching 3D content.
 - Children have greater binocular disparity of 3D presentations than adults because the distance between the eyes is shorter than one of adults. Therefore they will perceive more stereoscopic depth compared to adults for the same 3D image.
- Teenagers
 - Teenagers under the age of 19 may be stimulated to light coming from 3D videos. Advise them not to watch 3D videos for a long time when they are tired.
- Elderly
 - The elderly may perceive less of a 3D effect than the youth. Do not sit closer to the TV than the recommended distance.

Cautions when using the 3D glasses

- Only use LG 3D glasses. Otherwise, you may not be able to view 3D videos properly.
- Do not use 3D glasses instead of your normal glasses, sunglasses or protective goggles.
- Using modified 3D glasses may cause eye strain or image distortion.
- Do not keep your 3D glasses in extremely high or low temperatures. It will cause deformation.
- The 3D glasses are fragile and are easy to scratched. Use a soft, clean piece of cloth when wiping the lenses. Do not scratch the lenses of the 3D glasses with sharp objects or clean/wipe them with chemicals.

LICENSES

Supported licenses may differ by model. For more information about licenses, visit www.lge.com.



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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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"Covered by one or more of the following U.S. patents: 7,295,673; 7,460,668; 7,515,710; 7,519,274"



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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 three (3) years from the date on which you purchased the product.

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NOTE

- 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.

INSTALLATION PROCEDURE

- 1 Open the package and make sure all the accessories are included.
- 2 Attach the stand to the TV set.
- 3 Connect an external device to the TV set.
- 4 Make sure the network connection is available.
You can use the TV network functions only when the network connection is made.

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.



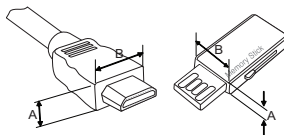
CAUTION

- 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.
- Some models appear to have a thin film on the screen. It is actually part of the screen, do not remove it.



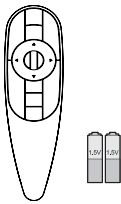
NOTE

- 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.
- 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.

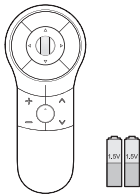


*A ≤ 10 mm

*B ≤ 18 mm

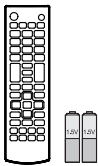


Or



**Magic Remote Control,
Batteries (AA)**
(A type)
(See p. 37)

**Magic Remote Control,
Batteries (AA)**
(B type)
(See p. 38)

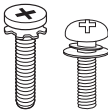


**Remote Control,
Batteries (AAA)**
(See p. 40)



Owner's Manual

(For 84LA9800)



Stand Screws
4 EA, M4 x 20
6 EA, M5 x 16
(See p. 18, 19)

(For 55LA9700, 55/65LA9650)

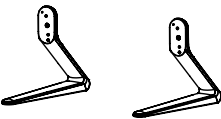


Stand Screws
4 EA, M4 x 14
(See p. 17, 18)

(For 55/65LA9650)

(For 55/65LA9700)

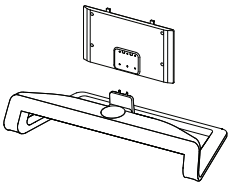
(For 84LA9800)



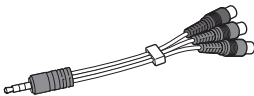
Stand Base
(See p. 17)



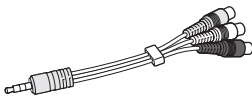
Stand Base
(See p. 18)



Stand Body / Stand Base
(See p. 18)



Component Video Cable
(See p. 30)



Composite Video Cable
(See p. 30, 31)



Tag On

(For 55/65LA9700)



Wall Mount Inner Spacers

4 EA
(See p. 23)



Cinema 3D Glasses

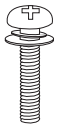
The number of 3D glasses may differ depending on the model or country.



Dual Play Glasses

The number of Dual play glasses may differ depending on the model or country.
(Depending on model)

(For 55LA9700)



Wall Mount Screws

4 EA, M6 x 54

(For 65LA9700)



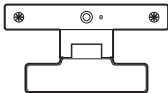
Wall Mount Screws

4 EA, M8 x 44



Power Cord

(Depending on model)



Video Call Camera

(Depending on model)

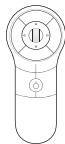


Cable Holder

(See p. 21, 22)

Optional Extras

Optional extras 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 manufacturer’s circumstances or policies.



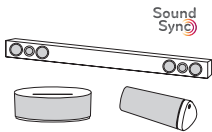
AN-MR400
Magic Remote



AG-F***
Cinema 3D Glasses



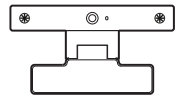
AG-F*DP**
Dual Play Glasses



LG Audio device



Tag On



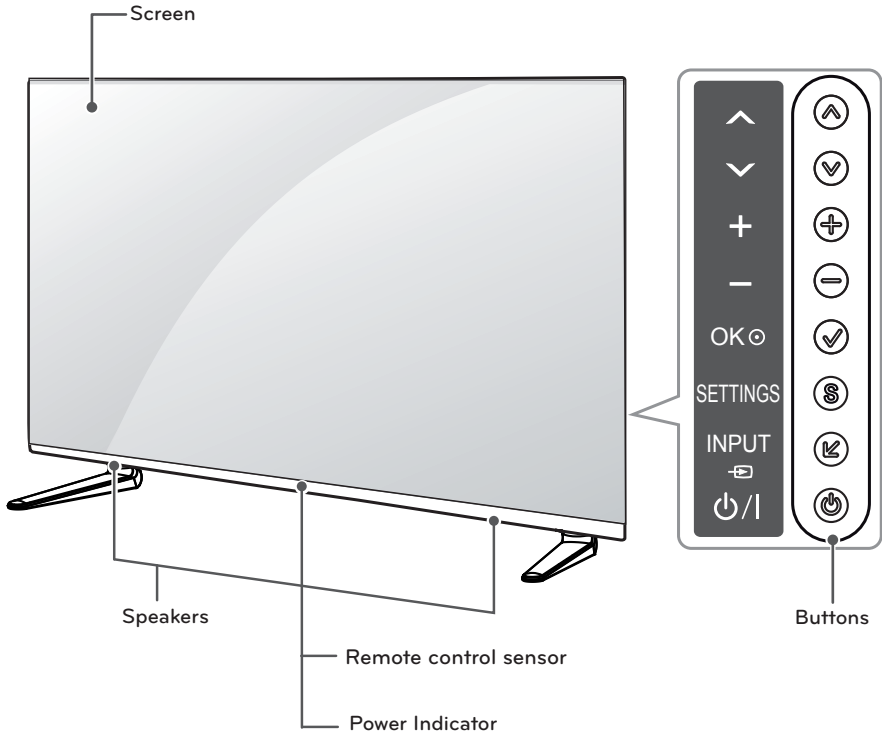
AN-VC5**
Video Call Camera

ENGLISH

Compatibility	LA9650	LA9700	LA9800
AN-MR400 Magic remote	●	●	●
AG-F*** Cinema 3D glasses	●	●	●
AG-F***DP Dual Play Glasses	●	●	●
AN-VC5** Video Call Camera	●	(Built-in)	●
Tag On	●	●	●
LG Audio device	●	●	●

Parts and Buttons

(For LA9650 Series)

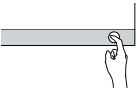


ENGLISH

Button	Description
▲ / ▼ (▲ / ▼)	Scrolls through the saved channels.
⊕ / ⊖ (⊕ / ⊖)	Adjusts the volume level.
✓ (OK ○)	Selects the highlighted menu option or confirms an input.
S (SETTINGS)	Accesses the main menus, or saves your input and exits the menus.
↶ (INPUT ⇄)	Changes the input source.
⏻ (power / I)	Turns the power on or off.



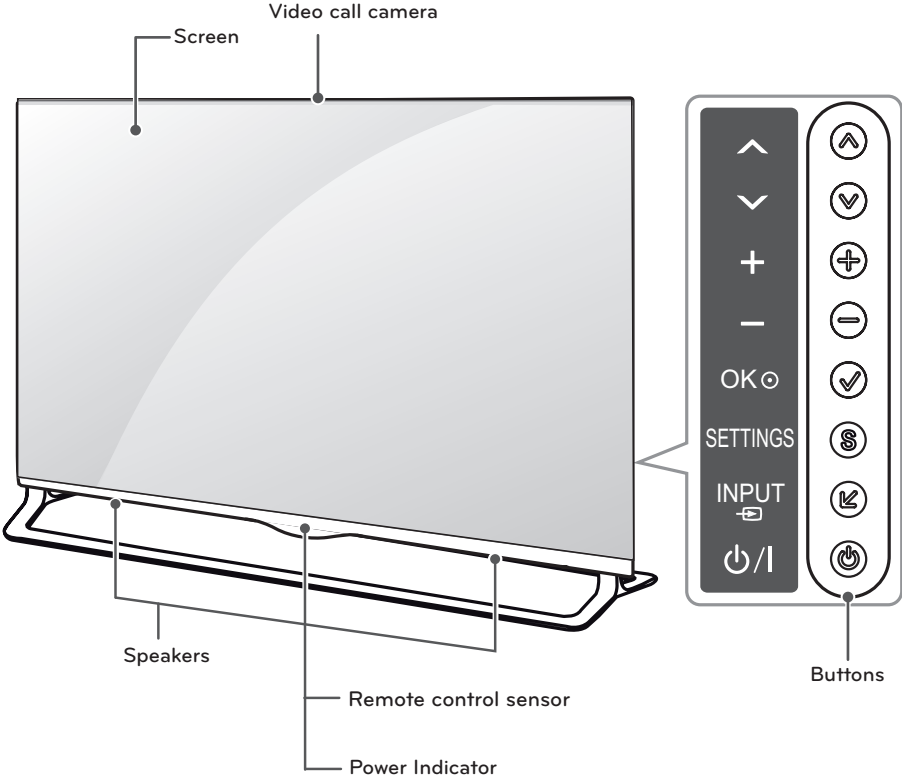
CAUTION



- To avoid possible SPEAKER damage or degradation in performance please keep contact of TV /Speaker out of reach of Children.
(For LA9650 Series)

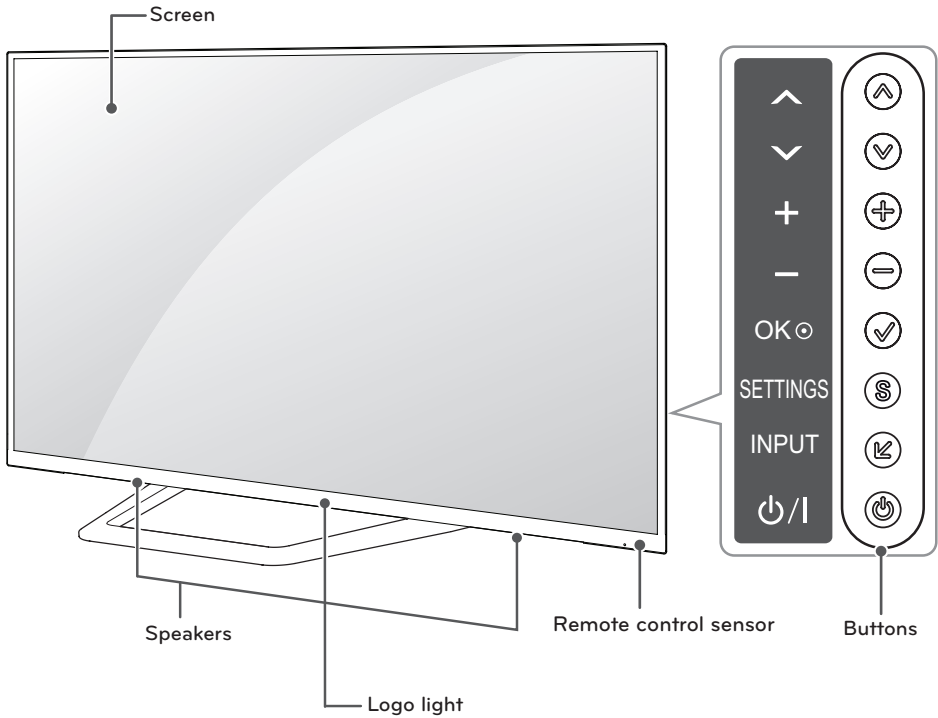
(For LA9700 Series)

ENGLISH



Button	Description
▲ / ▼ (▲ / ▼)	Scrolls through the saved channels.
+ / - (+ / -)	Adjusts the volume level.
✓ (OK ○)	Selects the highlighted menu option or confirms an input.
S (SETTINGS)	Accesses the main menus, or saves your input and exits the menus.
I (INPUT ⇐)	Changes the input source.
⏻ (⏻ / ⏻)	Turns the power on or off.

(For 84LA9800)



Button	Description
▲ / ▼ (▲ / ▼)	Scrolls through the saved channels.
⊕ / ⊖ (⊕ / ⊖)	Adjusts the volume level.
✓ (OK)	Selects the highlighted menu option or confirms an input.
S (SETTINGS)	Accesses the main menus, or saves your input and exits the menus.
⌂ (INPUT)	Changes the input source.
⏻ (⏻ / ⏻)	Turns the power on or off.

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 safe transportation regardless of its type and size.



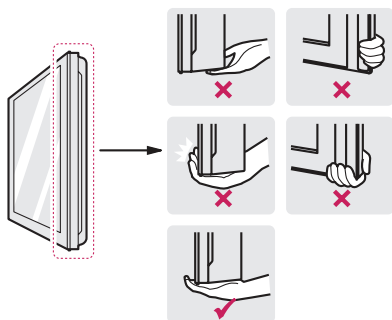
CAUTION

- Avoid touching the screen at all times, as this may result in damage to the screen.
- Do not place the product on the floor with its front facing down. Doing so may result in damage to the screen.

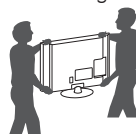
- It is recommended to move the TV in the box or packing material that the TV originally came in.
- Before moving or lifting the TV, disconnect the power cord and all cables.
- When holding the TV, the screen should face away from you to avoid damage.



- 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

You can mount your TV to a wall or attach the stand if you wish to place the TV on an entertainment center or other furniture.

Attaching the stand

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

⚠ CAUTION

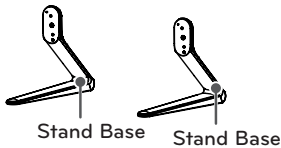
- When attaching the stand to the TV set, place the screen facing down on a cushioned table or flat surface to protect the screen from scratches.
- Make sure that the screws are fastened tightly. (If they are not fastened securely enough, the TV may tilt forward after being installed.)
- Do not tighten the screws with too much force; otherwise they may be damaged and come loose later.

! NOTE

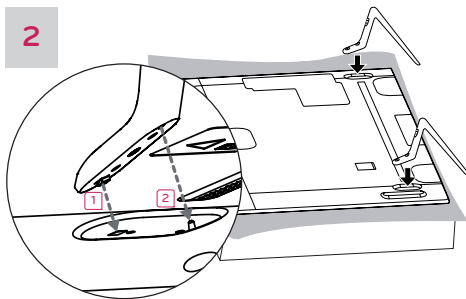
- Remove the stand before installing the TV on a wall mount by performing the stand attachment in reverse.

(For 55/65LA9650)

1



2

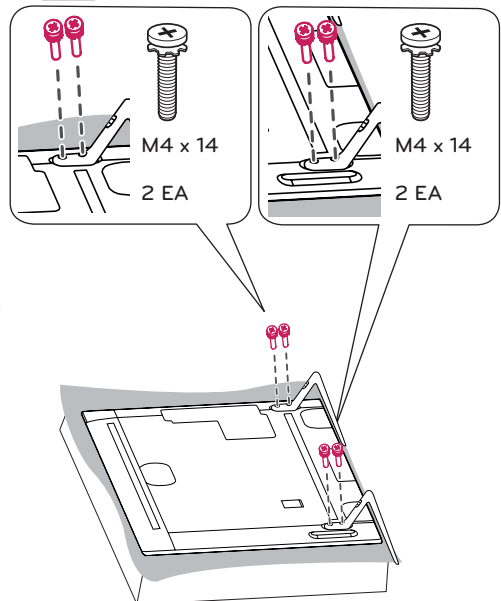


- 1 Attach the stand to the TV using the upper mounting hole on the back of the TV.
- 2 Attach the stand to the TV using the lower connection on the back of the TV.

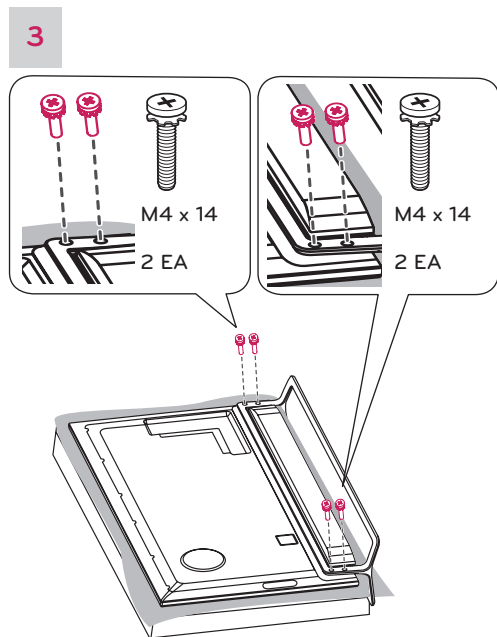
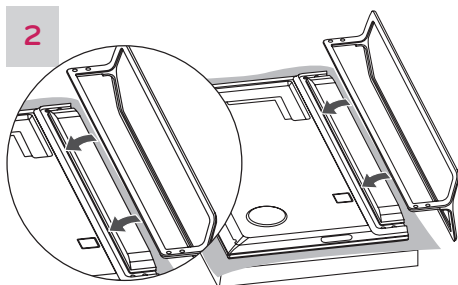
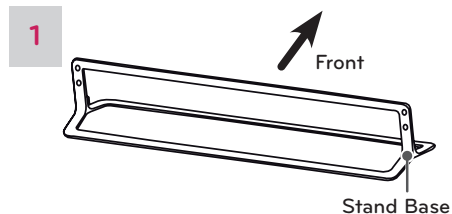
! NOTE

- Be sure to attach the upper mounting hole first, and then attach the lower connection second.

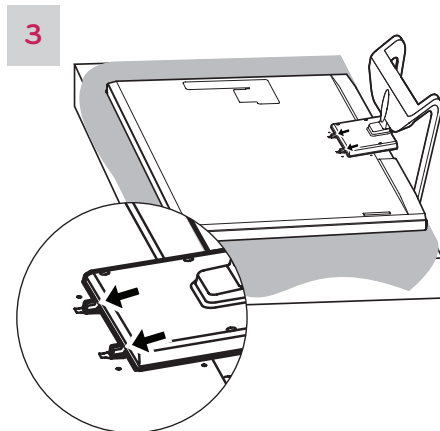
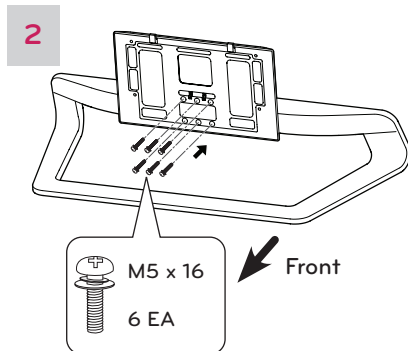
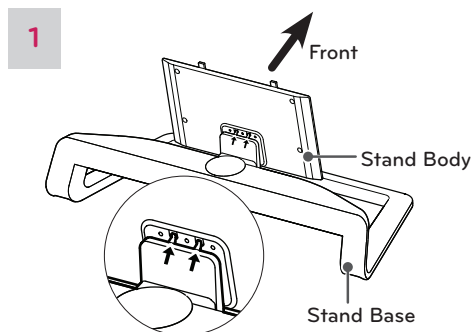
3



(For 55/65LA9700)



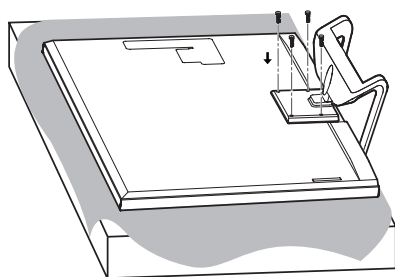
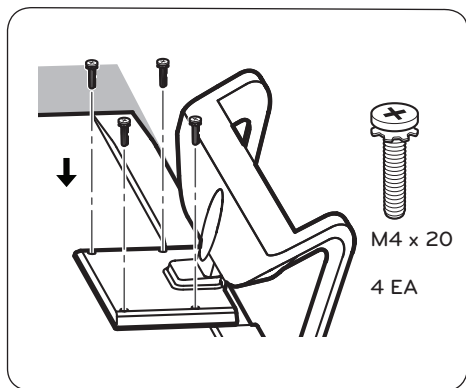
(For 84LA9800)



NOTE

- The stand screws are already attached at the back of the TV. Please use these attached screw to assemble the TV and stand. (For 65LA9700)

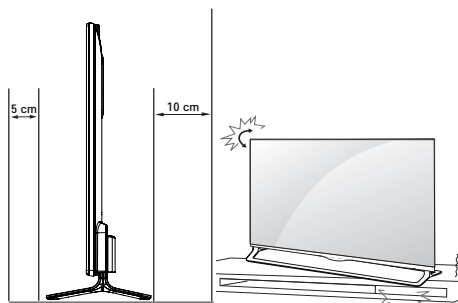
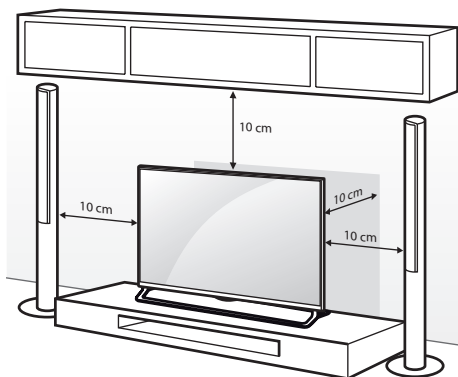
4



Mounting on a 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.



2 Connect the power cord to a wall outlet.



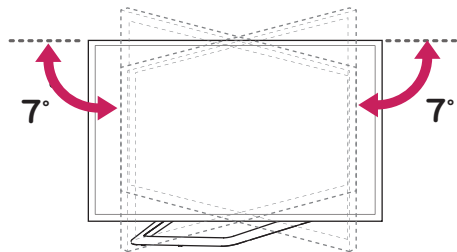
CAUTION

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

Adjusting the angle of the TV to suit view

Swivel 7 degrees to the left or right and adjust the angle of the TV to suit your view.

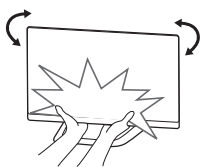
(For 84LA9800)

**CAUTION**

- When adjusting the angle of the TV, watch out for your fingers.
- Personal injury may occur if hands or fingers are pinched. If the product is tilted too much, it may fall, causing damage or injury.



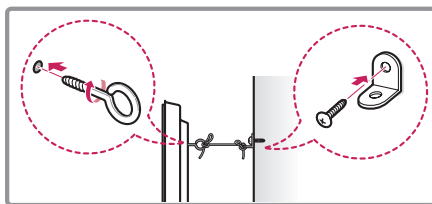
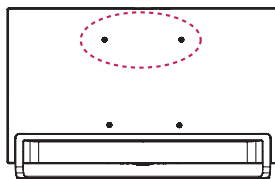
Rear



Front

Securing the TV to a wall (optional)

(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.

CAUTION

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

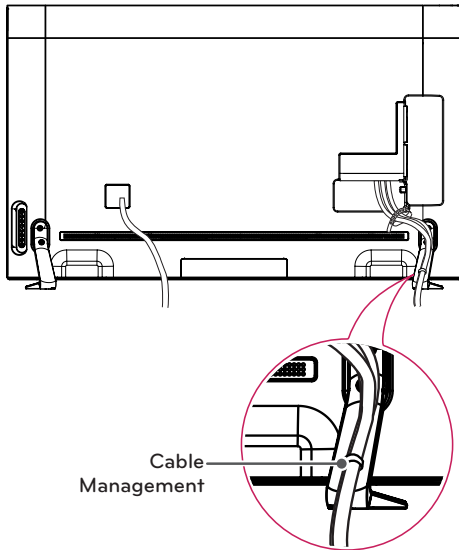
NOTE

- 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.

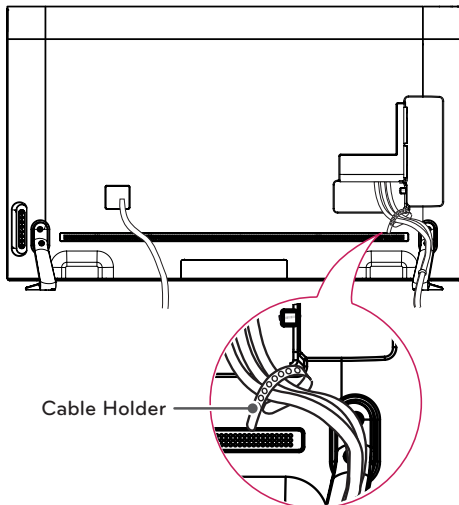
Tidying cables

(For 55/65LA9650)

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

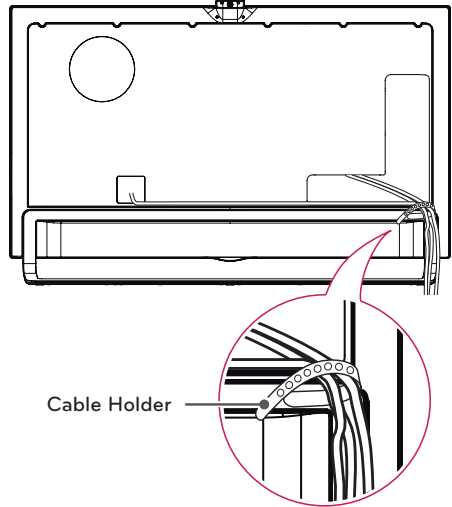


- 2 Gather and bind the cables with the cable holder.



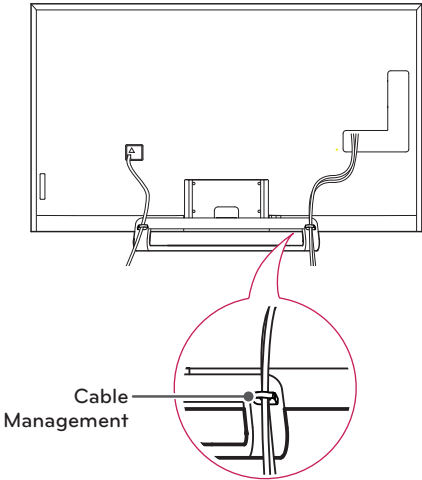
(For 55/65LA9700)

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

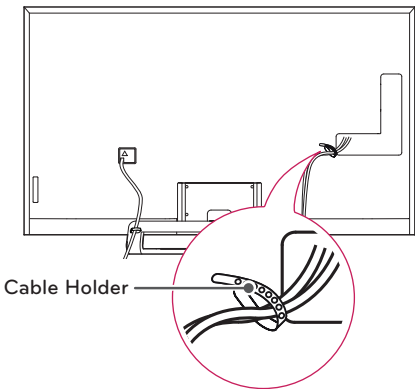


(For 84LA9800)

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



- 2 Gather and bind the cables with the cable holder.

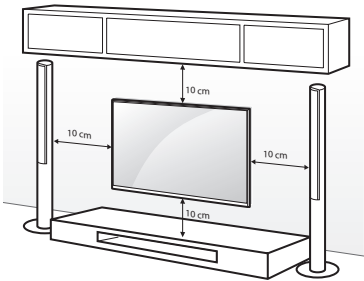


CAUTION

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

Mounting on a wall

An optional wall mount can be used with your LG Television. Consult with your local dealer for a wall mount that supports the VESA standard used by your TV model. Carefully attach the wall mount bracket at the rear of the TV. Install the wall mount bracket on a solid wall perpendicular to the floor. If you are attaching the TV to other building materials, please contact qualified personnel to install the wall mount. Detailed instructions will be included with the wall mount. We recommend that you use an LG brand wall mount.



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.

CAUTION

(For 55/65LA9700)

- When TV Wall Mount installation is applied please consider adequate spacing around perimeter of TV and at bottom for proper operation of Sliding Speaker compartment. Inadequate space may interfere with normal operation of sliding speaker compartment.
 - » Sliding Speaker OPEN state lowers/ extends to (25-35mm) below TV.

CAUTION

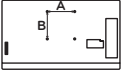
- Be sure to use the existing Components provided with the TV. Do NOT use components supplied with Wall Bracket to install Wall Bracket to TV. (For 55/65LA9700)

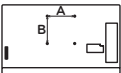


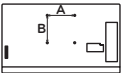
Wall mount inner
spacers
4EA

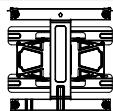
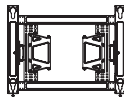
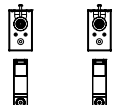


Wall mount screws
4EA, M6 x 54
(For 55LA9700)
4EA, M8 x 44
(For 65LA9700)

Model	55LA9700, 65LA9650
VESA (A x B)	400 x 400
	
Standard screw	M6
Number of screws	4
Wall mount bracket (optional)	LSW430B

Model	55LA9650
VESA (A x B)	400 x 400
	
Standard screw	M6
Number of screws	4
Wall mount bracket (optional)	LSW430B MSW240

Model	65LA9700 84LA9800
VESA (A x B)	600 x 400
	
Standard screw	M8
Number of screws	4
Wall mount bracket (optional)	LSW630B

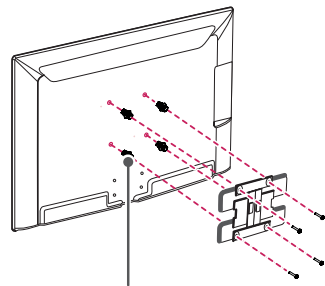
Wall mount bracket (optional)	
LSW430B	
LSW630B	
MSW240	

CAUTION

- Disconnect the power before moving or installing 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

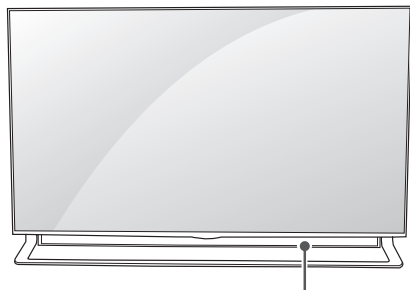
- Use the screws that are listed in the VESA standard screw specifications.
- The wall mount kit includes an installation manual and necessary parts.
- The wall mount bracket is optional. You can obtain additional accessories from your local dealer.
- The length of screws may differ depending on the wall mount. Make sure to use the proper length.
- For more information, refer to the manual supplied with the wall mount.
- When attaching the LG wall mount bracket to the TV, do not use wall mount spacers and wall mount screws provided with the LG wall mount bracket. Please use wall mount inner spacers and wall mount screws provided with the TV accessory.



Wall Mount Inner Spacer
(For 55/65LA9700)

Using Sliding Speaker

(For LA9700 Series)



Sliding Speaker

- 1 When TV is turned ON, the hidden Speaker slides out from inside the TV.
- 2 Go to **More ➡ Settings ➡ SOUND ➡ Sliding Speaker** to set Sliding Speaker.

If you are mounting TV on entertainment table/unit, please make sure there is enough clearance between yourself and foreign objects to allow operation of internal sliding speaker otherwise injury to yourself or damage to TV could occur.

Please do not use excessive force during operation of internal sliding Speaker as it may cause it to malfunction.

Make sure Speaker is in OPEN position when viewing TV as sound will be abnormal or distorted.

- 3 When transporting the TV, make sure that the sliding speaker is closed. If the sliding speaker is open when being transported, it may become damaged, resulting in malfunction.

To close the sliding speaker, go to **SOUND ➡ Sliding Speaker**, select **Open when TV is turned on** and press the POWER button.

Using Built-in Camera

(For LA9700 Series)

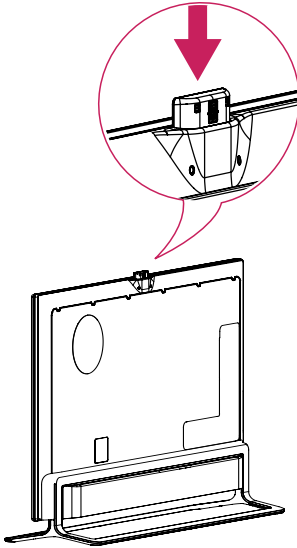
This TV does not support the use of an external camera.

! NOTE

- Before using the built-in camera, you must recognize the fact that you are legally responsible for the use or misuse of the camera by the relevant national laws including the criminal law.
- The relevant laws include the Personal Information Protection law which regulates the processing and transferring of personal information and the law which regulates the monitoring by camera in a workplace and other places.
- When using the built-in camera, the user must gain consent from the persons being observed. Please avoid using the camera in the following manner. We suggest avoiding the following situations:
 - (1) Using the camera in areas where the use of camera is generally prohibited such as restroom, locker room, fitting room and security area.
 - (2) Using the camera while causing the infringement of privacy.
 - (3) Using the camera while causing the violation of the relevant regulations or laws.

Preparing Built-in Camera

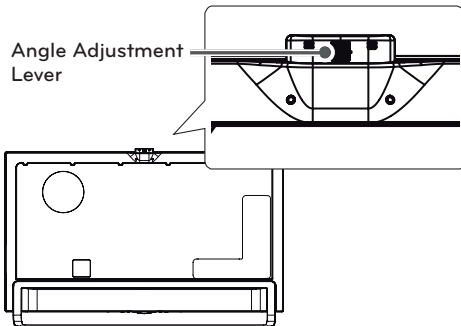
- 1 Pull up the built-in camera at the back of the TV.



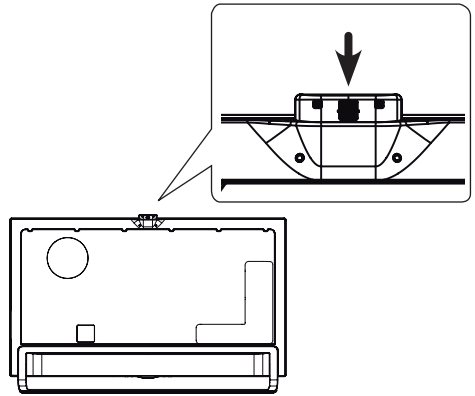
NOTE

- Remove the protective film before using the built-in camera.

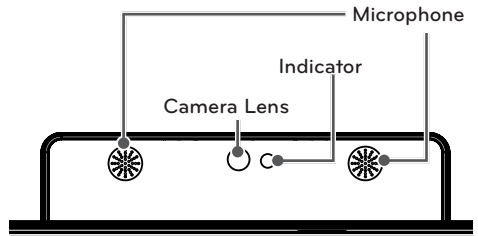
- 2 You can adjust the angle of the camera with the angle adjustment lever on the back of the built-in camera (within 5 degrees vertically).



- 3 Pull down the built-in camera when you are not using it.



Name of Parts for the Built-In Camera



Checking the Camera's Shooting Range

- 1 Press the **SMART** button on the remote control to display the More menu.
- 2 Select Settings from the More menu and then press the **⏮ wheel (OK)** button.
- 3 Go to **OPTION ➡ Camera Setting Help** and press the **⏮ wheel (OK)** button.

NOTE

- The optimal distance from the camera to use the motion recognition function is between 1.5 m and 4.5 m.

MAKING CONNECTIONS

- This section uses illustrations of the LA9700 series.

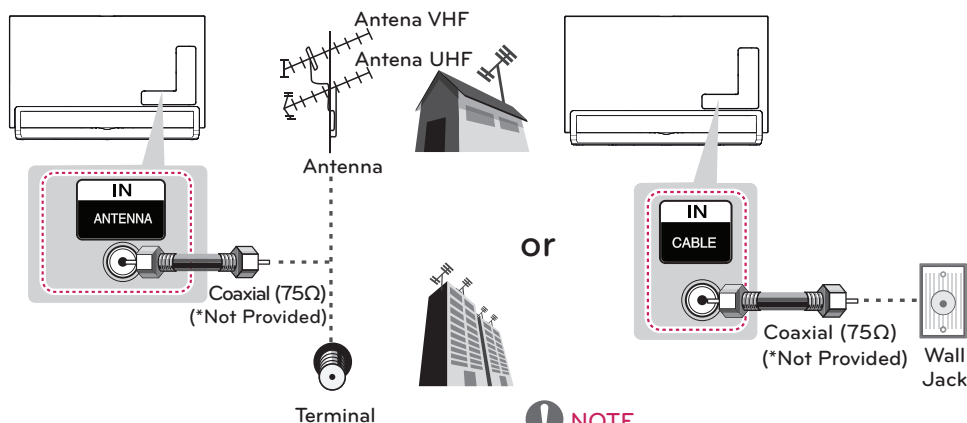
You can connect various external devices to the TV. Supported external devices are: HD receivers, DVD players, VCRs, audio systems, USB storage devices, PC, gaming devices, and other external devices. For more information on external device's connection, refer to the manual provided with each device.

! 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 connections shown may differ slightly from illustrations in this manual.
- Connect external devices to the TV regardless of the order of the TV port.
- 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.

Connecting to an Antenna or Cable

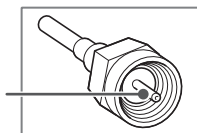
Connect an antenna, cable, or cable box to watch TV while referring to the following. The illustrations may differ from the actual items and a RF cable is optional.



! CAUTION

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

Copper wire



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

! NOTE

- To improve the picture quality in a poor signal area, please purchase a signal amplifier and install properly.
- Use a signal splitter to use more than 2 TVs.
- If the antenna is not installed properly, contact your dealer for assistance.
- DTV Audio Supported Codec: MPEG, Dolby digital, AAC, HE-AAC.
- Display of Ultra HD(3840 x 2160 pixels) content compatible; additional device capable of processing Ultra HD source content (in 2D or 3D) may be required and will be sold separately.

Connecting to a HD Receiver, DVD Player or VCR

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

HDMI Connection

HDMI is the best way to connect a device.

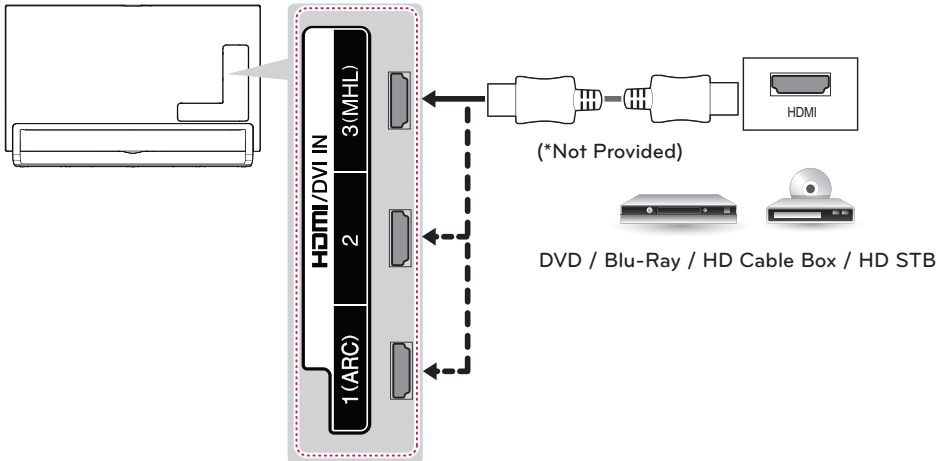
Transmits digital video and audio signals from an external device to the TV. Connect the external device and the TV with the HDMI cable as shown in the following illustration.



NOTE

- Use the latest High Speed HDMI™ Cable that supports CEC (Customer Electronics Control) function.
- High Speed HDMI™ Cables are tested to carry an HD signal up to 1080p and higher.
- HDMI Audio Supported Format: Dolby Digital, PCM (Up to 192 kHz, 32 kHz / 44.1 kHz / 48 kHz / 96 kHz / 192 kHz), DTS

Choose any HDMI input port to connect.
It does not matter which port you use.



ARC (Audio Return Channel)

- When connected with a high-speed HDMI cable, digital audio can be sent to a compatible device without an additional optical audio cable.
- ARC is only supported on the HDMI/DVI IN 1 (ARC) port. An external audio device that supports ARC should be connected to HDMI/DVI IN 1 (ARC) if you wish to use ARC.

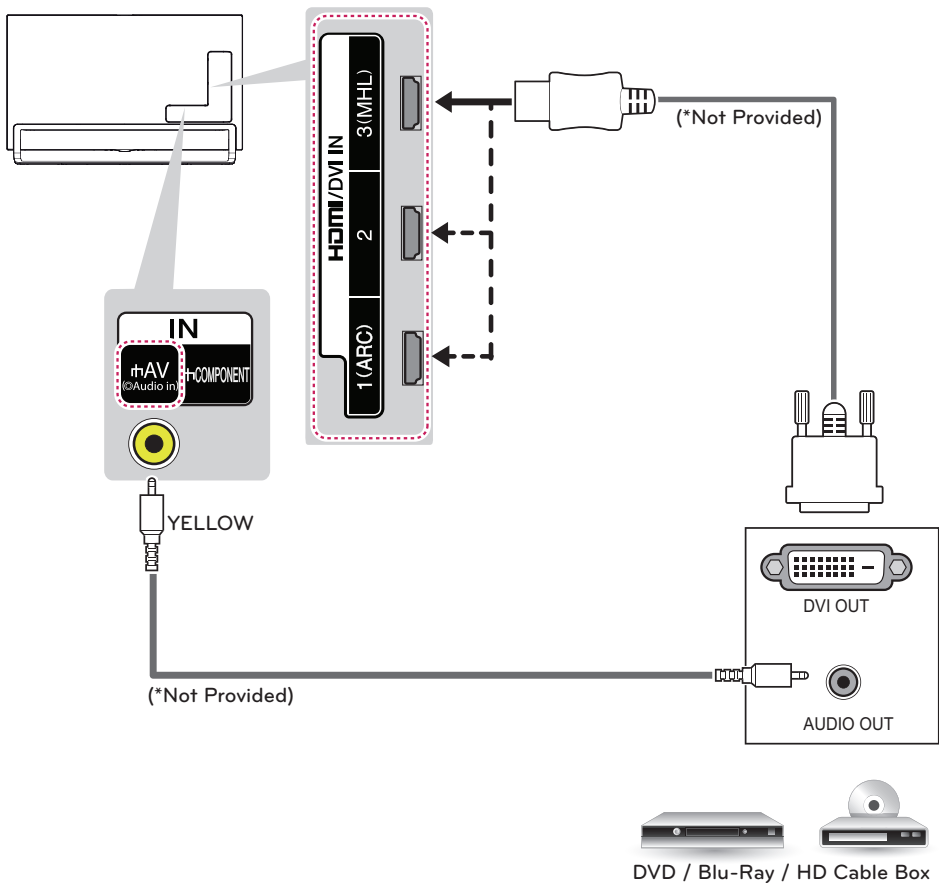
DVI to HDMI Connection

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.

NOTE

- When using the HDMI/DVI cable, Single link is only supported.

Choose any HDMI input port to connect.
It does not matter which port you use.



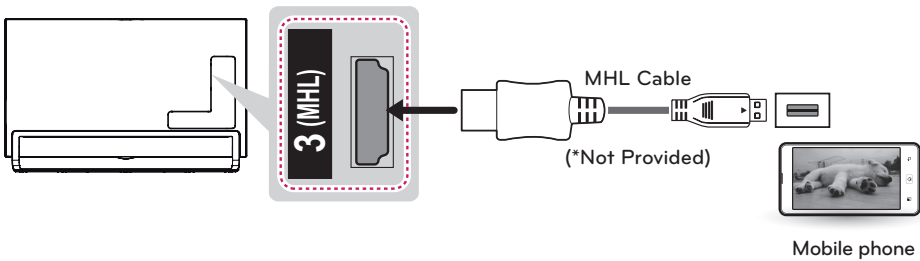
Connecting to a Mobile Phone

Mobile High-definition Link (MHL) is an interface for transmitting digital audio/visual signals from mobile phones to television sets.



NOTE

- Connect the mobile phone to the HDMI/DVI IN 3 (MHL) port to view the phone screen on the TV.
- This only works with an MHL-enabled phone.
- With some MHL supporting mobile phones, you can use the TV remote to control the phone.
- An MHL passive cable is needed to connect the TV and a mobile phone.
- Remove the MHL cable from the TV when:
 - the MHL function is disabled
 - your mobile device is fully charged in standby mode

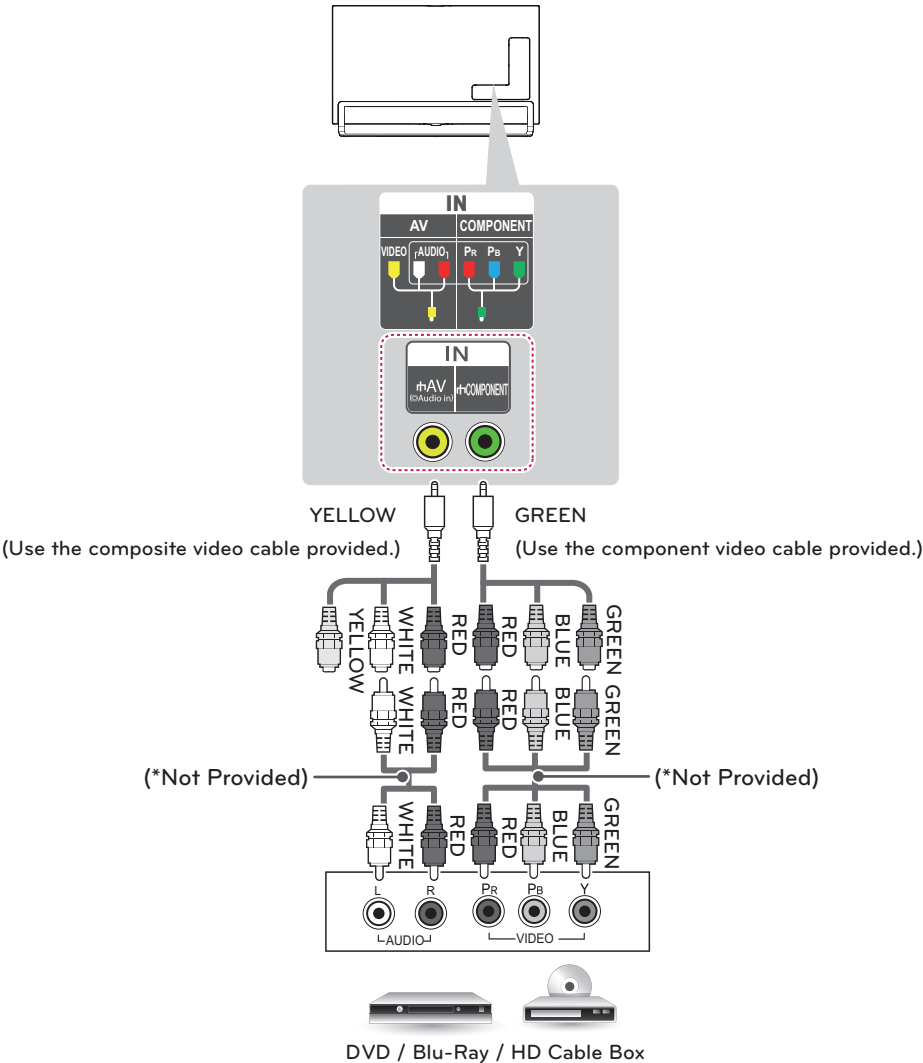


Component Connection

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

NOTE

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

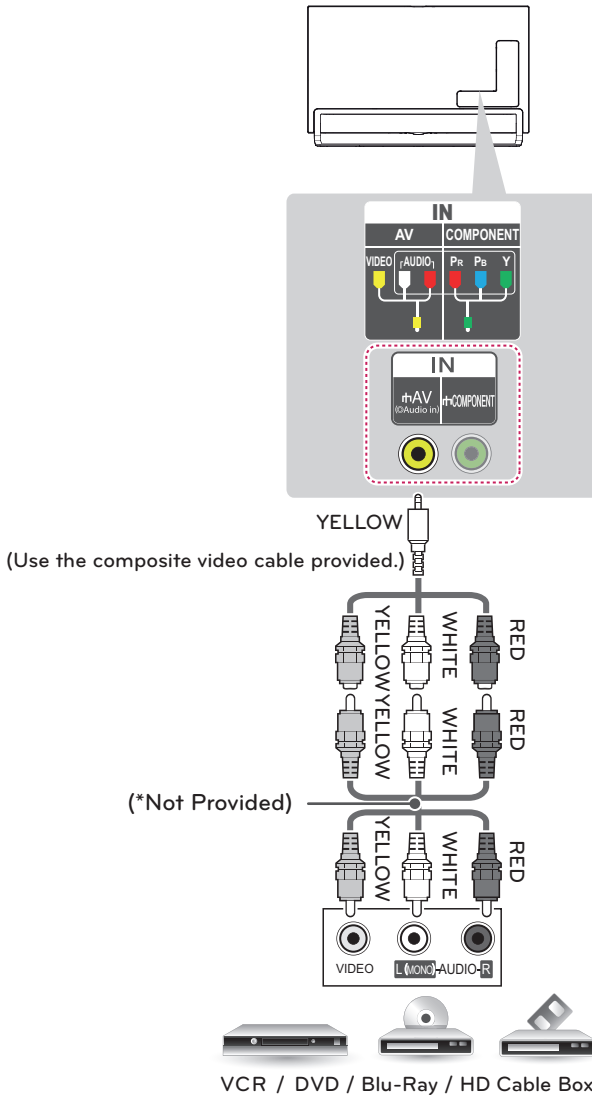


Composite Connection

Transmits 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.
- Check to ensure the cables are matched with the corresponding color connection.



Connecting a PC

! NOTE

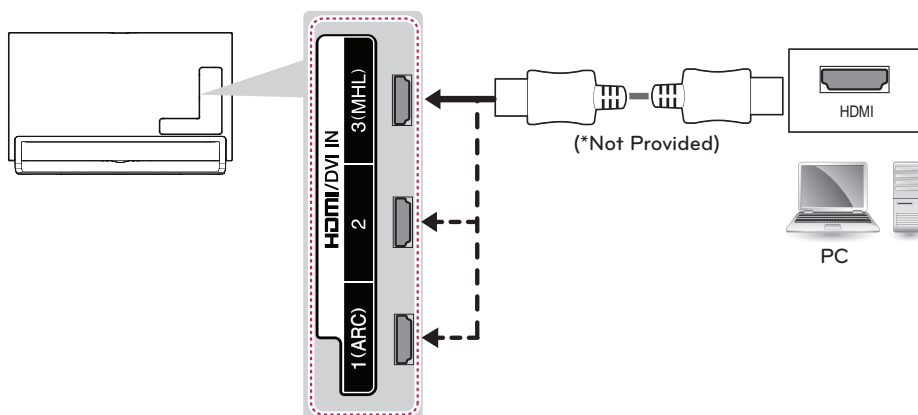
- It is recommended to use an HDMI connection for the best image quality.
- Depending on the graphics card, DOS mode video may not work if a HDMI to DVI Cable is in use.
- In PC mode, there may be noise associated with the resolution, vertical pattern, contrast or brightness. If noise is present, change 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.
- The synchronization input form for Horizontal and Vertical frequencies is separate.
- Depending on the graphics card, some resolution settings may not allow the image to be positioned on the screen properly.
- If you are using DVI out from a PC, you have to connect analog audio separately. Refer to the instructions on the next page.
- When using the HDMI/DVI cable, Single link is only supported.

HDMI Connection or DVI to HDMI Connection

Choose method A or B to make connection.

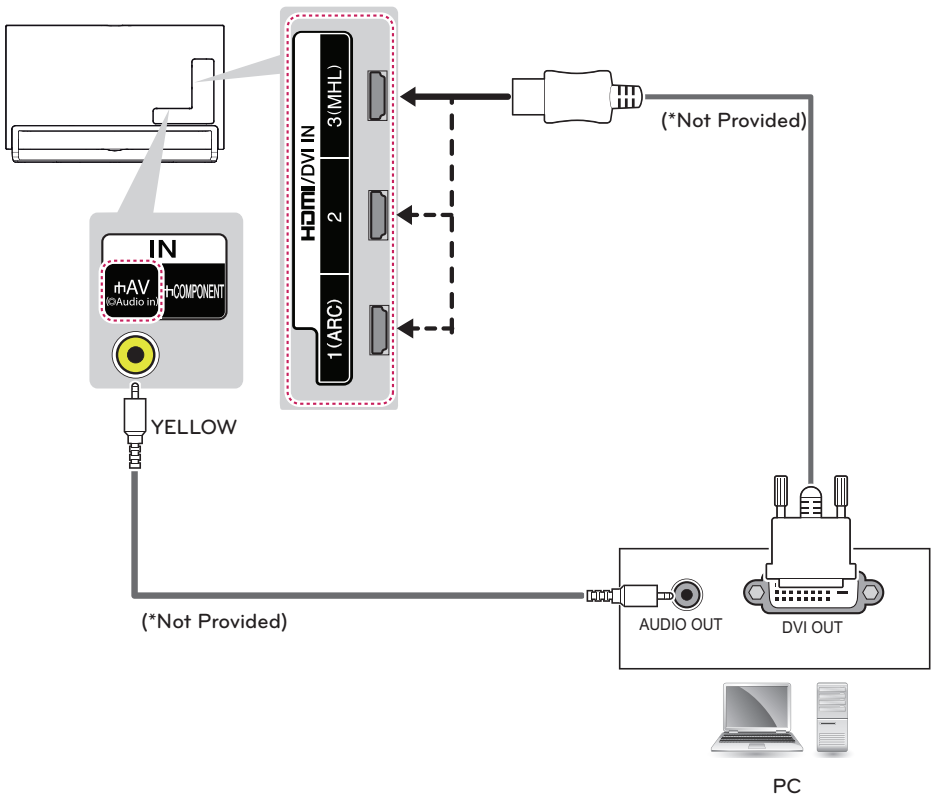
Method A: HDMI Connection

Choose any HDMI input port to connect.
It does not matter which port you use.



Method B: DVI to HDMI Connection

Choose any HDMI input port to connect.
It does not matter which port you use.



Connecting to an Audio System

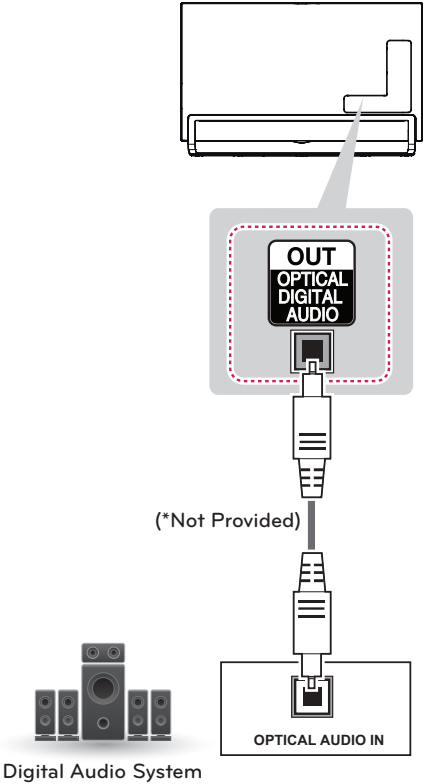
You can use an optional external audio system instead of the built-in speaker.

Digital Optical Audio Connection

Transmits a 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.

NOTE

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



Connecting Headphones

Listening to sound with headphones



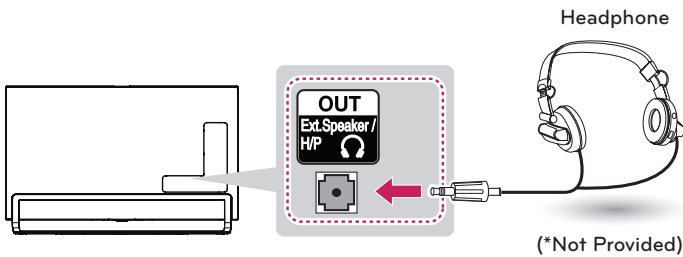
NOTE

- AUDIO menu options are disabled when using headphones.
- When changing AV MODE with headphones connected, the change is applied to video but not to audio.
- Optical Digital Audio Out is not available when headphones are connected.
- Headphone impedance: 16 Ω
- Max audio output: 0.624mW to 1.04mW
- Headphone jack size: 0.35 cm



CAUTION

- Do not use headsets (earphones) at high volume or for a long time. Otherwise, it may cause damage to your hearing.



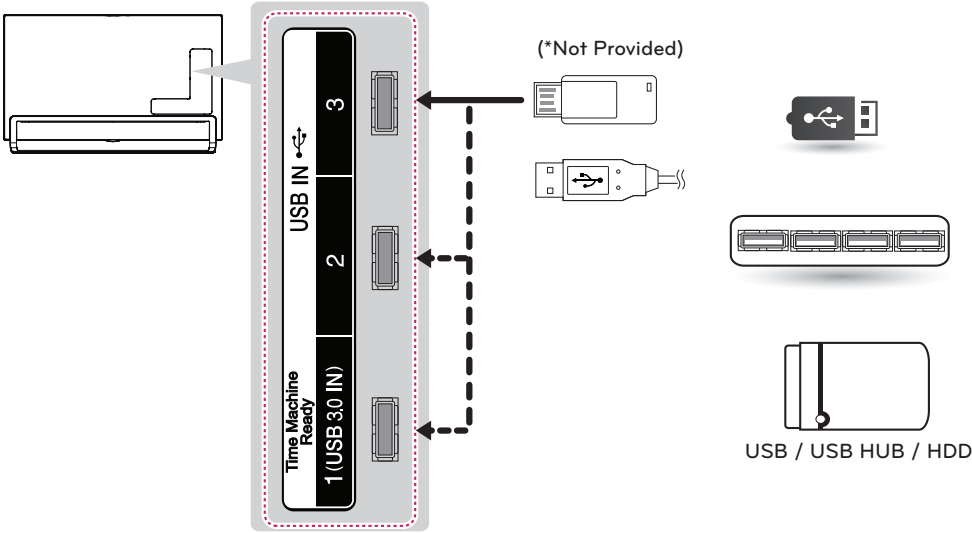
Connecting a USB Device

Connect a USB storage device such as USB flash memory, external hard drive, or a USB memory card reader to the TV and access the Smart Share menu to use various multimedia files.

NOTE

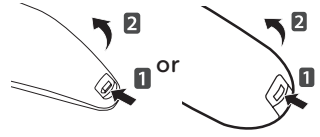
- To use Time Machine function, make sure your USB drive is connected to the USB IN 1 Time Machine Ready port.
- Some USB Hubs may not work. If a USB device connected using a USB Hub is not detected, connect it to the USB port on the TV directly.

Choose any USB input port to connect.
It does not matter which port you use.



MAGIC REMOTE CONTROL FUNCTIONS

When the message "Magic remote control battery is low. Change the battery." is displayed, replace the battery. To install batteries, open the battery cover, replace batteries (1.5 V AA) matching $\oplus$ and $\ominus$ ends to the label inside the compartment, and close the battery cover. 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. Be sure to point the remote control at the remote control sensor on the TV. To remove the batteries, perform the installation actions in reverse.

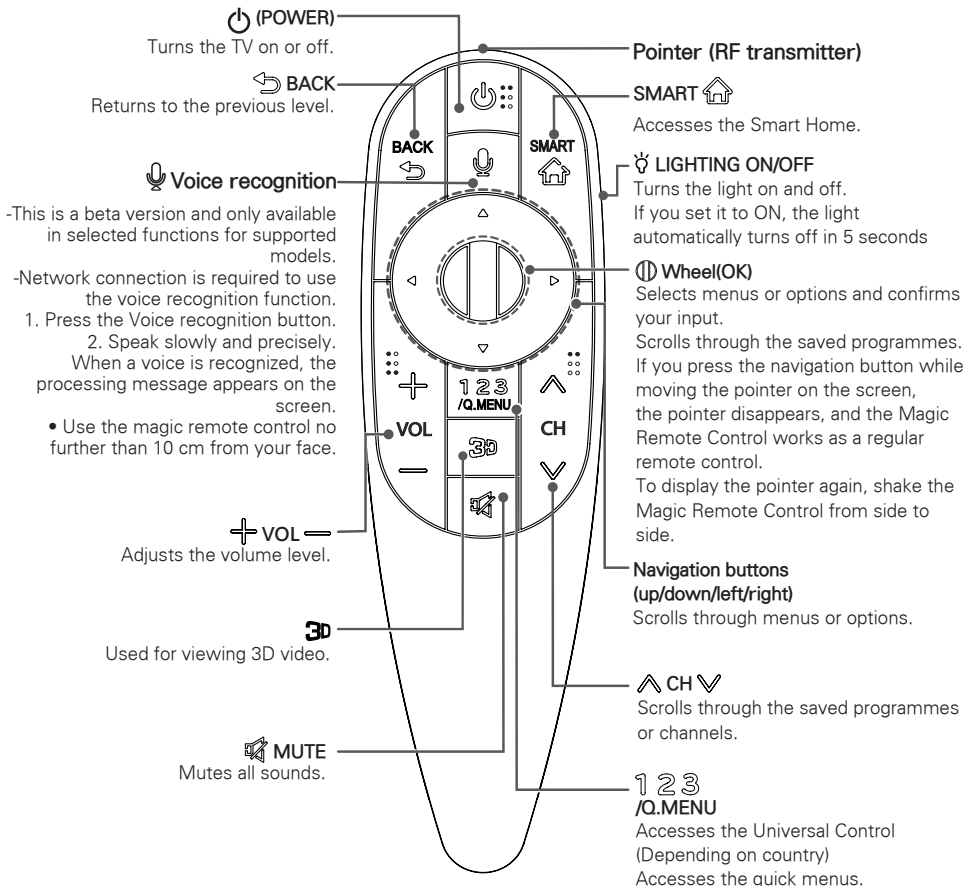


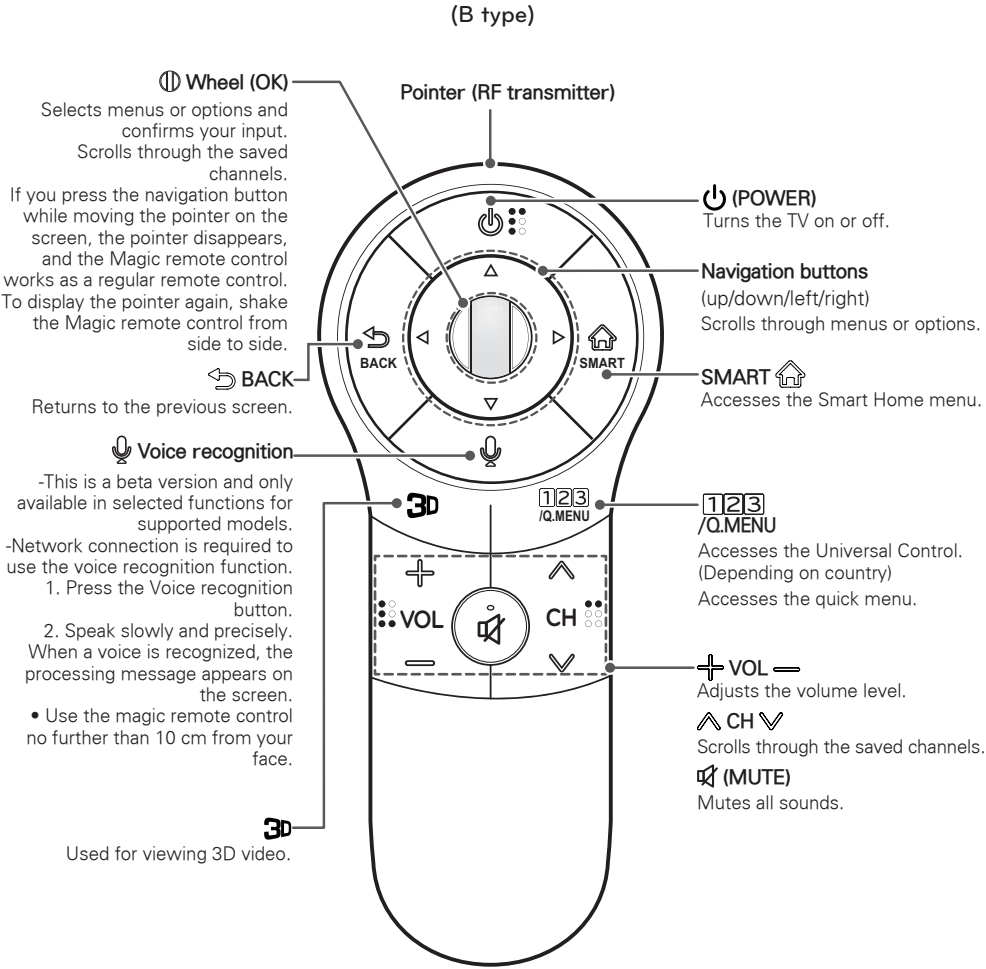
CAUTION

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

This remote uses infrared light. When in use, it should be pointed in the direction of the TV's remote sensor.

(A type)





Registering Magic Remote Control

The Magic Remote Control operates by pairing with your TV.

Please register the remote as follows.

How to register the Magic Remote Control

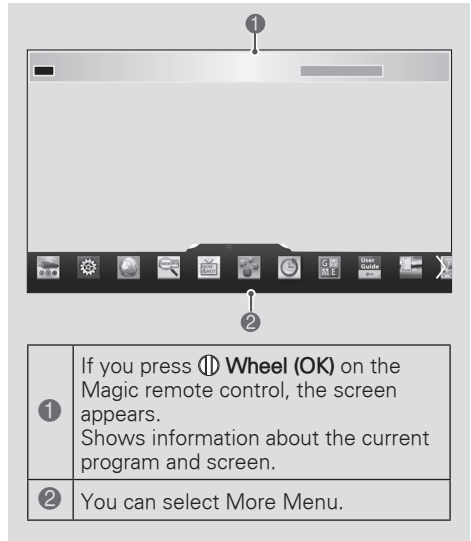
	To register automatically, turn the TV on and press the Wheel (OK). When registration is completed, the completion message appears on the screen. If registration fails, turn the TV off and back on, then press the Wheel (OK) to complete registration.
--	---

How to Re-register the Magic Remote Control

 BACK	1 Press and hold the  BACK and SMART  buttons together for 5 seconds to reset, then register it by following "How to register the Magic remote control" above.
SMART 	2 To re-register the Magic remote control, press and hold the  BACK button for 5 seconds toward the TV.

How to use Magic Remote Control

	1 You can move the pointer by aiming the Pointer Receiver of the remote control at your TV then move it left, right, up or down. » If the pointer does not work properly leave the remote control for 10 seconds then use it again.
	2 If the pointer disappears, move the remote control slightly to left or right. Then, it will automatically appear on the screen. » If the pointer has not been used for a certain period of time, it will disappear.

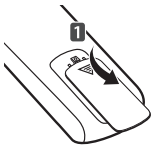


Precautions to Take when Using the Magic Remote Control

- Use the Magic remote control within the maximum communication distance (10 m). Using the remote control beyond this distance, or with an object obstructing it, may cause a communication failure.
- A communication failure may occur due to nearby devices. Electrical devices such as a microwave oven or wireless LAN product may cause interference, as these use the same bandwidth (2.4 GHz) as the Magic remote control.
- The Magic remote control may be damaged or may malfunction if it is dropped or receives a heavy impact.
- Take care not to bump into nearby furniture or other people when using the Magic remote control.
- Manufacturer and installer cannot provide service related to human safety as the applicable wireless device has possibility of electric wave interference.
- It is recommended that an Access Point (AP) be located more than 1 m away from the TV. If the AP is installed closer than 1 m, the Magic remote control may not perform as expected due to frequency interference.

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 install 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. 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. 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.

This remote uses infrared light. When in use, it should be pointed in the direction of the TV’s remote sensor.

ENGLISH



⏻ (POWER)

Turns the TV on or off.

TV

Returns to the last TV channel.

Q.MENU

Accesses the quick menu.

CAPTION

Activates or deactivate the subtitles.

 RATIO

Resizes an image.

 INPUT

Changes the input source. Turns the TV on if it is off.

Number button

Enters numbers.

LIST

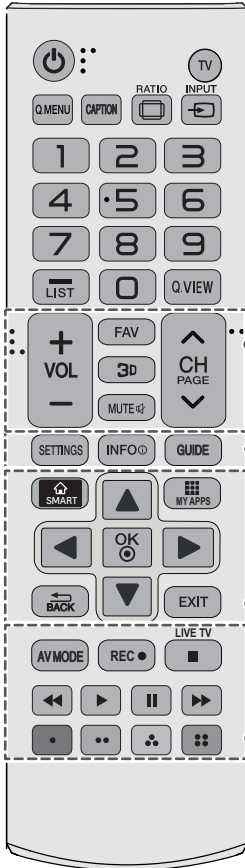
Accesses the saved channel list.

- (Dash)

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

Q.VIEW

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



+ VOL -

Adjusts the volume level.

FAV

Accesses your favorite channel list.

3D

Used for viewing 3D video.

MUTE

Mutes all sounds.

^ CH v

Scrolls through the saved channels.

^ PAGE v

Moves to the previous or next screen.

SETTINGS

Accesses the main menu.

INFO

Shows information on the current program.

GUIDE

Displays the program event according to time scheduler.

SMART

Accesses the Smart Home menu.

MY APPS

Shows the list of Apps.

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 screen.

EXIT

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

AV MODE

Selects an AV mode.

REC

Adjusts Time Machine II mode.

Control buttons (■, ▶, ⏸, ◀, ▶▶)

Controls the SIMPLINK compatible devices (USB, SIMPLINK).

LIVE TV

Returns to the LIVE TV.

Color buttons

These access special functions in some menus.

(■: Red, ■: Green, ■: Yellow, ■: Blue)

WATCHING TV

Turning the TV on for the First Time

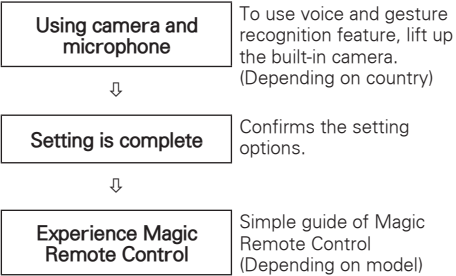
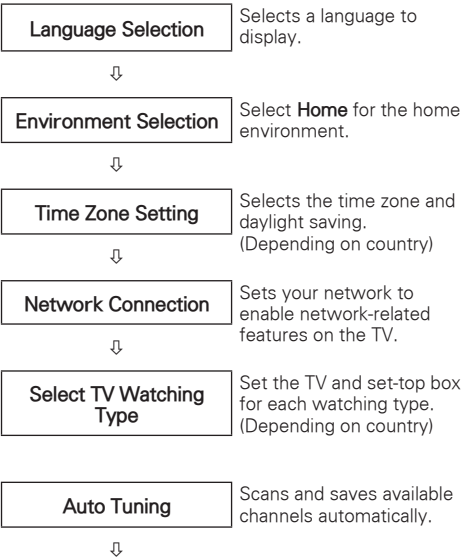
When you turn the TV on for the first time, the Initial setting screen appears. Select a language and customize the basic settings.

- 1 Connect the power cord to a power outlet.
- 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.



 **NOTE**

- Select **Home** when prompted. **Store** mode puts the TV in demo mode.
- If you select **Store**, the any customized settings will switch back to the default settings of **Store** in 5 minutes.
- Power Indicator feature is disabled in Store Demo mode.

- 4 When the basic settings are complete, press the **Wheel (OK)**.

 **NOTE**

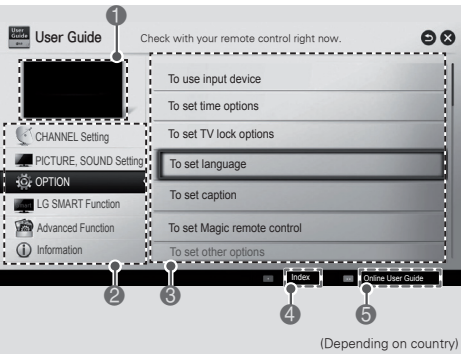
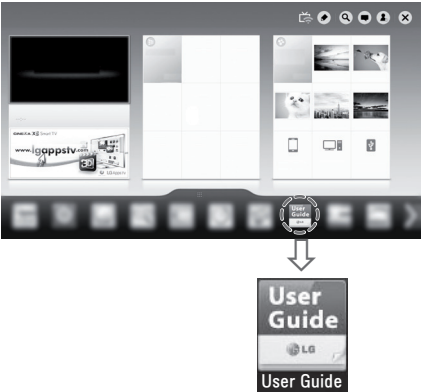
- If you do not complete the Initial setting, it will appear whenever the TV turns on.
- Disconnect the power cord from the power outlet when you do not use the TV for a long period of time.

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

USING THE USER GUIDE

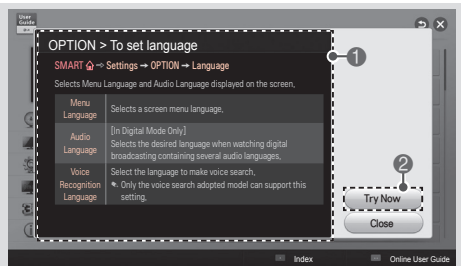
User Guide allows you to easily access detailed TV information.

- 1 Press **SMART**  button to access the Smart Home menus.
- 2 Select **User Guide** and press the  **Wheel** (OK) button.



1	Shows the video you were watching.
2	Guide categories.
3	List of topics in the current category. You can use  /  button to move between pages.
4	An index of key words present in the User Guide.
5	Provides the detailed information on the functions of LG Smart TV when the Internet is connected. (It may not be available depending on the country/language.)

ENGLISH



1	Shows the description of the selected menu. You can use  /  to move between pages.
2	Moves to the selected menu directly from the User Guide.

SPECIFICATIONS

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

Power requirement		AC 100 - 240 V ~ 50 / 60 Hz
Television System		Analog : NTSC, PAL-M/N DTV : SBTVD
Program Coverage		VHF 2 - 13, UHF 14 - 69, DTV 2 - 69, CATV 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		55LA9650 (55LA9650-SA)
Dimensions (Width x Height x Depth)	With stand	1234 x 790 x 261 (mm)
	Without stand	1234 x 755 x 41.9 (mm)
Weight	With stand	26.1 kg
	Without stand	24.6 kg
Current Value / Power consumption		1.9 A / 190 W

MODELS		65LA9650 (65LA9650-SA)
Dimensions (Width x Height x Depth)	With stand	1455 x 912 x 294 (mm)
	Without stand	1455 x 881 x 43.5 (mm)
Weight	With stand	36.8 kg
	Without stand	35 kg
Current Value / Power consumption		2.5 A / 250 W

MODELS		55LA9700 (55LA9700-SA)
Dimensions (Width x Height x Depth)	With stand	1230 x 781 x 274 (mm)
	Without stand	1230 x 714 (*743) x 40.2 (mm)
Weight	With stand	31 kg
	Without stand	27.9 kg
Current Value / Power consumption		2.8 A / 280 W

MODELS		65LA9700 (65LA9700-SA)
Dimensions (Width x Height x Depth)	With stand	1451 x 910 x 325 (mm)
	Without stand	1451 x 838 (*868) x 40.8 (mm)
Weight	With stand	44.2 kg
	Without stand	40.6 kg
Current Value / Power consumption		3.7 A / 370 W

MODELS		84LA9800 (84LA9800-SA)
Dimensions (Width x Height x Depth)	With stand	1916 x 1214 x 399 (mm)
	Without stand	1916 x 1120 x 39.9 (mm)
Weight	With stand	81.7 kg
	Without stand	70.4 kg
Current Value / Power consumption		5.2 A / 520 W

* : Sliding Speaker open state (For LA9700 series)

HDMI (DTV) supported mode

Resolution	Horizontal Frequency (kHz)	Vertical Frequency (Hz)
640 x 480	31.469 / 31.5	59.94 / 60
720 x 480	31.469 / 31.5	59.94 / 60
720 x 576	31.25 15.625	50 50
1280 x 720	37.500 44.96 / 45	50 59.94 / 60
1920 x 1080	33.72 / 33.75 28.125 26.97 / 27 33.716 / 33.75 56.250 67.43 / 67.5	59.94 / 60 25 / 50.00 23.97 / 24 29.976 / 30.00 50 59.94 / 60
3840 x 2160	53.95 54 56.25 61.43 67.5	23.976 24.00 25.00 29.970 30.00

HDMI (PC) supported mode

Resolution	Horizontal Frequency (kHz)	Vertical Frequency (Hz)
640 x 350	31.468	70.09
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
1152 x 864	54.348	60.053
1280 x 1024	63.981	60.020
1360 x 768	47.712	60.015
1920 x 1080	67.5	60.00
3840 x 2160	54 56.25 67.5	24.00 25.00 30.00

Component port connecting information

Component ports on the TV	Y	PB	PR
---------------------------	---	----	----

Video output ports on DVD player	Y	PB	PR
	Y	B-Y	R-Y
	Y	Cb	Cr
	Y	Pb	Pr

Signal	Component
480i/576i	O
480p/576p	O
720p/1080i	O
1080p	O (50 Hz / 60 Hz only)

Wireless LAN module (WN8122E1) specification

Standard	IEEE802.11a/b/g/n
Frequency Range	2400 to 2483.5 MHz 5150 to 5250 MHz 5725 to 5850 MHz
Output Power (Max.)	802.11a: 16.5 dBm 802.11b: 16 dBm 802.11g: 15.5 dBm 802.11n - 2.4GHz: 15.5 dBm 802.11n - 5GHz: 16.5 dBm

- Because band channel used by the country could be different, the user can not change or adjust the operating frequency and this product is set for the regional frequency table.
- Contains FCC ID: BEJWN8122E1
Contains IC: 2703H-WN8122E1

Bluetooth module (BM-LDS401) specification

Standard	Bluetooth Version 3.0
Frequency Range	2400 ~ 2483.5 MHz
Output Power (Max.)	10 dBm or lower

- Contains FCC ID: BEJLDS401
Contains IC: 2703H-LDS401

[ULTRA HD] Video Supported Codec

- Maximum : 3840 x 2160 @ 30p
- Maximum data transfer rate
3840 x 2160 (H.264 L5.1) : 50Mbps (megabits per second)
3840 x 2160 (H.265 L5.0) : 25Mbps (megabits per second)

Extension	Codec	
.mkv / .mp4 / .ts	Video	H.264 / AVC
	Audio	Dolby Digital, Dolby Digital Plus, AAC, HE-AAC
.ts	Video	H.265 (HEVC)
	Audio	Dolby Digital, Dolby Digital Plus, AAC, HE-AAC



NOTE

- New codecs can be updated through SW upgrade.
- Video files created by some encoders may not be played back.
- LG's ULTRA HD is fully compatible with most of ULTRA HD contents encode in HEVC delivering stunning high resolution contents. However it may not support certain types of codec contents.
- Video files in formats other than the ones specified here may not be played back.
- Playback of video files stored on a USB device that does not support High Speed, may not work properly.
- Some subtitles created by users may not work properly.
- The video and subtitle files should be placed in the same folder. In this case, you must assign the same names for the video and subtitle files for proper display.
- It supports the playback through USB only.
- Some ULTRA HD models need connection with "ULTRA HD Upgrade Kit".

3D supported mode

- Video, which is input as below media contents is switched into the 3D screen automatically.
- The method for 3D digital broadcast may differ depending on the signal environment. If video is not switched automatically into 3D, manually convert the settings to view 3D images.

3D supported mode automatically				
Input	Signal	Horizontal Frequency (kHz)	Vertical Frequency (Hz)	Playable 3D video format
HDMI	640 x 480	31.469 / 31.5	59.94 / 60	Side by Side (Half), Top & Bottom, Side by Side (Full)
		62.938 / 63		Frame Packing, Line Alternative
	480p	31.469 / 31.5		Side by Side (Half), Top & Bottom, Side by Side (Full)
		62.938 / 63		Frame Packing, Line Alternative
	576p	31.25	50	Side by Side (Half), Top & Bottom, Side by Side (Full)
		62.5		Frame Packing, Line Alternative
	720p	37.50	50	Side by Side (Half), Top & Bottom, Side by Side (Full)
		44.96 / 45	59.94 / 60	
		75	50	Frame packing, Line Alternative
		89.91 / 90	59.94 / 60	
	1080i	28.125	50	Side by Side (Half), Top & Bottom, Side by Side (Full)
		33.72 / 33.75	59.94 / 60	
		56.25	50	Frame packing, Field Alternative
		67.432 / 67.50	59.94 / 60	
	1080p	26.97 / 27	23.97 / 24	Side by Side (Half), Top & Bottom, Side by Side (Full)
		28.125	25	
		33.72 / 33.75	29.976 / 30	
		43.94 / 54	23.97 / 24	Frame packing, Line Alternative
		56.25	25	
		67.432 / 67.5	29.976 / 30	
		56.25	50	Side by Side (Half), Top & Bottom
		67.432 / 67.5	59.94 / 60	
USB	1080p	33.75	30	Side by Side (Half), Top & Bottom, Checker Board, MPO (Photo), JPS (Photo)
DLNA	1080p	33.75	30	
	Signal			Playable 3D video format
DTV	Frame Compatible			Side by Side (Half), Top & Bottom

3D supported mode manually				
Input	Signal			Playable 3D video format
	Resolution	Horizontal Frequency (kHz)	Vertical Frequency (Hz)	
DTV	HD / SD	-	-	2D to 3D, Side by Side (Half), Top & Bottom
ATV (CVBS)	SD	-	-	
Component	HD / SD	-	-	
HDMI-PC	1024 x 768	48.36	60	2D to 3D, Side by Side (Half), Top & Bottom, Checker Board, Frame Sequential, Row Interleaving, Column Interleaving
	1360 x 768	47.71		
	1920 x 1080	67.5	60	2D to 3D, Side by Side (Half), Top & Bottom, Checker Board, Frame Sequential, Row Interleaving, Column Interleaving
	3840 x 2160	54 56.25 67.5	24.00 25.00 30.00	2D to 3D, Top & Bottom (Half) Side by Side (Half)
	Others	-	-	2D to 3D, Side by Side (Half), Top & Bottom
HDMI-DTV	480P	31.5	60	2D to 3D, Side by Side (Half), Top & Bottom, Checker Board, Frame Sequential, Row Interleaving, Column Interleaving
	576P	31.25	50	
	720p	37.5	50	
		45	60	
	1080i	28.12	50	2D to 3D, Side by Side (Half), Top & Bottom
		33.75	60	
	1080p	27	24	2D to 3D, Side by Side (Half), Top & Bottom, Checker Board, Row Interleaving, Column Interleaving
		28.12	25	
		33.75	30	
		56.25	50	2D to 3D, Side by Side (Half), Top & Bottom, Checker Board, Frame Sequential, Row Interleaving, Column Interleaving
		67.5	60	
	2160p	53.95 54 56.25 61.43 67.5	23.976 24.00 25.00 29.970 30.00	2D to 3D, Top & Bottom (Half), Side by Side (Half)

3D supported mode manually				
Input	Signal			Playable 3D video format
	Resolution	Horizontal Frequency (kHz)	Vertical Frequency (Hz)	
USB ,DLNA (Movie)	Under 704 x 480	-	-	2D to 3D
	Over 704 x 480 interlaced	-	-	2D to 3D, Side by Side (Half), Top & Bottom
	Over 704 x 480 progressive	-	50 / 60	2D to 3D, Side by Side (Half), Top & Bottom, Checker Board, Frame Sequential, Row Interleaving, Column Interleaving
		-	others	2D to 3D, Side by Side (Half), Top & Bottom, Checker Board, Row Interleaving, Column Interleaving
USB, DLNA (Photo)	Under 320 x 240	-	-	2D to 3D
	Over 320 x 240	-	-	2D to 3D, Side by Side (Half), Top & Bottom
Miracast™ / WiDi	1024 x 768p	-	30 / 60	2D to 3D, Side by Side (Half), Top & Bottom
	1280 x 720p	-	30 / 60	
	1920 x 1080p	-	30 / 60	
	Others	-	-	2D to 3D

EXTERNAL CONTROL DEVICE SETUP

To obtain the external control device setup information, please visit www.lg.com.

MAINTENANCE

Cleaning Your TV

Clean your TV regularly to keep it at peak performance and to extend the product lifespan.



CAUTION

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

Screen, Frame, Cabinet and Stand

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.
- Do not spray liquid onto the surface. If water enters the TV, it may result in fire, electric shock, or malfunction.

Power Cord

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

TROUBLESHOOTING

Problem	Solution
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 sleep feature is activated in the Time settings. • If there is no signal while the TV is on, the TV will turn off automatically after 15 minutes of inactivity.



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

Record it below should you ever need service.

MODEL _____

SERIAL _____

MANUAL DO PROPRIETÁRIO

CONTROLE EXTERNO CONFIGURAÇÃO DO DISPOSITIVO

Leia este manual cuidadosamente antes de operar o aparelho e guarde-o para consultas futuras.

CÓDIGOS DE TECLA

- Esse recurso não está disponível para todos os modelos.

Código (Hexa)	Função	Observação	Código (Hexa)	Função	Observação
00	CH +, PR +	Botão R/C	45	Q.Menu	Botão R/C
01	CH -, PR -	Botão R/C	4C	Lista, - (Somente ATSC)	Botão R/C
02	Volume +	Botão R/C	53	List	Botão R/C
03	Volume -	Botão R/C	5B	Exit (Sair)	Botão R/C
06	> (Tecla de seta / Tecla direita)	Botão R/C	61	Azul	Botão R/C
07	< (Tecla de seta / Tecla esquerda)	Botão R/C	63	Amarelo	Botão R/C
08	Power (Liga / Desliga)	Botão R/C	71	Verde	Botão R/C
09	Mute (Mudo)	Botão R/C	72	Vermelho	Botão R/C
0B	Input (Entrada)	Botão R/C	79	Ratio / Aspect Ratio (Proporção / Formato da Tela)	Botão R/C
0E	SLEEP	Botão R/C	91	AD (Descrições do áudio)	Botão R/C
0F	TV, TV/RAD	Botão R/C	7A	User Guide (Guia do Usuário)	Botão R/C
10 - 19	Teclado numérico 0 - 9	Botão R/C	7C	Smart / Home	Botão R/C
1A	Q.View / Flashback	Botão R/C	7E	SIMPLINK	Botão R/C
1E	FAV (Canal Favorito)	Botão R/C	8E	▶▶ (Avançar)	Botão R/C
20	Text (Legenda)	Botão R/C	8F	◀◀ (Retroceder)	Botão R/C
21	T. Opt (Opção de Legenda)	Botão R/C	AA	Info	Botão R/C
28	Return / BACK (Retornar / VOLTAR)	Botão R/C	AB	Program Guide (Guia de Programação)	Botão R/C
30	Modo AV (Áudio / Vídeo)	Botão R/C	B0	▶ (Reproduzir)	Botão R/C
39	Caption / Subtitle	Botão R/C	B1	■ (Parar / Ao Vivo)	Botão R/C
40	Λ (Tecla de seta / Cursor para cima)	Botão R/C	BA	(Congelar / Reprodução Lenta / Pausar)	Botão R/C
41	V ((Tecla de seta / Cursor para baixo)	Botão R/C	BD	● (GRAV)	Botão R/C
42	My Apps (Meus Aplicativos)	Botão R/C	DC	3D	Botão R/C
43	Menu / Settings (Configurações)	Botão R/C	9F	App / *	Botão R/C
44	OK / Enter	Botão R/C			

* O código de tecla 4C (0x4C) está disponível nos modelos ATSC/ISDB que utilizam canal principal/secundário. (Para Coreia do Sul, Japão, América do Norte e América Latina exceto Colômbia)

CONFIGURAÇÃO DO DISPOSITIVO DE CONTROLE EXTERNO

- A imagem mostrada pode ser diferente da sua TV.

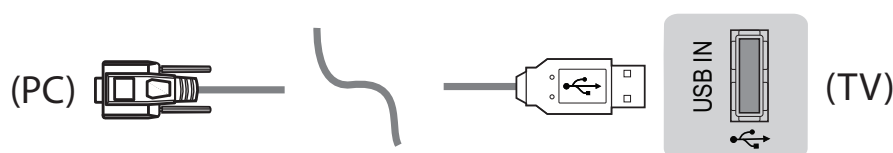
Encaixe o conector de entrada RS-232C (porta serial) a um dispositivo de controle externo (como um computador ou sistema de controle A/V) para controlar externamente as funções do produto.

Observação: O tipo de porta de controle da TV pode ser diferente entre as séries de modelos.

- * Esteja ciente de que nem todos os modelos são compatíveis com esse tipo de conectividade.
- * O cabo não é fornecido.

Cabo conversor USB → Serial

Tipo do USB



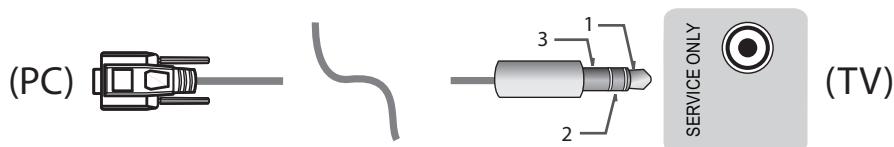
- A LGTV é compatível com o conversor USB → serial PL2303 baseado no chip (ID Fabricante: 0x0557, ID Produto: 0x2008), o qual não é produzido nem fornecido pela LG.
- É possível adquirir o conversor em lojas de produtos de informática que oferecem acessórios para profissionais de suporte em TI.

Usando o Cabo RS-232C

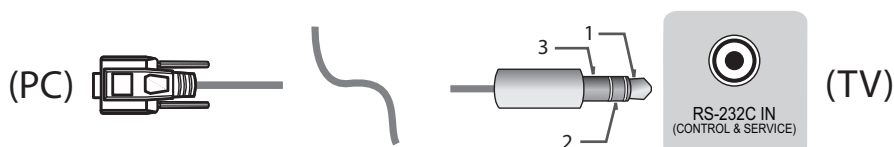
RS-232C → Fone de Ouvido

- Adquira o cabo RS-232C → Fone de Ouvido ou crie o seu próprio cabo usando as informações descritas neste manual.

* Para outros modelos, conecte-se à porta USB.

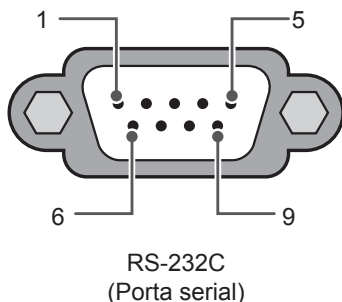


- Essa conexão só pode ser utilizada nos seguintes modelos : 55/47/39LN5450-UA, 55/50/47/42LN5400-UA, 42/39/32LN5300-UA, e 37/32LN530B-UA.



- Essa conexão só pode ser utilizada nos seguintes modelos : 42/50PN4500-UA, 50/60PN5300-UF, 50/60PN6500-UA, e 60PN6500-UA.

Computador do cliente



Configurações RS-232C

Configurações de 3 fios (Não padrão)

	PC	TV	
RXD	2	2	TXD
TXD	3	1	RXD
GND	5	3	GND
ou			
RXD	3	2	TXD
TXD	2	1	RXD
GND	5	3	GND
	D-Sub 9	Fone de Ouvido	

Set ID

Para número de ID, consulte "**Mapeamento de dados reais**" na página 6

1. Pressione **SETTINGS** para acessar o menu principal da TV.
2. No menu selecione **OPÇÕES** e pressione **OK**.
3. No menu selecione a opção **SET ID** e pressione **OK**.
4. Use < / > para definir a identificação da TV (1 ~ 99). Para sair pressione **EXIT**.

Parâmetros de comunicação

- Taxa de transmissão: 9600 bps (UART)
- Extensão de dados: 8 bits
- Paridade: Nenhuma
- Bit de parada: 1 bit
- Código de comunicação: código ASCII
- Use um cabo cruzado (inverso).

Lista de referência de comandos

(Dependendo do modelo)

	COMANDO 1	COMANDO 2	DADOS (Hexadecimais)		COMANDO 1	COMANDO 2	DADOS (Hexadecimais)
01. Desligar	k	a	00	13. Balanço	k	t	00 a 64
02. Formato da Tela	k	c	(Consulte a p.7)	14. Temperatura da Cor	x	u	00 a 64
03. Tela sem áudio	k	d	(Consulte a p.7)	15. ISM Método (somente TV de plasma)	j	p	(Consulte a p.8)
04. Sem áudio	k	e	00 a 01	16. Energy Saving	j	q	00 a 05
05. Controle de Volume	k	f	00 a 64	17. Comando de sintonia	m	a	(Consulte a p.9)
06. Contraste	k	g	00 a 64	18. Adicionar/excluir (pular) canal (programa)	m	b	00 a 01
07. Brilho	k	h	00 a 64	19. Tecla	m	c	Códigos de teclas
08. Cor	k	i	00 a 64	20. Controle da luz de fundo, Luz do painel de controle	m	g	00 a 64
09. Tonalidade	k	j	00 a 64	21. Selecionar Entrada (Principal)	x	b	(Consulte a p.10)
10. Nitidez	k	k	00 a 32	22. 3D (somente modelos 3D)	x	t	(Consulte a p.11)
11. Selecionar OSD	k	l	00 a 01	23. 3D estendido (somente modelos 3D)	x	v	(Consulte a p.11)
12. Controle remoto Modo Bloqueio	k	m	00 a 01				

* Observação: Durante as operações USB, como DivX ou EMF, todos os comandos exceto Power(ka) e Key(mc) não são executados e tratados como NG.

Protocolo de transmissão/recepção

Transmissão

[Comando1][Comando2][][Set ID][][Data][Cr]

[Comando 1] : Primeiro comando para controlar a TV (j, k, m ou x)

[Comando 2] : Segundo comando para controlar a TV.

[Set ID] : É possível ajustar o ID para escolher o número do ID do monitor desejado no menu de opções. O intervalo de ajuste é de 1 a 99. Ao ajustar o Set ID como '0', todo dispositivo conectado é controlado.
* Set ID é indicado como um valor decimal (1 a 99) no menu e como um valor hexadecimal (0x0 a 0x63) no protocolo de transmissão/recepção.

[DATA] : Para transmitir dados do comando. Transmite dados 'FF' para ler o status do comando.

[Cr] : Retorno de carro - código ASCII '0x0D'

[] : Espaço – Código ASCII '0x20'

Reconhecimento efetuado

[Comando2][][Set ID][][OK][Data][x]

* As configurações transmitem o ACK (reconhecimento) com base nesse formato ao receber dados normais. No momento, se os dados estiverem no modo de leitura, ele indicará os dados do status atual. Se os dados estiverem no modo de gravação, ele retorna os dados do computador.

Erro de reconhecimento

[Comando2][][Set ID][][NG][Data][x]

* As configurações transmitem o ACK (reconhecimento) com base nesse formato ao receber dados anormais de funções inviáveis ou erros de comunicação.

Data 00: Código ilegal

Mapeamento dos dados reais (Hexadecimais → Decimal)

* Ao inserir os [dados] em hexadecimais, consulte a seguinte tabela de conversão.

* O comando Ajustar canal (ma) utiliza um valor hexadecimal de dois bits ([dado]) para selecionar o número do canal.

00 : Passo 0	32 : Passo 50 (Set ID 50)	FE : Passo 254
01 : Passo 1 (Set ID 1)	33 : Passo 51 (Set ID 51)	FF : Passo 255
...	...	...
0A : Passo 10 (Set ID 10)	63 : Passo 99 (Set ID 99)	01 00 : Passo 256
...	...	...
0F : Passo 15 (Set ID 15)	C7 : Passo 199	27 0E : Passo 9998
10 : Passo 16 (Set ID 16)	C8 : Passo 200	27 0F : Passo 9999
...	...	...

* Os comandos podem funcionar de maneira diferente, dependendo do modelo e sinal.

01. Liga/Desliga (comando: k a)

- Para controlar o Liga/Desliga do dispositivo.

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

Data 00 : Desligar

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

- Para exibir a opção Desligar. (funciona somente se a TV estiver ligada)

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

Reconhecimento [a][][Set ID][][OK][01][x]

- * Do mesmo modo, se outras funções transmitirem dados 'FF' baseados neste formato, o feedback dos dados de Reconhecimento apresentará o status de cada função.

02. Formato da tela (comando: k c) (Tamanho da imagem principal)

- Para ajustar o formato da tela. (Tamanho da imagem principal)
Também é possível ajustar o formato da tela com a função Formato da Tela no Q.MENU. ou no menu IMAGEM.

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

Data 01 : Tela Normal (4:3)	07 : 14:9 (Europa, Colômbia, Oriente Médio, Ásia exceto Coreia do Sul e Japão)
02 : Widescreen (16:9)	09 : * Just Scan
04 : Zoom	0B : Full Wide
05 : Zoom 2 (América Latina exceto Somente Colúmbia)	(Europa, Taiwan, Oriente Médio, Ásia, China, Hong Kong, Colúmbia somente)
06 : Definido pelo Programa/Original	10 a 1F : Zoom Cinema 1 a 16

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

- * Usando a entrada do PC, selecione o formato da tela 16:9 ou 4:3.
- * No modo DTV/HDMI/Componente (alta definição), o Just Scan está disponível
- * O modo Tela Cheia pode funcionar de maneira diferente com base no modelo e se ele é totalmente suportado DTV, e parcialmente para ATV.

03. Tela sem áudio (comando: k d)

- Para ligar/desligar a tela sem áudio.

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

Data 00 : Tela sem áudio desligada (Imagem ligada)
Tela sem áudio desligada

01 : Tela sem áudio desligada (Imagem desligada)

10 : Tela sem áudio ligada

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

- * Caso apenas o recurso tela sem áudio ligada esteja selecionado, a TV irá exibir o On Screen Display (OSD). Mas, caso o recurso Tela sem áudio ligada esteja selecionado, a TV não irá exibir o OSD.

04. Sem áudio (comando: k e)

- Para controlar o ligamento/desligamento do volume.
Você pode ajustar o mudo com o botão MUDO no controle remoto.

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

Data 00 : Sem áudio ativado (Volume desligado)
01 : Sem áudio desativado (Volume ligado)

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

05. Controle de Volume (comando: k f)

- Para ajustar o volume.
Também é possível ajustar o volume com os botões de volume no controle remoto.

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

Data Mín.: 00 a Máx.: 64

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

06. Contraste (comando: k g)

- Para ajustar o contraste da tela.
Também é possível ajustar o contraste no menu IMAGEM.

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

Data Mín.: 00 a Máx.: 64

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

07. Brilho (comando: k h)

- Para ajustar o brilho da tela.
Também é possível ajustar o brilho no menu IMAGEM.

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

Data Mín.: 00 a Máx.: 64

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

08. Cor (comando: k i)

- ▶ Para ajustar a cor da tela.
Também é possível ajustar a cor no menu IMAGEM.

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

Data Mín.: 00 a Máx.: 64

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

09. Tonalidade (comando: k j)

- ▶ Para ajudar a tonalidade da tela.
Também é possível ajustar a tonalidade no menu IMAGEM.

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

Data Vermelho : 00 a Verde : 64

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

10. Nitidez (comando: k k)

- ▶ Para ajudar a nitidez da tela.
Também é possível ajustar a nitidez no menu IMAGEM.

Transmissão [k][k][][Set ID][][Data][Cr]

Data Mín.: 00 a Máx.: 32

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

11. Seleção do OSD (comando: k l)

- ▶ Para ligar/desligar OSD (On Screen Display) ao controlar remotamente.

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

Data 00 : OSD desligado 01 : OSD ligado

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

12. Modo Bloqueio do controle remoto (comando: k m)

- ▶ Para bloquear os controles do painel frontal no monitor e no controle remoto.

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

Data 00 : Bloqueio desligado 01 : Bloqueio ligado

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

- * Se você não está usando o controle remoto, use este modo.
O bloqueio do controle externo é liberado ao desligar e religar a alimentação principal (desencaixar e reencaixar após 20 a 30 segundos).

- * No modo de espera (alimentação desligada por temporizador ou comando 'ka', 'mc') e com a tecla de bloqueio acionada, a TV não será ligada pela tecla liga/desliga ou pela tecla IR & Local.

13. Balanço (comando: k t)

- ▶ Para ajustar o balanço.
Também é possível ajustar o balanço no menu ÁUDIO.

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

Data Mín.: 00 a Máx.: 64

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

14. Temperatura da cor (comando: x u)

- ▶ Para ajustar a temperatura da cor. Também é possível ajustar a temperatura da cor no menu IMAGEM.

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

Data Mín.: 00 a Máx.: 64

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

15. Método ISM (comando: j p) (somente TV de plasma)

- ▶ Para controlar o Método ISM. Também é possível ajustar o Método ISM no menu OPÇÕES.

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

Data : 02: Orbital

08: Normal

20: Limpeza de cor

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

16. Energy Saving (comando: j q)

- ▶ Para reduzir o consumo de energia da TV.
Também é possível ajustar o Energy Saving no menu IMAGEM.

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

Data

00 : Desligado

01 : Mínimo

02 : Médio

03 : Máximo

04 : Automático

05 : Vídeo Desligado

- * (Dependendo do modelo)

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

17. Comando de sintonia (comando: m a)

- * Este comando pode funcionar de maneira diferente, dependendo do modelo e sinal.
- Para Europa, Oriente Médio, Colômbia, Ásia exceto Coreia do Sul e Japão
- Selecione o canal para o seguinte número físico.

Transmissão [m][a][][Set ID][][Data 00][][Data 01][][Data 02][][Data 03][][Data 04][][Data 05][Cr]

- * Analógico terrestre/cabo

[Data 00][Data 01] Dados do canal

Data 00 : Dados do canal com byte alto

Data 01 : Dados do canal com byte baixo
- 00 00 a 00 C7 (Decimal : 0 ~ 199)

Data 02 : Fonte de entrada (analógico)

- 00 : TV terrestre (ATV)
- 80 : TV a cabo (CATV)

- * Digital terrestre/cabo/satélite

[Data 00][Data 01]: Dados do canal

Data 00 : Dados do canal alto

Data 01 : Dados do canal baixo
- 00 00 a 27 0F (Decimal : 0 a 9999)

Data 02 : Fonte de entrada (digital)

- 10 : TV terrestre (DTV)
- 20 : Rádio terrestre (rádio)
- 40 : TV por satélite (SDTV)
- 50 : Satélite de rádio (S-Rádio)
- 90 : TV a cabo (CADTV)
- a0 : Rádio por cabo (CA-Rádio)

- * Exemplos de comando de sintonia:

1. Sintonize o canal 10 terrestre analógico (PAL).

Set ID = All = 00

Data 00 a 01 = o dado do canal é 10 = 00 0a

Data 02 = TV terrestre analógica = 00

Resultado = **ma 00 00 0a 00**

2. Sintonize o canal 01 terrestre digital (DVB-T).

Set ID = All = 00

Data 00 & 01 = o dado do canal é 1 = 00 01

Data 02 = TV terrestre digital = 10

Resultado = **ma 00 00 01 10**

3. Sintonize o canal 1000 por satélite (DVB-S).

Set ID = All = 00

Data 00 & 01 = o dado do canal é 1000 = 03 E8

Data 02 = TV por satélite digital = 40

Resultado = **ma 00 03 E8 40**

Reconhecimento [a][][Set ID][][OK][Data 00]

[Data 01][Data 02][x][a][][Set ID][][NG][Data 00][x]

- Para Coreia do Sul e América do Norte/Latina exceto Colômbia

- Para sintonizar o canal para seguir o número físico/principal/secundário.

Transmissão [m][a][][0][][Data00][][Data01]

[][Data02][][Data03][][Data04][][Data05][Cr]

Os canais digitais possuem um número de canal Físico, Principal e Secundário. O número Físico é o número real do canal digital, O Principal é o número para que o canal possa ser mapeado e o Secundário é o sub-canal. Como o sintonizador ATSC mapeia automaticamente o canal conforme o número Principal ou Secundário, o número Físico não é necessário ao enviar um comando em modo Digital.

- * Analógico terrestre/cabo

Data 00 : Número físico do canal

- Terrestre (ATV) : 02 a 45 (Decimal : 2 a 69)
- Cabo (CATV) : 01, 0E a 7D (Decimal : 1, 14 a 125)

[Data 01 ~ 04]: Número do canal Principal/Secundário

Data 01 e 02: xx (não importa)

Data 03 e 04: xx (não importa)

Data 05: Fonte de entrada (analógico)

- 00 : TV terrestre (ATV)
- 01 : TV a cabo (CATV)

- * Digital terrestre/cabo

Data 00 : xx (não importa)

[Data 01][Data 02]: Número do canal Principal

Data 01 : Dados do canal com byte alto

Data 02 : Dados do canal com byte baixo

- 00 01 a 27 0F (Decimal : 1 a 9999)

[Data 03][Data 04]: Número do canal Secundário

Data 03 : Dados do canal com byte alto

Data 04 : Dados do canal com byte baixo

Data 05 : Fonte de entrada (digital)

- 02 : TV aberta (DTV) – Usar número de canal físico
- 06 : TV a cabo (CADTV) – Usar número de canal físico
- 22 : TV aberta (DTV) – Não usar número de canal físico
- 26 : TV a cabo (CADTV) - Não usar número de canal físico
- 46 : TV a cabo (CADTV) – use somente o número de canal principal (canal parte um)

Dois bytes estão disponíveis para cada dado de canal principal e secundário, mas o byte inferior (segundo) normalmente é usado sozinho (o byte superior é 0).

- * Exemplos de comando de sintonia:

1. Sintonize o canal 35 do cabo analógico (NTSC).

Set ID = All = 00

Data 00 = o dado do canal é 35 = 23

Data 01 e 02 = sem principal = 00 00

Data 03 e 04 = sem secundário = 00 00

Data 05 = TV a cabo terrestre analógica = 01

Total = **ma 00 23 00 00 00 01**

2. Sintonize o canal 30-3 terrestre digital (ATSC).

Set ID = All = 00

Data 00 = não conhece o físico = 00

Data 01 & 02 = o principal é 30 = 00 1E

Data 03 & 04 = o secundário é 3 = 00 03

Data 05 = TV terrestre digital = 22

Total = **ma 00 00 00 1E 00 03 22**

Reconhecimento [a][][Set ID][][OK][Data 00]

[Data 01][Data 02][Data 03][Data 04][Data 05]

[x][a][][Set ID][][NG][Data 00][x]

• Para Japão

- Para sintonizar o canal para seguir o número físico/principal/secundário.

Transmissão [m][a][][0][][Data00][][Data01]

[][Data02][][Data03][][Data04][][Data05][Cr]

* Digital terrestre/satélite

Data 00: xx (não importa)

[Data 01][Data 02]: Número do canal Principal

Data 01: Dados do canal com byte alto

Data 02: Dados do canal com byte baixo

- 00 01 a 27 0F (Decimal : 1 a 9999)

[Data 03][Data 04]: Número do canal Secundário/

Derivado

(não importa no satélite)

Data 03: Dados do canal com byte alto

Data 04: Dados do canal com byte baixo

Data 05 : Fonte de entrada (digital/satélite para Japão)

- 02 : TV terrestre (DTV)

- 07 : BS (Satélite de Transmissão)

- 08 : CS1 (Satélite de Comunicação 1)

- 09 : CS2 (Satélite de Comunicação 2)

* Exemplos de comando de sintonia:

1 Sintonize o canal 17-1 terrestre digital (ISDB-T).

Set ID = All = 00

Data 00 = não conhece o físico = 00

Data 01 e 02 = o principal é 17 = 00 11

Data 03 e 04 = o secundário/derivado é 1 = 00 01

Data 05 = TV terrestre = 02

Total = **ma 00 00 00 11 00 01 02**

2. Sintonize o canal 30 do BS (ISDB-BS).

Set ID = All = 00

Data 00 = não conhece o físico = 00

Data 01 e 02 = o principal é 30 30 = 00 1E

Data 03 e 04 = não importa = 00 00

Data 05 = TV BS digital = 07

Total = **ma 00 00 00 1E 00 00 07**

* Este recurso varia, dependendo do modelo.

Reconhecimento [a][][Set ID][][OK][Data 00]

[Data 01][Data 02][Data 03][Data 04][Data 05]

[x][a][][Set ID][][NG][Data 00][x]

18. Adicionar/Pular programação (comando: m b)

- Para pular o canal (programa) atual na próxima vez.

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

Data 00 : Excluir(ATSC,ISDB)/ 01 : Adicionar
Pular(DVB)

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

- * Definir o status do canal salvo como excluir (ATSC, ISDB)/pular (DVB) ou adicionar.

19. Chave (comando: m c)

- Para enviar o código da tecla remota IR.

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

Data Código de tecla - Consulte a p.2.

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

20. Controle da luz de fundo (comando: m g)

- Somente TV de LCD/TV de LED

- Para controlar a luz de fundo.

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

Data Mín.: 00 a Máx.: 64

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

Control Panel Light (Command: m g)

- Somente TV de plasma

- Para controlar a iluminação do painel.

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

Data Mín.: 00 a Máx.: 64

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

21. Seleção de entrada (comando: x b)

(Entrada da imagem principal)

- Para selecionar a fonte de entrada da imagem principal.

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

Data

00 : DTV 01 : CADTV

02 : Satélite DTV 10 : ATV

ISDB-BS (Japão)

03 : ISDB-CS1 (Japão)

04 : ISDB-CS2 (Japão)

11 : CATV

20 : AV ou AV1 21 : AV2

40 : Componente 1 41 : Componente 2

90 : HDMI1 91 : HDMI2

92 : HDMI3 93 : HDMI4

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

* Essa função depende do modelo e do sinal.

22. 3D (comando: x t) (somente modelos 3D) (Dependendo do modelo)

► Para mudar o modo 3D da TV.

Transmissão [x][t][][Set ID][][Data 00][][Data 01]
[][Data 02][][Data 03][Cr]

Data Structure

[Data 00] 00 : 3D ligado

01 : Desligar 3D

02 : 3D para 2D

03 : 2D para 3D

[Data 01] 00 : Superior e inferior

01 : Lado a lado

02 : Quadriculado

03 : Sequencial de quadros

04 : Intercalação de coluna

05 : Intercalação de linha

[Data 02] 00 : Direita para a esquerda

01 : Esquerda para Direita

[Data 03] Efeito 3D (Profundidade 3D): Mín.: 00 -
Máx.: 14

(*transmitir por código hexadecimal)

* Se [Data 00] for 00 (3D ligado), então [Data 03] não importa.

* Se [Data 00] for 01 (3D desligado) ou 02 (3D para 2D), [Data 01], [Data 02] e [Data 03] não importam.

* Se [Data 00] for 03 (2D para 3D), [Data 01] e [Data 02] não importam.

* Se [Data 00] for 00 (3D ligado) ou 03 (2D para 3D), [Data 03] funcionará quando o 3D Mode (Modo 3D) (Gênero) estiver somente manual.

* Dependendo da transmissão e do sinal de vídeo, nem todas as opções de padrão 3D ([Data 01]) podem estar disponíveis.

[Data 00]	[Data 01]	[Data 02]	[Data 03]
00	O	O	O
01	X	X	X
02	X	X	X
03	X	X	O

X : não importa

Reconhecimento [t][][Set ID][][OK][Data00]
[Data01][Data02][Data03][x]
[t][][Set ID][][NG][Data00][x]

23. 3D estendido (comando : x v) (somente modelos 3D) (dependendo do modelo)

► Para mudar a opção de 3D da TV.

Transmissão [x][v][][Set ID][][Data 00][][Data 01][Cr]

[Data 00] Opções 3D

00 : Correção da Imagem 3D

01 : Profundidade 3D (Modo 3D somente no manual)

02 : Visão 3D

06 : Correção da cor 3D

07 : Ampliação do Som 3D

08 : Visualização da imagem normal

09 : Modo 3D (Gênero)

[Data 01] Possui seu próprio intervalo para cada opção 3D determinado por [Data 00].

1) Quando [Data 00] for 00

00 : Direita para Esquerda

01 : Esquerda para Direita

2) Quando [Data 00] for 01, 02

Data Mín.: 0 - Máx.: 14 (*transmitir por código hexadecimal)

O intervalo de valor de dados (0 - 20) converte o intervalo da Visão (-10 - +10) automaticamente (dependendo do modelo)

3) Quando [Data 00] for 06, 07

00 : Desligado

01 : Ligado

4) Quando [Data 00] for 08

00 : Volta para vídeo 3D o vídeo convertido 3D → 2D.

01 : Muda o vídeo 3D para 2D, exceto vídeo 2D → 3D.

* Se a conversão não for possível, o comando será tratado como não aceito.

5) Quando [Data 00] for 09

00 : Padrão 01 : Esportes

02 : Cinema 03 : Extremo

04 : Manual

Reconhecimento [v][][Set ID][][OK][Data00]
[Data01][x]
[v][][Set ID][][NG][Data00][x]

