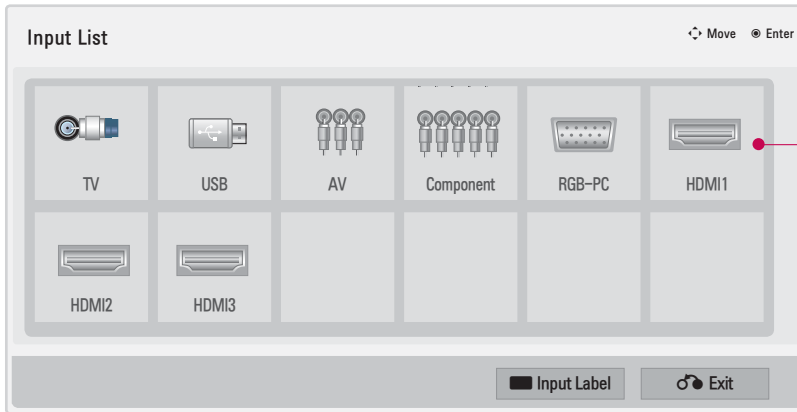


WATCHING TV / CHANNEL CONTROL

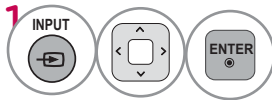
INPUT LIST

Only these input signals which are connected to a TV can be activated and selected.

i.e)

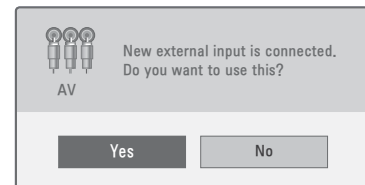


Disconnected inputs are inactive (grayed out)



Select the desired input source.

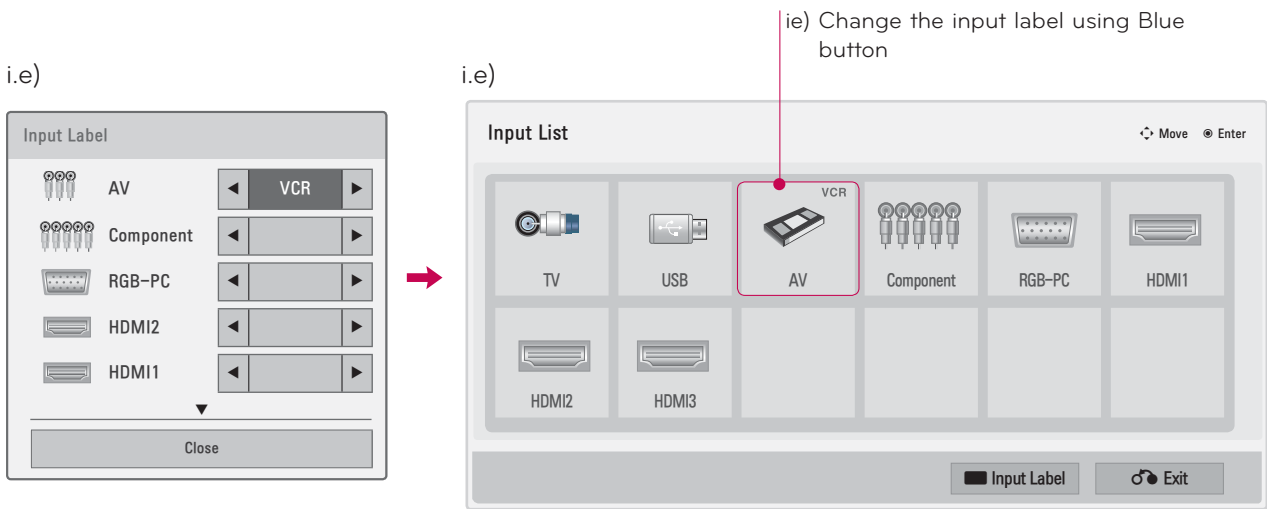
- When new external device is connected, this popup menu is displayed automatically. If selecting **Yes**, you can select input source that you want to appreciate.
- But, when selecting "**SIMPLINK - On**", popup menu for HDMI input will not be displayed.




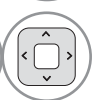




- **TV**: Select it to watch over-the-air, cable and digital cable broadcasts.
- **AV**: Select them to watch a VCR or other external equipment.
- **Component**: Select them to watch DVD or a Digital set-top box.
- **RGB-PC**: Select it to view PC input.
- **HDMI**: Select them to watch high definition devices.

INPUT LABEL

This indicates which device is connected to which input port.

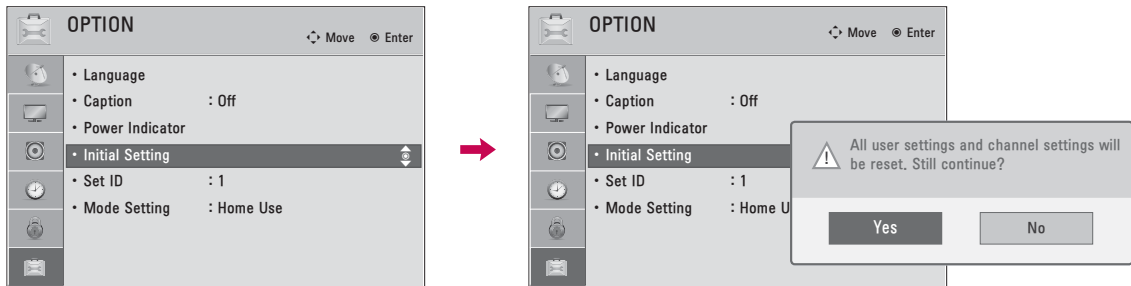



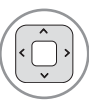





-   Select the desired input source.
-   Select the label.
-  Return to the previous menu.
-  Return to TV viewing.

WATCHING TV / CHANNEL CONTROL

RESET TO FACTORY DEFAULT (INITIAL SETTING)

This function resets the TV to factory default and erases all stored channels.

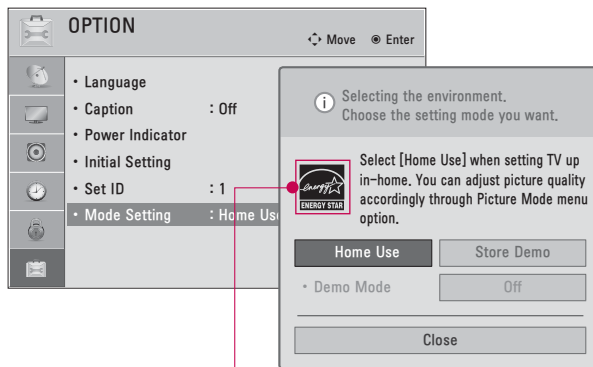
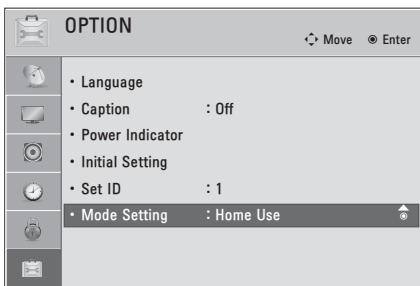


-   Select **OPTION**.
-   Select **Initial Setting**.
-   Select **Yes**.
-  TV turns off automatically and starts factory reset.

- 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.

MODE SETTING

Default selection is "Home Use". We recommend setting the TV to "Home Use" mode for the best picture in your home environment.



For 19/22/26/32/37/42/47/55LE5300, 22/26LE5500, 42/47/55LE7300, 37/42/47LD450C, 55LD520C, 32/42/47/55LD520, 42/47/55LD630, 42/47/55LE530C, 32/37/42/47LD452C

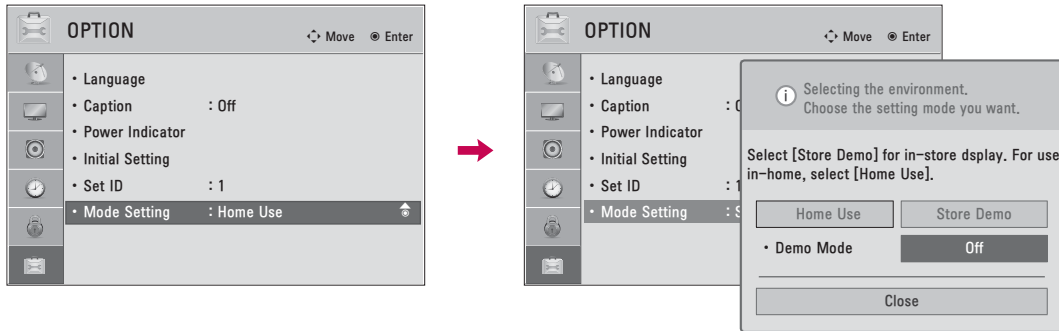
- 1 Select **OPTION**.
- 2 Select **Mode Setting**.
- 3 Select **Home Use**.
- 4 Return to the previous menu.
- Return to TV viewing.











- "Store Demo" Mode is only intended for use in retail environments. Customers can adjust the "Picture menu - **Picture mode**" manually while inspecting the TV, but the TV will automatically return to preset in-store mode after 5 minutes.
- "Store Demo" Mode is an optimal setting for displaying at stores. "Store Demo" mode initializes the TV to set the image quality:

WATCHING TV / CHANNEL CONTROL

DEMO MODE

Displays a slide show to explain the various feature of this TV.

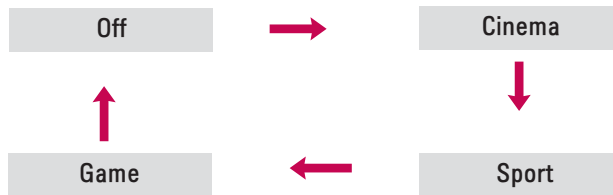


- 1   Select **OPTION**.
- 2   Select **Mode Setting**.
- 3   Select **Store Demo**.
- 4    Select **On**.
- 5  Return to TV viewing.
After a while, **Demo Mode** starts.

If you want to stop the demo, press any button (Except VOL +, - and MUTE button).

AV MODE

AV Mode toggles through preset Video and Audio settings.



Press the **AV MODE** button repeatedly to select the desired source.



- If you select "**Cinema**" in AV mode, **Cinema** will be selected both for "PICTURE menu - Picture Mode" and "AUDIO menu - Sound Mode" respectively.
- If you select "**Off**" in AV mode, the "**Picture Mode**" and "**Sound Mode**" return to previous selected value.
- **Off**: Disables the AV MODE.
- **Cinema**: Optimizes video and audio for watching movies.
- **Sport**: Optimizes video and audio for watching sports events.
- **Game**: Optimizes video and audio for playing games.

When playing a video game using PlayStation or Xbox, it is recommended to use the **Game** mode.

When in **Game** mode, functions related to picture quality will be optimized for playing games.

WATCHING TV / CHANNEL CONTROL

SIMPLINK

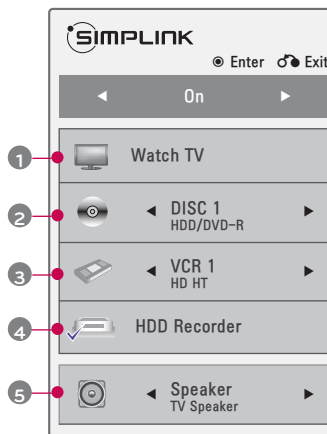
SIMPLINK allows you to control and play other AV devices connected with HDMI cable without additional cables and settings. This TV may work with devices with HDMI-CEC support, but only devices with the SIMPLINK logo are fully supported.

SIMPLINK can be turned on and off in the user menus.



- 1 Display **SIMPLINK** menu.
- 2 Select **On**.
- 3 Select the desired device.
- 4 Control connected AV devices.

- 1 **TV viewing:** Switch to the previous TV channel regardless of the current mode.
- 2 **DISC playback:** Select and play discs. When multiple discs are available, the disc devices are conveniently displayed at the bottom of the screen.
- 3 **VCR playback:** Control the connected VCR.
- 4 **HDD Recordings playback:** Control recordings stored in HDD.
- 5 **Audio Out to Home Theater speaker/ Audio Out to TV:** Select Home Theater speaker or TV speaker for Audio Out.



- ▶ When no device is connected (displayed in gray)
- ▶ Selected Device
- ▶ When a device is connected (displayed in bright color)

SIMPLINK Functions

- **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 **^ v < >**, **ENTER**, **▶**, **■**, **||**, **◀** and **▶▶** buttons.
- **Power off all devices:** When you power off the TV, all connected devices are turned off.
- **Switch audio-out:** Offers an easy way to switch audio-out.
- **Sync Power on:** When the equipment with Simplink function connected HDMI terminal starts to play, The TV will automatically turn on.

Note: To operate SIMPLINK, an HDMI cable over Version 1.3 with *CEC function should be used. (*CEC: Consumer Electronics Control).

(A device, which is connected to the TV through a HDMI cable but does not support SIMPLINK, does not provide this function)

NOTE

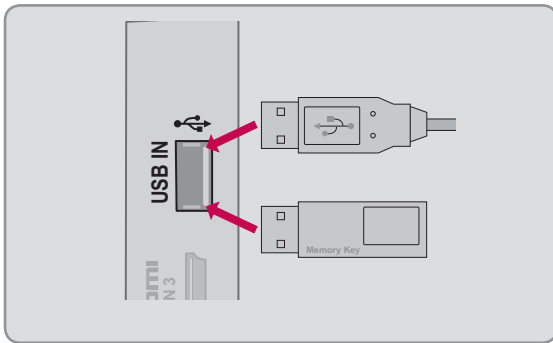
- ▶ Connect the HDMI/DVI IN or HDMI IN terminal of the TV to the rear terminal (HDMI terminal) of the SIMPLINK device with the HDMI cable
- ▶ When you switch the Input source with the INPUT button on the remote control, the SIMPLINK device will stop.
- ▶ When you select a device with home theater functionality, the sound output automatically switches to the home theater speakers and the TV speakers are turned off.
- ▶ If a connected SIMPLINK home theater system doesn't play the audio from the TV, connect the DIGITAL AUDIO OUT terminal on the back of the TV to the DIGITAL AUDIO IN terminal on the back of the SIMPLINK device with an OPTICAL cable.

MY MEDIA

CONNECTION METHOD

USB Connection

- 1 Connect the USB device to the **USB IN** jack on the side of TV.



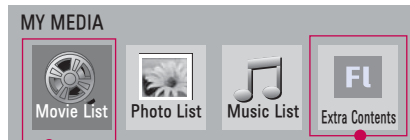
Precautions when using the USB device

- ▶ Only a USB storage device is recognizable.
- ▶ Connecting a USB storage device through a USB hub is not supported.
- ▶ A USB storage device which uses its own driver may not be recognized.
- ▶ The recognition speed of a USB storage device may depend on each device.
- ▶ Please do not turn off the TV or unplug the USB device when the connected USB storage device is working. When such device is suddenly separated or unplugged, the stored files or the USB storage device may be damaged.
- ▶ Only use a USB storage device which has normal music files, image files, or movie files.
- ▶ Please use only a USB storage device which was formatted as a FAT 32 or NTFS file system provided with the Windows operating system. Others may not be recognized.
- ▶ Some USB storage devices require a power adapter. The power adapter must be connected in order to be seen by the TV.
- ▶ If a device is not recognized by the TV, try a different cable. Excessively long cables are not supported.
- ▶ Some USB storage devices may not be supported or operate properly.
- ▶ Please backup important files because data on USB device could be damaged. Data management is consumer's responsibility and as a result, the manufacturer does not cover data damage.
- ▶ If your USB memory device has multiple partitions, or if you use a USB multi-card reader, you can use up to 4 partitions or USB memory devices.
- ▶ In case of USB storage devices formatted as NTFS, deletion is not supported.
- ▶ File alignment method of USB storage device is similar to Window XP and file names can be up to 100 English characters.
- ▶ The recommended capacity is 1TB or less for a USB external hard disk and 32 GB or less for USB memory.
- ▶ If a USB external hard disk with a "Energy Saving" function doesn't work, turn the hard disk off and on again to make it work properly. Refer to the user manual of the USB external hard disk.
- ▶ USB storage devices below USB 2.0 are supported as well. But they may not work properly in the movie list.

ENTRY MODE

The My Media menu will open automatically when you insert a USB drive. My Media can also be accessed by choosing My Media in the user menu.



On USB device, you can not add a new folder or delete the existing folder.



Except 32/42/47LD420,
32/37/42/47LD450,
37/42/47LD450C,
32/42/47/55LD520,
55LD520C,
42/47/55LE530C,
42/47LD451C,
32/37/42/47LD452C

For 32/37/42/47LD452C

1   Select **MY MEDIA**.

2   Select **Movie List**, **Photo List** or **Music List** or **Extra Contents**.

3 

■ This TV can view JPG image files, HD DivX files or play MP3 audio files.

When removing the USB device

Select the **USB Device** menu before removing the USB device.

1   Select **USB Device**.

2  Select **Eject**.

MY MEDIA

MOVIE LIST

(Except 32/42/47LD420, 32/37/42/47LD450, 37/42/47LD450C, 32/42/47/55LD520, 55LD520C, 42/47/55LE530C, 42/47LD451C, 32/37/42/47LD452C)

The movie list is activated once a USB drive is detected. It is used when playing movie files on the TV. It displays all of the video files it recognizes.

The On-Screen Display on your model may be slightly different.

Supported movie file

- Resolution: under 1920 pixel (width) x 1080 pixel (height)
- Frame Rate: under 30 frame/sec (1920x1080), under 60 frame/sec (1280x720)
- Max bitrate of playable video file: 20 Mbps (Mega bit per second)
- Bit rate : within 32 kbps to 320 kbps (MP3)
- Supported external subtitle format: *.smi/*.srt/*.sub (MicroDVD,Subviewer1.0/2.0)/*.ass/*.ssa/*.txt (TMPlayer)/*.psb (PowerDivX)
- Supported Internal subtitle format: only, XSUB (It is the subtitle format used in DivX6 files)

Precautions when playing the video files

- ▶ Some user-created subtitles may not work properly.
- ▶ Some special characters are not supported in subtitles.
- ▶ HTML tags are not supported in subtitles.
- ▶ Time information in an external subtitle file should be arranged in ascending order to be played.
- ▶ The screen may suffer temporary interruptions (image stoppage, faster playback, etc.) when the audio language is changed.
- ▶ A damaged video file may not be played correctly, or some functions may not be usable.
- ▶ Video files produced with some encoders may not be played correctly.
- ▶ If the video and audio structure of recorded file is not interleaved, the file not playback properly.
- ▶ Video with resolution higher than maximum resolution supported for each frame, cannot be guaranteed for smooth playback.
- ▶ Video files other than the specified types and formats may not work properly.
- ▶ The movie file encoded by the GMC (Global Motion Compensation) is not supported.
- ▶ Only 250 Korean characters, 500 letters and 500 numbers are supported for each line of the subtitle.
- ▶ Only 10000 sync blocks are supported within the subtitle file.
- ▶ We do not guarantee smooth playback of profiles encoded level 4.1 or higher in H.264/AVC.
- ▶ DTS Audio codec is not supported.
- ▶ A video file more than 30GB in file size is not supported for playback.
- ▶ Playing a video via a USB connection that doesn't support high speed may not work properly.
- ▶ USB storage devices below USB 2.0 are supported as well. But they may not work properly in the movie list.
- ▶ The video file and its subtitle file must be located in the same folder.
At this time, a video file name and its subtitle file name must be identical for it to be displayed.
- ▶ When you are watching a movie via the Movie List function, you can adjust the picture with the ENERGY SAVING and AV MODE button on the remote control. User setup for each picture mode is not supported.

Supported Video Formats

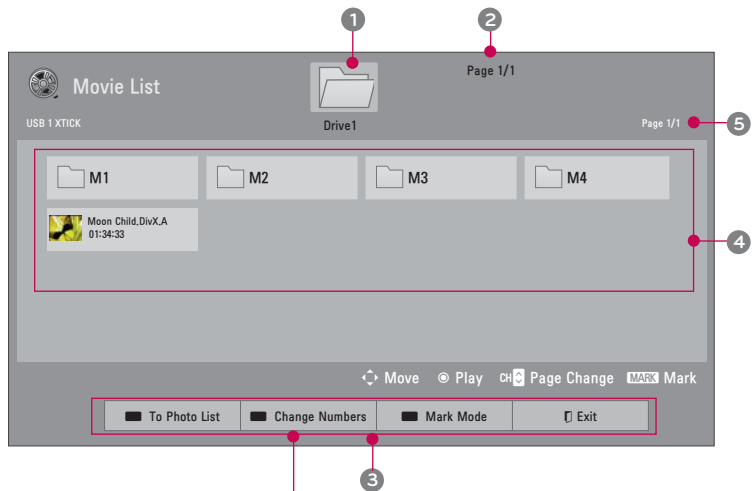
File Extension name	Video Decoder	Audio Codec	Max Resolution
mpg, mpeg	MPEG1, MPEG2	MP2, MP3, Dolby Digital, LPCM	1920 x 1080 @ 30p (Only Motion JPEG 640x480@30p)
dat	MPEG1	MP2	
ts, trp, tp	MPEG2, H.264, AVS, VC1	MP2, MP3, Dolby Digital, AAC, HE-AAC	
vob	MPEG1, 2	MP2, MP3, Dolby Digital, LPCM	
mp4, mov	MPEG4, DivX 3.11, DivX 4.12, DivX 5.x, DivX 6, Xvid 1.00, Xvid 1.01, Xvid 1.02, Xvid 1.03, Xvid 1.10-beta1/2H.264	AAC, HE-AAC, MP3	
mkv	H.264, MPEG-1,2,4	MP2, MP3, Dolby Digital, AAC HE-AAC, LPCM	
divx, avi	MPEG2, MPEG4, DivX 3.11, DivX 4, DivX 5, DivX 6, Xvid 1.00, Xvid 1.01, Xvid 1.02, Xvid 1.03, Xvid 1.10-beta1/2H.264	MP2, MP3, Dolby Digital, LPCM, ADPCM, AAC, HE-AAC	
Motion JPEG (avi, mp4, mkv)	JPEG	LPCM, ADPCM	
asf, wmv	VC1	WMA	
flv	Sorenson H.263, H264	MP3, AAC	

MY MEDIA

Screen Components

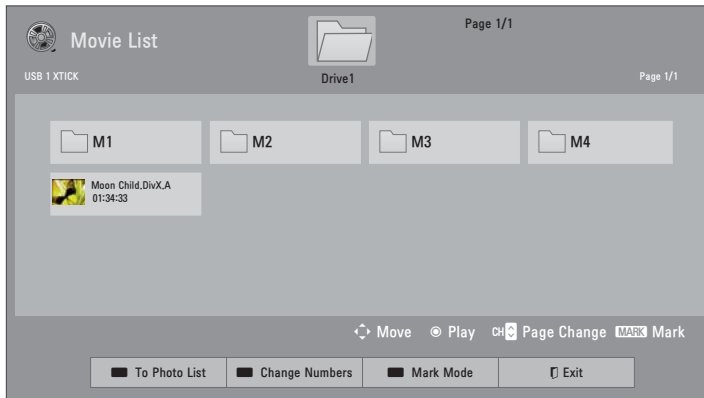


- 1 Moves to upper level folder
- 2 Current page/Total pages
- 3 Corresponding buttons on the remote control
- 4 Contents under the folder focused on 1
- 5 Current page/total pages of contents



GREEN	Move to Photo List or Music List .
YELLOW	Change Numbers: Changes the number or thumbnails displayed at a time.
BLUE	Allows you to mark certain files.
EXIT	Return to TV viewing.

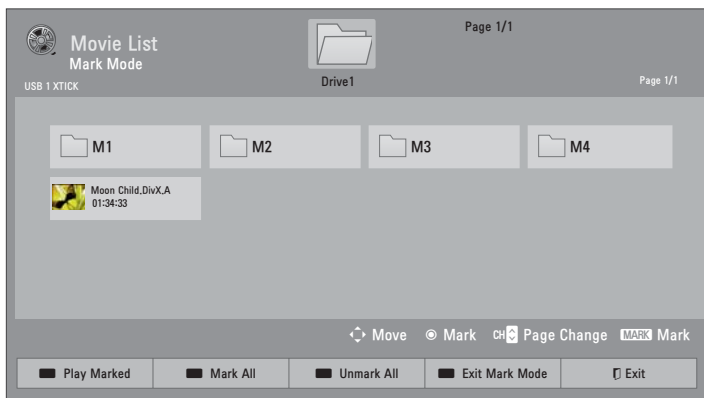
Movie Selection



- 1 Select the target folder or drive.
- 2 Select the desired movie title.
- 3 Play the movie file.

■ Use the CH (^ v) button to navigate in the movie page.

Mark Mode



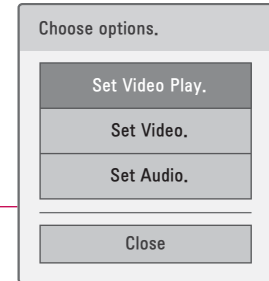
- 1 Select the target folder or drive.
- 2 Select the desired movie title.
- 3 Mark your desired movie file.
- 4 Play the marked movie file. It displays the current movie status progress bar on the bottom of the screen.


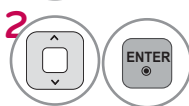
	Play Marked: Play the first selected file. Once a movie finishes playing, the next selected one will be played automatically.
	Mark All: Mark all files in the folder.
	Unmark All: Deselect all marked files.
	Exit the Mark Mode.

■ When one or more movie files are marked, the marked movies will be played in sequence.

MY MEDIA

Using the Movie List Function












- 1  Show the **Option** menu.
- 2  Select **Set Video Play.**, **Set Video.**, or **Set Audio.**

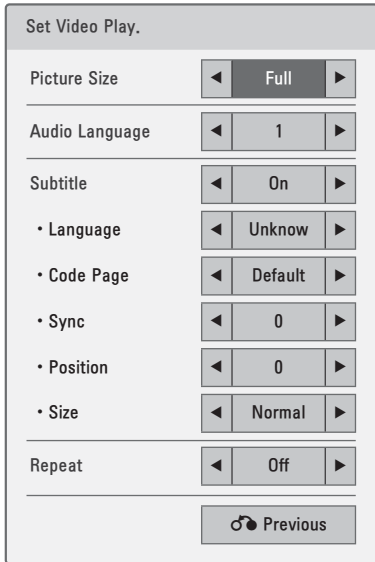
NOTE

- ▶ Option values changed in the Movie List does not affect Photo List and Music List.
- ▶ Option values changed in Photo List and Music List are changed likewise in Photo List and Music List, but not in the Movie List.
- ▶ When replaying a video file after stopping, you can play from where it stopped automatically.
- ▶ If you select "Yes" when playing the same file after the video file has been stopped, it will restart where it stopped previously.
- ▶ If continuous series files exist within the folder, the next file will automatically be played. But, this excludes cases when the Repeat function of Movie List Option is turned "On" (Refer to page 85) or when set as **Marked Play**.

Using the remote control

	Return to TV viewing.
	Select the required speed: x2, x4, x8, x16, x32 (backward/forward).
	Pauses the media player. If no buttons are pressed on the remote control for 10 minutes after pausing, the TV returns to the playback state.
	Displays a slow motion.
	Move to a specific frame forward or backward while playing a video. A cursor indicating the position can be viewed on the screen. It may not work properly for some movie files.
	Return to normal playback.
	Hide the menu on screen. To see the menu again, press ENTER button to display.
	Press the ENERGY SAVING button repeatedly to increase the brightness of your screen (Refer to p. 104).
	Press the AV MODE button repeatedly to select the desired source (Refer to p. 75).

Set Video Play Menu Options



1 Select **Picture Size**, **Audio Language**, **Subtitle**, or **Repeat**.



2 Make appropriate adjustments.

Code Page

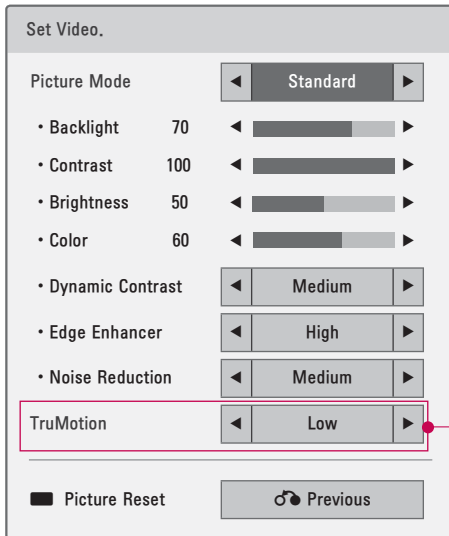
Subtitle Language Group	Supported Language
Latin1	English, Spanish, French
Korean	English, Korean

- **Picture Size:** Selects your desired picture format for videos.
- **Audio Language:** Changes the Language Group of the audio for video files.
- **Subtitle Language:** The subtitles can be turned on or off. If there are two or more subtitles, you can select one of them.
- **Language:** Activated for SMI subtitles and can select the language within the subtitle.
- **Code Page:** Subtitle font selection. When set to default, same font as general menu will be used.
- **Sync:** When the video is not synchronized with the captions, it can be adjusted by 0.5 second.
- **Position:** Move the location of the subtitles.
- **Size:** Changes the subtitle font size.
- **Repeat:** Turn on/off repeat function of movie playback. When turned on, the file within the folder will be played back repeatedly.

MY MEDIA

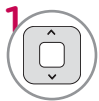
* Image shown may differ from your TV.

Set Video Menu Options



(TruMotion' dependent on model)

MY MEDIA



1 Select **Picture Mode** or **TruMotion**.

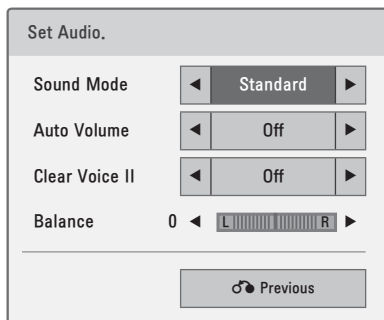


2 Make appropriate adjustments.



Reset picture settings to default.

Set Audio Menu Options



1 Select **Sound Mode**, **Auto Volume**, **Clear Voice II** or **Balance**.



2 Make appropriate adjustments.

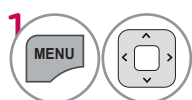
PHOTO LIST

The On-Screen Display on your model may be slightly different.

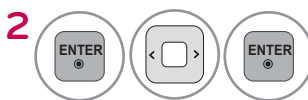
Supported photo file: *.JPG

- Baseline: 64 pixel (width) x 64 pixel (height) to 15360 pixel (width) x 8640 pixel (height)
- Progressive: 64 pixel (width) x 64 pixel (height) to 1920 pixel (width) x 1440 pixel (height)
- You can play JPEG files only.
- Non-supported files are displayed in the form of predefined icon.

Screen Components

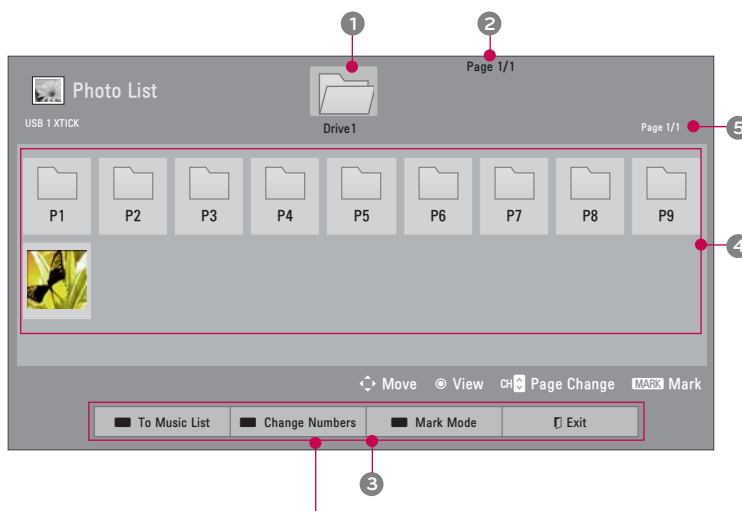


Select **MY MEDIA**.



Select **Photo List**.

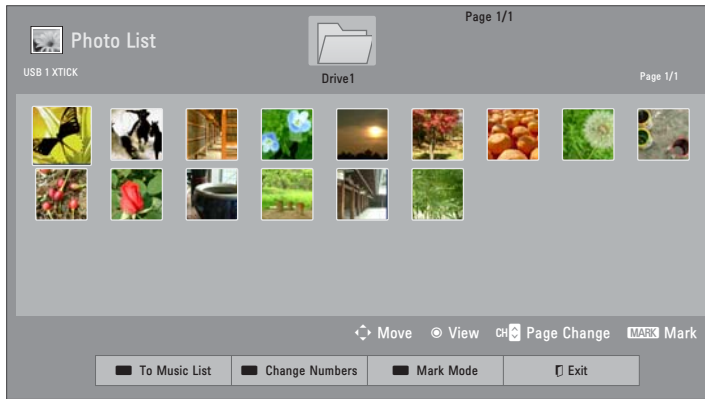
- 1 Moves to upper level folder
- 2 Current page/total pages
- 3 Corresponding buttons on the remote control
- 4 Contents under the folder focused on 1
- 5 Current page/total pages of contents



GREEN	Move to Music List or Movie List .
YELLOW	Change Numbers: Changes the number or thumbnails displayed at a time.
BLUE	Allows you to mark certain files.
EXIT	Return to TV viewing.

MY MEDIA

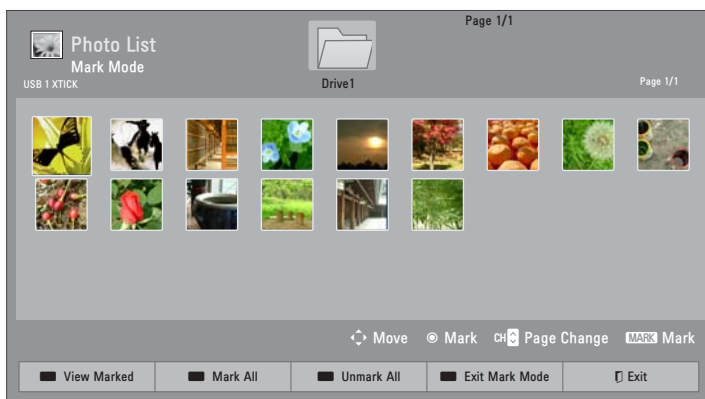
Photo Selection



- 1 Select the target folder or drive.
- 2 Select the desired photos.
- 3 Photo file is displayed.

■ Use the CH (^ v) button to navigate in the photo page.

Mark Mode



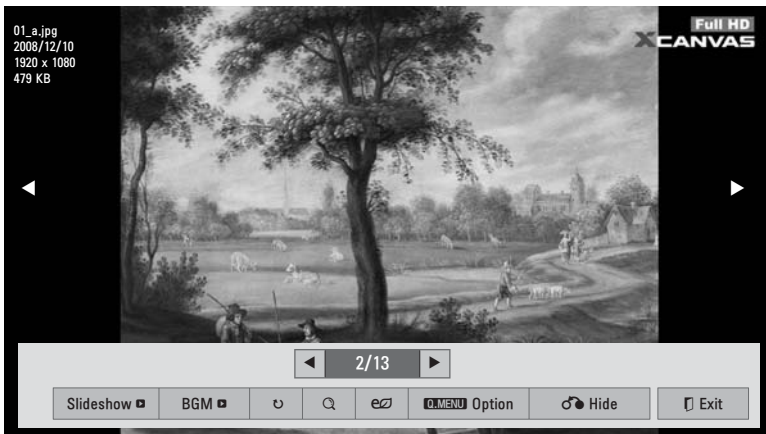
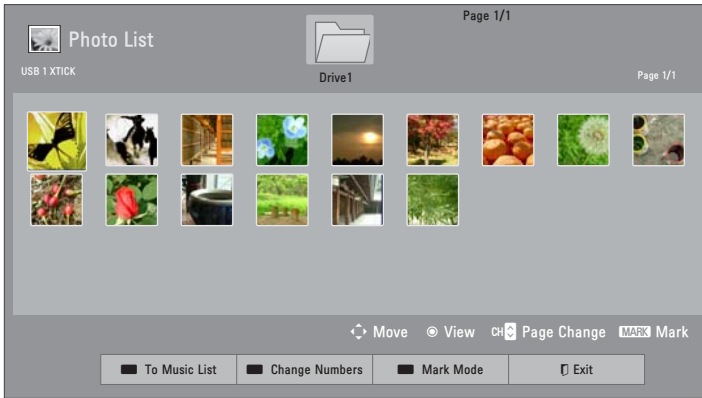
- 1 Select the target folder or drive.
- 2 Select the desired photo files.
- 3 Mark your desired photo files.
- 4 View the marked photo files.

	View Marked: Display the selected photo.
	Mark All: Mark all photos on the screen.
	Unmark All: Deselect all marked photos.
	Exit the Mark Mode.





■ When one or more photos are marked, you can view individual photos or a slide show of the marked photos. If no photos are marked, you can view all photos individually or all photos in the folder in a slide show.

Full Screen Menu

More operations are available in full screen mode.

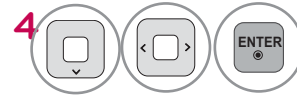
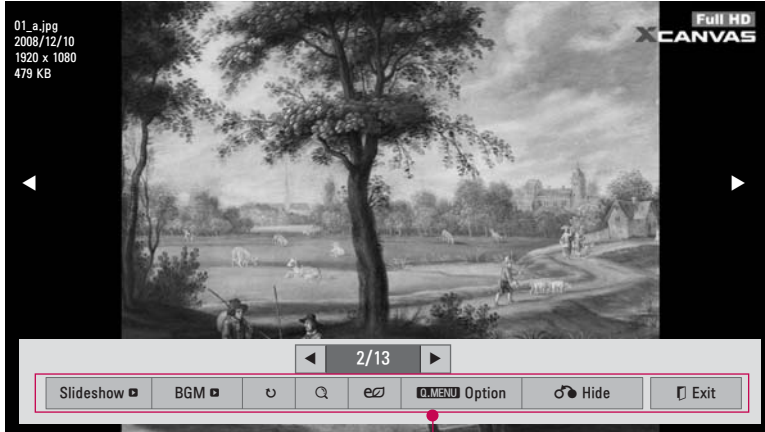


The aspect ratio of a photo may change the size of the photo displayed on the screen in full size.

- 1  Select the target folder or drive.
- 2   Select the desired photos.
- 3  The selected photo is displayed in full size.

■ Use the CH (^ v) button to navigate in the photo page.

MY MEDIA






4 Select the **Slideshow**, **BGM**, **⌚ (Rotate)**, **Q (Zoom In)**, **e (Energy Saving)**, **Option**, or **Hide**.

- Use < > button to select the previous or next photo.

- ▶ **Slideshow:** Selected photos are displayed during the slide show. If no photo is selected, all photos in the current folder are displayed during slide show.
 - Set the time interval of the slide show in **Option-Set Photo View** menu (Refer to p. 91).
 - You can adjust **Option** by using the **Q.MENU** button on the remote control.
- ▶ **BGM (Background Music):** Listen to music while viewing photos in full size.
 - Set the BGM device and album in **Option-Set Photo View** menu (Refer to p. 91).
 - You can adjust **Option** by using the **Q.MENU** button on the remote control.
- ▶ **⌚ (Rotate):** Rotate photos.
 - Rotates the photo 90 °, 180 °, 270 °, 360 ° clockwise.
 - Photos cannot be rotated if its width is greater than the available supported resolution height.
- ▶ **Q (Zoom In):** View the photo by zoom in 2, 4 times by using Blue button.
- ▶ **e (Energy Saving):** Increase the brightness of your screen by using ENERGY SAVING button.
- ▶ **Option:** Set values for **Slide Speed** and **Music Album** (Refer to p. 91).
 - You cannot change **Music Album** while BGM is playing.
 - You can only select the MP3 folder saved on the device that currently displays the photo.
- ▶ **Hide:** Hide the menu on the full-sized screen.
 - To see the menu again on the full-sized screen, press **ENTER** button to display.
- ▶ **Exit:** Move to the previous menu screen.

Using the Photo List Function

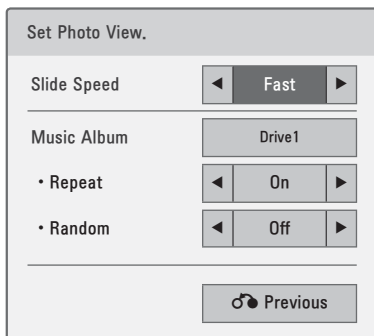




- 1  Show the **Option** menu.
- 2   Select **Set Photo View.**, **Set Video.**, or **Set Audio.**

NOTE

- ▶ Option values changed in Photo List do not affect Movie List and Music List.
- ▶ Option values changed in Photo List or Music List are changed likewise in Photo List and Music List, but not Movie List.

Set Photo View Menu Options

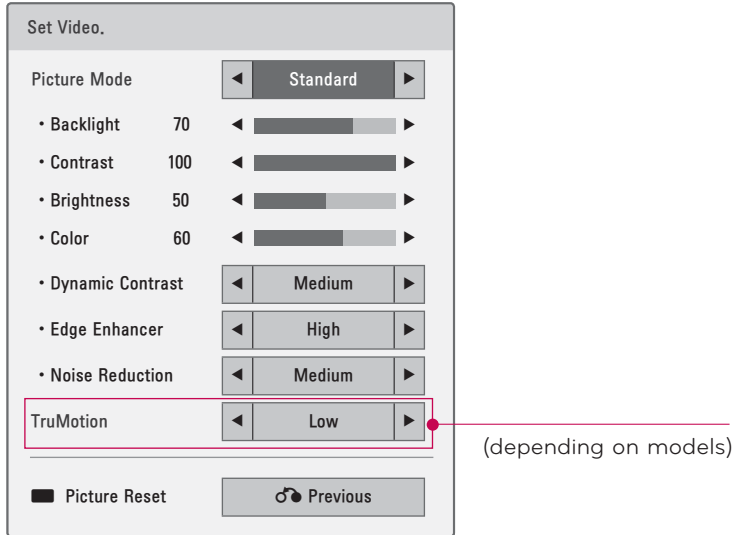


- 1  Select **Slide Speed** or **Music Album**.
- 2  Make appropriate adjustments.

MY MEDIA




* Image shown may differ from your TV.

Set Video Menu Options

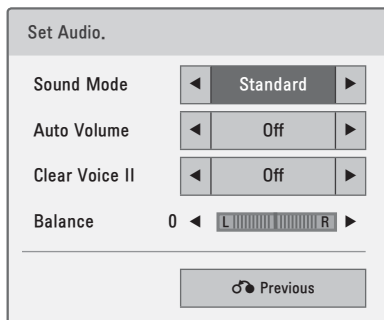




(depending on models)

MY MEDIA

- 1  Select **Picture Mode** or **TruMotion**.
- 2  Make appropriate adjustments.
-  Initialize the adjusted picture value.

Set Audio Menu Options



- 1  Select **Sound Mode**, **Auto Volume**, **Clear Voice II** or **Balance**.
- 2  Make appropriate adjustments.

MUSIC LIST

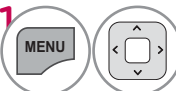
This TV cannot play back copy-protected files.
The On-Screen Display on your model may be slightly different.

MUSIC (*.MP3) supporting file
Bit rate 32 Kbps - 320 Kbps

- Sampling rate MPEG1 Layer3: 32 kHz, 44.1 kHz, 48 kHz
- Sampling rate MPEG2 Layer3: 16 kHz, 22.05 kHz, 24 kHz
- Sampling rate MPEG2.5 Layer3: 8 kHz, 11.025 kHz, 12 kHz

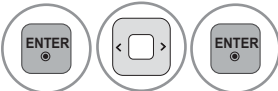
Screen Components

1



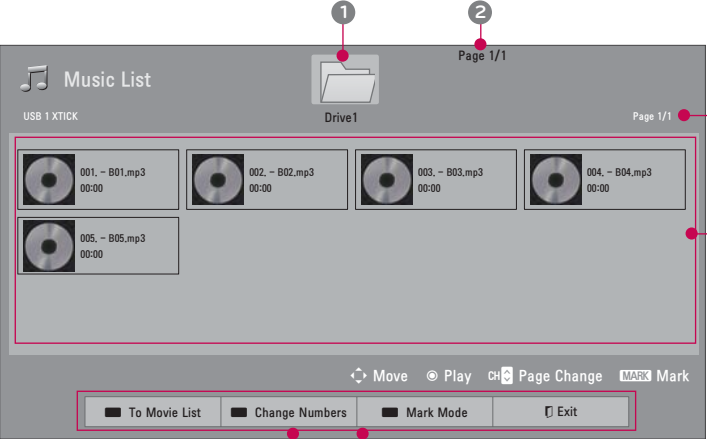
Select **MY MEDIA**.



2



Select **Music List**.

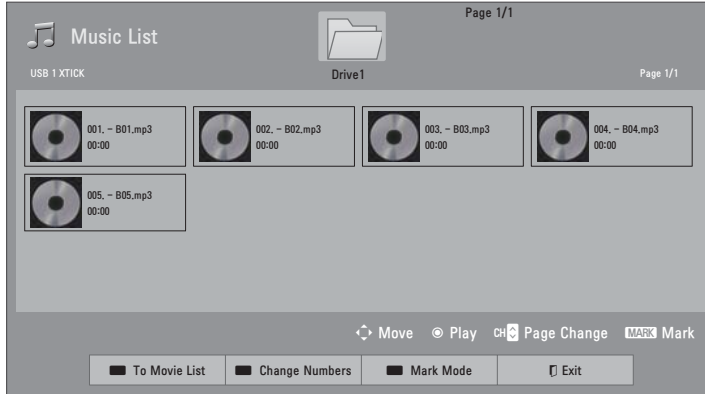
- 1 Preview: If any album jacket for the file (Album Art Image) exists, this picture is displayed.
- 2 Moves to upper level folder
- 3 Current page/Total pages
- 4 Corresponding buttons on the remote control
- 5 Contents under the folder focused on 1
- 6 Current page/total pages of contents



GREEN	Move to Movie List or Photo List .
YELLOW	Change Numbers: Changes the number or thumbnails displayed at a time.
BLUE	Allows you to mark certain files.
	Return to TV viewing.
	Press the ENERGY SAVING button repeatedly to increase the brightness of your screen (Refer to p. 104). (It's available "ENERGY SAVING - Off, Screen Off" only.)

MY MEDIA

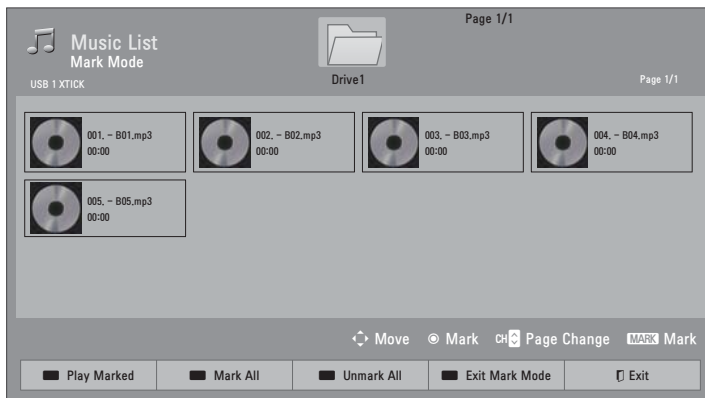
Music Selection



- 1 Select the target folder or drive.
- 2 Select the desired music file.
- 3 Music files are played.

■ Use the CH (^ v) button to navigate in the music page.

Mark Mode



- 1 Select the target folder or drive.
- 2 Select the desired music file.
- 3 Mark your desired music file.
- 4 Play the marked music file.

RED

Play Marked: Play the selected songs. Once a song finishes playing, the next selected one will be played automatically.

GREEN

Mark All: Mark all songs in the folder.

YELLOW

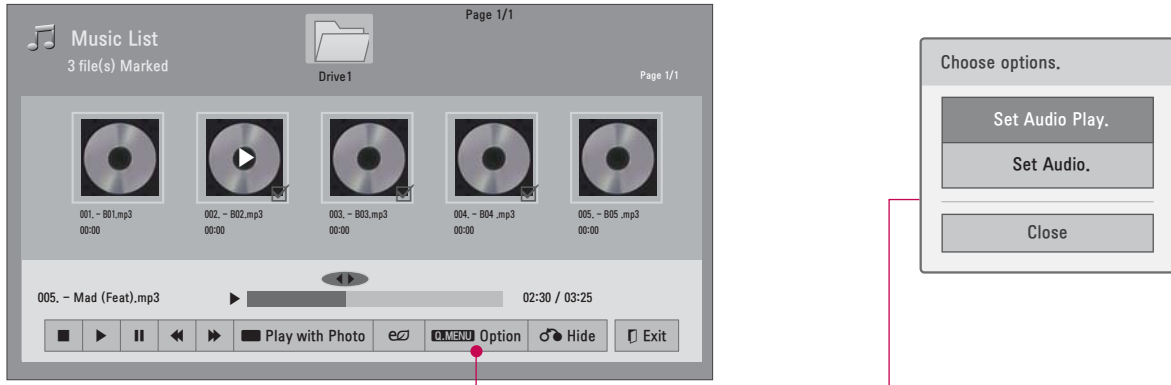
Unmark All: Deselect all marked song.

BLUE

Exit the Mark Mode.

■ When one or more music files are marked, the marked music files will be played in sequence.

Using the Music List Function



1 Show the **Option** menu.

2 Select **Set Audio Play.** or **Set Audio..**

NOTE

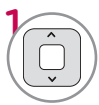
- ▶ Option values changed in Movie List does not affect Photo List and Music List.
- ▶ Option value changed in Photo List and Music List are changed likewise in Photo List and Music List excluding Movie List.
- ▶ You can listen to the music only within the device currently played.

Using the remote control

	Stop playback.
	Return to normal playback.
	Paused playback.
	Select the previous or next song.
	Play with Photo: Start playing the selected songs and then move to the Photo List.
	Press the ENERGY SAVING button repeatedly to increase the brightness of your screen (Refer to p. 104). (It's available "ENERGY SAVING - Off, Screen Off" only.)
	A cursor indicating the position can be played on the screen.
	Move to the previous menu screen.

MY MEDIA

Set Audio Play Menu Options

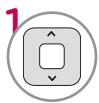
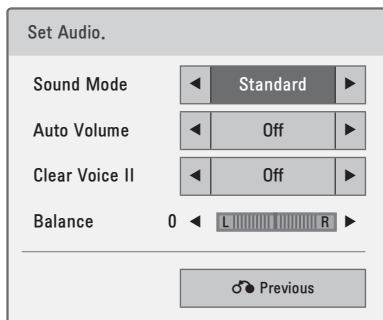


1 Select **Repeat** or **Random**.



2 Make appropriate adjustments.

Set Audio Menu Options

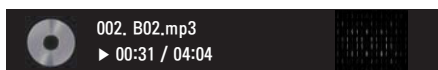


1 Select **Sound Mode**, **Auto Volume**, **Clear Voice II** or **Balance**.




2 Make appropriate adjustments.

- If you don't press any buttons for a while, the play information box will float across the screen. This prevents screen pixel damage due to a fixed image remaining on the screen for an extended period of time.



NOTE

- ▶ Music files with copy-protection will not play.
- ▶ Press ENTER or  button to stop the screen saver.

EXTRA CONTENTS

- For 32/37/42/47LD452C

You can play application files on USB device.

Application files your device can be played by this unit.

The On Screen Display may be different from your TV. Images are an example to assist with the TV operation.

FLASH (*.SWF) / GEM supporting file


An SWF file complied with Flash Lite 3.0 or earlier (the 3.0 version is recommended)

- The Pro: Centric application is required, which starts automatically in the flash memory when the TV is turned on.
- The folder called /hcapfs/as/abs_service/ must exist in USB drive root directory.
- The file called xait.xml must exist in the /hcapfs/as/abs_service/ folder.
- If the above conditions are not met, the following error message is displayed when selecting the Extra Contents option: Failed to execute file in the USB. Please check the files in the USB.
- When the flash file does not run even if the above all conditions are met, refer to the Download Extra Contents of Installation Guide.
- GEM is composed of JAVA application.

Playing the application files

1   Select **MY MEDIA**.

2   Select **Extra Contents**.

3  Application files are played.

To stop playing the Application file

Remove the USB from the **USB IN** jack of the TV set.

NOTE

- ▶ When playing the Application files(FLASH or GEM files), the buttons are controlled according to the settings of the Extra Contents option.

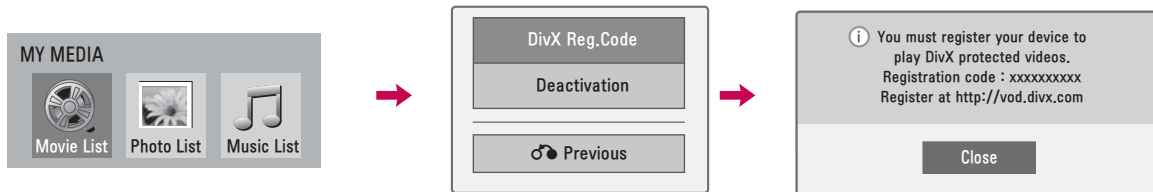
MY MEDIA

DIVX REGISTRATION CODE







(Except 32/42/47LD420, 32/37/42/47LD450, 37/42/47LD450C, 32/42/47/55LD520, 55LD520C, 42/47/55LE530C, 42/47LD451C, 32/37/42/47LD452C)

Using the registration number, movies can be rented or purchased at www.divx.com/vod.

Only DivX files matched with the registration code of the purchased TV are playable.



MY MEDIA

-   Select **MY MEDIA**.
-   Select DivX Option.
-  Select **DivX Reg. Code**.
-  Display DivX Reg. Code.

NOTE

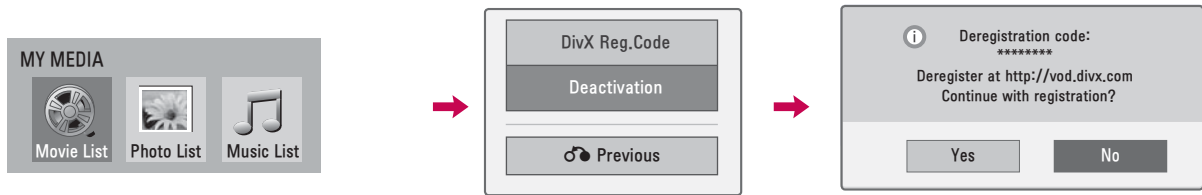
- ▶ When loading, some buttons may not work.
- ▶ If you use the DivX registration code of another device, the rented or purchased DivX file cannot be played. Therefore always use the DivX registration code assigned to this product.
- ▶ The video or audio of a file converted based on a standard other than the DivX codec standard may be corrupted or unable to be played.









DEACTIVATION

(Except 32/42/47LD420, 32/37/42/47LD450, 37/42/47LD450C, 32/42/47/55LD520, 55LD520C, 42/47/55LE530C, 42/47LD451C, 32/37/42/47LD452C)

The purpose of deactivation is to allow deactivation of devices for users who have activated all the available devices through the web server and are blocked from activating more devices. DivX VOD allows the consumer to activate up to 6 devices under one account.

Delete the existing authentication information to receive a new DivX user authentication for TV. Once this function is executed, a DivX user authentication is required again to see DivX DRM files.

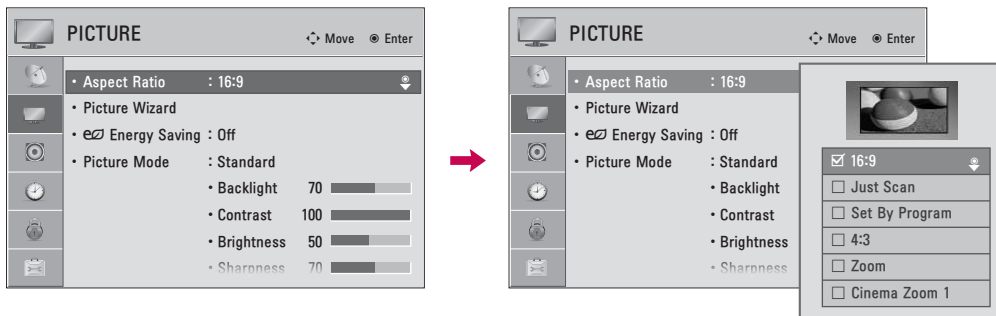


-   Select **MY MEDIA**.
-   Select DivX Option.
-  Select **Deactivation**.
-   Select **Yes**.
-  Display **Deactivation**.

PICTURE CONTROL

PICTURE SIZE (ASPECT RATIO) CONTROL

This feature lets you choose the way an analog picture with a 4:3 aspect ratio is displayed on your TV. You can select a different aspect ratio depending on input source (analog broadcasting, digital broadcasting, aux).

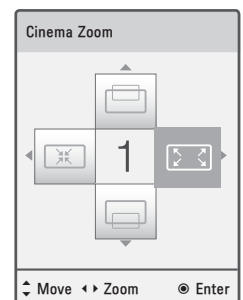
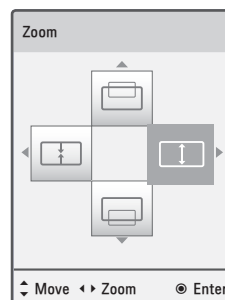


- 1 Select **PICTURE**.
- 2 Select **Aspect Ratio**.
- 3 Select the desired picture format.
- 4 Return to the previous menu.
- Return to TV viewing.

- You can also adjust **Aspect Ratio** in the **Q.MENU**.
- Press the **RATIO** button repeatedly to select the desired picture format.

When adjusting Zoom or Cinema Zoom in Q.MENU

- 1 Select **Aspect Ratio**.
- 2 Select **Zoom** or **Cinema Zoom**.
- 3 Adjust proportion of Zoom or Cinema Zoom. The Cinema Zoom adjustment range is 1-16.
- 4 Move the image on the screen.



16:9

Adjust the picture horizontally, in a linear proportion to fill the entire screen.



Just Scan

Normally the edges of video signals are cropped 1-2%. Just Scan turns off this cropping and shows the complete video.

Notes: If there is noise on the edges of the original signal, it will be visible when Just Scan is activated.

Just Scan operates only in DTV/Cable DTV/Component/HDMI-DTV/DVI-DTV (720p/1080i/1080p) input source.



Set By Program

Selects the proper picture proportion to match the source's image.

(4:3 → 4:3)



(16:9 → 16:9)



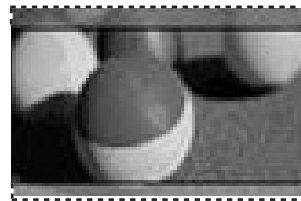
4:3

Choose 4:3 when you want to view a picture with an original 4:3 aspect ratio.



Zoom

Choose Zoom when you want to view the picture without any alteration. However, the top and bottom portions of the picture will be cropped.



Cinema Zoom

Choose Cinema Zoom when you want to enlarge the picture in correct proportion.

This enlarges an image with cinemascope aspect ratio (2.35:1) without distortion.

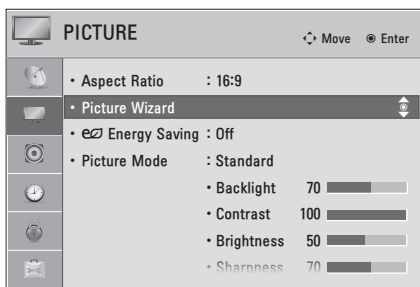
Note: When enlarging or reducing the picture, the image may become distorted.



PICTURE CONTROL

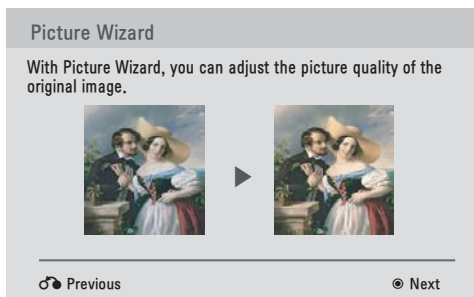
PICTURE WIZARD (Except 32/37/42/47LD452C)

This feature lets you adjust the picture quality of the original image. Use this to calibrate the screen quality by adjusting the Black and White Level etc. You can calibrate the screen quality by easily following each step. When you adjust the image to **Low**, **Recommended** or **High**, you can see the example of the changes you made.

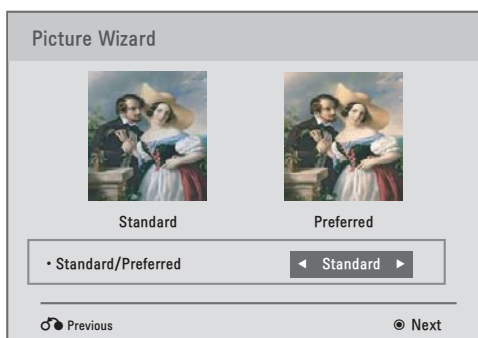


1 Select **PICTURE**.

2 Select **Picture Wizard**.

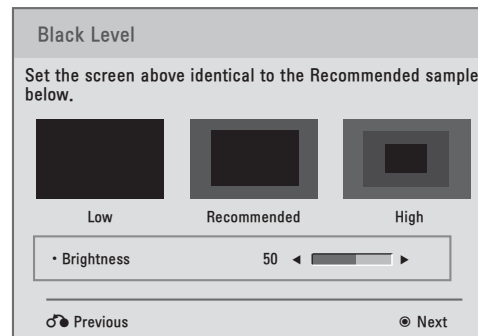


3 Adjust **Picture Wizard**.

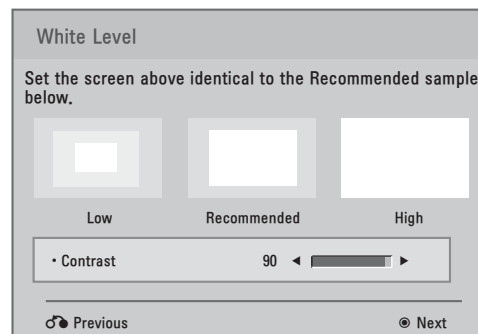


4 Adjust **Standard/Preferred**.

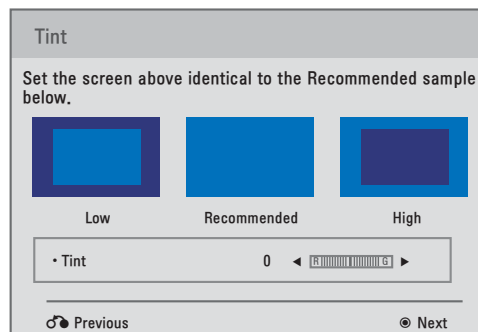
■ If you select **Preferred**, OSD (On Screen Display) differ from that shown in this manual.



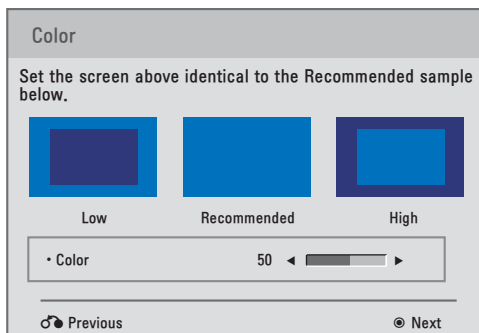
5 Adjust **Black Level**.



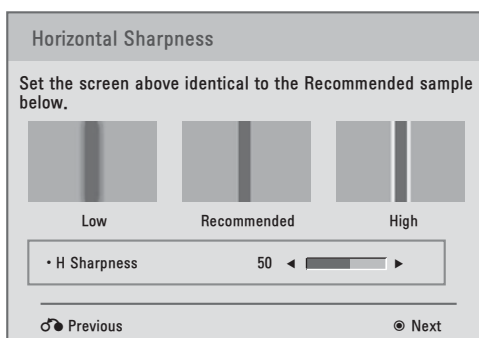
6 Adjust **White Level**.



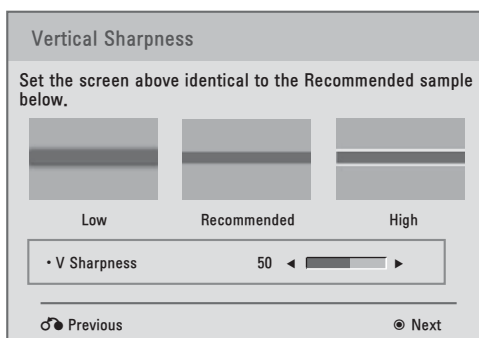
7 Adjust **Tint**.



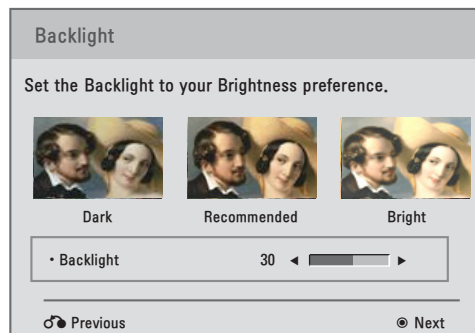
8 Adjust **Color**.



9 Adjust **Horizontal Sharpness**.

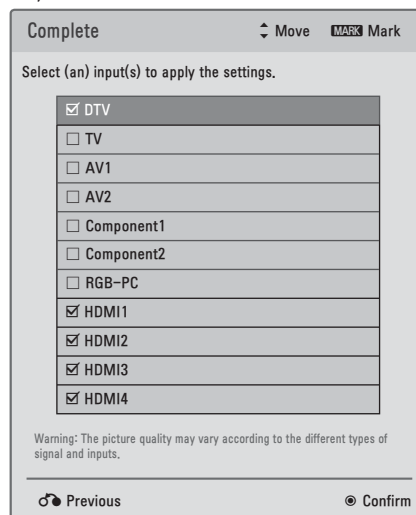


10 Adjust **Vertical Sharpness**.



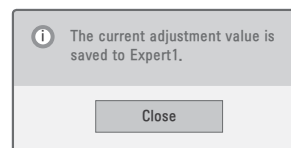
11 Adjust **Backlight**.

i.e)



12 Select input source to apply the settings.

13 Save.



14 Finish the Picture Wizard.

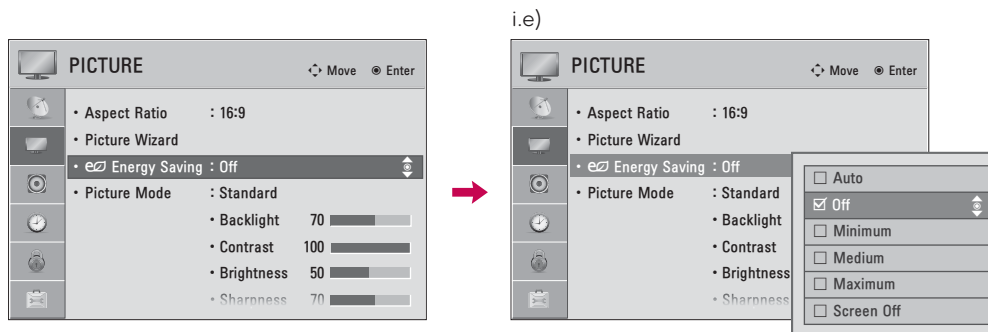
- If you stop the Picture Wizard before the final step, the changes will not be saved to the TV.
- Once the **Picture Wizard** sets the picture quality, **Energy Saving** is changed to **Off** automatically.
- To reset changes made by **Picture Wizard**, operate **Picture Reset** when **Picture Mode** is on **Expert1**.









PICTURE CONTROL

e ENERGY SAVING

It reduces the TV's power consumption by lowering the backlight level.

You can increase the brightness of your screen by adjusting the **Energy Saving** level or by adjusting the **Picture Mode**.

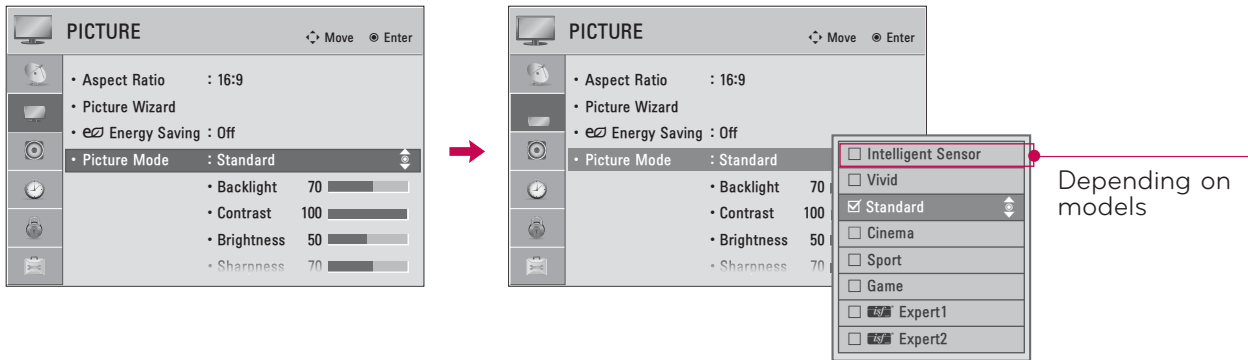


- 1   Select **PICTURE**.
- 2   Select **e Energy Saving**.
- 3   Select **Off, Minimum, Medium, Maximum, or Screen Off**.
- 4  Return to the previous menu.
-  Return to TV viewing.

- When selecting **Screen off**, the screen will turn off after 3 seconds.
- If you adjust "**Energy Saving-Maximum**", **Backlight** feature will not work.
- Press the **ENERGY SAVING** button repeatedly to select the appropriate Energy Saving setup.

PRESET PICTURE SETTINGS (PICTURE MODE)

There are factory presets for picture settings available in the user menus. You can use a preset, change each setting manually.



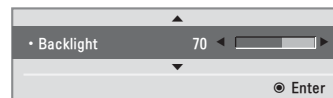
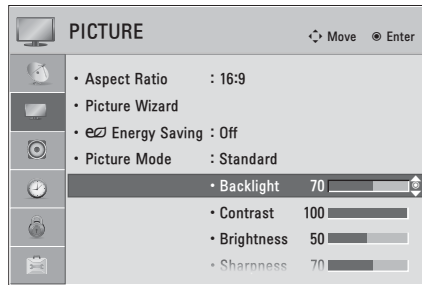
- 1 Select **PICTURE**.
- 2 Select **Picture Mode**.
- 3 Select **Vivid, Standard, Cinema, Sport,** or **Game**.
- 4 Return to the previous menu.
- Return to TV viewing.


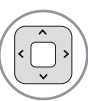

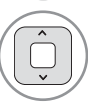

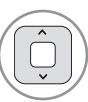

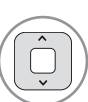




- **Vivid, Standard, Cinema, Sport,** and **Game** Settings are preset for the optimum picture quality at the factory.
- **Vivid:** This is the mode to maximize the effect of the video in the retail store. Strengthen the contrast, brightness, color and sharpness for vivid picture.
- **Standard:** This is the mode to realize optimum viewing condition for the general user.
- **Cinema:** This mode optimizes video for watching movies.
- **Sport:** This is the video mode to emphasize dynamic video and primary color (e.g, white, uniform, grass, sky blue etc.) by realizing the optimal screen for sports.
- **Game:** This is the mode to realize fast response speed in a fast gaming screen.
- **Expert:** This is the mode to adjust the video in detail for video quality expert and general user.
- You can also adjust **Picture Mode** in the **Q.MENU**.
- When selecting **Intelligent Sensor**, **Energy Saving** is changed to **Auto** automatically.
- When selecting **Intelligent Sensor**, it changes Backlight, contrast, brightness, sharpness, color and tint automatically.
- **Intelligent Sensor:** The most suitable picture is automatically adjusted according to the surrounding conditions.

PICTURE CONTROL

MANUAL PICTURE ADJUSTMENT - USER MODE

Adjust the picture appearance to suit your preference and viewing situations.

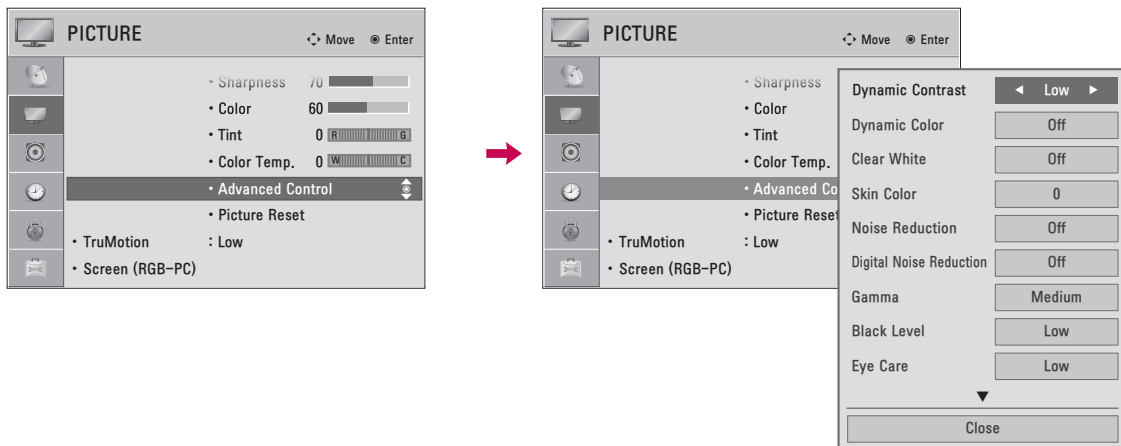











-   Select **PICTURE**.
-   Select **Picture Mode**.
-   Select **Vivid, Standard, Cinema, Sport, or Game**.
-   Select **Backlight, Contrast, Brightness, Sharpness, Color, Tint, Color Temp., or Advanced Control**.
-   Make appropriate adjustments.
-  Return to the previous menu.
-  Return to TV viewing.

- **Backlight:** This function adjusts the brightness of the backlight behind the LCD screen. Adjusting the backlight is recommended when setting the brightness of the TV. When decreasing the backlight, the brightness of the black becomes darker without any loss in video signal and the power consumption is reduced.
- **Contrast:** Increase or decrease the gradient of the video signal. You may use Contrast when the bright part of the picture is saturated.
- **Brightness:** Adjusts the base level of the signal in the picture. You may use Brightness when the dark part of the picture is saturated.
- **Sharpness:** Adjusts the level of crispness in the edges between the light and dark areas of the picture. The lower the level, the softer the image.
- **Color:** Adjusts intensity of all colors.
- **Tint:** Adjusts the balance between red and green levels.
- **Color Temp.:** Set to warm to enhance hotter colors such as red, or set to cool to enhance cooler colors such as blue.

PICTURE IMPROVEMENT TECHNOLOGY (ADVANCED CONTROL)



Advanced Control allows you to adjust some of the advanced features of your LG display. To reset to the factory default after making adjustments to each input source, execute the **Picture Reset** function for each Picture Mode.

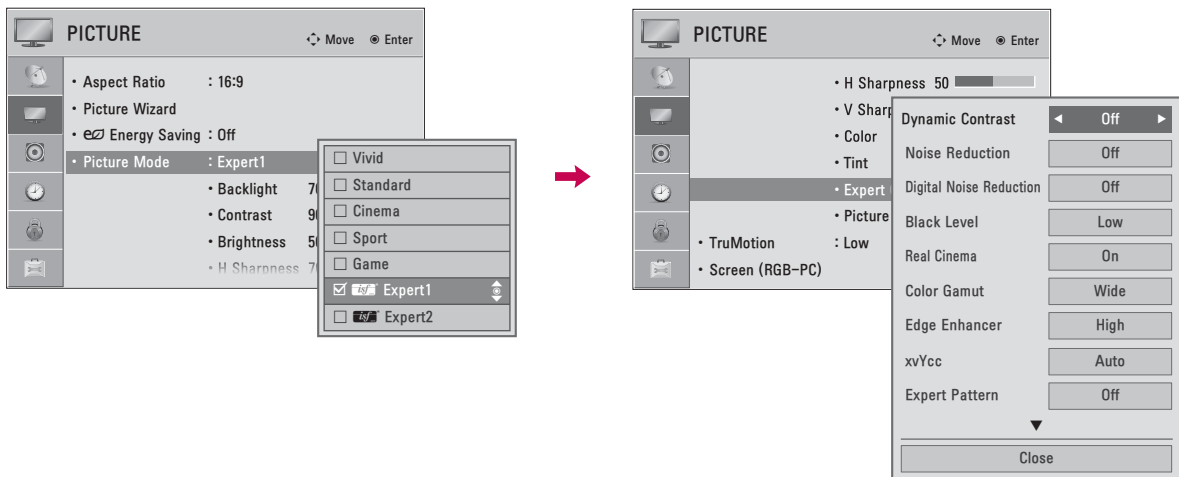

















- 1   Select **PICTURE**.
- 2   Select **Advanced Control**.
- 3   Select your desired menu option.
- 4  Make appropriate adjustments.
- 5  Return to the previous menu.
-  Return to TV viewing.

PICTURE CONTROL

EXPERT PICTURE CONTROL

 **Expert1** and  **Expert2** provide even more advanced picture settings for users. Typical used by professionals for calibrating the TV.



- 1   Select **PICTURE**.
- 2   Select **Picture Mode**.
- 3   Select  **Expert1** or  **Expert2**.
- 4   Select **Expert Control**.
- 5   Select your desired menu option.
- 6  Make appropriate adjustments.
- 7  Return to the previous menu.
-  Return to TV viewing.

*This feature is not available for all models.

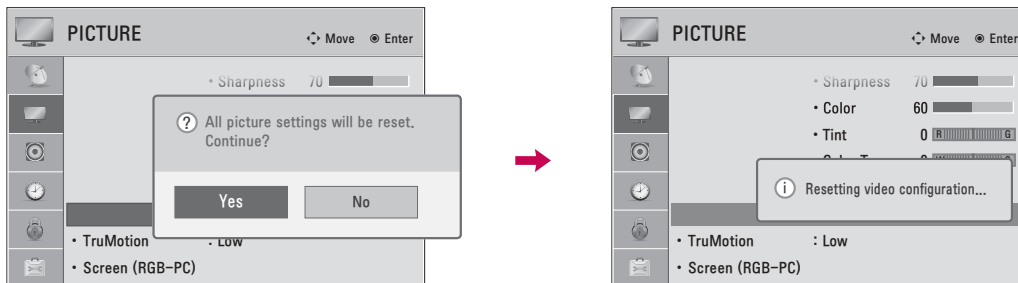
Dynamic Contrast	<ul style="list-style-type: none"> Adjusts the contrast to keep it at the best level according to the brightness of the screen. The picture is improved by making bright parts brighter and dark parts darker.
Dynamic Color	<ul style="list-style-type: none"> Adjusts screen colors so that they look livelier, richer and clearer. This feature enhances hue, saturation and luminance so that red, blue and green white look more vivid.
Skin Color	<ul style="list-style-type: none"> It detects the skin area of video and adjusts it to express a natural skin color.
Noise Reduction	<ul style="list-style-type: none"> Reduces screen noise without compromising video quality.
Digital Noise Reduction	<ul style="list-style-type: none"> Removes noise caused by compressing video.
Gamma	<ul style="list-style-type: none"> You can adjust brightness of dark areas and middle gray level areas of the picture. <p>Low : Make brighter and middle gray level areas of the picture brighter. Medium : Express original picture levels. High: Make dark and middle gray level areas of the picture darker.</p>
Black Level	<p>Low: The reflection of the screen gets darker. High: The reflection of the screen gets brighter.</p> <ul style="list-style-type: none"> Set black level of the screen to proper level. This function is available in the following modes: AV (NTSC-M), HDMI or Component.
Clear White	<ul style="list-style-type: none"> Make the white area of screen brighter and more white.
Eye Care	<ul style="list-style-type: none"> Adjust the brightness of the screen to prevent the screen from being too bright. Dims extremely bright pictures. This feature is enabled in "Picture Mode-Standard, Sports, Game".
Real Cinema	<ul style="list-style-type: none"> Makes video clips recorded in film look more natural by eliminating judder effect. DVD and Blu-ray movies are filmed at 24 frames per second (fps). With LG Real Cinema, every frame is consistently processed 5 times in 1/24 of a second producing 120 fps with TruMotion or 2 times in 1/24 of a second producing 48 fps without TruMotion, thus totally eliminating the judder effect. This function can also work when TruMotion is off.
Color Gamut	<p>Advanced Control</p> <ul style="list-style-type: none"> Maximize the utilization of colors to increase color quality. <p>Standard: Displays standard set of colors. Wide: Increase number of colors used.</p> <hr/> <p>LED LCD TV/LCD TV: Expert Control</p> <ul style="list-style-type: none"> Displays color domain of the signal. <p>Standard: Displays standard set of colors. Wide: Increase number of colors used. EBU: Mode to display EBU standard color area. SMPTE: Mode to display SMPTE standard color area. BT709: Mode to display BT709 standard color area.</p>

PICTURE CONTROL

Edge Enhancer	<ul style="list-style-type: none"> ■ Show clearer and distinctive yet natural edges in of the video. ■ This function is enabled in "Picture Mode - Expert".
xvYCC	<ul style="list-style-type: none"> ■ This produces richer colors. ■ This feature represents rich color as much as conventional video signal. ■ This function is enabled in "Picture Mode - Cinema, Expert" when a xvYCC signal is inputted through HDMI.
Color Filter	<ul style="list-style-type: none"> ■ This function filters specific colors in the video. You can use the RGB filter to set color saturation and hue accurately.
Expert Pattern	<ul style="list-style-type: none"> ■ This is a pattern used for expert adjustment. ■ This function is enabled in "Picture Mode - Expert" when you watch DTV.
Color Temperature	<ul style="list-style-type: none"> ■ Adjusts the overall color of the screen by changing the white baseline. <ol style="list-style-type: none"> a. Gamma : Select 1.9, 2.2, 2.4 b. Method : 2 Points <ul style="list-style-type: none"> - Pattern: Inner, Outer - Red/Green/Blue Contrast, Red/Green/Blue Brightness: The adjustment range is -50 - +50. c. Method : 10 Point IRE <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, then 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. d. Apply to all inputs
Color Management System	<ul style="list-style-type: none"> ■ A 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/Mgt/Yellow). Color difference may not be distinctive even when you make the adjustments for the general video. <p>Adjusts Red/Green/Blue/Yellow/Cyan/Magenta.</p> <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 disabled in RGB-PC and HDMI-PC mode.

PICTURE RESET

Settings of the selected picture modes return to the default factory settings.



1 Select **PICTURE**.

2 Select **Picture Reset**.

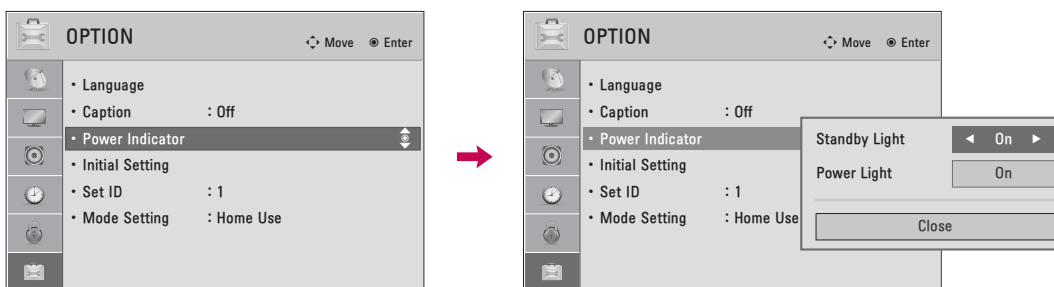
3 Select **Yes**.

4 Initialize the adjusted value.

Return to TV viewing.

POWER INDICATOR

Adjust the power/standby indicator light on the front of the TV.



1 Select **OPTION**.

2 Select **Power Indicator**.

3 Select **Standby Light** or **Power Light**.

4 Select your desired options.

5 Return to the previous menu.

Return to TV viewing.

- **Standby Light:** Determines whether to set the indicator light on the front of the TV to **On** or **Off** in standby mode.
- **Power Light:** Determines whether to set the indicator light on the front of the TV to **On** or **Off** when the power turns on.

PICTURE CONTROL

TRUMOTION

- For 32/37/42/47/55LE5300, 42/47/55LE7300, 32/42/47/55LD520, 55LD520C, 42/47/55LD630, 42/47/55LE530C

Advance video technology that provides clearer, smoother images, even during fast action scenes creating a more stable structure for a crisper picture.



- 1 Select **PICTURE**.
- 2 Select **TruMotion**.
- 3 Select **Low, High, User, or Off**.

Adjustment for TruMotion (Judder and Blur) with selecting User

- 4 Select **Judder** or **Blur**.
- 5 Make appropriate adjustments.
- 6 Return to the previous menu.
- Return to TV viewing.

- **Off**: Turn off **TruMotion** operation.
- **Low**: Provides smooth picture movement. Use this setting for standard use.
- **High**: Provides smoother picture movement.
- **Judder**: Adjusts noise of the screen.
- **Blur**: Adjusts after-image of the screen.
- **TruMotion** works with all inputs except PC mode.
- If you enable "**TruMotion**", noise may appear on the screen. If this occurs, set "**TruMotion**" to "**Off**".
- If you select "**Picture Mode-Game**" set "**TruMotion**" to "**Off**".








SOUND & LANGUAGE CONTROL

AUTO VOLUME

Auto Volume makes sure that the volume level remains consistent whether you are watching a commercial or a regular TV program.

Because each broadcasting station has its own signal conditions, volume adjustment may be needed every time the channel is changed. This feature allows users to enjoy stable volume levels by making automatic adjustments for each program.

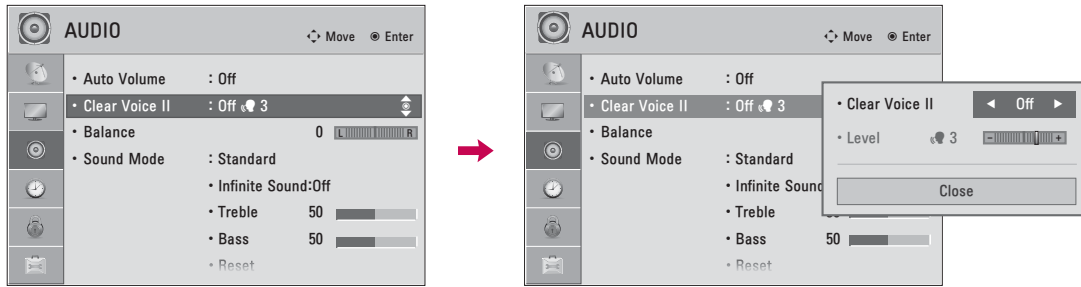



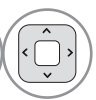



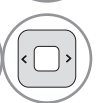
-   Select **AUDIO**.
-   Select **Auto Volume**.
-   Select **On** or **Off**.
-  Return to the previous menu.
-  Return to TV viewing.

SOUND & LANGUAGE CONTROL





CLEAR VOICE II

By differentiating the human sound range from others, it improves the sound quality of voices.



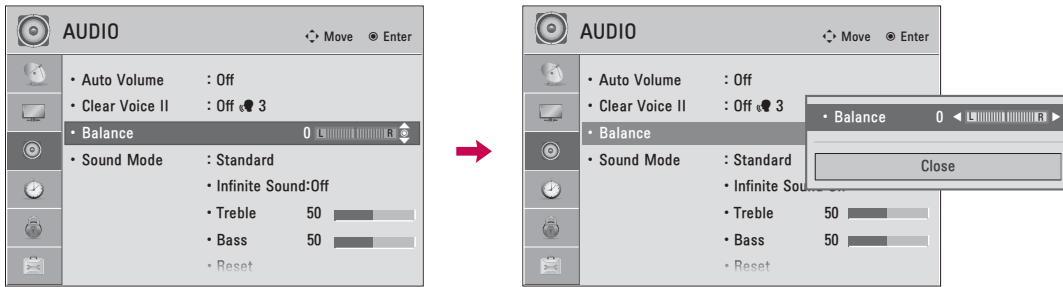
- 1   Select **AUDIO**.
- 2   Select **Clear Voice II**.
- 3   Select **On** or **Off**.









Adjustment for Clear Voice Level with selecting On

- 4  Select **Level**.
- 5  Make appropriate adjustments.
- 6  Return to the previous menu.
-  Return to TV viewing.

BALANCE

Adjust the left/right sound of speaker to suit your taste and room situations.

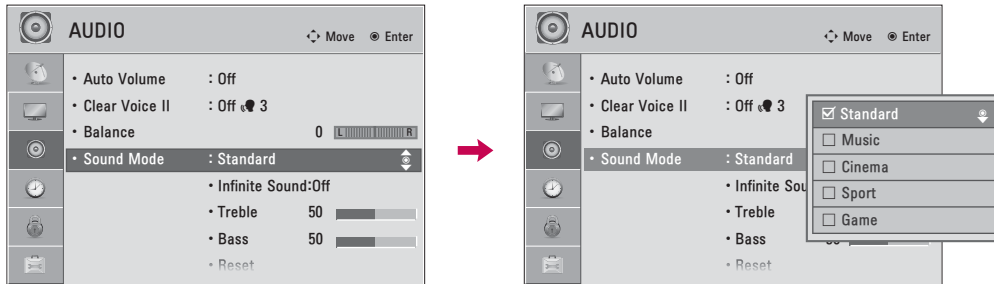










- 1   Select **AUDIO**.
- 2   Select **Balance**.
- 3   Make appropriate adjustments.
- 4  Return to the previous menu.
-  Return to TV viewing.

SOUND & LANGUAGE CONTROL

PRESET SOUND SETTINGS (SOUND MODE)

Sound Mode lets you enjoy the best sound without any special adjustment using factory presets.

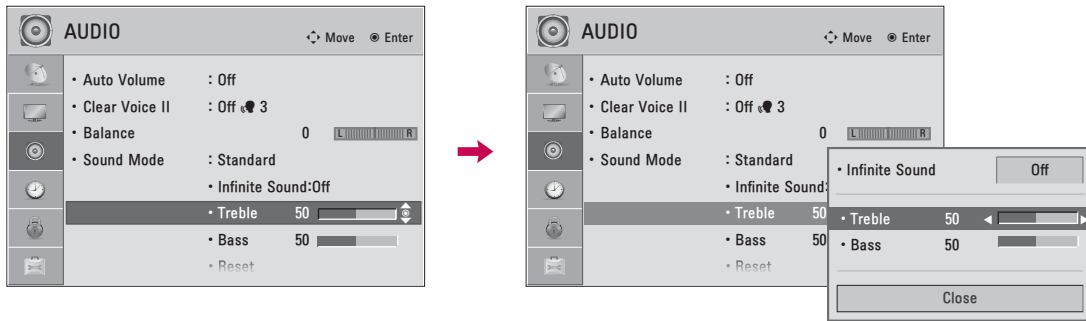



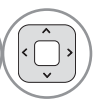

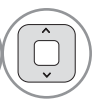

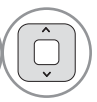

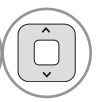

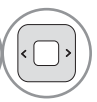


- 1   Select **AUDIO**.
- 2   Select **Sound Mode**.
- 3   Select **Standard, Music, Cinema, Sport, or Game**.
- 4  Return to the previous menu.
-  Return to TV viewing.

- **Standard, Music, Cinema, Sport, and Game** are preset for optimum sound quality at the factory.
- You can also adjust **Sound Mode** in the **Q.MENU**.
- **Standard**: Offers standard-quality sound.
- **Music**: Optimizes sound for listening to music.
- **Cinema**: Optimizes sound for watching movies.
- **Sport**: Optimizes sound for watching sports events.
- **Game**: Optimizes sound for playing games.

SOUND SETTING ADJUSTMENT - USER MODE

Adjust the sound to suit your taste and room situations.



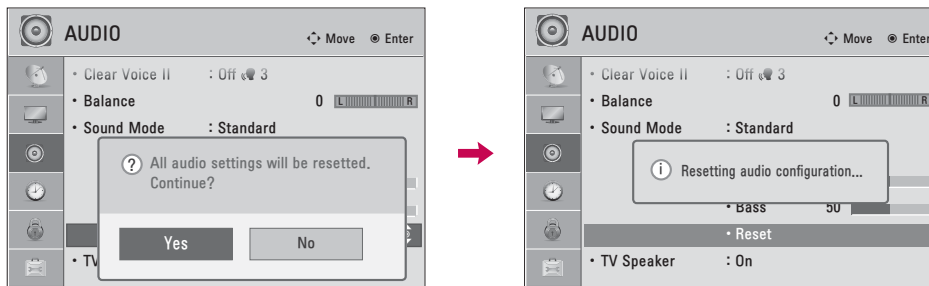
- 1   Select **AUDIO**.
- 2   Select **Sound Mode**.
- 3   Select **Standard, Music, Cinema, Sport, or Game**.
- 4   Select **Infinite Sound, Treble, or Bass**.
- 5   Make appropriate adjustments.
- 6  Return to the previous menu.
-  Return to TV viewing.









- If sound quality or volume is not at the level you want, it is recommended to use a separate home theater system or amp to cope with different user environments.
- If you select "Clear Voice II-On", the **Infinite Sound** feature will not operate.
- **Infinite Sound**: Infinite Sound is a patented LG proprietary sound processing technology that strives immersive 5.1 surround sound with just two front speakers.

SOUND & LANGUAGE CONTROL

AUDIO RESET

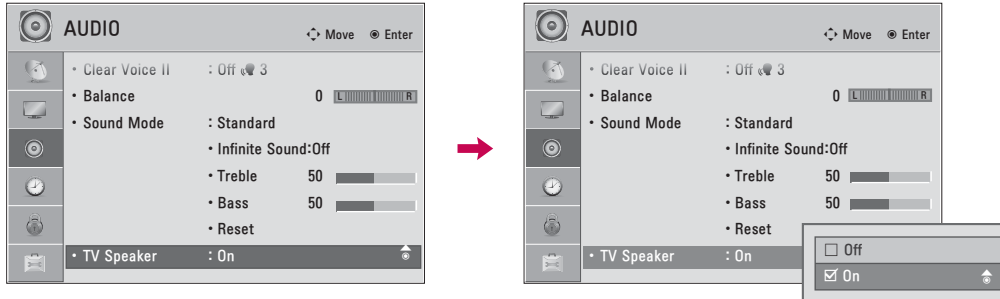
Settings of the selected Sound Mode return to the default factory settings.



-   Select **AUDIO**.
-   Select **Reset**.
-   Select **Yes**.
-  Initialize the adjusted value.
-  Return to TV viewing.

TV SPEAKERS ON/OFF SETUP

If you wish to use an external Hi-Fi system, turn off the TV's internal speakers.

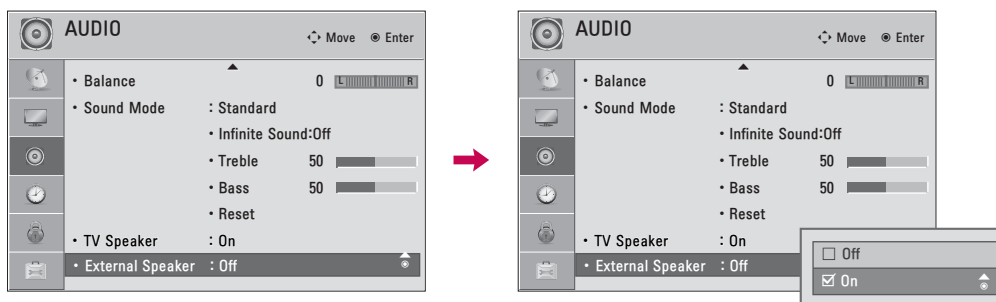


- 1 Select **AUDIO**.
- 2 Select **TV Speaker**.
- 3 Select **On** or **Off**.
- 4 Return to the previous menu.
- Return to TV viewing.

EXTERNAL SPEAKERS ON/OFF SETUP

(For 32/37/42/47LD450C, 32/37/47/47LD452C)

Turn the external speakers on if using external audio equipment.



- 1 Select **AUDIO**.
- 2 Select **External Speaker**.
- 3 Select **On** or **Off**.
- 4 Return to the previous menu.
- Return to TV viewing.





SOUND & LANGUAGE CONTROL

STEREO/SAP BROADCAST SETUP






On analog signals, this TV can receive MTS stereo programs and any SAP (Secondary Audio Program) that accompanies the stereo program if the station transmits an additional sound signal. Mono sound is automatically used if the broadcast is only in Mono.



Analog TV

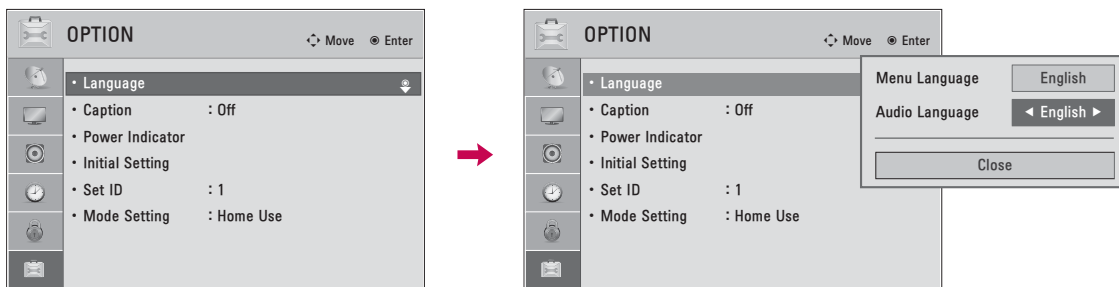
- 1   Select **SAP**.
- 2   Select **Mono, Stereo, or SAP**.
- 3  Return to TV viewing.









Digital TV

- 1   Select **Multi Audio**.
- 2   Select other languages.
- 3  Return to TV viewing.

AUDIO LANGUAGE

This feature operates only in DTV/Cable DTV mode.

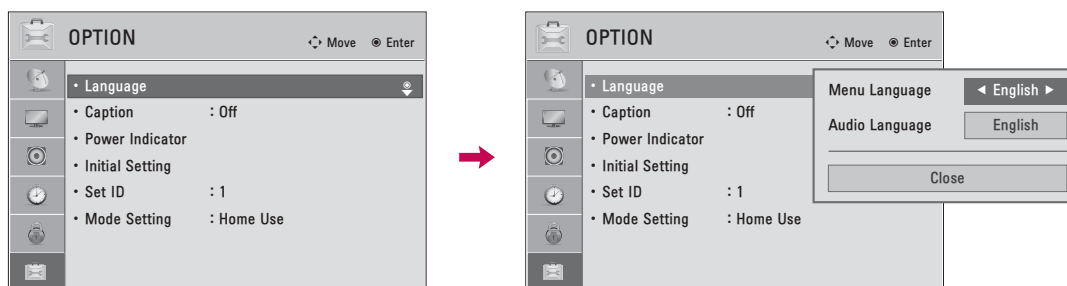











-   Select **OPTION**.
-   Select **Language**.
-   Select **Audio Language**.
-  Select your desired language.
-  Return to the previous menu.
-  Return to TV viewing.

SOUND & LANGUAGE CONTROL

ON-SCREEN MENUS LANGUAGE SELECTION

The menus can be shown on the screen in the selected language.

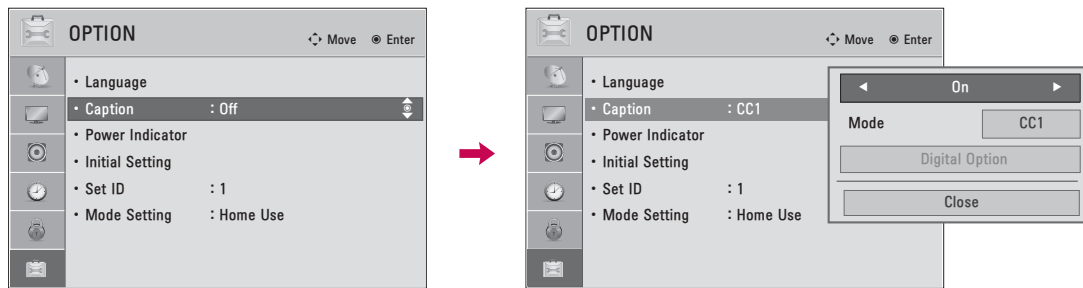



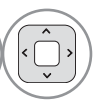



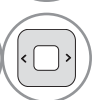




-   Select **OPTION**.
-   Select **Language**.
-   Select **Menu Language**.
-  Select your desired language.
From this point on, the on-screen menus will be shown in the selected language.
-  Return to the previous menu.
-  Return to TV viewing.

CAPTION MODE

Analog Broadcasting System Captions

Captions are provided to help the hearing impaired watch TV. Select a caption mode for displaying captioning information if provided on a program. Analog caption displays information at any position on the screen and is usually the program's dialog. Caption/Text, if provided by the broadcaster, would be available for both digital and analog channels on the Antenna/Cable. This TV is programmed to memorize the caption/text mode which was last set when you turned the power off. This function is only available when **Caption Mode** is set **On**.



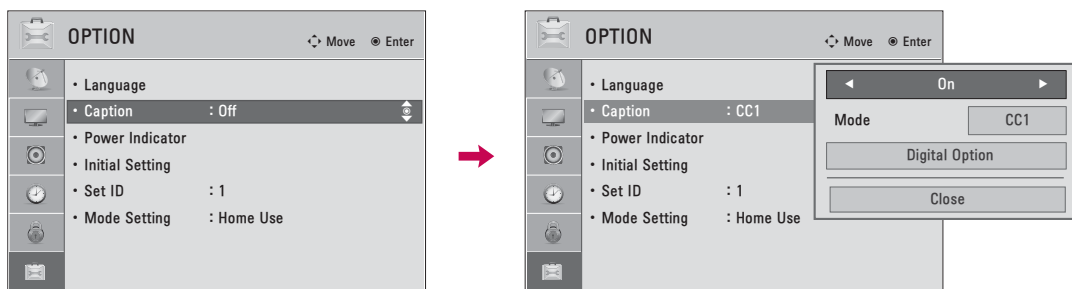
- 1   Select **OPTION**.
- 2   Select **Caption**.
- 3   Select **On**.
- 4   Select **CC1-4** or **Text1-4**.
- 5  Return to the previous menu.
-  Return to TV viewing.











- When selecting **Off**, Sub-menus for Analog, DTV, and Digital Option become disabled.
- **Caption**
The term for the words that scroll across the bottom of the TV screen; usually the audio portion of the program provided for the hearing impaired.
- **Text**
The term for the words that appear in a large black frame and almost cover the entire screen; usually messages provided by the broadcaster.

SOUND & LANGUAGE CONTROL

Digital Broadcasting System Captions

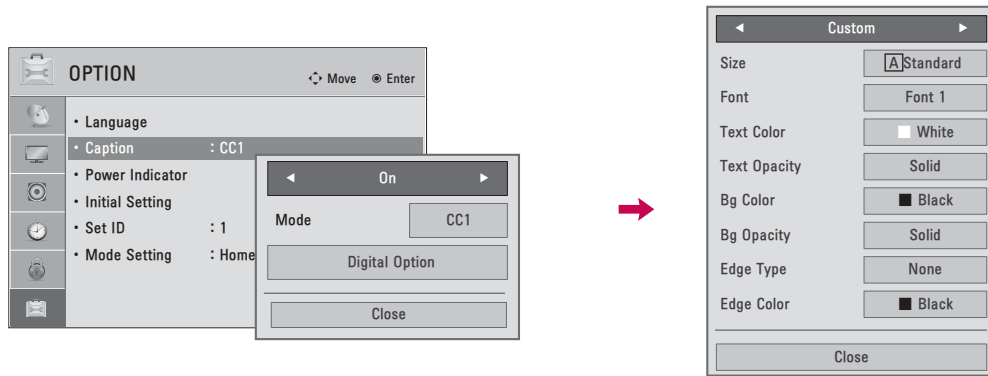
Choose the language you want the DTV/Cable DTV Captions to appear in.
Other Languages can be chosen for digital sources only if they are included on the program.
This function is only available when **Caption Mode** is set **On**.



-   Select **OPTION**.
-   Select **Caption**.
-   Select **On**.
-   Select **CC1-4, Text1-4, or Service1 - 6**.
-  Return to the previous menu.
-  Return to TV viewing.

Caption Option

Customize the DTV/Cable DTV captions that appear on your screen.
This function is only available when **Caption Mode** is set **On**.



1 Select **OPTION**.

2 Select **Caption**.

3 Select **On**.

4 Select **Digital Option**.

5 Select **Custom**.

6 Customize the **Size**, **Font**, etc., to your preference. A preview icon is provided at the bottom of the screen, use it to see the caption language.

7 Return to the previous menu.

Return to TV viewing.

- **Size:** Set the word size.
- **Font:** Select a typeface for the text.
- **Text Color:** Choose a color for the text.
- **Text Opacity:** Specify the opacity for the text color.
- **Bg (Background) Color:** Select a background color.
- **Bg (Background) Opacity:** Select the opacity for the background color.
- **Edge Type:** Select an edge type.
- **Edge Color:** Select a color for the edges.

TIME SETTING

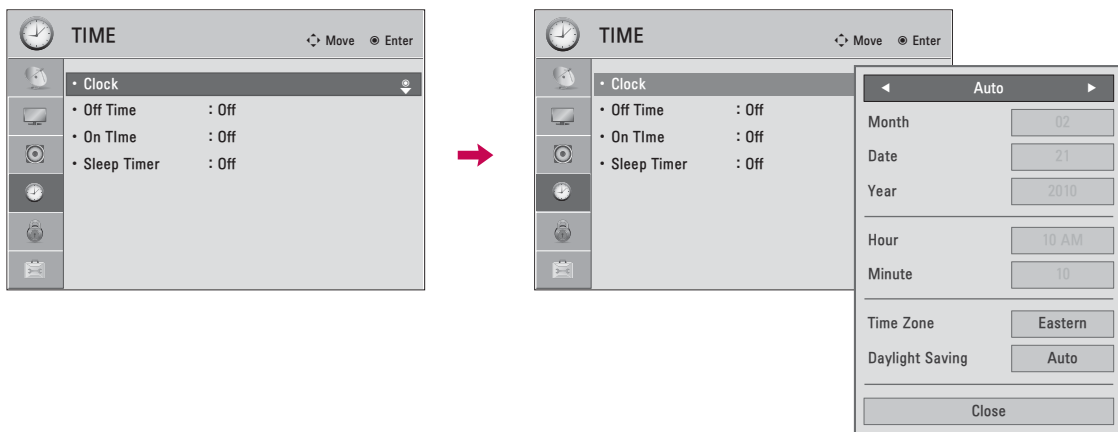
CLOCK SETTING













Auto Clock Setup

The time is set automatically from a digital channel signal.

The digital channel signal includes information for the current time provided by the broadcasting station.

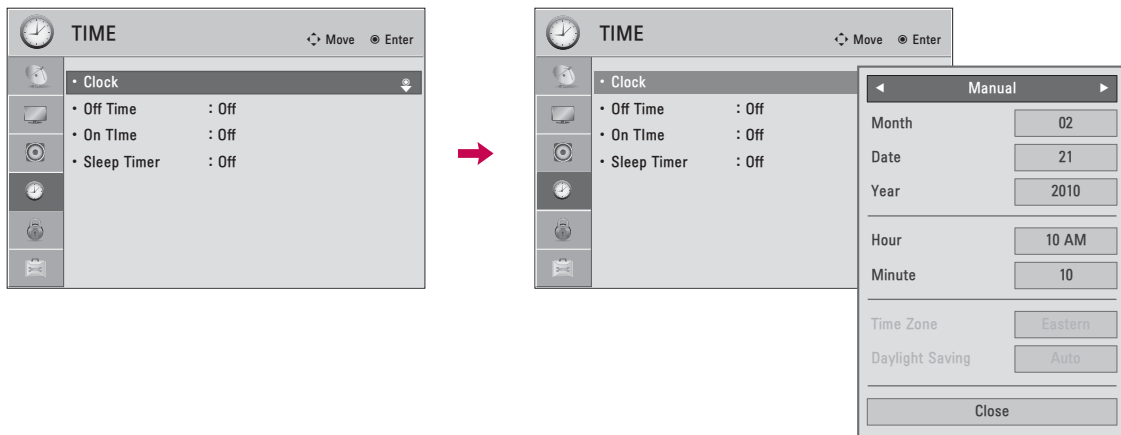
Set the clock manually if the current time is set incorrectly by the auto clock function.













-   Select **TIME**.
-   Select **Clock**.
-   Select **Auto**.
-   Select your viewing area time zone.
USA: Eastern, Central, Mountain, Pacific, Alaska, or Hawaii.
Canada: Eastern, Central, Mountain, Pacific, New Foundland, or Atlantic.
-   Select **Auto**, **Off**, or **On** (depending on whether or not your viewing area observes Daylight Saving time).
-  Return to the previous menu.
-  Return to TV viewing.

Manual Clock Setup

If the current time setting is wrong, reset the clock manually.



-   Select **TIME**.
-   Select **Clock**.
-   Select **Manual**.
-  Select the Year, Month, Date, Hour, or Minute option.
-  Set the Year, Month, Date, Hour, or Minute option.
-  Return to the previous menu.
-  Return to TV viewing.

TIME SETTING

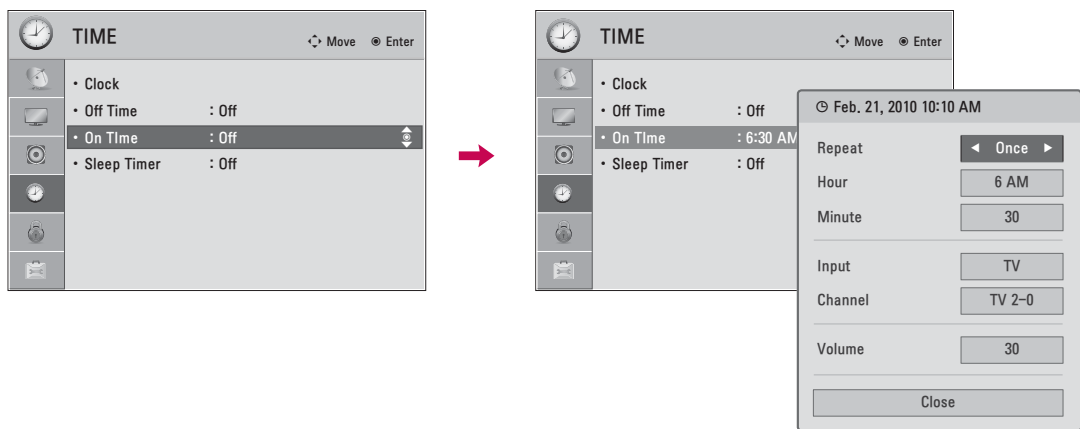
AUTO ON/OFF TIME SETTING

This function operates only if the current time has been set.

The **Off Time** function overrides the **On Time** function if they are both set to the same time.

The TV must be in standby mode for the **On Time** to work.

If you do not press any button within 2 hours after the TV turns on with the **On Time** function, the TV will automatically revert to standby mode. (Except 42/47LD450C, 55LD520C, 42/47/55LE530C, 42/47LD452C)



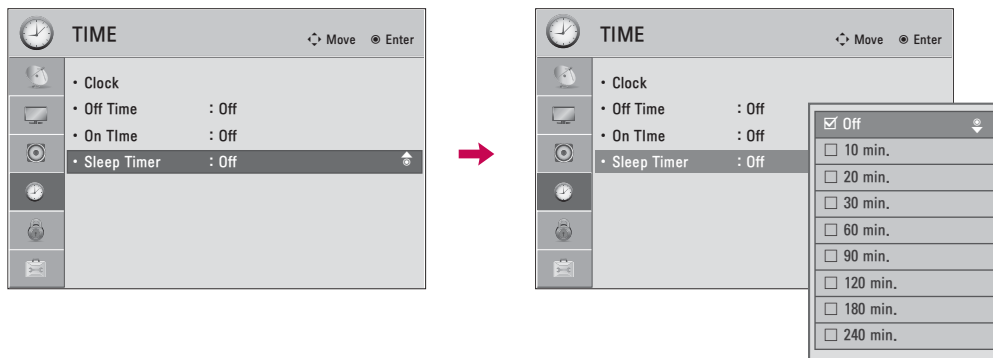
- 1 Select **TIME**.
- 2 Select **Off Time** or **On Time**.
- 3 Select **Repeat**.
- 4 Select **Off, Once, Daily, Mon.-Fri., Mon.-Sat., Sat.-Sun., or Sun..**
- 5 Select and set Hour or Minute.
- 6 Return to the previous menu.
- Return to TV viewing.








- To cancel **On/Off Time** function, select **Off**.
 - Only for **On Time** function
- 1 Select **Input**.
 - 2 Select the desired input source.
 - 3 When Selecting **TV**: set the channel at turn-on.
 - 4 Adjust to sound level at turn-on.

SLEEP TIMER SETTING

The Sleep Timer turns the TV off at the preset time.

Note that this setting is cleared when the TV is turned off.



- 1   Select **TIME**.
- 2   Select **Sleep Timer**.
- 3   Make appropriate adjustments.
- 4  Return to the previous menu.
-  Return to TV viewing.

- To cancel the **Sleep Timer**, select **Off**.
- You can also adjust **Sleep Timer** in the **Q.MENU**.

PARENTAL CONTROL / RATINGS

Parental Control can be used to block specific channels, ratings and other viewing sources.

The Parental Control Function (V-Chip) is used to block program viewing based on the ratings sent by the broadcasting station. The default setting is to allow all programs to be viewed. Viewing can be blocked by choosing the type of the program and the categories. It is also possible to block all program viewing for a time period. To use this function, the following must be done :

1. Set ratings and categories to be blocked.
2. Specify a password
3. Enable the lock

V-Chip rating and categories

Rating guidelines are provided by broadcasting stations. Most television programs and television movies can be blocked by TV Rating and/or Individual Categories. Movies that have been shown at the theaters or direct-to-video movies use the Movie Rating System (MPAA) only.

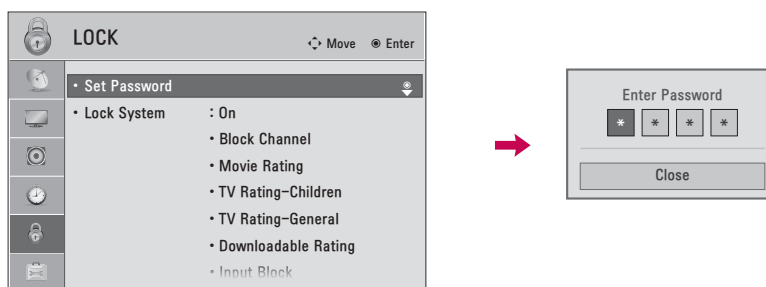
Ratings for Television programs including made-for-TV movies:





- TV-G (General audience)
- TV-PG (Parental guidance suggested)
- TV-14 (Parents strongly cautioned)
- TV-MA (Mature audience only)
- TV-Y (All children)
- TV-Y7 (Children 7 years older)

SET PASSWORD & LOCK SYSTEM

Setting up Your Password

Set up blocking schemes to block specific channels, ratings, and external viewing sources. A password is required to gain access to this menu.

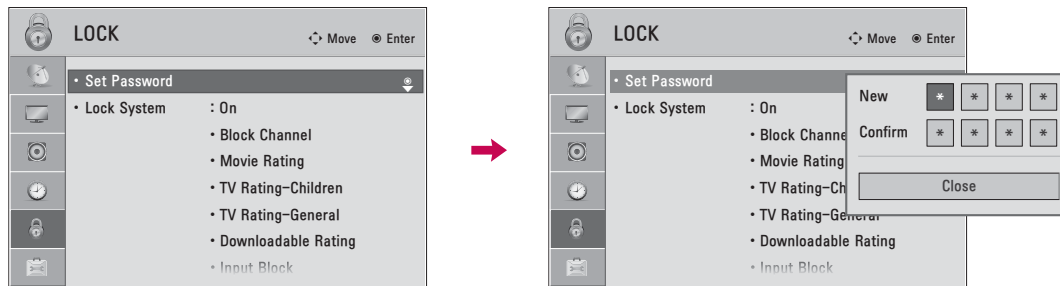


1.    Select **LOCK**.
2.  Input the password.


- Enter the password as requested.
- The TV is set up with the initial password "0-0-0-0".
- If you forget your password, press "0-3-2-5" on the remote control.

Set Password



Change the password by inputting a new password twice.





1    Select **LOCK**.

2  Input the password.

3  Select **Set Password**.

4   Choose any 4 digits for your new password.
As soon as the 4 digits are entered, re-enter the same 4 digits on the **Confirm**.

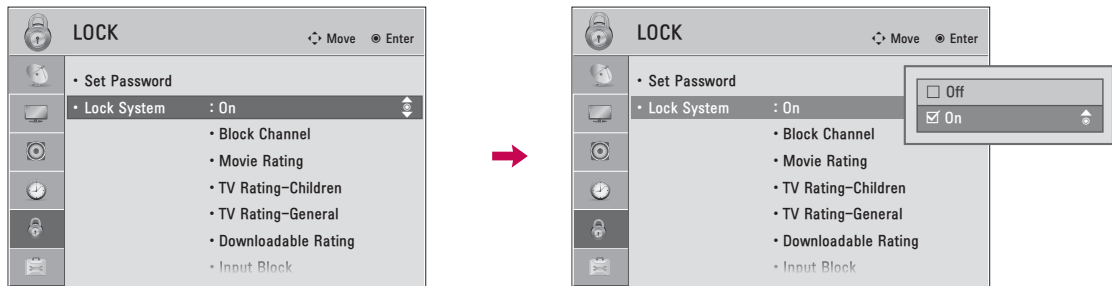
5  Return to the previous menu.


 Return to TV viewing.


PARENTAL CONTROL / RATINGS

Lock System

Enables or disables the blocking scheme you set up previously.





1    Select **LOCK**.

2  Input the password.

3  Select **Lock System**.

4   Select **On** or **Off**.

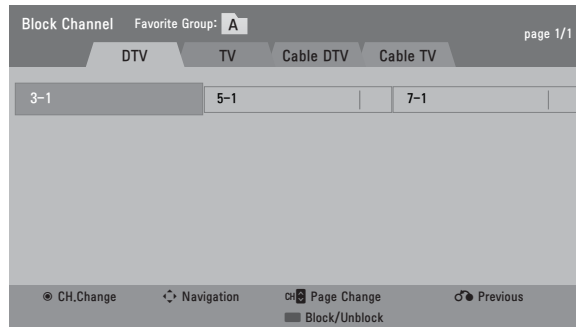
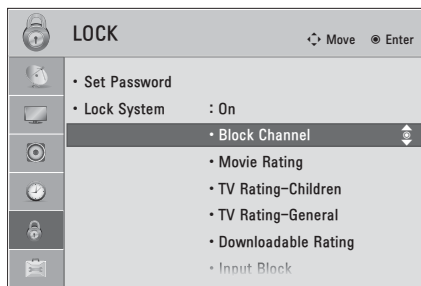
5  Return to the previous menu.











 Return to TV viewing.

■ When you select **On**, the Lock System is enable.

CHANNEL BLOCKING

Blocks any channels that you do not want to watch or that you do not want your children to watch.



- 1    Select **LOCK**.
- 2  Input the password.
- 3  Select **Block Channel**.
- 4   Select a channel to block or unblock.
- 5  Block or unblock a channel.
- 6  Return to the previous menu.
-  Return to TV viewing.

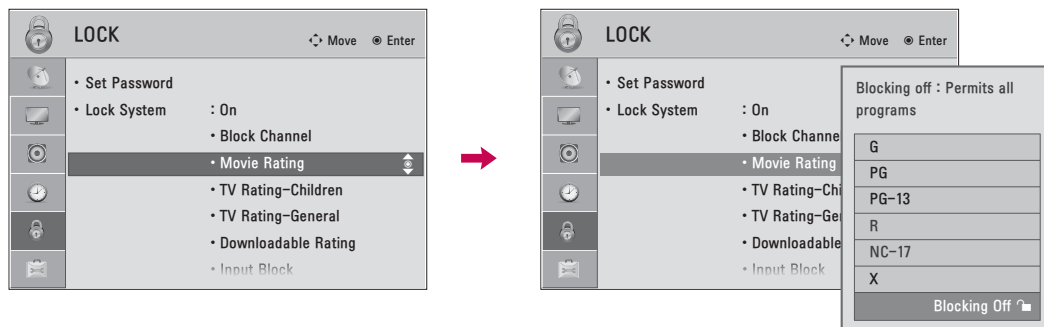
■ If a channel is locked, enter the password to unlock it temporarily.

PARENTAL CONTROL / RATINGS

MOVIE & TV RATING

Movie Rating (MPAA)- For USA

Blocks movies according to the movie ratings limits specified, so children cannot view certain movies. You can set the ratings limit by blocking out all the movies with the ratings above a specified level. Keep in mind that the movie ratings limit only applies to movies shown on TV, not TV programs, such as soap operas.

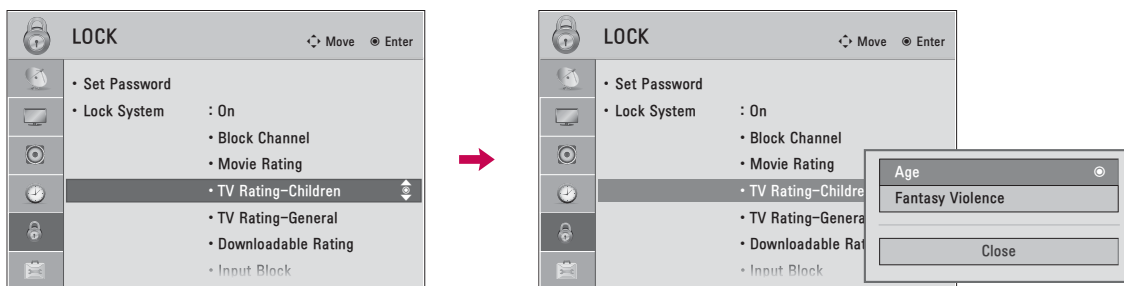













- 1 Select **LOCK**.
- 2 Input the password.
- 3 Select **Movie Rating**.
- 4 Select **G, PG, PG-13, R, NC-17, X, or Blocking Off**.
- 5 Return to the previous menu.
- Return to TV viewing.

- If **Movie Rating, TV Rating-Children** or **TV Rating-General** is locked, enter the password to unlock it temporarily.
- **G** (General audience)
- **PG** (Parental guidance suggested)
- **PG-13** (Parents strongly cautioned)
- **R** (Restricted)
- **NC-17** (No one 17 and under admitted)
- **X** (Adult only)
- **Blocking Off** (Permits all programs)
- If you set PG-13: G and PG movies will be available, PG-13, R, NC-17 and X will be blocked.

TV Rating Children - For USA

Prevents children from watching certain children's TV programs, according to the ratings limit set. The children rating does not apply to other TV programs. Unless you block certain TV programs intended for mature audiences in the TV Rating - sub menu, your children can view those programs.



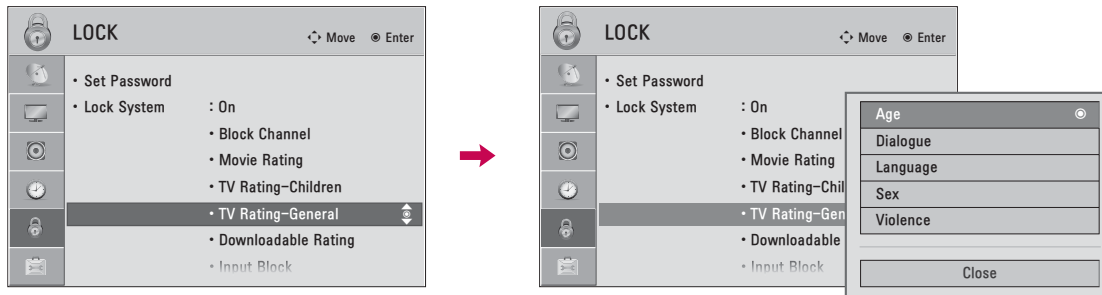
- 1    Select **LOCK**.
- 2  Input the password.
- 3  Select **TV Rating-Children**.
- 4   Select **Age** or **Fantasy Violence**.
- 5   Select block options.
- 6  Return to the previous menu.
-  Return to TV viewing.












- **Age** (applies to TV-Y, TV-Y7)
- **Fantasy Violence** (applies to TV-Y7)

PARENTAL CONTROL / RATINGS

TV Rating General - For USA

Based on the ratings, blocks certain TV programs that you and your family do not want to view.

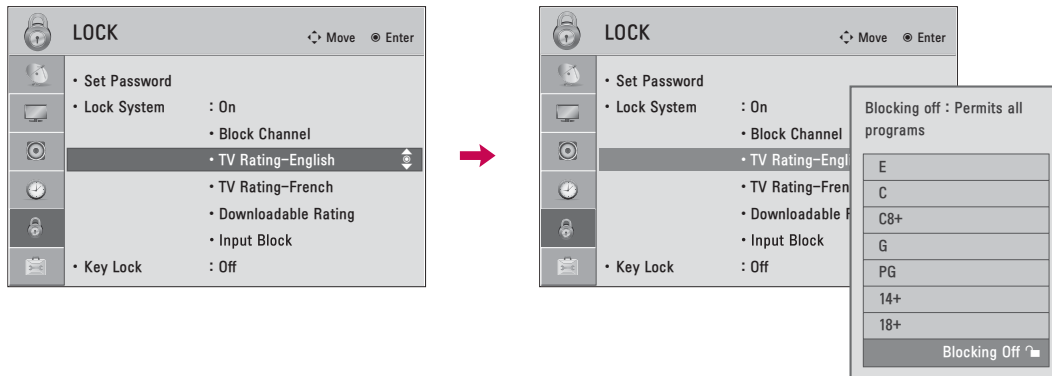


- 1    Select **LOCK**.
- 2  Input the password.
- 3  Select **TV Rating-General**.
- 4   Select **Age, Dialogue, Language, Sex** or **Violence**.
- 5   Select block options.
- 6  Return to the previous menu.
-  Return to TV viewing.

- **Age** (applies to TV-G,TV-PG,TV-14,TV-MA).
- **Dialogue**-sexual dialogue (applies to TV-PG,TV-14).
- **Language**-adult language (applies to TV-PG, TV-14, TV-MA).
- **Sex**-sexual situations (applies to TV-PG, TV-14, TV-MA).
- **Violence** (applies to TV-PG, TV-14, TV-MA).

TV Rating English - For CANADA

Selecting Canadian English rating system.



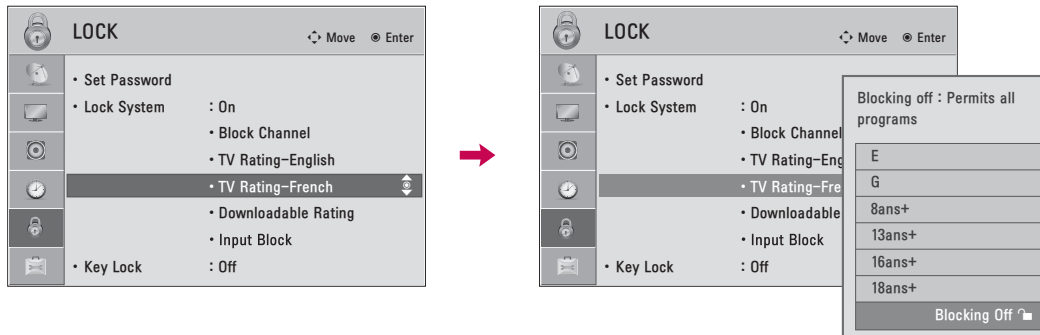
- 1 Select **LOCK**.
- 2 Input the password.
- 3 Select **TV Rating-English**.
- 4 Select **E, C, C8+, G, PG, 14+, 18+, or Blocking Off**.
- 5 Return to the previous menu.
- Return to TV viewing.










- If TV Rating-English or TV Rating-French is locked, enter the password to unlock it temporarily.
- **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)

PARENTAL CONTROL / RATINGS

TV Rating French - For CANADA

Selecting Canadian French rating system.



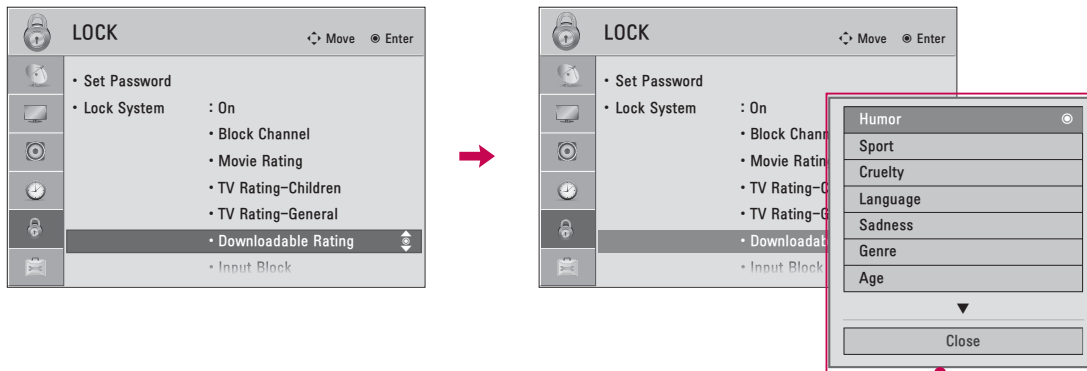
- 1    Select **LOCK**.
- 2  Input the password.
- 3  Select **TV Rating-French**.
- 4   Select **E, G, 8ans+, 13ans+, 16ans+, 18ans+, or Blocking Off**.
- 5  Return to the previous menu.
-  Return to TV viewing.

- **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)

DOWNLOADABLE RATING

This function is available only for digital channels.

This function operates only when TV has received Region5 Rating data.



■ Based on rating table, your TV's OSD (On Screen Display) may differ slightly from what is shown in this manual.

1 Select **LOCK**.

2 Input the password.

3 Select **Downloadable Rating**.

4 Select desired **Downloadable Rating** option.

5 Select desired option and block it.

6 Return to the previous menu.

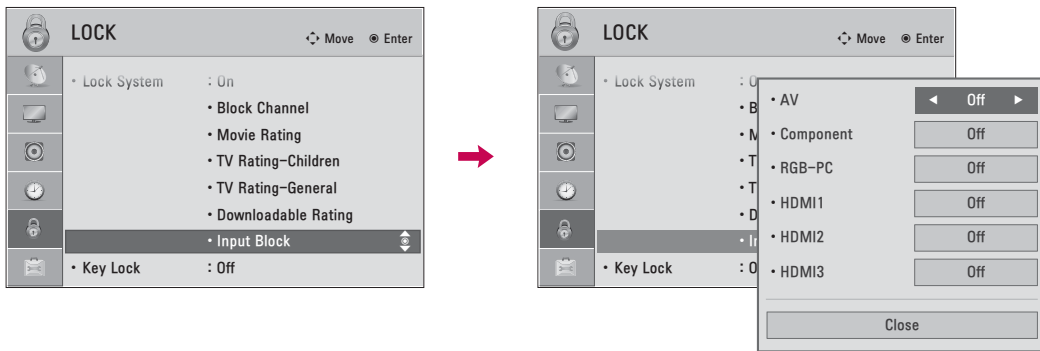
Return to TV viewing.

■ If a Downloadable rating is locked, enter the password to unlock it temporarily.

PARENTAL CONTROL / RATINGS


EXTERNAL INPUT BLOCKING

Enables you to block an input.



i.e)


1    Select **LOCK**.


2  Input the password.

3  Select **Input Block**.

4   Select input source.

5  Select **On** or **Off**.

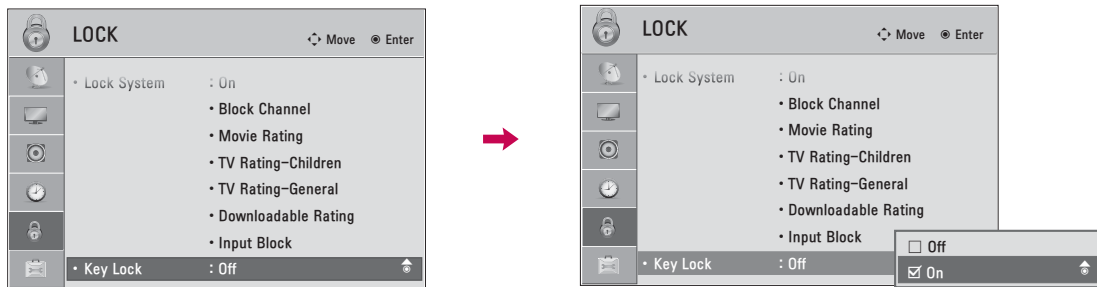
6  Return to the previous menu.

 Return to TV viewing.

KEY LOCK

This feature can be used to prevent unauthorized viewing by locking out the front panel controls, so that it can only be used with the remote control.

This TV is programmed to remember which option it was last set to even if you turn the TV off.



1 Select **LOCK**.

2 Input the password.

3 Select **LOCK**.

4 Select **On** or **Off**.

4 Return to the previous menu.

Return to TV viewing.

- In Key Lock '**On**', if the TV is turned off, press the / **I**, **INPUT**, **CH** (or) button on the TV or **POWER**, **INPUT**, **CH** () or **NUMBER** buttons on the remote control.
- With the **Key Lock On**, the display ' **Key Lock**' appears on the screen if any button on the front panel is pressed while viewing the TV.

APPENDIX

TROUBLESHOOTING

Abnormal Operation	
The remote control doesn't work	<ul style="list-style-type: none"> ■ Check to see if there is any object between the product and the remote control causing obstruction. Ensure you are pointing the remote control directly at the TV. ■ 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. *This feature is not available for all models.
TV turns off suddenly	<ul style="list-style-type: none"> ■ Is the sleep timer set? ■ Check the power control settings. Power interrupted. ■ If there is no signal, the TV turns off automatically in 15 minutes. *This feature is not available for all models.

Video Problems	
No picture & No sound	<ul style="list-style-type: none"> ■ 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	<ul style="list-style-type: none"> ■ This is normal, the image is muted during the product startup process. Please contact your service center, if the picture has not appeared after five minutes.
No or poor color or poor picture	<ul style="list-style-type: none"> ■ 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	<ul style="list-style-type: none"> ■ Check for local interference such as an electrical appliance or power tool.
Poor reception on some channels	<ul style="list-style-type: none"> ■ 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	<ul style="list-style-type: none"> ■ Check antenna (Change the direction of the antenna).
No picture when connecting HDMI	<ul style="list-style-type: none"> ■ If an HDMI cable doesn't support High Speed HDMI, it can cause flickers or no screen display. In this case use the latest cables that support High Speed HDMI.

Audio Problems	
No output from one of the speakers	<ul style="list-style-type: none"> Adjust Balance in menu option.
Unusual sound from inside the product	<ul style="list-style-type: none"> 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 fault with the product.
No sound when connecting HDMI/USB	<ul style="list-style-type: none"> Check High Speed HDMI cable. Check USB cable over version 2.0. Use normal MP3 file. <small>*This feature is not available for all models.</small>

PC Mode Problems	
The signal is out of range	<ul style="list-style-type: none"> Adjust resolution, horizontal frequency, or vertical frequency on the PC. Check the input source.
Vertical bar or stripe on background & Horizontal Noise & Incorrect position	<ul style="list-style-type: none"> Activate the Auto configure feature or adjust size, phase, or H/V position. (Option)
Screen color is unstable or single color	<ul style="list-style-type: none"> Check the signal cable. Reinstall the PC video card.
When connecting the HDMI cable to the PC, there is no audio.	<ul style="list-style-type: none"> Check the manual for the video card in the PC to see if it supports HDMI audio and how to set it up properly.

APPENDIX

Movie List Problems	
The file does not appear on the Movie List.	<ul style="list-style-type: none">■ Check whether the file 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 on a PC, you can check the language of the subtitle file.)

MAINTENANCE

Early malfunctions can be prevented. Careful and regular cleaning can extend the amount of time you can enjoy your new TV.

Caution: Be sure to turn the power off and unplug the power cord before you begin any cleaning.

Cleaning the Screen

- 1 Here's a great way to keep the dust off your screen for a while. Wet a soft cloth in a mixture of lukewarm water and a little fabric softener or dish washing detergent. Wring the cloth until it's almost dry, and then use it to wipe the screen.
- 2 Make sure the excess water is off the screen, and then let it air-dry before you turn on your TV.

Cleaning the Cabinet

- To remove dirt or dust, wipe the cabinet with a soft, dry, lint-free cloth.
- Please be sure not to use a wet cloth.

Extended Absence

CAUTION

- ▶ If you expect to leave your TV dormant for a long time (such as a vacation), it's a good idea to unplug the power cord to protect against possible damage from lightning or power surges.

APPENDIX

PRODUCT SPECIFICATIONS

MODELS		19LE5300 (19LE5300-UE)	22LE5300 (22LE5300-UE) 22LE5500 (22LE5500-UA)
Dimensions (Width x Height x Depth)	With stand	471.2 mm x 365.9 mm x 155.4 mm (18.5 inch x 14.4 inch x 6.1 inch)	542.9 mm x 407.1 mm x 155.4 mm (21.3 inch x 16.0 inch x 6.1 inch)
	Without stand	471.2 mm x 315.5 mm x 34.4 mm (18.5 inch x 12.4 inch x 1.3 inch)	542.9 mm x 357.6 mm x 34.4 mm (21.3 inch x 14.0 inch x 1.3 inch)
Weight	With stand	3.4 kg (7.4 lbs)	4.2 kg (9.2 lbs)
	Without stand	3.2 kg (7.0 lbs)	3.9 kg (8.5 lbs)

MODELS		26LE5300 (26LE5300-UE) 26LE5500 (26LE5500-UA)
Dimensions (Width x Height x Depth)	With stand	652.0 mm x 480.8 mm x 191.4 mm (25.6 inch x 18.9 inch x 7.5 inch)
	Without stand	652.0 mm x 420.3 mm x 34.4 mm (25.6 inch x 16.5 inch x 1.3 inch)
Weight	With stand	6.1 kg (13.4 lbs)
	Without stand	5.1 kg (11.2 lbs)

Power Requirement	19LE5300: 24V ⁼⁼⁼ , 1.6A 22LE5300: 24V ⁼⁼⁼ , 1.7 A 22LE5500: 24V ⁼⁼⁼ , 1.7 A 26LE5300: 24V ⁼⁼⁼ , 1.8 A 26LE5500: 24V ⁼⁼⁼ , 1.8 A	
Adapter (DC Power)	In: AC100-240 V ~ 50/60 Hz Out: DC 24 V, 3.42 A	
Television System	NTSC-M, ATSC, 64 & 256 QAM	
Program Coverage	VHF 2-13, UHF 14-69, CATV 1-135, DTV 2-69, CADTV 1-135	
External Antenna Impedance	75 Ω	
Environment condition	Operating Temperature	0 °C to 40 °C (32 °F to 104 °F)
	Operating Humidity	Less than 80 %
	Storage Temperature	-20 °C to 60 °C (-4 °F to 140 °F)
	Storage Humidity	Less than 85 %

■ The specifications shown above may be changed without prior notice for quality improvement.

MODELS		32LE5300 (32LE5300-UC)	37LE5300 (37LE5300-UC)
Dimensions (Width x Height x Depth)	With stand	784.6 mm x 558.1 mm x 221.0 mm (30.8 inch x 21.9 inch x 8.7 inch)	905.0 mm x 630.0 mm x 270.0 mm (35.6 inch x 24.8 inch x 10.6 inch)
	Without stand	784.6 mm x 499.5 mm x 39.9 mm (30.8 inch x 19.6 inch x 1.5 inch)	905.0 mm x 568.0 mm x 39.9 mm (35.6 inch x 22.3 inch x 1.5 inch)
Weight	With stand	12.4 kg (27.3 lbs)	15.3 kg (33.7 lbs)
	Without stand	10.5 kg (23.1 lbs)	12.8 kg (28.2 lbs)

MODELS		42LE5300 (42LE5300-UC) 42LE530C (42LE530C-UC)	47LE5300 (47LE5300-UC) 47LE530C (47LE530C-UC)
Dimensions (Width x Height x Depth)	With stand	1016.0 mm x 692.0 mm x 270.0 mm (40.0 inch x 27.2 inch x 10.6 inch)	1126.6 mm x 757.9 mm x 284.4 mm (44.3 inch x 29.8 inch x 11.1 inch)
	Without stand	1016.0 mm x 630.0 mm x 29.3 mm (40.0 inch x 24.8 inch x 1.1 inch)	1126.6 mm x 692.0 mm x 29.3 mm (44.3 inch x 27.2 inch x 1.1 inch)
Weight	With stand	19.2 kg (42.3 lbs)	22.6 kg (49.8 lbs)
	Without stand	16.7 kg (36.8 lbs)	19.6 kg (43.2 lbs)

MODELS		55LE5300 (55LE5300-UC) 55LE530C (55LE530C-UC)
Dimensions (Width x Height x Depth)	With stand	1306.0 mm x 867.0 mm x 345.0 mm (51.4 inch x 34.1 inch x 13.5 inch)
	Without stand	1306.0 mm x 797.0 mm x 30.7 mm (51.4 inch x 31.3 inch x 1.2 inch)
Weight	With stand	34.05 kg (75.0 lbs)
	Without stand	28.8 kg (63.4 lbs)

Power Requirement	AC 120 V ~ 50 / 60 Hz	
Television System	NTSC-M, ATSC, 64 & 256 QAM	
Program Coverage	VHF 2-13, UHF 14-69, CATV 1-135, DTV 2-69, CADTV 1-135	
External Antenna Impedance	75 Ω	
Environment condition	Operating Temperature	0 °C to 40 °C (32 °F to 104 °F)
	Operating Humidity	Less than 80 %
	Storage Temperature	-20 °C to 60 °C (-4 °F to 140 °F)
	Storage Humidity	Less than 85 %

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MODELS		42LE7300 (42LE7300-UA)	47LE7300 (47LE7300-UA)
Dimensions (Width x Height x Depth)	With stand	1009.2 mm x 694.5 mm x 286.5 mm (39.7 inch x 27.3 inch x 11.2 inch)	1119.6 mm x 757.1 mm x 286.5 mm (44.0 inch x 29.8 inch x 11.2 inch)
	Without stand	1009.2 mm x 629.7 mm x 29.3 mm (39.7 inch x 24.7 inch x 1.1 inch)	1119.6 mm x 691.3 mm x 29.3 mm (44.0 inch x 27.2 inch x 1.1 inch)
Weight	With stand	25.5 kg (56.2 lbs)	29.7 kg (65.4 lbs)
	Without stand	21.0 kg (46.2 lbs)	25.2 kg (55.5 lbs)

MODELS		55LE7300 (55LE7300-UA)
Dimensions (Width x Height x Depth)	With stand	1305.2 mm x 874.9 mm x 320.2 mm (51.3 inch x 34.4 inch x 12.6 inch)
	Without stand	1305.2 mm x 799.4 mm x 32.4 mm (51.3 inch x 31.4 inch x 1.2 inch)
Weight	With stand	44.5 kg (98.1 lbs)
	Without stand	37.1 kg (81.7 lbs)

Power requirement	AC 120 V ~ 50 / 60 Hz	
Television System	NTSC-M, ATSC, 64 & 256 QAM	
Program Coverage	VHF 2-13, UHF 14-69, CATV 1-135, DTV 2-69, CADTV 1-135	
External Antenna Impedance	75 Ω	
Environment condition	Operating Temperature	0 °C to 40 °C (32 °F to 104 °F)
	Operating Humidity	Less than 80 %
	Storage Temperature	-20 °C to 60 °C (-4 °F to 140 °F)
	Storage Humidity	Less than 85 %

- The specifications shown above may be changed without prior notice for quality improvement.

MODEL		32LD420 (32LD420-UA)
Dimensions (Width x Height x Depth)	With stand	805.0 mm x 583.0 mm x 224.0 mm (31.6 inch x 22.9 inch x 8.8 inch)
	Without stand	805.0 mm x 531.0 mm x 79.9 mm (31.6 inch x 20.9 inch x 3.1 inch)
Weight	With stand	10.8 kg (23.8 lbs)
	Without stand	9.7 kg (21.3 lbs)

MODELS		42LD420 (42LD420-UA)	47LD420 (47LD420-UA)
Dimensions (Width x Height x Depth)	With stand	1028.0 mm x 715.4 mm x 297.0 mm (40.4 inch x 28.1 inch x 11.6 inch)	1140.6 mm x 784.8 mm x 337.4 mm (44.9 inch x 30.8 inch x 13.2 inch)
	Without stand	1028.0 mm x 658.6 mm x 87.8 mm (40.4 inch x 25.9 inch x 3.4 inch)	1140.6 mm x 722.9 mm x 99.0 mm (44.9 inch x 28.4 inch x 3.8 inch)
Weight	With stand	16.6 kg (36.5 lbs)	21.6 kg (47.6 lbs)
	Without stand	14.8 kg (32.6 lbs)	19.0 kg (41.8 lbs)

MODELS		32LD450 (32LD450-UA) 32LD452C (32LD452C-UA)	37LD450 (37LD450-UA) 37LD450C (37LD450C-UA) 37LD452C (37LD452C-UA)
Dimensions (Width x Height x Depth)	With stand	799.0 mm x 555.0 mm x 207.0 mm (31.4 inch x 21.8 inch x 8.1 inch)	916.0 mm x 625.0 mm x 261.0 mm (36.0 inch x 24.6 inch x 10.2 inch)
	Without stand	799.0 mm x 506.0 mm x 73.5 mm (31.4 inch x 19.9 inch x 2.8 inch)	916.0 mm x 575.0 mm x 77.4 mm (36.0 inch x 22.6 inch x 3.0 inch)
Weight	With stand	9.1 kg (20.0 lbs)	12.5 kg (27.5 lbs)
	Without stand	8.1 kg (17.8 lbs)	10.8 kg (23.8 lbs)

MODELS		42LD450 (42LD450-UA) 42LD450C (42LD450C-UA) 42LD451C (42LD451C-UA) 42LD452C (42LD452C-UA)	47LD450 (47LD450-UA) 47LD450C (47LD450C-UA) 47LD451C (47LD451C-UA) 47LD452C (47LD452C-UA)
Dimensions (Width x Height x Depth)	With stand	1023.0 mm x 685.0 mm x 261.0 mm (40.2 inch x 26.9 inch x 10.2 inch)	1136.0 mm x 757.0 mm x 270.0 mm (44.7 inch x 29.8 inch x 10.6 inch)
	Without stand	1023.0 mm x 635.0 mm x 76.6 mm (40.2 inch x 25.0 inch x 3.0 inch)	1136.0 mm x 698.0 mm x 76.5 mm (44.7 inch x 27.4 inch x 3.0 inch)
Weight	With stand	15.1 kg (33.2 lbs)	19.5 kg (42.9 lbs)
	Without stand	13.5 kg (29.7 lbs)	17.5 kg (38.5 lbs)

Power requirement	AC 100-240 V ~ 50 / 60 Hz	
Television System	NTSC-M, ATSC, 64 & 256 QAM	
Program Coverage	VHF 2-13, UHF 14-69, CATV 1-135, DTV 2-69, CADTV 1-135	
External Antenna Impedance	75 Ω	
Environment condition	Operating Temperature	0 °C to 40 °C (32 °F to 104 °F)
	Operating Humidity	Less than 80 %
	Storage Temperature	-20 °C to 60 °C (-4 °F to 140 °F)
	Storage Humidity	Less than 85 %

■ The specifications shown above may be changed without prior notice for quality improvement.

APPENDIX

MODELS		32LD520 (32LD520-UA)	42LD520 (42LD520-UA)
Dimensions (Width x Height x Depth)	With stand	815.0 mm x 585.6 mm x 210.9 mm (32.0 inch x 23.0 inch x 8.3 inch)	1052.2 mm x 720.1 mm x 270.6 mm (41.4 inch x 28.3 inch x 10.6 inch)
	Without stand	815.0 mm x 529.6 mm x 82.0 mm (32.0 inch x 20.8 inch x 3.2 inch)	1052.2 mm x 657.3 mm x 90.8 mm (41.4 inch x 25.8 inch x 3.5 inch)
Weight	With stand	12.6 kg (27.7 lbs)	19.0 kg (41.8 lbs)
	Without stand	11.4 kg (25.1 lbs)	17.2 kg (37.9 lbs)

MODELS		47LD520 (47LD520-UA)	55LD520 (55LD520-UA), 55LD520C (55LD520C-UA)
Dimensions (Width x Height x Depth)	With stand	1173.4 mm x 791.4 mm x 319.0 mm (46.1 inch x 31.1 inch x 12.5 inch)	1357.0 mm x 901.0 mm x 423.0 mm (53.4 inch x 35.4 inch x 16.6 inch)
	Without stand	1173.4 mm x 723.4 mm x 100.8 mm (46.1 inch x 28.4 inch x 3.9 inch)	1357.0 mm x 835.4 mm x 109.6 mm (53.4 inch x 32.8 inch x 4.3 inch)
Weight	With stand	23.6 kg (52.0 lbs)	36.4 kg (80.2 lbs)
	Without stand	20.8 kg (45.8 lbs)	32.9 kg (72.5 lbs)

MODELS		42LD630 (42LD630-UC)	47LD630 (47LD630-UC)
Dimensions (Width x Height x Depth)	With stand	1024.0 mm x 685.0 mm x 261.0 mm (40.3 inch x 26.9 inch x 10.2 inch)	1137.0 mm x 758.0 mm x 270.0 mm (44.7 inch x 29.8 inch x 10.6 inch)
	Without stand	1024.0 mm x 621.0 mm x 76.8 mm (40.3 inch x 24.4 inch x 3.0 inch)	1137.0 mm x 685.0 mm x 76.8 mm (44.7 inch x 26.9 inch x 3.0 inch)
Weight	With stand	15.5 kg (34.1 lbs)	20.3 kg (44.7 lbs)
	Without stand	13.9 kg (30.6 lbs)	18.3 kg (40.3 lbs)

MODELS		55LD630 (55LD630-UC)
Dimensions (Width x Height x Depth)	With stand	1329.0 mm x 872.0 mm x 330.0 mm (52.3 inch x 34.3 inch x 12.9 inch)
	Without stand	1329.0 mm x 796.0 mm x 96.5 mm (52.3 inch x 31.3 inch x 3.7 inch)
Weight	With stand	33.0 kg (72.7 lbs)
	Without stand	29.8 kg (65.6 lbs)

Power requirement	AC 100-240 V ~ 50 / 60 Hz	
Television System	NTSC-M, ATSC, 64 & 256 QAM	
Program Coverage	VHF 2-13, UHF 14-69, CATV 1-135, DTV 2-69, CADTV 1-135	
External Antenna Impedance	75 Ω	
Environment condition	Operating Temperature	0 °C to 40 °C (32 °F to 104 °F)
	Operating Humidity	Less than 80 %
	Storage Temperature	-20 °C to 60 °C (-4 °F to 140 °F)
	Storage Humidity	Less than 85 %

■ The specifications shown above may be changed without prior notice for quality improvement.

IR CODE

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

■ Use this feature depending on your models.

APPENDIX

EXTERNAL CONTROL THROUGH RS-232C

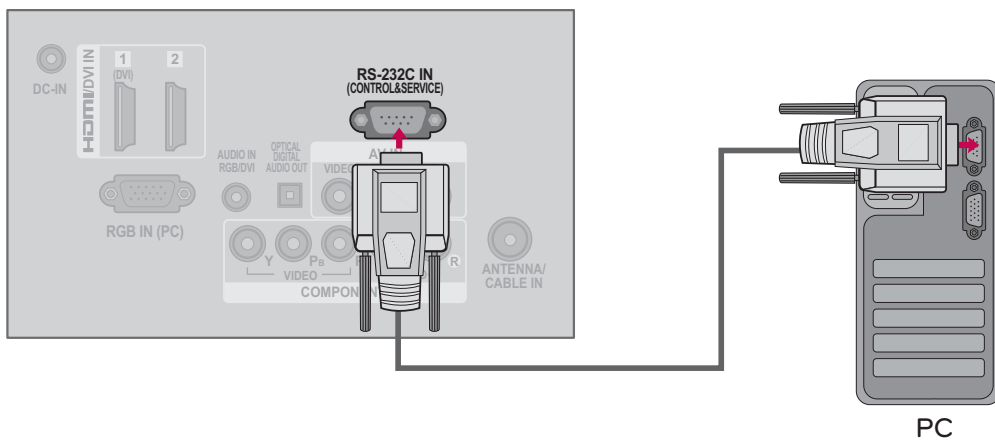
The RS-232C port allows you connect the RS-232C input jack to an external control device (such as a computer or an A/V control system) to control the TV's functions externally.

- Note: RS-232C on this unit 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 Setup

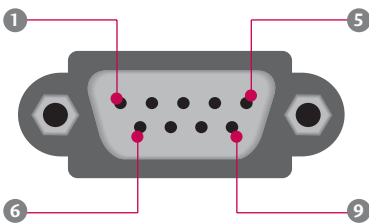
i.e)



Type of Connector; D-Sub 9-Pin Male

Communication Parameters

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

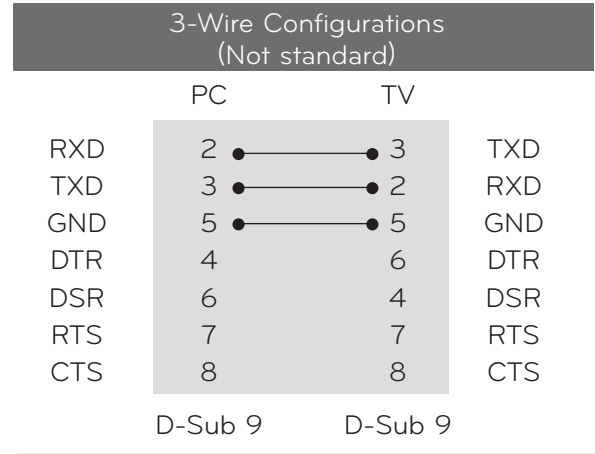
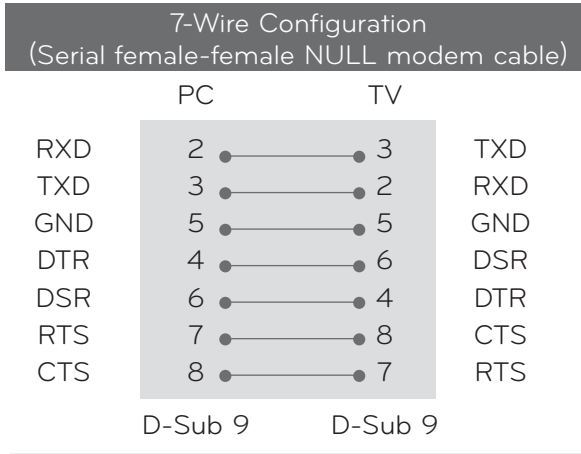


- Baud rate : 9600 bps (UART)
- Data length : 8 bits
- Parity : None
- Stop bit : 1 bit
- Communication code : ASCII code
- Use a crossed (reverse) cable.

! NOTE

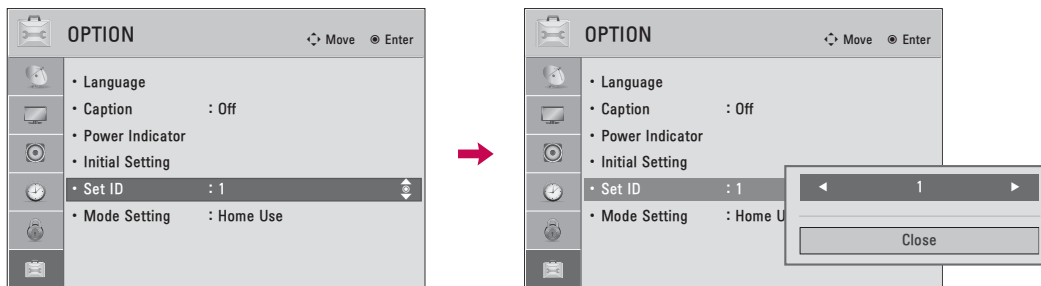
- This product has command echo back in the RS-232C Command.

RS-232C Configurations



Set ID

Use this function to specify a TV ID number.
Refer to 'Real Data Mapping'.



- 1 Select **OPTION**.
- 2 Select **Set ID**.
- 3 Choose the desired TV ID number.
The adjustment range of Set ID is 1~99.
- 4 Return to the previous menu.
- Return to TV viewing.

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

APPENDIX

Command Reference List

	COMMAND1	COMMAND2	DATA (Hexadecimal)
01. Power	k	a	00 - 01
02. Input Select	x	b	▶ P.155
03. Aspect Ratio	k	c	▶ P.155
04. Screen Mute	k	d	00 - 01
05. Volume Mute	k	e	00 - 01
06. Volume Control	k	f	00 - 64
07. Contrast	k	g	00 - 64
08. Brightness	k	h	00 - 64
09. Color	k	i	00 - 64
10. Tint	k	j	00 - 64
11. Sharpness	k	k	00 - 64
12. OSD Select	k	l	00 - 01
13. Remote Control Lock Mode	k	m	00 - 01
14. Treble	k	r	00 - 64
15. Bass	k	s	00 - 64
16. Balance	k	t	00 - 64
17. Color Temperature	x	u	00 - 64
18. Energy Saving	j	q	▶ P.156
19. Auto Configuration	j	u	▶ P.156
21. Channel Add/Del	m	b	00 - 01
22. Key	m	c	▶ P.157
23. Backlight	m	g	00 - 64

	COMMAND1	COMMAND2	DATA00 (Hexadecimal)	DATA01 (Hexadecimal)		
20. Channel Tuning	m	a	physical program high	major program low		
			DATA02 (Hexadecimal)	DATA03 (Hexadecimal)	DATA04 (Hexadecimal)	DATA05 (Hexadecimal)
			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 TV ID number in Setup menu. Adjustment range is 1-99. When selecting Set ID '0', every connected the TV 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, TV will not send the status during the standby mode.

OK Acknowledgement

[Command2][][Set ID][][OK][Data][x]

The TV 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, TV 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 TV 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, TV 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 TV.

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, TV 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 TV.

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: AV 2

Data 40: Component or Component1

Data 41: Component2

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 Zoom1

Data 04: Zoom :

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]

APPENDIX

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 TV, 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. 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]

18. Energy Saving (Command: j q)

To control the energy saving function.

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

Data 00: Energy saving - off
01: Energy saving - Minimum
02: Energy saving - Medium
03: Energy saving - Maximum
04: Energy saving - Auto (depending on model)
05: Energy saving - Screen off

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

19. 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]

20. 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.

Data5:	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

The table above 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

21. 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]

22. Key (Command: m c)

To send IR remote control code.

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

See page 151.

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.

23. 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]

APPENDIX

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(For example, a function in a library to compute square roots has a purpose that is entirely well-defined independent of the application. Therefore, Subsection 2d requires that any application-supplied function or table used by this function must be optional: if the application does not supply it, the square root function must still compute square roots.)

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If such an object file uses only numerical parameters, data structure layouts and accessories, and small macros and small inline functions (ten lines or less in length), then the use of the object file is unrestricted, regardless of whether it is legally a derivative work. (Executable containing this object code plus portions of

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Version 1.1

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NOTE: The text of this exhibit A may differ slightly from the text of the notices in the source code files of the original code. You should use the text of this exhibit A rather than the text found in the original code/source code for Your modifications.



The model and serial number of the TV is located on the back and/or one side of the TV. Record it below should you ever need service.

MODEL _____

SERIAL _____