

# 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.

LY75\*\*

LY96\*\*

# TABLE OF CONTENTS

## 3 LICENSES

## 3 OPEN SOURCE SOFTWARE NOTICE INFORMATION

## 4 SAFETY INSTRUCTIONS

- 4 - Viewing 3D Imaging (Only 3D models)

## 6 INSTALLATION PROCEDURE

## 7 ASSEMBLING AND PREPARING

- 7 Unpacking  
11 Separate purchase  
12 Parts and Button  
13 - Using the Joystick button  
14 Lifting and Moving the TV  
15 Setting up the TV  
15 - Attaching the Stand  
18 Mounting on a table  
20 Mounting on a wall  
22 Tidying cables

## 24 MAKING CONNECTIONS

- 24 Antenna Connection  
25 HDMI Connection  
26 MHL Connection  
26 Audio Connection  
26 - Digital Optical Audio Connection  
27 Speaker Output Setup  
27 Network Setup  
27 - Wired network Connection  
28 Component Connection  
29 Composite Connection  
29 RGB-PC Connection  
30 Headphone Connection  
30 USB Connection

## 31 REMOTE CONTROL

## 33 MAINTENANCE

- 33 Cleaning your TV  
33 - Screen, frame, cabinet and stand  
33 - Power cord

## 34 TROUBLESHOOTING

## 35 SPECIFICATIONS

## 44 IR CODES

## 45 EXTERNAL CONTROL DEVICE SETUP

- 45 RS-232C Setup  
45 Type of Connector: D-Sub 9-Pin Male  
45 RS-232C Configurations  
46 Communication Parameters  
46 Command Reference List  
47 Transmission / Receiving Protocol



### 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.

## LICENSES

Supported licenses may differ by model. For more information about licenses, visit [www.lg.com](http://www.lg.com).



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7,295,673; 7,460,668; 7,515,710; 7,519,274.



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

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

LG Electronics will also provide open source code to you on CD-ROM for a charge covering the cost of performing such distribution (such as the cost of media, shipping, and handling) upon email request to [opensource@lge.com](mailto:opensource@lge.com). This offer is valid for three (3) years from the date on which you purchased the product.

# SAFETY INSTRUCTIONS

Please read these safety precautions carefully before using the product.

## Viewing 3D Imaging (Only 3D models)



### WARNING

#### Viewing Environment

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

#### Those that have a photosensitive seizure or chronic illness

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

#### Symptoms which require discontinuation or refraining from watching 3D contents

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





## CAUTION

### Viewing Environment

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

### Viewing Age

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

### Cautions when using the 3D glasses

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

**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.
- \* 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.

# 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.



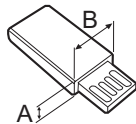
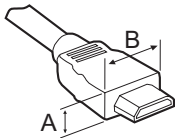
### CAUTION

- 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

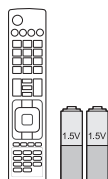
- The items supplied with your product may vary depending on the model.
- Product specifications or contents of this manual may be changed without prior notice due to upgrade of product functions.
- For an optimal connection, HDMI cables and USB devices should have bezels less than 10 mm thick and 18 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.



$$*A \leq 10 \text{ mm}$$

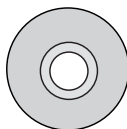
$$*B \leq 18 \text{ mm}$$

- 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<sup>®</sup>/TM Cable
  - High-Speed HDMI<sup>®</sup>/TM Cable with Ethernet

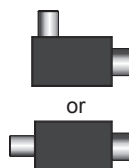


**Remote control, Batteries (AAA)**

(See p. 31, 32)



**Owner's manual**



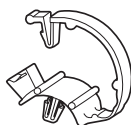
**Isolator**

(Depending on model)  
(See p. 10)



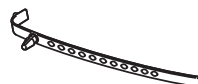
**Power cord**

(Depending on model)



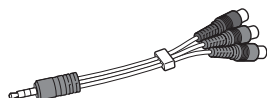
**Cable Managements**

2EA  
(Only LY750\*, LY755\*,  
LY96\*\*)  
(See p. 22)



**Cable Holder**

(Depending on model)  
(See p. 22, 23)



**Component Gender Cable**

(Depending on model)  
(See p. 28)



**Wall Mount Spacers**

2EA  
(Only 42LY75\*\*)  
(See p. 22)



**Stand Screws**

4EA, M4 x L20  
(Only 32LY750\*, 32LY755\*,  
42/47/55LY751\*)  
6EA, M4 x L20  
(Only 32/39LY751\*)  
(See p. 15, 16)



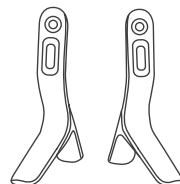
**Stand Screws**

4EA, M4 x L14  
(Only 42/47/55LY750\*,  
42/47/55LY755\*,  
42/47/55LY751\*,  
42/47/55LY96\*\*)  
(See p. 15, 17)



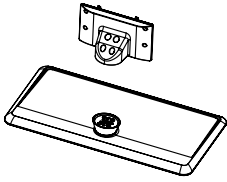
**Stand Screws**

4EA, M4 x L12  
(Only 60LY96\*\*)  
(See p. 15)

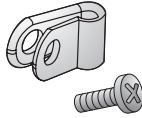


**Stand Bases**

(Only LY750\*, LY755\*,  
LY96\*\*)  
(See p. 15)



**Stand Base/Stand Body**  
(Only LY751\*)  
(See p. 15, 16)



**Power Cord Holder/Screw**  
1EA  
(Only 39/42/47/55LY751\*)  
(See p. 23)



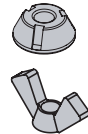
**Torx Plus Star-Head  
Screws**  
2EA  
(Only LY751\*)  
(See p. 16, 17)



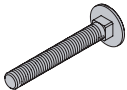
**Rubbers**  
2EA  
(Only LY751\*)  
(See p. 17)



**Washers for Stand Fixing**  
2EA  
(Depending on model)  
(See p. 19)



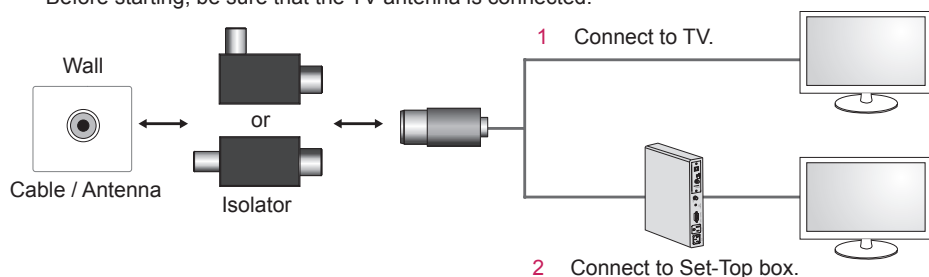
**Nuts for Stand Fixing**  
2EA  
(Depending on model)  
(See p. 19)



**Screws for Stand Fixing**  
2EA  
(Depending on model)  
(See p. 19)

**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.

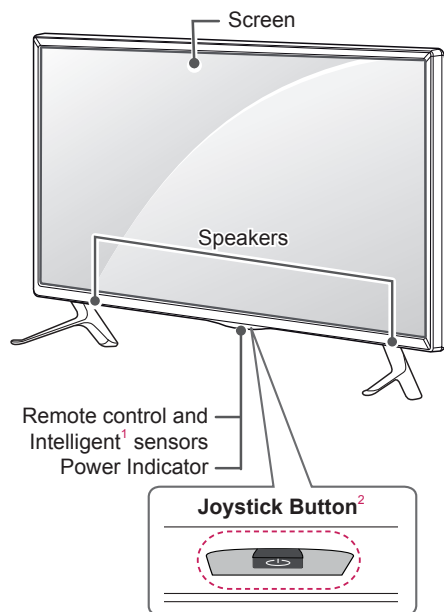
LG Audio Device	AN-MR300 Magic remote	AN-MR500 Magic remote
AG-F*** Cinema 3D Glasses		

Compatibility	LY75**	LY96**
LG Audio Device	•	•
AN-MR300 Magic Remote	•	
AN-MR500 Magic Remote		•
AG-F*** Cinema 3D Glasses		•

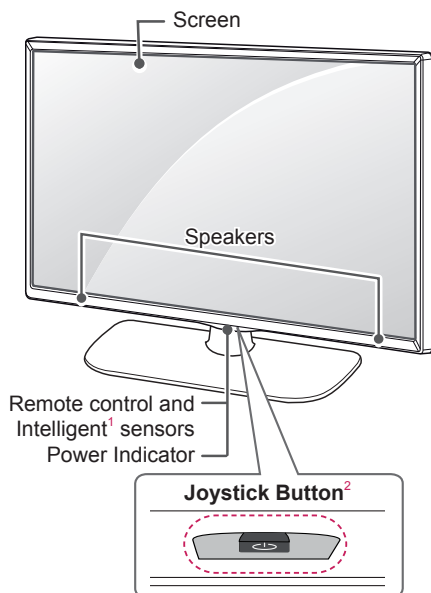
The model name or design may be changed depending on the upgrade of product functions, manufacturer's circumstances or policies.

## Parts and Button

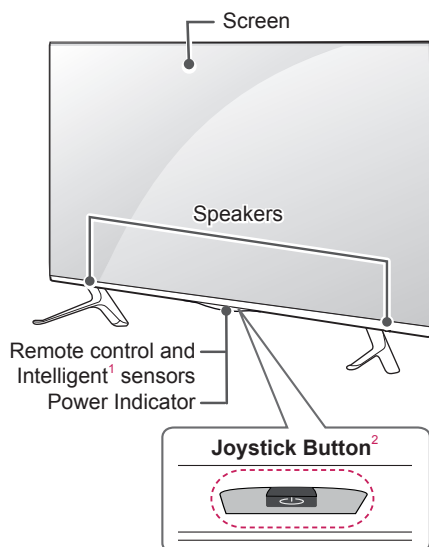
A type : LY750\*, LY755\*



B type : LY751\*



C type : LY96\*\*





- 1 Intelligent sensor - Adjusts the image quality and brightness based on the surrounding environment.
- 2 Joystick Button - This button is located below the TV screen.

**NOTE**

- You can set the power indicator light to on or off by selecting **OPTION** or **General** in the main menus.

## Using the Joystick button

You can simply operate the TV functions by pressing to turn On/Off or sliding your finger over joystick button moving up, down, left or right.

### Basic Functions

	Power On	When the TV is turned off, place your finger on the joystick button and press it once and release it.
	Power Off	When the TV is turned on, place your finger on the joystick button and press it once for a few seconds and release it.
	Volume Control	If you place your finger over the joystick button and move it left or right, you can adjust the volume level you want.
	Programmes Control	If you place your finger over the joystick button and move it up or down, you can scrolls through the saved programmes you want.

**NOTE**




- When your finger over the joystick button and push it to the up, down, left or right, be careful not to press the joystick button. If you press the joystick button first, you may not be able to adjust the volume level and saved programmes.

### Adjusting the Menu

(Only LY96\*\*)

When the TV is turned on, press the joystick button one time.

You can adjust the Menu items(, , ) moving the joystick button left or right.

		<b>TV OFF</b>	Turns the power off.
		<b>CLOSE</b>	Closes Clears on-screen displays and returns to TV viewing.
		<b>INPUT</b>	Changes the input source.

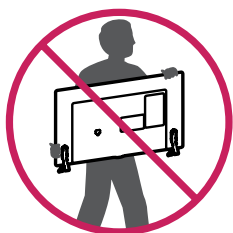
## Lifting and Moving the TV

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

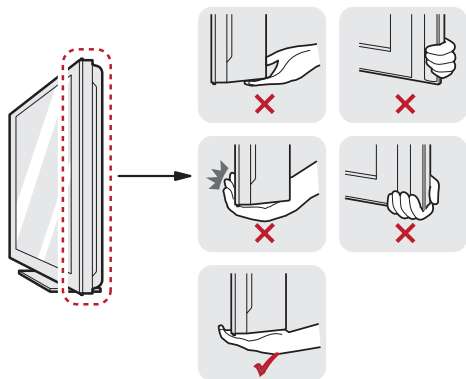


### CAUTION

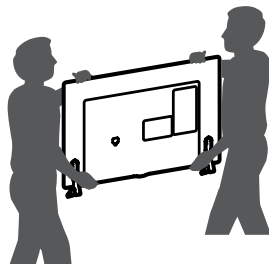
- Avoid touching the screen at all times, as this may result in damage to the screen.
- It is recommended to move the TV in the box or packing material that the TV originally came in.
- Before moving or lifting the TV, disconnect the power cord and all cables.
- When holding the TV, the screen should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



### CAUTION

- When handling the TV, be careful not to damage the protruding joystick button. (Image shown may differ from your TV.)

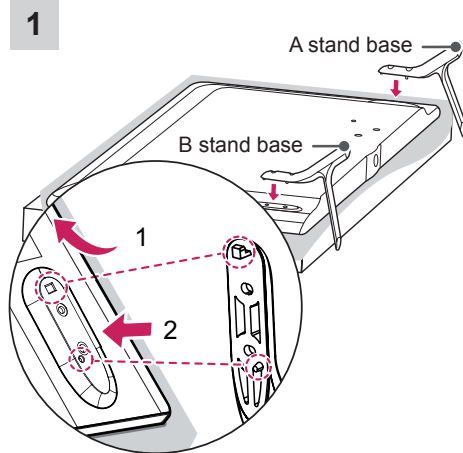


## Setting up the TV

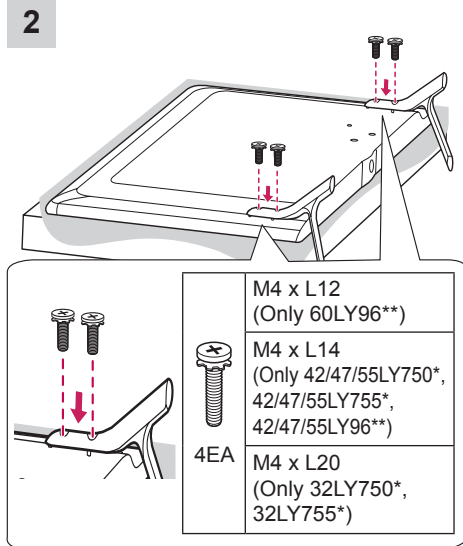
Image shown may differ from your TV.

### Attaching the Stand

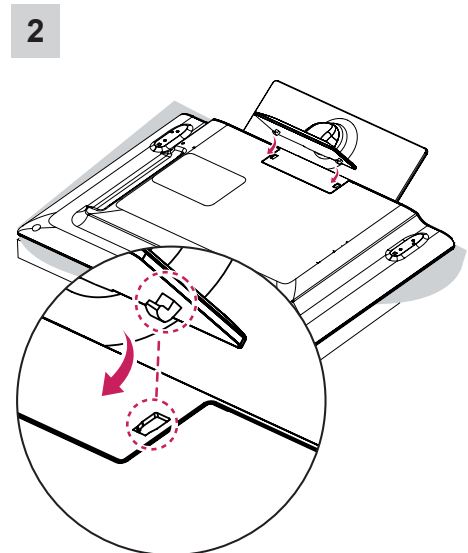
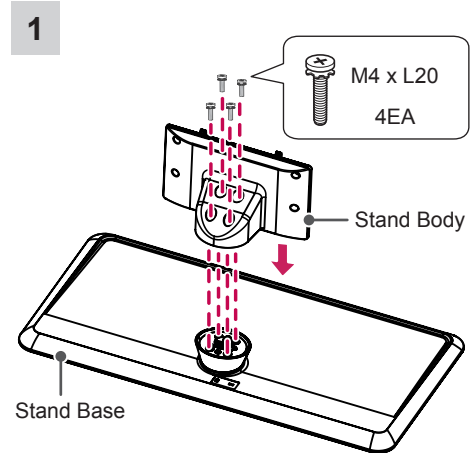
LY750\*, LY755\*, LY96\*\*



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



32/39LY751\*



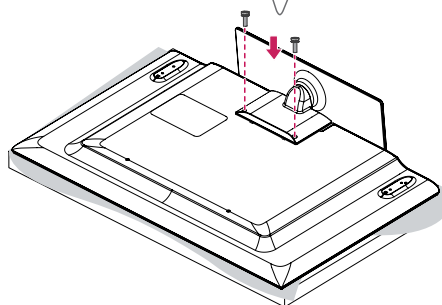
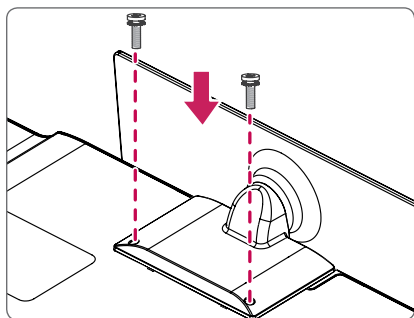
3

M4 x L20  
2EA

or

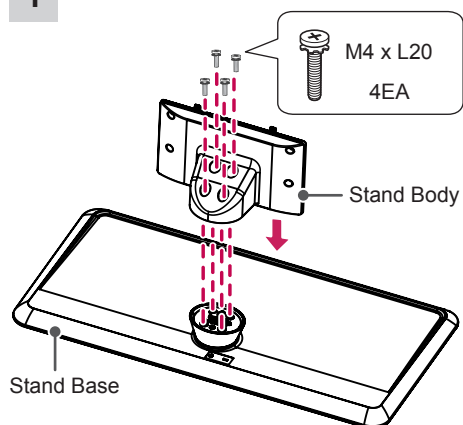
Torx Plus Star-Head Screws  
2EA

Tighten the two Torx head screws  
(supplied with TV) with a Torx Bit Driver  
(not supplied with TV).

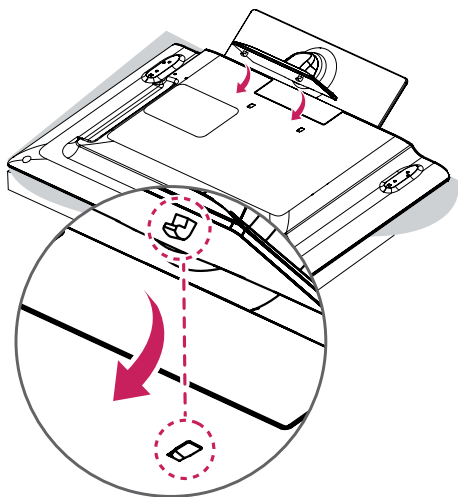


42/47/55LY751\*


1





2



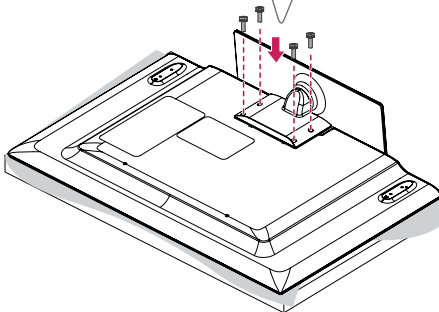
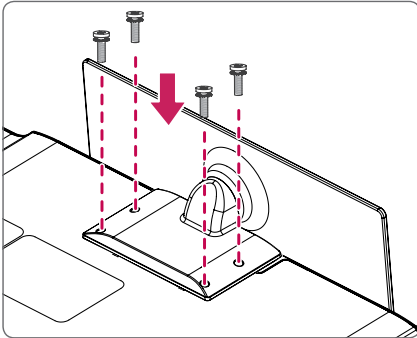
3

 M4 x L14  
4EA  
**or**

 M4 x L14  
2EA

 Torx Plus Star-Head Screws  
2EA

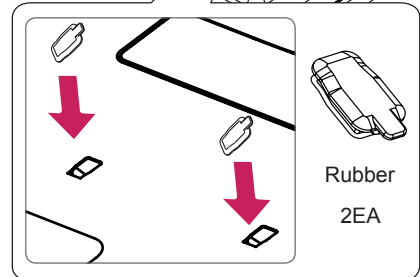
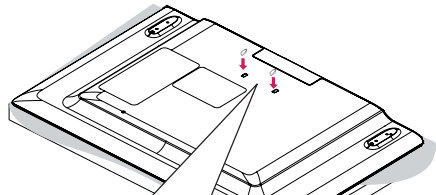
Tighten the two of these four screws and the two Torx screws (supplied with TV) to secure the TV. Tighten the two Torx screws with a Torx Bit Driver (not supplied with TV).

**CAUTION**

- When attaching the stand to the TV set, place the screen facing down on a cushioned table or flat surface to protect the screen from scratches.
- Make sure that the screws are fastened 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.

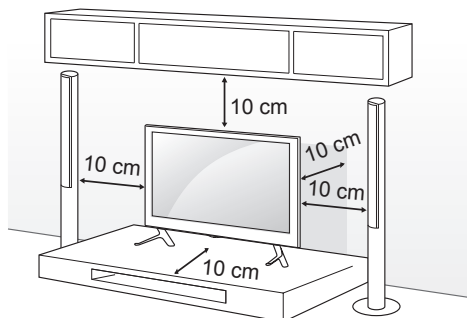
**NOTE**

- Remove the stand before installing the TV on a wall mount by performing the stand attachment in reverse.
- The rubber will protect the opening from accumulating dust and dirt. When installing the wall mounting bracket, use the rubber. (Only LY751\*)



## 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.

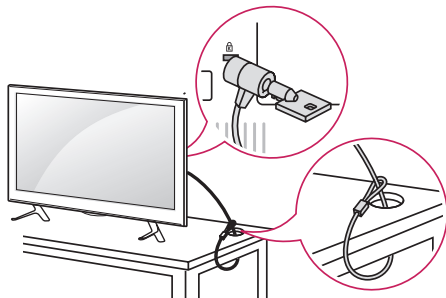
## Using the Kensington security system

(This feature is not available for all models.)

- Image shown may differ from your TV.

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.



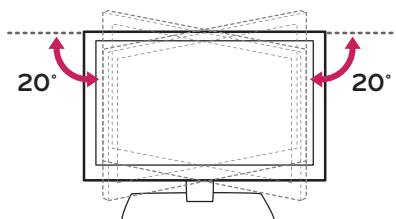
### WARNING

- 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.

## Adjusting the angle of the TV to suit view

(Only LY751\*)

Swivel 20 degrees to the left or right and adjust the angle of the TV to suit your view.



### CAUTION

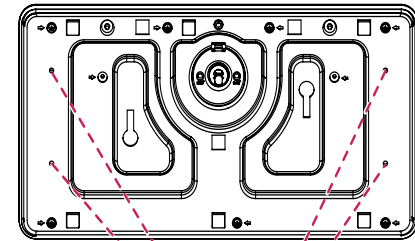
- When adjusting the angle of the product, watch out for your fingers.
  - » Personal injury may occur if hands or fingers are pinched. If the product is tilted too much, it may fall, causing damage or injury.

## Attaching the TV to a desk

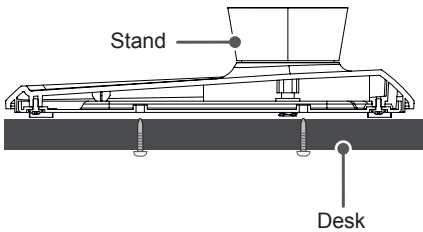
(Depending on model)

The TV should be attached to a desk so it cannot be pulled in a forward/backward direction, potentially causing injury or damaging the product.

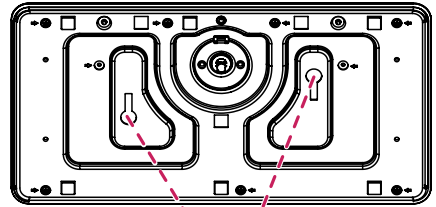
A type )



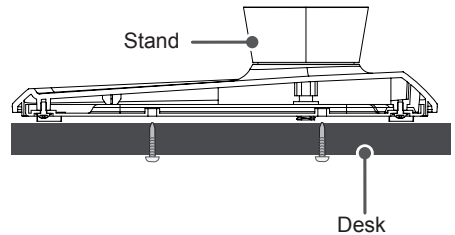
4-Screws  
(Not supplied with TV)



B type )



2-Washers for Stand Fixing,  
2-Nuts for Stand Fixing,  
2-Screws for Stand Fixing  
(Supplied with TV)

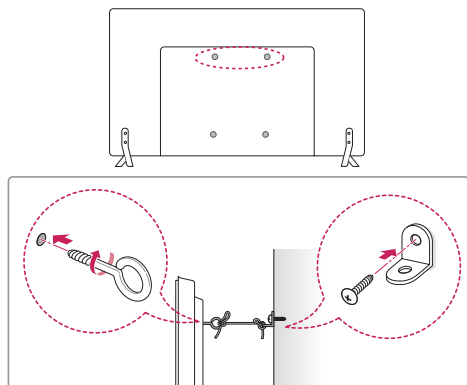


### NOTE

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

**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.

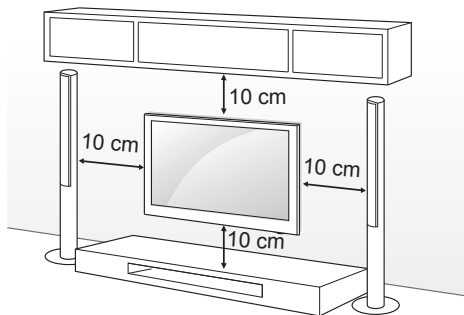
**NOTE**

- 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.

**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. We recommend the use of LG's wall mount bracket.

When you do not use LG's wall mount bracket, please use a wall mount bracket where the device is adequately secured to the wall with enough space to allow connectivity to external devices.

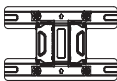




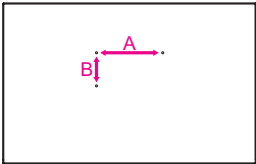


Make sure to use screws and wall mount bracket that meet the VESA standard. Standard dimensions for the wall mount kits are described in the following table.

Separate purchase (Wall Mounting Bracket)

Model	32/39LY75**	42/47/55LY75**
VESA (mm) (A x B)	200 x 200	400 x 400
Standard screw	M6	M6
Number of screws	4	4
Wall mount bracket	LSW240B MSW240	LSW440B MSW240
Model	42/47/55/60LY96**	
VESA (mm) (A x B)	400 x 400	
Standard screw	M6	
Number of screws	4	
Wall mount bracket	LSW440B	

Wall mount bracket		
LSW240B	LSW440B	MSW240
		



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 authorised 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.
- When attaching a wall mounting bracket to the TV, insert the wall mount spacers into the TV wall mount holes to adjust the vertical angle of the TV. (Only 42LY75\*\*)

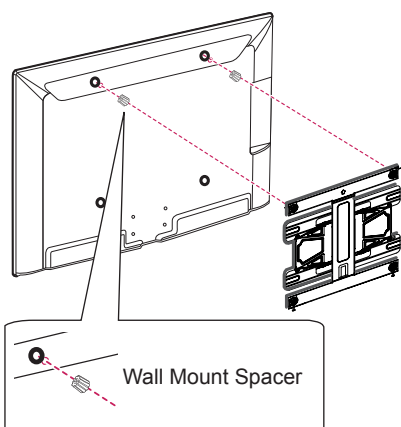
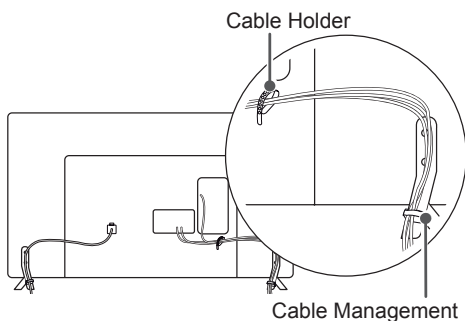
**Tidying cables**

Image shown may differ from your TV.

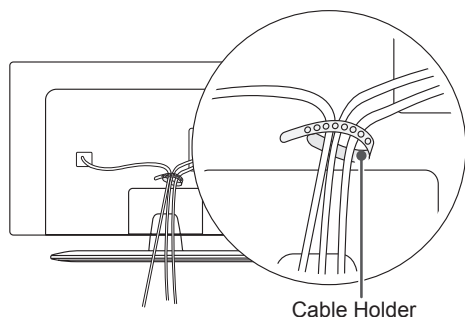
(Only LY750\*, LY755\*, LY96\*\*)

- 1 Gather and bind the cables with the cable holder.
- 2 Fix the Cable Management firmly to the TV.



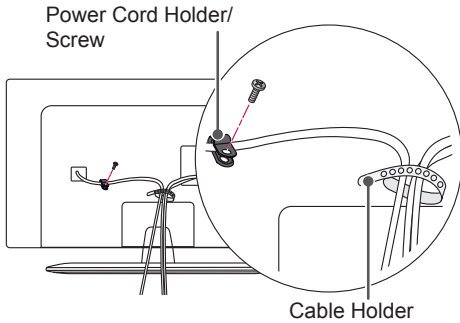
(Only 32LY751\*)

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



(Only 39/42/47/55LY751\*)

- 1 Install the power cord holder and power cord. It will help prevent the power cable from being removed by accident.
- 2 Gather and bind the cables with the cable holder.



### CAUTION

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

## MAKING CONNECTIONS

This section on **MAKING CONNECTIONS** mainly uses diagrams for the 42LY750\* models.

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

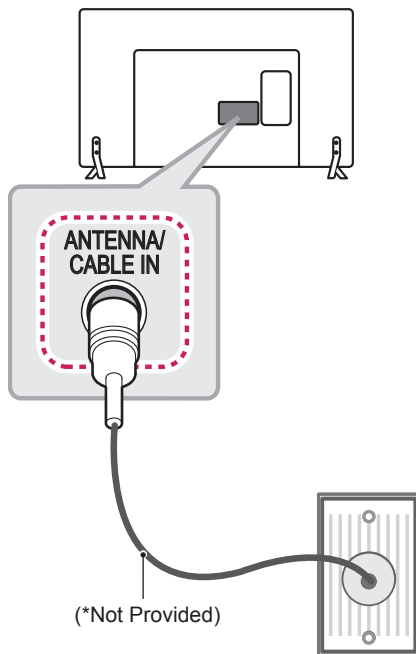
Available external devices are: HD receivers, DVD players, VCRs, audio systems, USB storage devices, PC, gaming devices, and other external devices.

### ! 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 program on a DVD recorder or VCR, make sure to connect the TV signal input cable to the TV through a DVD recorder or VCR. For more information on 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.
- USB storage device is recognizable.

## Antenna Connection

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



### ! 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

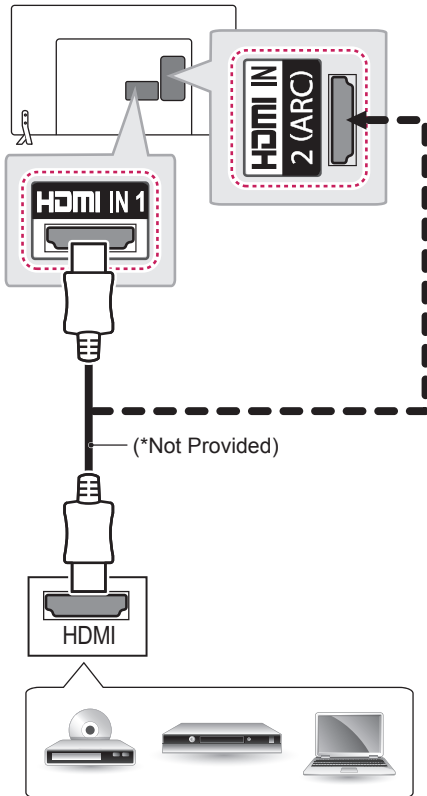
## HDMI Connection

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

### ARC (Audio Return Channel)

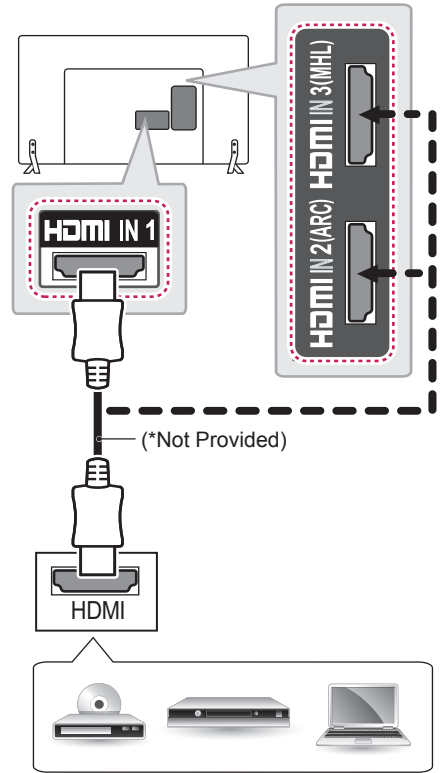
- An external audio device that supports SIMPLINK and ARC must be connected using **HDMI IN 2 (ARC)** port.
- When connected with a high-speed HDMI cable, the external audio device that supports ARC outputs optical SPDIF without additional optical audio cable and supports the SIMPLINK function.

(Only LY75\*\*)



DVD / Blu-Ray / HD Cable Box / HD STB / PC

(Only LY96\*\*)



DVD / Blu-Ray / HD Cable Box / HD STB / PC

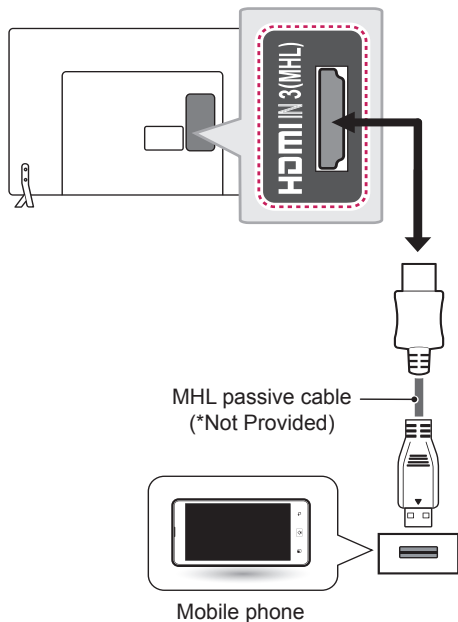
### NOTE

- 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 (32 KHz, 44.1 KHz, 48 KHz),  
PCM (32 KHz, 44.1 KHz, 48 KHz, 96 KHz, 192 KHz),  
DTS supported. (44.1 KHz, 48KHz - Only LY96\*\*),  
DTS not supported. (Only LY75\*\*)

## MHL Connection

(Only LY96\*\*)

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



### NOTE

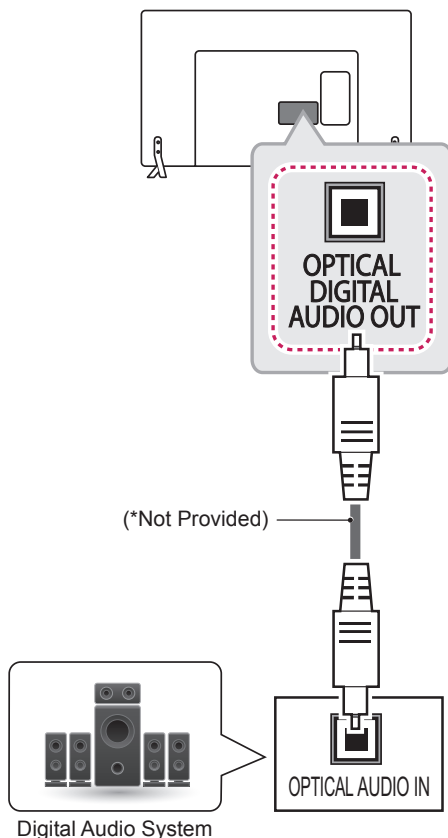
- Connect the mobile phone to the **HDMI IN 3 (MHL)** port to view the phone screen on the TV.
- The MHL passive cable is needed to connect the TV and a mobile phone.
- This only works for the MHL-enabled phone.
- Some applications can be operated by the remote control.
- Remove the MHL passive cable from the TV when:
  - » the MHL function is disabled
  - » your mobile device is fully charged in standby mode

## Audio Connection

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

### Digital Optical Audio Connection

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

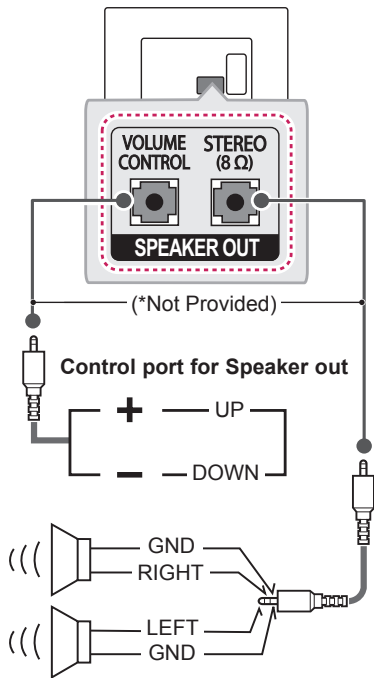


### NOTE

- 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.

Speaker Output Setup

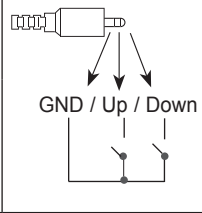
Connect the external speaker to the **SPEAKER OUT** jack on the TV.



**NOTE**

- Use only with the 3 Pole 3.5 mm Stereo Jack.
- Do not connect your headphones or earphones to the port for connecting a **SPEAKER OUT**.

Method of Volume control port

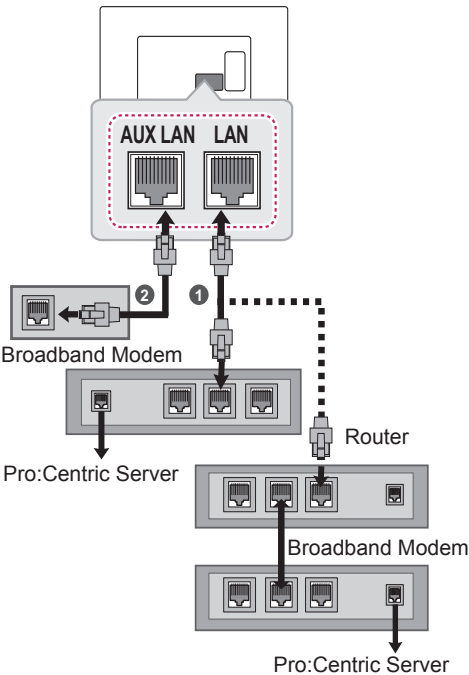
Cable Spec.		Each Up/ Down pin is pulled to 3.3 V with CPU GPIO. CPU detects transition from 3.3 V to GND level for volume control.
-------------	---	---

Network Setup

Wired network Connection

- Image shown may differ from your TV.

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.



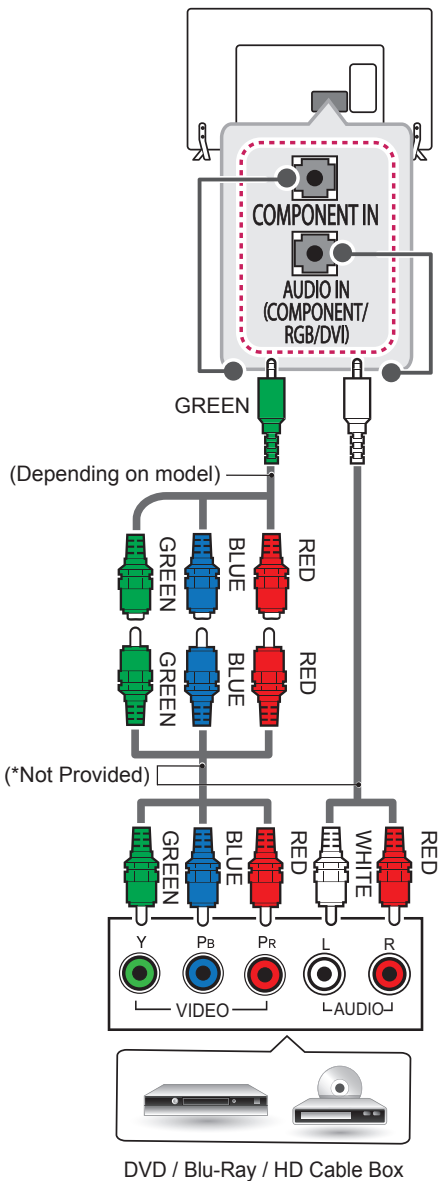
**CAUTION**

- 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.

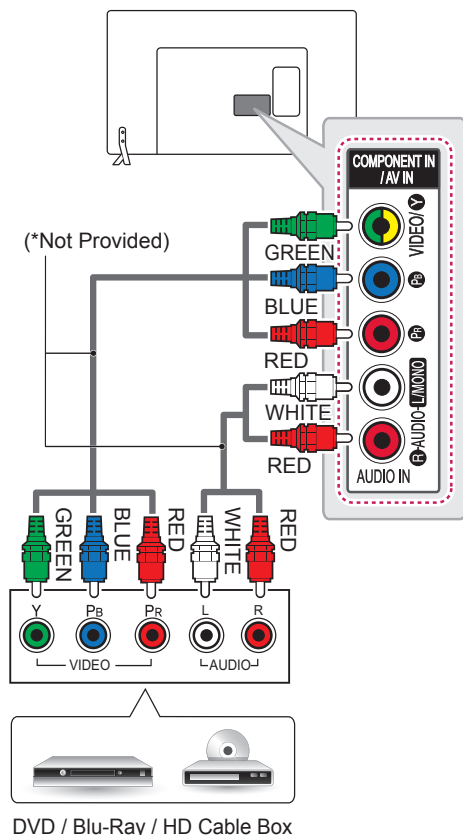
## Component Connection

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

(Only LY75\*\*)



(Only LY96\*\*)



### NOTE

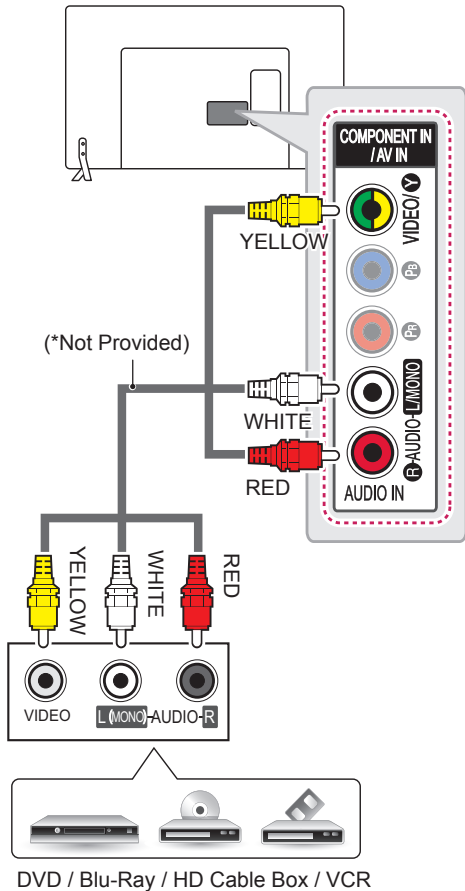
- If cables are not installed correctly, it could cause this image to display in black and white or with distorted colours.



## Composite Connection

(Only LY96\*\*)

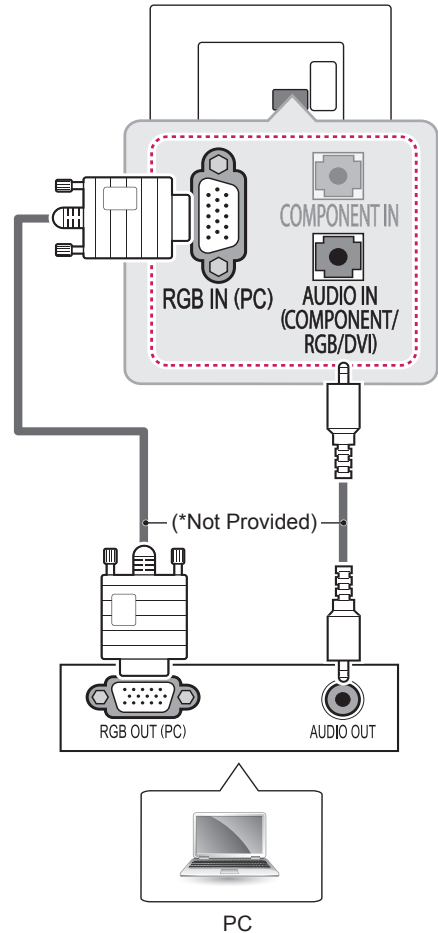
Transmits analog video and audio signals from an external device to the TV. Connect the external device and the TV with the composite cable as shown.



## RGB-PC Connection

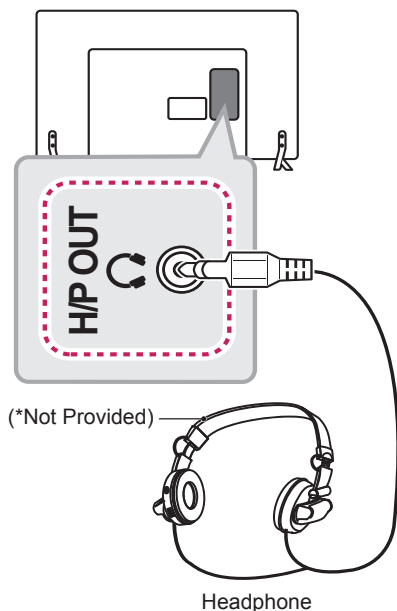
(Only LY75\*\*)

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



## Headphone Connection

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

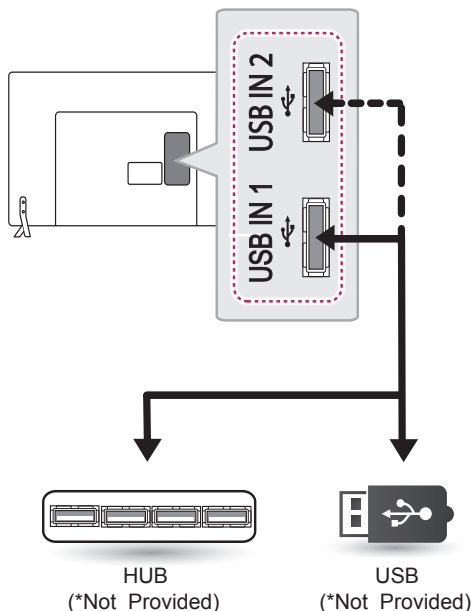


### NOTE

- 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  $\Omega$
- Max audio output of headphone:
  - » 9 mW to 15 mW (Only LY75\*\*)
  - » 0.627 mW to 1.334 mW (Only LY96\*\*)
- Headphone jack size: 0.35 cm

## USB Connection

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



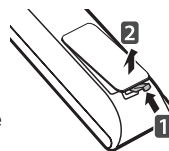
### NOTE

- 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.

# REMOTE CONTROL

This item is not included for all models.

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  $\oplus$  and  $\ominus$  ends to the label inside the compartment, and close the battery cover. To remove the batteries, perform the installation actions in reverse.

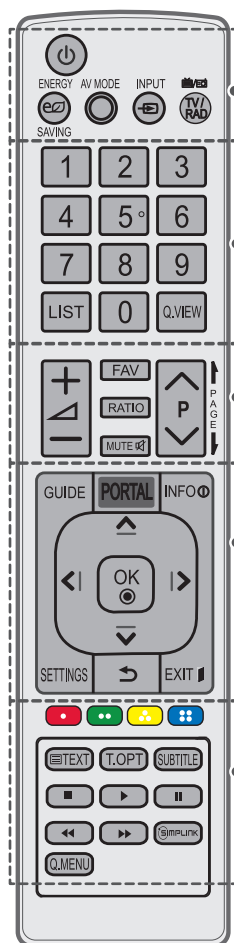


## CAUTION

- 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 LY75\*\*)



**POWER** Turns the TV on or off.  
**ENERGY SAVING** Adjusts the brightness of the screen to reduce energy consumption.  
**AV MODE** Selects an AV mode.  
**INPUT** Changes the input source.  
**TV/RAD** Selects Radio, TV and DTV programme.

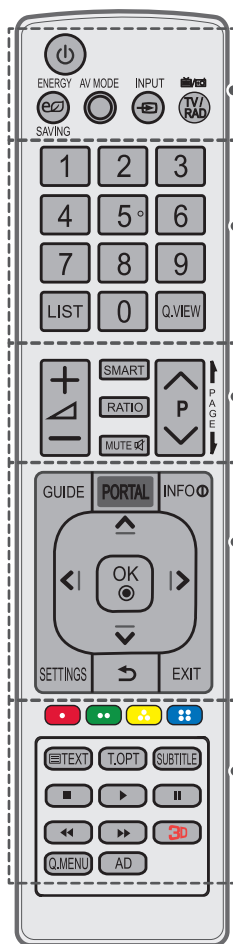
**Number buttons** Enters numbers.  
**LIST** Accesses the saved programme list.  
**Q.VIEW** Returns to the previously viewed programme.

**+ -** Adjusts the volume level.  
**FAV** Accesses your favourite programme list.  
**RATIO** Resizes an image.  
**MUTE** Mutes all sounds.  
**^ P v** Scrolls through the saved programmes.  
**← PAGE →** Moves to the previous or next screen.

**GUIDE** Shows programme guide.  
**PORTAL** Displays and removes hotel interactive menu.  
**INFO** Views the information of the current programme and screen.  
**Navigation buttons (up/down/left/right)** Scrolls through menus or options.  
**OK** Selects menus or options and confirms your input.  
**SETTINGS** Accesses the main menus.  
**↶ (BACK)** Returns to the previous level.  
**EXIT** Clears on-screen displays and return to TV viewing.

**Coloured buttons** These access special functions in some menus.  
(●: Red, ●: Green, ●: Yellow, ●: Blue)  
**Teletext buttons (TEXT/T.OPT)** These buttons are used for teletext.  
**SUBTITLE** Recalls your preferred subtitle in digital mode.  
**Control buttons (■, ►, II, ◀, ◀◀)** Controls the Premium contents, SmartShare menus or the SIMPLINK compatible devices (USB or SIMPLINK).  
**SIMPLINK** Accesses the AV devices connected with the HDMI cable through HDMI-CEC. Opens the SIMPLINK menu.  
**Q.MENU** Accesses the Quick menus.

(Only LY96\*\*)



	<b>(POWER)</b> Turns the TV on or off.
	<b>ENERGY SAVING</b> Adjusts the brightness of the screen to reduce energy consumption.
	<b>AV MODE</b> Selects an AV mode. (Depending on model)
	<b>INPUT</b> Changes the input source.
	<b>TV/RAD</b> Selects Radio, TV and DTV programme.
<b>Number buttons</b>	Enters numbers.
<b>LIST</b>	Accesses the saved programme list.
<b>Q.VIEW</b>	Returns to the previously viewed programme.
<b>+ / -</b>	Adjusts the volume level.
<b>SMART</b>	Accesses the Home menus.
<b>RATIO</b>	Resizes an image.
<b>MUTE</b>	Mutes all sounds.
<b>^ P v</b>	Scrolls through the saved programmes.
<b>← PAGE →</b>	Moves to the previous or next screen.
<b>GUIDE</b>	Shows programme guide.
<b>PORTAL</b>	Displays and removes hotel interactive menu.
<b>INFO</b>	Views the information of the current programme and screen.
<b>Navigation buttons (up/down/left/right)</b>	Scrolls through menus or options.
<b>OK</b>	Selects menus or options and confirms your input.
<b>SETTINGS</b>	Accesses the main menus.
<b>↶ (BACK)</b>	Returns to the previous level.
<b>EXIT</b>	Clears on-screen displays and return to TV viewing.
<b>Coloured buttons</b>	These access special functions in some menus. (: Red, : Green, : Yellow, : Blue)
<b>Teletext buttons</b> ( <b>TEXT/T.OPT</b> )	These buttons are used for teletext.
<b>SUBTITLE</b>	Recalls your preferred subtitle in digital mode.
<b>Control buttons</b> (	Controls the Premium contents, SmartShare menus or the SIMPLINK compatible devices (USB or SIMPLINK).
<b>3D</b>	Used for viewing 3D video.
<b>Q.MENU</b>	Accesses the Quick menus.
<b>AD</b>	By Pressing AD button, audio descriptions function will be enabled.

# 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


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.

Problem	Solution
Cannot control the TV with the remote control.	<ul style="list-style-type: none"><li>• Check the remote control sensor on the product and try again.</li><li>• Check if there is any obstacle between the product and the remote control.</li><li>• Check if the batteries are still working and properly installed (⊕ to ⊕, ⊖ to ⊖).</li></ul>
No image display and no sound is produced.	<ul style="list-style-type: none"><li>• Check if the product is turned on.</li><li>• Check if the power cord is connected to a wall outlet.</li><li>• Check if there is a problem in the wall outlet by connecting other products.</li></ul>
The TV turns off suddenly.	<ul style="list-style-type: none"><li>• Check the power control settings. The power supply may be interrupted.</li><li>• Check if the <b>Sleep Timer</b> or <b>Off Time</b> feature is activated in the <b>TIME</b> or <b>Timers</b> settings.</li></ul>
When connecting to the PC (RGB <sup>1</sup> / HDMI), 'No signal' or 'Invalid Format' is displayed.	<ul style="list-style-type: none"><li>• Turn the TV off/on using the remote control.</li><li>• Reconnect the RGB<sup>1</sup> / HDMI cable.</li><li>• Restart the PC with the TV on.</li></ul>


<sup>1</sup> Only LY75\*\*.

## SPECIFICATIONS

(Only LY75\*\*)

Wireless LAN module (TWFM-B006D) specification	
Standard	IEEE802.11a/b/g/n
Frequency Range	2400 to 2483.5 MHz 5150 to 5250 MHz 5725 to 5850 MHz (for Non EU)
Output Power (Max.)	802.11a: 11 dBm 802.11b: 14 dBm 802.11g: 10.5 dBm 802.11n - 2.4 GHz: 11 dBm 802.11n - 5 GHz: 12.5 dBm
<ul style="list-style-type: none"> <li>Because band channel used by the country could be different, the user can not change or adjust the operating frequency and this product is set for the regional frequency table.</li> <li>This device should be installed and operated with minimum distance 20 cm between the device and your body. And this phrase is for the general statement for consideration of user environment.</li> </ul>	
	

(Only LY96\*\*)

Wireless module (LGSBW41) Specifications			
Wireless LAN module		Bluetooth module	
Standard	IEEE 802.11a/b/g/n	Standard	Bluetooth Version 3.0
Frequency range	2400 to 2483.5 MHz 5150 to 5250 MHz 5725 to 5850 MHz (for Non EU)	Frequency range	2400 to 2483.5 MHz
Output power (Max.)	802.11a: 13 dBm 802.11b: 15 dBm 802.11g: 14 dBm 802.11n - 2.4 GHz: 16 dBm 802.11n - 5 GHz: 16 dBm	Output power (Max.)	10 dBm or Lower
<ul style="list-style-type: none"> <li>Because band channel used by the country could be different, the user can not change or adjust the operating frequency and this product is set for the regional frequency table.</li> <li>This device should be installed and operated with minimum distance 20 cm between the device and your body. And this phrase is for the general statement for consideration of user environment.</li> </ul>			
			

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		32LY750* 32LY755*	42LY750* 42LY755*	47LY750* 47LY755*
		32LY750H-TA 32LY755H-TA	42LY750H-TA 42LY755H-TA	47LY750H-TA 47LY755H-TA
Dimensions (W x H x D)	With stand (mm)	732 x 481 x 207	961 x 612 x 218	1073 x 676 x 247
	Without stand (mm)	732 x 437 x 55.5	961 x 567 x 55.5	1073 x 629 x 55.8
Weight	With stand (mm)	6.2	9.5	12.7
	Without stand (mm)	6.0	9.2	12.3
Power requirement		AC 100-240 V~ 50 / 60 Hz		
MODELS		55LY750* 55LY755*	32LY751*	39LY751*
		55LY750H-TA 55LY755H-TA	32LY751H-TA	39LY751H-TA
Dimensions (W x H x D)	With stand (mm)	1243 x 772 x 247	732 x 482 x 282	885 x 572 x 282
	Without stand (mm)	1243 x 725 x 56.8	732 x 437 x 55.5	885 x 524 x 55.5
Weight	With stand (mm)	17.7	8.9	10.9
	Without stand (mm)	17.3	6.0	8
Power requirement		AC 100-240 V~ 50 / 60 Hz		
MODELS		42LY751*	47LY751*	55LY751*
		42LY751H-TA	47LY751H-TA	55LY751H-TA
Dimensions (W x H x D)	With stand (mm)	961 x 617 x 325	1073 x 680 x 325	1243 x 771 x 325
	Without stand (mm)	961 x 567 x 55.5	1073 x 629 x 55.8	1243 x 725 x 56.8
Weight	With stand (mm)	12.6	15.7	20.7
	Without stand (mm)	9.2	12.3	17.3
Power requirement		AC 100-240 V~ 50 / 60 Hz		
MODELS		42LY96**	47LY96**	55LY96**
		42LY960H-TA	47LY960H-TA	55LY960H-TA
Dimensions (W x H x D)	With stand (mm)	949 x 611 x 218	1061 x 677 x 247	1231 x 772 x 247
	Without stand (mm)	949 x 560 x 55.1	1061 x 623 x 55.1	1231 x 718 x 55.1
Weight	With stand (mm)	10.3	13.2	18.9
	Without stand (mm)	10	12.8	18.5
Power requirement		AC 100-240 V~ 50 / 60 Hz		



MODELS		60LY96**
		60LY960H-TA
Dimensions (W x H x D)	With stand (mm)	1338.4 x 837 x 273.5
	Without stand (mm)	1338.4 x 778.8 x 58.1
Weight	With stand (mm)	21.8
	Without stand (mm)	21.3
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 (Depend on Country)	Analogue TV (Depend on Country)
Television System	DVB-T (DVB-T/T2 <sup>1</sup> )	PAL B/B, PAL B/G, PAL D/K, PAL-I SECAM B/G, SECAM D/K NTSC-M
Programme Coverage	VHF, UHF	VHF, UHF, CATV
Maximum number of storable programmes	DVB-T/T2 & Analogue TV : 1,500	
External Antenna Impedance	75 Ω	

<sup>1</sup> Only DVB-T2 Support models.

**HDMI-DTV Supported Mode**

Resolution	Horizontal Frequency (kHz)	Vertical Frequency (Hz)
640 x 480 (Only LY96**)	31.469 31.5	59.94 60.00
720 x 480	31.47 31.5	59.94 60
720 x 576	31.25	50
1280 x 720	44.96 45 37.5	59.94 60 50
1920 x 1080	28.125 33.72 33.75 26.97 27.00 33.71 33.75 56.25 67.432 67.5	50 59.94 60.00 23.976 24.000 29.97 30.00 50.00 59.94 60.00

**Component port connecting information**

Component ports on the TV	Y	P <sub>B</sub>	P <sub>R</sub>
---------------------------	---	----------------	----------------

Video output ports on DVD player	Y	P <sub>B</sub>	P <sub>R</sub>
	Y	B-Y	R-Y
	Y	Cb	Cr
	Y	Pb	Pr

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

**RGB-PC<sup>1</sup>, HDMI-PC Supported Mode**

- PC audio not supported. (Only LY96\*\*)

Resolution	Horizontal Frequency (kHz)	Vertical Frequency (Hz)
640 x 350	31.468	70.09
720 x 400	31.469	70.08
640 x 480	31.469	59.94
800 x 600	37.879	60.31
1024 x 768	48.363	60.00
1152 x 864	54.348	60.053
1280 x 1024	63.981	60.020
1360 x 768	47.712	60.015
1920 x 1080	67.5	60

<sup>1</sup> Only LY75\*\*.

**3D supported mode (Only 3D models)**

- Video, which is input as below media contents is switched into the 3D screen automatically. The method for 3D digital broadcast may differ depending on the signal environment. If video is not switched automatically into 3D, manually convert the settings to view 3D images. For models supporting Miracast / Intel® WiDi, you can set the 3D mode.

3D supported mode automatically				
Input	Signal	Horizontal Frequency (kHz)	Vertical Frequency (Hz)	Playable 3D video format
HDMI	480p	31.469 / 31.5	59.94 / 60	Top & Bottom, Side by Side(Half), Side by Side(Full)
		62.938 / 63		Frame Packing, Line Alternative
	576p	31.25	50	Top & Bottom, Side by Side(Half), Side by Side(Full)
		62.5		Frame Packing, Line Alternative
	720p	37.50	50	Top & Bottom, Side by Side(Half), Side by Side(Full)
		44.96 / 45	59.94 / 60	
		75	50	Frame Packing, Line Alternative
		89.91 / 90	59.94 / 60	
	1080i	28.125	50	Top & Bottom, Side by Side(Half), Side by Side(Full)
		33.72 / 33.75	59.94 / 60	
		56.25	50	Frame Packing, Field Alternative
		67.432 / 67.5	59.94 / 60	
	1080p	26.97 / 27	23.97 / 24	Top & Bottom, Side by Side(Half), Side by Side(Full)
		28.125	25	
		33.716 / 33.75	29.976 / 30	
		43.94 / 54	23.97 / 24	Frame packing, Line Alternative
		56.25	25	
		67.432 / 67.5	29.976 / 30	
		56.25	50	Top & Bottom, Side by Side(Half)
		67.432 / 67.5	59.94 / 60	
	Signal			Playable 3D video format
DTV	Frame Compatible			Side by Side(Half), Top & Bottom

3D supported mode manually				
Input	Signal			Playable 3D video format
	Resolution	Horizontal Frequency (kHz)	Vertical Frequency (Hz)	
DTV	HD / SD	-	-	2D to 3D, Side by Side(Half), Top & Bottom
ATV (CVBS)	SD	-	-	
Component	1280 x 720p	37.5	50	
		45	60	
		44.96	59.94	
	1920 x 1080i	33.75	60	
		33.72	59.94	
		28.12	50	
	1920 x 1080p	67.5	60	
		67.432	59.94	
		27	24	
		28.12	25	
		56.25	50	
		26.97	23.976	
		33.75	30	
		33.71	29.97	
HDMI-PC	1024 x 768p	48.36	60	
	1360 x 768p	47.71		
	1920 x 1080p	67.5		2D to 3D, Side by Side(Half), Top & Bottom, Checker Board, Single Frame Sequential, Row Interleaving, Column Interleaving
	Others	-	-	2D to 3D, Side by Side(Half), Top & Bottom

3D supported mode manually				
Input	Signal			Playable 3D video format
	Resolution	Horizontal Frequency (kHz)	Vertical Frequency (Hz)	
HDMI-DTV	480p	31.5	60	2D to 3D, Side by Side(Half), Top & Bottom, Checker Board, Frame Sequential, Row Interleaving, Column Interleaving
	576p	31.25	50	
	720p	37.5	50	
		45	60	
	1080i	28.125	50	2D to 3D, Side by Sied(Half), Top & Bottom
		33.75	60	
	1080p	27	24	2D to 3D, Side by Side(Half), Top & Bottom,Checker Board, Row Interleaving, Column Interleaving
		28.12	25	
		33.75	30	
		56.25	50	2D to 3D, Side by Side(Half), Top & Bottom, Checker Board, Frame Sequential, Row Interleaving, Column Interleaving
		67.5	60	
USB (Movie)	Under 704 x 480	-	-	2D to 3D
	Over 704x480 under 1080p interlaced	-	-	2D to 3D, Side by Side(Half), Top & Bottom
	Over 704x480 under 1080p progressive	-	50 / 60	2D to 3D, Side by Side(Half), Top & Bottom,Checker Board, Row Interleaving, Column Interleaving, Frame Sequential
	Over 704x480 under 1080p progressive	-	Others	2D to 3D, Side by Side(Half), Top & Bottom,Checker Board, Row Interleaving, Column Interleaving
USB (Photo)	Under 320 x 240	-	-	2D to 3D
	Over 320 x 240	-	-	2D to 3D, Side by Side(Half), Top & Bottom
Miracast/ Intel® WiDi	1024 x 768p	-	30 / 60	2D to 3D, Side by Side(Half), Top & Bottom
	1280 x 768p	-	30 / 60	
	1920 x 1080p	-	30 / 60	
	Others	-	-	2D to 3D

Video Codec

(Only LY96\*\*)

Extension	Codec	
.asf .wmv	Video	VC-1 Advanced Profile (WMVA excluded), VC-1 Simple and Main Profiles
	Audio	WMA Standard (WMA v1/WMA Speech excluded), WMA 9 Professional
.divx .avi	Video	DivX3.11, DivX4, DivX5, DivX6, 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
	Audio	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
	Audio	Dolby Digital, PCM, DTS, MPEG-1 Layer I, II, MPEG-1 Layer III (MP3), AAC
.ts .trp .tp .mts	Video	H.264/AVC, MPEG-2
	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 .rmvb	Video	RV30, RV40
	Audio	Realaudio6(cook), AAC LC, HE-AAC
	• This feature is available in certain countries only.	

**Audio Format**

(Only LY96\*\*)

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.	~384 kHz
	Support	PCM
	Channels	mono, stereo
.ogg	Bit rate	64 Kbps - 500 Kbps
	Sample freq.	8 kHz - 48 kHz
	Support	Vorbis
	Channels	mono, stereo
.wma	Bit rate	~1.5 Mbps
	Sample freq.	8 kHz - 192 kHz
	Support	WMA
	Channels	up to 8 ch

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

**Photo Format**

(Only LY96\*\*)

- Only 2D models

File Format	Format	Resolution
.jpeg, .jpg, .jpe	JPEG	Minimum: 64 x 64 Maximum: 15360 (W) x 8640 (H) / Progressive Type: 1920 (W) x 1440 (H)
.png	PNG	Minimum: 64 x 64 Maximum: 1920 (W) x 1080 (H)
.bmp	BMP	Minimum: 64 x 64 Maximum: 1920 (W) x 1080 (H)

- Only 3D models

File Format	Format	Resolution
.jps	JPS	Minimum: 64 x 64 Maximum: 15360 (W) x 8640 (H)
.mpo	MPO	4:3 size: 3648 x 2736, 2592 x 1944, 2048 x 1536 3:2 size: 3648 x 2432

## IR CODES

- This feature is not available for all models.

Code (Hexa)	Function	Note	Code (Hexa)	Function	Note
08	 (POWER)	Remote control Button (Power On/Off)	44	OK 	Remote control Button
95	ENERGY SAVING 	Remote control Button	43	SETTINGS	Remote control Button
30	AV MODE	Remote control Button	28		Remote control Button
0B	INPUT 	Remote control Button	5B	EXIT	Remote control Button
F0	TV/RAD 	Remote control Button	72	 (RED)	Remote control Button
10-19	Number Key 0-9	Remote control Button	71	 (GREEN)	Remote control Button
53	LIST	Remote control Button	63	 (YELLOW)	Remote control Button
1A	Q.VIEW	Remote control Button	61	 (BLUE)	Remote control Button
02		Remote control Button	20	 TEXT	Remote control Button
03		Remote control Button	21	T.OPT (T.Option)	Remote control Button
1E	FAV	Remote control Button	39	SUBTITLE	Remote control Button
79	RATIO	Remote control Button	B1		Remote control Button
09	MUTE	Remote control Button	B0		Remote control Button
00	 P / PAGE 	Remote control Button	BA		Remote control Button
01	P  / PAGE 	Remote control Button	8E		Remote control Button
AB	GUIDE	Remote control Button	8F		Remote control Button
0C	PORTAL	Remote control Button	7E	SIMPLINK	Remote control Button
AA	INFO 	Remote control Button	45	Q.MENU	Remote control Button
40		Remote control Button	7C	SMART	Remote control Button
41		Remote control Button	91	AD	Remote control Button
07		Remote control Button	DC		Remote control Button
06		Remote control Button			



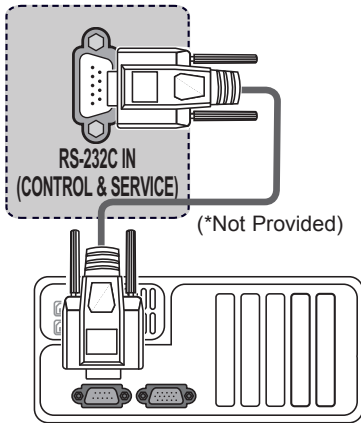
# EXTERNAL CONTROL DEVICE SETUP

## RS-232C Setup

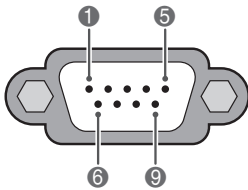
Connect the RS-232C (serial port) input jack to an external control device (such as a computer or an A/V control system) to control the product's functions externally.

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 (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)

	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	8	RTS
CTS	8	7	CTS
	D-Sub 9	D-Sub 9	

### Set ID

Set ID number. "Real Data Mapping".

- 1 Press **SETTINGS** or **HOME** 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)

	COM-MAND1	COM-MAND2	DATA (Hexadecimal)		COM-MAND1	COM-MAND2	DATA (Hexadecimal)
01. Power	k	a	00 to 01	12. Remote Control Lock Mode	k	m	00 to 01
02. Aspect Ratio	k	c	(See p. 48)	13. Balance	k	t	00 to 64
03. Screen Mute	k	d	(See p. 48)	14. Colour Temperature	x	u	00 to 64
04. Volume Mute	k	e	00 to 01	15. Energy Saving	j	q	(See p. 50)
05. Volume Control	k	f	00 to 64	16. Auto Configure	j	u	01
06. Contrast	k	g	00 to 64	17. Equalize	j	v	(See p. 50)
07. Brightness	k	h	00 to 64	18. Tune Command	m	a	(See p. 50)
08. Colour	k	i	00 to 64	19. Programme Add/Skip	m	b	00 to 01
09. Tint	k	j	00 to 64	20. Key	m	c	(See p. 51)
10. Sharpness	k	k	00 to 32	21. Control Back Light	m	g	00 to 64
11. OSD Select	k	l	00 to 01	22. Input select (Main)	x	b	(See p. 51)



### 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

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 Min : 00 to Max : 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	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	1	0	1	Screen Off
0	0	0	0	Low Power	1	0	0	Auto

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

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

## 16. 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]

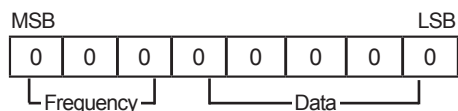
Data 01 : To set

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

## 17. Equalizer (Command : j v) (Only LY96\*\*)

- 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	0	0	0	1	1	19(decimal)
1	0	0	5th Band	0	0	1	0	1	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

Data02 : [Antena]

0x00 : Analog Main

0x10 : DTV Main

0x20 : Radio

[Cable]

0x80 : Analog Main

0x90 : DTV Main

0xA0 : Radio

Channel data range

Analogue - 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

## 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

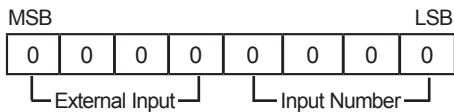
Ack [g][ ][Set ID][ ][OK/NG][Data][x]

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









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<sup>®</sup>**  
**Digital Video**  
**Broadcasting**