



English

- Read **Safety and Reference**.
- For the power supply and power consumption, refer to the label attached to the product.

Български

- Прочетете **Безопасност и справки**.
- Направете справка с етикета на продукта за електрозахранването и консумацията на енергия.

Français

- Lire le document **Sécurité et référence**.
- Reportez-vous à l'étiquette apposée sur le téléviseur pour connaître l'alimentation et la consommation électriques.

Ελληνικά

- Ανάγνωση **Ασφάλεια και Αναφορά**.
- Για πληροφορίες σχετικά με την τροφοδοσία και την κατανάλωση ενέργειας, δείτε την ετικέτα του προϊόντος.

Italiano

- Consultare la sezione **Sicurezza e informazioni di riferimento**.
- Per l'alimentazione e il consumo di energia, consultare l'etichetta applicata sul prodotto.

Português

- Consulte o manual de **Segurança e Referência**.
- No que respeita à fonte de alimentação e ao consumo de energia, consulte a etiqueta mostrada no produto.

Русский

- Прочтите **Руководство по технике безопасности**.
- Требования параметров электропитания и значения потребляемой мощности указаны на информационном лейбле на задней крышке изделия.

Hrvatski

- Pročitajte **Sigurnost i reference**.
- Informacije o napajanju i potrošnji energije potražite na oznaci koja se nalazi na proizvodu.

Español

- Leer **Seguridad y Referencias**.
- Para obtener información acerca de la fuente de alimentación y el consumo de energía, consulte la etiqueta del producto.

Українська

- Прочитайте **Правила безпеки та довідкова інформація**.
- Відомості щодо подачі живлення і споживання електроенергії дивіться на наліпці на виробі.

العربية

- قراءة الأمان والمرجع .
- لمعرفة المزيد حول مصدر الإمداد بالطاقة والمعايير استهلاك الطاقة، راجع الملصق الموجود على المنتج .

Česky

- Přečtěte si část **Bezpečnost a reference**.
- Informace o napájení a příkonu naleznete na štítku přiřevněném k výrobku.

Deutsch

- **Sicherheitshinweise und Referenzen:** Bitte lesen!
- Informationen zur Stromversorgung und zum Stromverbrauch sind dem Etikett auf dem Gerät zu entnehmen.

Magyar

- Lásd: **Biztonsági óvintézkedések**.
- A tápellátásra és az áramfogyasztásra vonatkozó adatok a készülékre ragasztott címkén találhatóak.

Polski

- Przeczytaj **Zasady bezpieczeństwa i informacje dodatkowe**.
- Dokładne informacje o zasilaniu i zużyciu energii są umieszczone na etykiecie znajdującej się na produkcie.

Română

- Citiți **Siguranță și referințe**.
- Pentru sursa de alimentare și consumul de energie, consultați eticheta atașată pe produs.

Srpski

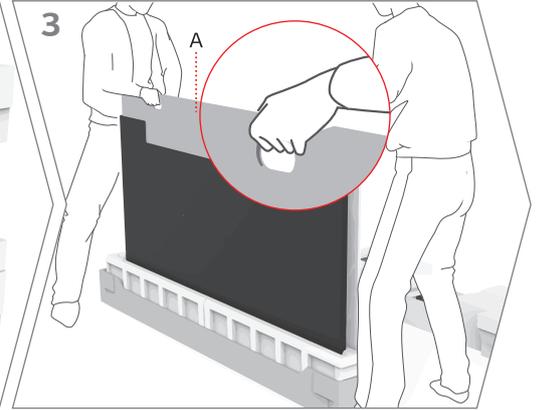
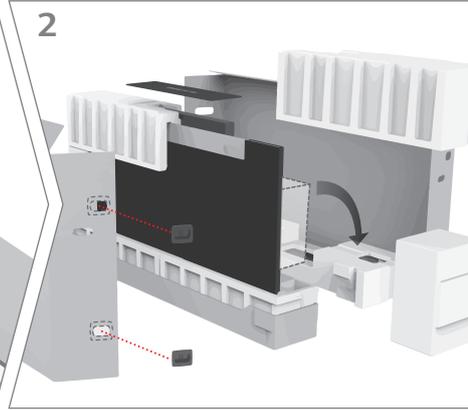
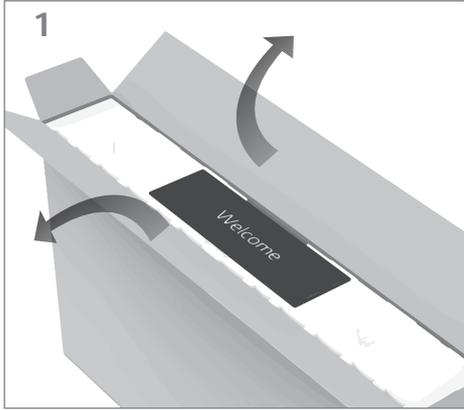
- Pročitajte **Bezbednost i informacije**.
- Da biste saznali informacije u vezi sa napajanjem i potrošnjom energije, pogledajte oznaku na proizvodu.

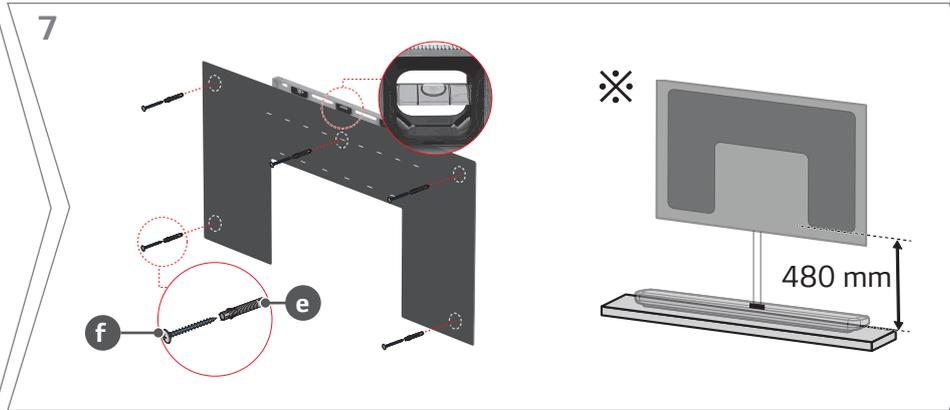
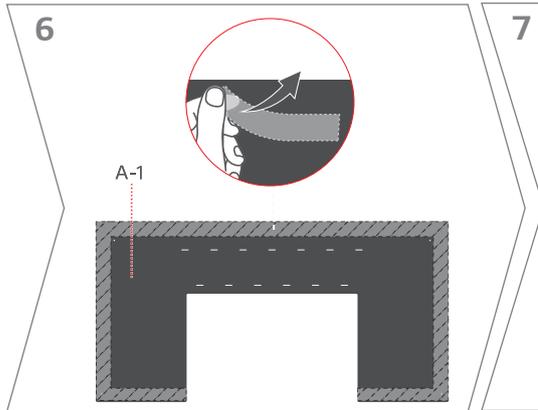
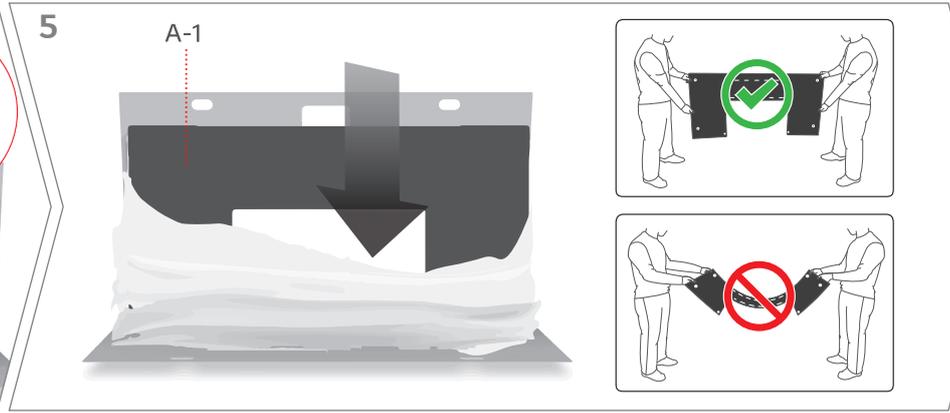
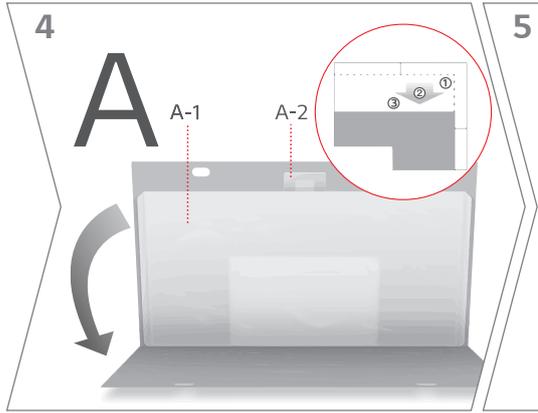
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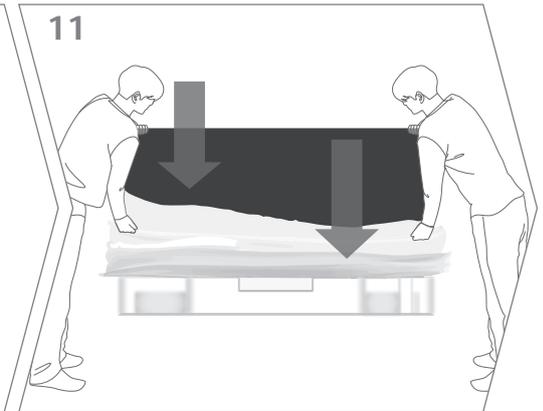
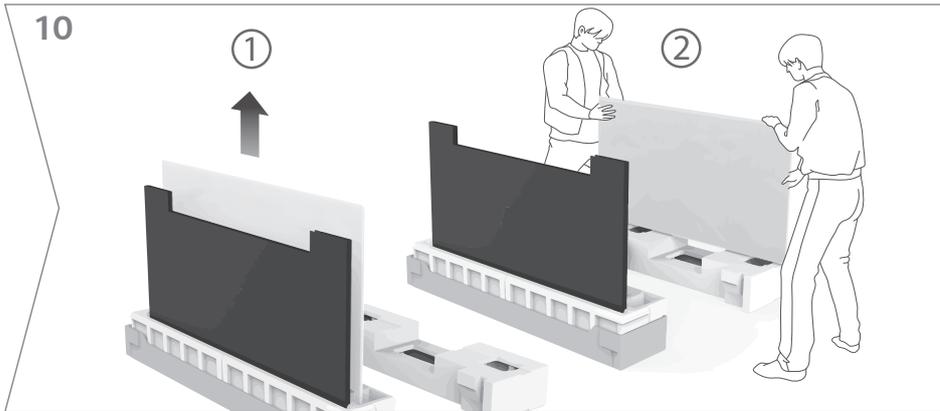
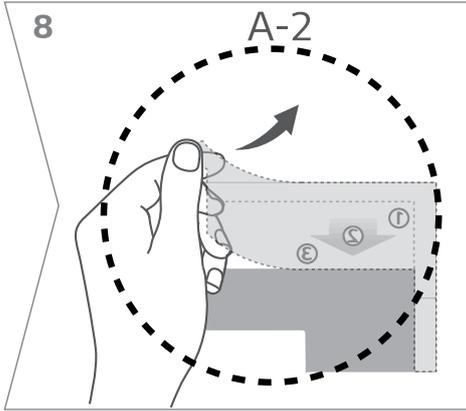
- Preberite **Varnostne informacije in napotki**.
- Podatke o napajanju in porabi energije si oglejte na nalepki izdelka.

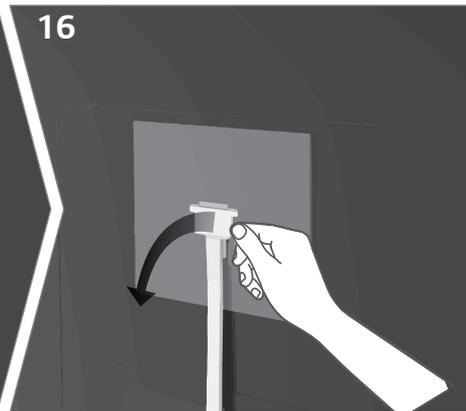
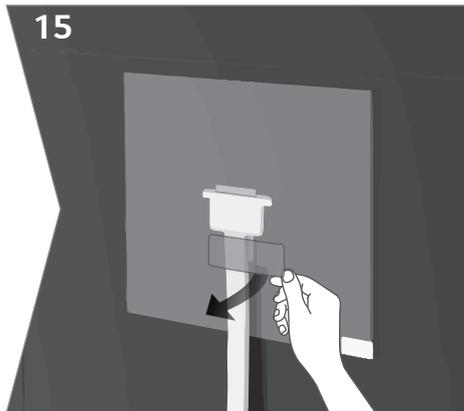
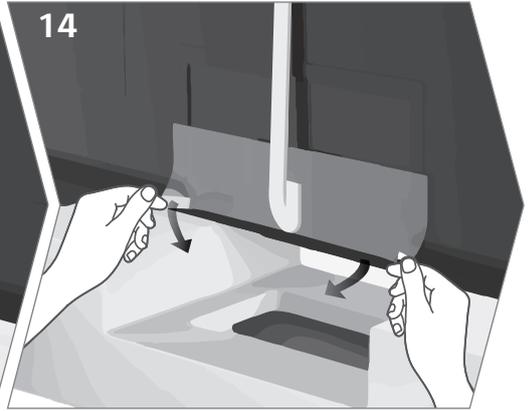
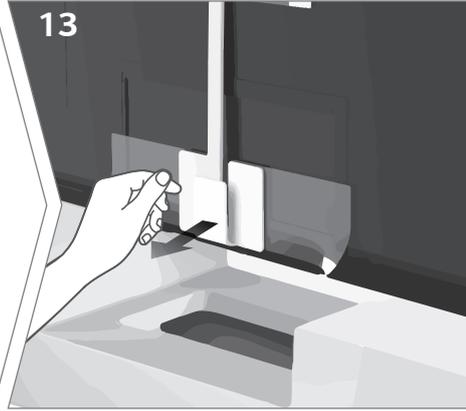
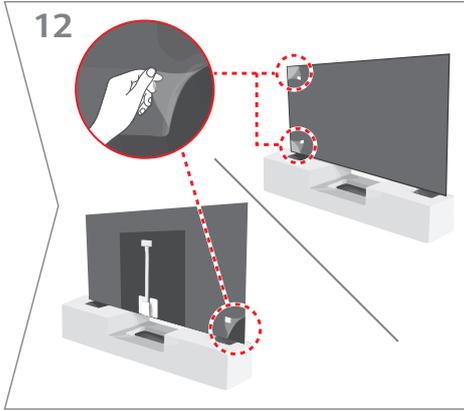
Türkçe

- **Güvenlik ve Referans** bölümünü okuyun.
- Güç kaynağı ve güç tüketimi için ürüne yapıştırılmış olan etikete bakın.



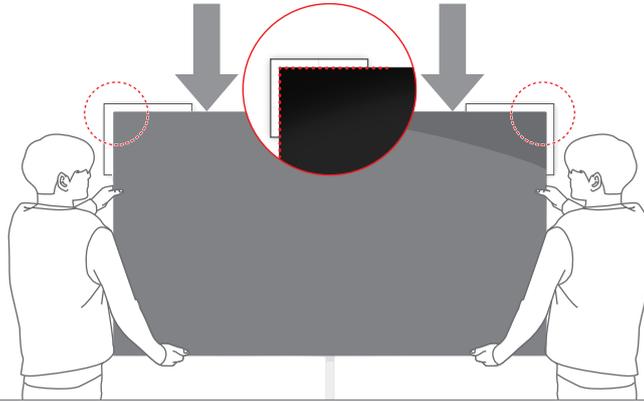




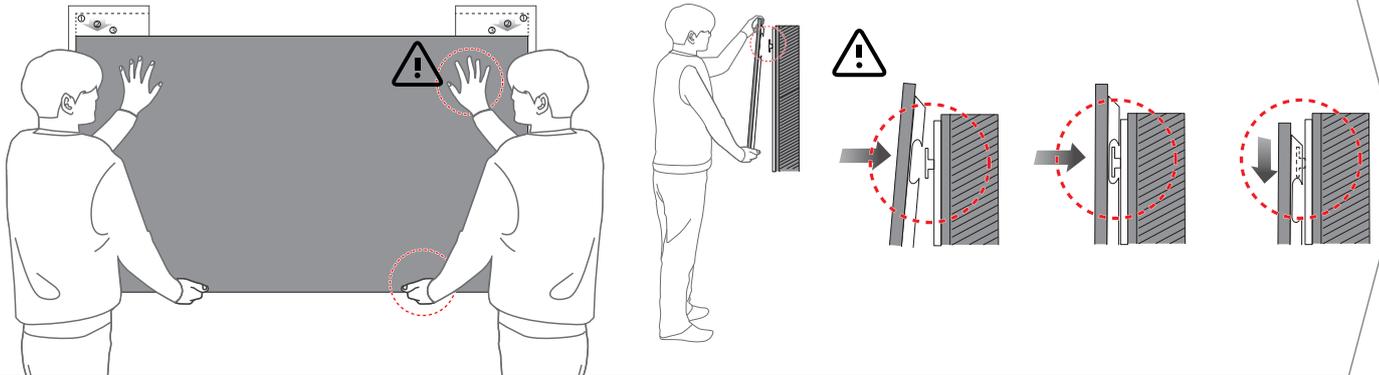




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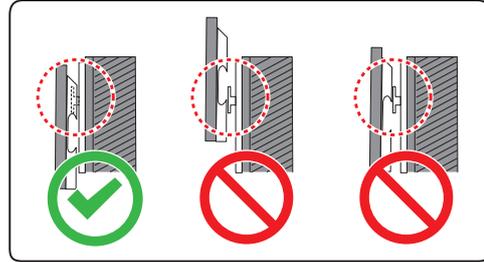
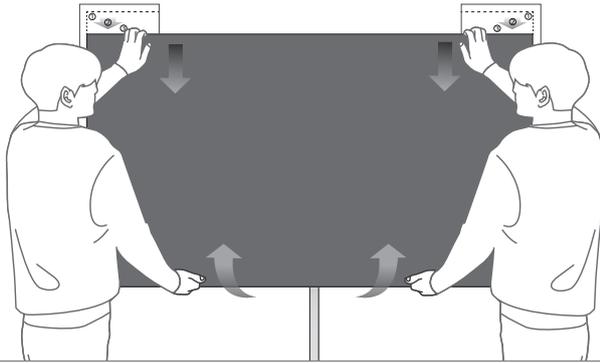


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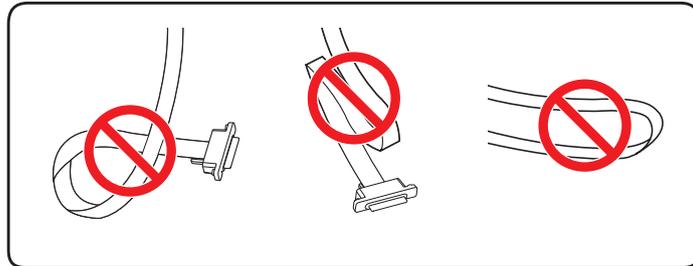




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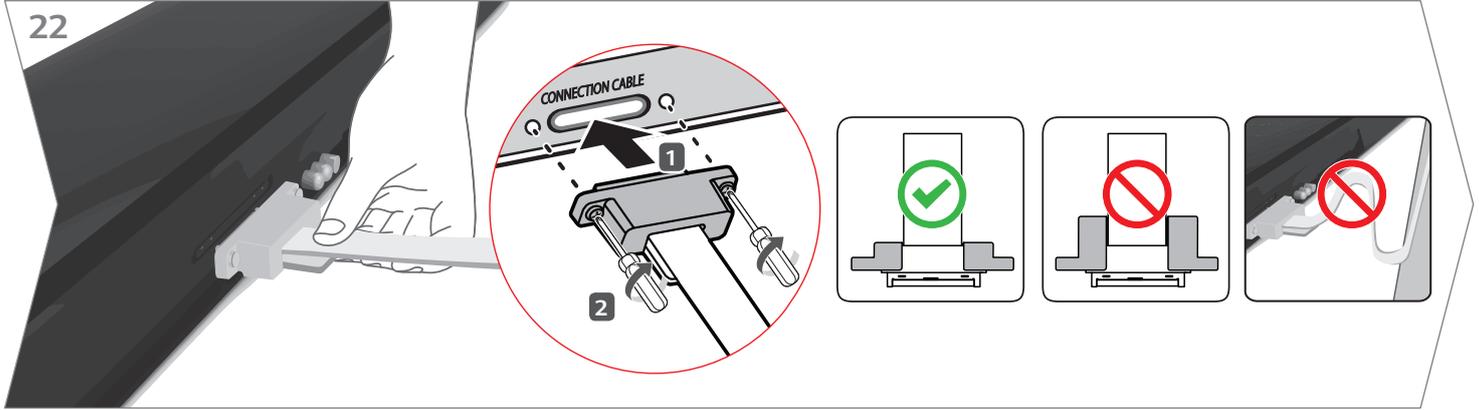


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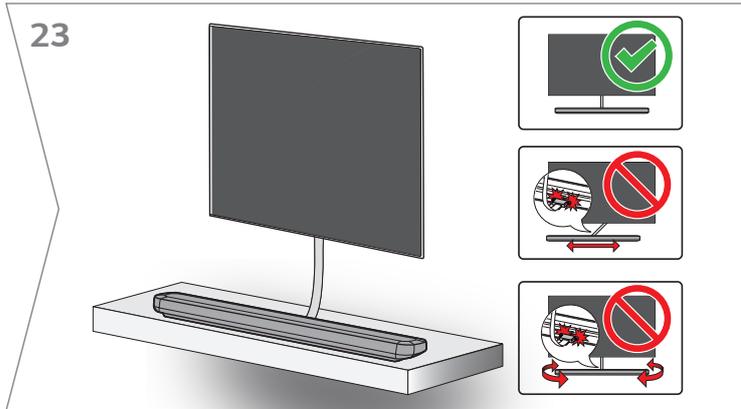


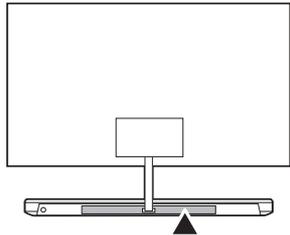


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ANTENNA/
CABLE IN



HDMI IN



HDMI IN/ARC

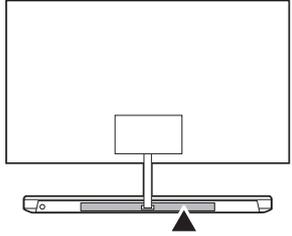


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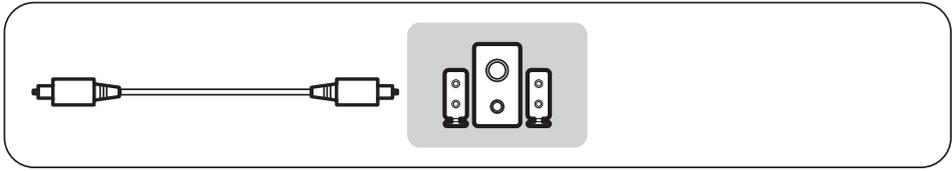


Satellite IN

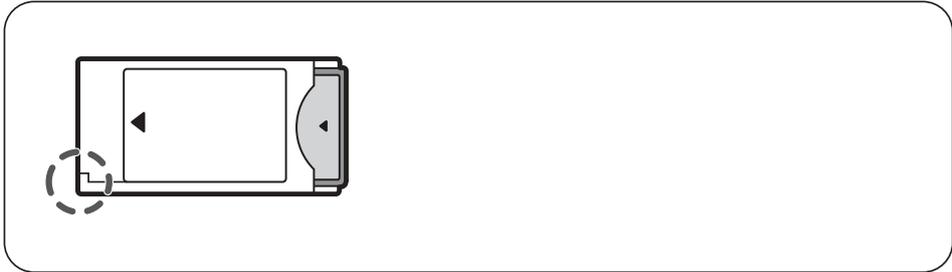


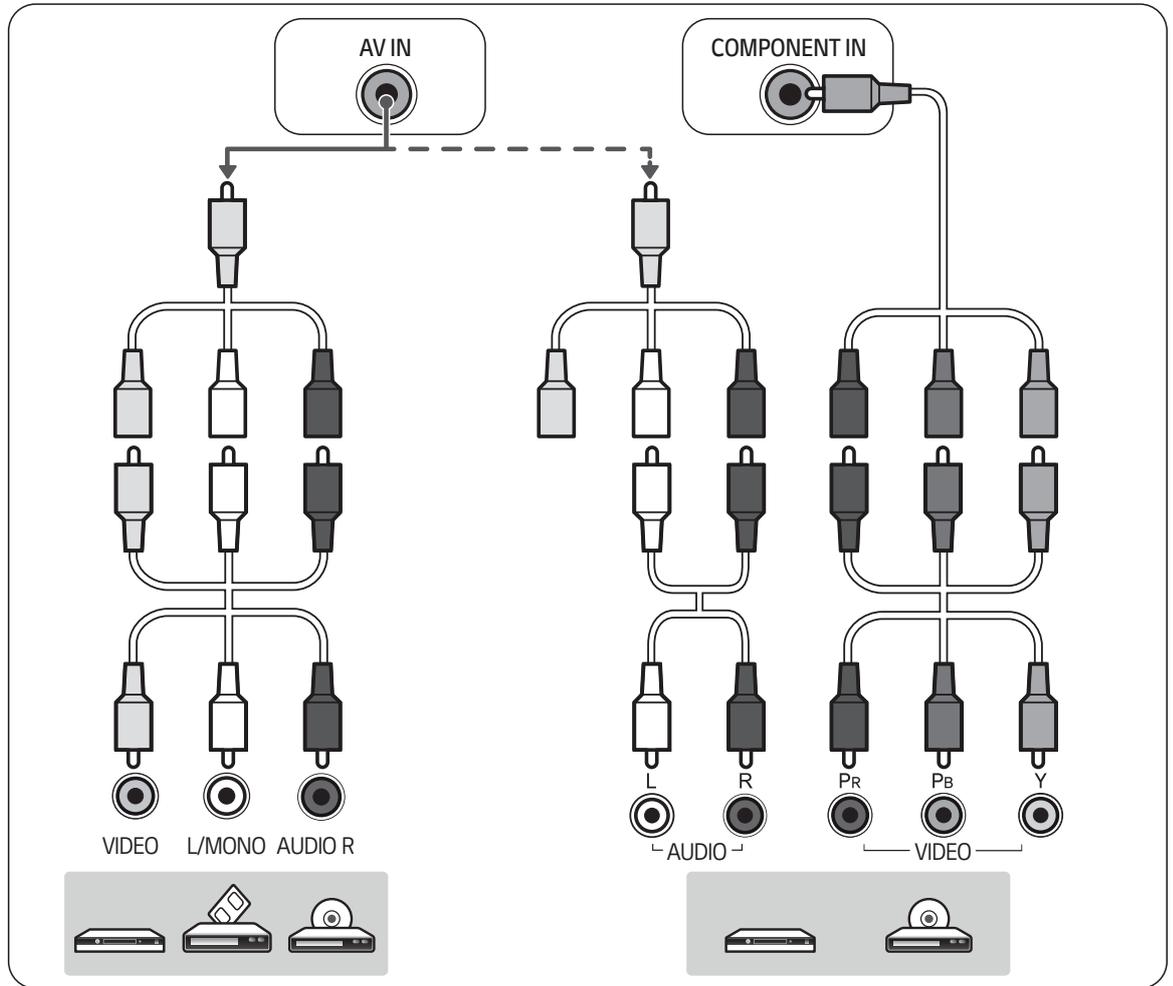
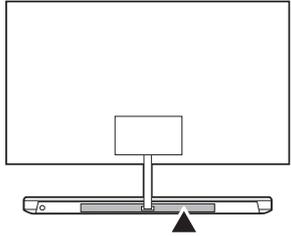


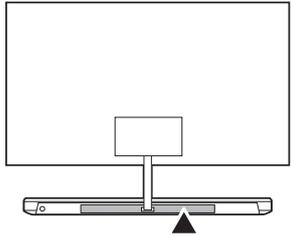
OPTICAL DIGITAL
AUDIO OUT



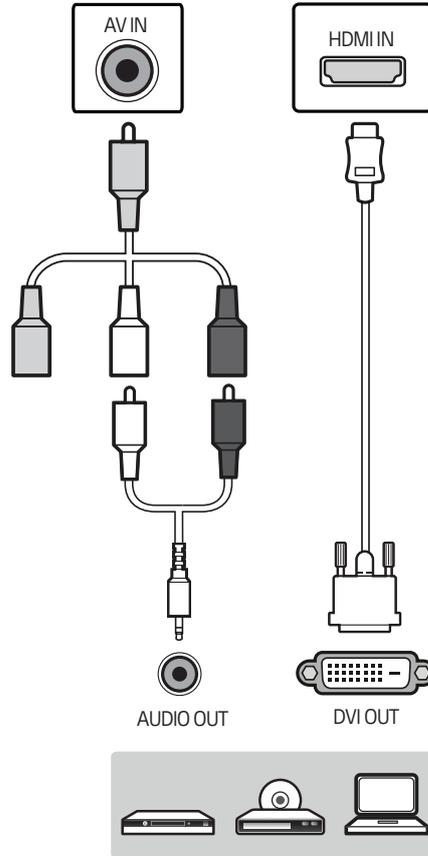
PCMCIA CARD SLOT

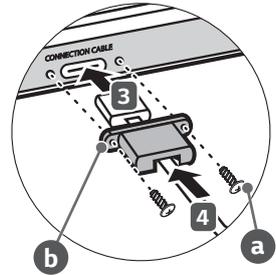
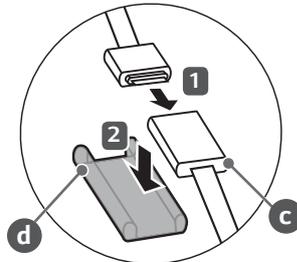
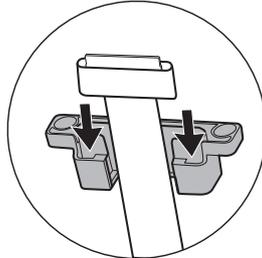
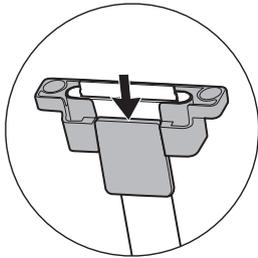
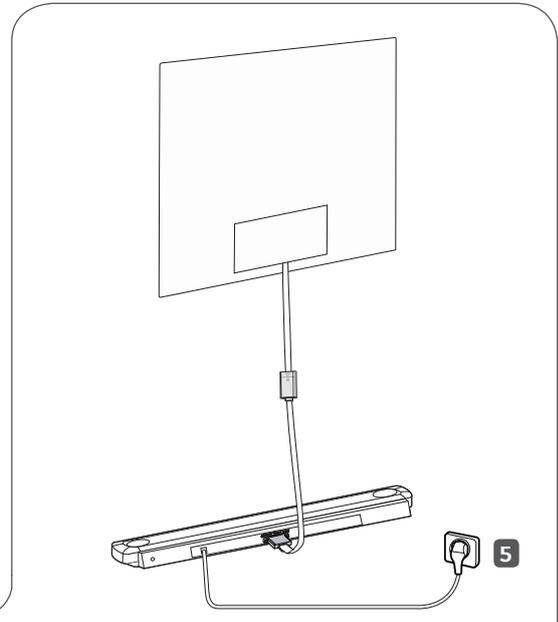
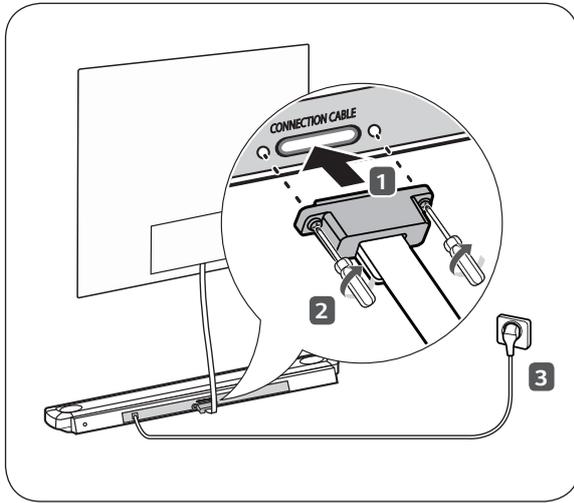


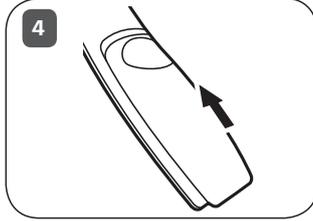
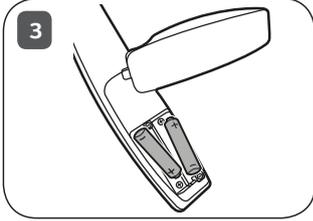
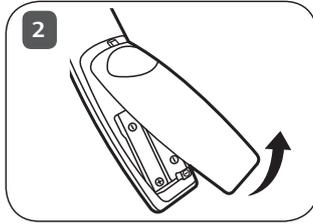
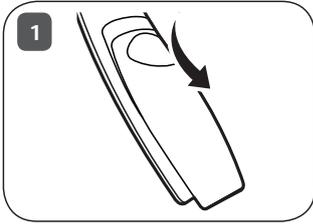


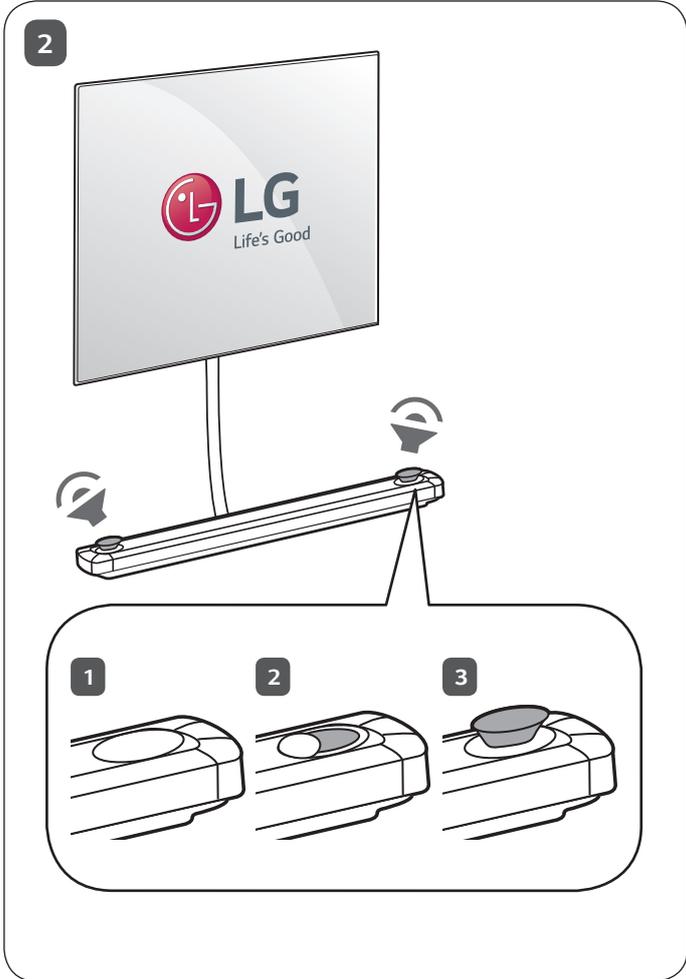
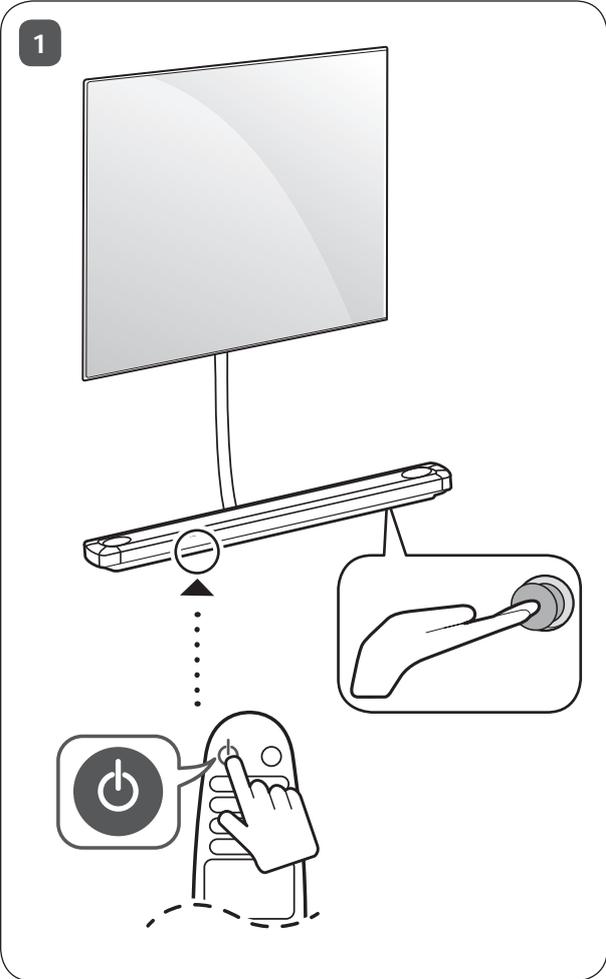


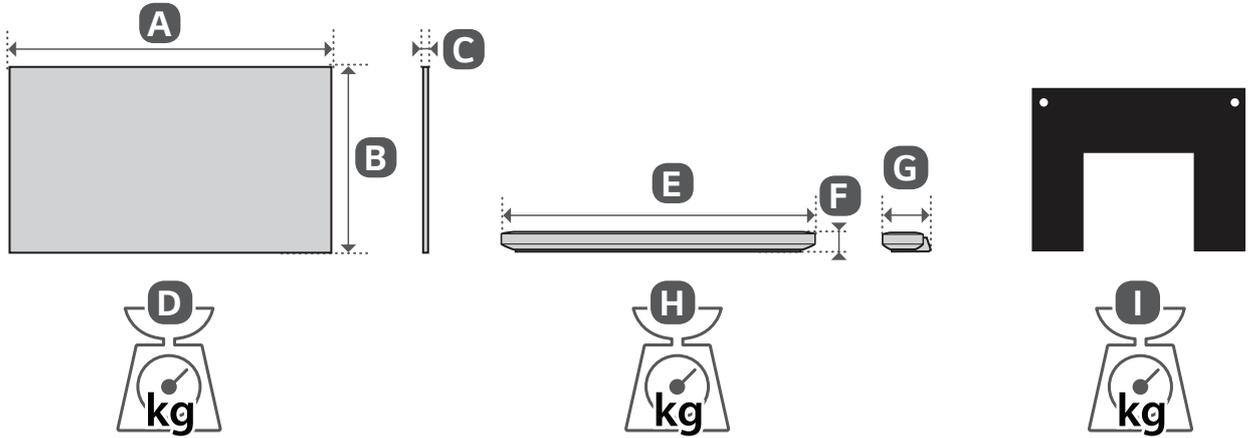
HDMI-DVI IN











	A (mm)	B (mm)	C (mm)	D (kg)	E (mm)	F (mm)	G (mm)	H (kg)	I (kg)
65EV960H-ZA	1450	825	3.85	7.6	1260	78	198	10.0	2.3
Power Requirement					AC 100-240 V ~ 50 / 60 Hz				



OWNER'S MANUAL

Safety and Reference

OLED TV

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



* S A C 3 5 9 7 4 1 8 4 *

(2002-REV04)

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Warning! Safety instructions



CAUTION
RISK OF ELECTRIC SHOCK
DO NOT OPEN



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

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

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

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



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

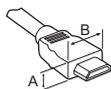
- Do not place the TV and/or remote control in the following environments:
 - A location exposed to direct sunlight
 - An area with high humidity such as a bathroom
 - Near any heat source such as stoves and other devices that produce heat
 - Near kitchen counters or humidifiers where they can easily be exposed to steam or oil
 - An area exposed to rain or wind
 - Near containers of water such as vasesOtherwise, this may result in fire, electric shock, malfunction or product deformation.
- Do not place the product where it might be exposed to dust. This may cause a fire hazard.
- Mains Plug is the TV connecting/disconnecting device to AC mains electric supply. This plug must remain readily attached and operable when TV is in use.
- Do not touch the power plug with wet hands. Additionally, if the cord pin is wet or covered with dust, dry the power plug completely or wipe dust off. You may be electrocuted due to excess moisture.
- Make sure to connect Mains cable to compliant AC mains socket with Grounded earth pin. (Except for devices which are not grounded on earth.) Otherwise possibility you may be electrocuted or injured.
- Insert power cable plug completely into wall socket otherwise if not secured completely into socket, fire ignition may break out.
- Ensure the power cord does not come into contact with hot objects such as a heater. This may cause a fire or an electric shock hazard.
- Do not place a heavy object, or the product itself, on power cables. Otherwise, this may result in fire or electric shock.
- Bend antenna cable between inside and outside building to prevent rain from flowing in. This may cause water damaged inside the Product and could give an electric shock.
- When mounting TV onto wall make sure to neatly install and isolate cabling from rear of TV as to not create possibility of electric shock / fire hazard.
- Do not plug too many electrical devices into a single multiple electrical outlet. Otherwise, this may result in fire due to over-heating.
- 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.
- Keep the anti-moisture packing material or vinyl packing out of the reach of children. Anti-moisture material is harmful if swallowed. If swallowed by mistake, force the patient to vomit and visit the nearest hospital. Additionally, vinyl packing can cause suffocation. Keep it out of the reach of children.
- Do not let your children climb or cling onto the TV. Otherwise, the TV may fall over, which may cause serious injury.
- Dispose of used batteries carefully to ensure that a small child does not consume them. Please seek Doctor- Medical Attention immediately if child consumes batteries.
- Do not insert any metal objects/conductors (like a metal chopstick/ cutlery/screwdriver) into the end of power cable while the power plug is plugged into wall socket. Additionally, do not touch the power plug right after unplugging from the wall socket. You may be electrocuted.

- Do not put or store inflammable substances near the product. There is a danger of combustion/explosion or fire due to careless handling of the inflammable substances.
- Do not drop metallic objects such as coins, hair pins, chopsticks or wire into the product, or inflammable objects such as paper and matches. Children must pay particular attention. Electrical shock, fire or injury can occur. If a foreign object is dropped into the product, unplug the power cord and contact the service centre.
- Do not spray water on the product or scrub with an inflammable substance (thinner or benzene). Fire or electric shock accident can occur.
- Do not allow any impact, shock or any objects to fall into the unit, and do not drop anything onto the screen. You may be injured or the product can be damaged.
- Never touch this product or antenna during a thunder or lightning storm.
You may be electrocuted.
- Never touch the wall outlet when there is leakage of gas, open the windows and ventilate. It may cause a fire or a burn by a spark.
- Do not disassemble, repair or modify the product at your own discretion. Fire or electric shock accident can occur.
Contact the service centre for check, calibration or repair.
- If any of the following occur, unplug the product immediately and contact your local service centre.
 - The product has been damaged
 - Foreign objects have entered the product
 - The product produced smoke or a strange smell
 This may result in fire or electric shock.
- Unplug the TV from AC mains wall socket if you do not intend to use the TV for a long period of time. Accumulated dust can cause fire hazard and insulation deterioration can cause electric leakage/shock/fire.
- Apparatus shall not be exposed to dripping or splashing and no objects filled with liquids, such as vases, shall be placed on the apparatus.
- 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.
- If water enters or comes into contact with TV, AC adapter or power cord please disconnect the power cord and contact service centre immediately. Otherwise, this may result in electric shock or fire.
- Only use an authorized AC adapter and power cord approved by LG Electronics. Otherwise, this may result in fire, electric shock, malfunction or product deformation.
- Never Disassemble the AC adapter or power cord. This may result in fire or electric shock.
- Be careful in handling the adapter to prevent any external shocks to it. An external shock may cause damage to the adapter.
- Make sure the power cord is connected securely to the power plug on the TV.
- Install the product where no radio wave occurs.
- There should be enough distance between an outside antenna and power lines to keep the former from touching the latter even when the antenna falls. This may cause an electric shock.
- Do not install the product on places such as unstable shelves or inclined surfaces. Also avoid places where there is vibration or where the product cannot be fully supported. Otherwise, the product may fall or flip over, which may cause injury or damage to the product.
- Only use the attachments / accessories specified by the manufacturer.
- When installing the antenna, consult with a qualified service technician. If not installed by a qualified technician, this may create a fire hazard or an electric shock hazard.
- We recommend that you maintain a distance of at least 2 to 7 times the diagonal screen size when watching TV. If you watch TV for a long period of time, this may cause blurred vision.
- Only use the specified type of battery. This could cause damage to the remote control.
- Do not mix new batteries with old batteries. This may cause the batteries to overheat and leak.
- Batteries should not be exposed to excessive heat. For example, keep away from direct Sunlight, open fireplace and electric heaters.

- Signal from Remote Control can be interrupted due to external/ internal lighting eg Sunlight, fluorescent lighting. If this occurs turn off lighting or darken viewing area.
- 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.
- Do not turn the product On/Off by plugging-in or unplugging the power plug to the wall outlet. (Do not use the power plug for switch.) It may cause mechanical failure or could give an electric shock.
- Please follow the installation instructions below to prevent the product from overheating.
 - Do not install the product in a place with no ventilation (e.g., on a bookshelf or in a cupboard).
 - Do not install the product on a carpet or cushion.
 - Make sure the air vent is not blocked by a tablecloth or curtain. This may result in fire.
- Take care not to touch the ventilation openings when watching the TV for long periods as the ventilation openings may become hot. This does not affect the operation or performance of the product.
- Periodically examine the cord of your appliance, and if its appearance indicates damage or deterioration, unplug it, discontinue use of the appliance, and have the cord replaced with an exact replacement part by an authorized servicer.
- Prevent dust collecting on the power plug pins or outlet. This may cause a fire hazard.
- Protect the power cord from physical or mechanical abuse, such as being twisted, kinked, pinched, closed in a door, or walked upon. Pay particular attention to plugs, wall outlets, and the point where the cord exits the appliance.
- Do not press strongly upon the panel with a hand or sharp object such as nail, pencil or pen, or make a scratch on it, as it may cause damage to screen.
- Avoid touching the screen or holding your finger(s) against it for long periods of time. Doing so may produce some temporary or permanent distortion/damage to screen.
- As long as this unit is connected to the AC wall outlet, it is not disconnected from the AC power source even if you turn off this unit by SWITCH.
- When unplugging the cable, grab the plug and unplug it, by pulling at the plug. Don't pull at the cord to unplug the power cord from the power board, as this could be hazardous.
- When moving the product, make sure you turn the power off first. Then, unplug the power cables, antenna cables and all connecting cables. The TV set or power cord may be damaged, which may create a fire hazard or cause electric shock.
- When moving or unpacking the product, work in pairs because the product is heavy. Otherwise, this may result in injury.
- Refer all servicing to qualified service personnel. Servicing is required when the apparatus has been damaged in any way, such as power supply cord or plug is damaged, liquid has been spilled or objects have fallen into the apparatus, the apparatus has been exposed to rain or moisture, does not operate normally, or has been dropped.
- Do not use high voltage electrical goods near the TV (e.g. electric mosquito-swatter). This may result in product malfunction.
- When cleaning the product and its components, unplug the power first and wipe it with a soft cloth. Applying excessive force may cause scratches or discolouration. Do not spray with water or wipe with a wet cloth on the panel. 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 fire, electric shock or product damage (deformation, corrosion or breakage).
- To clean the top of the Companion Box (AV box), spray a soft cloth with water. Then, wipe the surface so that the product does not come in direct contact with water. Next, wipe it again so that no moisture remains.

Preparing

- If the TV is turned on for the first time after it was shipped from the factory, initialization of the TV may take a few minutes.
- Image shown may differ from your TV.
- Your TV's OSD (On Screen Display) may differ slightly from that shown in this manual.
- The available menus and options may differ from the input source or product model that you are using.
- New features may be added to this TV in the future.
- The items supplied with your product may vary depending on the model.
- Product specifications or contents of this manual may be changed without prior notice due to upgrade of product functions.
- For an optimal connection, HDMI cables and USB devices should have bezels less than 10 mm thick and 18 mm width. Use an extension cable that supports USB 2.0 if the USB cable or USB memory stick does not fit into your TV's USB port.



* A ≤ 10 mm

* B ≤ 18 mm

- Use a certified cable with the HDMI logo attached.
- If you do not use a certified HDMI cable, the screen may not display or a connection error may occur. (Recommended HDMI Cable Types)
 - High-Speed HDMI[®]/TM Cable (3 m or less)
 - High-Speed HDMI[®]/TM Cable with Ethernet (3 m or less)



- When supported cable is not long enough to connect TV set with Companion Box (AV Box), you can use an extension cable.
- Please do not pile the stuff up or press strongly the speaker. This may result in product damage or degradation.
- Do not use any unapproved items to ensure the safety and product life span.
- Any damage or injuries caused by using unapproved items are not covered by the warranty.
- Make sure that the screws are fastened completely. (If they are not fastened securely enough, the TV may tilt forward after being installed.) Do not use too much force and over tighten the screws; otherwise screw may be damaged and not tighten correctly.
- 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.

Separate purchase

Separate purchase items can be changed or modified for quality improvement without any notification. Contact your dealer to buy these items. These devices only work with certain models. The model name or design may be changed depending on the upgrade of product functions, manufacturer's circumstances or policies.

The manufacturer shall not be held responsible for any injuries, damages, or quality issues that may arise if an item that is not listed below is purchased separately and used.

W7AWB

Companion Box (AV box) Wall mount

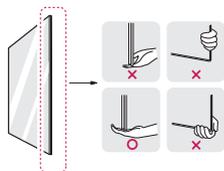
Lifting and moving the TV

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

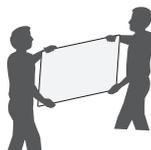
- It is recommended to move the TV in the box or packing material that the TV originally came in.
- Before moving or lifting the TV, disconnect the power cord and all cables.
- When holding the TV, the screen should face away from you to avoid damage.



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



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



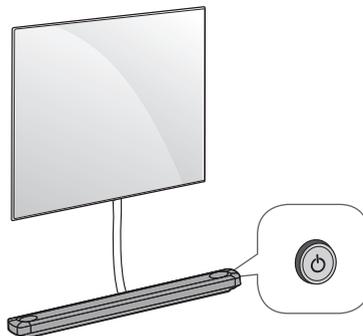
- When transporting the TV, do not expose the TV to jolts or excessive vibration.
- When transporting the TV, keep the TV upright, never turn the TV on its side or tilt towards the left or right.
- Do not apply excessive pressure to cause flexing /bending of frame chassis as it may damage screen.
- When handling the TV, be careful not to damage the protruding buttons.



- Avoid touching the screen at all times, as this may result in damage to the screen.
- Do not move the TV by holding the cable holders, as the cable holders may break, and injuries and damage to the TV may occur.

Using the button

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



Basic functions

	Power On (Press) Power Off (Press and hold) ¹
	Volume Control
	Programmes Control

¹ All running apps will close.

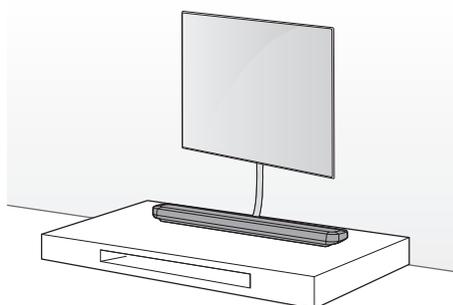
Adjusting the menu

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

	Turns the power off.
	Clears on-screen displays and returns to TV viewing.
	Changes the input source.
	Accesses the settings menu.

Mounting on a wall

If you are attaching the TV to other building materials, please contact qualified personnel to install the wall mount.



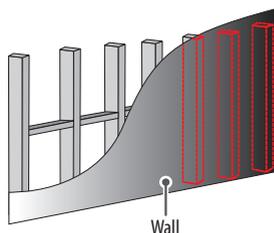
- Do not apply foreign substances (oils, lubricants, etc.) to the screw parts when assembling the product. (Doing so may damage the product.)

Provided item	
	
Wall mount	Punching Guide
	
Wall mounting screw Ø 5 x L65	Wall mounting anchor
	
Wall mounting screw for wood Ø 3 x L18	

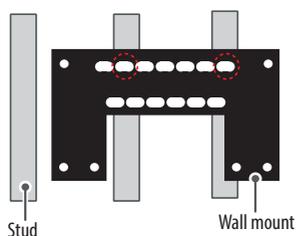
- Check the material of the wall and the thickness of the finishing.
- Use the Wall mount anchor for wall material of concrete, light concrete, strong natural stone, soft natural stone masonry brick and hollow block that do not crack.

Wall material	Tools	Wall width
Concrete	Wall mounting anchor, Wall mounting screw, Ø 3/6/8 mm Drill bit	70 mm
Brick		
Natural stone		
Metal Panel		
Plywood	Wall mounting screw, Ø 1.8 mm Drill bit	30 mm
EPS Panel		Penetrate the wall
Plasterboard + Plywood		30 mm

- When installing on a gypsum board or medium-density fiberboard (MDF) wall, fasten the screws to the wooden pillars that support the wall. If there are no wooden pillars, check the distance from the inner wall before installing.
 - 30 mm or below: Install directly on the inner wall using a 65 mm screw.
 - 30 mm or above: Install using a separate hanger.



- When installing the wall mount, check the positions of the wooden studs using a stud finder. Then, fasten the screws on at least two separate studs before proceeding.



- When installing the product on wall material not designated, install the product so that each location can withstand the pull out load of 70 kgf (686 N) and shear load of 100 kgf (980 N) or above.
- Use the $\varnothing 8$ mm drill bit for concrete and hammer (Impact) drill.

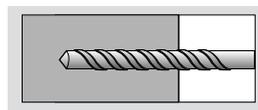
Tools you will need

- Phillips head + driver (manual or motorized), $\varnothing 3/6/8$ mm Drill bit, Level, Stud finder, Drill

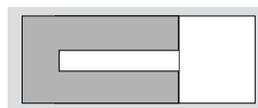
How to attach to masonry walls

Please follow the below direction.

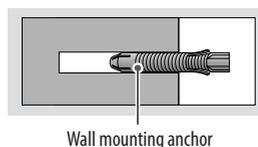
- Use a drill bit $\varnothing 8$ mm to drill a hole for the anchor location within a depth of 80 mm to 100 mm.



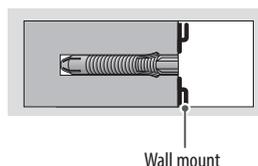
- Clean the drilled hole.



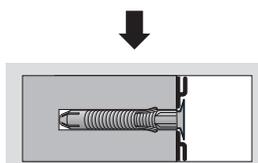
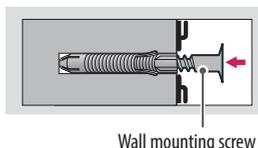
- Insert the sealed wall mounting anchor to the hole. (When inserting the anchor, use a hammer.)



- Set the wall mount on the wall by aligning to the location of the hole. And, set the angle adjusting part to face upward.

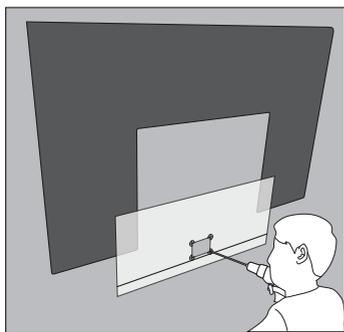


- Align the wall mounting screw to the hole and tighten it. Then, fasten the screws at torque of 45 kgf/cm to 60 kgf/cm.

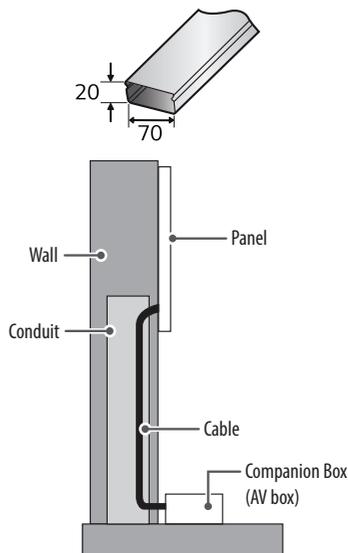




- Make sure that children do not climb on or hang on the TV.
- Use a platform or cabinet that is strong and large enough to support the TV securely.
- When installing the product, first check that the wall is strong enough. Use the anchors and screws provided.
 - If you use anchors and screws that are not specified by the manufacturer, they may not hold the weight of the product, causing safety issues.
- Be sure to use the accessory cable provided. Otherwise, friction between the product and the wall may cause damage to the connector.
- When drilling holes into the wall, make sure you use a drill and drill bit with the specified diameter. Ensure that you also follow the instructions regarding the depth of the holes.
 - Otherwise, the product may be installed incorrectly and cause safety issues.
- Wear safety gloves when installing the product. Do not use your bare hands.
 - Otherwise, it may cause personal injury.
- If some parts of the wall mount do not touch the wall after it is attached, use the double-sided tape included in the accessory box to stick the mount to the wall.
- If some parts of the wall mount do not touch the wall after using the wall mounting screws for wood, use the remaining screws.
- Be sure to use only the exclusive wall mounting screws provided as accessories.
- If you want to connect the TV Cable is connected to the back panel partition, please use the enclosed Punching Guide.

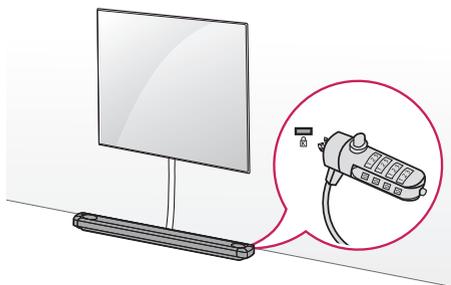


- If the cable that connects the panel to the Companion Box (AV Box) is to be embedded in the wall, it is recommended to make use of a conduit as shown in the figure below. The conduit must be installed in accordance with the wall-embedded installment regulations of each country. It is recommended that a product made of metallic material with internal dimensions at least 70 mm wide and 20 mm thick be used.



Using the kensington security system

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



Connections (notifications)

Connect various external devices to the TV and switch input modes to select an external device. For more information of external device's connection, refer to the manual provided with each device.

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

- The external device connection may differ from the model.
- Connect external devices to the TV regardless of the order of the TV port.
- Refer to the external equipment's manual for operating instructions.
- If you connect a gaming device to the TV, use the cable supplied with the gaming device.
- In PC mode, there may be noise associated with the resolution, vertical pattern, contrast or brightness. If noise is present, change the PC output to another resolution, change the refresh rate to another rate or adjust the brightness and contrast on the PICTURE menu until the picture is clear.
- In PC mode, some resolution settings may not work properly depending on the graphics card.
- If ULTRA HD content is played on your PC, video or audio may become disrupted intermittently depending on your PC's performance.
- When connecting via a wired LAN, it is recommended to use a CAT 7 cable.

Antenna connection

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

- Use a signal splitter to use more than 2 TVs.
- If the image quality is poor, install a signal amplifier properly to improve the image quality.
- If the image quality is poor with an antenna connected, try to realign the antenna in the correct direction.
- An antenna cable and converter are not supplied.
- Supported DTV Audio: MPEG, Dolby Digital, Dolby Digital Plus, HE-AAC
- For a location that is not supported with ULTRA HD broadcasting, this TV cannot receive ULTRA HD broadcasts directly. (Depending on model)

Satellite dish connection

(Only satellite models)

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

CI module connection

(Depending on model)

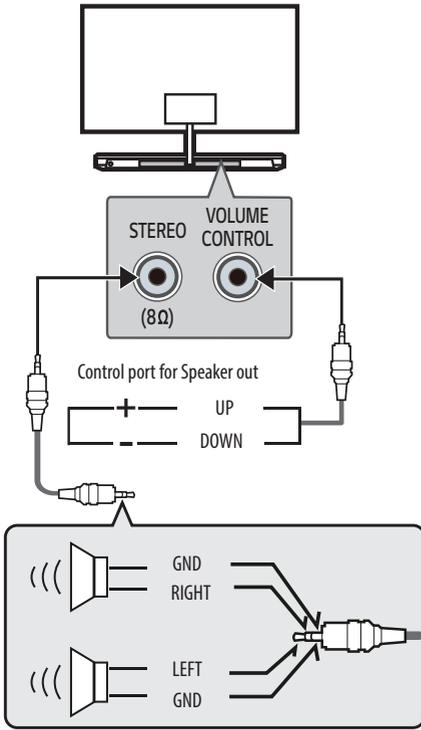
View the encrypted (pay) services in digital TV mode.

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

USB connection

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.

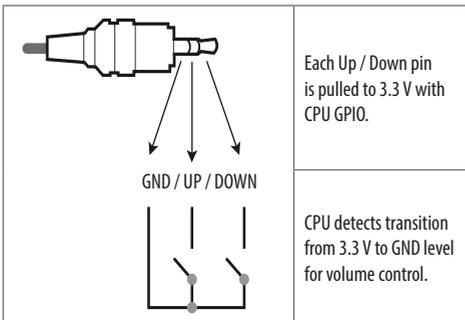
Speaker output setup



- Use only with the 3 Pole 3.5 mm Stereo Jack.
- Do not connect your headphones or earphones to the port for connecting an external speaker.

Method of volume control port

- Cable Spec.

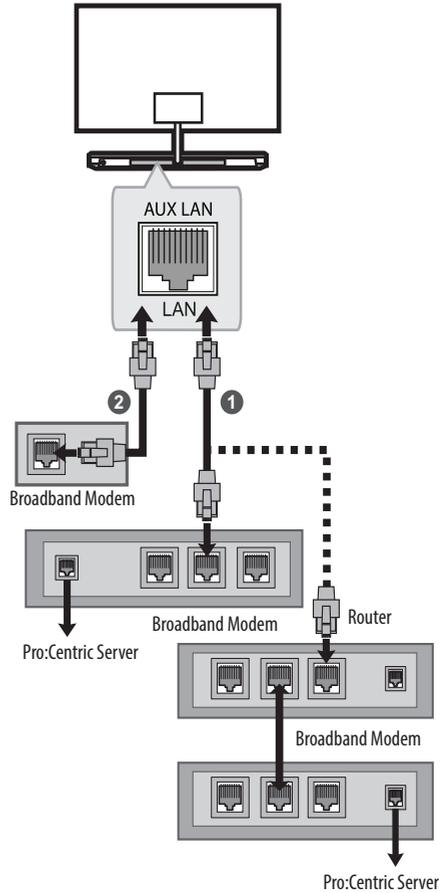


Network setup

Wired network connection

This TV can be connected to a Pro:Centric server via the **LAN** port. After making the physical connection, the TV needs to be set up for network communication.

Connect the **LAN** port of the Modem or Router from Pro:Centric server to the **LAN** port on the TV.



- 1 Connect the **LAN** port of the Modem or Router to the **LAN** port on the TV.
- 2 Connect the **LAN** port of the PC to the **AUX LAN** port on the TV.



- Do not connect a modular phone cable to the **LAN** port.
- Since there are various connection methods, please follow the specifications of your telecommunication carrier or internet service provider.

Other connections

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

-  →  → **General** → **HDMI ULTRA HD Deep Colour**
 - On: Support 4K @ 50/60 Hz (4:4:4, 4:2:2, 4:2:0)
 - Off: Support 4K @ 50/60 Hz 8 bit (4:2:0)

If the device connected to Input Port also supports ULTRA HD Deep Colour, your picture may be clearer.

However, if the device doesn't support it, it may not work properly.

In that case, connect the device to a different HDMI port or change the TV's **HDMI ULTRA HD Deep Colour** setting to Off.

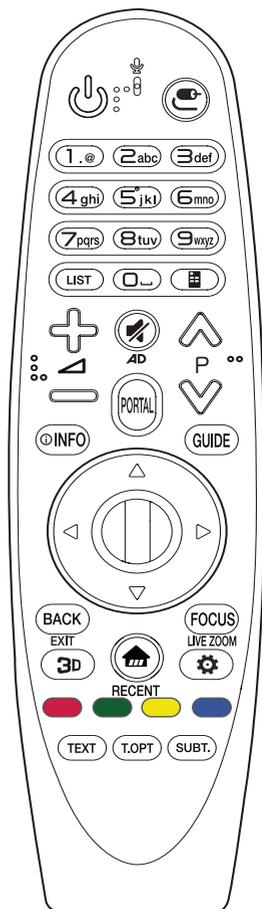
Magic remote functions

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

When the message "Magic remote battery is low. Change the battery." is displayed, replace the battery.

To replace batteries, open the battery cover, replace batteries (1.5 V AA) matching the \oplus and \ominus 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.

* To use the button, press and hold for more than 3 seconds.



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

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

- Pressing and holding the  button displays all the lists of external inputs.

Number buttons Enters numbers.

Alphabet buttons Enters letters.

LIST Accesses the saved programmes list.

 **(Space)** Opens an empty space on the screen keyboard.

 **(Screen Remote)** Displays the Screen Remote.

- Accesses the Universal Control Menu.

 Adjusts the volume level.

 **(MUTE)** Mutes all sounds.

- Pressing and holding the  button accesses the **Accessibility** menu.

AD* Audio descriptions function will be enabled.

  Scrolls through the saved programmes.

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

PORTAL Displays and removes hotel interactive menu.

GUIDE Shows programme guide.

 **(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.

 **Wheel (OK)** Press the center of the Wheel button to select a menu. You can change programmes by using the Wheel button.

BACK Returns to the previous level.

EXIT* Clears on-screen displays and returns to last input viewing.

FOCUS You can zoom in on the area where the remote control is pointed.

LIVE ZOOM* By zooming in on the selected area, you can view it in full screen.

 **3D** Used for viewing 3D video. (Only 3D models)

 **(HOME)** Shows Home menu.

RECENT* Shows the previous history.

 **(Q. Settings)** Accesses the Quick Settings.

- Pressing and holding the  button displays the **All Settings** menu.

    These access special functions in some menus.

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

SUBT. Recalls your preferred subtitle in digital mode.

Registering magic remote

How to register the magic remote

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

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 once.

Licenses

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



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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.

Troubleshooting

The software version can be updated for improvement in performance. Customer needs to ensure the compatibility of customer's equipment with LGE software. If needed, please consult with LGE and upload revised software version according to the guidance provided by LGE. Cannot control the TV with the remote control.

- Check the remote control sensor on the product and try again.
- Check if there is any obstacle between the product and the remote control.
- Check if the batteries are still working and properly installed (⊕ to ⊕, ⊖ to ⊖).

No image display and no sound is produced.

- Check if the product is turned on.
- Check if the power cord is connected to a wall outlet.
- Check if there is a problem in the wall outlet by connecting other products.

The TV turns off suddenly.

- Check the power control settings. The power supply may be interrupted.
- Check if the **Auto Power Off** (Depending on model) / **Sleep Timer / Timer Power Off** is activated in the **Timers** settings.
- If there is no signal while the TV is on, the TV will turn off automatically after 15 minutes of inactivity.

When connecting to the PC (HDMI/DVI), **No Signal** or **Invalid Format** is displayed.

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

Abnormal display

- If the product feels cold to the touch, there may be a small “flicker” when it is turned on. This is normal, there is nothing wrong with product.
- This panel is an advanced product that contains millions of pixels. You may see tiny black dots and/or brightly coloured dots (white, red, blue or green) at a size of 1 ppm on the panel. This does not indicate a malfunction and does not affect the performance and reliability of the product.

This phenomenon also occurs in third-party products and is not subject to exchange or refund.

- You may find different brightness and colour of the panel depending on your viewing position(left/right/top/down).

This phenomenon occurs due to the characteristic of the panel. It is not related with the product performance, and it is not malfunction.

- Displaying a still image for a prolonged period of time may cause image sticking. Avoid displaying a fixed image on the TV screen for a long period of time.
- Some horizontal lines may appear when the Pixel Refresher feature is performed. It is normal and there is no need to be concerned.

Generated sound

- “Cracking” noise: A cracking noise that occurs when watching or turning off the TV is generated by plastic thermal contraction due to temperature and humidity. This noise is common for products where thermal deformation is required.
- Electrical circuit humming/panel buzzing: A low level noise is generated from a high-speed switching circuit, which supplies a large amount of current to operate a product. It varies depending on the product.

This generated sound does not affect the performance and reliability of the product.

Specifications

Wireless module specifications

- 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 between the device and the body.

Wireless module (LGSBWAC72) specifications	
Wireless LAN (IEEE 802.11a/b/g/n/ac)	
Frequency range	Output power (Max.)
2400 to 2483.5 MHz	14 dBm
5150 to 5725 MHz	16.5 dBm
5725 to 5850 MHz (Not for EU)	11.5 dBm
Bluetooth	
Frequency range	Output power (Max.)
2400 to 2483.5 MHz	8.5 dBm

* "IEEE 802.11ac" is not available in all countries.

CI Module (W x H x D)		100.0 mm x 55.0 mm x 5.0 mm
Environment condition	Operating Temperature	0 °C to 40 °C
	Operating Humidity	Less than 80 %
	Storage Temperature	-20 °C to 60 °C
	Storage Humidity	Less than 85 %

(Depending on country)

	Digital TV			Analogue TV
Television system	DVB-T DVB-T2 DVB-C DVB-S/S2			PAL/SECAM B/G, D/K, I, SECAM L
Channel coverage (Band)	DVB-S/S2	DVB-C	DVB-T/T2	46 ~ 862 MHz
	950 ~ 2150 MHz	46 ~ 890 MHz	VHF III : 174 ~ 230 MHz UHF IV : 470 ~ 606 MHz UHF V : 606 ~ 862 MHz S Band II : 230 ~ 300 MHz S Band III : 300 ~ 470 MHz	
Maximum number of storable programmes	6,000	2,000		
External antenna impedance	75 Ω			

HDMI-DTV supported mode

Resolution	Horizontal Frequency (kHz)	Vertical Frequency (Hz)
640 x 480	31.469	59.94
	31.5	60.00
720 x 480	31.47	59.94
	31.5	60.00
720 x 576	31.25	50.00
1280 x 720	44.96	59.94
	45	60.00
	37.5	50.00
1920 x 1080	28.125	50.00
	33.72	59.94
	33.75	60.00
	26.97	23.976
	27.00	24.000
	33.71	29.97
	33.75	30.00
	56.25	50.00
	67.432	59.94
	67.5	60.00
	135	120
	134.86	119.88
3840 x 2160	112.5	100
	53.95	23.98
	54	24.00
	56.25	25.00
	61.43	29.97
	67.5	30.00
4096 x 2160	112.5	50.00
	134.86	59.94
	135	60.00
	53.95	23.98
	54	24.00
	56.25	25.00
	61.43	29.97
	67.5	30.00
112.5	50.00	
134.86	59.94	
135	60.00	

HDMI-PC supported Mode

- PC audio is not supported.
- Use HDMI IN 1 for PC mode (Depending on model)

Resolution	Horizontal Frequency (kHz)	Vertical Frequency (Hz)	
640 x 350	31.468	70.09	
720 x 400	31.469	70.08	
640 x 480	31.469	59.94	
800 x 600	37.879	60.31	
1024 x 768	48.363	60.00	
1360 x 768	47.712	60.015	
1152 x 864	54.348	60.053	
1280 x 1024	63.981	60.020	
		60	
1920 x 1080	135	60	
		120	
3840 x 2160	67.5	24.00	
		56.25	25.00
		67.5	30.00
4096 x 2160	53.95	23.97	
		54	24

Component port connecting information

Component ports on the TV	Y	P _B	P _R
---------------------------	---	----------------	----------------

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

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

Photo format

File Format	Format	Resolution
.jpeg, .jpg, .jpe	JPEG	Minimum: 64 (W) x 64 (H) Maximum (Normal Type): 15,360 (W) x 8,640 (H) Maximum (Progressive Type): 1,920 (W) x 1,440 (H)
.png	PNG	Minimum: 64 (W) x 64 (H) Maximum: 5,760 (W) x 5,760 (H)
.bmp	BMP	Minimum: 64 (W) x 64 (H) Maximum: 1,920 (W) x 1,080 (H)

Audio format

File Format	Item	Info
.mp3	Bit rate	32 Kbps - 320 Kbps
	Sample freq.	16 kHz - 48 kHz
	Support	MPEG1, MPEG2
	channels	mono, stereo
.wav	Bit rate	-
	Sample freq.	8 kHz - 96 kHz
	Support	PCM
	channels	mono, stereo
.ogg	Bit rate	64 kbps - 320 kbps
	Sample freq.	8 kHz - 48 kHz
	Support	Vorbis
	channels	mono, stereo
.wma	Bit rate	128 kbps - 320 kbps
	Sample freq.	8 kHz - 48 kHz
	Support	WMA
	channels	up to 6 ch
.flac	Bit rate	-
	Sample freq.	8 kHz - 96 kHz
	Support	FLAC
	channels	mono, stereo

- The number of supported programmes may vary depending on the sample frequency.

Video codec

Extension	Codec	
.asf .wmv	Video	VC-1 Advanced Profile (except for WMVA), VC-1 Simple and Main Profiles
	Audio	WMA Standard (except for WMA v1/WMA Speech), WMA 9 Professional
.avi	Video	Xvid (except 3 warp-point GMC), H.264/AVC, Motion Jpeg, MPEG-4
	Audio	MPEG-1 Layer I, II, MPEG-1 Layer III (MP3), Dolby Digital, LPCM, ADPCM, DTS
.mp4 .m4v .mov	Video	H.264/AVC, MPEG-4, HEVC
	Audio	Dolby Digital, Dolby Digital Plus, AAC, MPEG-1 Layer III (MP3)
.3gp .3g2	Video	H.264/AVC, MPEG-4
	Audio	AAC, AMR-NB, AMR-WB
.mkv	Video	MPEG-2, MPEG-4, H.264/AVC, VP8, VP9, HEVC
	Audio	Dolby Digital, Dolby Digital Plus, AAC, PCM, DTS, MPEG-1 Layer I, II, MPEG-1 Layer III (MP3)
.ts .trp	Video	H.264/AVC, MPEG-2, HEVC
	Audio	MPEG-1 Layer I, II, MPEG-1 Layer III (MP3), Dolby Digital, Dolby Digital Plus, AAC, PCM
.mpg .mpeg .dat	Video	MPEG-1, MPEG-2
	Audio	MPEG-1 Layer I, II, MPEG-1 Layer III (MP3)
.vob	Video	MPEG-1, MPEG-2
	Audio	Dolby Digital, MPEG-1 Layer I, II, DVD-LPCM
.rm ¹ .rmvb ¹	Video	RV30, RV40
	Audio	Realaudio6(cook), AAC LC, HE-AAC
.mkv .mp4 .ts	Video	H.264/AVC, HEVC
	Audio	Dolby Digital, Dolby Digital Plus, AAC

1 Depending on country



Record the model number and serial number of the TV.
Refer to the label on the back cover and quote this
information to your dealer when requiring any service.

MODEL _____

SERIAL _____

IR CODES

- This feature is not available for all models.

Code (Hexa)	Function	Note
08	 (POWER)	Remote control Button (Power On/Off)
0B	 (INPUT)	Remote control Button
10-19	Number Key 0-9 Alphabet buttons └─ (Space)	Remote control Button
53	LIST	Remote control Button
DE	 (Screen Remote) FOCUS LIVE ZOOM	Remote control Button
09	 AD (MUTE)	Remote control Button
02		Remote control Button
03		Remote control Button
00	 P Wheel (UP)	Remote control Button
01	 P Wheel (DOWN)	Remote control Button
75	Wheel (OK)	Remote control Button
0C	PORTAL	Remote control Button

Code (Hexa)	Function	Note
AA	 INFO	Remote control Button
AB	GUIDE	Remote control Button
40		Remote control Button
07		Remote control Button
06		Remote control Button
41		Remote control Button
28	BACK EXIT	Remote control Button
DC		Remote control Button
7C	 (HOME) RECENT	Remote control Button
43	 (Q. Settings)	Remote control Button
72	 (RED)	Remote control Button
71	 (GREEN)	Remote control Button
63	 (YELLOW)	Remote control Button
61	 (BLUE)	Remote control Button
20	TEXT	Remote control Button
21	T.OPT (T.Option)	Remote control Button
39	SUBT.	Remote control Button

EXTERNAL CONTROL DEVICE SETUP

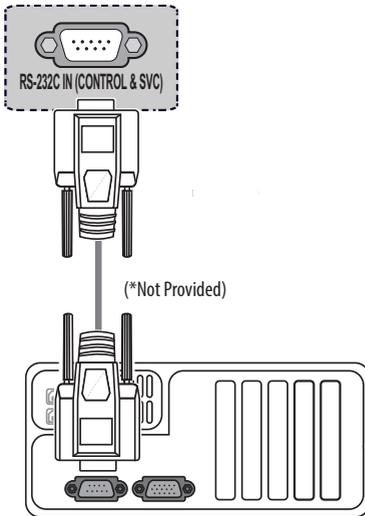
RS-232C Setup

- Image shown may differ from your TV.

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

Connect the serial port of the control device to the RS-232C jack on the product back panel.

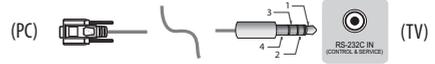
- RS-232C connection cables are not supplied with the product.



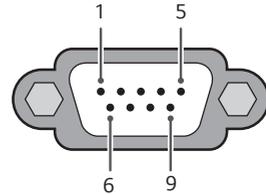
Phone jack Type

(Depending on model)

- You need to purchase the phone-jack to RS-232C 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.



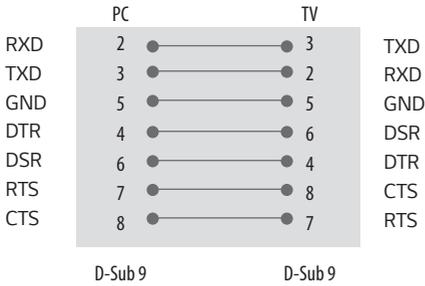
Type of Connector : D-Sub 9-Pin Male



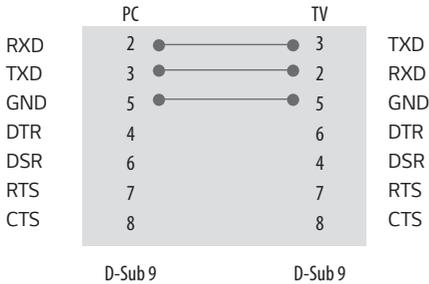
No.	Pin name
1	3.5 V
2	RXD (Receive data)
3	TXD (Transmit data)
4	IR OUT from TV
5	GND
6	No Connection
7	No Connection (5 V available in some models)
8	No Connection
9	No Connection (12 V available in some models)

RS-232C Configurations

7-Wire Configurations (Standard RS-232C cable)



3-Wire Configurations (Not standard)



Communication Parameters

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

Command Reference List

(Depending on model)

	COMMAND1	COMMAND2	DATA (Hexadecimal)
01. Power	k	a	00 to 01
02. Aspect Ratio	k	c	(See p. 4)
03. Screen Mute	k	d	(See p. 5)
04. Volume Mute	k	e	00 to 01
05. Volume Control	k	f	00 to 64
06. Contrast	k	g	00 to 64
07. Brightness	k	h	00 to 64
08. Colour	k	i	00 to 64
09. Tint	k	j	00 to 64
10. Sharpness	k	k	00 to 32
11. OSD Select	k	l	00 to 01
12. Remote Control Lock Mode	k	m	00 to 01
13. Balance	k	t	00 to 64
14. Colour Temperature	x	u	00 to 64
15. Energy Saving	j	q	(See p. 7)
16. Auto Configuration	j	u	01
17. Equalize	j	v	(See p. 7)
18. Tune Command	m	a	(See p. 7)
19. Programme Add/Skip	m	b	00 to 01
20. Key	m	c	(See p. 8)
21. Control Back Light	m	g	00 to 64
22. Input select	x	b	(See p. 8)

- During USB operations such as DivX or EMF, all commands except Power(ka) and Key(mc) are not executed and treated as NG.

Transmission / Receiving Protocol

(Depending on model)

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 is 1 to 99. When selecting Set ID '0', every connected set is controlled. Set ID is indicated as decimal (1 to 99) on menu and as Hexa decimal (0 x 0 to 0 x 63) on transmission/receiving protocol.

[Data] : To transmit command data. Transmit 'FF' data to read status of command.

[Cr] : Carriage Return

ASCII code '0 x 0D'

[] : ASCII code 'space (0 x 20)'

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

01. Power (Command: k a)

▶ To control Power On/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/Off.

Transmission

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

Ack

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

* Similarly, if other functions transmit '0 x FF' data based on this format, Acknowledgement data feed back presents status about each function.

* OK Ack., Error Ack. and other message may display on the screen when TV is power On.

02. Aspect Ratio (Command: k c)

(Main Picture Size)

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

Transmission

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

Data 01 : Normal screen (4:3)

(Just Scan Off)

06 : Original (Just Scan Off)

09 : Just Scan

02 : Wide screen (16:9)

(Just Scan Off)

Ack

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

* Using the PC input, you select either 16:9 or 4:3 screen aspect ratio.

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

- * Refer to "Real data mapping".

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

- * Refer to "Real data mapping".

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

- * Refer to "Real data mapping".

Ack

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

08. Colour (Command: k i)

- ▶ To adjust the screen Colour.
You can also adjust colour in the PICTURE menu.

Transmission

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

Data Min : 00 to Max : 64

- * Refer to "Real data mapping".

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

- * Refer to "Real data mapping".

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

- * Refer to "Real data mapping".

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 on/off, external control lock is released.
- * In the standby mode, if key lock is on, TV will not turn on by power on key of IR & Local Key.

13. Balance (Command: k t)

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

Transmission

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

Data L : 00 to R : 64

- * Refer to "Real data mapping".

Ack

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

14. Colour Temperature (Command: x u)

- ▶ To adjust colour temperature. You can also adjust Colour Temperature in the PICTURE menu.

Transmission

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

Data Warm: 00 to Cool:64

- * Refer to "Real data mapping".

Ack

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

15. 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]

Power Saving Function				Level	Description
7	6	5	4		
0	0	0	0	Low Power	Off
0	0	0	0	Low Power	Minimum
0	0	0	0	Low Power	Medium
0	0	0	0	Low Power	Maximum
0	0	0	0	Low Power	Screen Off
0	0	0	0	Low Power	Auto

- ▶ 'Auto' is available in TV that supports 'Intelligent Sensor'.

Ack

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

16. Auto Configuration (Command: j u) (Only RGB support 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

Ack

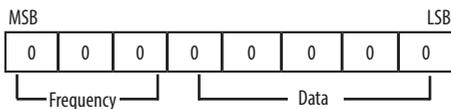
[u][][Set ID][][OK/NG][Data][x]

17. Equalize (Command : j v)

- ▶ To adjust equalize.

Transmission

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



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

Ack

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

18. Tune Command (Command: m a)

- ▶ Select channel to following physical number.

Transmission

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

Data 00 : High channel data

Data 01 : Low channel data

ex. No. 47 -> 00 2F (2FH)

No. 394 -> 01 8A (18AH),

DTV No. 0 -> Don't care

Data 02 : [Antenna]

0 x 00 : Analogue Main

0 x 10 : DTV Main

0 x 20 : Radio

[Cable]

0 x 80 : Analogue Main

0 x 90 : DTV Main

0 x A0 : Radio

[Satellite]

0 x 40 : DTV Main

0 x 50 : Radio Main

Channel data range
Min : 00 Max : 270F (0 to 9999)

Ack

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

19. Programme Add/Skip (Command: m b)
▶ To set skip status for the current Programme.

Transmission

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

Data 00 : Skip 01 : Add

Ack

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

20. Key (Command: m c)
▶ To send IR remote key code.

Transmission

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

Data IR CODES

Ack

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

21. Control Back Light (Command: m g)
▶ 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]

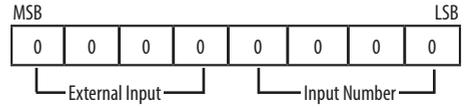
22. Input select (Command: x b)
(Main Picture Input)

▶ To select input source for main picture.

Transmission

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

Data Structure



External Input				Data
0	0	0	0	DTV
0	0	0	1	Analogue
0	0	1	0	AV
0	1	0	0	Component
0	1	1	0	RGB
0	1	1	1	HDMI
1	0	0	0	
1	0	0	1	
1	0	1	0	

Input Number				Data
0	0	0	0	Input1
0	0	0	1	Input2
0	0	1	0	Input3
0	0	1	1	Input4

Ack

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

*** Real data mapping**

00: Step 0
:
A: Step 10 (Set ID 10)
:
F: Step 15 (Set ID 15)
10: Step 16 (Set ID 16)
:
64: Step 100
:
6E: Step 110
:
73: Step 115
74: Step 116
:
CF: Step 199
:
FE: Step 254
FF: Step 255