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

OLED77C8PUA  OLED65B8PUA  OLED55B8PUA
OLED65B8SUB  OLED55B8SUB
OLED65C8PUA  OLED55C8PUA
OLED65C8AUA  OLED55C8AUA
OLED65E8PUA  OLED55E8PUA

www.lg.com

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Printed in Korea
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.

WARNING: This product contains chemicals known to the State of California to cause cancer and birth defects or other reproductive harm. Wash hands after handling.

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.ca/arbitration (Canada).
Warning! Safety Instructions

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.
- **Moving**
  - When moving, make sure the product is turned off, unplugged, and all cables have been removed. It may take 2 or more people to carry larger TVs. Do not press or put stress on the front panel of the TV. Otherwise, this may result in product damage, fire hazard or injury.
  - Keep the packing anti-moisture material or vinyl packing out of the reach of children.
  - Do not allow an impact shock, any objects to fall into the product, and do not drop anything onto the screen.
  - Do not press strongly upon the panel with a hand or a sharp object such as a nail, pencil, or pen, or make a scratch on it. It may cause damage to screen.
- **Cleaning**
  - When cleaning, unplug the power cord and wipe gently with a soft/dry cloth. Do not spray water or other liquids directly on the TV. Do not clean your TV with chemicals including glass cleaner, any type of air freshener, insecticide, lubricants, wax (car, industrial), abrasive, thinner, benzene, alcohol etc., which can damage the product and/or its panel. Otherwise, this may result in electric shock or product damage.
Preparing

- 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.
- Image shown may differ from your TV.
- Your TV's OSD (On Screen Display) may differ slightly from that shown in this manual.
- The available menus and options may differ from the input source or product model that you are using.
- New features may be added to this TV in the future.
- The device must be easily accessed to a location outlet near the access. Some devices are not made by turning on / off button, turning off the device and unplugging the power cord.
- The items supplied with your product may vary depending upon 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 (0.39 inches) thick and 18 mm (0.7 inches) width.
- Use an extension cable that supports USB 2.0 if the USB cable or USB flash drive does not fit into your TV's USB port.
- 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)
  - High-Speed HDMI™ cable
  - High-Speed HDMI™ cable with Ethernet
- 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 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.

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.

Magic Remote Control

(Depending upon model)

AN-MR18BA

Check whether your TV model supports Bluetooth in the Wireless Module Specification to verify whether it can be used with the Magic Remote.

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.

<table>
<thead>
<tr>
<th>Model</th>
<th>OLED55/65B8*</th>
<th>OLED55/65C8*</th>
<th>OLED55/65E8*</th>
<th>OLED77C8*</th>
</tr>
</thead>
<tbody>
<tr>
<td>VESA (A x B) (mm)</td>
<td>300 x 200</td>
<td>400 x 200</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Standard screw</td>
<td>M6</td>
<td>M6</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Number of screws</td>
<td>4</td>
<td>4</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Wall mount bracket</td>
<td>OLW480B</td>
<td>OLW480B</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

⚠️ Remove the bracket itself and the protective film inside it when installing the wall mount. (Only OLED55/65E8*)
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.

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.
- Do not move the TV by holding the cable holders, as the cable holders may break, and injuries and damage to the TV may occur, (Depending upon model).
- 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.

- If you install the TV on a stand instead of mounting it on a wall, make sure that the removed brackets are reattached at the bottom of the TV. (Only OLED55/65E8*)

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.

Hold the side and bottom of the TV frame firmly. Make sure not to hold the transparent part, speaker, or speaker grill area. (Not applicable for OLED55/65E8*)

- Hold the side of the TV with one hand, and hold the bottom of the rear cover with the other. (Hold the rear cover when placing the TV on the floor. Holding the bottom glass may result in injury.) (Only OLED55/65E8*)
- 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.

(Only OLED55/65E8*)

Mounting on the Table

(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.)
• 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.

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.

10 cm
10 cm
10 cm
10 cm
(4 inches)

• 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.
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.

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, (Depending upon model).

Other connections

Connect your TV to external devices. For the best picture and audio quality, connect the external device and the TV with the HDMI cable.

HDMI

- Supported HDMI Audio format :
  (Depending upon model)
  DTS (44.1 kHz, 48 kHz, 88.2 kHz, 96 kHz),
  DTS HD (44.1 kHz, 48 kHz, 88.2 kHz, 96 kHz, 176.4 kHz, 192 kHz),
  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)

(Only UHD models)

- → → Picture → Additional Settings → HDMI ULTRA HD Deep Color
  - On : Support 4K @ 60 Hz (4:4:4, 4:2:2, 4:2:0)
  - Off : Support 4K @ 60 Hz 8 bit (4:2:0)
If the device connected to Input Port also supports ULTRA HD 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 ULTRA HD Deep Color setting to off.

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.

- 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.
- The TV may be capable of operating without a set-top-box from a multichannel video programming distributor (MVPD).
- When connecting via a wired LAN, it is recommended to use a CAT 7 cable.

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.
Using Button

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

Basic functions

<table>
<thead>
<tr>
<th>Button</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Power On (Press)</td>
<td>Power Off 1 (Press and hold)</td>
</tr>
<tr>
<td></td>
<td>Volume Control</td>
</tr>
<tr>
<td></td>
<td>Channels Control</td>
</tr>
</tbody>
</table>

1 All running apps will close.

Adjusting the menu

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

<table>
<thead>
<tr>
<th>Button</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Turns the power off.</td>
</tr>
<tr>
<td></td>
<td>Accesses the settings menu.</td>
</tr>
<tr>
<td></td>
<td>Clears on-screen displays and returns to TV viewing.</td>
</tr>
<tr>
<td></td>
<td>Changes the input source.</td>
</tr>
</tbody>
</table>
Using Magic Remote Control

(Depeecn 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.

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

(POWER) Turns the TV on or off.
STB PWR You can turn your set-top box on or off by adding the set-top box to the universal remote control for your TV.
Number buttons Enters numbers.
— (DASH) Inserts a — (DASH) between numbers such as 2-1 and 2-2.
LIST Accesses the saved channels list.
(Screen Remote) Displays the Screen Remote.
- Accesses the Universal Control Menu in some regions.
(Screen Remote) SAP (Secondary Audio Program) Feature can be enabled by pressing the key.
QUICK ACCESS You can access apps or Live TV using the number buttons corresponding to the features.
VOL Adjusts the volume level.
(MUTE) Mutes all sounds.
*(MUTE) Accesses the Accessibility menu.
CH Scrolls through the saved channels.
*(Voice recognition)
Network connection is required to use the voice recognition function.
Once the voice display bar is activated on the TV screen, press and hold the button and speak your command out loud.
(HOME) Accesses the Home menu.
*(HOME) Shows the previous history.
(Q. Settings) Accesses the Quick Settings.
*(Q. Settings) Displays the All Settings menu.
Wheel (OK) Press the center of the Wheel button to select a menu. You can change channels by using the wheel button.
(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.
BACK Returns to the previous level.
BACK * Clears on-screen displays and returns to last input viewing.
GUIDE Displays the program event according to time scheduler.
Streaming Service buttons Connects to the Video Streaming Service.
(INPUT) Changes the input source.
*(INPUT) Displays a list of all the external inputs.
These access special functions in some menus.
Control buttons (■ ▶) Controls media contents.
LIVE ZOOM By zooming in on the selected area, you can view it in full screen.
FOCUS * You can zoom in on the area where the remote control is pointed.

(Some buttons and services may not be provided depending upon models or regions.)
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.
* Pressing and holding the GUIDE button will let you cancel and re-register 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.
- 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.

Troubleshooting

Cannot control the TV with the remote control.
- 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.
- Check if the product is turned on.
- Check if the power cord is connected to a wall outlet.
- Check if there is a problem in the wall outlet by connecting other products.

The TV turns off suddenly.
- Check the power control settings. The power supply may be interrupted.
- Check if the auto-off function is activated 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
- 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
- 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.
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.).

**Broadcasting Specifications**

<table>
<thead>
<tr>
<th>Television system</th>
<th>ATSC, NTSC-M, 64 &amp; 256 QAM</th>
</tr>
</thead>
<tbody>
<tr>
<td>Program coverage</td>
<td>VHF 2-13, UHF 14-69, DTV 2-69, CATV 1-135, CADTV 1-135</td>
</tr>
<tr>
<td>External antenna impedance</td>
<td>75 Ω</td>
</tr>
</tbody>
</table>

**Wireless module (LGSBWAC72) Specifications**

<table>
<thead>
<tr>
<th>Frequency Range</th>
<th>Output Power (Max.)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2400 to 2483.5 MHz</td>
<td>15 dBm</td>
</tr>
<tr>
<td>5150 to 5725 MHz</td>
<td>14.5 dBm</td>
</tr>
<tr>
<td>5725 to 5850 MHz</td>
<td>14.5 dBm</td>
</tr>
</tbody>
</table>

**Bluetooth**

<table>
<thead>
<tr>
<th>Frequency Range</th>
<th>Output Power (Max.)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2400 to 2483.5 MHz</td>
<td>8.5 dBm</td>
</tr>
</tbody>
</table>

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: BEJLGSBWAC72 / IC: 2703H-LGSBWAC72

**Environment condition**

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Operating Temperature</td>
<td>0 °C to 40 °C (32 °F to 104 °F)</td>
</tr>
<tr>
<td>Operating Humidity</td>
<td>Less than 80 %</td>
</tr>
<tr>
<td>Storage Temperature</td>
<td>-20 °C to 60 °C (-4 °F to 140 °F)</td>
</tr>
<tr>
<td>Storage Humidity</td>
<td>Less than 85 %</td>
</tr>
</tbody>
</table>
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

Supported licenses may differ by model.
**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. Even so, this phenomenon is rare under ordinary viewing conditions and is not a malfunction. Below sets forth helpful information you may refer to for using your OLED TV.

**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 → Picture Mode Settings → Picture Mode → APS
  - Picture → Picture Mode Settings → OLED LIGHT → Adjust to lower value
  - Picture → OLED Panel Settings → Logo Luminance Adjustment → 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 Settings → Aspect Ratio → Vertical Zoom or All-Direction Zoom

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

- OLED TV offers a function called Pixel Refresher, which helps to prevent temporary image retention. This function can be operated automatically or manually.
- The auto feature will activate when the TV power is turned off, but only after the TV has been turned on for a cumulated total of four (4) hours or more, which need not be consecutive. Pixel Refresher will automatically run for several minutes after the screen is turned off. (Please note that failure to supply the AC power or disconnecting the power cord from the outlet will disable the auto feature.)
- To manually activate Pixel Refresher, you will have to select Picture → OLED Panel Settings → Pixel Refresher in the settings. Once manually activated, the function will run for approximately one (1) hour. During this time, a horizontal line may appear on the screen; however, this is not a malfunction.
- If Pixel Refresher has not been manually activated for a certain period of time, a pop-up window advising to activate this function will appear on the screen. Please follow the instructions set forth in the pop-up window.
- In addition to Pixel Refresher, there are other functions available for protecting the screen from image retention. For example, a function that automatically reduces the screen brightness level, in part or in whole, will be activated when a static image is displayed uninterrupted on the screen. Once the static image disappears, the brightness level will automatically return to the previous level. This function is an intended function, and not a malfunction.
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)

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

This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment. This transmitter must not be colocated 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 radiator 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 complies with Industry Canada's applicable licence-exempt RSSs. Operation is subject to the following two conditions: (1) This device may not cause interference; and (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.
WARNING!

Never place a television set in an unstable location. 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:

- Using cabinets or stands recommended by the manufacturer of the television set.
- Only using furniture that can safely support the television set.
- Ensuring the television set is not overhanging the edge of the supporting furniture.
- Not placing the television set on tall furniture (for example, cupboards or bookcases) without anchoring both the furniture and the television set to a suitable support.
- Not placing the television set on cloth or other materials that may be located between the television set and supporting furniture.
- Educating children about the dangers of climbing on furniture to reach the television set or its controls.

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

Symbols

<table>
<thead>
<tr>
<th>Symbol</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Refers to alternating current (AC).</td>
</tr>
<tr>
<td></td>
<td>Refers to direct current (DC).</td>
</tr>
<tr>
<td></td>
<td>Refers to class II equipment.</td>
</tr>
<tr>
<td></td>
<td>Refers to stand-by.</td>
</tr>
<tr>
<td></td>
<td>Refers to “ON” (power).</td>
</tr>
<tr>
<td></td>
<td>Refers to dangerous voltage.</td>
</tr>
</tbody>
</table>
LG Recycling Policy

(For USA)
LG Electronics offers a customized e-waste take-back and recycling service that meets local needs and requirements in the countries where e-waste regulations are in place, and also provides product and packaging take-back and recycling service voluntarily in some countries. LG Electronics evaluates products’ recyclability at the design step using LG’s recyclability evaluation tool, with the goal of improving recyclability where practicable. Through these activities, LG seeks to contribute to conserving natural resources and protecting the environment. For more information about the LG Recycling Policy, please visit our global site at http://www.lg.com/global/sustainability/environment/take-back-recycling
CHILD SAFETY: PROPER TELEVISION PLACEMENT MATTERS

THE CONSUMER ELECTRONICS INDUSTRY CARES

• Manufacturers, retailers and the rest of the consumer electronics industry are committed to making home entertainment 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

• 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.

• 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 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 an independent laboratory (such as UL, CSA, ETL).

• 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. Some mounts are not designed to be mounted to walls and ceilings with steel studs or cinder block construction. 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

• Many new television buyers move their older CRT televisions into a secondary room after the purchase of a flat-panel television. Special care should be made in the placement of older CRT televisions.

• ALWAYS place your older CRT television on furniture that is sturdy and appropriate for its size and weight.

• NEVER place your older CRT television on a dresser where children may be tempted to use the drawers to climb.

• ALWAYS make sure your older CRT television does not hang over the edge of your furniture.

CE.org/safety
The model and serial numbers of the TV are located on the back and on one side of the TV. Record them below should you ever need service.

MODEL: ________________________

SERIAL NO.: ________________________
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.

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

* 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 converter/RS-232C input jack to an external control device (such as a computer or an AV 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 converter with USB Cable**

*USB Type*

- LGTV supports PL2303 chip-based (Vendor ID : 0x0557, Product ID : 0x2008) USB to serial 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 With RS232C Cable**

*DE9 (D-Sub 9pin) Type*

- You need to purchase the RS-232C (DE9, D-Sub 9pin female-to-female type) to RS-232C 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.

**Customer Computer**

**RS-232C configurations**

3-Wire Configurations (Not standard)

<table>
<thead>
<tr>
<th>PC</th>
<th>TV</th>
</tr>
</thead>
<tbody>
<tr>
<td>RXD</td>
<td>2</td>
</tr>
<tr>
<td>TXD</td>
<td>3</td>
</tr>
<tr>
<td>GND</td>
<td>5</td>
</tr>
</tbody>
</table>

OR

<table>
<thead>
<tr>
<th>PC</th>
<th>TV</th>
</tr>
</thead>
<tbody>
<tr>
<td>RXD</td>
<td>3</td>
</tr>
<tr>
<td>TXD</td>
<td>2</td>
</tr>
<tr>
<td>GND</td>
<td>5</td>
</tr>
</tbody>
</table>

**Set ID**

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

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

* (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)

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

* 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 & 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.

<table>
<thead>
<tr>
<th>Hexadecimal</th>
<th>Decimal</th>
</tr>
</thead>
<tbody>
<tr>
<td>00</td>
<td>0</td>
</tr>
<tr>
<td>01</td>
<td>1</td>
</tr>
<tr>
<td>02</td>
<td>2</td>
</tr>
<tr>
<td>03</td>
<td>3</td>
</tr>
<tr>
<td>...</td>
<td>...</td>
</tr>
<tr>
<td>0A</td>
<td>10</td>
</tr>
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<td>0B</td>
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<tr>
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</tbody>
</table>

* When entering hexadecimal data, refer to the following conversion table.

<table>
<thead>
<tr>
<th>Hexadecimal</th>
<th>Decimal</th>
</tr>
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<tbody>
<tr>
<td>00 : Step 0</td>
<td>0</td>
</tr>
<tr>
<td>01 : Step 1</td>
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</tr>
<tr>
<td>02 : Step 2</td>
<td>2</td>
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<td>03 : Step 3</td>
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<td>...</td>
</tr>
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<td>0A : Step 10</td>
<td>10</td>
</tr>
<tr>
<td>0B : Step 11</td>
<td>11</td>
</tr>
<tr>
<td>0C : Step 12</td>
<td>12</td>
</tr>
<tr>
<td>0D : Step 13</td>
<td>13</td>
</tr>
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<td>...</td>
<td>...</td>
</tr>
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<td>0F : Step 15</td>
<td>15</td>
</tr>
<tr>
<td>10 : Step 16</td>
<td>16</td>
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<tr>
<td>11 : Step 17</td>
<td>17</td>
</tr>
<tr>
<td>12 : Step 18</td>
<td>18</td>
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<td>...</td>
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<td>...</td>
<td>...</td>
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<tr>
<td>27 : Step 99</td>
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<td>29 : Step 99</td>
<td>99</td>
</tr>
<tr>
<td>...</td>
<td>...</td>
</tr>
</tbody>
</table>
EXTERNAL CONTROL DEVICE SETUP

* 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 07 : 14:9

(4:3) (Europe, Colombia, Mid-East, Asia except South Korea and Japan)

02 : Wide screen 09 : * Just Scan

(16:9) (Europe, Colombia, Mid-East, Asia except South Korea and Japan)

04 : Zoom 05 : Zoom 2

09 : * Just Scan

04 : Zoom (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]

<table>
<thead>
<tr>
<th>Frequency</th>
<th>Data</th>
</tr>
</thead>
<tbody>
<tr>
<td>0 0 0 0 0 0 0 0</td>
<td>0 0 0 0 0 0 0 0</td>
</tr>
</tbody>
</table>

* 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][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

* For South Korea, North/Latin America except Colombia Model
► To tune channel to following physical/major/minor number.

Transmission [m][a][ ][0][ ][Data00][Data01][Data02][Data03][Data04][Data05][Cr]

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

* 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 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][ ]

* 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
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

For Japan Model

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

Transmission [m][a][ ][0][ ][Data00][ ][Data01]
[ ][Data02][ ][Data03][ ][Data04][ ][Data05][Cr]

* 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 01
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
   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.

<table>
<thead>
<tr>
<th>[Data 00]</th>
<th>[Data 01]</th>
<th>[Data 02]</th>
<th>[Data 03]</th>
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<tbody>
<tr>
<td>00</td>
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<tr>
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<td>X</td>
<td>X</td>
</tr>
<tr>
<td>02</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>03</td>
<td>X</td>
<td>O</td>
<td>O</td>
</tr>
</tbody>
</table>

X : don’t care

Acknowledgment:

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

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

Transmission: [v][ ][Set ID][ ][OK][Data 00][Data 01][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

Acknowledgment:

Transmission: [u][ ][Set ID][ ][OK/NG][Data][x]
ENGLISH
Easy Setup Guide
Please read this manual carefully before operating your set and retain it for future reference.

ESPAÑOL
Guía Rápida de Configuración
Lea atentamente este manual antes de poner en marcha el equipo y consérvelo para futuras consultas.

FRANÇAIS
Guide de configuration rapide
Avant d’utiliser l’appareil, veuillez lire attentivement ce manuel et le conserver pour pouvoir vous y reporter ultérieurement.

OLED77C8PUA  OLED65C8PUA  OLED55C8PUA
DLED65C8UA  OLED55C8UA

ENGLISH  Read Safety and Reference.
ESPAÑOL  Leer Seguridad y Consultas.
FRANÇAIS  Lire Sécurité et références.
### Antenna/Cable In
- HDMI IN
- HDMI IN/ARC
- USB IN
- AV IN
- LAN
- Optical Digital Audio Out

### Measurements

<table>
<thead>
<tr>
<th>Models / Modèles / MODELES</th>
<th>A</th>
<th>B</th>
<th>C</th>
<th>D</th>
<th>E</th>
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</table>

### Power Requirement / Alimentación requerida / Alimentación
- AC 120 V ~ 50 / 60 Hz

**ENGLISH**
- Easy TV Connect Guide (Animation)

**ESPAÑOL**
- Guía Rápida de Conexión del televisor (Sólo en inglés)

**FRANÇAIS**
- Guide simplifié pour la connexion du téléviseur (Offert en anglais seulement)
Table of Contents
1. Overview and specification of the remote control
   (1) Overview
   (2) Specification
2. Precautions
3. Customer Support

1. Overview and Specifications for the Remote Control

(1) Overview
Instructions for using the Magic Remote control are in the TV manual. This remote uses RF (Radio Frequency) instead of infrared. The remote will operate within 10m of the TV and does not require to be pointed at the TV (voice recognition support).

(2) Specifications
- Model No: AN-MR18BA
- Range of frequency: 2,400 GHz - 2,483.5 GHz
- Output Power (Max): 4 dBm
- Channel: 40 channels
- Power source: AA 1.5 V, 2 alkaline batteries are used
- Operating temperature range: 0 ℃ ~ 40 ℃

2. Precautions

(1) After replacement of the battery, use the remote control following pairing in accordance with user manual.
(2) If the unit does not operate after replacement of battery, restart pairing in accordance with the user manual.
(3) If the remote controller is not being used for prolonged period of time, it is recommended you remove the battery from the unit.
(4) Do not disassemble or exert heat to the battery.
(5) Do not drop battery or exert extreme impact that may cause the case to be damaged.
(6) Do not immerse the battery in water.
(7) There is danger of explosion if the battery is inserted reversely.
(8) Properly dispose of used batteries.
(9) Open the battery cover to find the label.

3. Customer Support
Refer to the contact number for services provided in the TV Manual.

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ENGLISH

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FRANÇAIS

Table des matières

1. Vue d'ensemble et spécifications de la télécommande
   (1) Vue d'ensemble
   (2) Spécifications
2. Précautions
3. Service Consommateurs

1. Vue d'ensemble et spécifications de la télécommande

(1) Vue d'ensemble
Les instructions pour utiliser la télécommande Magic Remote sont dans le manuel du TV. Cette télécommande utilise des fréquences radio à la place de la lumière infrarouge. Cette télécommande fonctionne dans un intervalle de 10m de la TV et ne requiert pas d'être pointée vers la TV (support de la fonction de reconnaissance vocale)

(2) Spécifications
- Modèle: AN-MR18BA
- Fréquence de base: 2,400 GHz - 2,483,5 GHz
- Puissance d'émission: 4 dBm
- Nombre de canaux: 40 canaux
- Source d'alimentation: 2 piles Alcalines
- Température de fonctionnement: 0 ℃ ~ 40 ℃

2. Précautions

(1) Après remplacement des piles, utiliser la télécommande en la reliant suivant le manuel de l'utilisateur.

3. Service Consommateurs

Se référer au numéro de contact des services associés, fourni dans le manuel TV.
This page contains specific instructions related to FCC certification for electronic equipment. The text is in multiple languages and includes regulatory compliance information. It details the procedures and requirements for certifying electronic devices to ensure they meet the necessary safety and performance standards.
ThinQ AI TV Manual

How to use

You can use various functions on your TV easily with voice recognition.

01. Press and hold button on the remote control to display the following screen.

Please speak now.

02. Say the function you’d like or keywords you wish to search for.

03. When you release button on the remote control, the action you requested will run.

- Use voice recognition to use the following functions on your TV.
  - TV Control and Functions
    - Functions related to watching TV: Change channel, change volume
      - Change external input
      - Settings: Immediate change in some settings, Move to Settings menu
      - Feature/App/Website shortcut
    - Search on TV
      - Search TV programme and VOD
      - Additional search for video related information
      - Search other information (People/Weather/Time)
      - Search user manual
  - Press button on the remote control to see actual examples of voice-enabled functions.
  - Depending on your location, additional functions are available through external services.
  - Details of services may vary by country.
  - Please note that AI Service may be changed, removed or terminated, without notice, by LGE or its third-party providers.

Precautions

- To use the voice recognition function, you need to use the magic remote control, which may not be supported by some models.
- To use all the voice recognition functions, you need to set the network, channel and your location. Otherwise, some functions will be restricted.
- Before use, you must accept the terms and conditions of the voice recognition when connecting to the network.
- Voice recognition accuracy may vary depending on the characteristics of the user (voice loudness, pronunciation, intonation and speed) and the surrounding environment (noise and TV volume).
- For more accurate voice recognition, pronounce slowly and accurately with normal loudness from about 10 cm (3.94 inches) away from the microphone of the magic remote control.
- If the voice is not recognized correctly, different functions may occur from those you requested.
- To control the set-top box connected to the TV with the voice recognition, it is recommended that the magic remote control point toward the set-top box after inputting the voice.
- For the voice recognition to function properly, set the same language for both voice recognition and menu.
- You can change the voice recognition language in (Settings) → All Settings → General → Language → Voice Recognition Language.
- Once you set the voice recognition language according to the country setting, check the exact search results. Some functions may not be available if your location and language settings are different.

<table>
<thead>
<tr>
<th>Country settings</th>
<th>Voice recognition support language</th>
</tr>
</thead>
<tbody>
<tr>
<td>USA</td>
<td>English—United States</td>
</tr>
<tr>
<td>Canada</td>
<td>English—Canada</td>
</tr>
<tr>
<td>Mexico</td>
<td>Español—México</td>
</tr>
</tbody>
</table>
Be careful when cleaning the TV screen.

- 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.
ARBITRATION NOTICE

THIS LIMITED WARRANTY CONTAINS AN ARBITRATION PROVISION THAT REQUIRE YOU AND LG TO RESOLVE DISPUTES BY BINDING ARBITRATION INSTEAD OF IN COURT, UNLESS YOU CHOOSE TO OPT OUT. IN ARBITRATION, CLASS ACTIONS AND JURY TRIALS ARE NOT PERMITTED. PLEASE SEE THE SECTION TITLED “PROCEDURE FOR RESOLVING DISPUTES” BELOW.

PROCEDURE FOR RESOLVING DISPUTES:

ALL DISPUTES BETWEEN YOU AND LG ARISING OUT OF OR RELATING IN ANY WAY TO THIS LIMITED WARRANTY OR THE PRODUCT SHALL BE RESOLVED EXCLUSIVELY THROUGH BINDING ARBITRATION, AND NOT IN A COURT OF GENERAL JURISDICTION. BINDING ARBITRATION MEANS THAT YOU AND LG ARE EACH WAIVING THE RIGHT TO A JURY TRIAL AND TO BRING OR PARTICIPATE IN A CLASS ACTION.

Definitions. For the purposes of this section, references to “LG” mean LG Electronics U.S.A., Inc., its parents, subsidiaries and affiliates, and each of their officers, directors, employees, agents, beneficiaries, predecessors in interest, successors, assigns and suppliers; references to “dispute” or “claim” shall include any dispute, claim or controversy of any kind whatsoever (whether based in contract, tort, statute, regulation, ordinance, fraud, misrepresentation or any other legal or equitable theory) arising out of or relating in any way to the sale, condition or performance of the product or this Limited Warranty.

Notice of Dispute. In the event you intend to commence an arbitration proceeding, you must first notify LG in writing at least 30 days in advance of initiating the arbitration by sending a letter to LG at LG Electronics, USA, Inc. Attn: Legal Department- Arbitration 1000 Sylvan Ave, Englewood Cliffs 07632. You and LG agree to engage in good faith discussions in an attempt to amicably resolve your claim. The notice must provide your name, address, and telephone number; identify the product that is the subject of the claim; and describe the nature of the claim and the relief being sought. If you and LG are unable to resolve the dispute within 30 days, either party may proceed to file a claim for arbitration.

Agreement to Binding Arbitration and Class Action Waiver. Upon failure to resolve the dispute during the 30 day period after sending written notice to LG, you and LG agree to resolve any claims between us only by binding arbitration on an individual basis, unless you opt out as provided below. Any dispute between you and LG shall not be combined or consolidated with a dispute involving any other person’s or entity’s product or claim. More specifically, without limitation of the foregoing, any dispute between you and LG shall not under any circumstances proceed as part of a class or representative action. Instead of arbitration, either party may bring an individual action in small claims court, but that small claims court action may not be brought on a class or representative basis.

Arbitration Rules and Procedures. To begin arbitration of a claim, either you or LG must make a written demand for arbitration. The arbitration will be administered by the American Arbitration Association (“AAA”) and will be conducted before a single arbitrator under the AAA’s Consumer Arbitration Rules that are in effect at the time the arbitration is initiated (referred to as the “AAA Rules”) and under the procedures set forth in this section. The AAA Rules are available online at www.adr.org/consumer. Send a copy of your written demand for arbitration, as well as a copy of this provision, to the AAA in the manner described in the AAA Rules. You must also send a copy of your written demand to LG at LG Electronics, USA, Inc. Attn: Legal Department- Arbitration 1000 Sylvan Avenue Englewood Cliffs, NJ 07632. If there is a conflict between the AAA Rules and the rules set forth in this section, the rules set forth in this section will govern. This arbitration provision is governed by the Federal Arbitration Act. Judgment may be entered on the arbitrator’s award in any court of competent jurisdiction. All issues are for the arbitrator to decide, except that issues relating to the scope and enforceability of the arbitration provision and to the arbitrability of the dispute are for the court to decide. The arbitrator is bound by the terms of this provision.
Governing Law. The law of the state of your residence shall govern this Limited Warranty and any disputes between us except to the extent that such law is preempted by or inconsistent with applicable federal law.

Fees/Costs. You do not need to pay any fee to begin an arbitration. Upon receipt of your written demand for arbitration, LG will promptly pay all arbitration filing fees to the AAA unless you seek more than $25,000 in damages, in which case the payment of these fees will be governed by the AAA Rules. Except as otherwise provided for herein, LG will pay all AAA filing, administration and arbitrator fees for any arbitration initiated in accordance with the AAA Rules and this arbitration provision. If you prevail in the arbitration, LG will pay your attorneys’ fees and expenses as long as they are reasonable, by considering factors including, but not limited to, the purchase amount and claim amount. Notwithstanding the foregoing, if applicable law allows for an award of reasonable attorneys’ fees and expenses, an arbitrator can award them to the same extent that a court would. If the arbitrator finds either the substance of your claim or the relief sought in the demand is frivolous or brought for an improper purpose (as measured by the standards set forth in Federal Rule of Civil Procedure 11(b)), then the payment of all arbitration fees will be governed by the AAA Rules. In such a situation, you agree to reimburse LG for all monies previously disbursed by it that are otherwise your obligation to pay under the AAA Rules. Except as otherwise provided for, LG waives any rights it may have to seek attorneys’ fees and expenses from you if LG prevails in the arbitration.

Hearings and Location. If your claim is for $25,000 or less, you may choose to have the arbitration conducted solely on the basis of (1) documents submitted to the arbitrator, (2) through a telephonic hearing, or (3) by an in-person hearing as established by the AAA Rules. If your claim exceeds $25,000, the right to a hearing will be determined by the AAA Rules. Any in-person arbitration hearings will be held at a location within the federal judicial district in which you reside unless we both agree to another location or we agree to a telephonic arbitration.

Opt Out. You may opt out of this dispute resolution procedure. If you opt out, neither you nor LG can require the other to participate in an arbitration proceeding. To opt out, you must send notice to LG no later than 30 calendar days from the date of the first consumer purchaser’s purchase of the product by either: (i) sending an e-mail to optout@lge.com, with the subject line: “Arbitration Opt Out” or (ii) calling 1-800-980-2973. You must include in the opt out e-mail or provide by telephone: (a) your name and address; (b) the date on which the product was purchased; (c) the product model name or model number; and (d) the serial number (the serial number can be found (i) on the product; or (ii) online by accessing https://www.lg.com/us/support/repair-service/schedule-repair-continued and clicking on “Find My Model & Serial Number”).

You may only opt out of the dispute resolution procedure in the manner described above (that is, by e-mail or telephone); no other form of notice will be effective to opt out of this dispute resolution procedure. Opting out of this dispute resolution procedure will not affect the coverage of the Limited Warranty in any way, and you will continue to enjoy the full benefits of the Limited Warranty. If you keep this product and do not opt out, then you accept all terms and conditions of the arbitration provision described above.
Please direct all service-related questions or comments to lgusa.com/support or call 1-800-243-0000

LG Electronics U.S.A., Inc

REGISTER YOUR PRODUCT
ACTIVATE YOUR WARRANTY

Thank you for purchasing an LG product. We hope you’re enjoying it!

Now it’s important to register your product—a quick, simple process with many benefits:

- Serves as verification of ownership if it’s lost or stolen
- Helpful emails on how to make the most of your product
- Reminders about downloads and firmware updates
- More efficient warranty service
- Exclusive information on new products and innovations
- Special offers and promotions

Welcome to the LG family!

Please seal with tape. Do not staple.
LG

REGISTER YOUR PRODUCT
ACTIVATE YOUR WARRANTY

REGISTER EASILY WITH YOUR PHONE

1. Take a photo
   of the camera icon to the right

2. Send it in:
   Text photo to 77228

Need help? Visit Photoregister.com/help
or text HELP to 77228.

Other easy ways to register:

· REGISTER ONLINE

· REGISTER BY MAIL
  Within the next 10 days

- Mr.  - Mrs.  - Ms.  - Miss

First Name  Initial  Last Name
Street
City  State/Province  Zip/Postal Code
Email
Date of Purchase  Phone Number
Model Number
Serial Number
Name of Purchase Location

☐ By checking this box, I wish to receive helpful information about my new
  product as well as news and offers from LG Electronics U.S.A., Inc. in accordance
  with the privacy policy located at www.lgusa.com/privacy.

To update your communication preferences, please visit MyLG
at www.lgusa.com/mylg. Failure to return this card will
not diminish your warranty rights.

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LG Electronics, Inc.

LCD / LED / OLED Television Limited Warranty - USA

Your LG Electronics ("LG") LCD / LED / OLED Television ("unit") will be repaired or replaced, at LG's option, if it proves to be defective in material or workmanship under normal use, during the warranty period ("Warranty Period") listed below, effective from the date ("Date of Purchase") of original consumer purchase of the unit. This warranty is good only to the original purchaser of the unit and effective only when used in the United States, excluding U.S. Territories.

<table>
<thead>
<tr>
<th>WARRANTY PERIOD</th>
<th>HOW SERVICE IS HANDLED</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>LABOR:</strong> One (1) Year from the Date of Purchase.</td>
<td><strong>Please retain</strong> dealer’s dated bill of sale or delivery ticket as evidence of the Date of Purchase for proof of warranty, and submit a copy of the bill of sale to the service person at the time warranty service is provided.</td>
</tr>
</tbody>
</table>
| **PARTS:** One (1) Year from the Date of Purchase. | **CONSUMER USER**
| Replacement Units and Repair Parts may be new or factory remanufactured. | Please Call 1-800-243-0000 for instructions on getting the defective unit repaired or replaced. Visit our website at: http://www.lg.com |
| Replacement Units and Repair Parts are warranted for the remaining portion of the original unit’s warranty period. | **COMMERCIAL USER**
| | Please Call (888) 865-3026 for instructions on getting the defective unit repaired or replaced. Visit our website at: http://www.lg.com/us/commercial/display |

**THIS WARRANTY IS IN LIEU OF ANY OTHER WARRANTY, EXPRESS OR IMPLIED, INCLUDING WITHOUT LIMITATION, ANY WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE. TO THE EXTENT ANY IMPLIED WARRANTY IS REQUIRED BY LAW, IT IS LIMITED IN DURATION TO THE EXPRESS WARRANTY PERIOD ABOVE. NEITHER THE MANUFACTURER NOR ITS U.S. DISTRIBUTOR SHALL BE LIABLE FOR ANY INCIDENTAL, CONSEQUENTIAL, INDIRECT, SPECIAL, OR PUNITIVE DAMAGES OF ANY NATURE, INCLUDING WITHOUT LIMITATION, LOST PROFITS, LOST OR CORRUPTED PROGRAMMING OR DATA, OR ANY OTHER DAMAGE WHETHER BASED IN CONTRACT, TORT, OR OTHERWISE.** Some states do not allow the exclusion or limitation of incidental or consequential damages or limitations on how long an implied warranty lasts, so the above exclusion or limitation may not apply to you. This warranty gives you specific legal rights and you may also have other rights that vary from state to state.

**THIS LIMITED WARRANTY DOES NOT APPLY TO:**

- damage caused in shipping or transit
- service required as a result of improper installation, including incorrect or insufficient AC supply (please consult the owner’s manual for power supply requirements).
- installation or repair of antenna systems, cable converters, cable company supplied equipment, or other components in a video system
- set-up or adjustment on consumer controls, or damage caused by improper adjustments
- damage caused by other system components
- any unit that has been modified or incorporated into any other unit.
- replacement of batteries on the remote control.

- damage (including cosmetic damage), failure, loss or personal injury due to misuse, abuse, negligence, improper maintenance or storage, or to acts of nature or other causes beyond our control. (Causes beyond our control include but are not limited to lightning strike, power surges, power outages and water damage.)
- image burn-in
- repair or replacement of warranted parts by other than an LG authorized service centers.
- units purchased or serviced outside of the U.S.A.
- units where the original factory serial numbers have been removed, defaced or changed in any way.
- units sold and labeled as “as is, where is” or similar disclaimer.

The cost of repair or replacement under these excluded circumstances shall be borne by the consumer.
CUSTOMER INTERACTIVE CENTER NUMBERS

<table>
<thead>
<tr>
<th>To obtain Customer Assistance, Product Information, or Dealer or Authorized Service Center location:</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>CONSUMER USER</strong></td>
</tr>
<tr>
<td>Please call 1-800-243-0000 and select the appropriate option from the menu.</td>
</tr>
<tr>
<td>Or visit our website at:</td>
</tr>
<tr>
<td><a href="http://www.lg.com">http://www.lg.com</a></td>
</tr>
<tr>
<td><strong>COMMERCIAL USER</strong></td>
</tr>
<tr>
<td>Please call (888) 865-3026 and select the appropriate option from the menu.</td>
</tr>
<tr>
<td>Or visit our website at:</td>
</tr>
<tr>
<td><a href="http://www.lg.com/us/commercial/display">http://www.lg.com/us/commercial/display</a></td>
</tr>
</tbody>
</table>

CONCERNING PIXEL FUNCTIONALITY: Your LCD/LED/OLED television contains hundreds of thousands of individual pixels. LCD/LED/OLED displays typically contain a small number of pixels that do not function normally. Your display has been inspected and is in compliance with manufacturer’s specifications, indicating that any pixel defects do not affect the operation or use of your display.

BEFORE CALLING FOR SERVICE:
Please have your unit’s model number, serial number, and the date of purchase available.
Under some circumstances you may be asked to provide credit card information for a non-warranty service fee, as a deposit for advanced shipment, or cost of unreturned loaner unit.
If a replacement unit is received, please use the carton and packaging from that replacement unit in returning the defective unit to an LG authorized service center.
Parts and service in accordance with the LG warranty is LG’s responsibility and will be provided without charge. Other service requirements will be at the owner’s expense. If you have problems in obtaining satisfactory warranty service, write or call the LG Customer Interactive Center.
To assure proper credit and avoid unnecessary charges, you must obtain a Return Authorization before returning any unit to the Factory Service Center. Contact the Customer Interactive Center for details.

Service for your LG Television is provided through LG Electronics Alabama, Inc., the authorized LG Service Center for the United States.

TO CONTACT LG ELECTRONICS BY MAIL:
LG Customer Interactive Center
P. O. Box 240007
2C1 James Record Road
Huntsville, Alabama 35824
ATTN: CIC

LG LCD/LED/OLED Televisions are marketed and distributed in the United States by:
LG Electronics U.S.A., Inc., 1000 Sylvan Avenue, Englewood Cliffs, NJ 07632