

OWNER'S MANUAL

Safety and Reference

LG OLED TV

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

OLED55G1PUA

OLED65G1PUA

OLED77G1PUA



* M F L 7 1 7 5 3 6 3 2 *

(2102-REV00)

www.lg.com

Printed in Korea

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Important Safety Instruction

- Read these instructions.
- Keep these instructions.
- Heed all warnings.
- Follow all instructions.
- Do not use this apparatus near water.
- Clean only with dry cloth.
- Do not block any ventilation openings. Install in accordance with the manufacturer's instructions.
- Do not install near any heat sources such as radiators, heat registers, stoves, or other apparatus (including amplifiers) that produce heat.
- Do not defeat the safety purpose of the polarized or grounding-type plug. A polarized plug has two blades with one wider than the other. A grounding type plug has two blades and a third grounding prong. The wide blade or the third prong are provided for your safety. If the provided plug does not fit into your outlet, consult an electrician for replacement of the obsolete outlet.
- 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 the cart, stand, tripod, bracket, or table specified by the manufacturer, or sold with the apparatus. When a cart is used, use caution when moving the cart/apparatus combination to avoid injury from tip-over.



- 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.

By using this product, you agree that all disputes between you and LG arising out of or relating in any way to this product (including but not limited to warranty disputes) shall be resolved exclusively through binding arbitration on an individual basis. The terms of the arbitration agreement (including details on the procedure for resolving disputes) is available at www.lg.com/us/arbitration (USA) or www.lg.com/ca_en/arbitration (Canada).

1 Warning! Safety instructions

2 Preparing

- Lifting and moving the TV
- Mounting on the Table
- Mounting to the Wall
- Antenna/Cable

3 Starting TV

- Turning on the TV
- Registering Magic Remote Control
- Connecting Smart Devices using NFC Tagging

4 Using Magic Remote Control

- Using Magic Remote Control

5 Connections

6 Troubleshooting

7 Specifications

- Open Source Software Notice Information
- Licenses

8 Important Information for Preventing Image Retention



9 Regulatory

Before reading this manual

- Read this manual thoroughly before operating your TV, and keep it for future reference.
- On the website you can download the manual including installation, using, troubleshooting, specifications, license etc and view its contents on your PC or mobile device.

User Guide

For more information about this TV, read the USER GUIDE embedded in the product.

- To open the USER GUIDE  →  → [Support] → [User Guide]

Optional Extras

- Optional extras can be changed or modified for quality improvement without any notification. Contact your dealer for buying these items. These devices work only with certain models. The model name or design may be changed due to the manufacturer's circumstances or policies.
- A cable to connect antennas and external devices must be purchased separately.

Note

- Product specifications or contents of this manual may be changed without prior notice due to upgrade of product functions.
- The items supplied with your product may vary depending upon the model.
- Image shown may differ from your TV.

1 Warning! Safety instructions



CAUTION
RISK OF ELECTRIC SHOCK
DO NOT OPEN



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



The symbol is intended to alert the user to the presence of uninsulated dangerous voltage within the product's enclosure that may be of sufficient magnitude to constitute a risk of electric shock to persons.



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

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

- TO PREVENT THE SPREAD OF FIRE, KEEP CANDLES OR OTHER ITEMS WITH OPEN FLAMES AWAY FROM THIS PRODUCT AT ALL TIMES.

- **Do not place the TV and/or remote control in the following environments:**

- Keep the product away from direct sunlight.
- An area with high humidity such as a bathroom.
- Near any heat source such as stoves and other devices that produce heat.
- Near kitchen counters or humidifiers where they can easily be exposed to steam or oil.
- An area exposed to rain or wind.
- Do not expose to dripping or splashing and do not place objects filled with liquids, such as vases, cups, etc. on or over the apparatus (e.g., on shelves above the unit).
- Near flammable objects such as gasoline or candles, or expose the TV to direct air conditioning.
- Do not install in excessively dusty places.

Otherwise, this may result in fire, electric shock, combustion/explosion, malfunction or product deformation.

- **Ventilation**

- Install your TV where there is proper ventilation. Do not install in a confined space such as a bookcase.
- Do not install the product on a carpet or cushion.
- Do not block or cover the product with cloth or other materials while unit is plugged in.
- Take care not to touch the ventilation openings. When watching the TV for a long period, the ventilation openings may become hot.
- Protect the power cord from physical or mechanical abuse, such as being twisted, kinked, pinched, closed in a door, or walked upon. Pay particular attention to plugs, wall outlets, and the point where the cord exits the device.
- Do not move the TV whilst the Power cord is plugged in.
- Do not use a damaged or loosely fitting power cord.
- Be sure to grasp the plug when unplugging the power cord. Do not pull on the power cord to unplug the TV.
- Do not connect too many devices to the same AC power outlet as this could result in fire or electric shock.

- **Disconnecting the Device from the Main Power**

- The power plug is the disconnecting device. In case of an emergency, the power plug must remain readily accessible.

- Do not let your children climb or cling onto the TV. Otherwise, the TV may fall over, which may cause serious injury.

- **Outdoor Antenna Grounding** (Can differ by country):

- If an outdoor antenna is installed, follow the precautions below. An outdoor antenna system should not be located in the vicinity of overhead power lines or other electric light or power circuits, or where it can come in contact with such power lines or circuits as death or serious injury can occur.

Be sure the antenna system is grounded to provide some protection against voltage surges and built-up static charges. Section 810 of the National Electrical Code (NEC) in the U.S.A. provides information with respect to proper grounding of the mast and supporting structure, grounding of the lead-in wire to an antenna discharge unit, size of grounding conductors, location of antenna discharge unit, connection to grounding electrodes and requirements for the grounding electrode. Antenna grounding according to the National Electrical Code, ANSI/NFPA 70

- **Grounding** (Except for devices which are not grounded.)

- TV with a three-prong grounded AC plug must be connected to a three-prong grounded AC outlet. Ensure that you connect the earth ground wire to prevent possible electric shock.
- Never touch this apparatus or antenna during a lightning storm. You may be electrocuted.
- Make sure the power cord is connected securely to the TV and wall socket if not secured damage to the Plug and socket may occur and in extreme cases a fire may break out.
- Do not insert metallic or inflammable objects into the product. If a foreign object is dropped into the product, unplug the power cord and contact the customer service.
- Do not touch the end of the power cord while it is plugged in. You may be electrocuted.

- **If any of the following occur, unplug the product immediately and contact your local customer service.**

- The product has been damaged.
- If water or another substance enters the product (like an AC adapter, power cord, or TV).
- If you smell smoke or other odors coming from the TV
- When lightning storms or when unused for long periods of time.

Even the TV is turned off by remote control or button, AC power source is connected to the unit if not unplugged in.

- Do not use high voltage electrical equipment near the TV (e.g., a bug zapper). This may result in product malfunction.
- Do not attempt to modify this product in any way without written authorization from LG Electronics. Accidental fire or electric shock can occur. Contact your local customer service for service or repair. Unauthorized modification could void the user's authority to operate this product.
- Use only an authorized attachments / accessories approved by LG Electronics. Otherwise, this may result in fire, electric shock, malfunction, or product damage.
- Never disassemble the AC adapter or power cord. This may result in fire or electric shock.
- Handle the adapter carefully to avoid dropping or striking it. An impact could damage the adapter.
- To reduce the risk of fire or electrical shock, do not touch the TV with wet hands. If the power cord prongs are wet or covered with dust, dry the power plug completely or wipe dust off.

- **Batteries**

- Store the accessories (battery, etc.) in a safe location out of the reach of children.
- Do not short circuit, disassemble, or allow the batteries to overheat. Do not dispose of batteries in a fire. Batteries should not be exposed to excessive heat.
- Caution: Risk of fire or explosion if the battery is replaced by an incorrect type.

- **Moving**

- When moving, make sure the product is turned off, unplugged, and all cables have been removed. It may take 2 or more people to carry larger TVs. Do not press or put stress on the front panel of the TV. Otherwise, this may result in product damage, fire hazard or injury.
- Keep the packing anti-moisture material or vinyl packing out of the reach of children.
- Do not allow an impact shock, any objects to fall into the product, and do not drop anything onto the screen.
- Do not press strongly upon the panel with a hand or a sharp object such as a nail, pencil, or pen, or make a scratch on it. It may cause damage to screen.

- **Cleaning**

- When cleaning, unplug the power cord and wipe gently with a soft/dry cloth. Do not spray water or other liquids directly on the TV. Do not clean your TV with chemicals including glass cleaner, any type of air freshener, insecticide, lubricants, wax (car, industrial), abrasive, thinner, benzene, alcohol etc., which can damage the product and/or its panel. Otherwise, this may result in electric shock or product damage.

2 Preparing

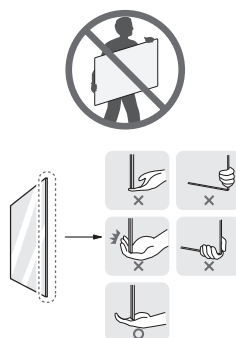
Lifting and moving the TV

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.

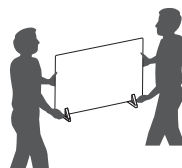
- It is recommended to move the TV in the box or packing material that the TV originally came in.
- Before moving or lifting the TV, disconnect the power cord and all cables.

- When holding the TV, the screen should face away from you to avoid damage.

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



- Use at least two people to move a large TV.
- When transporting the TV by hand, hold the TV as shown in the following illustration.



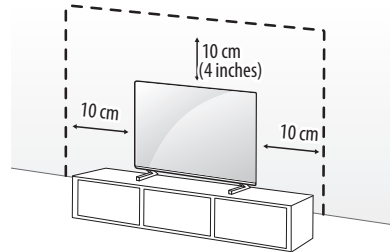
- When transporting the TV, do not expose the TV to jolts or excessive vibration.
- When transporting the TV, keep the TV upright; never turn the TV on its side or tilt towards the left or right.
- When handling the TV, be careful not to damage the protruding buttons.



- Avoid touching the screen at all times, as this may result in damage to the screen.
- Do not place the product on the floor with its front facing down without padding. Failure to do so may result in damage to the screen.
- When attaching the stand to the TV set, place the screen facing down on a cushioned table or flat surface to protect the screen from scratches.

Mounting on the Table

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



(Depending upon model)



- Do not apply foreign substances (oils, lubricants, etc.) to the screw parts when assembling the product. (Doing so may damage the product.)
- If you install the TV on a stand, you need to take actions to prevent the product from overturning. Otherwise, the product may fall over, which may cause injury.
- Do not use any unapproved items to ensure the safety and lifespan of the product.
- Any damages or injuries by using unapproved items are not covered by the warranty.
- Make sure that the screws are fastened tightly. (If they are not fastened securely enough, the TV may tilt forward after being installed.)
- When installing on a cabinet or a shelf using a stand, make sure its width is greater than that of the TV.
- Do not fasten the screws with excessive force otherwise they may strip and become loose.

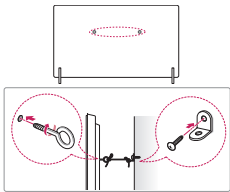
Securing TV to the Wall

- 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 or cable. Make sure to keep the rope parallel to the flat surface.
- 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.



(Depending upon model)

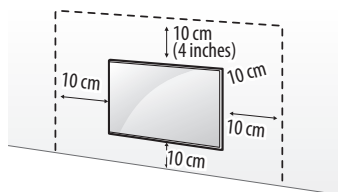
Stand

(Depending upon model)

Stand	Model
AP-G1DV55	OLED55G1*
AP-G1DV65	OLED65G1*
AP-G1DV77	OLED77G1*

Mounting to the 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. The LG wall mount is easy to adjust or to connect the cables. When you do not use LG's wall mount bracket, use a wall mount bracket where the device is adequately secured to the wall with enough space to allow connectivity to external devices. If you are using a non-adjustable mount, attach the mount to the wall. Attach the cables to the TV first, then attach the TV to the mount.



(Depending upon model)

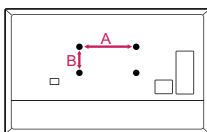


- Remove the stand before installing the TV on a wall mount by performing the stand attachment in reverse.
- For more information of screws and wall mount bracket, refer to the Separate purchase.
- If you intend to mount the product to a wall, attach VESA standard mounting interface (optional parts) to the back of the product. When you install the set to use the wall mounting bracket (optional parts), fix it carefully so as not to drop.
- When mounting a TV on the wall, make sure not to install the TV by hanging the power and signal cables on the back of the TV.
- Do not install this product on a wall if it could be exposed to oil or oil mist. This may damage the product and cause it to fall.
- When installing the Full Contact Wall Mount, the TV may not be contacted firmly against the wall due to some wall conditions.

Wall Mounting Bracket

(Depending upon model)

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



Model	OLED55/65/77G1*
VESA (A x B) (mm)	300 x 300
Standard screw	M6
Number of screws	4
Wall mount bracket	OLW480B



For more information, watch the installation video on your smart device.

Precautions for Safety

(Except for OLW480B)

- Professional installers should read this manual carefully to ensure proper installation.
- Professional installers should forward this manual to customers after installation and encourage them to read and store it in a convenient place for future reference.

After reading the installation manual, keep it in a convenient place for future reference.



- Ask a professional installer appointed by the store for installation of the product.
Installation by someone other than a professional installer is extremely dangerous and may result in personal injury.
- Do not install the product in an unstable site that cannot withstand its weight.
If the installation site lacks sufficient rigidity, the product may fall and cause personal injury.
- Contact a professional installer appointed by the store prior to moving or replacing the product after installation.
Installation is a technical task and safety issues may arise if an individual attempts to install or move the product personally.
- Do not hang on the product or subject it to severe impact after installation.
Doing so may cause the product to fall and cause personal injury.
- When installing the product on a wall, do not hang the power line or signal cables from the back of the TV.
This can damage the cords, resulting in a fire, electrical shock or malfunction of the product.
- Be sure to wear work gloves when installing the product.
 - Installing with unprotected hands may result in injury.



- Install the product according to the instructions in the installation manual.
Failure to install the product according to the instructions in the installation manual can result in serious personal injury or product damage.
- Be sure to have at least two people when installing the product or adjusting the product's height.
Attempting to perform installation or adjustments personally may result in personal injury or damage to the product.
- Make sure a wall is available prior to proceeding with installation. Make use of the anchors and screws provided with the product.
Use of any unauthorized anchors or screws may not support the product's weight, which poses safety risks.
- When drilling in the wall for installation, be sure to use drill bits and drills of the specified diameter. Follow the instructions for the hole depth.
Drilling and installing the product in ways other than specified in the installation manual may result in an unstable installation and potential safety issues.
- Do not wipe the product with a wet towel or use any heating equipment or humidifier under the place where the product is installed.
Liquid water or vapor may enter the product and excessive heat may cause fire, electric shock, or malfunction.
- Do not install the product near a fire sprinkler or detector, a place where vibration or shock may occur or near a high-voltage wire or power source.
- Unplug the product's power cord from the wall outlet before installing.
Installing the product while the power cord is plugged in may result in electric shock or fire.
- Do not install the product with bare hands. Be sure to wear work gloves.
Attempting installation without work gloves may cause personal injury.
- Connect the product with the supplied cable. Use of an unauthorized cable may result in damage by friction with the wall. Make sure to use the supplied cable gender. (This may vary by model.)

Before Installation

(Except for 0LW480B)

- Do not use the product for any purpose other than installing the TV on a wall.
- Avoid product damage and safety accidents caused by careless installing or use of improper or unauthorized wall mount.
- Follow the instructions in the installation manual for a convenient installation of the wall mount.
- Immediately discontinue installation and contact the service center if you cannot fully understand the installation process.
Use a professional installer if any installation issues remain after the inquiry.
- Installation of this product on a concrete wall or wood stud is recommended. Installation of this product on other surfaces (Dry wall, plywood, bricks, etc.) is not recommended. Improper installation may result in the product falling.
- Install the product only on a vertical wall.
Do not install on a tilted wall that exceeds building standards or on the heavily tilted wall or ceiling.
LG is not responsible for problems caused by improper installation of the product, e.g., heavily tilted walls and ceilings.

- Check the enclosed accessories before installation. We are not responsible for any lost or damaged accessories after the inner packaging is opened.
- When an infant or small child swallows the enclosed accessories, various safety accidents such as choking may occur. Keep the enclosed accessories out of the reach of infants and children.
- When tightening screws, tighten until fully snug.
Avoid using excessive force when tightening the screws. Doing so may damage the wall and product or reduce the rigidity or performance of the product.
- Avoid installing a TV that exceeds the specified tensile load, and do not allow any external force to be applied to the product.
- Avoid accidents by using work tools with care during installation.

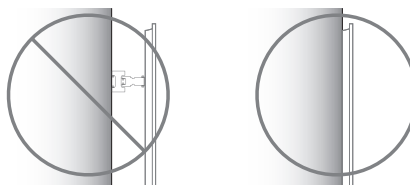
Tools for Installation

- “+” shaped screwdriver (manual or electric) / level / drill / Ø 8 mm drill bit for concrete or Ø 4 mm drill bit for steel

Securing TV to the Wall

(Except for OLW480B)

- Please use the TV close to the wall after installation.



How to fix anchors and screws

(Except for OLW480B)

Please make sure that:

- Check that the material and thickness of the wall and finishing material comply with the installation manual. Before beginning the mounting process, you must be sure the wall is able to support the weight of the TV.
- Should use the enclosed anchors and screws on crack-free concrete walls.
- Never install the product on a plasterboard or wall made of paper or medium-density fiberboard (MDF). When it is necessary to install the product on such wall, anchor screws must be fastened to retaining walls (concrete) or wood Stud inside the finishing material.
- The wall mount should be attached to a stud. This usually will not be a problem, but depending on individual circumstances, there may be cases when the ability to mount into a stud is not possible. In this case, there are a variety of drywall anchors, such as toggle bolts, which may provide a solution. If using drywall anchors, please be sure the anchors and the wall have the ability to support the weight of your TV. Please note that the supplied anchors may not be the correct ones for your individual situation, so you should check with a local professional.
- Other unspecified walls must be capable of supporting pullout loads of over 70 kgf (154 lbf) (686 N) and shear loads of over 100 kgf (220 lbf) (980 N) per fastener.
- Use an Ø 8 mm drill bit for concrete and a hammer (impact) drill or Ø 4 mm drill bit for wood stud to drill holes.

For installation on concrete wall

1 Drill holes in anchor locations with a drill bit of \varnothing 8 mm to a depth of 80 mm (3.15 inches) to 100 mm (3.94 inches).



2 Clean the drilled holes.



3 Insert the enclosed anchors for fixing the wall mount into the holes. (Use a hammer when inserting anchors.)



Wall mounting anchor

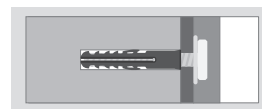
4 Push the wall mount support closely toward the wall to match the hole locations.



5 Tighten screws for fixing the wall mount to the holes. At this time, tighten the screws to a torque of between 45 kgf/cm (39.06 lbf/in) to 60 kgf/cm (52.08 lbf/in).



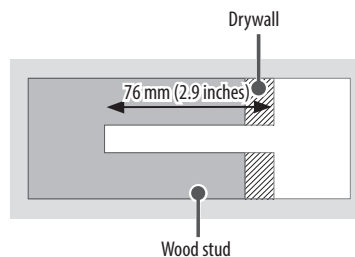
Wall mounting screw



For installation on wood stud

Use the \varnothing 4 mm drill bit for wood to drill holes with the depth of 76 mm (2.9 inches). (Clean the drilled hole.)

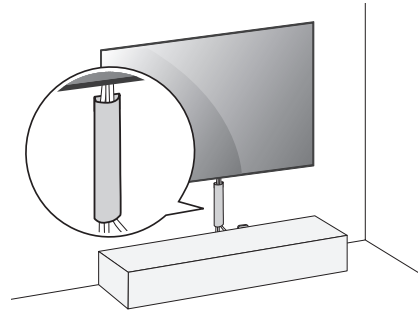
Without using the wall mounting anchor, fasten the wall mounting screw directly to the wood stud.



After Installation



- When connecting additional cables from the sides, we recommend holding the centre of the TV horizontally or vertically and pulling the product to make sure there is sufficient distance from the wall before connecting.
- When connecting additional cables from the bottom, we recommend releasing the TV from the wall mount before connecting.
- Use cable management systems to arrange the cables at the bottom of the TV as shown below. Cable managements are not provided with the product, so purchase them separately.



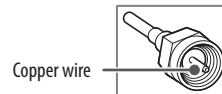
(For example)

- After installing the product, be sure to use it adhered to the wall.
 - Using the product while it is not adhered to the wall may damage or shake the product.

Antenna/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 an RF cable is optional.

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

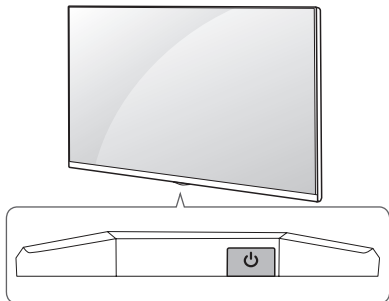


- Complete all connections between devices, and then connect the power cord to the power outlet to prevent damage to your TV.
- Use a signal splitter to use 2 TVs or more.
- DTV Audio Supported Codec: MPEG, Dolby Digital
- This TV cannot receive Ultra HD (3840 x 2160 pixels) broadcasts directly because the related standards have not been confirmed.

3 Starting TV

Turning on the TV

You can simply operate the TV functions, using the button.



Using button



Power On (Press)

Power Off¹⁾ (Press and Hold)

Menu Control (Press²⁾)

Menu Selection (Press and Hold³⁾)

1) All running apps will close.

2) You can access and adjust the menu by pressing the button when TV is on.

3) You can use the function when you access menu control.

Note

- When the TV is turned on for the first time after being shipped from the factory, initialization of the TV may take approximately one minute.

Adjusting the menu

When the TV is turned on, press the  button one time. You can adjust the Menu items using the button.



Turns the power off.



Changes the input source.



Adjusts the volume level.



Scrolls through the saved channels.

Note

- Your TV's OSD (On Screen Display) may differ slightly from that shown in this manual.
- The available menus and options may differ from the input source or product model that you are using.
- New features may be added to this TV in the future.
- The device must be easily accessed to a location outlet near the access. Some devices are not made by turning on / off button, turning off the device and unplugging the power cord.

Inserting the battery

When the message [Magic Remote battery is low. Please change the battery.] is displayed, replace the batteries.

To install batteries, open the battery cover, replace batteries (1.5 V AA) matching the ⊕ and ⊖ ends to the label inside the compartment, and close the battery cover. Be sure to point the magic remote toward the remote control sensor on the TV. To remove the batteries, perform the installation actions in reverse.



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

Registering Magic Remote Control

How to register the Magic Remote Control

To use the Magic Remote, first pair it with your TV.

- 1 Put batteries into the Magic Remote and turn the TV on.
 - 2 Point the Magic Remote at your TV and press the ○ Wheel (OK) on the remote control.
- * If the TV fails to register the Magic Remote, try again after turning the TV off and back on.

How to deregister the Magic Remote Control

Press the ⬅ (Back) and 🏠 (Home) buttons at the same time, for five seconds, to unpair the Magic Remote with your TV.

- * Press and hold the 🏠 (Home) and ⚙ (Q. Settings) buttons for more than 5 seconds to disconnect and re-register the Magic Remote at the same time.
-




- It is recommended that an Access Point (AP) be located more than 0.2 m (0.65 ft) away from the TV. If the AP is installed closer than 0.2 m (0.65 ft), the Magic remote control may not perform as expected due to frequency interference.

Connecting Smart Devices using NFC Tagging

Using the NFC Feature

NFC is technology that uses Near Field Communication, allowing you to conveniently send and receive information without separate settings. By bringing a smart device near the NFC-enabled remote control, you can install the LG ThinQ app and connect the device to the TV.

- 1 Turn on NFC in the smart device's settings. To use NFC with Android devices, set the NFC option to enable 'read/write tags' in the smart device's settings. The NFC settings may vary depending on the device.
- 2 Bring the smart device near the  (NFC) on the remote control. The required distance for NFC tagging is about 1 cm (0.3 inches).
- 3 Follow the instructions to install the LG ThinQ app on your smart device.
- 4 Retagging the smart device to the remote control allows you to conveniently access various features on the connected TV through the LG ThinQ app.



Note


















- This feature is available for NFC-enabled smart devices only.
- This feature is only available if the remote control has an NFC logo.

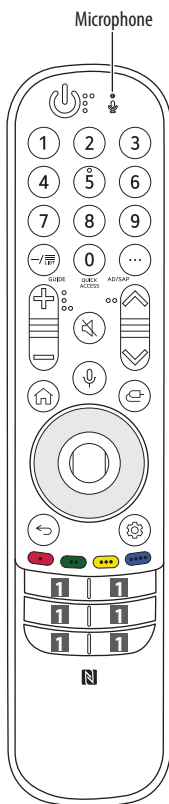
4 Using Magic Remote Control
















Using Magic Remote Control

(Depending upon model)

The descriptions in this manual are based on the buttons on the remote control. Please read this manual carefully and use the TV correctly.

-  **POWER** Turns the TV on or off.
-  **—(DASH)** Inserts a — between numbers such as 2-1 and 2-2.
-  **LIST** Accesses the saved channel list.
-  **GUIDE**** Accesses the [Guide].
-  **QUICK ACCESS**** Accesses the [Edit Quick Access].
 - [Edit Quick Access] is a feature that allows you to enter a specified app or Live TV directly by pressing and holding the number buttons.
-  Adjusts the volume level.
-  Scrolls through the saved channels.
-  **HOME** Accesses the Home menu.
-  **HOME**** Launches the last used apps.
-  **INPUT** Changes the input source.
-  **INPUT**** Accesses the [Home Dashboard].
-  **Wheel (OK)** Press the center of  button to select a menu. You can change channels by using  button.
-  **Wheel (OK)**** Accesses the [Magic Explorer]. You can run the [Magic Explorer] feature when the pointer colour is changed to purple. If watching a programme, press and hold down the pointer onto the video. When using [TV Guide], [Settings], [Sports Alert], or [Art Gallery], press and hold down on the text.
-  **Back** Returns to the previous level.
-  **Back**** Clears on-screen displays and returns to last input viewing.



-  **Number buttons** Enters numbers.
-  **9**** Accesses the [Quick Help].
-  **MORE ACTIONS** Displays more remote control functions.
-  **AD/SAP**** SAP (Secondary Audio Program) feature can also be enabled by pressing the ... button.
-  **MUTE** Mutes all sounds.
-  **MUTE**** Accesses the [Accessibility] menu.
-  **Voice recognition** Network connection is required to use the voice recognition function.
-  Check for recommended content. (Some recommended services may not be available in some countries.)
-  **Voice recognition** Speak while pressing and holding the button to use the voice recognition feature.
-  **Q. Settings** Accesses the Quick Settings.
-  **Q. Settings**** Displays the [All Settings] menu.
-  **Up/Down/Left/Right** Press the up, down, left or right button to scroll the menu. If you press  buttons while the pointer is in use, the pointer will disappear from the screen and Magic Remote will operate like a general remote control. To display the pointer on the screen again, shake Magic Remote to the left and right.
-  These access special functions in some menus.
-  **Streaming Service buttons** Connects to the Video Streaming Service.

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

 **Note**

**** To use the button, press and hold for more than 1 second.**

5 Connections

You can connect various external devices to the TV. For more information on external device's connection, refer to the manual provided with each device.

HDMI

- When connecting the HDMI cable, the product and external devices should be turned off and unplugged.



- Supported HDMI Audio format (Depending upon model):
True HD (48 kHz),
Dolby Digital / Dolby Digital Plus (32 kHz, 44.1 kHz, 48 kHz),
PCM (32 kHz, 44.1 kHz, 48 kHz, 96 kHz, 192 kHz)

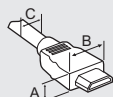
✓ Note

If the device connected to Input Port also supports HDMI Deep Color, your picture may be clearer. However, if the device doesn't support it, it may not work properly. In that case, change the TV's [HDMI Deep Color] setting to off.

- ⓘ → ⓘ → [General] → [Devices] → [HDMI Settings] → [HDMI Deep Color]
 - On: Support 4K @ 50/60 Hz (4:4:4, 4:2:2, 4:2:0), 4K @ 100/120 Hz (4:4:4, 4:2:2, 4:2:0)
 - Off: Support 4K @ 50/60 Hz (4:2:0)
- Use a certified cable with the HDMI logo attached. If you do not use a certified HDMI cable, the screen may not display or a connection error may occur.
- Recommended HDMI cable types (3 m (9.84 ft) or less)
 - Ultra High Speed HDMI[®]/TM cable

✓ Note

- For an optimal connection, HDMI cables and USB devices should have bezels less than 8 mm (0.31 inches) thick, 18 mm (0.7 inches) width and 8 mm (0.31 inches) a wire diameter.
- Use an extension cable that supports USB 2.0 or higher if the USB cable or USB flash drive does not fit into your TV's USB port.



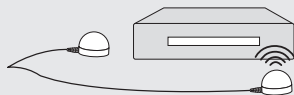
* A ≤ 8 mm (0.31 inches)

* B ≤ 18 mm (0.7 inches)



* C ≤ 8 mm (0.31 inches)

IR Blaster

Control the set-top box (cable/satellite/IP/OTT), Blu-ray/DVD player, soundbar, game consoles, etc., using the IR Blaster. (Depending upon country)



✓ Note

- Connect the IR Blaster cable to the TV's IR Blaster port.
- Place both ends (one or two) of the IR Blaster in front of the external device as shown in the picture below.
- Use universal control settings to control the device. Go to  →  → [General] → [Devices] → [External Devices] → [Universal Control Settings].
- Secure the IR Blaster with the 3M tape provided.

External Devices

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

✓ Note

- If you record a TV program on a Blu-ray/DVD recorder or VCR, make sure to connect the TV signal input cable to the TV through a DVD recorder or VCR. For more information about recording, refer to the manual provided with the connected device.
- The external device connections shown may differ slightly from illustrations in a manual.
- Connect external devices to the TV regardless about 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.
- 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. Depending upon the graphics card, some resolution settings may not allow the image to be positioned on the screen properly.
- Some USB Hubs may not work. If a USB device connected through a USB Hub is not detected, connect it directly to the USB port on the TV.
- When connecting via a wired LAN, it is recommended to use a CAT 7 cable.
- The TV may be capable of operating without a set-top-box from a multichannel video programming distributor (MVPD).

Remote RS-232C setup

To obtain the RS-232C external control setup information, please visit www.lg.com. Download and read the manual, (Depending upon model).



- Do not drop the product or let it fall over when connecting external devices. Otherwise, this may result in injury or damage to the product.
- When connecting external devices such as video game consoles, make sure the connecting cables are long enough. Otherwise, the product may fall over, which may cause injury or damage the product.

6 Troubleshooting

Cannot control the TV with the remote control.	<ul style="list-style-type: none"> • Check if anything such as tape has been placed over the receiver. • Check if there is any obstacle between the product and the remote control. • Replace the batteries with new fresh ones.
No image display and no sound is produced.	<ul style="list-style-type: none"> • 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.	<ul style="list-style-type: none"> • Check the power control settings. The power supply may be interrupted. • Check if the auto-off function is activated in the settings menu. • If there is no signal while the TV is on, the TV will turn off automatically after 15 minutes of inactivity.
Abnormal Display	<ul style="list-style-type: none"> • 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 screen or holding your finger(s) against it for long periods of time. Doing so may produce some temporary distortion effects on the screen. • This panel is an advanced product that contains millions of 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	<ul style="list-style-type: none"> • 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 upon the product. This generated sound does not affect the performance and reliability of the product.



- Make sure to wring any excess water or cleaner from the cloth.
- Do not spray water or cleaner directly onto the TV screen.
- Make sure to spray just enough of water or cleaner onto a dry cloth to wipe the screen.

7 Specifications

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

Estimated yearly energy consumption indicated on the FTC label is measured in accordance with the Test Procedures for Television Sets (USA only).

The actual energy consumption depends on the usage environment (The content watched, TV settings, etc.).

- For information of the power supply and power consumption, refer to the label attached to the product.
- The typical power consumption is measured in accordance with IEC 62087 or each country's energy regulations.
- * On some models, the label is inside the external device connection terminal cover.
- * Depending upon the model or country, the typical power consumption may not be on label.

Broadcasting Specifications	
Television system	ATSC / NTSC-M, 64 & 256 QAM
Program coverage	VHF 2-13, UHF 14-69, DTV 2-69, CATV 1-135, CADTV 1-135
External antenna impedance	75 Ω

Wireless module(LGSBWAC95)Specifications	
Wireless LAN (IEEE 802.11a/b/g/n/ac)	
Frequency range	Output Power (Max.)
2,400 to 2,483.5 MHz	18.5 dBm
5,150 to 5,725 MHz	18 dBm
5,725 to 5,850 MHz	18 dBm
Bluetooth	
Frequency range	Output power(Max.)
2,400 to 2,483.5 MHz	9 dBm

As band channels can vary per country, the user cannot change or adjust the operating frequency. This product is configured for the regional frequency table.

For consideration of the user, this device should be installed and operated with a minimum distance of 20 cm (7.8 inches) between the device and the body.

FCC ID: BEJLGSBWAC95 / IC: 2703H-LGSBWAC95

Environment condition	
Operating Temperature	0 °C to 40 °C (32 °F to 104 °F)
Operating Humidity	Less than 80 %
Storage Temperature	-20 °C to 60 °C (-4 °F to 140 °F)
Storage Humidity	Less than 85 %

| Open Source Software Notice Information

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

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

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

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

| Licenses



(Magic Remote supported models only)

8 Important Information for Preventing Image Retention









OLED is a self-emissive technology, which brings many significant benefits to image quality and performance. As with any self-emitting display, it is possible for users of OLED TVs to experience temporary image retention under certain conditions, such as when displaying a static image on the screen for a long time. LG OLED TVs incorporate dedicated functions that protect the screen from possible image retention.

If a static image persists on screen, screen brightness is automatically reduced in specific areas of, or across the entire screen. Once the static image disappears, screen brightness will automatically return to its prior setting. This is not a product malfunction.



Examples of Images that may Cause Image Retention

- Still images or fixed images containing certain information that are displayed uninterrupted on the screen, such as channel numbers, station logos, program titles, news or movie subtitles, and headlines.
- Fixed menu or icons for video game consoles or broadcasting set-top boxes.
- Black bars shown on the left, right, top, or bottom of the screen, such as in images with a 4:3 or 21:9 ratio.

Recommended Measures for Preventing Image Retention

- Avoid watching a video displaying an image as listed above for extended periods of time.
- Adjust your TV settings as below when turning on a video exhibiting an image as listed above for extended periods of time.
 -  →  → [Picture] → [Select Mode] → [APS]
 -  →  → [Picture] → [Advanced Settings] → [Brightness] → [OLED Pixel Brightness] → Adjust to lower value
 -  →  → [Support] → [OLED Screen Saver] → [Adjust Logo Brightness] → [High]
- Turn off the menu bar of an external device, such as a set-top box, to prevent long-term display of the menu bar of such device. (Please refer to the manual of the applicable external device for instructions.)
- Adjust the settings as below when watching a video constantly showing black bars on the left, right, top or bottom, in order to remove the black bars.
 -  →  → [Picture] → [Aspect Ratio] → [User Selection] → [Vertical Zoom] or [4-Way Zoom]

Information on Functions Supporting Image Quality in Relation to Temporary Image Retention

- LG OLED TVs provide a feature called Pixel Cleaning, which helps to prevent temporary image retention.
- When the accumulated television viewing time reaches 2,000 hours or more (this is equivalent to watching TV for five hours a day over the course of a year), Pixel Cleaning will be automatically activated once your TV is turned off. When turning off your TV, a notice will appear on the screen informing the activation of Pixel Cleaning. This feature will run for an hour while your TV is turned off. A horizontal line may appear at the top or bottom of the screen when the process is almost finished.
- You may also manually activate Pixel Cleaning via the TV menu:  →  → [Support] → [OLED Screen Saver] → [Pixel Cleaning].
- Whenever you watch your TV for more than four cumulative hours, Pixel Cleaning will be automatically activated for a few minutes once your TV is turned off. (Note: Pixel Cleaning will not be activated if the power cord of your TV is not plugged in or the main power is off.)

9 Regulatory

FCC NOTICE

(For USA)

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

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

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

FCC Radio Frequency Interference Requirements (for UNII devices)

(For USA)

High power radars are allocated as primary users of the 5.25 to 5.35 GHz and 5.65 to 5.85 GHz bands. These radar stations can cause interference with and/or damage this device. This device cannot be co-located with any other transmitter.

FCC RF Radiation Exposure Statement

(For USA)

(For having wireless function (WLAN, Bluetooth,...))

This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment. This transmitter must not be co-located or operating in conjunction with any other antenna or transmitter. This equipment should be installed and operated with minimum distance 20 cm (7.8 inches) between the antenna and your body. Users must follow the specific operating instructions for satisfying RF exposure compliance.

Industry Canada Statement

(For Canada)

(For having wireless function (WLAN, Bluetooth,...))

This device contains licence-exempt transmitter(s)/receiver(s) that comply with Innovation, Science and Economic Development Canada's licence-exempt RSS(s). Operation is subject to the following two conditions:

- (1) This device may not cause interference.
- (2) This device must accept any interference, including interference that may cause undesired operation of the device.

IC Radiation Exposure Statement

(For Canada)

(For having wireless function (WLAN, Bluetooth,...))

This equipment complies with IC radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with minimum distance 20 cm (7.8 inches) between the antenna & your body.

NOTE THE MANUFACTURER IS NOT RESPONSIBLE FOR ANY RADIO OR TV INTERFERENCE CAUSED BY UNAUTHORIZED MODIFICATIONS TO THIS EQUIPMENT. SUCH MODIFICATIONS COULD VOID THE USER'S AUTHORITY TO OPERATE THE EQUIPMENT.

RSS-247 Requirement

(For Canada)

(For product having the wireless function using 5 GHz frequency bands)

- (1) The device for operation in the band 5150–5250 MHz is only for indoor use to reduce the potential for harmful interference to co-channel mobile satellite systems;
- (2) For devices with detachable antenna(s), the maximum antenna gain permitted for devices in the bands 5250–5350 MHz and 5470–5725 MHz shall be such that the equipment still complies with the e.i.r.p. limit;
- (3) For devices with detachable antenna(s), the maximum antenna gain permitted for devices in the band 5725–5850 MHz shall be such that the equipment still complies with the e.i.r.p. limits as appropriate; and
- (4) (For devices operating in the band 5250–5350 MHz having an e.i.r.p. greater than 200 mW) Antenna type(s), antenna models(s), and worst-case tilt angle(s) necessary to remain compliant with the e.i.r.p. elevation mask requirement set forth in section 6.2.2.3 of RSS-247 shall be clearly indicated.

Users should also be advised that high-power radars are allocated as primary users (i.e. priority users) of the bands 5250–5350 MHz and 5650–5850 MHz and that these radars could cause interference and/or damage to LE-LAN devices.

NOTE TO CABLE/TV INSTALLER

(For USA and Canada)

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

WARNING! (STABILITY HAZARD)

A television set may fall, causing serious personal injury or death. Many injuries, particularly to children, can be avoided by taking simple precautions such as:

- ALWAYS use cabinets or stands or mounting methods recommended by the manufacturer of the television set.
- ALWAYS use furniture that can safely support the television set.
- ALWAYS ensure the television set is not overhanging the edge of the supporting furniture.
- ALWAYS educate children about the dangers of climbing on furniture to reach the television set or its controls.
- ALWAYS route cords and cables connected to your television so they cannot be tripped over, pulled or grabbed.
- NEVER place a television set in an unstable location.
- NEVER place the television set on tall furniture (for example, cupboards or bookcases) without anchoring both the furniture and the television set to a suitable support.
- NEVER place the television set on cloth or other materials that may be located between the television set and supporting furniture.
- NEVER place items that might tempt children to climb, such as toys and remote controls, on the top of the television or furniture on which the television is placed.

If the existing television set is going to be retained and relocated, the same considerations as above should be applied.

Symbols

	Refers to alternating current (AC).		Refers to stand-by.
	Refers to direct current (DC).		Refers to "ON" (power).
	Refers to class II equipment.		Refers to dangerous voltage.

LG Take-back & Recycling Policy

(For USA)

LG Electronics offers a customized e-waste take-back & recycling service that meets local needs and requirements in the countries where e-waste regulations are in place, and also provides product take-back & recycling service voluntarily in some regions. LG Electronics evaluates products' recyclability at the design step selectively, with the goal of improving recyclability where practicable. Through these activities, LG Electronics seeks to contribute to conserving natural resources and protecting the environment. For more information, please visit our global site at <https://www.lg.com/recycling>

CHILD SAFETY:

PROPER TELEVISION PLACEMENT MATTERS

THE CONSUMER TECHNOLOGY INDUSTRY CARES

Manufacturers, retailers and the rest of the consumer technology industry are committed to making products safe and enjoyable. As you enjoy your television, please note that all televisions – new and old- must be supported on proper stands or installed according to the manufacturer's recommendations. Televisions that are inappropriately situated on dressers, bookcases, shelves, desks, speakers, chests, carts, etc., may fall over, resulting in injury.



TUNE IN TO SAFETY

- **NEVER** allow children to climb on or play on the television or the furniture on which the television is placed.
- **NEVER** place the television on furniture that can easily be used as steps, such as a chest of drawers.
- **ALWAYS** follow the manufacturer's recommendations for the safe installation of your television.
- **ALWAYS** read and follow all instructions for proper use of your television.
- **ALWAYS** install the television where it cannot be pushed, pulled over or knocked down.
- **ALWAYS** route cords and cables connected to the television so that they cannot be tripped over, pulled or grabbed.



WALL OR CEILING MOUNT YOUR TELEVISION

- **ALWAYS** contact your retailer about professional installation if you have any doubts about your ability to safely mount your television.
- **ALWAYS** use a mount that has been recommended by the television manufacturer and has a safety certification by a Nationally Recognized Testing Laboratory (NRTL).
- **ALWAYS** follow all instructions supplied by the television and mount manufacturers.
- **ALWAYS** make sure that the wall or ceiling where you are mounting the television is appropriate. Use proper anchoring systems for different wall or ceiling types (e.g. wood, concrete, metal, etc.). If you are unsure, contact a professional installer.
- Televisions can be heavy. A minimum of two people is required for a wall or ceiling mount installation.



MOVING AN OLDER TELEVISION TO A NEW PLACE IN YOUR HOME

- **REMEMBER** Special care should be made in the placement of older CRT /flat-panel televisions. Many new television buyers move their older CRT /flat-panel televisions into a secondary room after the purchase of a flat-panel television.
- **NEVER** place your older CRT /flat-panel television on a dresser where children may be tempted to use the drawers to climb.
- **ALWAYS** place your older CRT /flat-panel television on furniture that is sturdy and appropriate for its size and weight.
- **ALWAYS** make sure your older CRT /flat-panel television does not hang over the edge of your furniture.



Supplier's Declaration of Conformity

Trade Name	LG
Responsible Party	LG Electronics USA, Inc.
Address	111 Sylvan Avenue, North Building, Englewood Cliffs, NJ 07632
E-mail	lg.environmental@lge.com

The model and serial number of the product are located on the back and on one side of the product. Record them below in case you ever need service.

Model _____

Serial No. _____

LG Customer Information Center

For inquiries or comments, visit www.lg.com or call;

1-800-243-0000	USA, Consumer User
1-888-865-3026	USA, Commercial User
1-888-542-2623	CANADA

Register your product Online!

www.lg.com



OWNER'S MANUAL

EXTERNAL CONTROL DEVICE SETUP

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

KEY CODES

- This feature is not available for all models.

Code (Hexa)	Function	Note	Code (Hexa)	Function	Note
00	CH +, PR +	R/C Button	53	List	R/C Button
01	CH -, PR -	R/C Button	5B	Exit	R/C Button
02	Volume +	R/C Button	60	PIP(AD)	R/C Button
03	Volume -	R/C Button	61	Blue	R/C Button
06	> (Arrow Key / Right Key)	R/C Button	63	Yellow	R/C Button
07	< (Arrow Key / Left Key)	R/C Button	71	Green	R/C Button
08	Power	R/C Button	72	Red	R/C Button
09	Mute	R/C Button	79	Ratio / Aspect Ratio	R/C Button
0B	Input	R/C Button	91	AD (Audio Description)	R/C Button
0E	SLEEP	R/C Button	9E	LIVE MENU	R/C Button
0F	TV, TV/RAD	R/C Button	7A	User Guide	R/C Button
10 - 19	* Number Key 0 - 9	R/C Button	7C	Smart / Home	R/C Button
1A	Q.View / Flashback	R/C Button	7E	SIMPLINK	R/C Button
1E	FAV (Favorite Channel)	R/C Button	8E	▶▶ (Forward)	R/C Button
20	Text (Teletext)	R/C Button	8F	◀◀ (Rewind)	R/C Button
21	T. Opt (Teletext Option)	R/C Button	AA	Info	R/C Button
28	Return (BACK)	R/C Button	AB	Program Guide	R/C Button
30	AV (Audio / Video) Mode	R/C Button	B0	▶ (Play)	R/C Button
39	Caption/Subtitle	R/C Button	B1	■ (Stop / File List)	R/C Button
40	∧ (Arrow Key / Cursor Up)	R/C Button	B5	RECENT	R/C Button
41	∨ (Arrow Key / Cursor Down)	R/C Button	BA	(Freeze / Slow Play / Pause)	R/C Button
42	My Apps	R/C Button	BB	Soccer	R/C Button
43	Menu / Settings	R/C Button	BD	● (REC)	R/C Button
44	OK / Enter	R/C Button	DC	3D	R/C Button
45	Q.Menu	R/C Button	99	AutoConfig	R/C Button
4C	List, -	R/C Button	9F	App / *	R/C Button
4D	PICTURE	R/C Button	9B	TV / PC	R/C Button
52	SOUND	R/C Button			

* Key code 4C (0x4C) is available on ATSC/ISDB models which use major/minor channel.
(For South Korea, Japan, North America, Latin America except Colombia models)

EXTERNAL CONTROL DEVICE SETUP

- Image shown may differ from your TV.

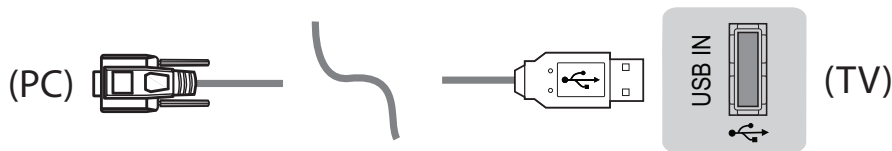
Connect the USB to Serial(RS-232C) converter/RS-232C(Serial) input jack to an external control device (such as a computer or an A/V control system) to control the product's functions externally.

Note: The type of control port on the TV can be different between model series.

- * Please be advised that not all models support this type of connectivity.
- * Cable is not provided.

USB to Serial(RS-232C) converter with USB Cable

USB Type



- LGTV supports PL2303 chip-based (Vendor ID : 0x0557, Product ID : 0x2008) USB to serial(RS-232C) converter which is not made nor provided by LG.
- It can be purchased from computer stores that carry accessories for IT support professionals.

RS-232C(Serial) With RS-232C(Serial) Cable

DE9 (D-Sub 9pin) Type

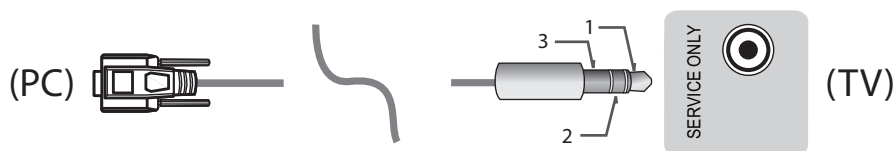
- You need to purchase the RS-232C (DE9, D-Sub 9pin female-to-female type) to RS-232C(Serial) cable required for the connection between the PC and the TV, which is specified in the manual.



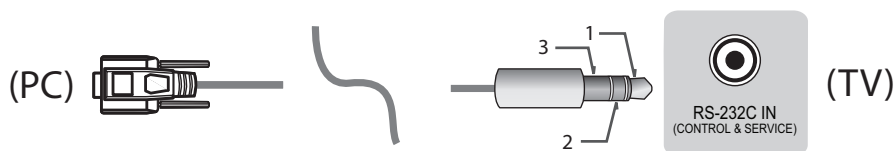
The connection interface may differ from your TV.

Phone jack Type

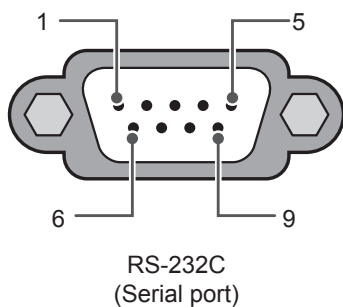
- You need to purchase the phone-jack to RS-232 cable required for the connection between the PC and the TV, which is specified in the manual.
- For other models, connect to the USB port.
- The connection interface may differ from your TV.



- or

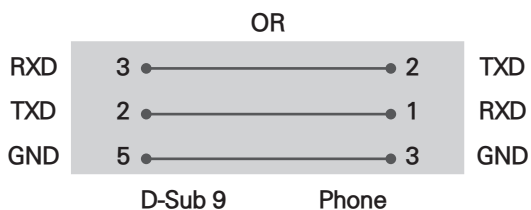
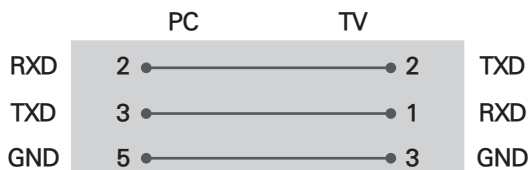


Customer Computer



RS-232C configurations

3-Wire Configurations(Not standard)



Set ID

For Set ID number, see "Real Data Mapping" on p.6

- Press **SETTINGS** to access the main menus.
- Press the Navigation buttons to scroll to (***General** → **About this TV or OPTION**) and press **OK**.
- Press the Navigation buttons to scroll to **SET ID** and press **OK**.
- Scroll left or right to select a set ID number and select **CLOSE**. The adjustment range is 1-99.
- When you are finished, press **EXIT**.
* (Depending on model)

Communication Parameters

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

Command reference list

(Depending on model)

	COMMAND1	COMMAND2	DATA (Hexadecimal)		COMMAND1	COMMAND2	DATA (Hexadecimal)
01. Power*	k	a	00 to 01	15. Balance	k	t	00 to 64
02. Aspect Ratio	k	c	(p.7)	16. Color (Colour) Temperature	x	u	00 to 64
03. Screen Mute	k	d	(p.7)	17. ISM Method (Only Plasma TV)	j	p	(p.8)
04. Volume Mute	k	e	00 to 01	18. Equalizer	j	v	(p.9)
05. Volume Control	k	f	00 to 64	19. Energy Saving	j	q	00 to 05
06. Contrast	k	g	00 to 64	20. Tune Command	m	a	(p.9)
07. Brightness	k	h	00 to 64	21. Channel (Programme) Add/Del(Skip)	m	b	00 to 01
08. Color/ Colour	k	i	00 to 64	22. Key	m	c	Key Codes
09. Tint	k	j	00 to 64	23. Control Backlight, Control Panel Light	m	g	00 to 64
10. Sharpness	k	k	00 to 32	24. Input select (Main)	x	b	(p.11)
11. OSD Select	k	l	00 to 01	25. 3D (Only 3D models)	x	t	(p.11)
12. Remote Control Lock Mode	k	m	00 to 01	26. Extended 3D (Only 3D models)	x	v	(p.12)
13. Treble	k	r	00 to 64	27. Auto Configure	j	u	(p.12)
14. Bass	k	s	00 to 64				

* Note: During playing or recording media, all commands except Power (ka) and Key (mc) are not executed and treated as NG.

With RS232C cable, TV can communicate "ka command" in power-on or power-off status. but with USB-to-Serial converter cable, the command works only if TV is on.

Transmission / Receiving Protocol

Transmission

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

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

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

[Set ID] : You can adjust the [Set ID] to choose desired monitor ID number in option menu.
Adjustment range in TV is 1 to 99. If [Set ID] value is selected to '0', every connected set can be controlled.
* [Set ID] is indicated as decimal (1 to 99) on menu and as Hexadecimal (0x00 to 0x63) on transmission/receiving protocol.

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

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

[] : Space - ASCII code '0x20'

OK Acknowledgement

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

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

Error Acknowledgement

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

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

Data 00: Illegal Code

Real data mapping (Hexadecimal to Decimal)

* When you enter the [data] in hexadecimal, refer to following conversion table.

* Channel Tune (ma) Command uses two-byte hexadecimal value([data]) to select channel number.

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

* Commands may work differently depending on model and signal.

01. Power (Command: k a)

- To control Power *On or Off of the set.

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

Data 00 : Power Off 01 : *Power On

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

- To Show TV is Power On or *Off

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

Ack [a][][Set ID][][OK][Data][x]

* Similarly, if other functions transmit 'FF' data based on this format, Acknowledgement feedback presents status about each function.

02. Aspect Ratio (Command: k c)

(Main Picture Size)

- To adjust the screen format. (Main picture format)
You can also adjust the screen format using the Aspect Ratio in the Q.MENU. or PICTURE menu.

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

Data 01 : Normal screen (4:3)	07 : 14:9 (Europe, Colombia, Mid-East, Asia except South Korea and Japan)
02 : Wide screen (16:9)	09 : * Just Scan
04 : Zoom	0B : Full Wide (Europe, Colombia, Mid-East, Asia except South Korea and Japan)
05 : Zoom 2 (Latin America except Colombia Only)	06 : Set by Program/ 10 to 1F : Cinema Zoom 1 to 16 Original 0c : 21:9 (Depending on model)

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

- * Using the PC input, you select either 16:9 or 4:3 screen aspect ratio.
- * In DTV/HDMI/Component mode (high-definition), Just Scan is available.
- * Full wide mode may work differently based on model and is supported for DTV fully, and ATV, AV partially.

03. Screen Mute (Command: k d)

- To select screen mute on/off.

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

Data 00 : Screen mute off (Picture on)
Video mute off
01 : Screen mute on (Picture off)
10 : Video mute on

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

* In case of video mute on only, TV will display On Screen Display(OSD). But, in case of Screen mute on, TV will not display OSD.

04. Volume Mute (Command: k e)

- To control volume mute on/off.

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

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

Data 00 : Volume mute on (Volume off)
01 : Volume mute off (Volume on)

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

05. Volume Control (Command: k f)

- To adjust volume.

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

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

Data Min : 00 to Max : 64

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

06. Contrast (Command: k g)

- To adjust screen contrast.

You can also adjust contrast in the PICTURE menu.

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

Data Min : 00 to Max : 64

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

07. Brightness (Command: k h)

- To adjust screen brightness.

You can also adjust brightness in the PICTURE menu.

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

Data Min : 00 to Max : 64

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

08. Color/Colour (Command: k i)

- To adjust the screen Color(Colour).
You can also adjust colour in the PICTURE menu.

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

Data Min : 00 to Max : 64

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

09. Tint (Command: k j)

- To adjust the screen tint.
You can also adjust tint in the PICTURE menu.

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

Data Red : 00 to Green : 64

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

10. Sharpness (Command: k k)

- To adjust the screen sharpness.
You can also adjust sharpness in the PICTURE menu.

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

Data Min : 00 to Max : 32

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

11. OSD Select (Command: k l)

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

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

Data 00 : OSD off 01 : OSD on

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

12. Remote control lock mode (Command: k m)

- To lock the front panel controls on the monitor and remote control.

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

Data 00 : Lock off 01 : Lock on

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

- * If you are not using the remote control, use this mode.
When main power is off & on (plug-off and plug-in, after 20 - 30 seconds), external control lock is released.

- * In the standby mode (DC off by off timer or 'ka', 'mc' command), and if key lock is on, TV will not turn on by power on key of IR & Local Key.

13. Treble (Command: k r)

- To adjust treble.
You can also adjust in the AUDIO menu.

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

Data Min : 00 to Max : 64

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

* (Depending on model)

14. Bass (Command: k s)

- To adjust Bass.
You can also adjust in the AUDIO menu.

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

Data Min : 00 to Max : 64

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

* (Depending on model)

15. Balance (Command: k t)

- To adjust balance.
You can also adjust balance in the AUDIO menu.

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

Data Min : 00 to Max : 64

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

16. Color(Colour) Temperature (Command: x u)

- To adjust colour temperature. You can also adjust Color(Colour) Temperature in the PICTURE menu.

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

Data Min : 00 to Max : 64

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

17. ISM Method (Command: j p) (Only Plasma TV)

- To control the ISM method. You can also adjust ISM Method in OPTION menu.

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

Data Min : 02: Orbiter

08: Normal

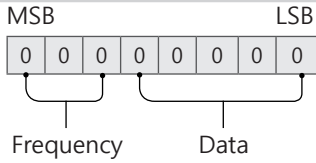
20: Color(Colour) Wash

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

18. Equalizer (Command : j v)

- Adjust EQ of the set.

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



7	6	5	Frequency	4	3	2	1	0	Step
0	0	0	1st Band	0	0	0	0	0	0(decimal)
0	0	1	2nd Band	0	0	0	0	1	1(decimal)
0	1	0	3rd Band
0	1	1	4th Band	1	0	0	1	1	19(decimal)
1	0	0	5th Band	1	0	1	0	1	20(decimal)

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

* It depends on model, and can adjust when sound mode is EQ adjustable value.

19. Energy Saving (Command: j q)

- To reduce the power consumption of the TV. You can also adjust Energy Saving in PICTURE menu.

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

Data

- 00 : Off
- 01 : Minimum
- 02 : Medium
- 03 : Maximum
- 04 : Auto (For LCD TV / LED TV) / Intelligent sensor (For PDP TV)
- 05 : Screen off

* (Depending on model)

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

20. Tune Command (Command: m a)

* This command may work differently depending on model and signal.

- For Europe, Mid-East, Colombia, Asia except South Korea and Japan Model

- Select channel to following physical number.

Transmission [m][a][][Set ID][][Data 00][][Data 01][][Data 02][Cr]

* Analog Antenna/Cable

[Data 00][Data 01] Channel Data

Data 00 : High byte channel data

Data 01 : Low byte channel data

- 00 00 ~ 00 C7 (Decimal : 0 ~ 199)

Data 02 : Input Source (Analog)

- 00 : Antenna TV (ATV)

- 80 : Cable TV (CATV)

* Digital Antenna/Cable/Satellite

[Data 00][Data 01]: Channel Data

Data 00 : High Channel data

Data 01 : Low Channel data

- 00 00 ~ 27 0F (Decimal: 0 ~ 9999)

Data 02 : Input Source (Digital)

- 10 : Antenna TV (DTV)

- 20 : Antenna Radio (Radio)

- 40 : Satellite TV (SDTV)

- 50 : Satellite Radio (S-Radio)

- 90 : Cable TV (CADTV)

- a0 : Cable Radio (CA-Radio)

* Tune Command Examples:

1. Tune to the Analog antenna (PAL) Channel 10.

Set ID = All = 00

Data 00 & 01 = Channel Data is 10 = 00 0a

Data 02 = Analog Antenna TV = 00

Result = **ma 00 00 0a 00**

2. Tune to the digital antenna (DVB-T) Channel 01.

Set ID = All = 00

Data 00 & 01 = Channel Data is 1 = 00 01

Data 02 = Digital Antenna TV = 10

Result = **ma 00 00 01 10**

3. Tune to the satellite (DVB-S) Channel 1000.

Set ID = All = 00

Data 00 & 01 = Channel Data is 1000 = 03 E8

Data 02 = Digital Satellite TV = 40

Result = **ma 00 03 E8 40**

Ack [a][][Set ID][][OK][Data 00][Data 01]

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

- For South Korea, North/Latin America except Colombia Model

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

Transmission [m][a][][0][][Data 00][][Data 01]

[][Data 02][][Data 03][][Data 04][][Data 05][Cr]

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

* Analog Antenna/Cable

Data 00 : Physical Channel Number

- Antenna (ATV) : 02~45 (Decimal: 2 ~ 69)
- Cable (CATV) : 01, 0E~7D (Decimal : 1, 14~125)

[Data 01 ~ 04]: Major/Minor Channel Number

Data 01 & 02: xx (Don't care)

Data 03 & 04: xx (Don't care)

Data 05: Input Source (Analog)

- 00 : Antenna TV (ATV)
- 01 : Cable TV (CATV)

* Digital Antenna/Cable

Data 00 : xx (Don't care)

[Data 01][Data 02]: Major Channel Number

Data 01 : High byte Channel Data

Data 02 : Low byte Channel Data

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

[Data 03][Data 04]: Minor Channel Number

Data 03 : High byte Channel Data

Data 04 : Low byte Channel Data

Data 05 : Input Source (Digital)

- 02 : Antenna TV (DTV) – Use Physical Channel Number
- 06 : Cable TV (CADTV) – Use Physical Channel Number
- 22 : Antenna TV (DTV) – Don't Use Physical Channel Number
- 26 : Cable TV (CADTV) - Don't Use Physical Channel Number
- 46 : Cable TV (CADTV) – Use Physical/Major Channel Number Only (One Part Channel)
- 66 : Cable TV (CADTV) – Use Major Channel Number Only (One Part Channel)
- 0b : Cable DTV Plus – Use Physical Channel Number
- 2b : Cable DTV Plus – Don't Use Physical Channel Number
- 4b : Cable DTV Plus – Use Physical/Major Channel Number Only (One Part Channel)
- 6b : Cable DTV Plus – Use Major Channel Number Only (One Part Channel)

Two bytes are available for each major and minor channel data, but usually the low byte is used alone (high byte is 0).

* Tune Command Examples:

1. Tune to the Analog cable (NTSC) channel 35.

Set ID = All = 00

Data 00 = Channel Data is 35 = 23

Data 01 & 02 = No Major = 00 00

Data 03 & 04 = No Minor = 00 00

Data 05 = Analog Cable TV = 01

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

2. Tune to the digital antenna (ATSC) channel 30-3.

Set ID = All = 00

Data 00 = Don't know Physical = 00

Data 01 & 02 = Major is 30 = 00 1E

Data 03 & 04 = Minor is 3 = 00 03

Data 05 = Digital Antenna TV = 22

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

Ack [a][][Set ID][][OK][Data 00][Data 01]

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

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

• For Japan Model

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

Transmission [m][a][][0][][Data00][][Data01]

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

* Digital Antenna/Satellite

Data 00: xx (Don't care)

[Data 01][Data 02]: Major Channel Number

Data 01: High byte Channel Data

Data 02: Low byte Channel Data

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

[Data 03][Data 04]: Minor/Branch Channel Number
(Don't care in Satellite)

Data 03: High byte Channel Data

Data 04: Low byte Channel Data

Data 05 : Input Source (Digital/Satellite for Japan)

- 02 : Antenna TV (DTV)
- 42 : Antenna TV (DTV) – Use Physical/Major Channel Number Only (One Part Channel)
- 62 : Antenna TV (DTV) – Use Major Channel Number Only (One Part Channel)
- 07 : BS (Broadcasting Satellite)
- 08 : CS1 (Communication Satellite 1)
- 09 : CS2 (Communication Satellite 2)

* Tune Command Examples:

1. Tune to the digital antenna (ISDB-T) channel 17-1.

Set ID = All = 00

Data 00 = Don't know Physical = 00

Data 01 & 02 = Major is 17 = 00 11

Data 03 & 04 = Minor/Branch is 1 = 00 01

Data 05 = Digital Antenna TV = 02

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

2. Tune to the BS (ISDB-BS) channel 30.

Set ID = All = 00

Data 00 = Don't know Physical = 00

Data 01 & 02 = Major is 30 = 00 1E

Data 03 & 04 = Don't Care = 00 00

Data 05 = Digital BS TV = 07

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

* This feature is varied based on the model.

Ack [a][][Set ID][][OK][Data 00][Data 01]

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

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

21. Channel(Programme) Add/Del(Skip)

(Command: m b)

► To skip current channel(programme) for next time.

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

Data 00 : Del(ATSC,ISDB)/Skip(DVB) 01 : Add

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

* Set the saved channel status to del(ATSC, ISDB)/skip(DVB) or add.

22. Key (Command: m c)

► To send IR remote key code.

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

Data Key code - p.2.

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

23. Control Backlight (Command: m g)

• For LCD TV / LED TV

► To control the backlight.

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

Data Min : 00 to Max : 64

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

Control Panel Light (Command: m g)

• For Plasma TV

► To control the panel light.

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

Data Min : 00 to Max : 64

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

24. Input select (Command: x b)

(Main Picture Input)

► To select input source for main picture.

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

Data

00 : DTV 01 : CADTV

02 : Satellite DTV 10 : ATV

ISDB-BS (Japan)

03 : ISDB-CS1 (Japan)

04 : ISDB-CS2 (Japan)

11 : CATV

20 : AV or AV1 21 : AV2

40 : Component1 41 : Component2

60 : RGB

90 : HDMI1 91 : HDMI2

92 : HDMI3 93 : HDMI4

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

* This function depends on model and signal.

25. 3D(Command: x t) (only 3D models)

(Depending on model)

► To change 3D mode for TV.

Transmission [x][t][][Set ID][][Data 00][][Data 01]

[][Data 02][][Data 03][Cr]

* (Depending on model)

Data Structure

[Data 00] 00 : 3D On

01 : 3D Off

02 : 3D to 2D

03 : 2D to 3D

[Data 01] 00 : Top and Bottom

01 : Side by Side

02 : Check Board

03 : Frame Sequential

04 : Column interleaving

05 : Row interleaving

[Data 02] 00 : Right to Left

01 : Left to Right

[Data 03] 3D Effect(3D Depth): Min : 00 - Max : 14

(*transmit by Hexadecimal code)

- * [Data 02], [Data 03] functions depend on model and signal.
- * If [Data 00] is 00 (3D On), [Data 03] has no meaning.
- * If [Data 00] is 01 (3D off) or 02 (3D to 2D), [Data 01], [Data 02] and [Data 03] have no meaning.
- * If [Data 00] is 03 (2D to 3D), [Data 01] and [Data 02] have no meaning.
- * If [Data 00] is 00 (3D On) or 03 (2D to 3D), [Data 03] works when 3D Mode (Genre) is manual only.
- * All 3D pattern options ([Data 01]) may not be available according to broadcasting/video signal.

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

X : don't care

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

26. Extended 3D(Command: x v) (only 3D models) (Depending on model)

- To change 3D option for TV.

```
Transmission [x][v][ ][Set ID][ ][Data 00][ ]
[Data 01][Cr]
```

[Data 00] 3D option

- 00 : 3D Picture Correction
- 01 : 3D Depth (3D Mode is Manual Only)
- 02 : 3D Viewpoint
- 06 : 3D Color Correction
- 07 : 3D Sound Zooming
- 08 : Normal Image View
- 09 : 3D Mode (Genre)

[Data 01] It has own range for each 3D option determined by [Data 00].

1) When [Data 00] is 00

- 00 : Right to Left
- 01 : Left to Right

2) When [Data 00] is 01, 02

Data Min: 0 - Max: 14 (*transmit by Hexadecimal code)

Data value range(0 - 20) converts Viewpoint range (-10 - +10) automatically (Depending on model)

- * This option works when 3D Mode (Genre) is manual only.

3) When [Data 00] is 06, 07

- 00 : Off
- 01 : On

4) When [Data 00] is 08

- 00 : Revert to 3D video from 3D-to-2D converted 2D video
- 01 : Change 3D video to 2D video, except 2D-to-3D video

- * If conversion condition doesn't meet, command is treated as NG.

5) When [Data 00] is 09

- 00 : Standard
- 01 : Sport
- 02 : Cinema
- 03 : Extreme
- 04 : Manual
- 05 : Auto

```
Ack [v][ ][Set ID][ ][OK][Data00][Data01][x]
[v][ ][Set ID][ ][NG][Data00][x]
```

27. Auto Configure (Command: j u) (Depending on model)

- To adjust picture position and minimize image shaking automatically. It works only in RGB (PC) mode.

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

Data 01 : To set Auto Configure

```
Ack [u][ ][Set ID][ ][OK/NG][Data][x]
```

