

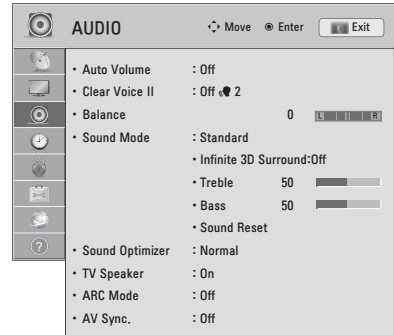


Setting	Description
Edge Enhancer	Shows clearer and distinctive yet natural edges of the video. This function works well over Sharpness UI 60 value.
xvYCC	This produces richer colors. This feature represents rich colors as much as a conventional video signal. This function is enabled in "Picture mode - Cinema, Expert" when xvYCC signal is inputted through HDMI.
Color Filter	This is the function to filter the specific colors of the video. You can use the RGB filter to set color saturation and hue accurately.
Expert Pattern	This is the pattern used for expert adjustment This function is enabled in "Picture Mode - Expert" when you watch DTV.
Color Temperature	Adjusts the overall color of the screen by changing the white baseline. <div style="display: flex; border: 1px solid black; padding: 5px;"> <div style="width: 30px; text-align: center; border-right: 1px solid black; margin-right: 5px;">  </div> <div> <p>a. Method : 2 Points</p> <ul style="list-style-type: none"> • Pattern: Inner, Outer • Red/Green/Blue Contrast, Red/Green/Blue Brightness: The adjustment range is -50 to +50. <p>b. Method : 20 Point IRE</p> <ul style="list-style-type: none"> • IRE (Institute of Radio Engineers) is the unit to display the size of the video signal and can be set among 0, 5, 10, 15 - 100 Plasma TV. You can adjust Red, Green or Blue according to each setting. • Red/Green/Blue: The adjustment range is -50 - +50. <p>c. Apply to all inputs</p> </div> </div> <div style="display: flex; border: 1px solid black; padding: 5px; margin-top: 5px;"> <div style="width: 30px; text-align: center; border-right: 1px solid black; margin-right: 5px;">  </div> <div> <p>a. Gamma : Select 1.9, 2.2, 2.4</p> <p>b. Method : 2 Points</p> <ul style="list-style-type: none"> • Pattern: Inner, Outer • Red/Green/Blue Contrast, Red/Green/Blue Brightness <p>c. Method : 10 Point IRE</p> <ul style="list-style-type: none"> • Pattern: Inner, Outer • IRE (Institute of Radio Engineers) is the unit to display the size of the video signal and can be set among 10, 20, 30 - 100. You can adjust Red, Green or Blue according to each setting. • Luminance: This function displays calculated luminance value for 2.2 gamma. You can input luminance value you want at 100 IRE, than the target luminance value for 2.2 gamma is displayed at every 10 steps from 10 IRE to 90 IRE. • Red/Green/Blue: The adjustment range is -50 - +50. <p>d. Apply to all inputs</p> </div> </div>
Color Management System	As the tool used by the experts to make adjustments by using the test patterns, this does not affect other colors but can be used to selectively adjust the 6 color areas (Red/Green/Blue/Cyan/Magenta/Yellow). Color difference may not be distinctive even when you make the adjustments for the general video. Adjusts Red/Green/Blue/Yellow/Cyan/Magenta. <ul style="list-style-type: none"> » Red/Green/Blue/Yellow/Cyan/Magenta Color: The adjustment range is -30 - +30. » Red/Green/Blue/Yellow/Cyan/Magenta Tint: The adjustment range is -30 - +30. » This feature is disable in RGB-PC and HDMI-PC mode.


AUDIO Settings

- 1 Press **Home** to access the Home menu.
- 2 Press the Navigation buttons to scroll to **SETUP** and press **ENTER**.
- 3 Press the Navigation buttons to scroll to **AUDIO** and press **ENTER**.
- 4 Press the Navigation buttons to scroll to the setting or option you want and press **ENTER**.
 - To return to the previous level, press **BACK**.
- 5 When you are finished, press **EXIT**.



The available audio settings are described in the following.

Setting	Description																						
Auto Volume	Activates the Auto Volume feature to keep the volume level consistent whenever you change channels. The volume level may not be consistent due to different signal conditions of broadcasting stations.																						
Clear Voice II	Sets whether to enhance human voice clarity. You can adjust the level of clarity when you set this feature on.																						
Balance	Adjust balance between the left and right speakers according to your room environment.																						
Sound Mode	Selects one of the preset sound modes or customizes options in each mode. <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th colspan="2">Mode</th> </tr> </thead> <tbody> <tr> <td>Standard</td> <td>Select when you want standard-quality sound.</td> </tr> <tr> <td>Music</td> <td>Select when you listen to music.</td> </tr> <tr> <td>Cinema</td> <td>Select when you watch movies.</td> </tr> <tr> <td>Sport</td> <td>Select when you watch sports events.</td> </tr> <tr> <td>Game</td> <td>Select when you play games.</td> </tr> </tbody> </table> <div style="border: 1px solid gray; padding: 5px; margin-top: 10px;"> <p>NOTE</p> <ul style="list-style-type: none"> If sound quality or volume is not at the level you want, it is recommended to use a separate home theater system or amplifier to cope with different user environments. If the Clear Voice II feature is on, Infinite 3D Surround will not be activated. </div> <table border="1" style="width: 100%; border-collapse: collapse; margin-top: 10px;"> <thead> <tr> <th colspan="2">Option</th> </tr> </thead> <tbody> <tr> <td>Infinite 3D Surround</td> <td>Patents LG proprietary sound processing technology that strives immersive 5.1 surround sound with just two front speakers.</td> </tr> <tr> <td>Treble</td> <td>Controls the dominant sounds in the output. When you turn up the treble, it will increase the output to the higher frequency range.</td> </tr> <tr> <td>Bass</td> <td>Controls the softer sounds in the output. When you turn up the bass, it will increase the output to the lower frequency range.</td> </tr> <tr> <td>Sound Reset</td> <td>Resets the sound mode to the default setting.</td> </tr> </tbody> </table>	Mode		Standard	Select when you want standard-quality sound.	Music	Select when you listen to music.	Cinema	Select when you watch movies.	Sport	Select when you watch sports events.	Game	Select when you play games.	Option		Infinite 3D Surround	Patents LG proprietary sound processing technology that strives immersive 5.1 surround sound with just two front speakers.	Treble	Controls the dominant sounds in the output. When you turn up the treble, it will increase the output to the higher frequency range.	Bass	Controls the softer sounds in the output. When you turn up the bass, it will increase the output to the lower frequency range.	Sound Reset	Resets the sound mode to the default setting.
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Setting	Description
Sound Optimizer	Optimizes the sound depending on the environment in which the TV is installed.
	Option
	Normal Normal sound mode.
	Wall Mount Type Optimized sound mode for a wall-mounted TV. Stand type Optimized sound mode for a stand-type TV.
TV Speaker	Turns on the internal speaker of the TV when using an external Hi-Fi system. You can use the TV speaker as an audio output device even if there is no video input.
ARC Mode (Audio Return Channel)	When using an external audio device with the ARC (Audio Return Channel) feature, optical SPDIF can be output using only a High Speed HDMI cable without an additional optical cable.
	 NOTE <ul style="list-style-type: none"> • Some HDMI cables may not support this mode. (A High Speed HDMI cable is recommended.) • The ARC mode only works on the HDMI 1 input on the TV. • Activates the SIMPLINK feature to use this feature.
	Option
	On If the device with the ARC feature is turned on, the device speaker is automatically used when SIMPLINK is enabled. Off Even if the device with the ARC feature is turned on and SIMPLINK is enabled, the device speaker is not automatically used.
AV Sync.	If the video and sound are not synced, you can adjust it manually. <ul style="list-style-type: none"> » (-) setting : Make audio output faster than the default. » (+) setting : Make audio output slower than the default.
	Option
	AV Sync. Adjusts the sync of the TV speaker and SPDIF.
	TV Speaker Adjusts the sync of the sound from the TV's internal speaker. SPDIF (Sony Philips Digital InterFace) Adjusts the sync of the sound from an external speaker connected to the digital audio output port.

TIME Settings

- 1 Press **Home** to access the Home menu.
- 2 Press the Navigation buttons to scroll to **SETUP** and press **ENTER**.
- 3 Press the Navigation buttons to scroll to **TIME** and press **ENTER**.
- 4 Press the Navigation buttons to scroll to the setting or option you want and press **ENTER**.
 - To return to the previous level, press **BACK**.
- 5 When you are finished, press **EXIT**.

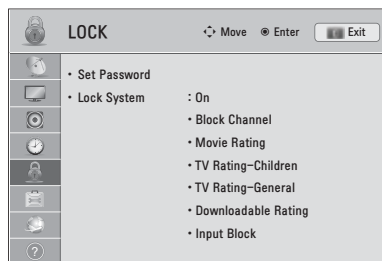


The available time settings are described in the following.

Setting	Description
Clock	Sets the time, date, time zone, and daylight-saving time feature. The time will be set automatically according to a digital channel signal which includes time information provided by the broadcasting station. If not, set the time and date manually.
Off Time/On Time	<p>Sets the time to turn on or off the TV automatically. To use this function, you should set the current time and date in advance.</p> <p>NOTE</p> <ul style="list-style-type: none"> • If you do not press any button within 2 hours after the TV turns on by the On Time feature, the TV enters the Standby mode automatically. • If you set both Off time and On time features to the same time, the Off time feature overrides the On time feature.
Sleep Timer	Sets the length of time until the TV to turns off. When you turn the TV off and turn it on again, the Sleep timer feature will be set to off.



LOCK Settings

- 1 Press **Home** to access the Home menu.
- 2 Press the Navigation buttons to scroll to **SETUP** and press **ENTER**.
- 3 Press the Navigation buttons to scroll to **LOCK** and press **ENTER**.
- 4 Press the Navigation buttons to scroll to the setting or option you want and press **ENTER**.
- To return to the previous level, press **BACK**.
- 5 When you are finished, press **EXIT**.



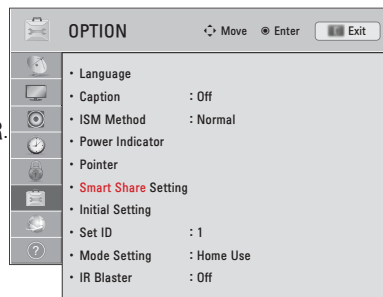
The available lock settings are described in the following.

Setting	Description	
Set Password	Changes the 4-digit password. The default PIN is "0 0 0 0". If you forget your password, press "0-3-2-5" on the remote control.	
Lock System	Activates or deactivates the lock system.	
Block Channel	Blocks the channels that contain inappropriate contents for children. The channels can be selected but the screen blank and the audio is muted. To watch a locked channel, enter the password.	
Movie Rating	Blocks the movies that are only broadcasted on the TV and contain inappropriate contents, based on the Motion Picture Association of America (MPAA) rating.	
	Rating	
	G	General audiences – All ages admitted
	PG	Parental guidance suggested – Some material may not be suitable for children
	PG-13	Parents strongly cautioned – Some material may be inappropriate for children under 13
	R	Restricted – Under 17 requires accompanying parent or adult guardian
	NC-17	No one 17 and under admitted.
X	Adults only	
TV Rating-Children (Depending on model)	Blocks the children's TV programs that parents do not want their children to watch. To block other TV programs, you should set the TV Rating-General feature.	
	Rating	
	Age	TV-Y (All children, including children from ages 2-6) TV-Y7 (Directed to older children, suitable for children age 6 and above)
	Fantasy Violence	TY-Y7 (Directed to older children – Fantasy violence, suitable for children age 6 and above, containing more intense or combative fantasy violence)

Setting	Description																		
TV Rating-General (Depending on model)	<p>Blocks the TV programs that you want based on the ratings by using the Parental Control Function (V-Chip).</p> <div style="border: 1px solid black; padding: 5px; margin-top: 10px;">  NOTE <ul style="list-style-type: none"> The V-Chip electronically reads TV program ratings and allows parents to block program that are unsuitable for children. </div> <table border="1" style="width: 100%; margin-top: 10px;"> <thead> <tr> <th colspan="2" style="background-color: #f2f2f2;">Rating</th> </tr> </thead> <tbody> <tr> <td style="width: 25%;">Age</td> <td>TV-G (General audience, suitable for all ages) TV-PG (Parental guidance suggested, containing material that are unsuitable for younger children) TV-14 (Parents strongly cautioned, containing material that are unsuitable for children age 14 and under) TV-MA (Mature audience only, unsuitable for children age under 17)</td> </tr> <tr> <td>Dialog (suggestive dialogue)</td> <td>TV-PG or TV-14</td> </tr> <tr> <td>Language (coarse language)</td> <td>TV-PG, TV-14, or TV-MA</td> </tr> <tr> <td>Sex (sexual situation)</td> <td>TV-PG, TV-14, or TV-MA</td> </tr> <tr> <td>Violence</td> <td>TV-PG, TV-14, or TV-MA</td> </tr> </tbody> </table>	Rating		Age	TV-G (General audience, suitable for all ages) TV-PG (Parental guidance suggested, containing material that are unsuitable for younger children) TV-14 (Parents strongly cautioned, containing material that are unsuitable for children age 14 and under) TV-MA (Mature audience only, unsuitable for children age under 17)	Dialog (suggestive dialogue)	TV-PG or TV-14	Language (coarse language)	TV-PG, TV-14, or TV-MA	Sex (sexual situation)	TV-PG, TV-14, or TV-MA	Violence	TV-PG, TV-14, or TV-MA						
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TV Rating-English (Depending on model)	<p>Selecting Canadian English rating system.</p> <table border="1" style="width: 100%; margin-top: 5px;"> <thead> <tr> <th colspan="2" style="background-color: #f2f2f2;">Rating</th> </tr> </thead> <tbody> <tr> <td style="width: 25%;">E</td> <td>Exempt</td> </tr> <tr> <td>C</td> <td>Children</td> </tr> <tr> <td>C8+</td> <td>Children eight years and older</td> </tr> <tr> <td>G</td> <td>General programming, suitable for all audiences</td> </tr> <tr> <td>PG</td> <td>Parental Guidance</td> </tr> <tr> <td>14+</td> <td>Viewers 14 years and older</td> </tr> <tr> <td>18+</td> <td>Adult programming</td> </tr> <tr> <td>Blocking Off</td> <td>Permits all programs</td> </tr> </tbody> </table>	Rating		E	Exempt	C	Children	C8+	Children eight years and older	G	General programming, suitable for all audiences	PG	Parental Guidance	14+	Viewers 14 years and older	18+	Adult programming	Blocking Off	Permits all programs
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TV Rating-French (Depending on model)	<p>Selecting Canadian French rating system.</p> <table border="1" style="width: 100%; margin-top: 5px;"> <thead> <tr> <th colspan="2" style="background-color: #f2f2f2;">Rating</th> </tr> </thead> <tbody> <tr> <td style="width: 25%;">E</td> <td>Exempt</td> </tr> <tr> <td>G</td> <td>General</td> </tr> <tr> <td>8ans+</td> <td>General-Not convenient for little children</td> </tr> <tr> <td>13ans+</td> <td>Not convenient for children of 13 years and younger</td> </tr> <tr> <td>16ans+</td> <td>Not convenient for children of 16 years and younger</td> </tr> <tr> <td>18ans+</td> <td>This programs is only for adults</td> </tr> <tr> <td>Blocking Off</td> <td>Permits all programs</td> </tr> </tbody> </table>	Rating		E	Exempt	G	General	8ans+	General-Not convenient for little children	13ans+	Not convenient for children of 13 years and younger	16ans+	Not convenient for children of 16 years and younger	18ans+	This programs is only for adults	Blocking Off	Permits all programs		
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16ans+	Not convenient for children of 16 years and younger																		
18ans+	This programs is only for adults																		
Blocking Off	Permits all programs																		
Downloadable Rating	<p>This function operates only when TV has received Region5 Rating data. The name of the rating option may differ.</p> <div style="border: 1px solid black; padding: 5px; margin-top: 10px;">  NOTE <ul style="list-style-type: none"> This feature is available only for digital channels. </div>																		
Input Block	<p>Block the input sources.</p>																		



OPTION Settings



- 1 Press **Home** to access the Home menu.
- 2 Press the Navigation buttons to scroll to **SETUP** and press **ENTER**.
- 3 Press the Navigation buttons to scroll to **OPTION** and press **ENTER**.
- 4 Press the Navigation buttons to scroll to the setting or option you want and press **ENTER**.
 - To return to the previous level, press **BACK**.
- 5 When you are finished, press **EXIT**.



The available general settings are described in the following.

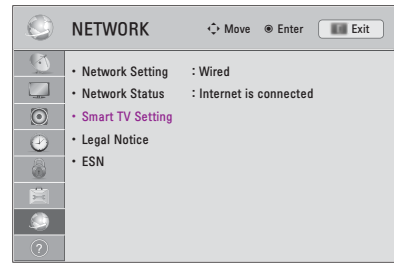
Setting	Description
Language	Selects a desired language.
	Option
	Menu Language Selects a language for the display text. Audio Language Selects an audio language for your program. This feature operates only in the DTV or CADTV mode.
Caption	Sets whether to display captions and customize your option in each mode.
	Mode
	CC 1-4 (Closed Captioning) Displays the audio portion of a TV program as text on the TV screen. CC1 is the most common mode in use.
	Text 1-4 - Field 1 data channels: two Captions (CC1, CC2) and two Text (T1, T2). - Field 2 data channels: two Captions (CC3, CC4) and two Text (T3, T4).
	Service 1-6 This is only available for the digital broadcasting system.
	Option (For Digital Broadcasting)
	Size Selects the word size.
	Font Selects a typeface for the text.
	Text Color Selects a color for the text.
	Text Opacity Adjusts the opacity for the text color.
	Bg Color Selects a background color.
	Bg Opacity Adjusts the opacity for the background color.
	Edge Type Selects an edge type.
Edge Color Selects a color for the edges.	
Power Indicator (Depending on model)	Sets to turn on or off the indicator light on the TV.
	Option
	Standby Light Set to turn on or off the indicator light in Standby mode. Power Light Set to turn on or off the indicator light when you turn on the power.

Setting	Description	
ISM Method 	Prevents image sticking or removes a ghost image. A frozen still picture displayed on the screen for prolonged periods can result in a ghost image.	
	Mode	
	Normal	Sets it if image sticking is never a problem.
	Orbiter	Avoids a ghost image on the screen. The image will move every 2 minutes to help prevent ghost images. However, it is best not to allow any fixed image to remain on the screen.
	Color Wash	Removes a ghost image on the screen. The color block with the screen moved a little and the white pattern are alternately displayed. It is difficult to see the after image on all colors. Once it has been corrected it will not be visible in any color.
	White Wash	Removes a ghost image on the screen. Use sparingly. Watch the TV normally for a while before using this feature to see if the ghost image disappears on its own.
 NOTE <ul style="list-style-type: none"> An excessive ghosted image may be impossible to clear entirely with White Wash. To return to normal viewing, press the any button. 		
Pointer (Depending on model)	Sets the pointer option of the magic motion remote control.	
	Option	
	Speed	Changes the pointer speed.
	Shape	Selects the pointer shape.
	Size	Changes the pointer size.
	Alignment	Align the remote control's direction with the pointer on your TV screen by shaking the remote control left and right. Then, the pointer automatically moves to the center of the screen.
Smart Share Setting	Sets the DivX and DLNA option.	
	Option	
	DivX VOD Registration	Registers your TV to play DivX protected videos (See p.71).
	DivX Deregistration	Deregisters your TV (See p.71).
	DMR	Activates or deactivates the DMR (Digital Media Render) connection.

Setting	Description
Initial Setting	<p>Resets the TV to factory default and erases all stored channels. Customizes the TV settings to suit your preference. The initial setup screen will appear when you turn on the TV for the first time.</p> <div style="border: 1px solid black; padding: 5px; margin-top: 10px;"> <p> NOTE</p> <ul style="list-style-type: none"> • When selecting “Lock System - On” in the LOCK menu, the message to enter the password appears. • If you forget your password, press “0-3-2-5” on the remote control. </div>
Setting	
Language	Selects a desired language.
Mode Setting	<p>Selects Home Use for the home environment. Selects Store Demo for the retail environment. Selects Demo Mode to set to show special features of the TV. You can cancel the demo mode by pressing any buttons except the Volume and Mute buttons.</p> <div style="border: 1px solid black; padding: 5px; margin-top: 10px;"> <p> NOTE</p> <ul style="list-style-type: none"> • When selecting Store Demo, Demo Mode will be activated. </div>
Power Indicator (LED LCD TV)	Turns the power indicator light on or off.
Time Zone	Sets the time zone and daylight saving.
Auto Tuning	Scans and saves available channels automatically.
Set ID	Adds an ID to the connected devices.
Mode Setting	Default selection is “Home Use”. We recommend setting the TV to “Home Use” mode for the best picture in your home environment.
Option	
Home Use	Selects it for the home environment.
Store Demo	Selects it for the retail environment.
Demo Mode	Sets to show special features of the TV. You can cancel the demo mode by pressing any buttons except the Volume and Mute buttons.
IR Blaster (Depending on model)	Adjusts when connecting Wireless media box (sold separate). For further information, refer to the optional “Wireless media box” manual for operating instructions.

NETWORK Settings

- 1 Press **Home** to access the Home menu.
- 2 Press the Navigation buttons to scroll to **SETUP** and press **ENTER**.
- 3 Press the Navigation buttons to scroll to **NETWORK** and press **ENTER**.
- 4 Press the Navigation buttons to scroll to the setting or option you want and press **ENTER**.
 - To return to the previous level, press **BACK**.
- 5 When you are finished, press **EXIT**.

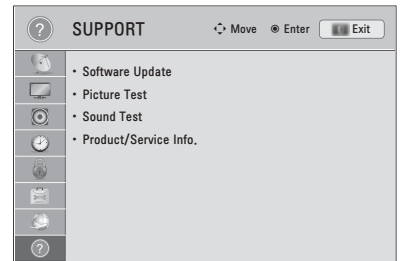


The available network settings are described in the following.

Setting	Description	
Network Setting	Configure the network settings (See p.50).	
Network Status	Display the network status (See p.55).	
Smart TV Setting	Set the region for which weather forecast is provided and manage the IDs added to the TV.	
	Setting	
	Country Setting	Set the country for premium services. Different premium services are provided depending on the country you set.
	Weather Effect	Sets the region for the weather to be displayed on the background of the premium service. Select your region.
	Premium Version	Display the version of the premium service.
	ID Management	Manage the login history of the IDs added to the TV.
Reset	Delete all IDs added and applications installed on the TV. Please be aware that all your paid applications may be deleted.	
Legal Notice	Display the Legal notice (See p.57).	
ESN (Depending on model)	View the supplied Netflix Electronic Serial Number (ESN)	

SUPPORT Settings

- 1 Press **Home** to access the Home menu.
- 2 Press the Navigation buttons to scroll to **SETUP** and press **ENTER**.
- 3 Press the Navigation buttons to scroll to **SUPPORT** and press **ENTER**.
- 4 Press the Navigation buttons to scroll to the setting or option you want and press **ENTER**.
 - To return to the previous level, press **BACK**.
- 5 When you are finished, press **EXIT**.



The available **support** settings are described in the following.

Setting	Description
Software Update	Update the TV with the latest firmware.
Picture Test	Executes picture or built-in melody sound tests.
Sound Test	<ul style="list-style-type: none"> » If this test has an error, select Yes. You will see product or service information. » If this test has no errors, check the connection status of external devices and refer to the manual of external devices.
Product/Service Info.	Shows the product or service information. Customer Service Center can differ by country.

MAKING CONNECTIONS

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

- 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.
- The external device connection may differ from the model.
- Connect external devices to the TV regardless of the order of the TV port.

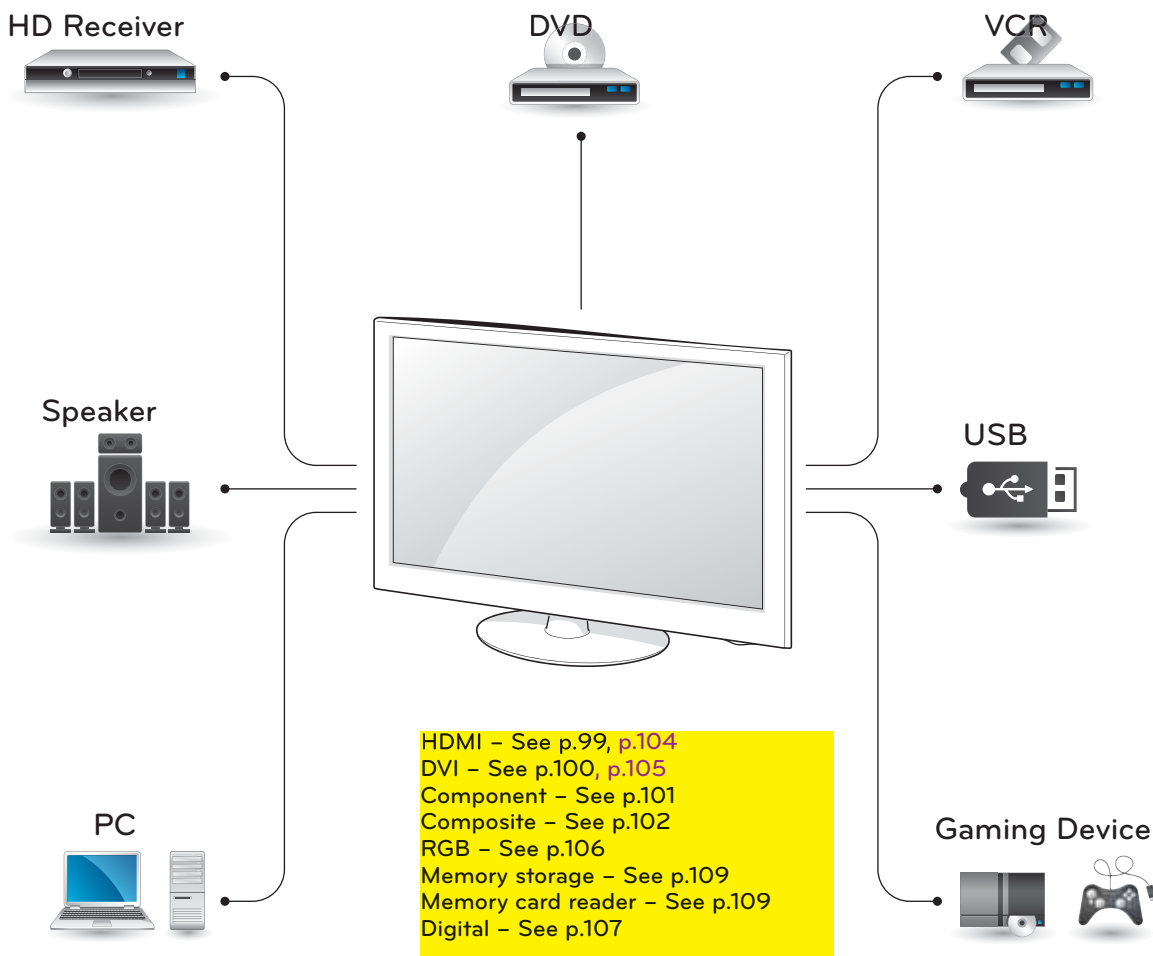
Connect external devices to the TV by referring to the following table.

Connection type	Video		Audio	
	Digital	Analog	Digital	Analog
HDMI (highly recommended)	O	-	O	-
DVI	O	-	-	-
Component	-	O	-	-
Composite	-	O	-	-
RGB	-	O	-	-
Optical audio	-	-	O	-

Connection Overview

Connect various external devices to the ports on the TV back panel.

- 1 Find an external device you want to connect to your TV as shown on the following illustration.
- 2 Check the connection type of the external device.
- 3 Go to the appropriate illustration and check the connection details.



NOTE

- If you connect a gaming device to the TV, use the cable supplied with the gaming device.
- Refer to the external equipment's manual for operating instructions.

Connecting to a HD receiver, DVD, or VCR player

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

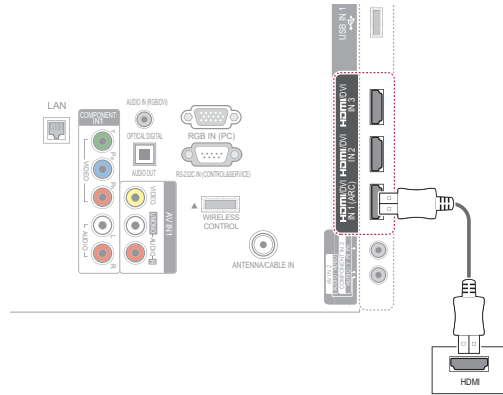
HDMI Connection

Transmits the digital video and audio signals from an external device to the TV. Connect the external device and the TV with the HDMI cable as shown in the following illustration.

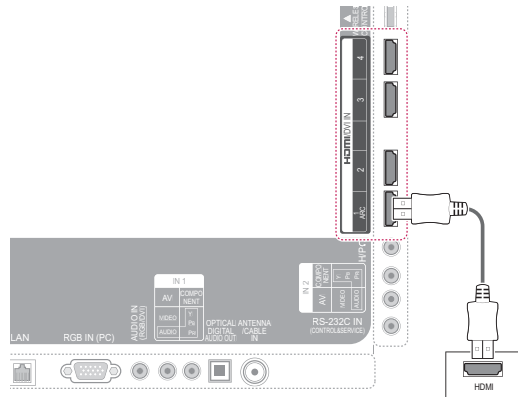
NOTE

- 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.

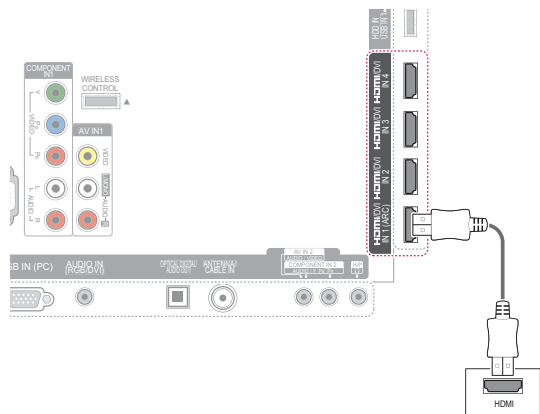
LV3700 series



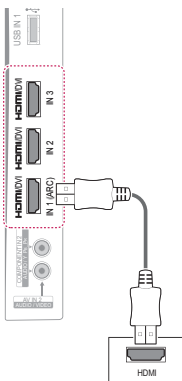
LZ9700 series



Other models

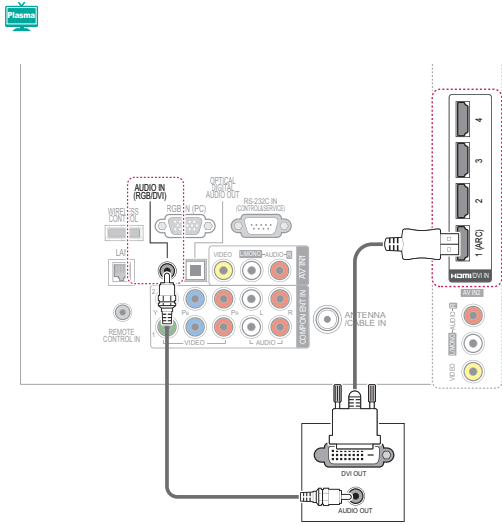


LK530, LK550 series

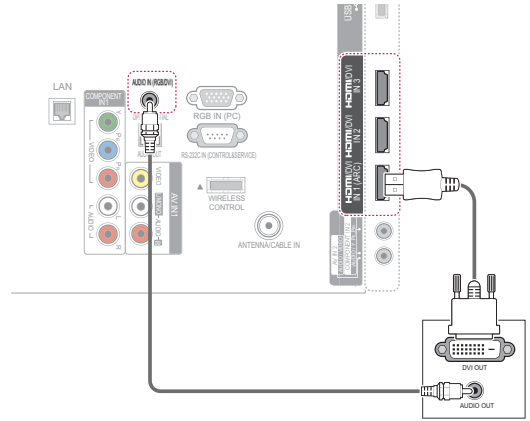


DVI to HDMI Connection

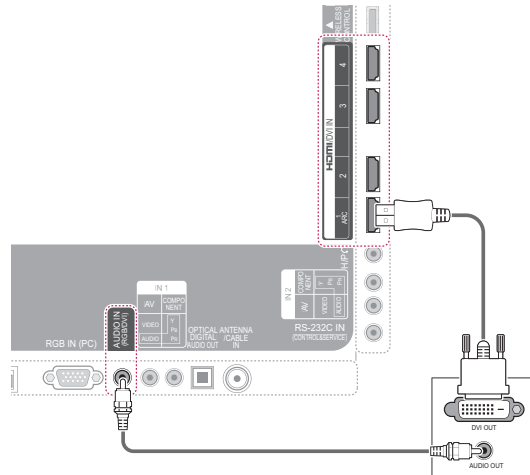
Transmits the digital video signal from an external device to the TV. Connect the external device and the TV with the DVI-HDMI cable as shown in the following illustration. To transmit an audio signal, connect an optical audio cable.



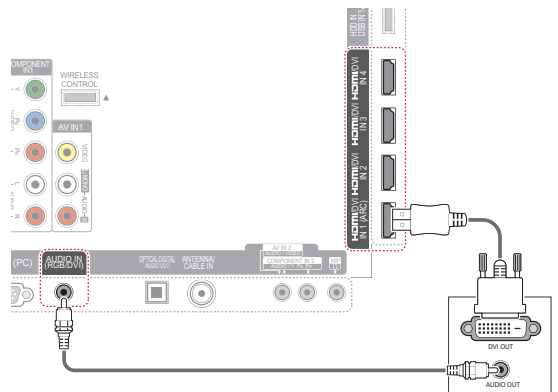
LV3700 series



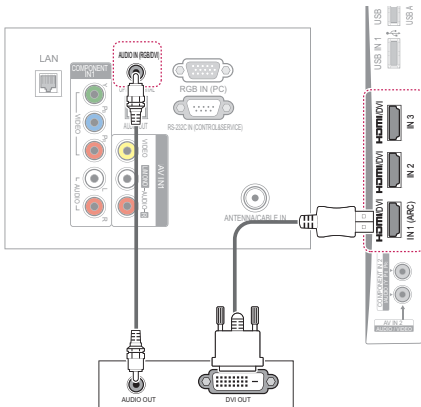
LZ9700 series



Other models

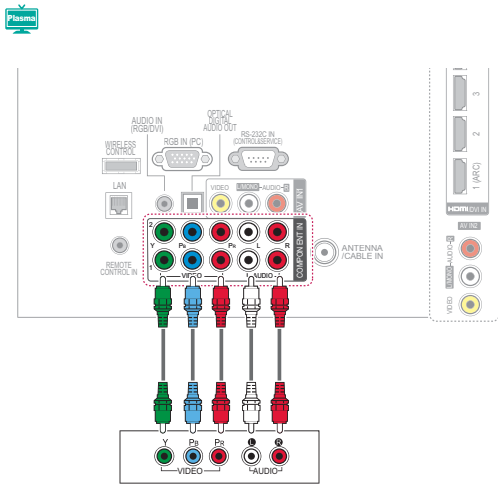


LK530, LK550 series

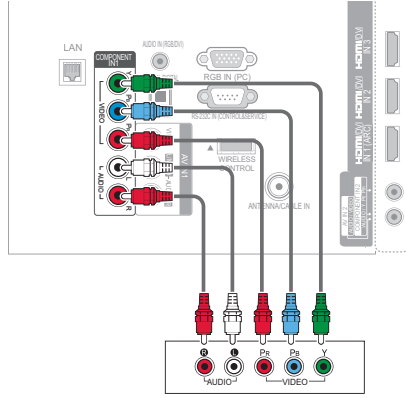


Component Connection

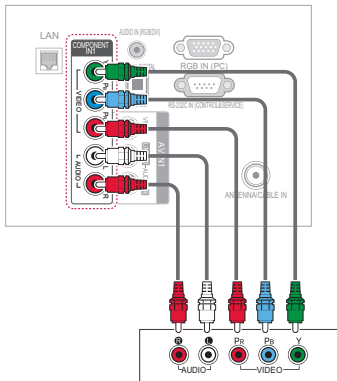
Transmits the analog video and audio signals from an external device to the TV. Connect the external device and the TV with the component cable as shown in the following illustration.



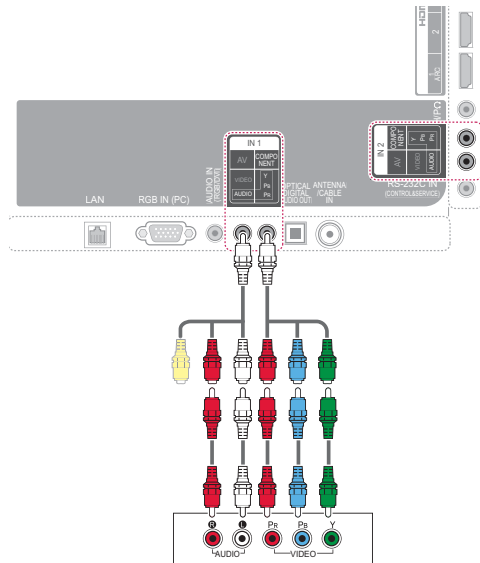
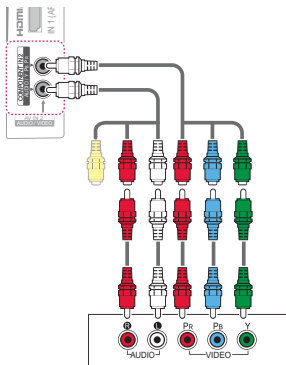
LV3700 series



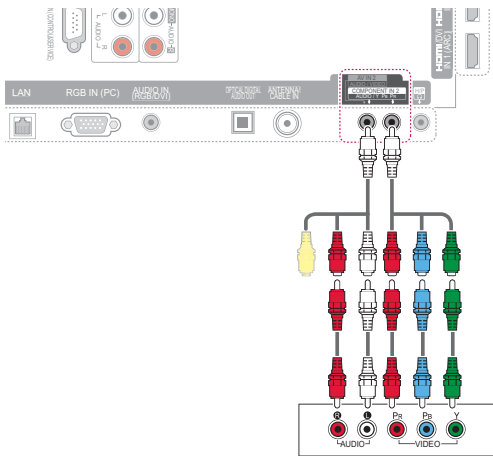
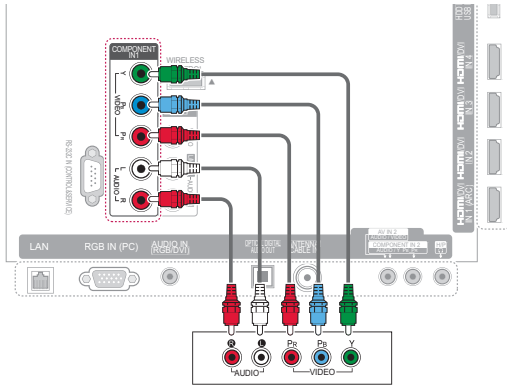
LK530, LK550 series



LZ9700 series



Other models



! NOTE

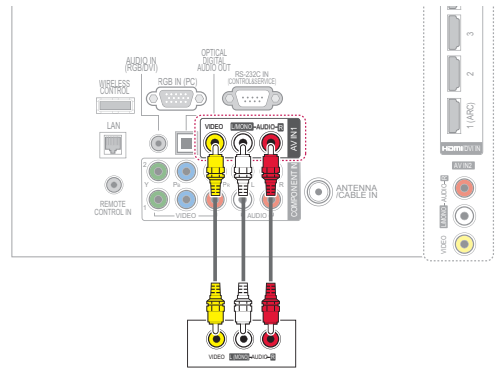
- If cables are installed incorrectly, it could cause the image to display in black and white or with distorted color. Check to ensure the cable are matched with the corresponding color connection.

Composite Connection

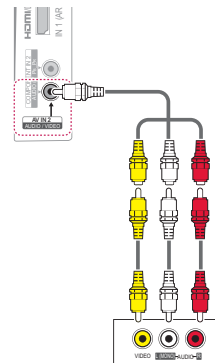
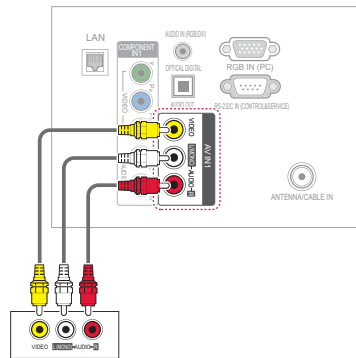
Transmits the analog video and audio signals from an external device to the TV. Connect the external device and the TV with the composite cable as shown in the following illustration.

! NOTE

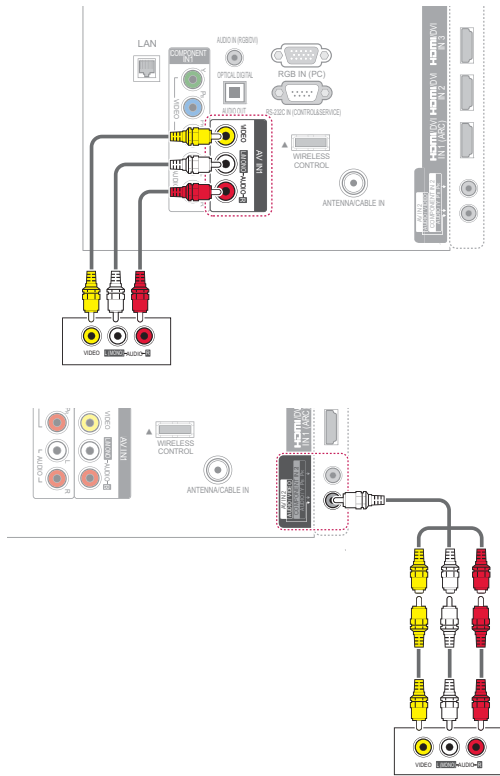
- If you have a mono VCR, connect the audio cable from the VCR to the AUDIO L/MONO jack of the TV.



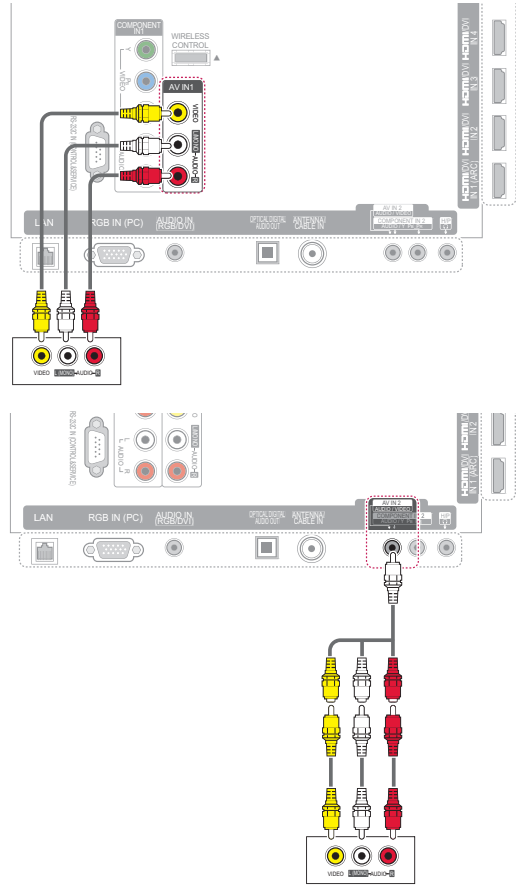
LK530, LK550 series



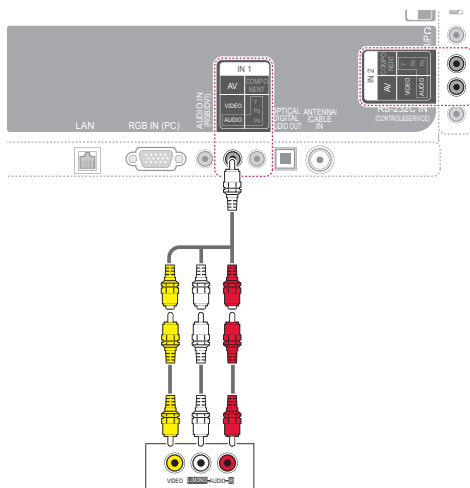
LV3700 series



Other models



LZ9700 series



Connecting to a PC

This TV supports the Plug & Play. A PC will automatically recognize the TV and requires no driver to be installed.

Connect the TV according to your PC by referring to the following table.

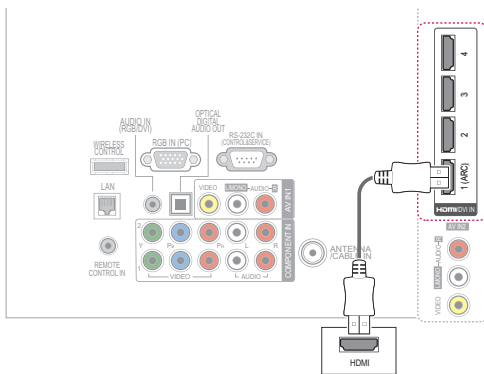
	HDMI (highly recommended)	RGB
Video	O (Digital)	O (Analog)
Audio	O (Digital)	X

NOTE

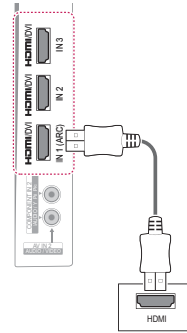
- It is recommended to use the TV set with the HDMI connection for the best image quality.

HDMI Connection

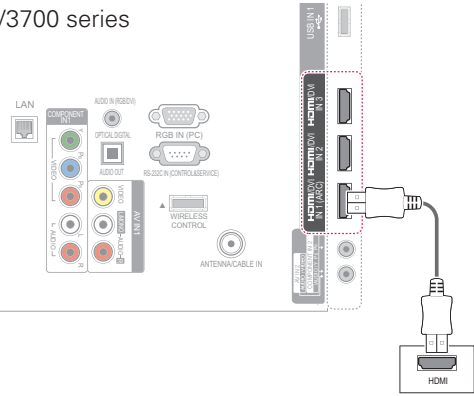
Transmits the digital video and audio signals from your PC to the TV. Connect the PC and the TV with the HDMI cable as shown in the following illustrations.



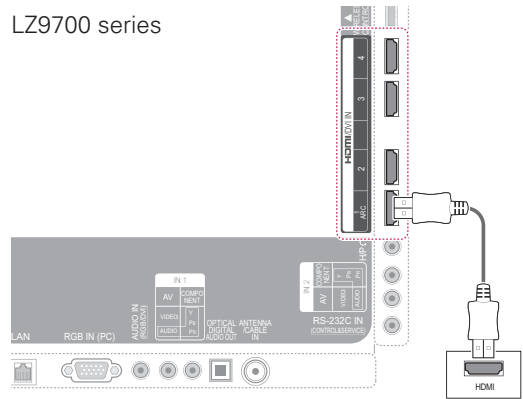
LK530, LK550 series



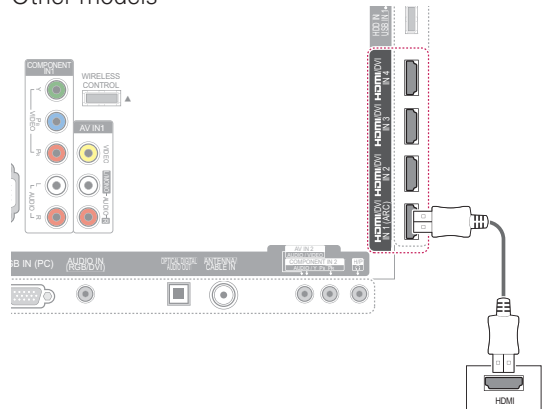
LV3700 series



LZ9700 series

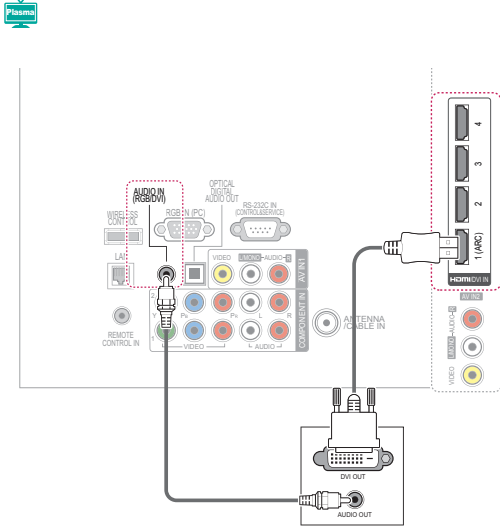


Other models

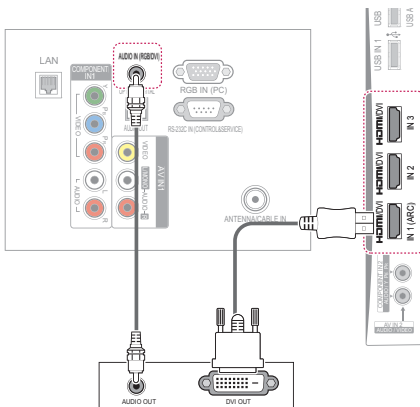


DVI to HDMI Connection

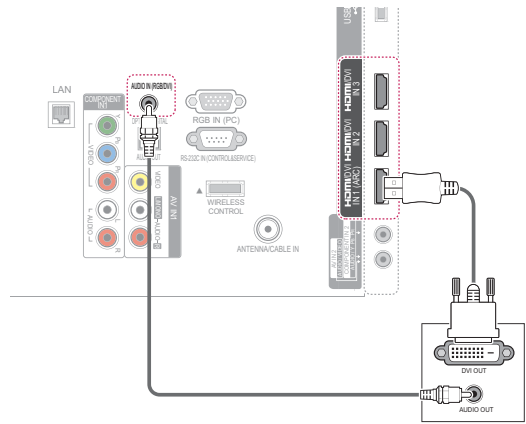
Transmits the digital video signal from your PC to the TV. Connect the PC and the TV with the DVI-HDMI cable as shown in the following illustration. To transmit an audio signal, connect an optical audio cable.



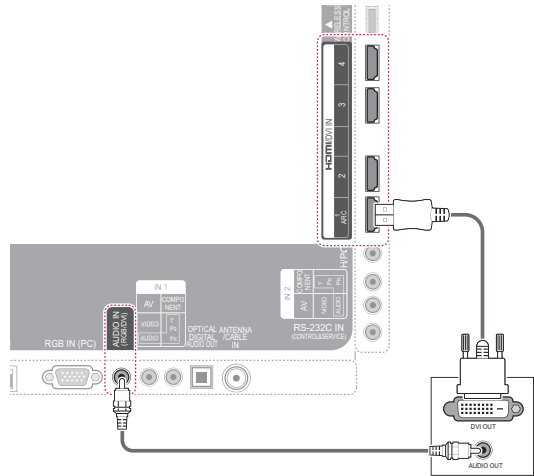
LK530, LK550 series



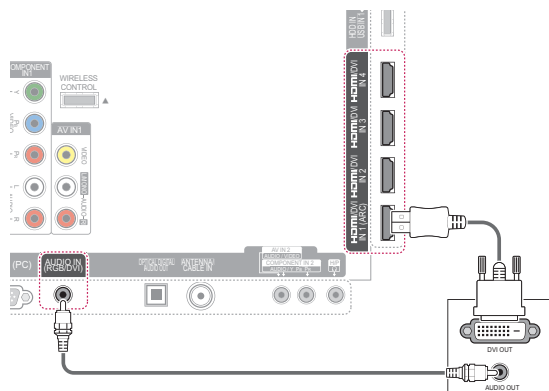
LV3700 series



LZ9700 series

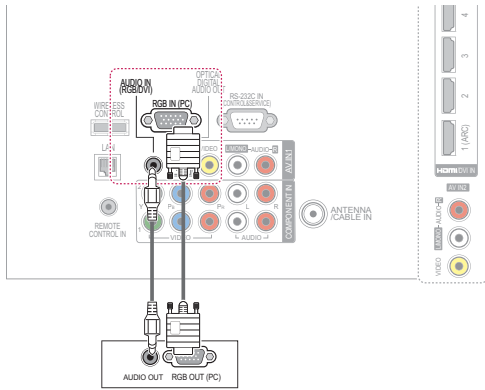


Other models

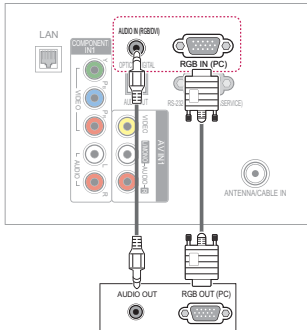


RGB Connection

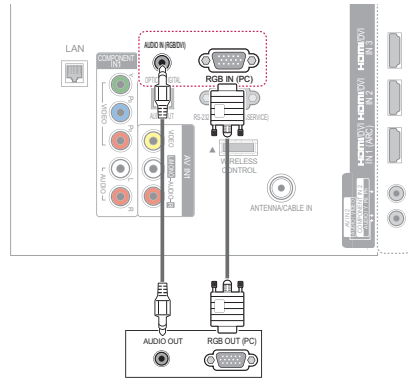
Transmits the analog video signal from your PC to the TV. Connect the PC and the TV with the D-sub 15 pin signal cable as shown in the following illustrations. To transmit an audio signal, connect an optical audio cable.



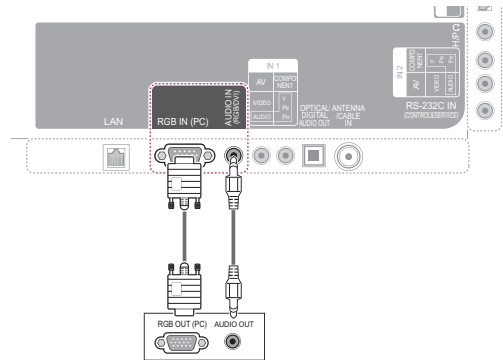
LK530, LK550 series



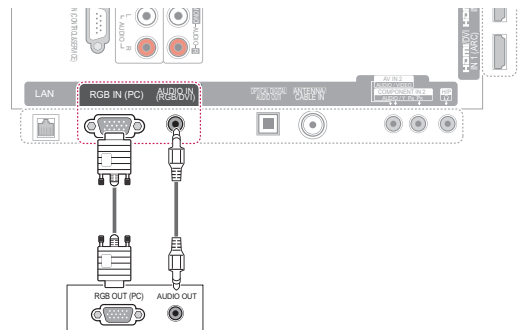
LV3700 series



LZ9700 series



Other models



NOTE

- 1920x1080 is the recommended PC resolution. If you use the TV in other video modes, afterimages or distorted images may appear on the screen.
- Depending on the graphics card, DOS mode may not work if a HDMI to DVI Cable is in use.
- 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.
- The synchronization input form for Horizontal and Vertical frequencies is separate.
- Depending on the graphics card, some resolution settings may not allow the image to be positioned on the screen properly.
- If you experience overscan issues when using HDMI-PC 1920x1080, change aspect ratio to Just scan.
- When selecting HDMI-PC, set the "Input Label - PC" in the **INPUT** menu.

Connecting to an Audio System

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

NOTE

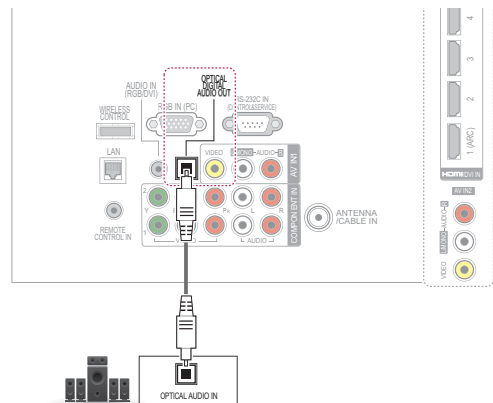
- If you use an optional external audio device instead of the built-in speaker, set the TV speaker feature to off (See p.88).

Digital Optical Audio Connection

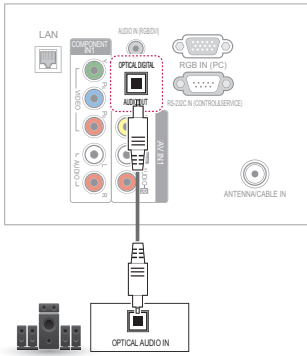
Transmits the digital audio signal from the TV to an external device. Connect the external device and the TV with the optical audio cable as shown in the following illustration.

NOTE

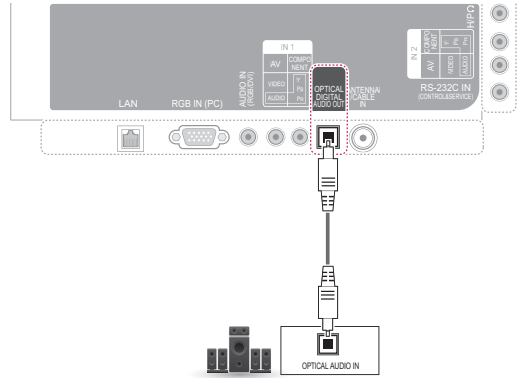
- Do not look into the optical output port. Looking at the laser beam may damage your vision.
- Audio with ACP (Audio Copy Protection) function may block digital audio output.



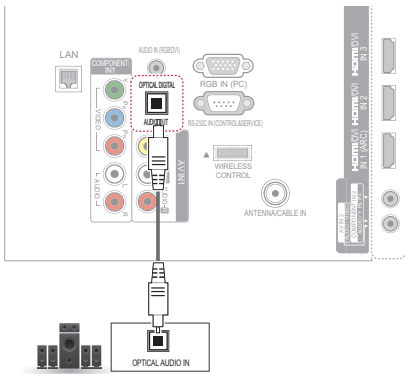
LK530, LK550 series



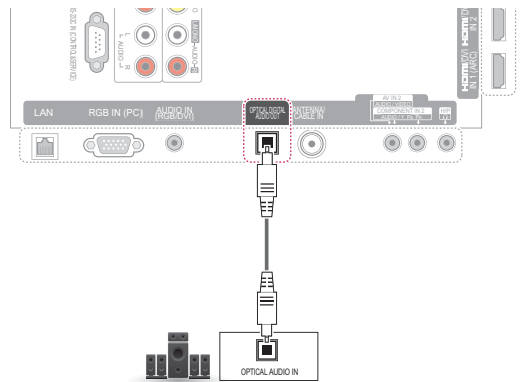
LZ9700 series



LV3700 series



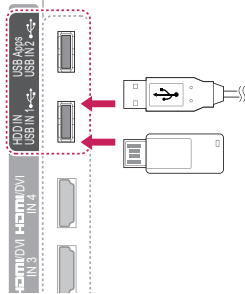
Other models



Connecting to a USB

Connect a USB storage device such as a USB flash memory, external hard drive, or a USB memory card reader to the TV and access the **Smart Share** menu to use various multimedia files. See "Connecting USB storage devices" on page 62 and see "Browsing files" on page 67.

ie)

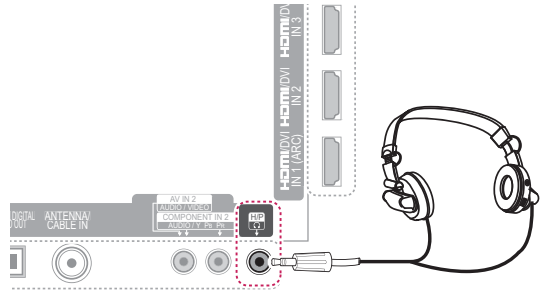


Connecting to a Headphone



Listen to the sound through a headphone.

ie)



NOTE

- AUDIO menu options are disabled when connecting a headphone.
- When changing AV MODE with a headphone connected, the change is applied to video but not to audio.
- Optical Digital Audio Out is not available when connecting a headphone.
- Headphone impedance: 16 Ω
- Max audio output: 10 mW to 15 mW
- Headphone jack size: 0.35 cm (0.13 inch)

Connecting the Wireless Media Box

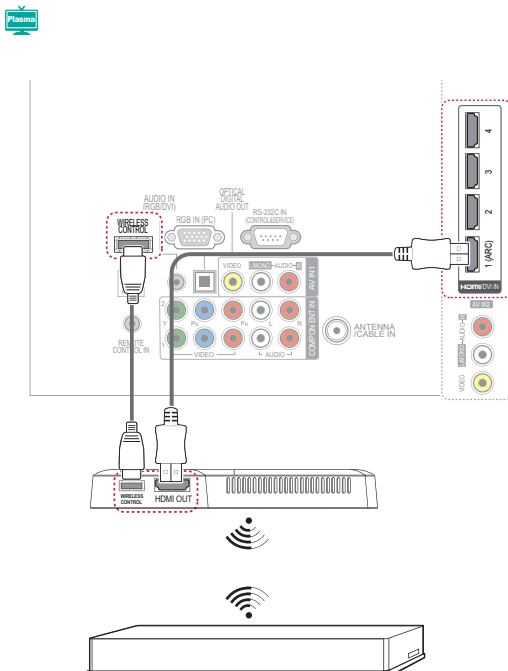
(Not support for LK530 and LK550 series)

LG TVs with a Wireless Control port support the LG Wireless Media Box, which is sold separately. When you connect the wireless ready dongle (included with the media box) to the TV, external devices can be connected to the LG Wireless Media Box and video and audio will be sent to the TV wirelessly.

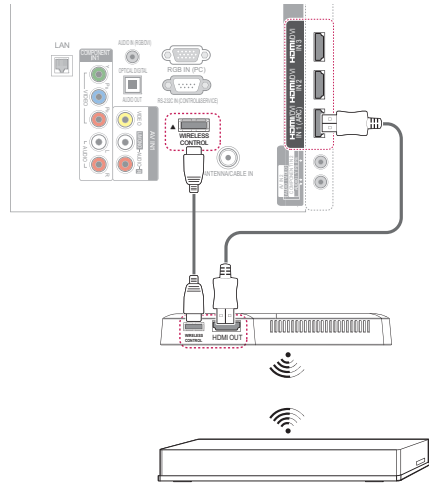
Refer to the [Wireless Media Box manual](#) for operating instructions.

NOTE

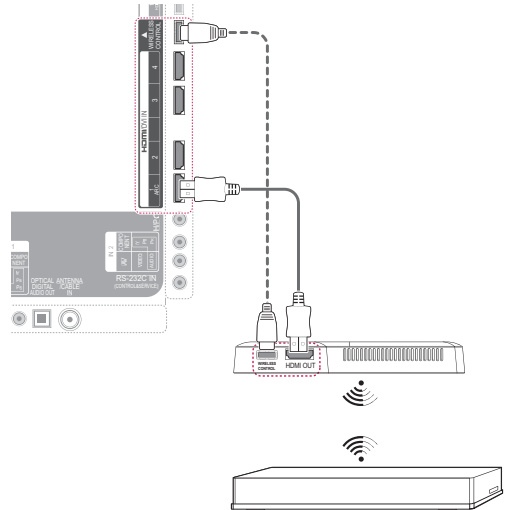
- When using the external device connected to the Wireless Media Box, some functions of the TV menu may not work.



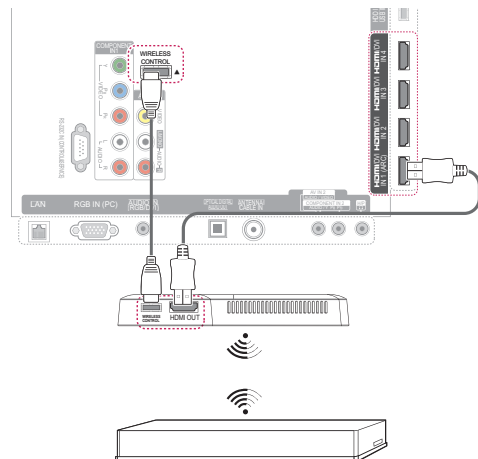
LV3700 series



LZ9700 series



Other models



SIMPLINK Connection

Use the TV remote control to play and control the AV device connected with the HDMI cable through HDMI-CEC. [This TV may work with the devices that support HDMI-CEC, but only devices with the SIMPLINK logo are fully supported.](#)

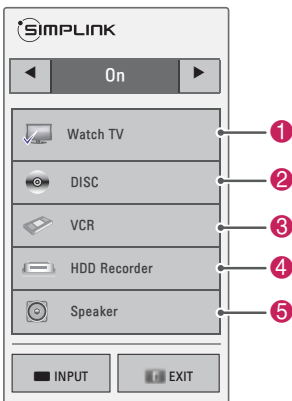
Connect one end of the HDMI cable to the HDMI/DVI IN or HDMI IN terminal on the rear of the TV and the other end to the SIMPLINK device.

NOTE

- If the connected device does not support HDMI-CEC, the SIMPLINK feature is unavailable.
- To operate SIMPLINK, you should use an High Speed HDMI cable with the CEC (Consumer Electronics Control) function.
- SIMPLINK may not work properly if you a third-party device that has an HDMI-CEC function.

Activating and Using the SIMPLINK menus

- 1 Press **SIMPINK** to access the SIMPLINK menus.
- 2 Press the Navigation buttons to **select** to **On**.
- 3 Press the Navigation buttons to scroll to one of the devices and press **ENTER**.



No.	Description
1	Displays the previously viewed TV channel.
2	Plays discs. When multiple discs are available, the title of the disc appears at the bottom of the screen.
3	Controls the connected VCR.
4	HDD recordings playback: Controls the recording stored in HDD.
5	Audio out to home theater speaker or Audio out to TV: Changes the audio output between Home theater speaker and TV speaker.

- A check mark appears in front of the selected device.
- Available devices display in a bright color.
- Unavailable devices display in grey.

3 Control the selected AV device.

Function	Description
Direct Play	After connecting AV devices to the TV, you can directly control the devices and play media without additional settings.
Select AV device	Enables you to select one of the AV devices connected to the TV.
Disc playback	Control connected AV devices by pressing the Navigation buttons, ENTER , ▶ , ■ , , ◀ and ▶▶ .
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.
Switch audio-out	Offers an easy way to switch audio-out.

NOTE

- If you change the input source by pressing **INPUT**, the progressing function of the SIMPLINK device will stop.
- If you select a device that has the home theater feature, the sound output automatically switches to the home theater speaker and the TV speaker turns off.
- If a connected SIMPLINK home theater system does not play the audio from the TV, connect the DIGITAL AUDIO OUT terminal on the rear of the TV to the DIGITAL AUDIO IN terminal on the back of the SIMPLINK device with an optical cable.

MAINTENANCE

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

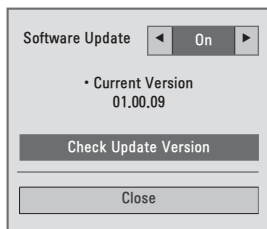
Updating the TV Firmware

Download and install the latest firmware by connecting to the firmware update server to enhance or change the product function, or add new features.

The firmware update may not work properly depending on the Internet environment. If so, you may obtain the latest firmware update from the authorized LG Electronics service center.

To check the current firmware version or update the firmware,

- 1 Press **Home** to access the Home menu.
- 2 Press the Navigation buttons to scroll to **SETUP** and press **ENTER**.
- 3 Press the Navigation buttons to scroll to **SUPPORT** and press **ENTER**.
- 4 Press the Navigation buttons to scroll to **Software Update** and press **ENTER**.
The current firmware version displays.
- 5 Select **Check Update Version** to check a new firmware version manually.



NSU (Network Software Update):

When software update is on, the TV will automatically check for software updates. A pop-up window will appear on the screen when an update is available.

NOTE

- While updating the firmware, do not disconnect the LAN cable, turn the TV off, or unplug the power cord.
- Premium service is disabled while the software is being updated through NSU.

- 6 When the update is complete, the TV will automatically restart in 5 seconds.

You may need to reset some **CHANNEL**, **PICTURE**, or **AUDIO** menus.

NOTE

- You cannot downgrade back to an older firmware version.
- The period of time for the firmware update may be different depending on the firmware size or network condition.
- If the firmware update download fails when using wireless, temporarily connect a cable directly to your router. If it still does not download, contact customer service.

Cleaning Your TV



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 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

- 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 **discoloration**.

Cabinet and stand

To remove dust or light dirt, wipe the cabinet with a dry, clean, 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. Then wipe immediately with a dry cloth.



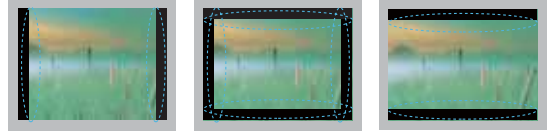
CAUTION

- 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.
- Avoid displaying a fixed image on the TV screen for a long period of time (2 or more hours for LCD, 1 or more hours for the Plasma TV) to prevent image burn.

TROUBLESHOOTING

General

Problem	Resolution
Cannot control the TV with the remote control.	<ul style="list-style-type: none"> • Check the remote control sensor on the product and try again. • Check if there is any obstacle between the product and the remote control. • Check if the batteries are still working and properly installed (⊕ to ⊕, ⊖ to ⊖). • Check if the appropriate input mode such as TV or VCR is set for using the remote control.
No image display and no sound is produced.	<ul style="list-style-type: none"> • Check if the product is turned on. • Check if the power cord is connected to a wall outlet. • Check if there is a problem in the wall outlet by connecting other products.
Image appears slowly when the TV turns on.	<ul style="list-style-type: none"> • The image is muted during the product startup process. This is normal. If the image does not appear in a few minutes, unplug the TV for 30 seconds and try again. If the image still does not appear, contact the authorized service center in your local area.
Cannot connect external devices.	<ul style="list-style-type: none"> • Refer to the "Connection overview" and connect an external device.
The TV turns off suddenly.	<ul style="list-style-type: none"> • Check the power control settings. The power supply may be interrupted. • Check if the Auto sleep feature is activated in the Time settings. Refer to the "Sleep Timer". • If there is no signal while the TV is on, the TV will turn off automatically after 15 minutes of inactivity.

Audio

Problem	Resolution
No sound is produced while images are displaying.	<ul style="list-style-type: none"> • Press VOL + or - button. • Check if the sound is muted by pressing MUTE. • Scroll to other channels. There may a problem with the broadcast. • Check if the audio cables are connected properly. • Check if the TV Speaker feature is activated in the menu option.
No output from one of the speakers	<ul style="list-style-type: none"> • Adjust Balance in the menu option.
Unusual sound from inside the TV is produced.	<ul style="list-style-type: none"> • A change in ambient humidity or temperature may result in an unusual noise when the product turns on or off. There is no problem with your product.

Video

Problem	Resolution
An image displays in black and white or the color quality is poor.	<ul style="list-style-type: none"> Adjust the color setting in the menu option. Keep a sufficient distance between this product and other electronic products. Scroll to other channels. There may a problem with the broadcast.
Horizontal or vertical bars appears or images blur	<ul style="list-style-type: none"> Check if there are local interferences such as an electrical appliance or power tool.
Lines or streaks appear on images	<ul style="list-style-type: none"> Check the antenna or aim the antenna to the proper direction.
Afterimages (ghosts) appear when the product turns off	<ul style="list-style-type: none"> Pixels may have been damaged from a fixed image displayed for a long time (image burn). Use a screen saver to prevent the pixel damage on the screen.
The power is on but the screen appears extremely dark.	<ul style="list-style-type: none"> Adjust the brightness and contrast in the menu option.
"No Signal" appears on the screen.	<ul style="list-style-type: none"> Check if the signal cable is connected between the TV and products properly. Check the selected input source by pressing INPUT.
Black spots appear on the screen.	<ul style="list-style-type: none"> Several pixels in red, green, white, or black may appear on the screen that can attribute to the characteristics of the LCD panel. This is normal.
The display offset is wrong.	<ul style="list-style-type: none"> Adjust the position setting in the Picture menu. Check if the video card resolution and frequency are supported by the product. If the frequency is out of range, set to the recommended resolution using the display settings on the external device.
Thin lines appear in the background of the screen.	<ul style="list-style-type: none"> Check the video cable connections.
Horizontal noises appear or characters blur.	<ul style="list-style-type: none"> Adjust the Phase setting in the menu option. Refer to the "SCREEN (RGB-PC)".
The reception on some channels is poor	<ul style="list-style-type: none"> Scroll to other channels. There may a problem with the broadcast. The station signal may be weak. Aim the antenna to the proper direction. Check if there is local interference such as an electrical appliance or power tool.

Movie

Problem	Resolution
The file does not appear on the Movie List.	<ul style="list-style-type: none"> Check whether the extension is supported.
Message is displayed saying "This file is invalid" or the audio is working normally but the video is not working normally.	<ul style="list-style-type: none"> Check whether the file is playing normally on a PC. (Check whether the file is damaged.) Check whether the resolution is supported. Check whether the video/audio codec is supported. Check whether the frame rate is supported.
Message is displayed saying "Unsupported Audio" or the video is working normally but the audio is not working normally.	<ul style="list-style-type: none"> Check whether the file is playing normally on a PC. (Check whether the file is damaged.) Check whether the audio codec is supported. Check whether the bit rate is supported. Check whether the sample rate is supported.
Subtitle is not working.	<ul style="list-style-type: none"> Check whether the file is playing normally on a PC. (Check whether the file is damaged.) Check whether the video file and subtitle file name are the same. Check whether the video file and subtitle file are located in the same folder. Check whether the subtitle file is supported. Check whether the language is supported. (When you open the subtitle file in Memo Pad, you can check the language of the subtitle file.)

SPECIFICATIONS

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

Television System		NTSC-M, ATSC, 64 & 256 QAM
Program Coverage		VHF 2-13, UHF 14-69, CATV 1-135, DTV 2-69, CACTV 1-135
External Antenna Impedance		75 Ω
Environment condition	Operating Temperature	0 - 40°C
	Operating Humidity	Less than 80%
	Storage Temperature	-20 - 60°C
	Storage Humidity	Less than 85%

MODELS		50PZ750 (50PZ750-UG)	60PZ750 (60PZ750-UG)
Dimensions (W x H x D)	With stand	1185.2 mm x 782.6 mm x 317.2 mm	1404.0 mm x 911.4 mm x 364.4 mm
	Without stand	1185.2 mm x 714.0 mm x 49.6 mm	1404.0 mm x 837.8 mm x 49.6 mm
Weight	With stand	31.5 kg	46.3 kg
	Without stand	27.9 kg	40.3 kg
Power requirement		AC100-240V - 50/60Hz	

MODELS		50PZ950 (50PZ950-UA)	60PZ950 (60PZ950-UA)
		50PZ950U (50PZ950U-UA)	60PZ950U (60PZ950U-UA)
Dimensions (W x H x D)	With stand	1175.2 mm x 787.6 mm x 317.2 mm	1393.4 mm x 916.4 mm x 364.4 mm
	Without stand	1175.2 mm x 720.6 mm x 49.6 mm	1393.4 mm x 843.8 mm x 49.6 mm
Weight	With stand	32.5 kg	46.3 kg
	Without stand	28.9 kg	40.3 kg
Power requirement		AC 100 - 240V ~ 50 / 60 Hz	

MODELS		42LV3700 (42LV3700-UD)	47LV3700 (47LV3700-UD)	55LV3700 (55LV3700-UD)
Dimensions (W x H x D)	With stand	998.0 mm x 684.0 mm x 256.0 mm	1108.0 mm x 746.0 mm x 256.0 mm	1286.0 mm x 847.0 mm x 338.0 mm
	Without stand	998.0 mm x 615.0 mm x 30.4 mm	1108.0 mm x 677.0 mm x 30.4 mm	1286.0 mm x 778.0 mm x 30.4 mm
Weight	With stand	15.5 kg	20.9 kg	25.5 kg
	Without stand	13.3 kg	18.7 kg	21.4 kg
Power requirement		AC100-240V - 50/60Hz		

MODELS		42LV5400 (42LV5400-UB)	47LV5400 (47LV5400-UB)	55LV5400 (55LV5400-UB)
		42LV5500 (42LV5500-UA)	47LV5500 (47LV5500-UA)	55LV5500 (55LV5500-UA)
Dimensions (W x H x D)	With stand	1012.0 mm x 683.0 mm x 256.0 mm	1121.0 mm x 746.0 mm x 256.0 mm	1298.0 mm x 849.0 mm x 338.0 mm
	Without stand	1012.0 mm x 617.0 mm x 29.9 mm	1121.0 mm x 678.0 mm x 29.9 mm	1298.0 mm x 778.0 mm x 29.9 mm
Weight	With stand	15.5 kg	20.7 kg	25.8 kg
	Without stand	13.2 kg	18.4 kg	21.7 kg
Power requirement		AC100-240V - 50/60Hz		

MODELS		42LW5600 (42LW5600-UA)	47LW5600 (47LW5600-UA)	55LW5600 (55LW5600-UA)
Dimensions (W x H x D)	With stand	1005.0 mm x 688.0 mm x 256.0 mm	1115.0 mm x 750.0 mm x 256.0 mm	1293.0 mm x 851.0 mm x 338.0 mm
	Without stand	1005.0 mm x 621.0 mm x 29.9 mm	1115.0 mm x 683.0 mm x 29.9 mm	1293.0 mm x 785.0 mm x 29.9 mm
Weight	With stand	15.2 kg	20.7 kg	26.2 kg
	Without stand	13.0 kg	18.5 kg	22.0 kg
Power requirement		AC100-240V - 50/60Hz		

MODELS		32LW5700 (32LW5700-UE)	42LW5700 (42LW5700-UE)
Dimensions (W x H x D)	With stand	766.0 mm x 545.0 mm x 240.0 mm	999.0 mm x 681.0 mm x 255.0 mm
	Without stand	766.0 mm x 491.0 mm x 41.0 mm	999.0 mm x 623.0 mm x 30.9 mm
Weight	With stand	10.7 kg	15.7 kg
	Without stand	8.9 kg	13.4 kg
Power requirement		AC100-240V - 50/60Hz	

MODELS		47LW5700 (47LW5700-UE)	55LW5700 (55LW5700-UE)
Dimensions (W x H x D)	With stand	1109.0 mm x 744.0 mm x 255.0 mm	1286.0 mm x 848.0 mm x 338.0 mm
	Without stand	1109.0 mm x 684.0 mm x 30.9 mm	1286.0 mm x 784.0 mm x 30.9 mm
Weight	With stand	20.2 kg	26.2 kg
	Without stand	17.9 kg	22.1 kg
Power requirement		AC100-240V - 50/60Hz	

MODELS		47LW6500 (47LW6500-UA)	55LW6500 (55LW6500-UA)	65LW6500 (65LW6500-UA)
Dimensions (W x H x D)	With stand	1119.4 mm x 748.6 mm x 255.0 mm	1297.0 mm x 851.0 mm x 341.0 mm	1555.0 mm x 1012.0 x 341.0 mm
	Without stand	1119.4 mm x 683.8 mm x 29.9 mm	1297.0 mm x 785.0 mm x 29.9 mm	1555.0 mm x 940.0 mm x 38.1 mm
Weight	With stand	21.0 kg	27.0 kg	47.0 kg
	Without stand	18.2 kg	22.0 kg	42.0 kg
Power requirement		AC100-240V - 50/60Hz		

MODELS		47LW7700 (47LW7700-UA)	55LW7700 (55LW7700-UA)
Dimensions (W x H x D)	With stand	1114.0 mm x 747.0 mm x 263.0 mm	1291.0 mm x 860.0 mm x 347.0 mm
	Without stand	1114.0mm x 680.0 mm x 31.1 mm	1291.0 mm x 780.0 mm x 31.1 mm
Weight	With stand	23.7 kg	33.4 kg
	Without stand	20.9 kg	28.2 kg
Power requirement		AC 100 - 240V ~ 50 / 60 Hz	

MODELS		47LW9500 (47LW9500-UA)	55LW9500 (55LW9500-UA)	60LW9500 (60LW9500-UA)
Dimensions (W x H x D)	With stand	1095.2 mm x 734.9 mm x 235.0 mm	1265.0 mm x 831.0 mm x 284.5 mm	1422.8 mm x 943.7 mm x 330.0 mm
	Without stand	1095.2 mm x 664.7 mm x 27.5 mm	1265.0 mm x 760.3 mm x 27.5 mm	1422.8 mm x 880.5 mm x 41.5 mm
Weight	With stand	22.5 kg	29.0 kg	43.0 kg
	Without stand	18.2 kg	23.8 kg	36.0 kg
Power requirement		AC 100 - 240V ~ 50 / 60 Hz		

MODELS		42LK530 (42LK530-UC)	47LK530 (47LK530-UC)	55LK530 (55LK530-UC)
Dimensions (W x H x D)	With stand	1024.0 mm x 685.0 mm x 261.0 mm	1137.0 mm x 758.0 mm x 270.0 mm	1329.0 mm x 872.0 mm x 330.0 mm
	Without stand	1024.0 mm x 621.0 mm x 76.8 mm	1137.0 mm x 685.0 mm x 76.8 mm	1329.0 mm x 796.0 mm x 96.5 mm
Weight	With stand	15.5 kg	20.3 kg	33.0 kg
	Without stand	13.9 kg	18.3 kg	29.8 kg
Power requirement		AC 100 - 240V ~ 50 / 60 Hz		

MODELS		42LK550 (42LK550-UA)	47LK550 (47LK550-UA)
Dimensions (W x H x D)	With stand	1019.0 mm x 698.0 mm x 265.0 mm	1132.0 mm x 762.0 mm x 265.0 mm
	Without stand	1019.0 mm x 631.0 mm x 76.5 mm	1132.0 mm x 695.0 mm x 76.5 mm
Weight	With stand	16.2 kg	19.0 kg
	Without stand	14.5 kg	17.3 kg
Power requirement		AC 100 - 240V ~ 50 / 60 Hz	

MODELS		72LZ9700 (72LZ9700-UA)
Dimensions (W x H x D)	With stand	1721.0 mm x 1126.0 mm x 410.0 mm
	Without stand	1721.0 mm x 1045.0 mm x 69.9 mm
Weight	With stand	77.7 kg
	Without stand	64.7 kg
Power requirement		AC 100 - 240V ~ 50 / 60 Hz

RGB (PC), HDMI (PC) supported mode

Resolution	Horizontal Frequency (kHz)	Vertical Frequency (Hz)
640x350	31.468	70.09
720x400	31.469	70.08
640x480	31.469	59.94
800x600	37.879	60.31
1024x768	48.363	60.00
1360x768	47.712	60.015
1280x1024 (HDMI-PC)	63.981	60.02
1920x1080 (RGB-PC)	66.587	59.934
1920x1080 (HDMI-PC)	67.50	60.00

HDMI (DTV) supported mode

Resolution	Horizontal Frequency (kHz)	Vertical Frequency (Hz)
720x480p	31.47	59.94
	31.50	60.00
1280x720p	44.96	59.94
	45.00	60.00
1920x1080i	33.72	59.94
	33.75	60.00
1920x1080p	26.97	23.976
	27.00	24.00
	33.71	29.97
	33.75	30.00
	67.432	59.94
	67.50	60.00

Component supported mode

Resolution	Horizontal Frequency (kHz)	Vertical Frequency (Hz)
720x480i	15.73	59.94
	15.73	60.00
720x480p	31.47	59.94
	31.50	60.00
1280x720p	44.96	59.94
	45.00	60.00
1920x1080i	33.72	59.94
	33.75	60.00
1920x1080p	26.97	23.976
	27.00	24.00
	33.71	29.97
	33.75	30.00
	67.432	59.94
	67.500	60.00

Component port connecting information

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

DivX supported mode

File Extensions	Audio/Video	Codec	Profile/Level Support	Explanation
.asf .wmv	Video	VC-1 Advanced Profile	Advanced Profile@Level 3 (e.g. 720p60, 1080i60, 1080p30)	Only streams compliant to SMPTE 421M VC-1 standard are supported.
		VC-1 Simple and Main Profiles	Simple Profile@Medium Level (e.g. CIF, QVGA) Main Profile@High Level (e.g. 1080p30)	
	Audio	WMA Standard WMA 9 Professional		
.divx .avi	Video	DivX3.11		Global motion compensation or quarterpel motion estimation does not supported. Streams using this syntax are not supported.
		DivX4 DivX5 DivX6	Advanced Simple Profile (e.g. 720p/1080i)	
		XViD		
	H.264 / AVC	Main Profile@ Level 4.1 High Profile@ Level 4.1 (e.g. 720p60, 1080i60, 1080p30)		
Audio	MPEG-1 Layer I, II MPEG-1 Layer III (MP3) Dolby Digital			
.mp4 .m4v .mov	Video	H.264 / AVC	Main Profile@ Level 4.1 High Profile@ Level 4.1 (e.g. 720p60, 1080i60, 1080p30)	Global motion compensation or quarterpel motion estimation does not supported. Streams using this syntax are not supported.
		MPEG-4 Part 2	Advanced Simple Profile (e.g. 720p/1080i)	
	Audio	AAC	AAC-LC and HE-AAC	
.mkv	Video	H.264 / AVC	Main Profile@ Level 4.1 High Profile@ Level 4.1 (e.g. 720p60, 1080i60, 1080p30)	Most of the MKV content available is encoded by the open source x264 codec.
	Audio	HE-AAC Dolby Digital	HE-AAC-LC and HE-AAC	
.ts .trp .tp	Video	H.264 / AVC	Main Profile@ Level 4.1 High Profile@ Level 4.1 (e.g. 720p60, 1080i60, 1080p30)	Only streams compliant to SMPTE 421M VC-1 standard are supported.
		MPEG-2	Main Profile@High Level (e.g. 720p60, 1080i60)	
		VC-1	Simple Profile@Medium Level (e.g. CIF, QVGA) Main Profile@High Level (e.g. 1080p30) Advanced Profile@Level3 (e.g. 720p60, 1080i60, 1080p30)	
	Audio	MPEG-1 Layer I, II MPEG-1 Layer III (MP3) Dolby Digital Dolby Digital Plus AAC	AAC-LC and HE-AAC	
.vob	Video	MPEG-1		
		MPEG-2	Main Profile@High Level (e.g. 720p60, 1080i60)	
	Audio	Dolby Digital MPEG-1 Layer I, II DVD-LPCM		
.mpg	Video	MPEG-1	Main Profile@High Level (e.g. 720p60, 1080i60)	Only streams compliant configured properly for TS, PS or ES
	Audio	MPEG-1 Layer I, II		

3D supported formats

Input	Signal	Resolution	Horizontal Frequency (kHz)	Vertical Frequency (Hz)	Playable 3D video format
HDMI	720p	1280x720	45.00	60	» Side by Side » Top & Bottom » HDMI 3D Frame Packing » HDMI 3D Top & Bottom
	1080i	1920x1080	33.75		» Side by Side » Top & Bottom » HDMI 3D Side by Side (Half)
	1080p		67.50	» Side by Side » Top & Bottom » Checker Board » Single Frame Sequential	
			27.00	24	» Side by Side » Top & Bottom » Checker Board » HDMI 3D Frame Packing » HDMI 3D Top & Bottom
			33.75	30	» Side by Side » Top & Bottom » Checker Board » HDMI 3D Frame Packing
Component ()	720p	1280x720	44.96	59.94	» Side by Side » Top & Bottom
			45.00	60.00	
	1080i	1920x1080	33.72	59.94	» Side by Side » Top & Bottom
			33.75	60.00	
RGB-PC	1080p	1920x1080	66.587	59.934	» Side by Side » Top & Bottom
USB	1080p	1920x1080	33.75	30	» Side by Side » Top & Bottom » Checker Board
DLNA	1080p	1920x1080	33.75	30	» Side by Side » Top & Bottom » Checker Board
	Signal				Playable 3D video format
DTV	720p, 1080i				» Side by Side » Top & Bottom

- Media contents and a player need to support **HDMI 3D Frame Packing**, **HDMI 3D Side by Side**, **HDMI 3D Top & Bottom** to play in 3D.
- Video, which is input as **HDMI 3D Frame Packing**, **HDMI 3D Side by Side**, **HDMI 3D Top & Bottom** format, is switched into the 3D screen automatically.

Wireless LAN for Broadband/DLNA Adaptor SPEC (For LW9500 series)

This device only works with compatible LG TV.

Standard	IEEE802.11a/b/g/n
Frequency Range	2402 to 2483 MHz 5150 to 5250 MHz 5725 to 5850 MHz
Modulation	CCK / OFDM / MIMO
Output Power (Typical)	802.11a: 14 dBm 802.11b: 17 dBm 802.11g: 14 dBm 802.11n: 13 dBm
Data rate	802.11a/g: 54 Mbps 802.11b: 11 Mbps 802.11n: 300 Mbps
Antenna Gain (Typical)	2402 to 2483 MHz: 1.17 dBi 5150 to 5250 MHz: 4.67 dBi 5725 to 5850 MHz: 3.30 dBi
Occupied bandwidth	802.11a/b/g: HT20 802.11n: HT20/40

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.

- FCC ID of Wi-Fi module inside TV
FCC ID: BEJWN8522D1

**RF module (BM-LDS201) specification (For LW7700, LW9500, LZ9700 series)**

For TV By using a 2.4 GHz bandwidth radio frequency(RF).

- Output: 1 dBm or lower
- Maximum Communication Distance: 10 m (30 ft) in an open space
- Bandwidth: 2.4 GHz (2.4035 GHz - 2.4783 GHz)
- Transfer Rate: 250 kbps
- FCC ID of RF module inside TV
FCC ID: BEJLDS201



IR CODES

(Depending on model)

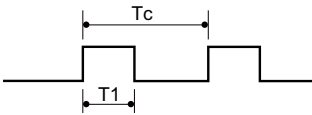
How to Connect

Connect your wired remote control to the Remote Control port on the TV.

Remote Control IR Codes

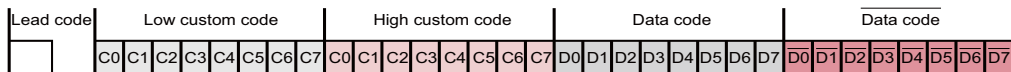
Output waveform

Single pulse, modulated with 37.917kHz signal at 455kHz

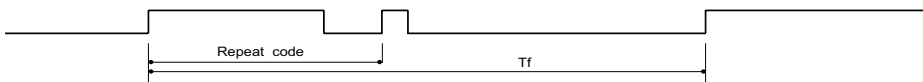


Frame configuration

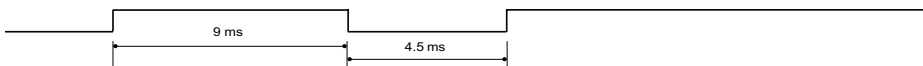
1st frame



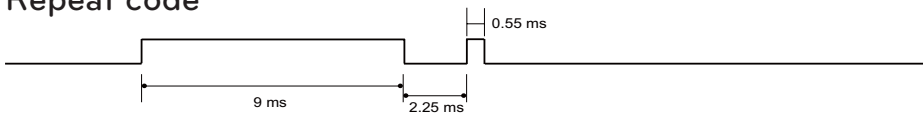
Repeat frame



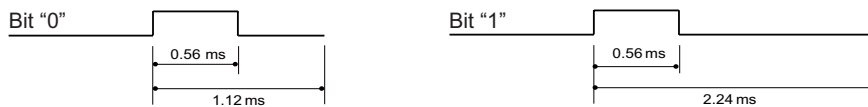
Lead code



Repeat code

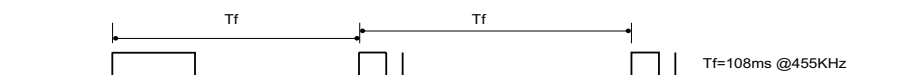


Bit description




Frame interval: Tf

The waveform is transmitted as long as a key is depressed.



ENGLISH

Code (Hexa)	Function	Note	Code (Hexa)	Function	Note
08	POWER	Remote control Button (Power On/Off)	0F	TV	Remote control Button
			DC	3D	Remote control Button
45	Q.MENU	Remote control Button	5B	EXIT	Remote control Button
43	Home	Remote control Button	D6	TV	Discrete IR Code (TV Input Selection)
0B	INPUT	Remote control Button			
10 - 19	Number Key 0-9	Remote control Button	C4	POWER ON	Discrete IR Code (Only Power Off)
4C	- (Dash)/LIST	Remote control Button			
1A	FLASHBK	Remote control Button	C5	POWER OFF	Discrete IR Code (Only Power Off)
09	MUTE/DELETE	Remote control Button			
02	VOL +	Remote control Button	5A	AV1	Discrete IR Code (AV1 Input Selection)
03	VOL -	Remote control Button			
00	CH ▲	Remote control Button	D0	AV2	Discrete IR Code (AV2 Input Selection)
01	CH ▼	Remote control Button			
1E	FAV/MARK	Remote control Button	BF	COMPONENT1	Discrete IR Code (Component1 Input Selection)
40	▲	Remote control Button			
41	▼	Remote control Button	D4	COMPONENT2	Discrete IR Code (Component2 Input Selection)
07	<	Remote control Button			
06	>	Remote control Button	D5	RGB-PC	Discrete IR Code (RGB-PC Input Selection)
44	ENTER	Remote control Button			
28	BACK	Remote control Button	CE	HDMI1	Discrete IR Code (HDMI1 Input Selection)
79	RATIO	Remote control Button			
BA 	FREEZE	Remote control Button	CC	HDMI2	Discrete IR Code (HDMI2 Input Selection)
95	ENERGY SAVING	Remote control Button			
7E	SIMPLINK	Remote control Button	E9	HDMI3	Discrete IR Code (HDMI3 Input Selection)
AA	INFO	Remote control Button			
30	AV MODE	Remote control Button	DA	HDMI4	Discrete IR Code (HDMI4 Input Selection)
72	RED	Remote control Button			
71	GREEN	Remote control Button	76	Ratio 4:3	Discrete IR Code (Only 4:3 Mode)
63	YELLOW	Remote control Button			
61	BLUE	Remote control Button	77	Ratio 16:9	Discrete IR Code (Only 16:9 Mode)
B1	■	Remote control Button			
B0	▶	Remote control Button	AF	Ratio Cinema Zoom	Discrete IR Code (Only Cinema Zoom Mode)
BA	▬	Remote control Button			
8E	▶▶	Remote control Button			
8F	◀◀	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.

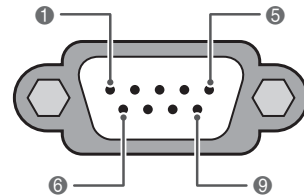
Connect the serial port of the control device to the RS-232C jack on the product back panel.



NOTE

- RS-232C on this TV is intended to be used with third party RS-232C control hardware and software. The instructions below are provided to help with programming software or to test functionality using telenet software. RS-232C connection cables are not supplied with the product.

Type of connector; D-Sub 9-Pin Male



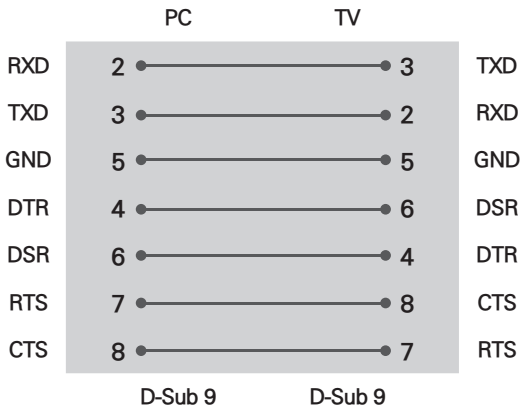
RS-232C IN
(CONTROL & SERVICE)

No.	Pin name
1	No connection
2	RXD (Receive data)
3	TXD (Transmit data)
4	DTR (DTE side ready)
5	GND
6	DSR (DCE side ready)
7	RTS (Ready to send)
8	CTS (Clear to send)
9	No Connection

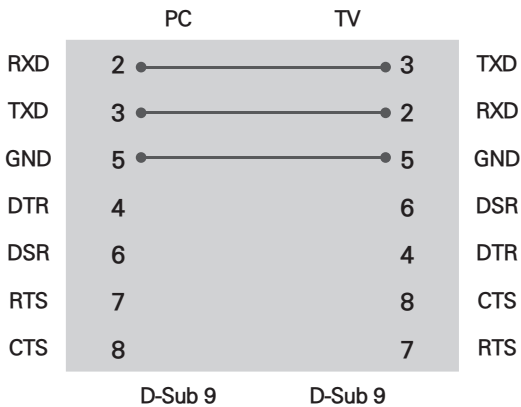
RS-232C configurations

7-Wire Configuration

(Serial female-female NULL modem cable)

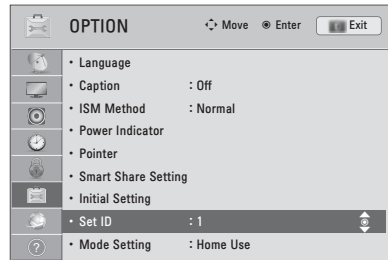


3-Wire Configurations(Not standard)



Set ID

Set ID number.





- 1 Press **Home** to access the Home menu.
- 2 Press the Navigation buttons to scroll to **SETUP** and press **ENTER**.
- 3 Press the Navigation buttons to scroll to **OPTION** and press **ENTER**.
- 4 Press the Navigation buttons to scroll to **Set ID** and press **ENTER**.
- 5 Scroll left or right to select a set ID number and select **CLOSE**. The adjustment range is 1-99.
- 6 When you are finished, press **EXIT**.

```
*Real data mapping
0 : Step 0
  :
A : Step 10 (SET ID 10)
  :
F : Step 15 (SET ID 15)
10 : Step 16 (SET ID 16)
  :
63 : Step 99 (SET ID 99)
64 : Step 100
```

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

	COMMAND1	COMMAND2	DATA (Hexadecimal)		COMMAND1	COMMAND2	DATA (Hexadecimal)
01. Power	k	a	00 - 01	14. Treble	k	r	00 - 64
02. Input Select	x	b	(See p.130)	15. Bass	k	s	00 - 64
03. Aspect Ratio	k	c	(See p.130)	16. Balance	k	t	00 - 64
04. Screen Mute	k	d	00 - 01	17. 3D (For 3D TV)	x	t	(See p.131)
05. Volume Mute	k	e	00 - 01	18. Color Temperature	x	u	00 - 64
06. Volume Control	k	f	00 - 64	19. Extended 3D (For 3D TV)	x	v	(See p.131)
07. Contrast	k	g	00 - 64	20. ISM Method ()	j	p	(See p.132)
08. Brightness	k	h	00 - 64	21. Energy Saving	j	q	(See p.132)
09. Color	k	i	00 - 64	22. Auto Configuration	j	u	(See p.132)
10. Tint	k	j	00 - 64	24. Channel Add/Del	m	b	00 - 01
11. Sharpness	k	k	00 - 64	25. Key	m	c	(See p.132)
12. OSD Select	k	l	00 - 01	26. Backlight ()	m	g	00 - 64
13. Remote Control Lock Mode	k	m	00 - 01				

	COMMAND1	COMMAND2	DATA00 (Hexadecimal)	DATA01 (Hexadecimal)	DATA02 (Hexadecimal)	DATA03 (Hexadecimal)	DATA04 (Hexadecimal)	DATA05 (Hexadecimal)
23. Channel Tuning	m	a	physical program high	major program low	major low	minor high	minor low	attribute

Transmission / Receiving protocol

Transmission

[Command1][Command2][][Set ID][][Data][Cr]

[Command 1] : First command to control the set.(j, k, m or x)

[Command 2] : Second command to control the set.

[Set ID] : You can adjust the set ID to choose desired set ID number in Option menu. Adjustment range is 1~ 99. When selecting Set ID '0', every connected the set is controlled. Set ID is indicated as decimal (1~ 99) on menu and as Hexa decimal (0x0~ 0x63) on transmission /receiving protocol.

[DATA] : To transmit the command data.

Transmit the 'FF' data to read status of command.

[Cr] : Carriage Return

ASCII code '0x0D'

[] : ASCII code 'space (0x20)'

* In this model, set will not send the status during the standby mode.

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.

* In this model, set will not send the status during the standby mode.

* Data Format

[Command 2] : Use as command.

[Set ID] : Use the small character, if set ID is 10, it will send the '0', 'a'.

[DATA] : Use the small character, if data is 0 x ab, it will send the 'a', 'b'.

[OK] : Use the large character.

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.

Data1: Illegal Code

Data2: Not supported function

Data3: Wait more time

* In this model, set will not send the status during the standby mode.

* Data Format

[Command 2] : Use as command.

[Set ID] : Use the small character, if set ID is 10, it will send the '0', 'a'.

[DATA] : Use the small character, if data is 0 x ab, it will send the 'a', 'b'.

[NG] : Use the large character

01. Power (Command: k a)

To control Power On/Off of the set.

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

Data 00: Power Off Data 01: Power On

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

- * In a like manner, if other functions transmit 'FF' data based on this format, Acknowledgement data feedback presents status about each function.
- * Note: In this model, set will send the Acknowledge after power on processing completion.
There might be a time delay between command and acknowledge.

02. Input Select (Command: x b)

To select input source for set.

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

Data 00: DTV (Antenna) Data 01: DTV (Cable)
Data 10: Analog (Antenna) Data 11: Analog (Cable)
Data 20: AV or AV1 Data 21: AV2
Data 40: Component1 Data 41: Component2
Data 42: Component3 Data 60: RGB-PC
Data 90: HDMI1 Data 91: HDMI2
Data 92: HDMI3 Data 93: HDMI4

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

- * Use the feature depending on your model.

03. Aspect Ratio (Command: k c)

To adjust the screen format.

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

Data 01: 4:3 Data 09: Just scan
Data 02: 16:9 Data 10: Cinema Zoom 1
Data 06: Set by program :
Data 1F: Cinema Zoom16

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

04. Screen Mute (Command: k d)

To select screen mute on/off.

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

Data 00: Screen mute off (Picture on), Video-out Mute off
Data 01: Screen mute on (Picture off)
Data 10: Video-out Mute on

Acknowledgement [d][][Set ID][][OK/NG][Data][x]

- * In case of Video-out Mute on only, TV will display On Screen Display (OSD). But, in case of screen mute on, TV will not display On Screen Display (OSD).

05. Volume Mute (Command: k e)

To control volume mute on/off.

You can also adjust mute using the MUTE button on remote control.

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

Data 00: Volume mute on (Volume off)
Data 01: Volume mute off (Volume on)

Acknowledgement [e][][Set ID][][OK/NG][Data][x]

06. Volume Control (Command: k f)

To adjust volume.

You can also adjust volume with the volume buttons on remote control.

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

Data Min: 00 ~ Max: 64 (*transmit by Hexadecimal code)

*Refer to "Real data mapping".

Acknowledgement [f][][Set ID][][OK/NG][Data][x]

07. Contrast (Command: k g)

To adjust screen contrast.

You can also adjust contrast in the PICTURE menu.

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

Data Min: 00 ~ Max: 64 (*transmit by Hexadecimal code)

*Refer to "Real data mapping".

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

08. 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 ~ Max: 64 (*transmit by Hexadecimal code)

*Refer to "Real data mapping".

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

09. Color (Command: k i)

To adjust screen color.

You can also adjust color in the PICTURE menu.

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

Data Min: 00 ~ Max: 64 (*transmit by Hexadecimal code)

*Refer to "Real data mapping".

Acknowledgement [i][][Set ID][][OK/NG][Data][x]

10. Tint (Command: k j)

To adjust screen tint.

You can also adjust tint in the PICTURE menu.

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

Data Red: 00 ~ Green: 64 (*transmit by Hexadecimal code)

*Refer to "Real data mapping".

Acknowledgement [j][][Set ID][][OK/NG][Data][x]

11. Sharpness (Command: k k)

To adjust screen sharpness.

You can also adjust sharpness in the PICTURE menu.

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

Data Min: 00 ~ Max: 64 (*transmit by Hexadecimal code)

*Refer to "Real data mapping".

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

12. OSD Select (Command: k l)

To select OSD (On Screen Display) on/off.

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

Data 00: OSD off Data 01: OSD on

Acknowledgement [l][][Set ID][][OK/NG][Data][x]

13. Remote Control Lock Mode (Command: k m)

To lock the remote control and the front panel controls on the set.

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

Data 00: Lock off Data 01: Lock on

Acknowledgement [m][][Set ID][][OK/NG][Data][x]

If you're not using the remote control and front panel controls on the Monitor set, use this mode. When main power is on/off, remote control lock is released. If Key Lock is on in the standby mode, TV will not turn on by POWER button of remote control and on the TV.

14. Treble (Command: k r)

To adjust treble.

You can also adjust treble in the AUDIO menu.

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

Data Min: 00 ~ Max: 64 (*transmit by Hexadecimal code)

*Refer to "Real data mapping".

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

15. Bass (Command: k s)

To adjust bass.

You can also adjust bass in the AUDIO menu.

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

Data Min: 00 ~ Max: 64 (*transmit by Hexadecimal code)

*Refer to "Real data mapping".

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

16. Balance (Command: k t)

To adjust balance.

You can also adjust balance in the AUDIO menu.

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

Data Min: 00 ~ Max: 64 (*transmit by Hexadecimal code)

*Refer to "Real data mapping".

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

17. 3D (Command: x t) (For 3D TV)

To change 3D mode for TV.

Transmission [x][t][][Set ID][][Data01][][Data02][][Data03][][Data04][Cr]

Data1

00: 3D On 01: 3D Off
02: 3D to 2D 03: 2D to 3D

Data2

00: Top and Bottom 01: Side by Side
02: Check Board 03: Frame Sequential

Data3

00: Right to Left 01: Left to Right

Data4

3D Depth: Min : 00 ~ Max : 14
(*transmit by Hexadecimal code)

*If data1 is 00 (3D On), data4 has no meaning.

*If data1 is 01 (3D off) or 02 (3D to 2D), data2, data3 and data4 have no meaning.

*If data1 is 03 (2D to 3D), data2 and data3 have no meaning.

Data 1	Data 2	Data 3	Data 4
00	o	o	x
01	x	x	x
02	x	x	x
03	x	x	o

x : Don't care

Acknowledgement [t][][OK][Data01][Data02][Data03][Data04][x][t][][NG][Data01][x]

18. Color Temperature (Command: x u)

To adjust color temperature.

You can also adjust color temperature in the PICTURE menu.

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

Data Min: 00 ~ Max: 64 (*transmit by Hexadecimal code)

*Refer to "Real data mapping".

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

19. Extended 3D (Command: x v) (For 3D TV)

To change 3D option for TV.

Transmission [x][v][][Set ID][][Data01][][Data02][Cr]

Data1: 3D option

00: 3D Picture Correction
01: 3D Depth (2D to 3D Only)
02: 3D Viewpoint
03: 3D Picture Size
04: 3D Picture Balance
05: 3D Optimization

Data2: It has own range for each 3D option determined by Data1.

1) When Data1 is 00

00: Right to Left 01: Left to Right

2) When Data1 is 01

Data Min: 00 ~ Max: 14 (*transmit by Hexadecimal code)

3) When Data1 is 02

- LZ9700 series

Data Min: 00 ~ Max: 06 (*transmit by Hexadecimal code)

- Other models

Data Min: 00 ~ Max: 14 (*transmit by Hexadecimal code)

4) When Data1 is 03

00: Just Scan 01: 16:9

5) When Data1 is 04

00: Off 01: On

6) When Data1 is 05

Data Min: 00 ~ Max: 02 (*transmit by Hexadecimal code)

Acknowledgement [v][][OK][Data01][Data02][x][v][][NG][Data01][x]

* Use the feature depending on your model.

20. ISM Method (Command: j p) 

To avoid having a fixed image remain on screen.

Transmission [j][p][][Set ID][][Data][Cr]

Data 02: Orbiter
04: White Wash
08: Normal
20: Color Wash

Acknowledgement [p][][Set ID][][OK/NG][Data][x]

21. Energy Saving (Command: j q)

To control the energy saving function.

Transmission [j][q][][Set ID][][Data][Cr]

Data 00: off
01: Minimum
02: Medium
03: Maximum
04: Auto (Depending on model)
05: Screen off

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

22. Auto Configuration (Command: j u)

To adjust picture position and minimize image shaking automatically. Auto configuration only works in RGB-PC mode.

Transmission [j][u][][Set ID][][Data][Cr]

Data 01: To set

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

23. Channel Tuning (Command: m a)

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

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

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

Data 00: Physical Channel Number
NTSC air: 02~45, NTSC cable: 01, 0E~7D
ATSC air: 01~45, ATSC cable: 01~87

Data 01 & 02: Major Channel Number
Data 01: High byte Data 02: Low byte

Two bytes are available for the Major and Minor, normally only the second byte is used.

Data 03 & 04: Minor Channel Number

Not needed for NTSC.

The table lists the binary code which must be converted to Hexadecimal before sending. For example:

The binary code to tune the sub source to an NTSC cable channel is "1000 0001", which translates to "81" in Hex.

- * 7th bit : For which source do you want to change the channel.
- * 6th bit: Use a two part or one part channel. Most

cases just use 0 since it's ignored when using NTSC.

- * 5th bit: Use 0 with NTSC since it can only use the physical channel number. Normally use 1 for ATSC since most times it doesn't matter what the physical number is.
- * 4th bit: Set to 0.
- * 3-0 bits: Choose signal type.

* Tune Command Examples:

1. Tune to the analog (NTSC) cable channel 35.

Data 00 = Physical of 35 = 23
Data 01 & 02 = No Major = 00 00
Data 03 & 04 = No Minor = 00 00
Data 05 = 0000 0001 in binary = 01
Total = ma 00 23 00 00 00 00 01

2. Tune to the digital (ATSC) local channel 30-3.

Data 00 = Don't know Physical = 00
Data 01 & 02 = Major is 30 = 00 1E
Data 03 & 04 = Minor is 3 = 00 03
Data 05 = 0010 0010 in binary = 22
Total = ma 00 00 00 1E 00 03 22

24. Channel Add/Del (Command: m b)

To add and delete the channels.

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

Data 00: Channel Delete Data 01: Channel Add

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

25. Key (Command: m c)

To send IR remote key code.

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

See page 125.

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

When TV is in the standby mode, TV will turn on by POWER button of remote control only.

26. Backlight (Command: m g) 

To adjust screen backlight.

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

Data Min:00 ~ Max:64 (*transmit by Hexadecimal code)

*Refer to "Real data mapping".

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

* Table List (Channel Tuning)

7	Main/Sub Picture	6	Two/One Part Channel	5	Using Physical Channel	4 Reserved	3	2	1	0	Step
0	Main	0	Two	0	Use	x	0	0	0	0	NTSC Air
1	Sub	1	One	1	No Use	x	0	0	0	1	NTSC Cable
						x	0	0	1	0	ATSC Air
						x	0	0	1	1	ATSC Cable_std
						x	0	1	0	0	ATSC Cable_hrc
						x	0	1	0	1	ATSC Cable_irc
						x	0	1	1	0	ATSC cable_auto
						x	0	1	1	1	Reserved
						x	x	x	x	x	...
						x	1	1	1	1	Reserved

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- lua interpreter

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