



OWNER'S MANUAL LED TV^{*}

* Disclaimer

LG LED TV applies LCD screen with LED backlights.

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

LN54**

LP36**

LP62**

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WARNING

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



CAUTION

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



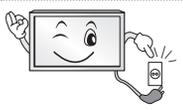
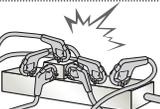
NOTE

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

SAFETY INSTRUCTIONS

Please read these safety precautions carefully before using the product.

WARNING

- | | | | |
|---|---|---|---|
|  | <ul style="list-style-type: none"> Do not place the TV and/ or remote control in the following environments: <ul style="list-style-type: none"> - 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 vases <p>Otherwise, this may result in fire, electric shock, malfunction or product deformation.</p> |  | <ul style="list-style-type: none"> Insert power cable plug completely into wall socket otherwise if not secured completely into socket, fire ignition may break out. |
|  | <ul style="list-style-type: none"> Do not place the product where it might be exposed to dust. This may cause a fire hazard. |  | <ul style="list-style-type: none"> 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. |
|  | <ul style="list-style-type: none"> 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. |  | <ul style="list-style-type: none"> Do not place a heavy object, or the product itself, on power cables. Otherwise, this may result in fire or electric shock. |
|  | <ul style="list-style-type: none"> 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. |  | <ul style="list-style-type: none"> 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. |
|  | <ul style="list-style-type: none"> 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. |  | <ul style="list-style-type: none"> 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. |
| | |  | <ul style="list-style-type: none"> Do not plug too many electrical devices into a single multiple electrical outlet. Otherwise, this may result in fire due to over-heating. |
| | |  | <ul style="list-style-type: none"> 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) between power cable plug and input Wall Socket while it is connected to the input terminal on the wall. Additionally, do not touch the power cable right after plugging into the wall input terminal. You may be electrocuted. (Depending on model)



- 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 impacted by shock
 - 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.



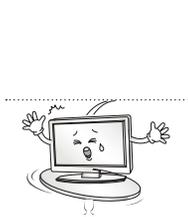
- Apparatus shall not be exposed to dripping or splashing and no objects filled with liquids, such as vases, shall be placed on the apparatus.



CAUTION



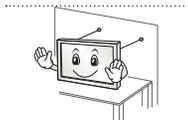
- Install the product where no radio wave occurs.



- 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.

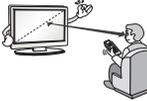


- If you install the TV on a stand, you need to take actions to prevent the product from overturning. Otherwise, the product may fall over, which may cause injury.

- 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.
- Only use the attachments / accessories specified by the manufacturer.



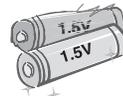
- When installing the antenna, consult with a qualified service technician. If not installed by a qualified technician, this may create a fire hazard or an electric shock hazard.



- 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.

- Do not place non-rechargeable batteries in charging device.



- Make sure there are no objects between the remote control and its sensor.



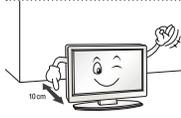
- Signal from Remote Control can be interrupted due to external/internal lighting eg Sunlight, fluorescent lighting. If this occurs turn off lighting or darken viewing area.



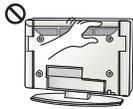
- When connecting external devices such as video game consoles, make sure the connecting cables are long enough. Otherwise, the product may fall over, which may cause injury or damage to the product.



- 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.
 - The distance between the product and the wall should be more than 10 cm.
 - 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.
 Otherwise, this may result in fire.

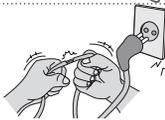


- Take care not to touch the ventilation openings when watching the TV for long periods as the ventilation openings may become hot. This does not affect the operation or performance of the product.

- 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.



- 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 discoloration. Do not spray with water or wipe with a wet cloth. Never use glass cleaner, car or industrial shiner, abrasives or wax, benzene, alcohol etc., which can damage the product and its panel. Otherwise, this may result in fire, electric shock or product damage (deformation, corrosion or breakage).

- 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.



- Contact the service centre once a year to clean the internal parts of the product. Accumulated dust can cause mechanical failure.



- 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.



- 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.



- The panel is a high technology display product with resolution of two million to six million pixels. You may see tiny black dots and/or brightly coloured dots (red, blue or green) at a size of 1 ppm on the panel. This does not indicate a malfunction and does not affect the performance and reliability of the product. This phenomenon also occurs in third-party products and is not subject to exchange or refund.



- You may find different brightness and 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 (e.g., broadcasting channel logo, on-screen menu, scene from a video game) for a prolonged time may cause damage to the screen, resulting in retention of the image, which is known as image sticking. The warranty does not cover the product for image sticking.

Avoid displaying a fixed image on your television's screen for a prolonged period (2 or more hours for LCD, 1 or more hours for Plasma).

Also, if you watch the TV at a ratio of 4:3 for a long time, image sticking may occur on the borders of the panel.

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

• 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.

NOTE

- Image shown may differ from your TV.
- Your TV's OSD (On Screen Display) may differ slightly from that shown in this manual.
- The available menus and options may differ from the input source or product model that you are using.
- New features may be added to this TV in the future.
- The TV can be placed in standby mode in order to reduce the power consumption. And the TV should be turned off if it will not be watched for some time, as this will reduce energy consumption.
- The energy consumed during use can be significantly reduced if the level of brightness of the picture is reduced, and this will reduce the overall running cost.

INSTALLATION PROCEDURE

- 1 Open the package and make sure all the accessories are included.
- 2 Attach the stand to the TV set.
- 3 Connect an external device to the TV set.
- 4 Make sure the network connection is available. You can use the TV network functions only when the network connection is made. (Only LP62**)

ASSEMBLING AND PREPARING

Unpacking

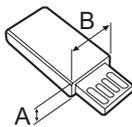
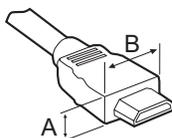
Check your product box for the following items. If there are any missing accessories, contact the local dealer where you purchased your product. The illustrations in this manual may differ from the actual product and item.

CAUTION

- Do not use any unapproved items to ensure the safety and product life span.
- Any damages or injuries by using unapproved items are not covered by the manufacturer's warranty.
- Some models have a thin film attached on to the screen and this must not be removed.

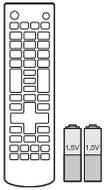
NOTE

- The items supplied with your product may vary depending on the model.
- Product specifications or contents of this manual may be changed without prior notice due to upgrade of product functions.
- For an optimal connection, HDMI cables and USB devices should have bezels less than 10 mm thick and 18 mm width. Use an extension cable that supports USB 2.0 if the USB cable or USB memory stick does not fit into your TV's USB port.



*A ≤ 10 mm

*B ≤ 18 mm



Remote control and batteries (AAA)
(See p.25, 26)



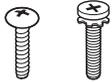
Owner's manual



Cable holder
(Depending on model)
(See p.18)



Power Cord
(Depending on model)



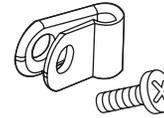
Stand Screws
3EA, P5 x 25
4EA, M4 x 14
(Only 60LN54**)
(See p.14)



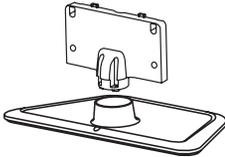
Stand Screws
7EA, M4 x 14
(Only 32/42/47/55LN54**,
LP36**, LP62**)
(See p.14)



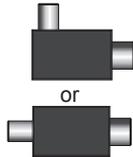
Desk-mount Screw
(See p.15)



**Power cable holder/
bolt**
(See p.18)



**Stand Body /
Stand Base**
(See p.14)



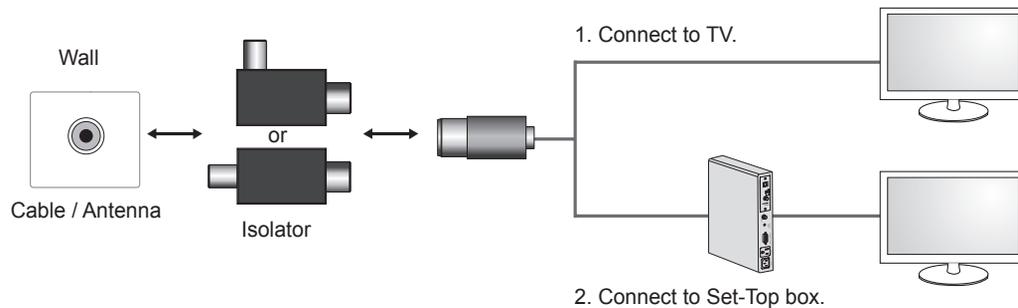
Isolator
(Depending on model)
(See p.10)



EzSign 2.0 Editor CD
(Only LN549E)

NOTE

- Antenna Isolator Installation Guide
 - Use this to install TV in a place where there is a voltage difference between TV Set and GND of antenna signal.
 - » If there is a voltage difference between TV Set and GND of antenna signal, the antenna contact might be heated and excessive heat might cause an accident.
 - You can improve the safety when watching TV by efficiently removing power voltage from TV antenna. It is recommended to mount the isolator to the wall. If it cannot be mounted to the wall, mount it on the TV. Avoid disconnecting the antenna Isolator after installation.
 - Before starting, be sure that the TV antenna is connected.



Connect one end of the isolator to cable/antenna jack and the other to TV set or set-top box.

“Equipment connected to the protective earthing of the building installation through the mains connection or through other equipment with a connection to protective earthing - and to a cable distribution system using coaxial cable, may in some circumstances create a fire hazard. Connection to a cable distribution system has therefore to be provided through a device providing electrical isolation below a certain frequency range (galvanic isolator, see EN 60728-11)”

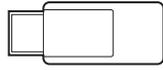
When applying the RF Isolator, a slight loss of signal sensitivity can occur.

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.



LG Audio device

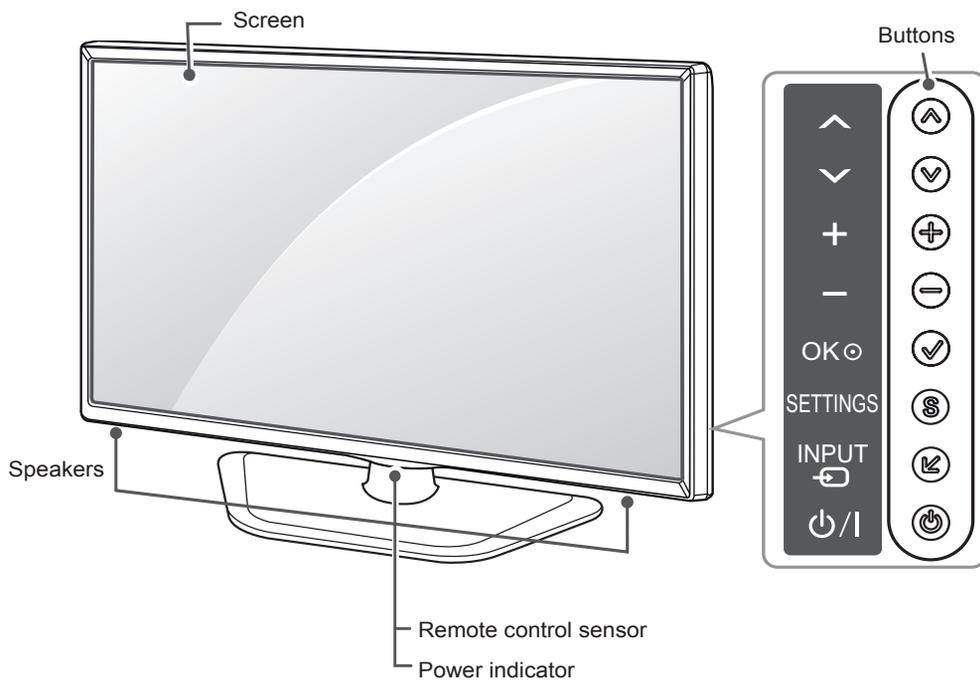


**Wireless Dongle
AN-WF100**

Compatibility	LN549C, LP36**, LP62**	LN549E
LG Audio device	•	
Wireless Dongle AN-WF100		•

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

Parts and buttons



Button	Description
^ v	Scrolls through the saved programmes.
+ -	Adjusts the volume level.
✓	Selects the highlighted menu option or confirms an input.
S	Accesses the main menu, or saves your input and exits the menus.
↶	Changes the input source.
⏻	Turns the power on or off.

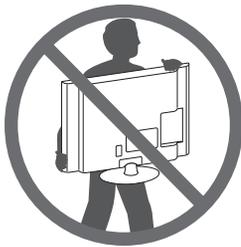
Lifting and moving the TV

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

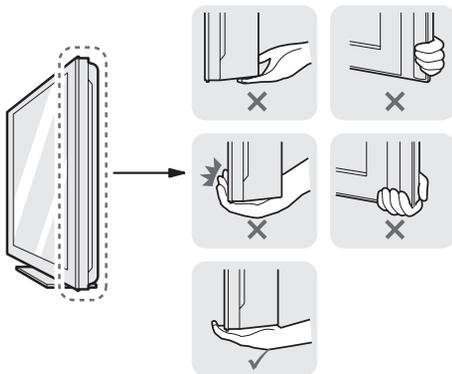


CAUTION

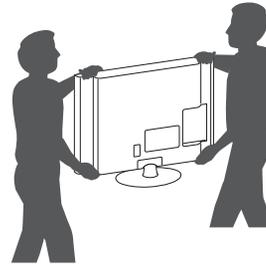
- Avoid touching the screen at all times, as this may result in damage to the screen.
- It is recommended to move the TV in the box or packing material that the TV originally came in.
- Before moving or lifting the TV, disconnect the power cord and all cables.
- When holding the TV, the screen should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



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



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



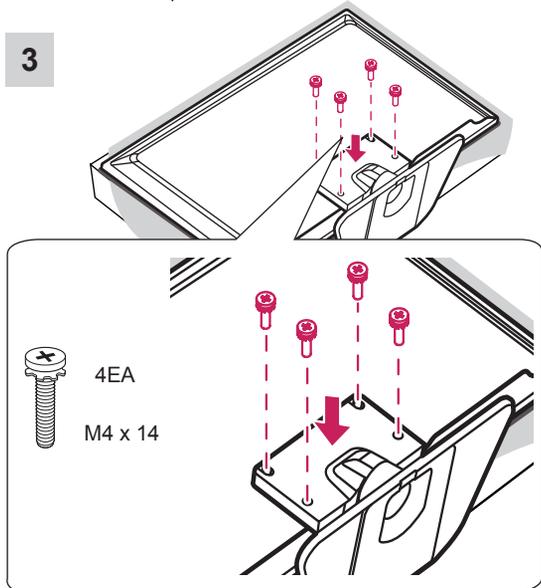
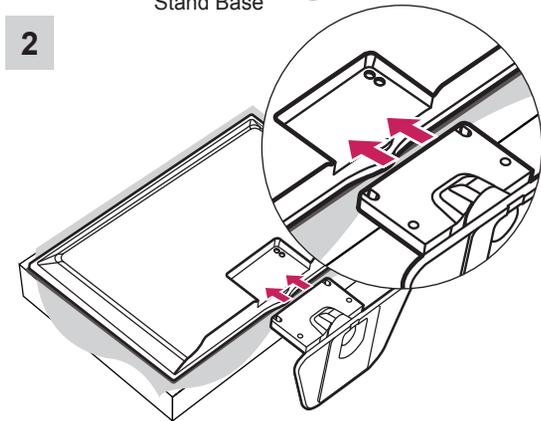
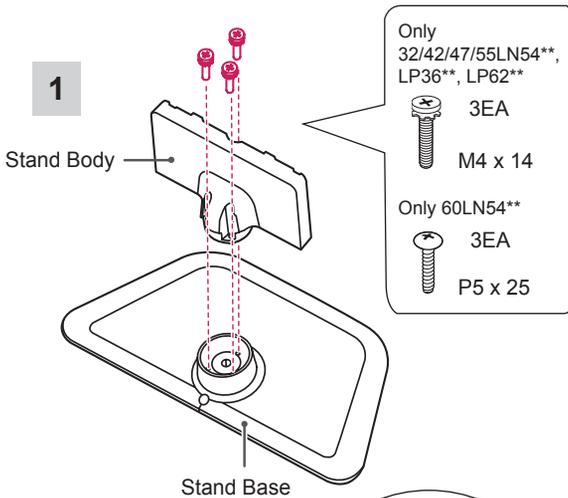
- When transporting the TV, do not expose the TV to jolts or excessive vibration.
- When transporting the TV, keep the TV upright, never turn the TV on its side or tilt towards the left or right.
- Do not apply excessive pressure to cause flexing /bending of frame chassis as it may damage screen.

ENGLISH

Setting up the TV

Image shown may differ from your TV.

Attaching the stand



CAUTION

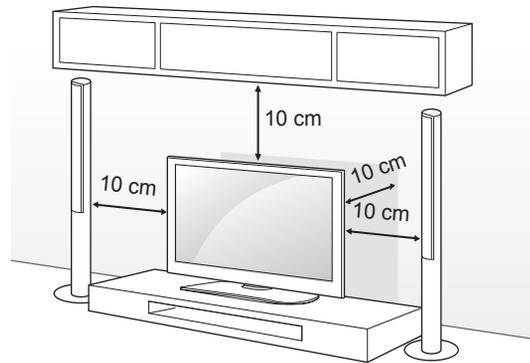
- When attaching the stand to the TV set, place the screen facing down on a cushioned table or flat surface to protect the screen from scratches.
- Make sure that the screws are inserted correctly and fastened securely. (If they are not fastened securely enough, the TV may tilt forward after being installed.)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

NOTE

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

Mounting on a table

- 1 Lift and tilt the TV into its upright position on a table.
 - Leave a 10 cm (minimum) space from the wall for proper ventilation.



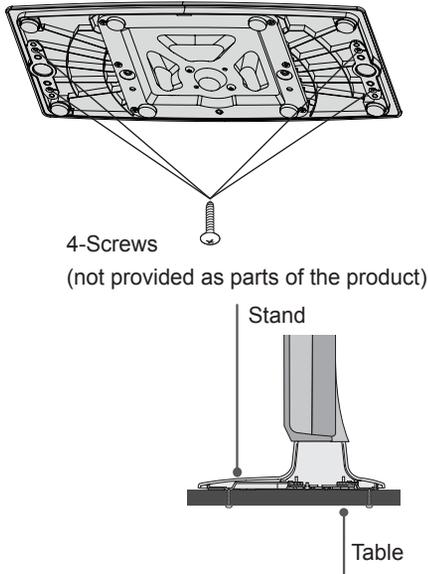
- 2 Connect the power cord to a wall outlet.

CAUTION

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

Attaching the TV to a table

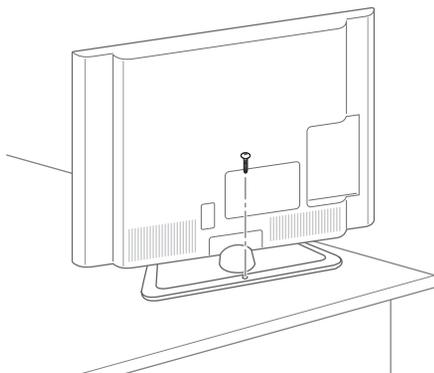
(Only 39/42/47LN54**, 42/47LP36**, 42/47/55LP62**) Image shown may differ from your TV. The TV must be attached to desk so it cannot be pulled in a forward/backward direction, potentially causing injury or damaging the product.



Screws: M5 x L (*L: Table depth + 8-10 mm)
ex) Table depth: 15mm, Screw: M5 x 25

Securing the TV to a table

Fix the TV to a table to prevent from tilting forward, damage, and potential injury. To secure the TV to a table, insert and tighten the supplied screw on the rear of the stand.

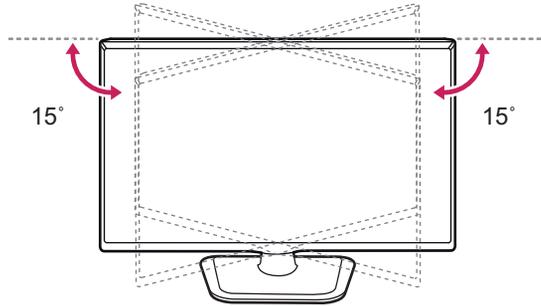


! WARNING

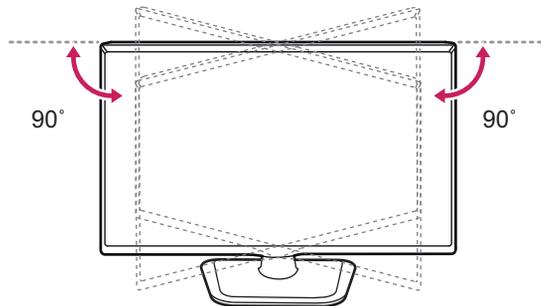
- To prevent TV from falling over, the TV should be securely attached to the floor/wall per installation instructions. Tipping, shaking, or rocking the TV may cause injury.

Adjusting the angle of the TV to suit view

(Only 32LN54**, 32LP36**, 32LP62**) Swivel 15 degrees to the left or right and adjust the angle of the TV to suit your view.



(Only 39/42/47/55LN54**, 42/47LP36**, 42/47/55LP62**) Swivel 90 degrees to the left or right and adjust the angle of the TV to suit your view.

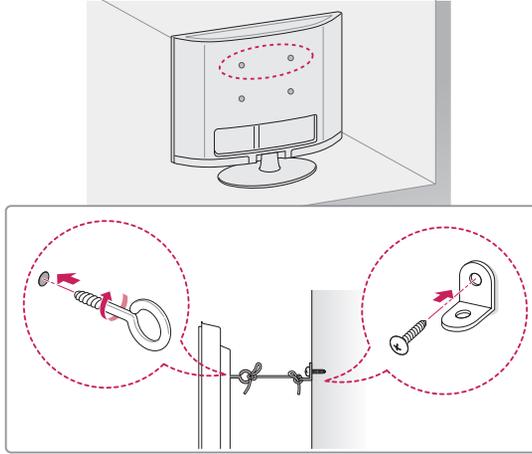


! CAUTION

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

Securing the TV to a wall

(This feature is not available for all models.)



- 1 Insert and tighten the eye-bolts, or TV brackets and bolts on the back of the TV.
 - If there are bolts inserted at the eye-bolts position, remove the bolts first.
- 2 Mount the wall brackets with the bolts to the wall. Match the location of the wall bracket and the eye-bolts on the rear of the TV.
- 3 Connect the eye-bolts and wall brackets tightly with a sturdy rope. Make sure to keep the rope horizontal with the flat surface.

**CAUTION**

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

**NOTE**

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

**WARNING**

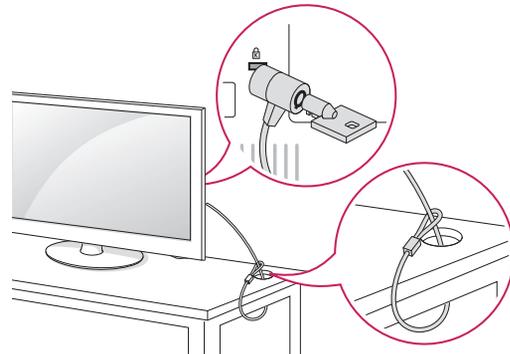
- If a television is not positioned in a sufficiently stable location, it can be potentially hazardous due to falling. Many injuries, particularly to children, can be avoided by taking simple precautions such as:
 - » Using cabinets or stands recommended by the manufacturer of the television.
 - » Only using furniture that can safely support the television.
 - » Ensuring the television is not overhanging the edge of the supporting furniture.
 - » Not placing the television on tall furniture (for example, cupboards or bookcases) without anchoring both the furniture and the television to a suitable support.
 - » Not standing the televisions on cloth or other materials placed between the television and supporting furniture.
 - » Educating children about the dangers of climbing on furniture to reach the television or its controls.

Using the Kensington security system

(This feature is not available for all models.)

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

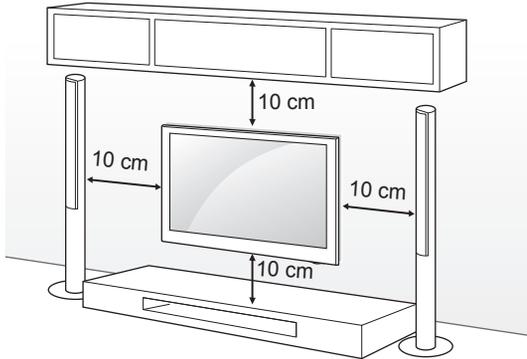
Connect the Kensington security system cable between the TV and a table.



Mounting on a wall

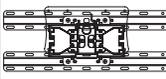
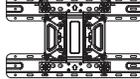
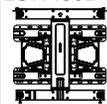
Attach an optional wall mount bracket at the rear of the TV carefully and install the wall mount bracket on a solid wall perpendicular to the floor. When you attach the TV to other building materials, please contact qualified personnel.

LG recommends that wall mounting be performed by a qualified professional installer.



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.

Separate purchase(Wall Mounting Bracket)

Model	32LN54** 32LP36** 32LP62**	39/42LN54** 42LP36** 42LP62**
VESA (A x B)	200 x 100	200 x 200
Standard screw	M4	M6
Number of screws	4	4
Wall mount bracket	LSW130B 	LSW230B 
Model	47/55/60LN54** 47LP36** 47/55LP62**	
VESA (A x B)	400 x 400	
Standard screw	M6	
Number of screws	4	
Wall mount bracket	LSW430B 	



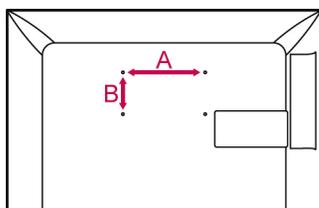
CAUTION

- Disconnect the power first, and then move or install the TV. Otherwise electric shock may occur.
- If you install the TV on a ceiling or slanted wall, it may fall and result in severe injury. Use an authorized LG wall mount and contact the local dealer or qualified personnel.
- Do not over tighten the screws as this may cause damage to the TV and void your warranty.
- Use the screws and wall mounts that meet the VESA standard. Any damages or injuries by misuse or using an improper accessory are not covered by the manufacturer's warranty.



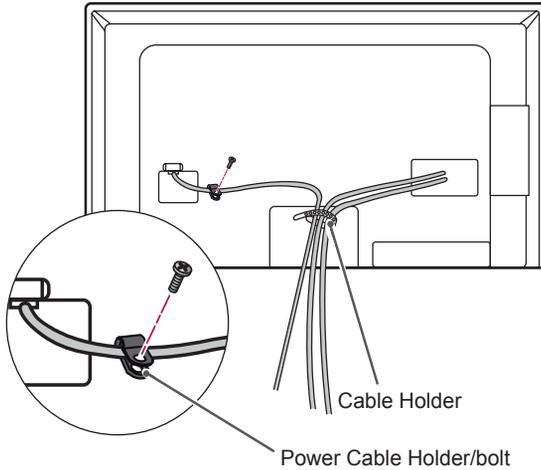
NOTE

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



Tidying cables

- 1 Secure the power cord with the Power Cable Holder/bolt.
- 2 Gather and bind the cables with the Cable Holder.



CAUTION

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

MAKING CONNECTIONS

This section on **MAKING CONNECTIONS** mainly uses diagrams for the LN54** models.

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.

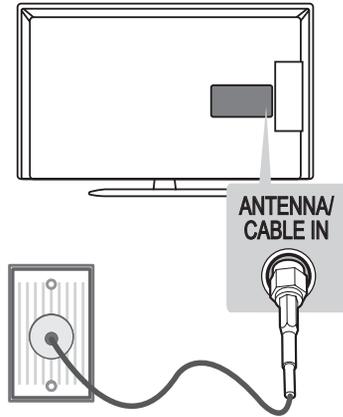


NOTE

- The external device connection may differ from the model.
- Connect external devices to the TV regardless of the order of the TV port.
- If you record a TV programme on a DVD recorder or VCR, make sure to connect the TV signal input cable to the TV through a DVD recorder or VCR. For more information of recording, refer to the manual provided with the connected device.
- 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.

Antenna connection

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

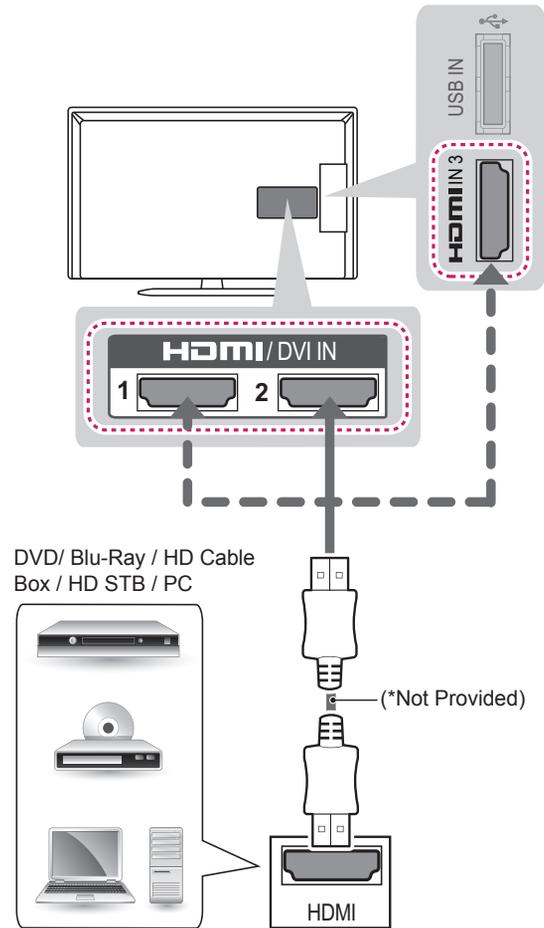


NOTE

- 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

HDMI connection

Transmits the digital video and audio signals from an external device to the TV. Connect the external device and the TV with the HDMI cable as shown. Choose any HDMI input port to connect. It does not matter which port you use.



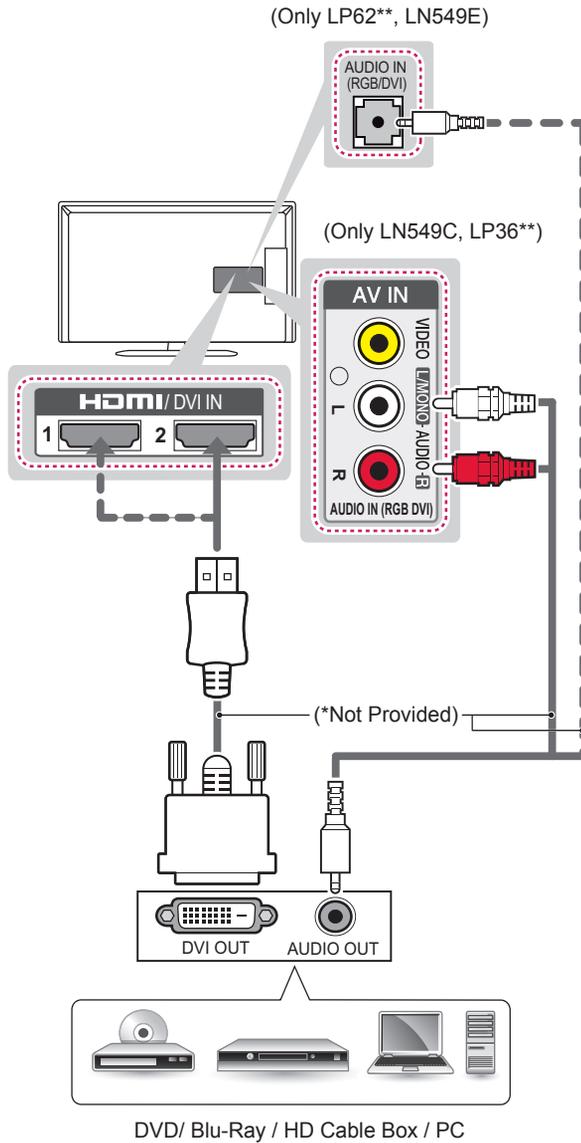
NOTE

- It is recommended to use the TV with the HDMI connection for the best image quality.
- Use the latest High Speed HDMI™ Cable with CEC (Customer Electronics Control) function.
- High Speed HDMI™ Cables are tested to carry an HD signal up to 1080p and higher.
- Supported HDMI Audio format : Dolby Digital, PCM (Up to 192 kHz, 32kHz/44.1kHz/48kHz/88kHz/96kHz/176kHz/192kHz) *DTS Not supported.

ENGLISH

DVI to HDMI connection

Transmits the digital video signal from an external device to the TV. Connect the external device and the TV with the DVI-HDMI cable as shown. To transmit an audio signal, connect an audio cable. Choose any HDMI input port to connect. It does not matter which port you use.

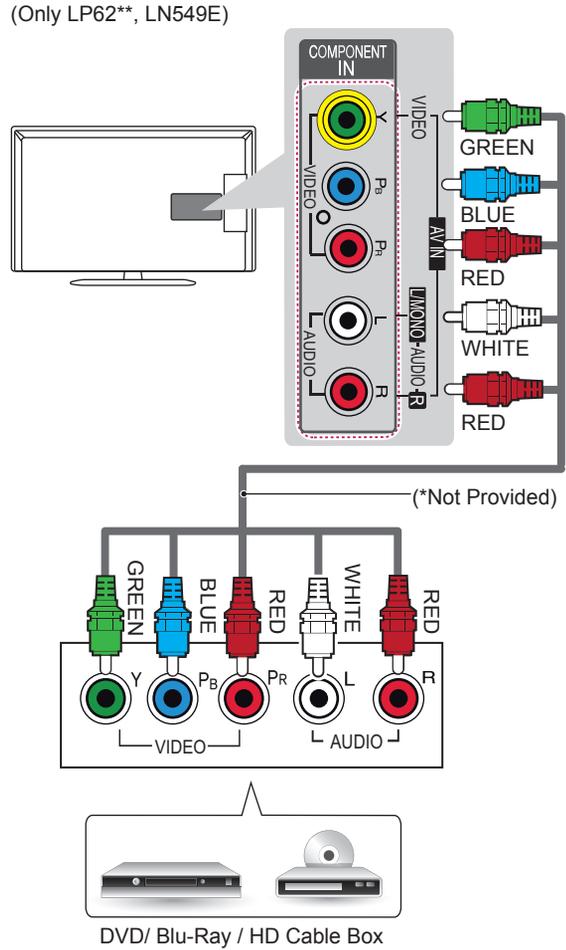


NOTE

- Depending on the graphics card, DOS mode may not work if a HDMI to DVI Cable is in use.
- When using the HDMI/DVI cable, Single link is only supported.

Component connection

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

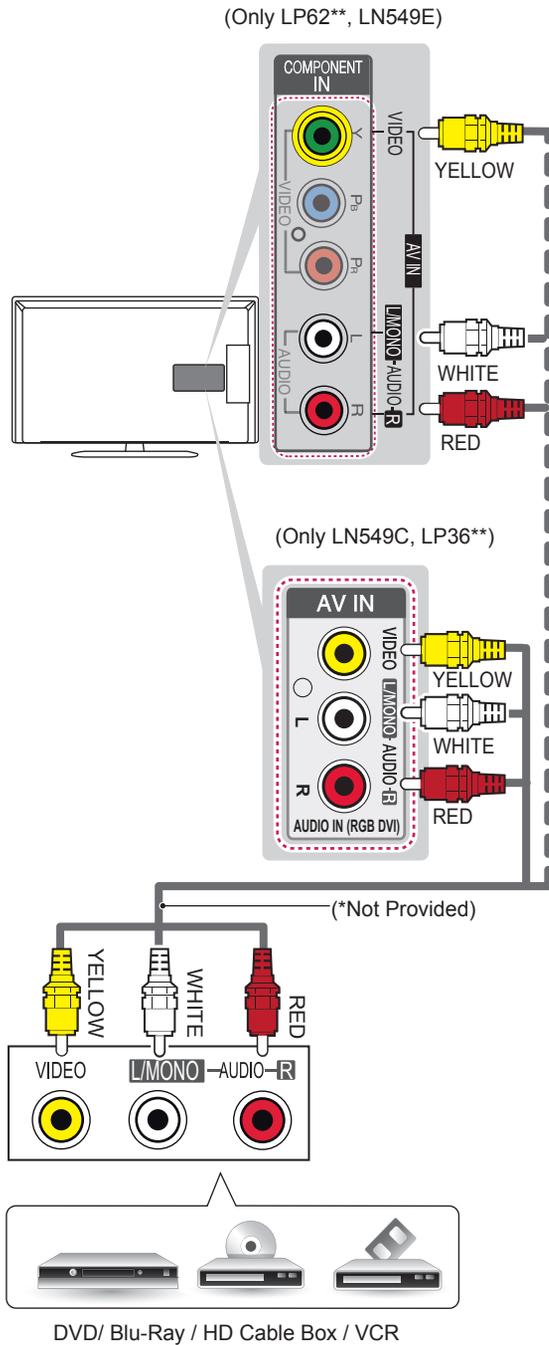


NOTE

- If cables are not installed correctly, it could cause this image to display in black and white or with distorted colours.

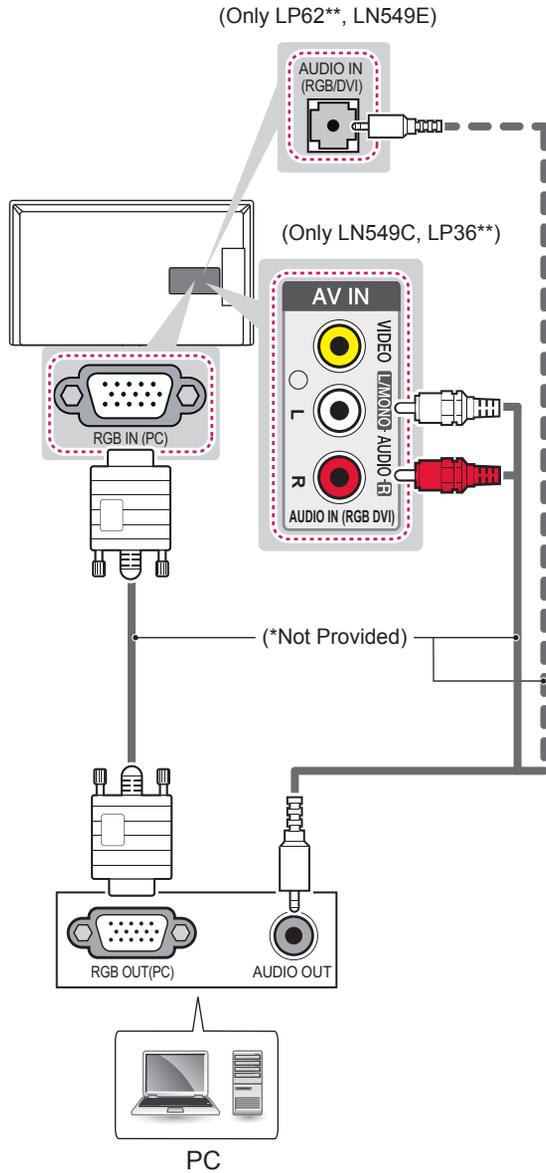
Composite connection

Transmits analog video and audio signals from an external device to the TV. Connect the external device and the TV with the composite cable as shown.



RGB-PC connection

Transmits the video signal from PC to the TV. To transmit an audio signal, connect an audio cable.



Audio connection

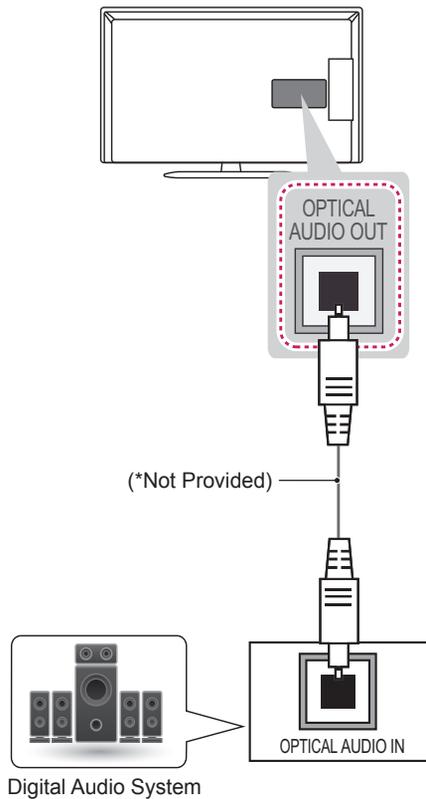
You may use an optional external audio system instead of the built-in speaker.

NOTE

- If you use an optional external audio device instead of the built-in speaker, set the TV speaker feature to off.

Digital optical audio connection

Transmits the digital audio signal from the TV to an external device. Connect the external device and the TV with the optical audio cable as shown.

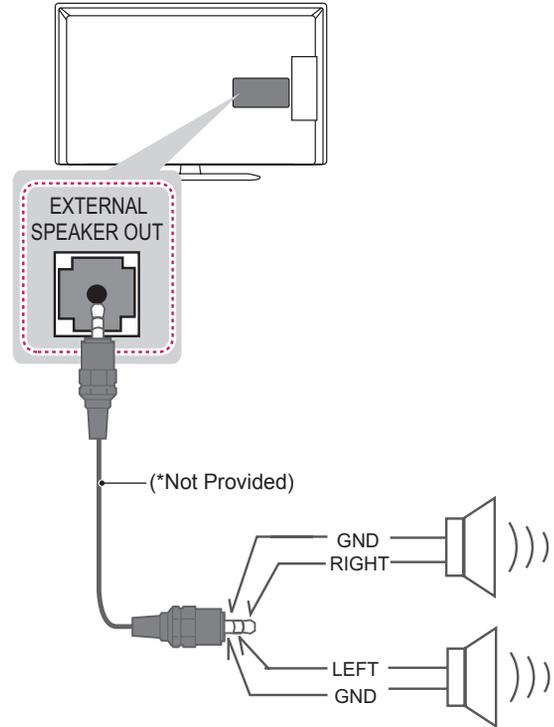


NOTE

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

External speaker out

Connecting External Speaker.



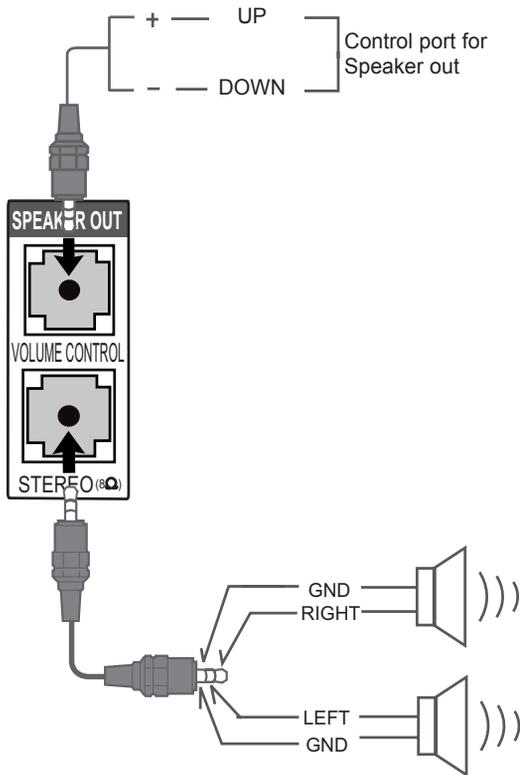
NOTE

- Make sure when connecting External Speaker that TV is Power OFF.

Speaker output setup

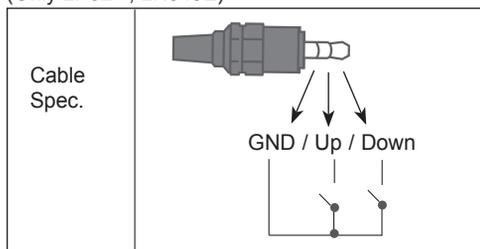
Connect the external speaker to the Speaker output(STEREO) jack on the TV.

(Only LP62**, LN549E)



Volume control port

(Only LP62**, LN549E)



- Each Up/ Down pin is pulled to 3.3V with CPU GPIO.
- CPU detects that vol. ctrl. Port is shorted to GND for volume control.
- CPU detects transition from 3.3V to GND level for volume control.

NOTE

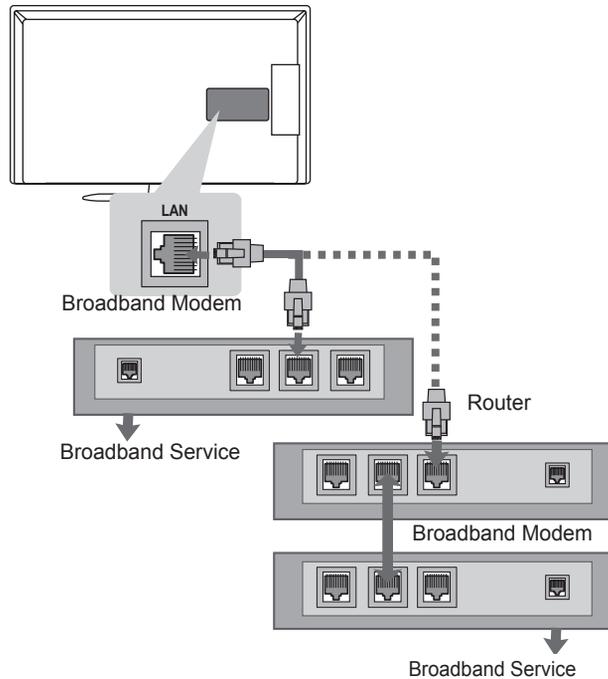
- External speaker must be used four plug(BTL: Bridge Tied Load, Stereo) as shown in the drawings and external speaker fully inserted with external Speaker Jack.
- Otherwise it will cause defect.

Network Connection

Connecting to a Wired Network

(Only LP62**)

This TV can be connected to a local area network (LAN) via the LAN port. After making the physical connection, the TV needs to be set up for network communication. (Image shown may differ from your TV.)



Connect the LAN port of the Modem or Router to the LAN port on the TV.

CAUTION

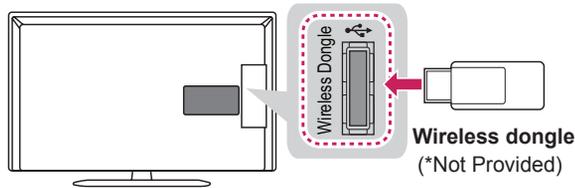
- Do not connect a modular phone cable to the LAN port.
- Since there are various connection methods, please follow the specifications of your telecommunication carrier or internet service provider.

ENGLISH

Wireless network connection

(Only LN549E)

This TV can be connected to wireless network via the Wireless Dongle port. After making the physical connection, the TV needs to be set up for network communication. Connect the wireless dongle to the Wireless Dongle port on the TV.
(Image shown may differ from your TV.)



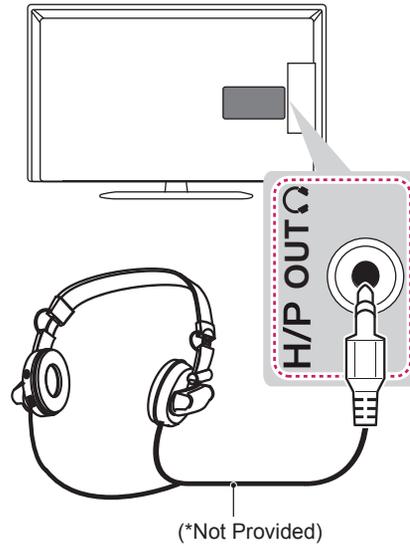
CAUTION

- Do not remove the wireless dongle while the wireless network is working.

Headphone connection

Transmits the headphone signal from the TV to an external device. Connect the external device and the TV with the headphone.

(Only LP62**, LN549E)

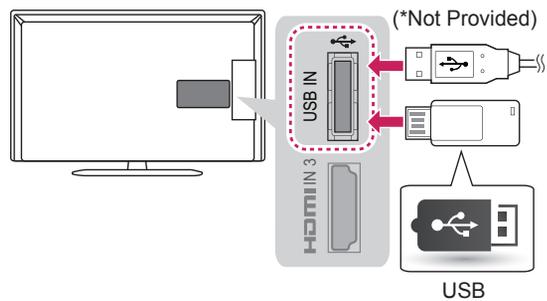


NOTE

- AUDIO menu items are disabled when connecting a headphone.
- When changing AV MODE with a headphone connected, the change is applied to video but not to audio.
- Optical Digital Audio Out is not available when connecting a headphone.
- Headphone impedance: 16 Ω
- Max audio output of headphone: 10 mW to 15 mW
- Headphone jack size: 0.35 cm

USB connection

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



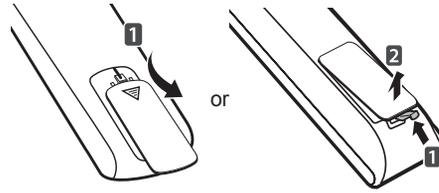
REMOTE CONTROL

The descriptions in this manual are based on the buttons on the remote control.

Please read this manual carefully and use the TV correctly.

To replace batteries, open the battery cover, replace batteries (1.5 V AAA) matching the ⊕ and ⊖ ends to the label inside the compartment, and close the battery cover.

To remove the batteries, perform the installation actions in reverse.



CAUTION

- Do not mix old and new batteries, as this may damage the remote control.
- In Analogue TV and some countries, some remote control buttons may not work.

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

(Only LN549C, LP36**)

	<p>⏻ (POWER) Turns the TV on or off.</p> <p>TV/RAD Selects Radio, TV and DTV programme.</p> <p>SUBTITLE Recalls your preferred subtitle in digital mode.</p> <p>AV MODE Selects an AV mode.</p> <p> RATIO Resizes an image.</p> <p> INPUT Changes the input source.</p>
	<p>Number buttons Enters numbers.</p> <p>LIST Accesses the saved programme list.</p> <p>Q.VIEW Returns to the previously viewed programme.</p> <p>FAV Accesses your favourite programme list.</p> <p>GUIDE Shows programme guide.</p> <p>MUTE Mutes all sounds.</p> <p> + - Adjusts the volume level.</p> <p>P ^ v Scrolls through the saved programmes.</p> <p>PAGE ^ v Moves to the previous or next screen.</p>
	<p>TELETEXT BUTTONS(TEXT, T.OPT) These buttons are used for teletext.</p> <p>INFO Views the information of the current programme and screen.</p> <p>SETTINGS Accesses the main menus.</p> <p>Q.MENU Accesses the Quick menus.</p> <p>Navigation buttons (up/down/left/right) Scrolls through menus or options.</p> <p>OK Selects menus or options and confirms your input.</p> <p>BACK Returns to the previous level.</p> <p>EXIT Clears on-screen displays and return to TV viewing.</p>
	<p> SIMPLINK Accesses the AV devices connected with the HDMI cable through HDMI-CEC. Opens the SIMPLINK menu.</p> <p>SLEEP Sets the sleep timer.</p> <p>Control buttons Controls the MY MEDIA menus, or the SIMPLINK compatible devices (USB, SIMPLINK).</p> <p>Coloured buttons These access special functions in some menus. : Red, : Green, : Yellow, : Blue</p>

ENGLISH

(Only LP62**, LN549E)

<p>⏻ (POWER) Turns the TV on or off.</p> <p>e ENERGY SAVING Adjusts the brightness of the screen to reduce energy consumption.</p> <p>AV MODE Selects an AV mode.</p> <p>INPUT Changes the input source.</p> <p>TV/RAD Selects Radio, TV and DTV programme.</p>
<p>Number buttons Enters numbers.</p> <p>LIST Accesses the saved programme list.</p> <p>Q.VIEW Returns to the previously viewed programme.</p>
<p>+ / - Adjusts the volume level.</p> <p>FAV Accesses your favourite programme list.</p> <p>RATIO Resizes an image.</p> <p>MUTE Mutes all sounds.</p> <p>∇ P ^ Scrolls through the saved programmes.</p> <p>← PAGE → Moves to the previous or next screen.</p>
<p>GUIDE Shows programme guide. (Only LP62**). Shows Contents List in EzSign mode. (Only LN549E)</p> <p>PORTAL Displays and removes hotel interactive menu.</p> <p>INFO ⓘ Views the information of the current programme and screen. (Only LP62**) Shows or hides the information on TV remote control buttons in EzSign mode. (Only LN549E)</p> <p>Navigation buttons (up/down/left/right) Scrolls through menus or options.</p> <p>OK ⓘ Selects menus or options and confirms your input.</p> <p>SETTINGS Accesses the main menus.</p> <p>↶ (BACK) Returns to the previous level.</p> <p>EXIT Clears on-screen displays and return to TV viewing.</p>
<p>Coloured buttons These access special functions in some menus. (● : Red, ●● : Green, ●●● : Yellow, ●●●● : Blue)</p> <p>TELETEXT BUTTONS(TEXT, T.OPT) These buttons are used for teletext.</p> <p>SUBTITLE Recalls your preferred subtitle in digital mode.</p> <p>Control buttons (■, ▶, II, ◀, ▶▶) Controls the MY MEDIA menus, or the SIMPLINK compatible devices (USB, SIMPLINK). * Not functional when EzSign contents is on. (Only LN549E)</p> <p>SIMPLINK Accesses the AV devices connected with the HDMI cable through HDMI-CEC. Opens the SIMPLINK menu.</p> <p>Q. MENU Accesses the quick menus.</p>

MAINTENANCE

Cleaning your TV

Clean your TV regularly to keep the best performance and to extend the product lifespan.



CAUTION

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

Screen, frame, cabinet and stand

- To remove dust or light dirt, wipe the surface with a dry, clean, and soft cloth.
- To remove major dirt, wipe the surface with a soft cloth dampened in clean water or a diluted mild detergent. Then wipe immediately with a dry cloth.



CAUTION

- Avoid touching the screen at all times, as this may result in damage to the screen.
- Do not push, rub, or hit the screen surface with your fingernail or a sharp object, as this may result in scratches and image distortions.
- Do not use any chemicals as this may damage the product.
- Do not spray liquid onto the surface. If water enters the TV, it may result in fire, electric shock, or malfunction.

Power cord

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

TROUBLESHOOTING

Problem	Solution
Cannot control the TV with the remote control.	<ul style="list-style-type: none"> • 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.	<ul style="list-style-type: none"> • Check if the product is turned on. • Check if the power cord is connected to a wall outlet. • Check if there is a problem in the wall outlet by connecting other products.
The TV turns off suddenly.	<ul style="list-style-type: none"> • Check the power control settings. The power supply may be interrupted. • Check if the Auto sleep feature is activated in the Time settings. • If there is no signal while the TV is on, the TV will turn off automatically after 15 minutes of inactivity.
When connecting to the PC (HDMI/DVI/RGB), 'No signal' or 'Invalid Format' is displayed.	<ul style="list-style-type: none"> • Turn the TV off/on using the remote control. • Reconnect the HDMI/DVI/RGB cable. • Restart the PC with the TV on.

CAUTION FOR USING EZSIGN 2.0

Only LN549E

- Do not remove a USB drive while data is being copied. It can corrupt the data and EzSign may not work properly.
- While loading a USB device or dongle, your TV may function slower than normal.
- While EzSign contents is running, the movie with internal subtitles is not supported in USB mode. EzSign TV supports only external subtitles.
- (External Subtitle format: *.smi/*.srt/*.sub(MicroDVD, Subviewer 1.0/2.0)*.ass/*.ssa/*.txt(TMPlayer)*psb(PowerDivX)
- Some user-created subtitles may not work properly.
- Some special characters are not supported in subtitles.
- HTML tags are not supported in subtitles.
- Subtitles in languages other than the supported languages are not available.
- EzSign 2.0 TV function does not work before completing the initial setup Wizard. Make sure to complete the initial setup Wizard by turning on the TV after installation.
- If the time is set according to the TV signal, it may not appeared exactly for some region. In that case, set the time manually.
- It is recommended that you copy files to the TV memory before playing them, as playing directly from the USB memory for an extended period of time may cause the device to overheat.
- In EzSign 2.0 TV mode, some remote control keys may not work.
- EzSign 2.0 TV dose not support the USB HUB. It is recommended that you connect a USB device directly to the TV without using a USB extension cable as it may not work properly.
- It is recommended that you use EzSign 2.0 TV within 8 hours per day as it is standard.
- Refer to the EzSign 2.0 Editor user guide for details.
- EzSign 2.0 TV does not support Store Demo.

ENVIRONMENTAL INFORMATION

(India only)

WEEE



Disposal of your old appliance

1. When this crossed-out wheeled bin symbol is attached to a product it means the product is covered by the e-waste (Management and Handling) Rules, 2011.
2. All electrical and electronic products should be disposed of separately from the municipal waste stream via designated collection facilities appointed by the government or the local authorities.
3. The correct disposal of your old appliance will help prevent potential negative consequences for the environment and human health.
4. For more detailed information about disposal of your old appliance, please contact your city office, waste disposal service or the shop where you purchased the product.
5. This product does not contain any of the hazardous substances as specified in the rule 13 (1) and (2) of the e-waste (Management and Handling) Rules, 2011.

पर्यावरणीय जानकारी

WEEE



अपने पुराने उपकरण का निपटान

1. जब यह काटे गये पहिये वाले बिन का चिह्न किसी उत्पाद के साथ संलग्न होता है तो इसका अर्थ है उत्पाद ई-अपशिष्ट (प्रबंधन और हथालन) नियम २०११ के अंतर्गत सम्मिलित किया गया है।
 2. सभी इलेक्ट्रिकल एवं और इलेक्ट्रॉनिक उत्पादों को सरकार या स्थानीय अधिकारियों द्वारा नियुक्त नगरपालिका अपशिष्ट धारा से अलग प्राधिकृत की गई संग्रह सुविधाओं के माध्यम से निपटाया जाना चाहिए।
 3. सही तरीके से अपने पुराने उपकरणों का निपटान वातावरण और मानवीय स्वास्थ्य के लिए संभावित नकारात्मक परिणामों को रोकने में मदद करेगा।
४. अपने पुराने उपकरणों के निपटान के संबंध में और अधिक विस्तृत जानकारी के लिए, कृपया अपने नगर कार्यालय, अपशिष्ट निपटान सेवा या जहां से आपने उत्पाद खरीदा था, वहां संपर्क करें।
५. इस उत्पाद में ई-अपशिष्ट(प्रबंधन और हथालन) नियम, २०११ के नियम १३ (१) और (२) में निर्देशानुसार कोई भी हानिकारक पदार्थ शामिल नहीं है।

SPECIFICATIONS

Product specifications may be changed without prior notice due to upgrade of product functions.
For the power supply and power consumption, refer to the label attached to the product.

MODELS		32LP36**	42LP36**	47LP36**
		32LP360H-TA	42LP360H-TA	47LP360H-TA
Dimensions (W x H x D)	With stand (mm)	738.0 x 497.0 x 207.0	968.0 x 629.0 x 236.0	1080.0 x 694.0 x 264.0
	Without stand(mm)	738.0 x 449.0 x 79.0	968.0 x 579.0 x 79.0	1080.0 x 642.0 x 80.5
Weight	With stand (kg)	7.0	10.7	14.7
	Without stand (kg)	6.4	9.6	13.4
Power requirement		AC 100-240 V~ 50 / 60 Hz	AC 100-240 V~ 50 / 60 Hz	AC 100-240 V~ 50 / 60 Hz
MODELS		32LN54**	39LN54**	42LN54**
		32LN549C-TA 32LN549E-TA	39LN549C-TA 39LN549E-TA	42LN549C-TA 42LN549E-TA
Dimensions (W x H x D)	With stand (mm)	738.0 x 497.0 x 207.0	894.0 x 587.0 x 236.0	968.0 x 629.0 x 236.0
	Without stand(mm)	738.0 x 449.0 x 79.0	894.0 x 537.0 x 79.0	968.0 x 579.0 x 79.0
Weight	With stand (kg)	7.0	9.7	10.7
	Without stand (kg)	6.4	8.6	9.6
Power requirement		AC 100-240 V~ 50 / 60 Hz	AC 100-240 V~ 50 / 60 Hz	AC 100-240 V~ 50 / 60 Hz
MODELS		47LN54**	55LN54**	60LN54**
		47LN549C-TA 47LN549E-TA	55LN549C-TA 55LN549E-TA	60LN549E-TA
Dimensions (W x H x D)	With stand (mm)	1080.0 x 694.0 x 264.0	1250.0 x 790.0 x 297.0	1359.0 x 852.0 x 297.0
	Without stand(mm)	1080.0 x 642.0 x 80.5	1250.0 x 737.0 x 79.1	1359.0 x 799.0 x 67.2
Weight	With stand (kg)	14.7	21.2	26.3
	Without stand (kg)	13.4	19.1	24.2
Power requirement		AC 100-240 V~ 50 / 60 Hz	AC 100-240 V~ 50 / 60 Hz	AC 100-240 V~ 50 / 60 Hz
MODELS		32LP62**	42LP62**	47LP62**
		32LP620H-TA	42LP620H-TA	47LP620H-TA
Dimensions (W x H x D)	With stand (mm)	738.0 x 497.0 x 207.0	968.0 x 629.0 x 236.0	1080.0 x 694.0 x 264.0
	Without stand(mm)	738.0 x 449.0 x 79.0	968.0 x 579.0 x 79.0	1080.0 x 642.0 x 80.5
Weight	With stand (kg)	7.0	10.7	14.7
	Without stand (kg)	6.4	9.6	13.4
Power requirement		AC 100-240 V~ 50 / 60 Hz	AC 100-240 V~ 50 / 60 Hz	AC 100-240 V~ 50 / 60 Hz
MODELS		55LP62**		
		55LP620H-TA		
Dimensions (W x H x D)	With stand (mm)	1250.0 x 790.0 x 297.0		
	Without stand(mm)	1250.0 x 737.0 x 79.1		
Weight	With stand (kg)	21.2		
	Without stand (kg)	19.1		
Power requirement		AC 100-240 V~ 50 / 60 Hz		

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 %

		Digital TV	Analogue TV
New Zealand, Singapore	Television System	DVB-T	PAL/SECAM-B/G/D/K, PAL-I
	Programme Coverage	UHF 21 to 69	BG : VHF/UHF 1 to 69, CATV 01 to 47 I : VHF/UHF 1 to 69, CATV 01 to 47 DK : VHF/UHF 1 to 69, CATV 01 to 47
Australia	Television System	DVB-T	PAL B/B
	Programme Coverage	VHF 06 to 12, UHF 27 to 69	B/B : VHF/UHF 0 to 75, CATV : 2 to 44
Indonesia, Israel, Myanmar, Sri Lanka	Television System	DVB-T	PAL/SECAM-B/G/D/K, PAL-I, NTSC-M
	Programme Coverage	UHF 21 to 69	BG : VHF/UHF 1 to 69, CATV 01 to 47 I : VHF/UHF 1 to 69, CATV 01 to 47 DK : VHF/UHF 1 to 69, CATV 01 to 47 M : VHF/UHF 2 to 78, CATV 01 to 71
Vietnam, Malaysia	Television System	DVB-T	PAL/SECAM-B/G/D/K, PAL-I, NTSC-M
	Programme Coverage	VHF 6 to 12, UHF 21 to 69	BG : VHF/UHF 1 to 69, CATV 01 to 47 I : VHF/UHF 1 to 69, CATV 01 to 47 DK : VHF/UHF 1 to 69, CATV 01 to 47 M : VHF/UHF 2 to 78, CATV 01 to 71
Iran, Algeria, Tunisia, Digital model	Television System	DVB-T	PAL/SECAM-B/G/D/K, PAL-I, NTSC-M
	Programme Coverage	VHF 5 to 12, UHF 21 to 69	BG : VHF/UHF 1 to 69, CATV 01 to 47 I : VHF/UHF 1 to 69, CATV 01 to 47 DK : VHF/UHF 1 to 69, CATV 01 to 47 M : VHF/UHF 2 to 78, CATV 01 to 71
Analogue model, India, Thailand, South Africa, --	Television System	-	PAL/SECAM-B/G/D/K, PAL-I, NTSC-M
	Programme Coverage	-	BG : VHF/UHF 1 to 69, CATV 01 to 47 I : VHF/UHF 1 to 69, CATV 01 to 47 DK : VHF/UHF 1 to 69, CATV 01 to 47 M : VHF/UHF 2 to 78, CATV 01 to 71
	External Antenna Impedance	75 Ω	75 Ω

In country that Digital broadcasting regulation isn't fixed, some DTV function may not work depending on digital broadcasting circumstances. (Only DTV)

Only LN549C, LP36**

HDMI/DVI-DTV supported mode

Resolution	Horizontal Frequency (kHz)	Vertical Frequency (Hz)
720x480	31.469	59.94
	31.5	60
720x576	31.25	50
1280x720	37.5	50
	44.96	59.94
	45	60
1920x1080	33.72	59.94
	33.75	60
	28.125	50
	26.97	23.97
	27	24
	33.716	29.976
	33.75	30.00
	56.25	50
	67.43	59.94
	67.5	60

RGB-PC, HDMI/DVI-PC supported mode

Resolution	Horizontal Frequency (kHz)	Vertical Frequency (Hz)
720x400	31.468	70.08
640x480	31.469	59.94
800x600	37.879	60.31
1024x768	48.363	60.00
1280x720	45	60
1280x768	47.78	59.87
1360x768	47.72	59.80
1280x1024	63.981	60.02
1920x1080 (RGB-PC)	66.587	59.93
1920x1080 (HDMI-PC)	67.5	60.00

(Except for 32LN549C, 32LP36**)

Only LP62**, LN549E

HDMI/DVI-DTV supported mode

Resolution	Horizontal Frequency (kHz)	Vertical Frequency (Hz)
720x480	31.47	59.94
	31.5	60
1280x720	44.96	59.94
	45	60
1920x1080	33.75	60
	33.72	59.94
	26.97	23.976
	27	24
	33.75	30.00
	67.432	59.94
67.5	60	

RGB-PC, HDMI/DVI-PC supported mode

Resolution	Horizontal Frequency (kHz)	Vertical Frequency (Hz)
640x350	31.468	70.09
720x400	31.469	70.08
640x480	31.469	59.94
800x600	37.879	60.31
1024x768	48.363	60
1280x768	47.776	59.87
1360x768	47.712	60.015
1280x1024	63.981	60.02
1600x1200	75	60
1920x1080 (RGB-PC)	66.587	59.934
1920x1080 (HDMI-PC)	67.5	60

(Except for 32LP62**, 32LN549E)

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	○
480p/576p	○
720p/1080i	○
1080p	○ (50 Hz / 60 Hz only)

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IR CODES

- This feature is not available for all models.

Code (Hexa)	Function	Note
08	⏻ (POWER)	Remote control Button (Power On/Off)
F0	TV/RAD	Remote control Button
39	SUBTITLE	Remote control Button
30	AV MODE	Remote control Button
79	RATIO	Remote control Button
0B	INPUT	Remote control Button
10-19	Number Key 0-9	Remote control Button
53	LIST	Remote control Button
1A	Q.VIEW	Remote control Button
02	↗+	Remote control Button
03	↘-	Remote control Button
1E	FAV	Remote control Button
AB	GUIDE	Remote control Button
09	MUTE	Remote control Button
00	P ^	Remote control Button
01	P v	Remote control Button
20	TEXT (Teletext)	Remote control Button
AA	INFO	Remote control Button
21	T. OPT (Teletext Option)	Remote control Button
43	SETTINGS / Home	Remote control Button
45	Q.MENU	Remote control Button
44	OK	Remote control Button
40	^	Remote control Button
41	v	Remote control Button
07	<	Remote control Button
06	>	Remote control Button
28	↶ BACK	Remote control Button
5B	EXIT	Remote control Button
7E	SIMPLINK	Remote control Button
0E	SLEEP	Remote control Button
B1	■	Remote control Button
B0	▶	Remote control Button
BA		Remote control Button
8E	▶▶	Remote control Button
8F	◀◀	Remote control Button
72	RED	Remote control Button
71	GREEN	Remote control Button
63	YELLOW	Remote control Button
61	BLUE	Remote control Button

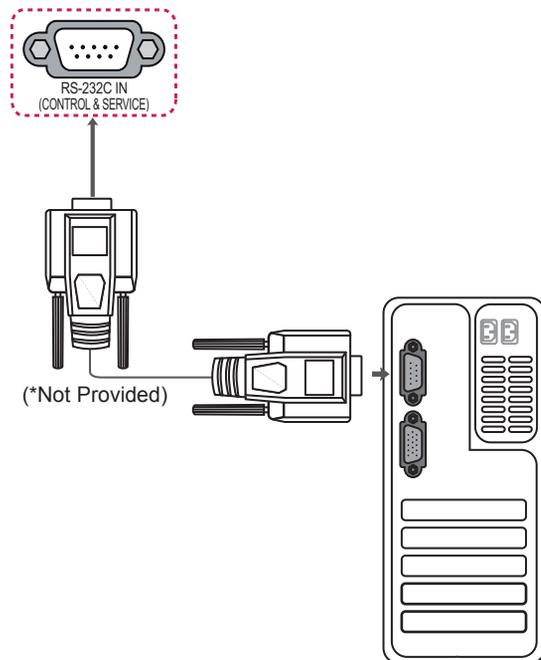
EXTERNAL CONTROL DEVICE SETUP

RS-232C Setup

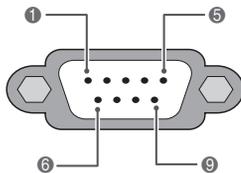
Connect the RS-232C (serial port) input jack to an external control device (such as a computer or an A/V control system) to control the product's functions externally.

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

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



Type of connector; D-Sub 9-Pin Male



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

RS-232C Configurations

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

	PC	TV	
RXD	2	3	TXD
TXD	3	2	RXD
GND	5	5	GND
DTR	4	6	DSR
DSR	6	4	DTR
RTS	7	8	CTS
CTS	8	7	RTS
	D-Sub 9	D-Sub 9	

3-Wire Configurations (Not standard)

	PC	TV	
RXD	2	3	TXD
TXD	3	2	RXD
GND	5	5	GND
DTR	4	6	DTR
DSR	6	4	DSR
RTS	7	7	RTS
CTS	8	8	CTS
	D-Sub 9	D-Sub 9	

Set ID

Set ID number. "Real Data Mapping".

- 1 Press **SETTINGS** to access the main menus.
- 2 Press the Navigation buttons to scroll to **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**.

Communication Parameters

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

Command reference list

(Depending on model)

	COMMAND1	COMMAND2	DATA (Hexadecimal)		COMMAND1	COMMAND2	DATA (Hexadecimal)
01. Power	k	a	00 to 01	13. Treble	k	r	00 to 64
02. Aspect Ratio	k	c	(See p.38)	14. Bass	k	s	00 to 64
03. Screen Mute	k	d	(See p.38)	15. Balance	k	t	00 to 64
04. Volume Mute	k	e	00 to 01	16. Colour Temperature	x	u	00 to 64
05. Volume Control	k	f	00 to 64	17. Energy Saving	j	q	00 to 05
06. Contrast	k	g	00 to 64	18. Auto Configuration	j	u	01
07. Brightness	k	h	00 to 64	19. Tune Command	m	a	(See p.40)
08. Colour	k	i	00 to 64	20. Programme Add/Skip	m	b	00 to 01
09. Tint	k	j	00 to 64	21. Key	m	c	Key Code
10. Sharpness	k	k	00 to 64	22. Control Back Light	m	g	00 to 64
11. OSD Select	k	l	00 to 01	23. Input select (Main Picture Input)	x	b	(See p.40)
12. Remote Control Lock Mode	k	m	00 to 01				

* Note : 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

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 (0x0 to 0x63) on transmission/receiving protocol.
[DATA]	: To transmit command data. Transmit 'FF' data to read status of command.
[Cr]	: Carriage Return ASCII code '0x0D'
[]	: ASCII code 'space (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

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 Power On/Off.

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

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

* Similarly, if other functions transmit '0xFF' 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 07 : 14:9
(4:3) 09 : Just Scan
02 : Wide screen 0B : Full Wide
(16:9) 10 to 1F : Cinema Zoom 1 to 16
04 : Zoom
06 : Original

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 (1080i 50 Hz / 60 Hz, 720p 50Hz / 60 Hz, 1080p 24 Hz / 30 Hz / 50 Hz / 60 Hz), Component(720p, 1080i, 1080p 50 Hz / 60 Hz) mode, Just Scan is available.

* Full Wide is supported only for DTV.

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'. See p.34.

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'. See p.34.

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'. See p.34.

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'. See p.34.

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'. See p.34.

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 : 64
* Refer to 'Real data mapping'. See p.34.

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

11. OSD Select (Command: k i)

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

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

Data 00 : OSD off 01 : OSD on

Ack [i][][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. Treble (Command: k r)

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

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

Data Min : 00 to Max : 64
* Refer to 'Real data mapping'. See p.34.

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

14. Bass (Command: k s)

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

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

Data Min : 00 to Max : 64
* Refer to 'Real data mapping'. See p.34.

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

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
* Refer to 'Real data mapping'. See p.34.

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

16. 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 Min : 00 to Max : 64
* Refer to 'Real data mapping'. See p.34.

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

17. 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	3	2	1	0	
0	0	0	0	Low Power	0	0	0	Off
0	0	0	0	Low Power	0	0	1	Minimum
0	0	0	0	Low Power	0	1	0	Medium
0	0	0	0	Low Power	0	1	1	Maximum
0	0	0	0	Low Power	0	1	0	Screen Off
0	0	0	0	Low Power	0	1	0	Auto

- ▶ 'Auto' is available in TV that supportss 'Intelligent Sensor'

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

18. Auto Configure(Command: j u)

- ▶ 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]

19. Tune Command (Command: m a)

- ▶ Select channel to following physical number.

Transmission [m][a][][Set ID][][Data0][][Data1][][Data2][Cr]

Data00 : High channel data

Data01 : Low channel data

- ex. No. 47 -> 00 2F (2FH)
- No. 394 -> 01 8A (18AH),
- DTV No. 0 -> Don't care

Data02 : [Antenna]

- 0x00 : Analog Main
- 0x10 : DTV Main
- 0x20 : Radio
- [Cable]
- 0x80 : Analog Main
- 0x90 : DTV Main
- 0xA0 : Radio

Channel data range

Analog - Min: 00 to Max: 63 (0 to 99)

Digital - Min: 00 to Max: 3E7 (0 to 999)

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

Data Min: 00 to Max: 7DH

20. 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]

21. Key(Command: m c)

- ▶ To send IR remote key code.

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

Data Key code - See p.28

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

22. Control Back Light(Command: m g)

- ▶ To control the back light.

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

Data Min : 00 to Max : 64

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

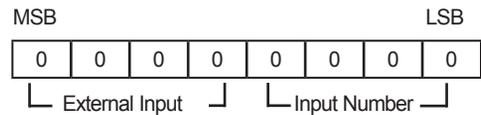
23. Input select (Command: x b)

(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



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 _____

(Only DTV)

DVB[®]
Digital Video
Broadcasting