LG
Life's Good

OWNER'S MANUAL
CINEMA 3D TV

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

CINEMA 3D TV MODEL
DM2350D

www.lg.com

ENGLISH

CONTENTS

LICENSES

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INSTALLATION PROCEDURE

1 Open the package and make sure all the accessories are included.

2 Attach the stand to the TV.

3 Connect an external device to the TV.

> **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.

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 accessories.

> **NOTE**
>
> • The accessories supplied with your product may vary depending on the model.
> • Product specifications or contents in this manual may be changed without prior notice due to upgrade of product functions.

> **CAUTION**
>
> • Do not use any pirated items to ensure the safety and product life span.
> • Any damages or injuries by using pirated items are not covered by the warranty.

ENGLISH
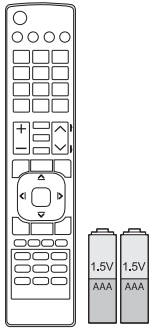
Remote control / Batteries(AAA)
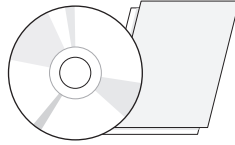
CD (Owner's Manual) / Card
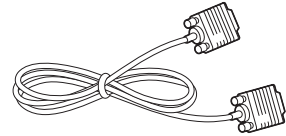
RGB Cable
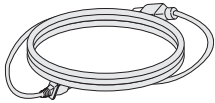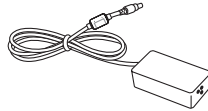
Power Cord

AC-DC Adapter

Audio Cable

Cable Tie
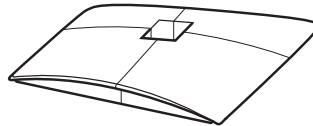
Stand Base

TriDef 3D Game Software CD / Quick Installation Guide
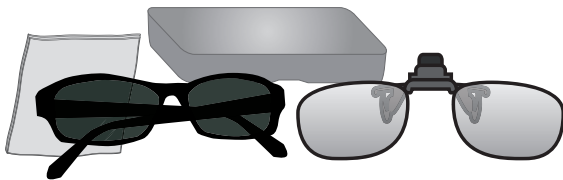
Cinema 3D Glasses(Nomal type / Clip type)

The number of 3D glasses may differ depending on the model or country.

ENGLISH

Parts and buttons

Power Indicator
• Lighting On: Turned on
• Lighting Off: Turned off

Touch Buttons

Remote Control Sensor

Connection panel (see p. 14)
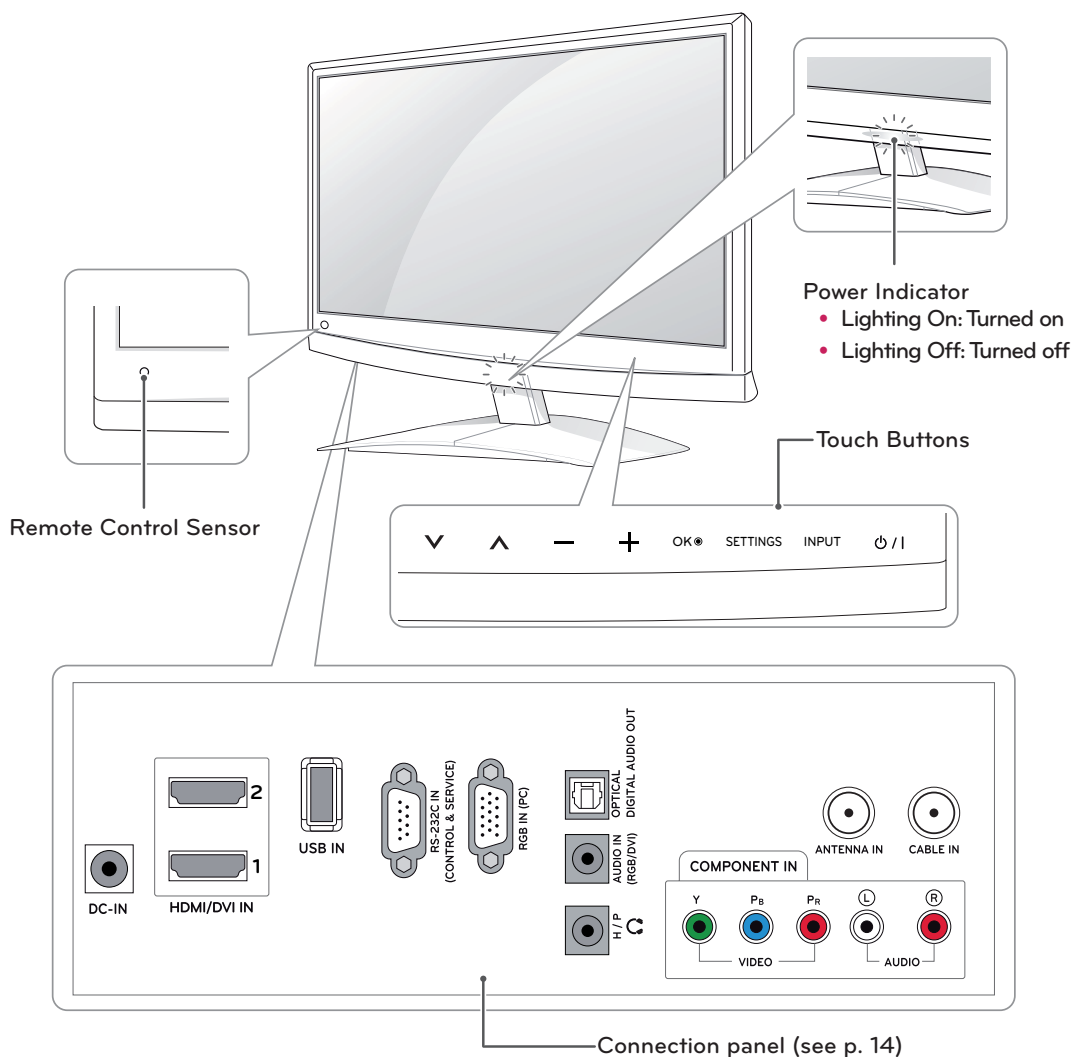
Touch button	Description
∨ ∧	Scrolls through the saved channels.
− +	Adjusts the volume level.
OK ◉	Selects the highlighted menu option or confirms an input.
SETTINGS	Accesses the main menus, or saves your input and exits the menus.
INPUT	Changes the input source.
⏻ / Ⅰ	Turns the power on or off.

All of the buttons are touch sensitive and can be operated through simple touch with your finger.

> **NOTE**
>
> You can set the Power indicator to on or off by selecting **OPTION** in the main menus.

Lifting and moving the TV

When moving or lifting the TV, read the following to prevent the TV from being scratched or damaged and for save transportation regardless of its type and size.

> ⚠ **CAUTION**
>
> Avoid touching the screen at all times, as this may result in damage to the screen or some of the pixels used to create images.

- 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.
- Hold the top and bottom of the TV frame firmly. Make sure not to hold the transparent part, speaker, or speaker grill area.
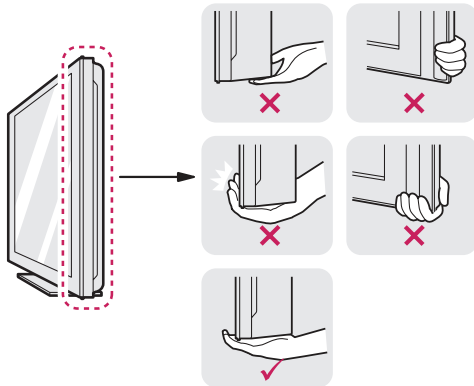
- When holding the TV, the screen should face away from you to prevent the screen from scratches.
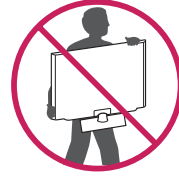
- When transporting the TV, do not expose the TV to jolts or excessive vibration.
- When transporting the TV, keep the TV upright, never turn the TV on its side, or tilt towards the left or right.

Setting up the TV

Attaching the Stand Base

If you are not mounting the TV to a wall, use the following instructions to attach the stand base.

1 Place the TV with the screen side down on a flat and cushioned surface.

> ⚠ CAUTION
>
> • Lay a foam mat or soft protective cloth on the surface to protect the screen from damage.
> • When attaching the stand to the TV, place the screen facing down on a cushioned table or flat surface to protect the screen from scratches.

2 Attach the **Stand Base** from the TV by turning the screw to the right with a **Coin**.
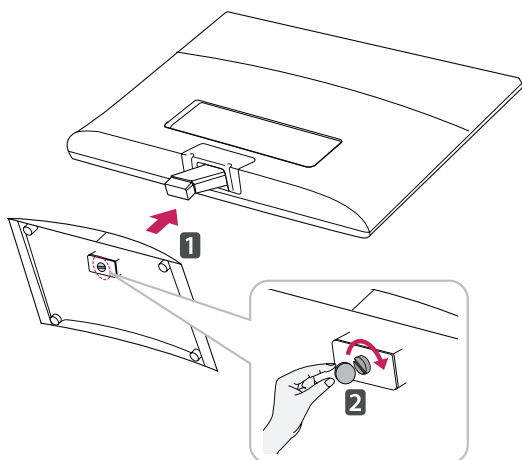
> ⚠ CAUTION
>
> Tighten the screws firmly to prevent the TV from tilting forward. Do not over tighten.

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.
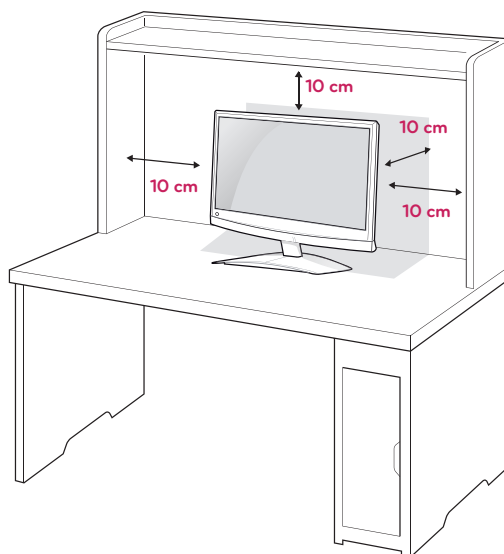
2 Connect the **AC-DC Adapter** and **Power Cord** to a wall outlet.
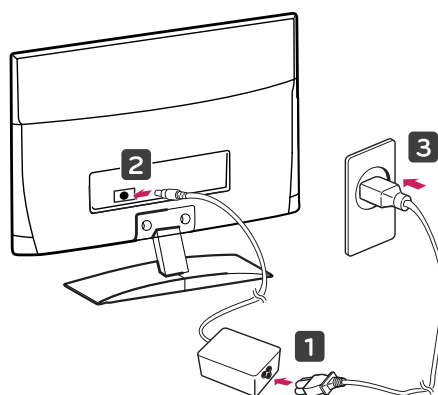
> ⚠ CAUTION
>
> Do not place the TV near or on sources of heat, as this may result in fire or other damage.

⚠ WARNING

When you adjust the angle, do not hold the buttom of the TV frame as shown on the following illustration, it may injure your fingers.
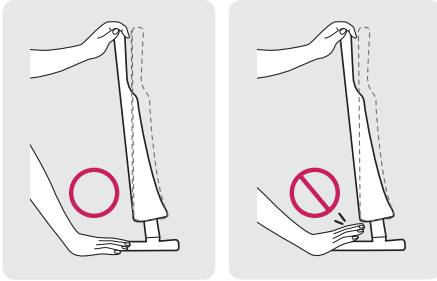
⚠ CAUTION

Disconnect the power cord first, and then move or install the TV. Otherwise electric shock may occur.

❗ NOTE

Tilt from +18 to -5 degrees up or down to adjust the angle of the TV to suit your view

A   B

Front   Rear
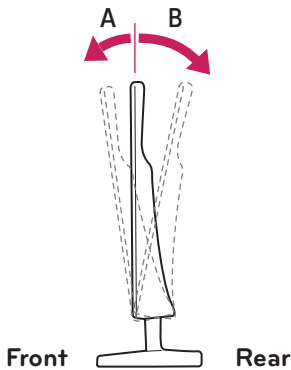
Tidying cables

Gather and bind the cables with the supplied cable tie.
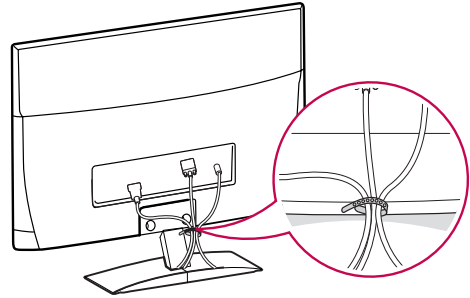
Using the Kensington security system

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

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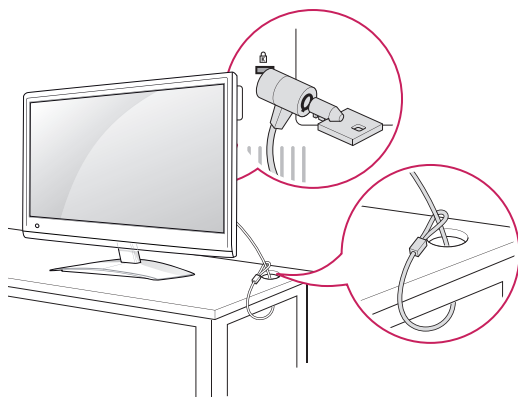
ⓘ **NOTE**

The Kensington security system is optional. You can obtain additional accessories from most electronics stores.

Detaching the Stand Base and Body

1 Place the TV with the screen side down on a flat and cushioned surface.

⚠ **CAUTION**

• Lay a foam mat or soft protective cloth on the surface to protect the screen from damage.
• When detaching the stand to the TV, place the screen facing down on a cushioned table or flat surface to protect the screen from scratches.

2 Turn the screw to the left, and then pull out the **Stand Base** from the **Stand Body**.
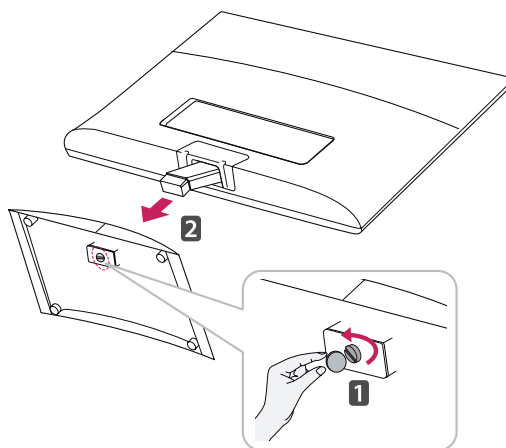
3 Remove 2 screws and pull out the **Stand Body** from the TV.
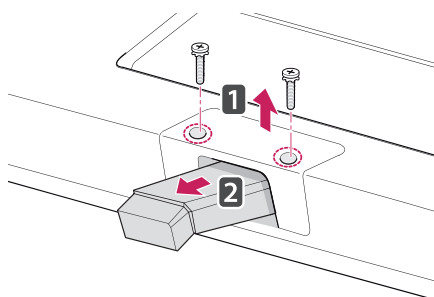
Mounting on a wall

For proper ventilation, allow a clearance of 10 cm on each side and from the wall. Detailed installation instructions are available from your dealer, see the optional Tilt Wall Mounting Bracket Installation and Setup Guide.
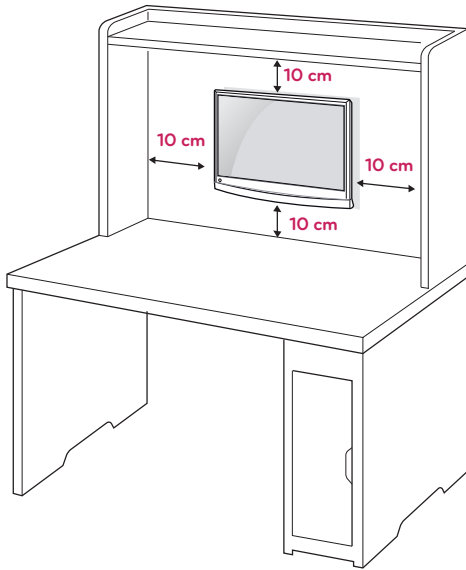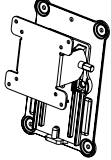
If you intend to mount the TV to a wall, attach the Wall mounting interface (optional parts) to the back of the set.
When you install the TV using the wall mounting interface (optional parts), attach it carefully so it will not drop.

1 Please use a wall mount interface in accordance with VESA Standards.

2 If you use screws longer than standard, the TV might be damaged internally.

3 If you use improper screws, the product might be damaged and drop from the mounted position. In this case, LG Electronics is not responsible for damage.

4 VESA compatible only with respect to screw mounting interface dimensions and mounting screw specifications.

5 Please use VESA standard as below.
  • 784.8 mm (30.9 inch) and under
    * Wall Mount Pad Thickness : 2.6 mm
    * Screw : Φ 4.0 mm x Pitch 0.7 mm x
              Length 10 mm
  • 787.4 mm (31.0 inch) and above
    * Please use VESA standard wall mount pad and screws.

Model	DM2350D
VESA (A x B)	75 x 75
Standard screw	M4
Number of screws	4
Wall mount bracket (optional)	RW120

• VESA (A x B)
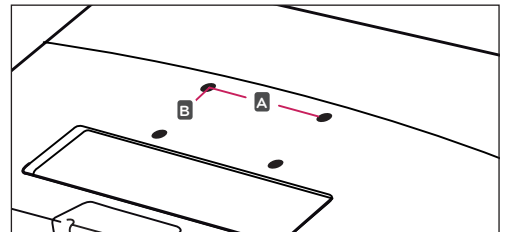
⚠ CAUTION

- Disconnect the power cord 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 screws and a wall mount that complies with the VESA standard. Any damages or injuries by misuse or using an improper accessory are not covered by the 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 optional. You can obtain additional accessories from your local dealer.
- The length of screws may differ depending on the wall mount. Be sure to use the proper length.
- For more information, refer to the instructions supplied with the wall mount.

MAKING CONNECTIONS

Connect various external devices to the TV and switch input modes to select an external device. For more information about an external device's connection, refer to the manual supplied with each device.
Available external devices are: HD receivers, DVD players, VCRs, Audio systems, USB storage devices, PC, Camcorders or Cameras, Gaming devices, and other External devices.

> ⓘ **NOTE**
>
> - 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 about recording, refer to the manual supplied with the connected device.
> - The external device connection may differ from the model.
> - Connect external devices to the TV regardless of the order of the TV port.

Selecting an input source

1 Press **INPUT** to access the input source list.

2 Press the Navigation buttons to scroll to one of the input sources and press **OK**.

Input List				⟳ Move ⊙ OK	
TV	USB	Component	RGB-PC	HDMI1	HDMI2

■ SimpLink   ■ Input Label   ♂ Exit
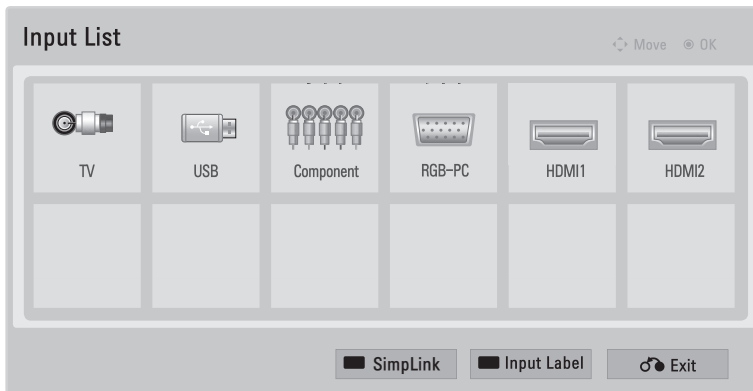
3 When you are finished, press **EXIT**.
When you return to the previous menu, press ⤶**(BACK)**.

Connecting an antenna or cable

Connect an antenna, cable, or cable box to watch TV referring to the following. The illustrations may differ from the actual accessories and an RF cable is optional.

Connecting an antenna or basic cable

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

ANTENNA IN

Wall Antenna Socket   **Outdoor Antenna**
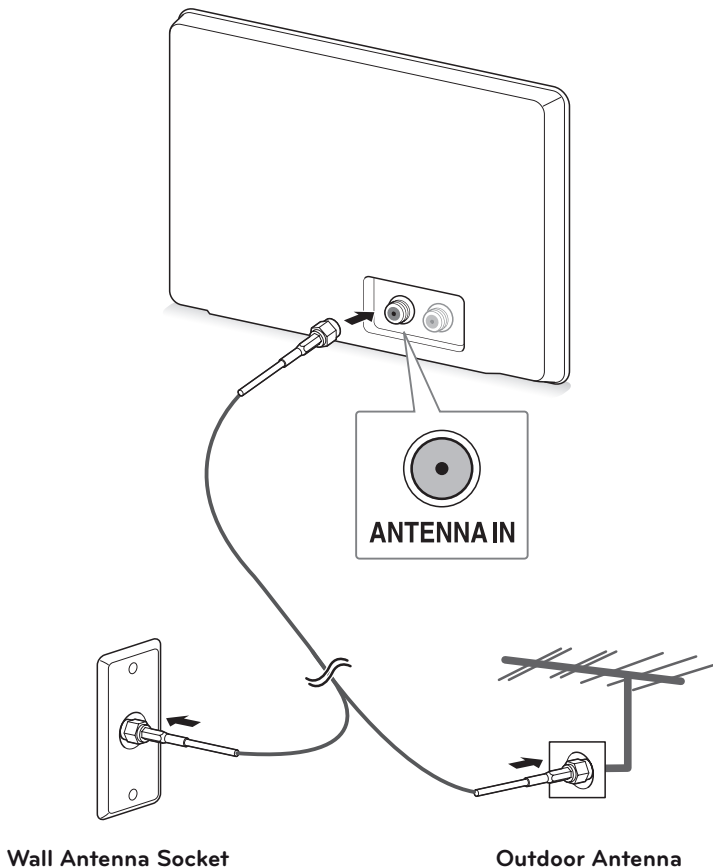
> **NOTE**
>
> - Use a signal splitter to use more than 2 TVs.
> - If the image quality is poor, install a signal amplifier properly to improve the image quality.
> - If the image quality is poor with an antenna connected, aim the antenna to the proper direction.
> - Visit *http://AntennaWeb.org* for more information about the antenna and cable connection.

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Connecting with a cable box

Connect the TV to a cable box and the cable box to a wall antenna socket with 2 RF cables (75 ohm).

CABLE IN

IN   **OUT**

Cable Box
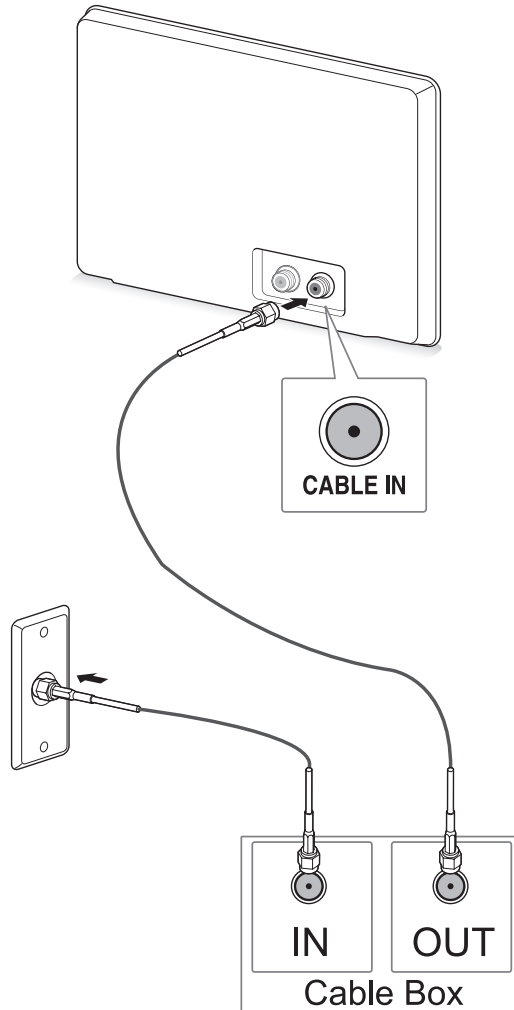
⚠ **CAUTION**

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

Copper wire
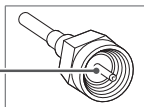
- Complete all connections instructions between devices, and then connect the power cord to the power outlet to prevent damages to your TV.

Connecting to a HD receiver, DVD, VCR player or Gaming device

Connect a HD receiver, DVD, VCR player or Gaming device to the TV and select an appropriate input mode.

HDMI connection

HDMI is the best way to connect a device.
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 on the following illustration.

> **NOTE**
>
> • Use a High Speed HDMI™ Cable.
> • High Speed HDMI™ Cables are tested to carry an HD signal up to 1080p and higher.
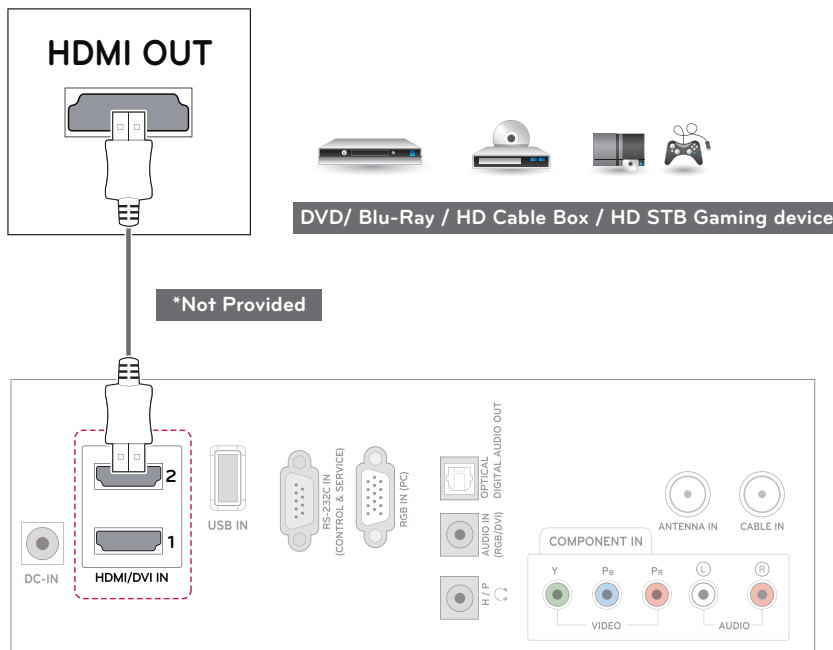
HDMI OUT

DVD/ Blu-Ray / HD Cable Box / HD STB Gaming device

*Not Provided

• **Choose any HDMI input port to connect.**
• **It does not matter which port you use.**

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 in the following illustration.

> **NOTE**
>
> If you do not use an optional external speaker, connect the PC to the TV with the supplied audio cable.

DVI OUT   **AUDIO OUT**

DVD/ Blu-Ray / HD Cable Box / HD STB Gaming device

*Not Provided

USB IN

DC-IN   HDMI/DVI IN

RS-232C IN (CO

RGB IN (PC)

OPTICAL DIGITAL AUDIO OUT

AUDIO IN (RGB/DVI)

H / P

COMPONENT IN

ANTENNA IN   CABLE IN

Y   P_B   P_R   (L)   (R)
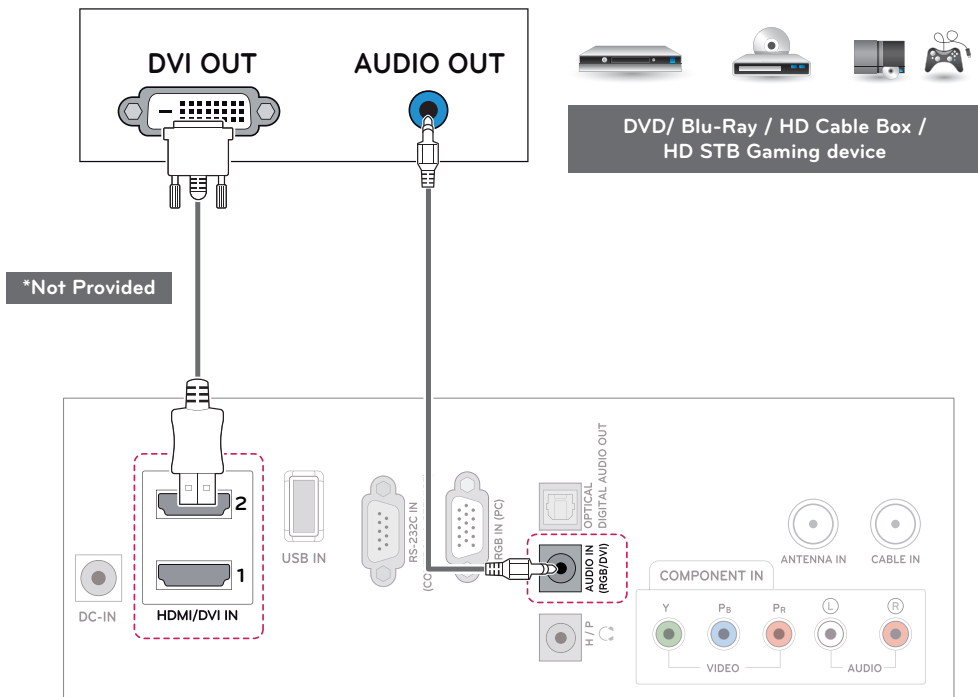
VIDEO   AUDIO

Component connection

Transmits the analog video and audio signals from an external device to the TV. Connect the external device and the TV with the component cable as shown on the following illustration. To display images by using progressive scan, make sure to use the component cable.

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> **NOTE**
>
> • If cables are installed incorrectly, it could case the image to display in black and white or with distorted color.
> • Check to ensure the cable are matched with the corresponding color connection.
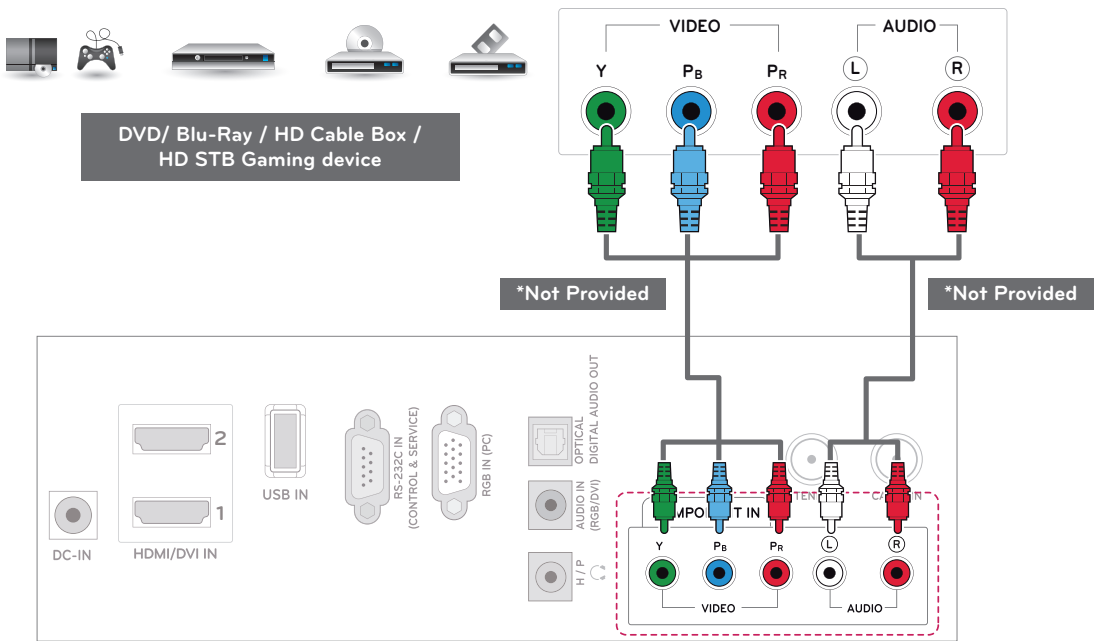
Connecting to an audio system

Use an optional external audio system instead of the built-in speaker.

> ⓘ **NOTE** ————————————————————————————————————
>
> If you use an 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 on the following illustration
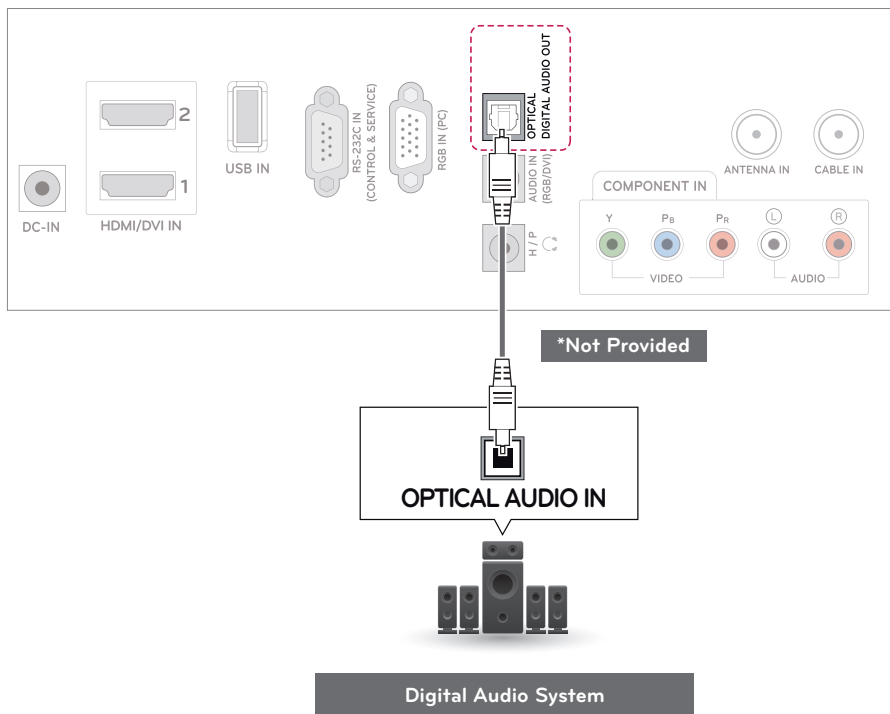
Headphone connection

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

ENGLISH

*Not Provided

Headphone
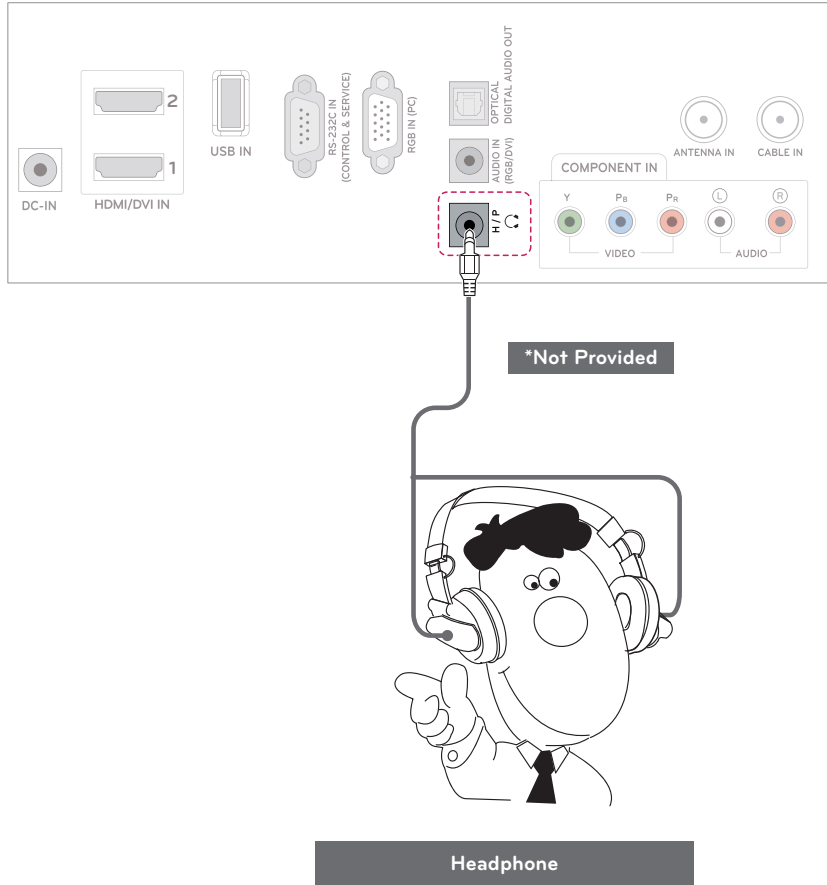
Connecting to a USB

Connect a USB storage device such as s USB flash memory, external hard drive, MP3 player or a USB memory card reader to the TV and access the USB menu to use various multimedia files.
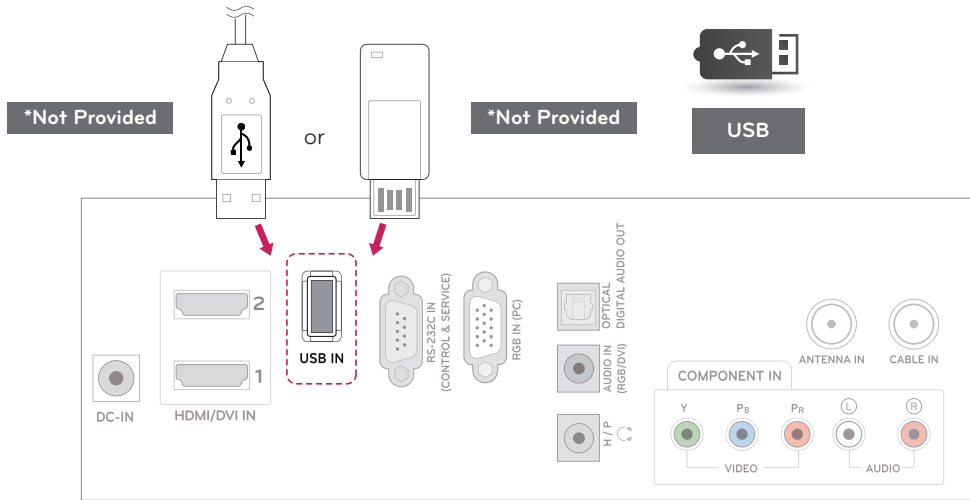
Connecting to a PC

Your TV supports the Plug & Play* feature and has the built-in speakers with Infinite Surround that reproduces sound clearly with rich bass.

* Plug & Play: This is the function that allows a PC to use the TV without installing a driver.

> **NOTE**
>
> - It is recommended to use the TV with the HDMI connection for the best image quality.
> - If you want to use an optional external speaker instead of the built-in speaker, set the TV speaker feature to off .
> - If you do not use an optional external speaker, connect the PC to the TV with the optional audio cable.
> - If you turn the TV on when the set becomes cold, the screen may flicker. This is normal.
> - Use a shielded signal interface cable, such as D-sub 15 pin signal cable and DVI to HDMI cable, with a ferrite core to maintain standard compliance for the product.
> - Some red, green, or blue spots may appear on the screen. This is normal.
> - Connect the signal input cable and tighten it by turning the screws clockwise.
> - Do not press the screen with your finger for a long time as this may result in temporary distortion on the screen.
> - Avoid displaying a fixed image on the screen for a long period of time to prevent image burn. Use a screensaver if possible.
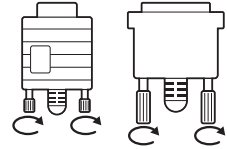
> **NOTE**
>
> - The **OSD (On Screen Display)** is displayed on the screen as shown below.
>   - » When turning the product on in **HDMI** input.
>   - » When switching to **HDMI** input.
>   - » When connecting an **HDMI** cable with no signal.
>
> ⚠ **Is the input connected to your PC?**
>
> | Yes | No |
>
> ☐ **Do not show message again.**
>
> - If you select **"Yes"** the size and image quality are optimised for your PC.
> - If you select **"No"** the size and image quality are optimised for the **AV device (DVD player, set-top box, gaming device)**.
> - If you select **"Do not show message again"** this message does not appear until the TV is reset. You can change the set value in **Input ▶ Blue button ▶ Input Label**.
> - The values set for HDMI1/HDMI2 are saved independently.
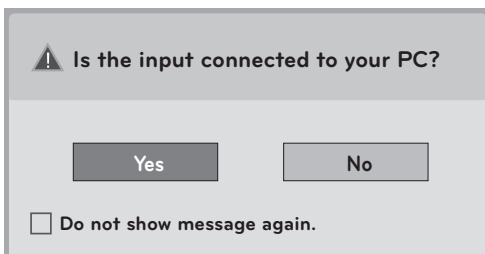
HDMI connection

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 in the following illustrations. You should set PC as an input label to connect the PC to the TV with an HDMI connection.

> **NOTE**
>
> • Use a High Speed HDMI™ Cable.
> • Please check the PC environment if you cannot hear the sound in HDMI mode.
> • High Speed HDMI™ Cables are tested to carry an HD signal up to 1080p and higher.
> • If you want to use HDMI-PC mode, you must set the input label to PC mode.
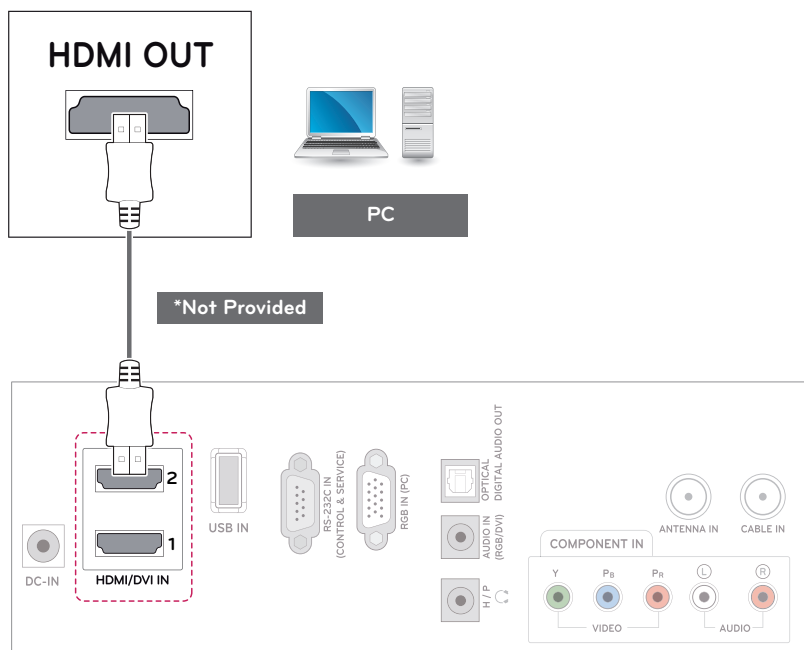
- **Choose any HDMI input port to connect.**
- **It does not matter which port you use.**

DVI to HDMI connection

Transmits the digital video signal from your PC to
the TV. Connect the PC and the TV with the DVI to HDMI cable as shown the following illustrations.

> **NOTE**
>
> • If you want to use HDMI-PC mode, you must set the input label to PC mode.
> • If you do not use an optional external speaker, connect the PC to the TV with the supplied audio cable.
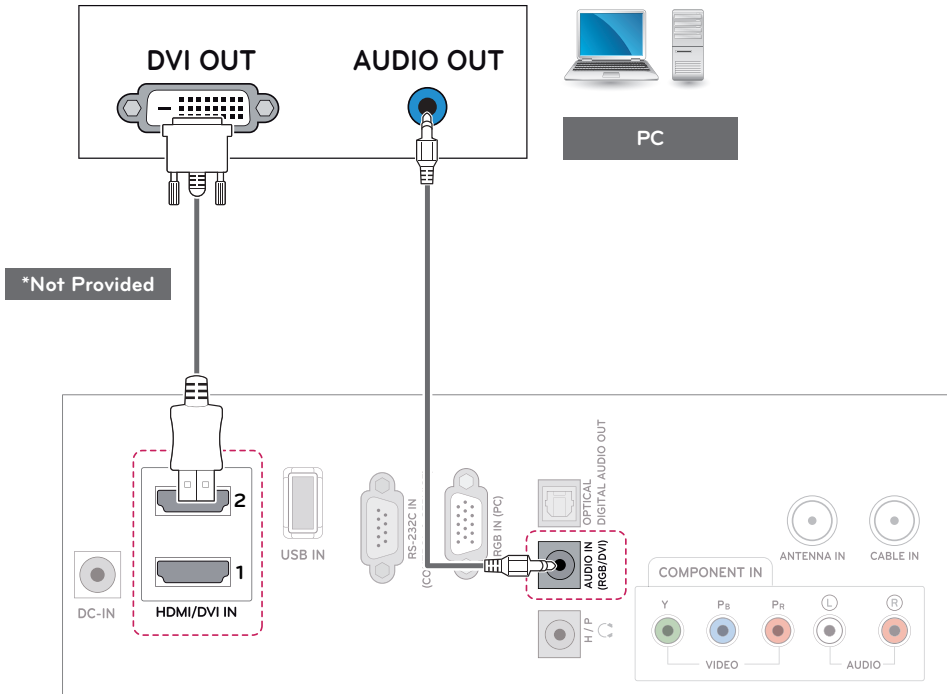
RGB connection

Transmits the analog video signal from your PC to the TV. Connect the PC and the TV with the D-sub 15 pin cable as shown the following illustrations.

> ⓘ **NOTE** ───
>
> • If you do not use an optional external speaker, connect the PC to the TV with the supplied audio cable.
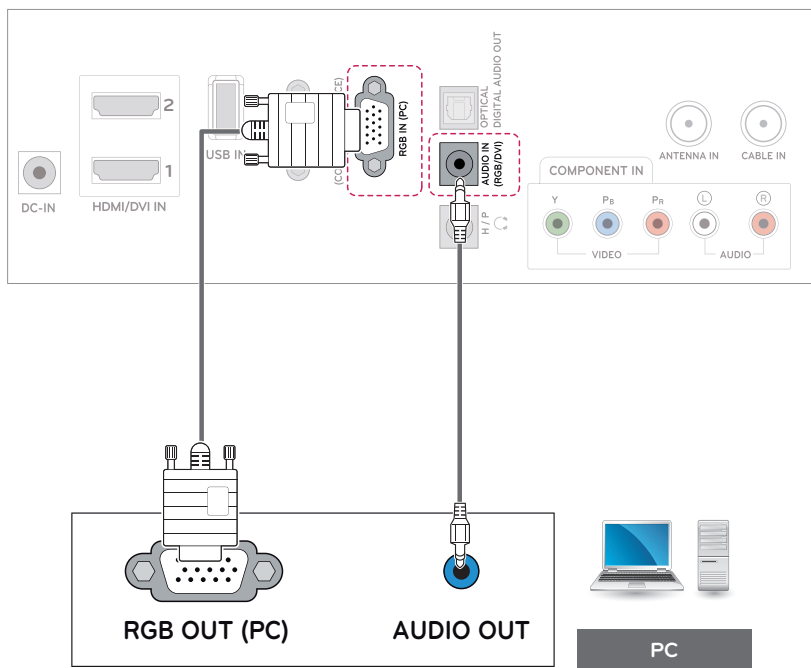
WATCHING TV

Turning the TV on for the first time

When you access the TV for the first time, the initial setting screen appears. Select a language and customize the basic settings.

1   Connect the power cord to a power outlet. The Power indicator turns blue and the TV switches to Standby mode.

2   Press ⏻/| on the TV or power button on the remote control to turn the TV on.

The Power indicator lighting is turned on.

> **! NOTE**
>
> When the TV is in Power saving mode, the Power indicator lighting blinks.

3   The initial setting screen appears if you access the TV for the first time.

> **! NOTE**
>
> If you do not operate the TV within 40 seconds when the setting menu screen appears, the setting menus will disappear.

4   Follow the on-screen instructions to customize your TV according to your preferences.

Language	Selects a language for the display.
⇩	
Mode Setting	Selects **Home Use** for the home environment.
⇩	
Time Zone	Selects the time zone and daylight saving.
⇩	
3D-On-Start Setting	Turning on the TV, automatically converts 2D to 3D and prints images in 3D.
⇩	
Auto Tuning	Scans and saves available channels automatically.
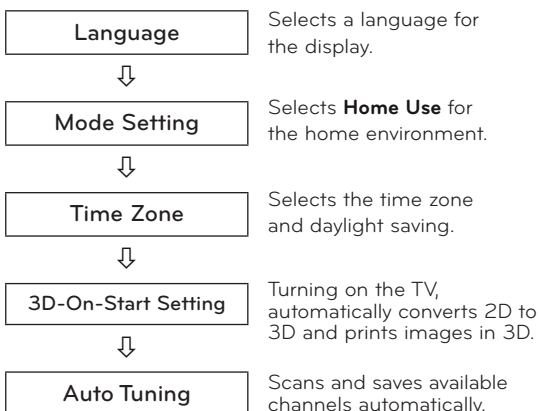
> **! NOTE**
>
> • For those countries without confirmed DTV broadcasting standards, some DTV features might not work, depending on the DTV broadcasting environment.
> • To display images in the best quality for your home environment, select **Home Use** mode.
> • **Store Demo** mode is suitable for the retail environment.
> • If you select **Store Demo** mode, the previously customized settings will switch to the default settings of **Store Demo** mode in 2 minutes.

5   When the basic settings are complete, press **OK**.

> **! NOTE**
>
> If you do not complete the initial setting, it will appear whenever you access the TV.

6   To turn the TV off, press ⏻/| on the TV. The Power Indicator turns off.

> **⚠ CAUTION**
>
> Disconnect the power cord from the power outlet when you do not use the TV for a long period of time.

> **! NOTE**
>
> • You can also switch the TV from PC mode to TV mode, press **TV/PC**.
> • You can also access **Initial Setting** by accessing **OPTION** in the main menus.

REMOTE CONTROL

The descriptions in this manual are based on the buttons of 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 ⊕ 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.
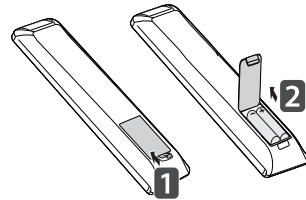
Make sure to point the remote control to the remote control sensor on the TV.

⏻ (POWER)
Turns the TV on or off.

⁇(User guide)
Selects an E-Manual.

RATIO
Resizes an image.

LIST
Displays the channel table.

FAV
Accesses your favorite channel list.

VOLUME
Adjusts the volume level.

MUTE
Mutes all sounds.

INPUT
Selects the input mode.

ENERGY SAVING
Adjusts the brightness of the screen to reduce energy consumption.

Number buttons
Enters numbers.

Q.VIEW
Alternates between the two last channels selected (pressing repeatedly).

3D
Uses for viewing 3D video.

CH
Scrolls through the saved channels.
PAGE
Moves to the previous or next screen.

INFO ⓘ
Views the information of the currently program and the screen.

SETTINGS
Accesses the main menus or saves your input and exit menus.

OK
Selects menus or options and confirms your input.

↩(BACK)
Allows the user to move return one step in an interactive application, EPG or other user interaction function.

Colored buttons
These access special functions in some menus.

USB Menu control buttons
USB menu(Photo List and Music List or Movie List).

AV MODE
Selects an AV Mode.

Q.MENU
Accesses the quick menus.
3D SETTING(Only 3D Mode)
View for 3D Mode setting.

Navigation buttons
Scrolls through menus or options.

GUIDE
Displays the program event according to time scheduler.

EXIT
Clears all on-screen displays and returns to TV viewing from any menu.

Backlight
Adjusts the brightness of the screen by controlling the screen backlight.

PIP
Turns the PIP mode on or off.

SIMPLINK
Accesses the AV devices connected to the TV; Opens the SIMPLINK menu.

TV/PC
Selects TV or PC mode.

CUSTOMIZING SETTINGS

Accessing main menus

1 Press **SETTINGS** to access the main menus.

2 Press the Navigation buttons to scroll to one of the following menus and press **OK**.

3 Press the Navigation buttons to scroll to the setting or option you want and press **OK**.

4 When you are finished, press **EXIT**.
  When you return to the previous menu, press **(BACK)**.

AUDIO
Adjusts the sound quality, effect, or volume level.

CHANNEL
Sets up and edit channels.

PICTURE
Adjusts the image size, quality, or effect.

TIME
Sets the time, date or Timer feature.

LOCK
Locks or unlocks channels and programs.

MY MEDIA
Using integrated media features.

| PICTURE | AUDIO | CHANNEL | TIME |
| LOCK | OPTION | INPUT | MY MEDIA |

OPTION
Customizes the general settings.

INPUT
Views the input sources with their labels.

• Press **RED** button to access the **Customer Support** menus.

Press OK(◉) to set channel settings.
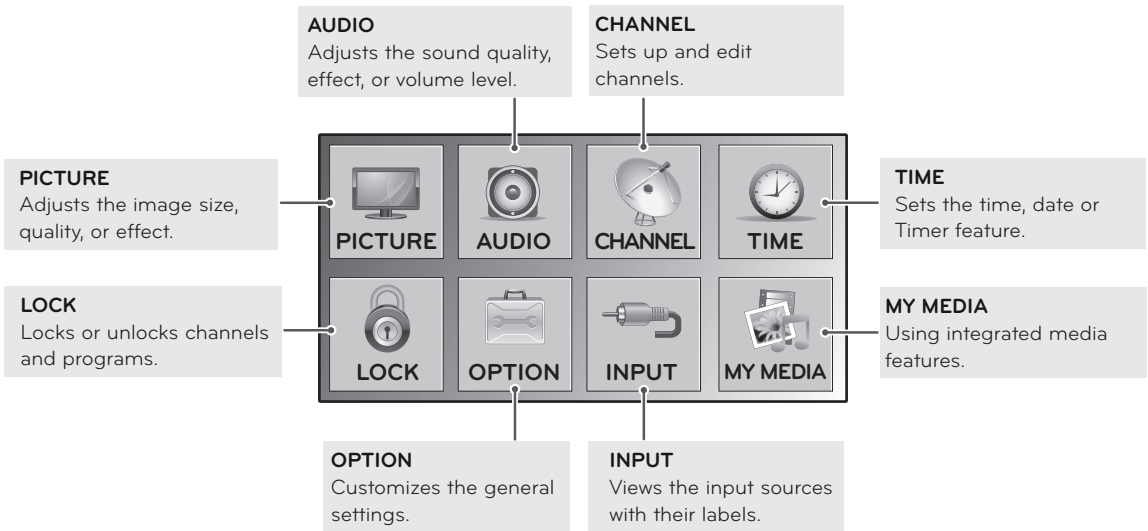
FAQ Customer Support Exit
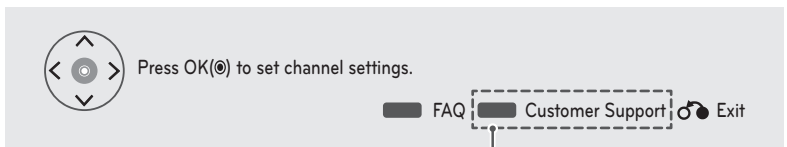
Customer Support
Using Customer Support feature.
  • Software Update
  • Picture Test
  • Sound Test
  • Signal Test
  • Product/Service Info.
  • User Guide

USING THE USER GUIDE

Accessing user guide menu.

Using the TV menu

1 Press **SETTINGS** to access the main menus.

2 Press the **RED** button to access the **Customer Support** menus.

3 Press the Navigation button to scroll to **User Guide** and press **OK**.

4 Press the Navigation buttons to scroll to the option you want and press **OK**.

5 When you are finished, press **EXIT**.
   When you return to the previous menu, press ⤺**(BACK)**.

Using the Remote Control

1 Press ⒜**(USER GUIDE)** to access the **User Guide** menu.

2 Press the Navigation buttons to scroll to the option you want and press **OK**.

3 When you are finished, press **EXIT**.
   When you return to the previous menu, press ⤺**(BACK)**.

3D IMAGING

3D Technology

This TV can display in 3D via 3D broadcasting or when the TV is connected to a compatible device, such as a Blu-ray 3D Player. The viewer must wear compatible 3D glasses in order to see these images in 3D format.

> **NOTE**
>
> - After powering on the TV, a few seconds may be needed for your TV to calibrate.
> - When watching digital TV in 3D imaging mode, TV out signals cannot be output through the SCART cable.
> - If you set the 3D mode to On while a scheduled recording is performed on digital TV, TV out signals cannot be output through the SCART cable, and the recording cannot be performed.
> - If 3D TV broadcast standard changes in the future and it is not supported by this TV, you may need a separate device, such as a set-top box.

Precautions to take when viewing 3D images

> **WARNING**
>
> - If you view 3D images from too close a distance, your eyesight may deteriorate.
> - If you view images in 3D for a long period of time, you may feel dizzy or experience blurred vision.
> - If you are pregnant, elderly, have heart problems, experience severe nausea or if you are under the influence of alcohol, we recommend that you do not view 3D images.
> - This is because the 3D images can cause disorientation and confusion.
> - Put fragile or breakable objects away when viewing 3D images.
> - Such objects may break, or cause personal injuries when you are startled by the realistic 3D images.
> - Parents should prevent children who are 5 years or younger from watching 3D images because viewing 3D images can be harmful to vision development.
> - Warning about photosensitivity seizures
>   Some users may have a seizure or other abnormal reactions when they are exposed to a flashing light or a particular pattern in a video game or film. If anyone in your family has a history of epilepsy or has ever experienced any kind of seizure, please consult your doctor before viewing 3D images. If you exhibit any of the symptoms listed below when viewing 3D images, stop viewing immediately and have a break.
>   » Dizziness, blurred vision or facial tics, involuntary movements, twitching, blackouts, confusion and disorientation. Please consult your doctor if such symptoms persist.
> - To prevent a photosensitivity seizure, please take the following precautions.
>   » Have a 5- to 15-minute break every hour.
>   » If your left and right eye sight is significantly different, correct the sight difference first.
>   » You should be able to see all of the screen at eye level.
>   » If you experience headaches, fatigue or dizziness, stop viewing and have a rest.
>   » Do not view 3D images when you are tired or ill.

> ⚠ **CAUTION**
>
> Parents/guardians should TV children's viewing of 3D images because they may not be used to the 3D viewing experience and lack knowledge on how to handle potential risks.

When using 3D Glasses

> ⚠ **CAUTION**
>
> - Do not use the 3D glasses to replace your corrective glasses, sunglasses or protective goggles.
> - Do not store the 3D glasses in hot or cold locations.
> - Do not drop objects onto the 3D glasses. Do not drop or bend the glasses.
> - Since the lenses of the 3D glasses are easily scratched, make sure to clean only with a soft cloth. Shake off any dust before using the cloth
> - Do not scratch the surface of the lens(Polarized film) of 3D glasses with a sharp tool or wipe the lens with chemicals.
> - The lens of the 3D glasses is different from those of general glasses, and is very thin. Therefore be careful with the glasses as the lens can be popped out easily.
> - Be careful of the edges of the glass frame when putting on the 3D glasses.

3D Imaging Viewing Range

TV size, viewing angle & other circumstances may change the viewing distance and the angle of view.
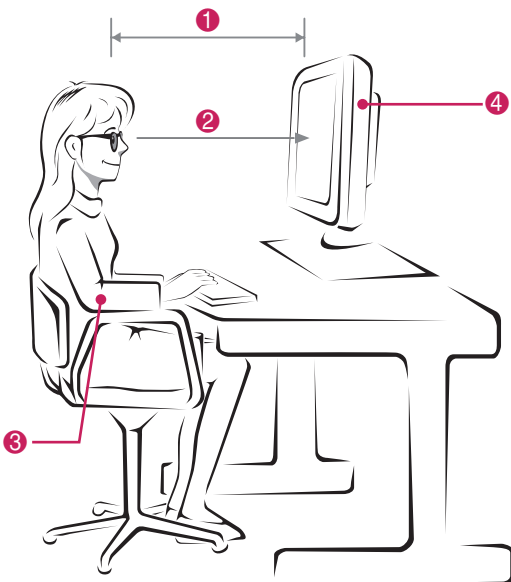
No.	Description
❶	Adjust your distance from the TV to allow you to view images from the optimal distance (L).
❷	Adjust the TV and your posture to allow you to view images at the optimal viewing angle (D).
❸	Place your hands gently on the keyboard, keeping your arms bent at the elbows and horizontally outright.
❹	Adjust the location of the TV to avoid it reflecting light.

Mode	When viewing 3D images
Size(Inch)	584 mm
Optimal viewing distance (L)	50 cm to 90 cm
Up/Down Optimal viewing angle (D)	12°

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 and frame

To remove dust, wipe the surface with a dry 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 clean and dry cloth.

⚠ CAUTION

- Do not push, rub, or hit the surface with your fingernail or a sharp object, as this may result in scratches on the screen and image distortions.
- Do not use any chemicals, such as waxes, benzene, alcohol, thinners, insecticides, air fresheners, lubricants, as these may damage the screen's finish and cause discolorations.

Cabinet and stand

To remove dust, wipe the cabinet with a dry and soft cloth.
To remove major dirt, wipe the cabinet with a soft cloth dampened in a clean water or water containing a small amount of mild detergent.

⚠ CAUTION

- Do not spray liquid onto the surface. If water enters the TV, it may result in fire, electric shock, or malfunction.
- Do not use any chemicals as this may deteriorate the surface.

Power cord

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

Preventing "Image burn" or "Burn-in" on your TV screen
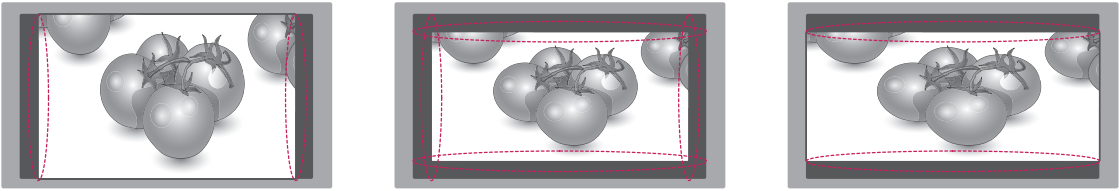
- If a fixed image displays on the TV screen for a long period of time, it will be imprinted and become a permanent disfigurement on the screen. This is "image burn" or "burn-in" and not covered by the warranty.
- If the aspect ratio of the TV is set to 4:3 for a long period of time, image burn may occur on the letterboxed area of the screen.

TROUBLESHOOTING

General

The TV does not operate normally.

Problem	Resolution
The remote control doesn't work	• Check to see if there is any object between the product and the remote control causing obstruction. Ensure you are pointing the remote control • Ensure that the batteries are installed with correct polarity (⊕ to ⊕, ⊖ to ⊖). • Ensure that the correct remote operating mode is set: TV, VCR, etc. • Install new batteries.
Power is suddenly turned off	• Is the sleep timer set? • Check the power control settings. Power interrupted. • If the TV is switched on and there is no input signal, it will switch off automatically after 15 minutes to save the power consumption. • When a broken file was played in the USB mode, the TV may turn off. Please check the file in your usb storage. • Except the screen off mode of the energy saving menu.

Video Problems

Problem	Resolution
No picture & No sound	• Check whether the product is turned on. • Try another channel. The problem may be with the broadcast. • Is the power cord inserted into wall power outlet? • Check your antenna direction and/or location. • Test the wall power outlet, plug another product's power cord into the outlet where the product's power cord was plugged in.
Picture appears slowly after switching on	• This is normal, the image is muted during the product startup process. Please contact your service centre, if the picture has not appeared after five minutes.
No Color, poor color, or poor picture	• Adjust Color in menu option. • Keep a sufficient distance between the product and the VCR. • Try another channel. The problem may be with the broadcast. • Are the video cables installed properly? • Activate any function to restore the brightness of the picture.
Horizontal / vertical bars or picture shaking	• Check for local interference such as an electrical appliance or power tool.
Poor reception on some channels	• Station or cable product experiencing problems, tune to another station. • Station signal is weak, reorient antenna to receive weaker station. • Check for sources of possible interference.
Lines or streaks in pictures	• Check antenna (Change the direction of the antenna).

Problem	Resolution
No picture when connecting HDMI	• Check that your HDMI cable is High Speed HDMI Cable. If the HDMI cables are not High Speed HDMI Cable, flickering or no screen display can result. Please use the High Speed HDMI Cable.

Audio Problems

Problem	Resolution
Picture OK & No sound	• Press the **VOL**(**+** , **-**) button or **VOL** (◀ **,** ▶) button. • Sound muted? Press MUTE button. • Try another channel. The problem may be with the broadcast. • Are the audio cables installed properly?
No output from one of the speakers	• Adjust Balance in menu option.
Unusual sound from inside the product	• A change in ambient humidity or temperature may result in an unusual noise when the product is turned on or off and does not indicate a problem with the product.
No sound when connecting HDMI or USB	• Check HDMI cable is High Speed HDMI Cable. • Check USB cable over version 2.0. • Use a normal MP3 file

There is a problem with PICTURE settings.

Problem	Resolution
When the user changes the picture settings, the TV automatically converts back to the initial settings after a certain period of time.	• It means that the TV is currently set to **Store Demo** mode. To switch to Home use mode you should do the followings: From the TV Main menu, choose **OPTION** ▶ Choose **Initial Setting** ▶ Choose **Home use**. Now, you have completed switching to the **Home use** mode.

PC mode

No image is displayed.

Problem	Resolution
Power is on, power indictor is blue but the screen appears extremely dark.	• Adjust brightness and contrast again.
Does the 'Invalid format' message appear?	• The signal from the PC (Video card) is out of the vertical or horizontal frequency range of the product. Adjust the frequency range by referring to the Specifications in this user's guide.
Does the 'Check signal cable' message appear?	• The signal cable between PC and product is not connected. Check the signal cable. • Press the 'INPUT' button in the remote control to check the input signal.
The power indicator is dimmed.	• If the product is in power saving mode, move the mouse or press any key.

'Unknown Product' message appears when the product is connected.

Problem	Resolution
Did you install the driver?	• Install the product driver, which is provided with the product, or download it from the web site. (http://www.lg.com) • See if the plug & play function is supported by referring to the video card user's guide.

After-image appears on the screen.

Problem	Resolution
After-image appears when the product is turned off.	• If you use a fixed image for a long time, the pixels may be damaged quickly. Use the screen saver function.

Screen Color is abnormal.

Problem	Resolution
Screen has poor Color resoluion (16_ Colors).	• Set screen Color resolution to more than 24 bits (true Color) Select control panel ▶ Display ▶ Settings ▶ Color Table menu in Windows.
Screen Color is unstable or mono Color.	• Check the connection status of the signal cable.
Do back spots appear on the screen?	• Several pixels (red, green, white or black Color) may appear on the screen, which can be attributable to the unique characteristics of the LCD panel. It is not a malfunction of the LCD.

The screen image looks abnormal.

Problem	Resolution
Is the screen position wrong?	• Adjust the **Position** menu in OSD. From the TV Main menu, Choose **PICTURE ▶** Choose **Screen(RGB-PC) ▶** Adjusts **Position**. • A See if the video card resolution and frequency are supported by the product. If the frequency is out of range, set to the recommended resolution in the Control Panel ▶ Display ▶ Setting menu.
Do thin lines appear on the background screen?	• Adjust the **Size** menu in OSD. From the TV Main menu, Choose **PICTURE ▶** Choose **Screen(RGB-PC) ▶** Adjusts **Size**.
Horizontal noise appears or the characters look blurred.	• Adjust the **Phase** menu in OSD. From the TV Main menu, Choose **PICTURE ▶** Choose **Screen(RGB-PC) ▶** Adjusts **Phase**.

TROUBLESHOOTING WHEN USING 3D MODE

I can see a swirling oil-like pattern on the TV when the TV is turned off.
This is caused by the interference of external light in the air layer between the LCD surface and 3D filter. The pattern becomes almost invisible when you turn on the power again.

I cannot see 3D Images properly

Problem	Resolution
If you are not using the glasses provided with the TV.	When you view 3D images with this TV, it is very important that you use the glasses provided with the TV. The glasses are designed to compensate optically for the 3D filter attached to the surface of the TV. If you wear third-party glasses, you may not see 3D images properly on the TV.
If you view 3D images outside the optimal viewing angle or distance.	The optimal viewing angle of this TV is between 14° degrees; the optimal viewing distance is between 50 cm to 90 cm from the TV. When you view 3D images outside the optimal viewing angle or viewing distance, the images may look overlapped or not be displayed properly in 3D.

Notes for Viewing 3D Image with 3D Digital Brodcating

*In Analogue Brodcating, 3D Imaging does not work.

Problem	Resolution
When switching the 2D image display to the 3D image display with the 3D button on the remote control, the overlapped image may be displayed.	• Disable the 3D imaging mode with the 3D button. • The 3D imaging mode is disabled automatically if you change the channel.
If the screen is divided into left/right or top/bottom when you change the channel	This channel supports the 3D imaging mode. Select the 3D imaging type displayed on the screen by pressing the 3D button on the remote control.
If your eyes are sore or the screen looks blurry while viewing 3D images.	Select Left/Right or Right/Left option, which you find better for viewing 3D images.

SPECIFICATIONS

LCD Panel	Screen Type	584.2 mm Wide (23 inch) TFT (Thin Film Transistor) LCD (Liquid Crystal Display) Panel. Visible diagonal size : 584.2 mm
	Pixel Pitch	0.265 mm (H) x 0.265 mm (V)
Video Signal	Max. Resolution	1920 × 1080 @ 60 Hz
	Recommended Resolution	1920 × 1080 @ 60 Hz
	Horizontal Frequency	30 kHz to 83 kHz
	Vertical Frequency	56 Hz to 75 Hz
	Synchronization Type	Separate Sync, Digital
Input Connector		TV, D-Sub Analog, PC Audio In, Component, HDMI*2
Power	Rated Voltage	19 V ⎓ 3.0 A
	Power Consumption	On Mode : 48 W (typ.) Off Mode ≤ 0.5 W
AC/DC Adapter		Manufacturer: LITE-ON, Model PA-1650-68
Tilt	Tilt Range	-5° to 18°
Dimensions (Width x Height x Depth) Weight		546.7 mm x 423.8 mm x 180 mm 3.9 kg
Environmental conditions	Operating Temperature Operating Humidity	10 °C to 35 °C 20 % to 80 %
	Storage Temperature Storage Humidity	-10 °C to 60 °C 5 % to 90 %

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

RGB (PC) / HDMI (PC) supported mode

Resolution	Horizontal Frequency(kHz)	Vertical Frequency(Hz)
720 x 400	31.468	70.080
640 x 480	31.469	59.940
640 x 480	37.500	75.000
800 x 600	37.879	60.317
800 x 600	46.875	75.000
1024 x 768	48.363	60.004
1024 x 768	60.023	75.029
1152 x 864	67.500	75.000
1280 x 720	45.000	60.000
1280 x 800	49.702	59.810
1280 x 1024	63.981	60.020
1280 x 1024	79.976	75.025
1400 x 1050	65.317	59.978
1440 x 900	55.935	59.887
1600 x 900	60.000	60.000
1680 x 1050	64.674	59.883
1680 x 1050	65.290	59.954
1920 x 1080	67.500	60.000

HDMI (DTV) supported mode

Resolution	Horizontal Frequency(kHz)	Vertical Frequency(Hz)
720 x 480	31.469 31.500	59.940 60.000
720 x 576	31.250	50.000
1280 x 720	37.500	50.000
1280 x 720	44.960 45.000	59.940 60.000
1920 x 1080	33.720 33.750	59.940 60.000
1920 x 1080	28.125	50.000
1920 x 1080	27.000	24.000
1920 x 1080	33.750	30.000
1920 x 1080	56.250	50.000
1920 x 1080	67.430 67.500	59.940 60.000

Component supported mode

Resolution	Horizontal Frequency(kHz)	Vertical Frequency(Hz)
720 x 480	15.730	59.940
720 x 480	15.750	60.000
720 x 576	15.625	50.000
720 x 480	31.470	59.940
720 x 480	31.500	60.000
720 x 576	31.250	50.000
1280 x 720	44.960	59.940
1280 x 720	45.000	60.000
1280 x 720	37.500	50.000
1920 x 1080	33.720	59.940
1920 x 1080	33.750	60.000
1920 x 1080	28.125	50.000
1920 x 1080	56.250	50.000
1920 x 1080	67.432	59.940
1920 x 1080	67.500	60.000

Component port connecting informatio

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

> ⓘ **NOTE**
>
> • Avoid keeping a fixed image on the set's screen for prolonged periods of time. The fixed image may become permanently imprinted on the screen. Use a screen saver when possible.
> • There may be interference relating to resolution, vertical pattern, contrast or brightness in PC mode. Change the PC mode to another resolution or change the refresh rate to another rate or adjust the brightness and contrast on the menu until the picture is clear. If the refresh rate of the PC graphic card can not be changed, change the PC graphic card or consult the manufacturer of the PC graphic card.
> • The synchronization input waveform for Horizontal and Vertical frequencies are separate.
> • Connect the signal cable from the TV output port of the PC to the RGB (PC) port of the TV or the signal cable from the HDMI output port of the PC to the HDMI/DVI IN port on the TV.
> • Connect the audio cable from the PC to the Audio input on the TV.
> • If using a sound card, adjust PC sound as required.
> • If the graphic card on the PC does not output analogue and digital RGB simultaneously, connect only one of either RGB or HDMI/DVI IN to display the PC output on the TV.
> • If the graphic card on the PC does output analogue and digital RGB simultaneously, set the TV to either RGB or HDMI. (The other mode is set to Plug and Play automatically by the TV.)
> • DOS mode may not work depending on the video card if you use an HDMI to DVI cable.
> • If you use too long an RGB-PC cable that is too long, there may be interference on the screen. We recommend using under 5 m of cable. This provides the best picture quality.

3D video input format supported.

	Signal	Resolution	Horizontal Frequency (kHz)	Vertical Frequency (Hz)	Playable 3D video format
HDMI	720p	1280 x 720	45	60	Top & Bottom, Side by Side
			89.9 90	59.94 60	HDMI Frame Packing
			37.5	50	Top & Bottom, Side by Side
			75		HDMI Frame Packing
	1080i	1920 x 1080	33.75	60	Top & Bottom, Side by Side
			28.125	50	
	1080p	1920 x 1080	67.50	60	Top & Bottom, Side by Side, Checker Board, Single Frame Sequential
			56.250	50	Top & Bottom, Side by Side, Checker Board, Single Frame Sequential
			27	24	Top & Bottom, Side by Side
			53.95 54	23.98 24	HDMI Frame Packing
			33.75	30	Top & Bottom, Side by Side
USB	1080p	1920 x 1080	33.75	30	Top & Bottom, Side by Side
RGB	1080p	1920 x 1080	66.587	59.93	Top & Bottom, Side by Side
	Signal				**Playable 3D video format**
DTV	720p, 1080i				Top & Bottom, Side by Side

> ⓘ **NOTE**
>
> - If HDMI input is received in HDMI 3D format, images are automatically converted into 3D.
> - **2D ➜ 3D** mode is available to watch for all signals.
> - If you change **2D ➜ 3D** mode, the left and right edges of the screen are clipped.
> - If you select HDMI 3D, 3D mode is automatically enabled, which may cause the delay of screen turning on.
> - For some 3D content files, if a 3D file is converted into 2D, the left and right edges of the screen may appear truncated.

Make sure to read the Safety Precautions before using the product.
Keep the Owner's Manual (CD) in an accessible place for future reference.
The model and serial number of the TV is located on the back and one side of the TV.
Record it below should you ever need service.

MODEL _____

SERIAL _____

OPEN SOURCE SOFTWARE NOTICE
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.

❏ To view program information

Press INFO button.

Displays information on current program and / or current time, etc.

❏ To set favorite channels

SETTINGS ⇨ CHANNEL ➡ Channel Edit

1 Press the Q.MENU button on Channel Edit screen and select Favorite Group.
2 Select the desired channel.
3 Please press FAV button. The selected channels are saved as favorite channels.

❏ To use Favorites

Press FAV button.

Favorite list will appear. Select the desired preset favorite channel from Favorite List A-D.

Press GUIDE button.

[In Digital mode only]

Obtains information about programs and airtime. Checks the broadcasting time of the desired program and scheduled viewing.

❐ To set up the channels automatically

SETTINGS ⇒ CHANNEL ➜ Auto Tuning

Memorizes automatically the channels being broadcast.

✎ The channels will not be memorized properly if the antenna/cable is not installed correctly.

✎ Auto Tuning memorizes the channels that are currently being broadcast.

✎ If Lock System is turned on, a pop-up window will appear asking for password.

❐ To set up the channels at manually

SETTINGS ⇨ CHANNEL ➜ Manual Tuning

Adjusts channels manually and saves the results.

For digital broadcasting, signal strength, etc. can be checked.

❏ To edit the channels

SETTINGS ⇒ CHANNEL ➜ Channel Edit

Edits the saved channels.

SETTINGS ⇨ PICTURE ➜ Aspect Ratio

Selects the screen aspect ratio.

- **16:9:** Resizes the image ratio to fit 16:9 screen.
- **Just Scan:** Displays high-quality image without loss.
  - ✎ Select the original at the input of DTV/Component/HDMI/DVI (720P or higher).
- **Set by Program:** Depending on the input signal, screen aspect ratio changes to 4:3 or 16:9
- **4:3:** Resizes the image ratio to fit 4:3 screen.
- **Zoom:** Resizes the image to fit the screen width. The top and bottom parts of the image may be cut off.
- **Zoom2 [Only for SBTVD.] :** Resizes the image to fit the screen width. The height of the image does not change.

- Cinema Zoom: Formats an image to the cinemascope ratio (2.35:1) and zooms in on the ratio.

✎ While viewing an external device, these cases may result in image burn:
  - a video with stationary caption (such as network name)
  - 4 : 3 aspect ratio mode for an extended period
  Take caution when using these functions.

✎ Available picture size may differ depending on the input signal.

✎ At HDMI/RGB-PC input, select the image ratios of 4:3 and 16:9.
  (Only for models supporting PC connection)

❐ To adjust pictures in PC input mode

SETTINGS ⇨ PICTURE ➡ Screen (RGB-PC)

Adjusts picture in RGB-PC mode.

- Resolution: Sets the desired resolution.
  - ✎ Options may only be selected when the PC resolution is set to 1024X768 / 1280X768 / 1360X768, 1280X960 / 1440X900 / 1600X900 or 1400X1050 / 1680X1050.
- Auto Config.: Optimizes the picture.
- Position/Size/Phase: Adjusts screen size and position for optimum viewing.
- Reset: Initializes the screen setups in PC input mode.

❏ To set PC resolution

1 Right-click on the PC's desktop and select「Properties」.
2 Click on「Settings」and refer to the supported format to set the resolution.
3 Select「Advanced → Monitor → Monitor Setup」on the setup window. Refer to the supported formats to select the optimal vertical frequency.

✎ In PC mode, 1920 x 1080 resolution delivers the optimum picture quality.

✎ Method to set up resolution differs depending on PC type.

[Depending on model]

Press AV MODE button.

Optimizes the TV's Picture/Audio for different AV modes.
- Off: Views with the value set at the PICTURE/AUDIO Menu.
- Cinema: Optimizes picture and audio settings for movies.
- Sport: Optimizes picture and audio settings for sports.
- Game: Optimizes picture and audio settings for games.

❏ To adjust pictures with Picture Wizard

SETTINGS ⟹ PICTURE ➜ Picture Wizard Ⅱ

This function calibrates and adjusts for optimum picture quality with the remote control and the Picture Wizard without expensive pattern devices or help from a specialist.

Follow the instructions on the screen to obtain the optimum picture quality.

❏ To select Picture Mode

SETTINGS ⇨ PICTURE ➜ Picture Mode

Select the picture mode optimized for the viewing environment or the program.

- **𝒾𝓈𝒻**® **Expert**: Menu for adjusting picture quality that allows experts and amateurs to enjoy the best TV viewing. This menu for adjustment is provided for ISF-certified picture tuning professionals. (ISF logo can only be used on ISF-certified TVs.)
  ISFccc: Imaging Science Foundation Certified Calibration Control

✎ Depending on input signal, available range of picture modes may differ.

✎ 𝑖𝑠𝑓ᶜᶜᶜ Expert mode is for picture tuning professionals to control and fine-tune using a specific image. For normal images, the effects may not be drastic.

❏ To fine-tune picture mode

SETTINGS ⇨ PICTURE ➜ Picture Mode ➜Backlight / Contrast / Brightness / Sharpness / Color / Tint / Color Temp.

First select a Picture Mode of your choice.

- Backlight: Adjusts the display brightness by varying the brightness of the LCD panel.

✎ Depending on the input signal or other picture settings, the range of detailed items for adjustment may differ.

❐ To set advanced control

SETTINGS ⇨ PICTURE ➜ Picture Mode ➜ Advanced Control / Expert Control

For each picture mode, screen can be calibrated; or for a special screen, picture settings can be adjusted.

Select the desired Picture Mode.

- Dynamic Contrast: Adjusts the contrast to the optimal level according to the image's brightness.
- Dynamic Color: Adjusts colors to make the image appear in more natural colors.
- Clear White: Enhances whites on screen to make the image brighter and sharper.

- **Skin Color**: Skin color spectrum can be separately set to implement the skin color as defined by the user.
- **Noise Reduction**: Eliminates noise in the picture.
- **Digital Noise Reduction**: Eliminates noise generated while creating digital picture signals.
- **Gamma**: Sets the gradation curve according to the output of picture signal in relation to the input signal.
- **Black Level**: Adjusts the screen's brightness and contrast to fit them to the input picture's black level by using the blackness (black level) of the screen.

- Film Mode: Helps maintain the optimal state of the screen.
- Edge Enhancer: Shows clearer and distinctive yet natural edges of the video.
- Expert Pattern: Patterns used for expert adjustment
- Color Filter: Filters a specific color spectrum in RGB colors to fine-tune color saturation and hue accurately.

- Color Temperature: Adjusts the overall tone of the screen as desired. In Expert mode, detailed fine-tuning can be set via Gamma method, etc.
- Color Management System: This system is used by experts to adjust color with a test pattern. They can select from six color areas (Red/ Green/Blue/ Cyan/Magenta/Yellow) without affecting other colors. For normal images, adjustments may not result in noticeable color changes.

✎ Depending on input signal or other picture settings, the range of detailed items for adjustment may differ.

❑ To initialize picture settings

SETTINGS ⇨ PICTURE ➜ Picture Mode ➜ Picture Reset

Initializes picture settings that the user customizes.

Each picture mode is reset. Select the desired picture mode to reset.

❐ To use Sound Mode

SETTINGS ⇒ AUDIO ➜ Sound Mode

Adjusts TV audio to an optimal level according to a selected sound mode.

❏ To manually adjust Sound Mode

SETTINGS ⇨ AUDIO ➜ Sound Mode ➜ Infinite Surround / Treble / Bass / Reset

Sets minute options for each sound mode.

Select the desired Sound Mode first.

- Infinite Surround: LG's proprietary audio processing technology allows 5.1 channel-like surround sound from two speakers.
  - ✎ When Clear Voice II is set to On, Infinite Surround is not available.
- Treble/Bass: Adjusts treble and bass in Sound.
- Reset: Initializes voice options that the user has changed. Initializes each voice mode. Select the desired sound mode to reset.

❏ To set Auto Volume

SETTINGS ⇨ AUDIO ➜ Auto Volume

Sets Auto Volume to ON and volume output from channel to channel is automatically adjusted for convenient TV watching when clicking through different channels.

❏ To adjust Clear Voice II function

SETTINGS ⇨ AUDIO ➜ Clear Voice II

Boosts audio clarity from the TV.

❏ To adjust audio balance

SETTINGS ⇨ AUDIO ➜ Balance

Adjusts left/right audio balance.

❏ To use TV speakers

SETTINGS ⇨ AUDIO ➜ TV Speaker

[Depending on model]

When listening to the speakers on external audio devices connected to TV such as home theater, TV speaker may be turned off. When there are SIMPLINK connected home theater devices, selecting TV Speaker to OFF will automatically turn on home theater.

- Off: TV speakers do not play sound. TV sounds can be played through external audio device speakers connected to the TV.
  - ✎ In this mode, volume adjustment can be made on the external audio device connected to the TV.
- On: TV internal speakers play TV sound.

❒ To use Digital Audio Out

SETTINGS ⇒ AUDIO ➜ Digital Audio Out

[Depending on model]

Sets up Digital Audio Out.

Item	Audio Input	Digital Audio output
Auto	MPEG	PCM
	Dolby Digital	Dolby Digital
	Dolby Digital Plus	Dolby Digital
	HE-AAC	Dolby Digital
PCM	All	PCM

SETTINGS ⇨ Multi Audio

Multi Audio means stereo and multiple language broadcast from the channel provider.

□ Case of digital broadcast

Select multiple languages depending on multi-language signals from the TV station.

For default language, set up at SETTINGS ⇨ OPTION ➜ Language ➜ Audio Language.

☐ Case of analog broadcast

- Mono: The sound mode is in mono while the sound comes out of both left and right speakers. Select this menu to listen in Mono mode regardless of broadcast state. Set up while listening in stereo mode. Select Mono in poor reception areas (e.g., areas with weak or erratic signals) or when multi audio reception is not clear.
- Stereo: The sound mode is in stereo while the sound comes out of both left and right speakers.
- SAP: Changes the MTS sound.

❏ To select external input

Press INPUT button.

Selects external input.

✎ Edit the device name: You can edit the name of the external device connected to the external input port.

❏ To use SIMPLINK

SIMPLINK controls and manages multimedia devices conveniently with the TV remote control through the SIMPLINK menu.

1 Connect TV' HDMI IN terminal and SIMPLINK device's HDMI output terminal using HDMI cable.
   - [Depending on model] For home theater units with SIMPLINK function, connect HDMI terminals as above, and use an optical cable to connect Optical Digital Audio Out from the TV to Optical Digital Audio In of the SIMPLINK device.
2 Select INPUT ⇒ SimpLink. SIMPLINK menu window appears.
3 In SIMPLINK Setting window, set SIMPLINK function to ON.
4 In SIMPLINK menu window, select the device to control.

- This function is only compatible with devices having the SIMPLINK logo.

- To use SIMPLINK function,use high-speed HDMI® cable (with CEC (Consumer Electronics Control) feature added). High-speed HDMI® cable has No. 13 pin connected for information exchange between devices.

- When changing to another input, the SIMPLINK device stops.

- If a third-party device with HDMI-CEC function is added, the SIMPLINK device may not work normally.

- [Depending on model] When selecting or playing the media of the device with home theater function, HT Speaker is automatically connected. Be sure to connect with Optical cable (sold separately) to use HT Speaker function.

□ SIMPLINK function description

- Direct Play : Plays the multimedia device on the TV instantly.
- Select multimedia device : Selects the desired device through SIMPLINK menu and control the device from the TV screen instantly.
- Disc playback : Manages the multimedia device with the TV remote control.
- Power off all devices : When you power off the TV, all connected devices are turned off.
- Sync Power on : When the equipment with SIMPLINK function connected HDMI terminal starts to play, the TV will automatically turn on.
- Speaker : [Depending on model] Selects either home theater unit or TV speaker.

SETTINGS ⇒ PICTURE ➜ Energy Saving

Saves electric power by adjusting screen brightness.

- Off : Turns off the Energy Saving.
- Minimum/Medium/Maximum : Applies the pre-set Energy Saving.
- Screen Off : Screen is turned off and only sound is played. Press any button on the remote control to turn the screen back on.

SETTINGS ⇒ PICTURE ➜ SUPER Energy Saving

You can save energy by adjusting backlight and brightness according to the picture's brightness.

- **Off:** Disables SUPER Energy Saving.
- **On:** Enables SUPER Energy Saving; you can save energy with this energy-efficiency function.

❐ PIP Setting

You can watch TV on the sub-screen in PC mode.

- Mode: Shows or hides the sub-screen.
- Position: Adjusts the position of the sub-screen.
- Size: Adjusts the size of the sub-screen.
- Sound: Selects the sound of the sub-screen.

✎ Press the PIP button on the remote control to show or hide the sub-screen.

❐ To use Sleep Timer

SETTINGS ⇒ TIME ➔ Sleep Timer

Turns off the TV after a prescribed number of minutes.

To deactivate the Sleep Timer, select Off.

❑ To set current time

SETTINGS ⇨ TIME ➔ Clock

Checks or changes the time while watching TV.

- Auto : Synchronizes the TV clock to the digital time information sent by the TV station.
- Manual : Sets the time and date manually if the auto setup does not correspond to the current time.

❑ To turn on/off the TV

SETTINGS ⇨ TIME ➜ On Time / Off Time

Sets On/Off time.

To deactivate the On/Off time function, select Off on Repeat.

✎ To set On/Off time, set the current time correctly.

✎ When the TV is turned on using the On Time function, it will be turned off automatically if no buttons are touched within 120 minutes.

❏ To set password

SETTINGS ⇒ LOCK ➜ Set Password

Sets or changes TV password.

✎ The initial password is set to 「0000」.

❐ To lock system

SETTINGS ⇨ LOCK ➜ Lock System

Locks the selected channel or external input.

First set Lock System to On.

- Block Channel : Blocks programmes with content inappropriate for children. Programmes can be selected but the screen is blank and the audio is muted. To watch a locked programme, enter the password.

- Rating : Blocks the movies that are only broadcasted on the TV and contain inappropriate contents.
  Blocking Off : (General audiences) All ages admitted
  10 and above : (Parental guidance suggested) Some material may not be suitable for children
  12 and above : (Patents strongly cautioned) Some material may be inappropriate for children under 12
  14 and above : (Restricted) Under 14 requires accompanying parent or adult guardian
  16 and above : No one 16 and under admitted.
  18 and above : Adults only
- Input Block : Block the input sources.

❏ To use Key Lock

SETTINGS ⇒ LOCK ➜ Key Lock

Locks control buttons on TV.

- 🔖 Key Lock function remains intact even in case of power outage or when the power cord is removed from the wall socket.
- 🔖 Key Lock function can only be set by remote control, and not by the button on the TV.
- 🔖 Even though Key Lock is set to On, TV's buttons can turn on the power.

SETTINGS ⇨ OPTION ➞ Language

You can select the language of the menu displayed on the screen and digital sound broadcasting.

- Menu Language : Selects a screen menu language.
- Audio Language [In Digital mode Only] : Selects the desired language when watching digital broadcasting containing several voice languages.

SETTINGS ⇨ OPTION ➜ Caption

View captions when the TV station provides captioned programing. Program captions work only on digital/analog broadcasts or external input.

Change Caption to On and select caption settings.

- Mode
  CC 1-2 (Closed Captioning) / Text 1-2 : Displays the audio portion of a TV program as text on the TV screen. CC1 is the most common mode in use.
  Digital : This is only available for the digital broadcasting system. Selects Portuguese or English

❐ To set up Power Indicator

SETTINGS ⇒ OPTION ➜ Standby Light

Turns on/off the standby light in the front panel of the TV.

❏ To change TV mode

SETTINGS ⇒ OPTION ➝ Mode Setting

Selects Home Use or Store Demo.

When in use in home, please select Home Use.

Store Demo mode is for store display.

❒ To return to initial settings

SETTINGS⇨ OPTION ➜ Initial Setting

Returns to initial default mode by deleting all optional setup.

Once initialization is completed, the TV will turn off and on by itself.

- ✎ When Lock System is in place, a pop-up window appears and asks for password.

- ✎ Do not turn off the power during initialization.

❏ To view 3D images

3D imaging is a technology that utilizes the slight difference in left/right eyes to make the images on TV appear just like the real life 3-dimensional space.

1 Replay a 3D image title or turn to a 3D channel.
2 Put on 3D glasses.
3 Press 3D button to change to 3D imaging.
4 While viewing 3D images, press 3D button on the remote control to end 3D image viewing.

✎ You can also see the 3D Video through SETTINGS ⇨ PICTURE ➜ Set 3D Video.

❏ To adjust details of 3D images

Press the 3D OPTION button.

Changes options on 3D image viewing.
- 3D Picture Correction : Flips left/right images. Select a better 3D screen.
- 3D Depth : Adjusts depth between the object and surroundings.
- 3D Viewpoint : Adjust 3D depth between the object and surroundings by moving the 3D image screen back and forth.

❏ Warning when viewing 3D images

✎ 3D images may not be viewed correctly with shutter-type glasses that require recharging.

✎ If a future 3D broadcasting format that is not supported by this TV becomes the standard, an additional device such as a set-top box may be required.

❐ Warning when using 3D glasses

- ✎ Do not use the 3D glasses as a replacement for your own corrective glasses, sunglasses, or protective goggles. Improper use of 3D glasses may cause eye injuries.

- ✎ Do not store 3D glasses in extreme conditions. Exposure to excessively high or low temperatures may deform the lenses. Do not use deformed glasses.

- ✎ Do not apply pressure to or subject 3D glasses to any impact. Subjecting 3D glasses to rough handling may cause a defect.

- ✎ The lenses on 3D glasses (with polarizing film) are vulnerable to scratches. Use only a clean and soft cloth for cleaning. Dirty cloth may scratch the polarizing film.

- ✎ Scratching the lens surface of the 3D glasses with sharp objects or cleaning with chemicals may distort 3D images.

Easily and Conveniently replays content stored in USB (external HDD, USB Memory) directly on TV.

❏ To connect USB

Connect USB storage device to the TV's USB IN terminal.

The connected USB storage device is available for immediate use.

❏ To remove the USB device

Q.MENU ⇨ USB Device

Select a USB storage device and remove it.

Once the message that the USB device was removed is displayed, remove the device from the TV.

✎ After selecting to remove USB device, the USB storage Device cannot be read. Remove the USB storage device and then reconnect it.

❐ Warning when using USB storage device

- ✎ USB storage devices with a built-in auto recognition program or its own driver may not work.

- ✎ Some USB storage device may not work or may work improperly.

- ✎ Use only those USB storage devices formatted with FAT32 or NTFS File System provided by Windows.

- ✎ For external USB HDD, use devices with less than 5V-rated voltages and 500 mA-rated current.

- ✎ It is recommended to use USB Memory Stick with 32 GB or less and USB HDD with 1 TB or less.

- ✎ If a USB HDD with power-saving function does not work properly, turn the power off and on. For more information, refer to the user manual of USB HDD.

- ✎ Data in the USB storage device can be damaged so back up important files in other devices. Data maintenance is the user's responsibility. The manufacturer is not responsible for data loss.

❐ To use My Media

SETTINGS ⇨ MY MEDIA ➜ All Media / Movie List / Photo List / Music List

Select desired file from the list. Watch the chosen file.

Sets play related settings by checking option during disk playback.

❏ To set up My Media

- DivX VOD Registration : Checks DivX Reg. Code for replaying DivX protected videos. Register at http://vod.divx.com. Use Registration Code to rent or purchase movies at www.divx.com/vod.

  ✎ When using the DivX Reg. Code of a different device, you cannot replay the rented/purchased DivX file. Use only the DivX Reg. Code granted to this specific device.

  ✎ Converted files not conforming to the DivX Codec Standard may not be replayed or may produce abnormal sound.

- DivX Deregistration : Deregisters DivX.

❐ My Media supporting file

Maximum data transfer rate:

    20 Mbps (Mega bit per second)

External supported subtitle formats:

    *.smi, *.srt, *.sub (MicroDVD, SubViewer 1.0/2.0), *.ass, *.ssa, *.txt (TMPlayer), *.psb (PowerDivX)

Internal supported subtitle formats:

    XSUB (Supports internal subtitles generated from DivX6)

☐ Available video file

Maximum: 1920 x 1080 @30p (only Motion JPEG 640x480 @30p)

.asf, .wmv
  [Video] VC-1 Advanced Profile, VC-1 Simple and Main Profiles
  [Audio] WMA Standard

.divx, .avi
  [Video] DivX3.11, DivX4, DivX5, DivX6, XViD, H.264/AVC, Motion JPEG
  [Audio] MPEG-1 Layer I, II, Dolby Digital, MPEG-1 Layer III (MP3)

.mp4, .m4v, .mov
  [Video] H.264/AVC, MPEG-4 Part 2, XViD
  [Audio] AAC, MPEG-1 Layer III (MP3)

.mkv
   [Video] H.264/AVC, XViD, MPEG-4 Part2
   [Audio] HE-AAC, Dolby Digital, MPEG-1 Layer III (MP3)

.ts, .trp, .tp
   [Video] H.264/AVC, MPEG-2
   [Audio] MPEG-1 Layer I, II, MPEG-1 Layer III (MP3), Dolby Digital,
            Dolby Digital Plus, AAC

.vob
   [Video] MPEG-1, MPEG-2
   [Audio] Dolby Digital, MPEG-1 Layer I, II, DVD-LPCM

.mpg, .mpeg, .mpe
   [Video] MPEG-1
   [Audio] MPEG-1 Layer I, II

☐ Available music file

File type : mp3
    [Bit rate] 32 Kbps - 320 Kbps
    [Sample freq.] 16 kHz - 48 kHz
    [Support] MPEG1, MPEG2, Layer2, Layer3

☐ Available photo file

Category : 2D(jpeg, jpg, jpe), 3D(jps)

    [Available file type] SOF0: baseline,

                                    SOF1: Extend Sequential,

                                    SOF2: Progressive

    [Photo size] Minimum: 64 x 64

                   Maximum: Normal Type: 15360 (W) x 8640 (H)

                                      Progressive Type: 1920 (W) x 1440 (H)

Category : 3D (mpo)

    [Available file type] mpo

    [Photo size] 4:3 size: 3,648 x 2,736 / 2,592 x 1,944 / 2,048 x 1,536

    3:2 size: 3,648 x 2,432

❏ Video Replay Issues

- ✎ Some subtitles created by users may not work properly.

- ✎ The video and subtitle files should be placed in the same folder. Assign the same names to the video and subtitle files for proper display.

- ✎ Streams containing GMC (Global Motion Compensation) or Qpel (Quarterpel Motion Estimation) are not supported.

- ✎ Only H.264/AVC profile levels 4.1 and lower are supported.

- ✎ Video files that exceed 50 GB (Gigabyte) are not supported for playback. The file size limit is dependent on the encoding environment.

SETTINGS ⇨ Customer Support ➜ Software Update

Uses Software Update to check and obtain the latest version. If not updated, certain functions may not work properly.

It is also possible to check manually for available updates.

- Software Update : Set it to On. When an update file is detected, the file is automatically downloaded. When the file download is complete, the software update window appears.
- Check Update Version : Checks the latest update version installed and when a new update is available, the download process can be performed manually. [Depending on model]

- ✎ The latest version can be obtained via digital broadcast signals or internet connections.

- ✎ Changing the channel while downloading the software via digital broadcast signal interrupts the download process. Returning to the initial channel allows downloading to resume.

- ✎ If software is not updated, certain functions may not work properly.

If the following symptoms occur, recheck the system. It may not be malfunction.

❏ Operational problem

☑ Cannot view certain channels.
- Adjust the location or orientation of the antenna.
- Save the desired viewing channels on Auto Tuning or Channel Edit.

☑ After turning on the TV, there is a delay before full images appear.
- This is normal because an image deletion process was inserted to clean up image noises that may occur immediately after the power is turned on.

❏ Image problem

SETTINGS ⇨ Customer Support ➡ Picture Test

Conducts Picture Test first to verify that image signal output is normal.

When the test image is normal, check connected external devices or broadcast signal.

- ☑ Images from the previously viewed channel or other channels linger or the screen shows annoying lines.
  - Adjust the antenna to the direction of the TV station or refer to the manual for proper way to connect the antenna.

☑ Vibrating horizontal/vertical lines and fishnet patterns appear momentarily.

- Such a problem may happen when there is strong electronic interference. Turn off other electronic devices such as mobile phones, power tools and other small electrical appliances.

☑ The screen display freezes or does not work properly during digital broadcast.

- It may happen when the signals are weak or the reception is unstable. Adjust the antenna's orientation or cable connections.
- If the signal strength or quality is low on Manual Tuning, contact the TV station or administration office for checkup.

☑ Digital broadcast cannot be seen though the cable is connected.

- Verify subscription and/or signal with cable operator.
  (Depending on the subscription, digital broadcasting may not be supported.)

☑ Display is not on or unclear when connected to HDMI.

- Check the HDMI® cable specifications. Failure to use genuine HDMI® cable may cause images to fade in and out or not be displayed properly.
- Verify that all cable connections are securely connected. When connections are not secure, images may not be properly displayed.

☑ Does not work when connected to USB storage device.

- Verify that the USB device and cable is version 2.0 or higher.

❏ Sound problem

SETTINGS ⇒ Customer Support ➜ Sound Test

Try Sound Test to verify that sound signal output is normal.

When the test sound is normal, check connected external devices or broadcast signal.

☑ Screen display is on but no sound.
- Check other TV channels.
- [Depending on model] Make sure the TV Speaker is set to On.

☑ For analog broadcast, stereo is not clear or sound comes from one speaker only.

- In a poor reception area (areas with weak or unstable signal) or if multi audio is unstable, select Mono on Multi Audio.
- Adjust the Balance with the Navigation Button.

☑ TV sound is not in sync with the lips or the sound breaks up occasionally.

- If it occurs only with a certain TV channel, that station's broadcast signal may have a problem. Check with the TV station or your cable operator.

☑ Each channel's volume is different.
- Depending on the channel, there can be differences in volume.
- Please set Auto Volume to On.

☑ On certain channels, sound does not come out or only the background music plays. (If it is a program created for overseas viewers)
- On Language, set Language ➜ Audio Language to the desired language. Changes to the language on Multi Audio may returned to the default setup by turning off the power or changing the channel.

☑ There is no sound when connected to HDMI/USB.

- Verify that the HDMI® cable is high speed.
- Check that the USB device and cable is version 2.0 or higher.
- Use only regular music (*mp3) files.

❐ PC connection problem (Only for models supporting PC connection)

☑ The screen display is not on after connecting to the computer.
- Check that the computer and TV are securely connected.
- Check if the resolution is correctly set for PC input.
- To use the TV as a secondary monitor, check that the connected desktop or laptop supports dual monitor displays.

☑ There is no sound after connecting the computer with the HDMI cable.
- Check with the video card manufacturer to ensure it supports HDMI voice output. (Video cards manufactured in DVI format require connection of a separate sound cable.)

☑ When connected to the computer, the display is partially cut off or shifts to one side.

- Set up the resolution supporting PC input.
  (If it does not work, reboot the computer.)
- Select Screen (RGB-PC) and adjust Position / Size / Phase.

❏ Problem with replaying movies in My Media

☑ I cannot view the files on the Movie List.
- Check if the file on the USB storage device can be read on a computer.
- Check that the file extension is supported.

☑ This is not a file that is supported. The above error message appears. Sound, video or subtitles is not normal.
- Make sure that the file replays normally on the video player in the computer. (Check for damaged files.)
- Check if My Media can support selected file.

✎ For information on requesting service, refer to the TV's menu.
SETTINGS ⇨ Customer Support ➜ Product/Service Info.

❑ ANATEL (Brasil)

Este equipamento opera em caráter secundário, isto é, não tem direito a proteção contra interferência prejudicial, mesmo de estações do mesmo tipo, e não pode causar interferência a sistemas operando em caráter primário [Somente para alguns modelos].

❏ No momento do descarte/troca (Utilize apenas lâmpadas específicas e projetadas para os televisores de LCD)

- A lâmpada fluorescente usada neste aparelho contém uma pequena quantidade de mercúrio.
- Não descarte este produto com o restante do lixo comum.
- O descarte desse produto deve ser feito de acordo com a legislação de sua região.