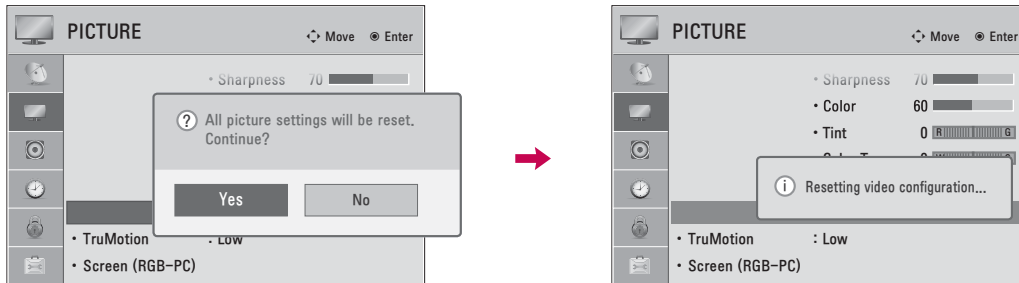


PICTURE RESET

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



1 Select **PICTURE**.

2 Select **Picture Reset**.

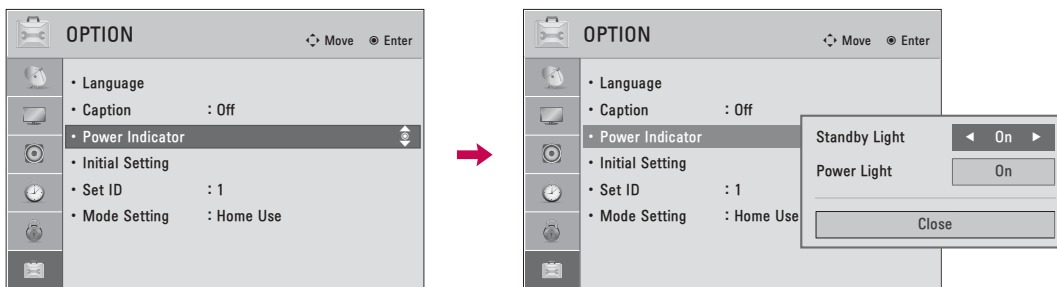
3 Select **Yes**.

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 or Return to the previous menu.

Return to TV viewing.

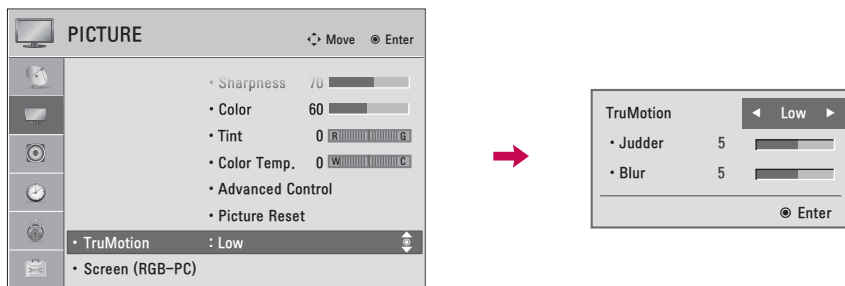
- **Standby Light:** Determines whether to set the indicator light on the front of the TV to **On** or **Off** in standby mode.
- **Power Light:** Determines whether to set the indicator light on the front of the TV to **On** or **Off** when the power turns on.

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 or 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.

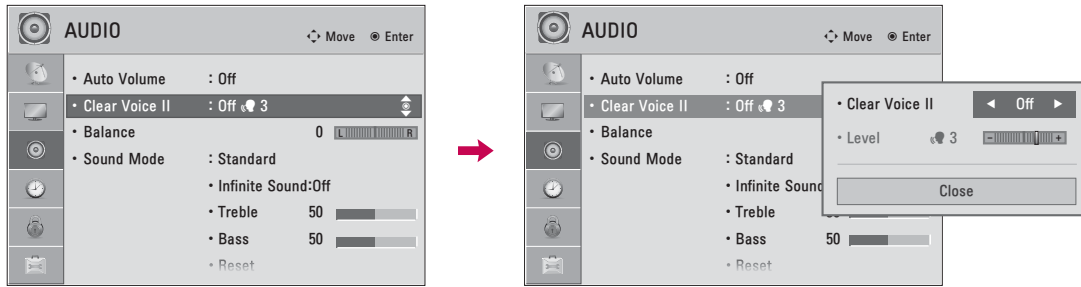


- 1   Select **AUDIO**.
- 2   Select **Auto Volume**.
- 3   Select **On** or **Off**.
- 4  or  Return to the previous menu.
-  Return to TV viewing.

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**.

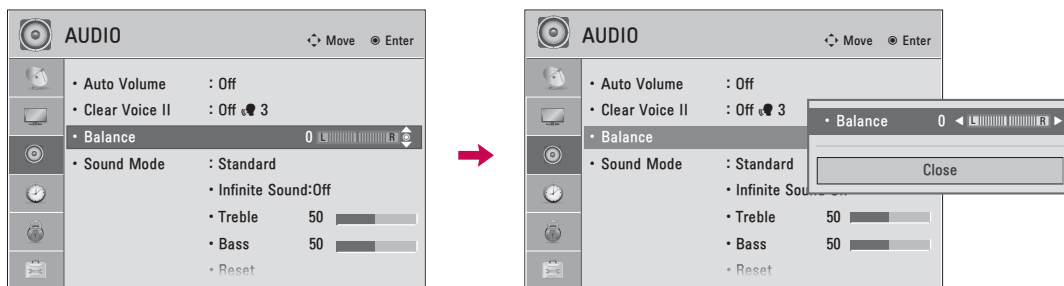
5  Make appropriate adjustments.










6  or  Return to the previous menu.

 Return to TV viewing.

BALANCE

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

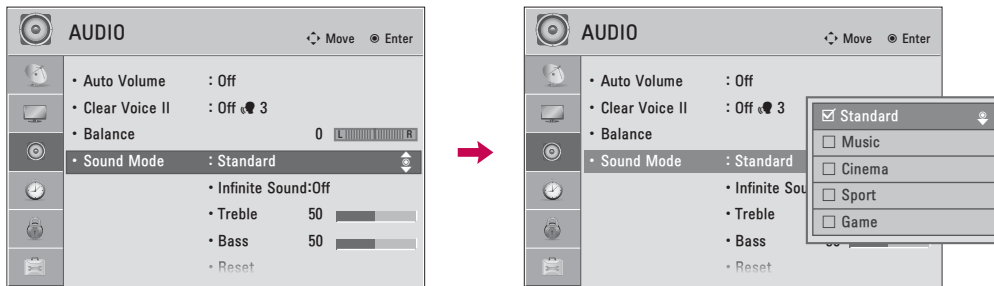










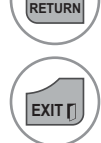
- 1   Select **AUDIO**.
- 2   Select **Balance**.
- 3   Make appropriate adjustments.
- 4  or  Return to the previous menu.
-  Return to TV viewing.

SOUND & LANGUAGE CONTROL

PRESET SOUND SETTINGS (SOUND MODE)

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

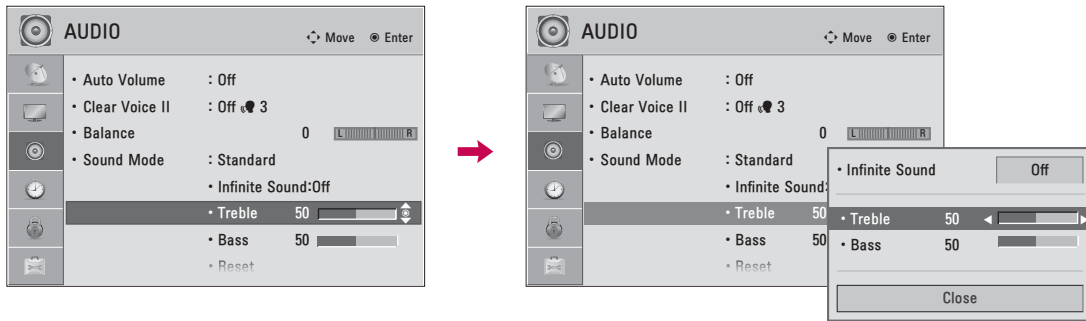



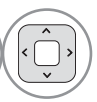

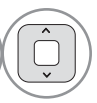

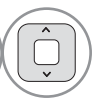

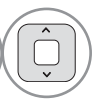

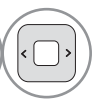



-   Select **AUDIO**.
-   Select **Sound Mode**.
-   Select **Standard, Music, Cinema, Sport, or Game**.
-  or  Return to the previous menu.
-  Return to TV viewing.

- **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.



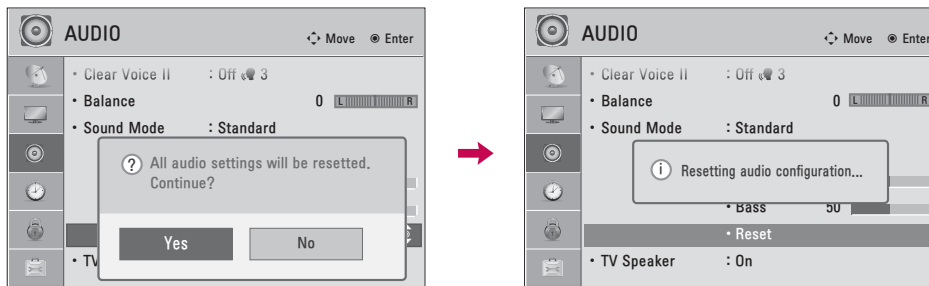
- 1   Select **AUDIO**.
- 2   Select **Sound Mode**.
- 3   Select **Standard, Music, Cinema, Sport, or Game**.
- 4   Select **Infinite Sound, Treble, or Bass**.
- 5   Make appropriate adjustments.
- 6  or  Return to the previous menu.
-  Return to TV viewing.


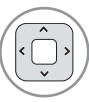

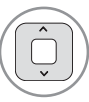

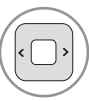


- If sound quality or volume is not at the level you want, it is recommended to use a separate home theater system or amp to cope with different user environments.
- If you select "Clear Voice II-On", the **Infinite Sound** feature will not operate.
- **Infinite Sound**: Infinite Sound is a patented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

SOUND & LANGUAGE CONTROL

AUDIO RESET

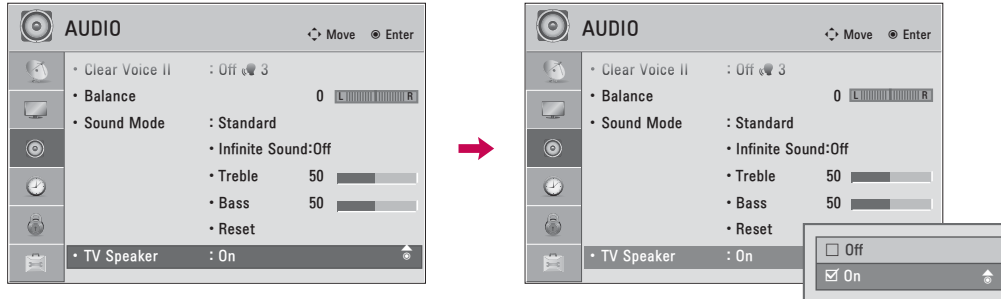
Settings of the selected Sound Mode return to the default factory settings.



-   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.

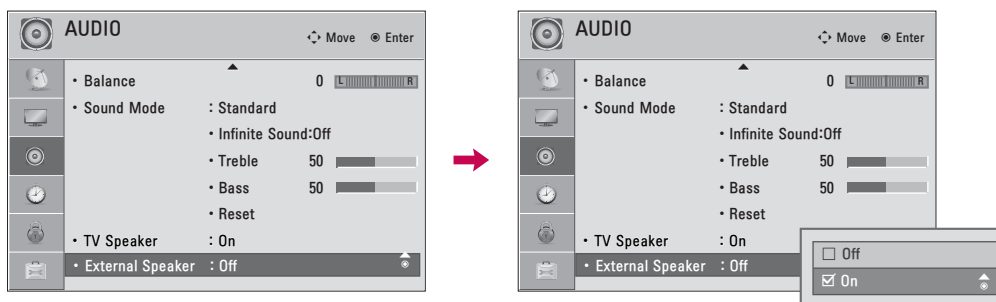


- 1 Select **AUDIO**.
- 2 Select **TV Speaker**.
- 3 Select **On** or **Off**.
- 4 or Return to the previous menu.
- Return to TV viewing.

EXTERNAL SPEAKERS ON/OFF SETUP

(For 32/37/42/47LD450C, 32/37/47/47LD452C, 32/42/47LD452B, 26LD352C)

Turn the external speakers on if using external audio equipment.



- 1 Select **AUDIO**.
- 2 Select **External Speaker**.
- 3 Select **On** or **Off**.
- 4 or 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

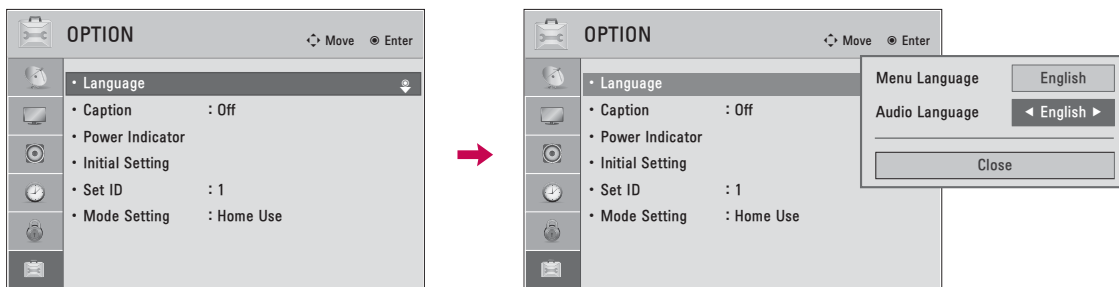
- 1   Select **SAP**.
- 2   Select **Mono, Stereo,** or **SAP**.
- 3  Return to TV viewing.











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.

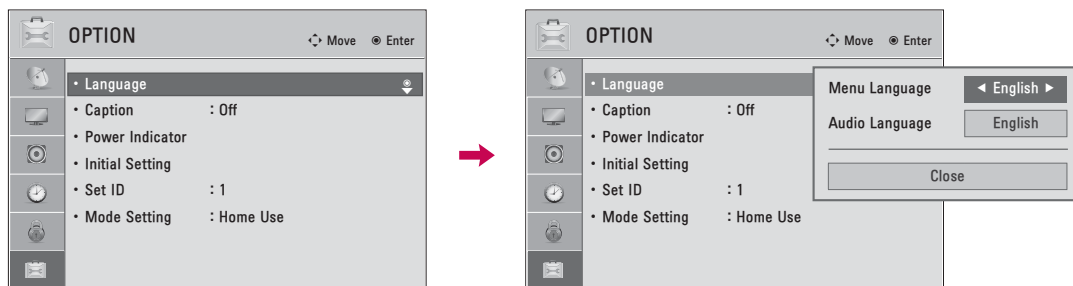





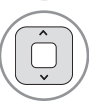

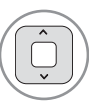


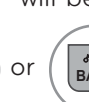

-   Select **OPTION**.
-   Select **Language**.
-   Select **Audio Language**.
-  Select your desired language.
-  or  Return to the previous menu.
-  Return to TV viewing.

SOUND & LANGUAGE CONTROL

ON-SCREEN MENUS LANGUAGE SELECTION

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

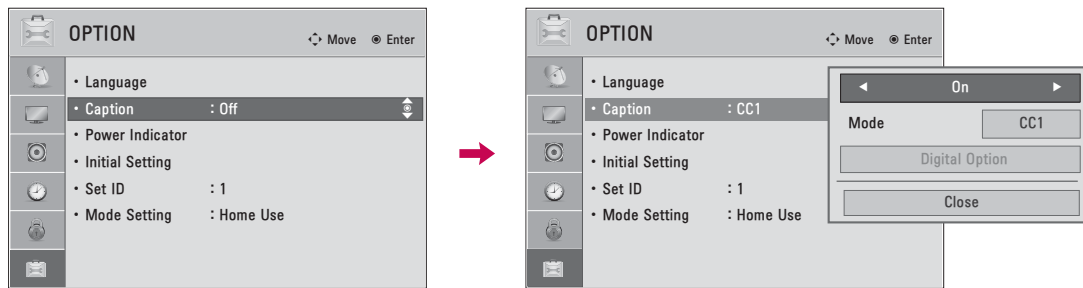



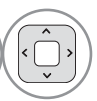



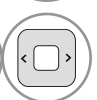



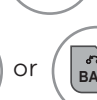

-   Select **OPTION**.
-   Select **Language**.
-   Select **Menu Language**.
-  Select your desired language.
From this point on, the on-screen menu will be shown in the selected language.
-  or  Return to the previous menu.
-  Return to TV viewing.

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**.



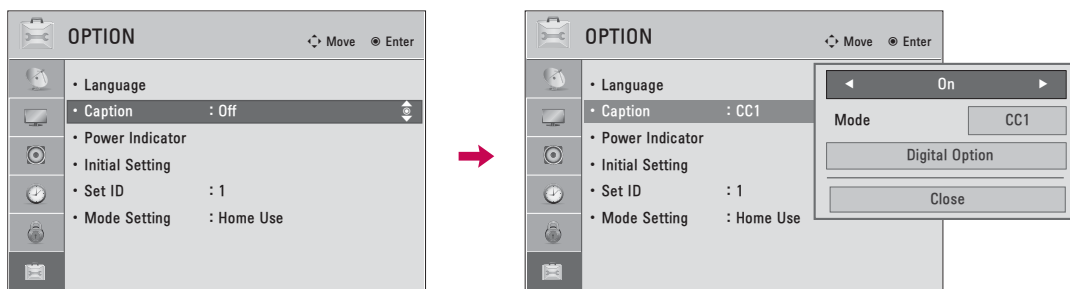
- 1   Select **OPTION**.
- 2   Select **Caption**.
- 3   Select **On**.
- 4   Select **CC1-4** or **Text1-4**.
- 5  or  Return to the previous menu.
-  Return to TV viewing.












- 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

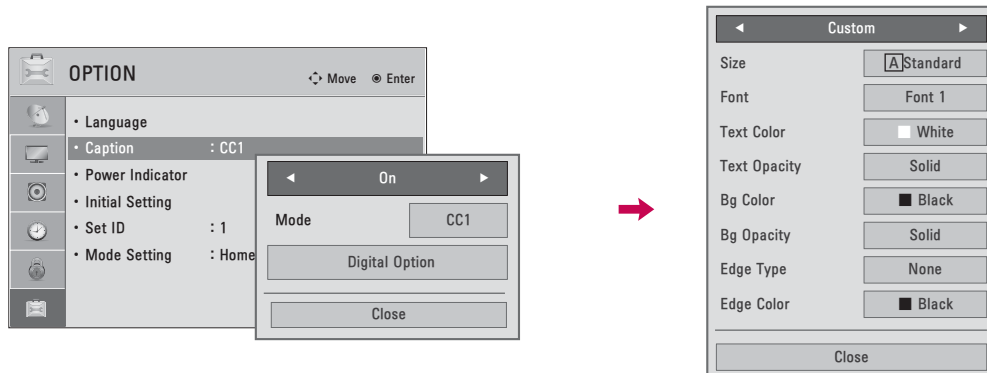
Choose the language you want the DTV/Cable DTV Captions to appear in.
Other Languages can be chosen for digital sources only if they are included on the program.
This function is only available when **Caption Mode** is set **On**.



- 1   Select **OPTION**.
- 2   Select **Caption**.
- 3   Select **On**.
- 4   Select **CC1-4, Text1-4, or Service1 - 6**.
- 5  or  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 or 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

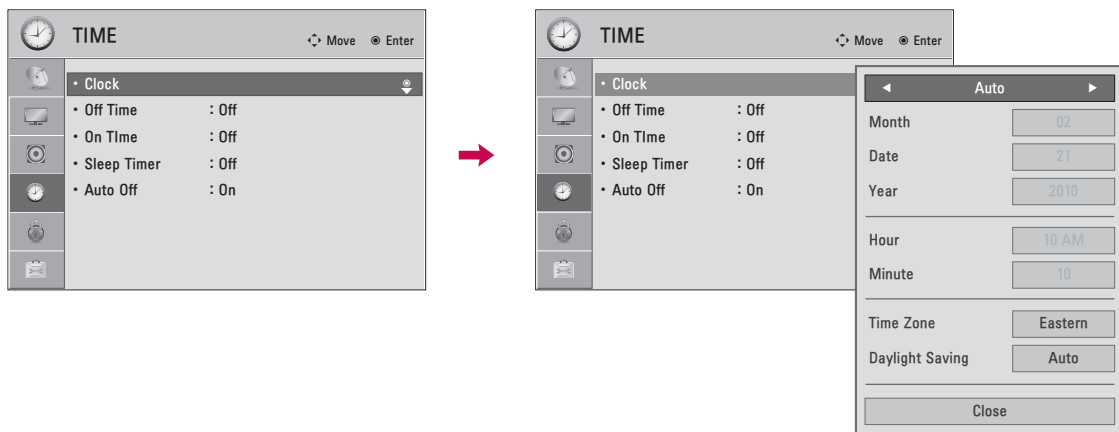
CLOCK SETTING














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.

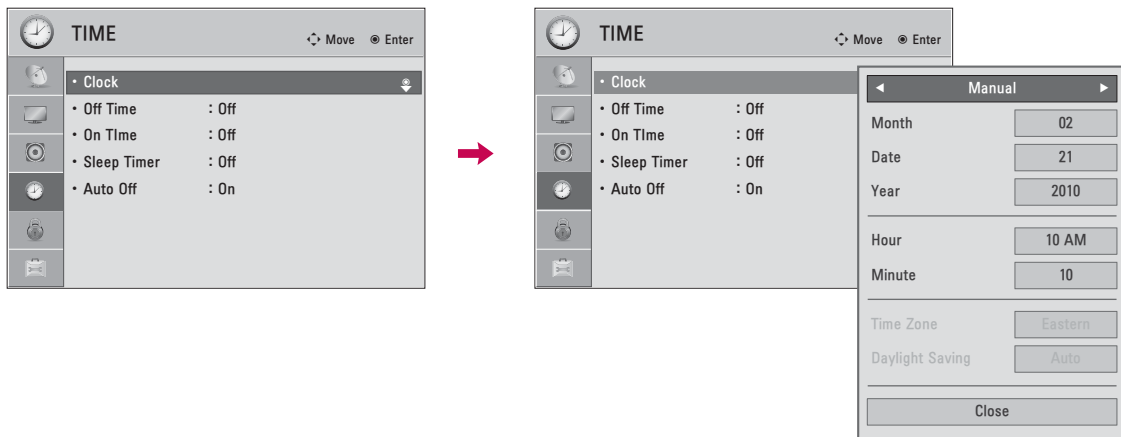
Set the clock manually if the current time is set incorrectly by the auto clock function.














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

TIME SETTING

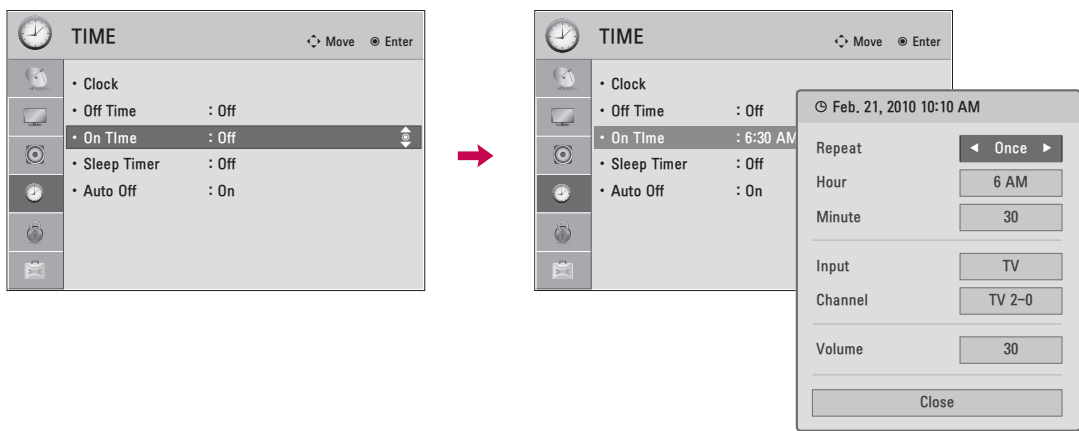
AUTO ON/OFF TIME SETTING

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, 42/47LD452B, 26LD352C)

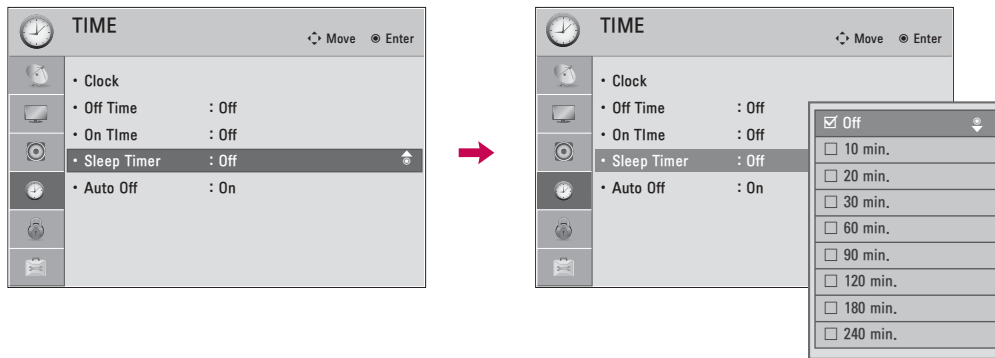


- 1 Select **TIME**.
- 2 Select **Off Time** or **On Time**.
- 3 Select **Repeat**.
- 4 Select **Off, Once, Daily, Mon.-Fri., Mon.-Sat., Sat.-Sun., or Sun.**
- 5 Select and set Hour or Minute.
- 6 or Return to the previous menu.
- Return to TV viewing.

- 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.



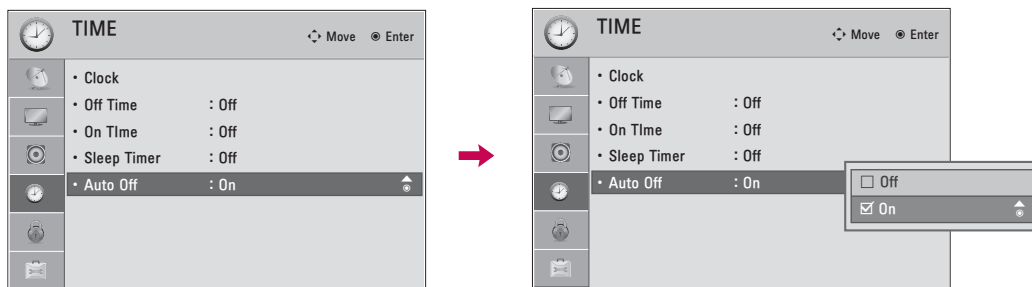
- 1 Select **TIME**.
- 2 Select **Sleep Timer**.
- 3 Make appropriate adjustments.

- 4 or 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**.

AUTO SHUT-OFF SETTING

If set to on and there is no input signal, the TV turns off automatically after 15 minutes.



- 1 Select **TIME**.
- 2 Select **Auto Off**.
- 3 Select **On** or **Off**.

- 4 or Return to the previous menu.
- Return to TV viewing.

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.

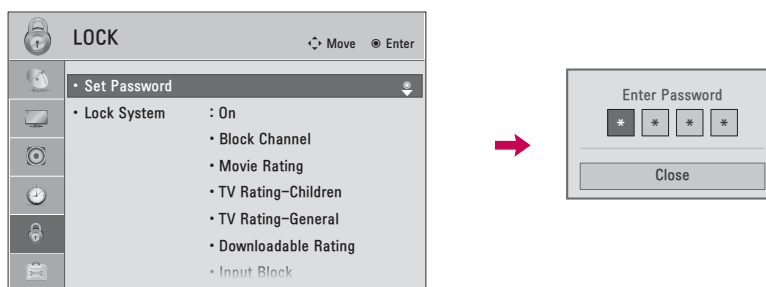
Ratings for Television programs including made-for-TV movies:





- 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.

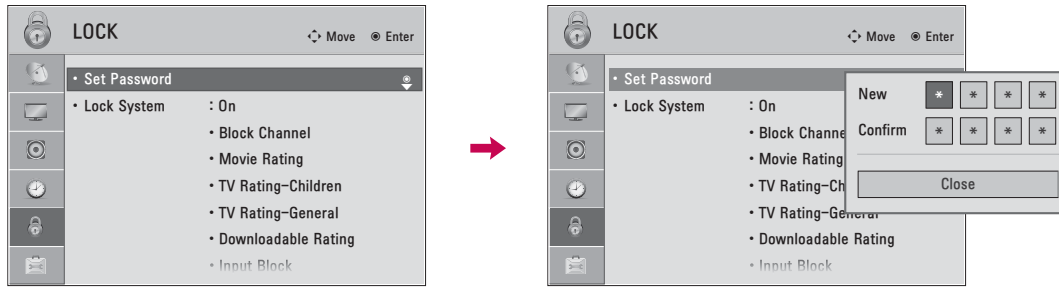


1.    Select **LOCK**.
2.  Input the password.


- 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**.

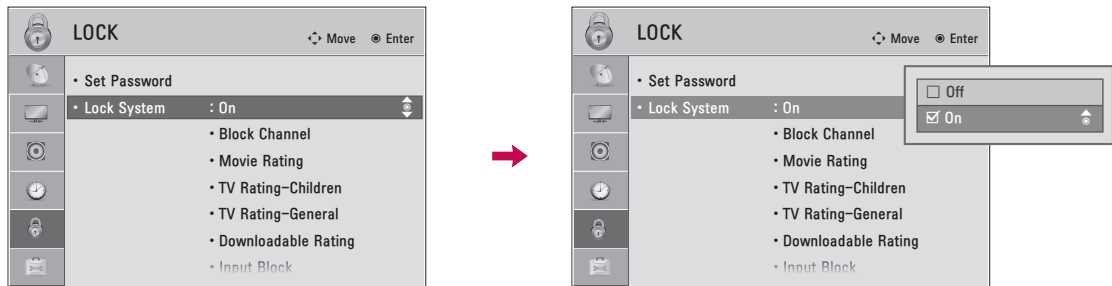
5  or  Return to the previous menu.











 Return to TV viewing.

PARENTAL CONTROL / RATINGS

Lock System

Enables or disables the blocking scheme you set up previously.

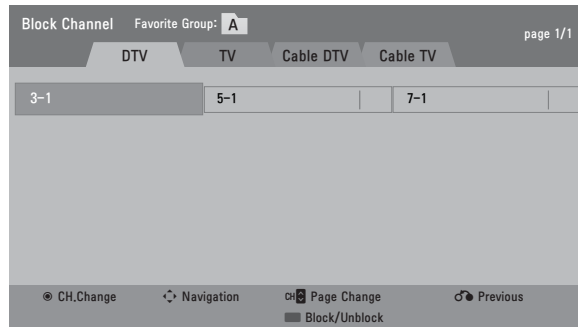
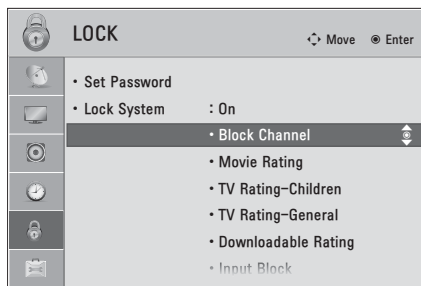


-    Select **LOCK**.
-  Input the password.
-  Select **Lock System**.
-   Select **On** or **Off**.
-  or  Return to the previous menu.
-  Return to TV viewing.


■ 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  or  Return to the previous menu.

 Return to TV viewing.

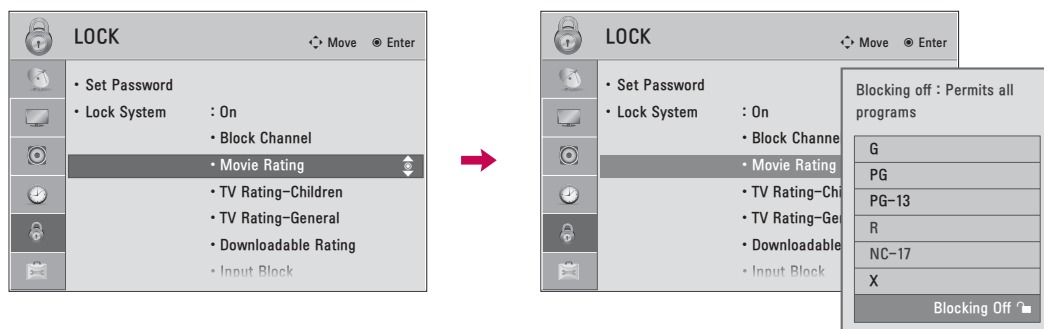
■ If a channel is locked, enter the password to unlock it temporarily.











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.

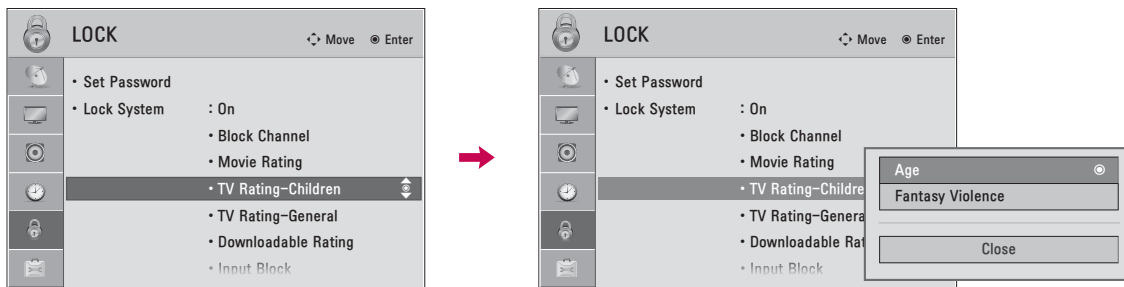














-    Select **LOCK**.
-  Input the password.
-  Select **Movie Rating**.
-   Select **G, PG, PG-13, R, NC-17, X, or Blocking Off**.
-  or  Return to the previous menu.
-  Return to TV viewing.

- 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.



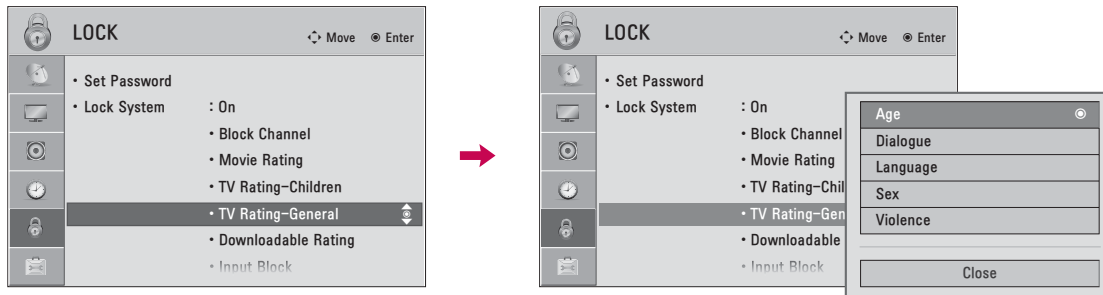
-    Select **LOCK**.
-  Input the password.
-  Select **TV Rating-Children**.
-   Select **Age** or **Fantasy Violence**.
-   Select block options.
-  or  Return to the previous menu.
-  Return to TV viewing.


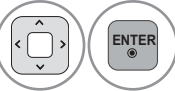









- **Age** (applies to TV-Y, TV-Y7)
- **Fantasy Violence** (applies to TV-Y7)

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.

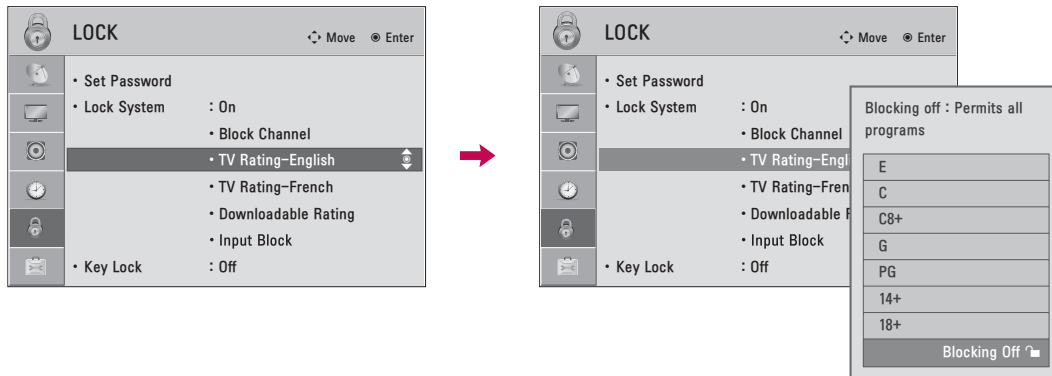


- 1   Select **LOCK**.
- 2  Input the password.
- 3  Select **TV Rating-General**.
- 4   Select **Age, Dialogue, Language, Sex** or **Violence**.
- 5   Select block options.
- 6  or  Return to the previous menu.
-  Return to TV viewing.

- **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.



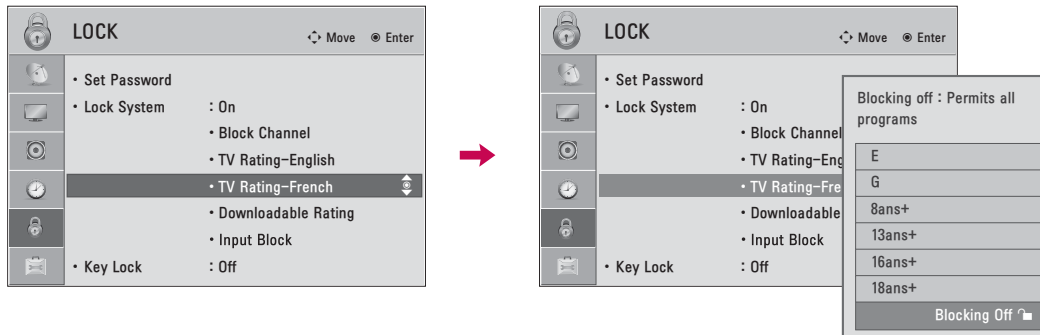
- 1 Select **LOCK**.
- 2 Input the password.
- 3 Select **TV Rating-English**.
- 4 Select **E, C, C8+, G, PG, 14+, 18+,** or **Blocking Off**.
- 5 or Return to the previous menu.
- Return to TV viewing.











- 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.



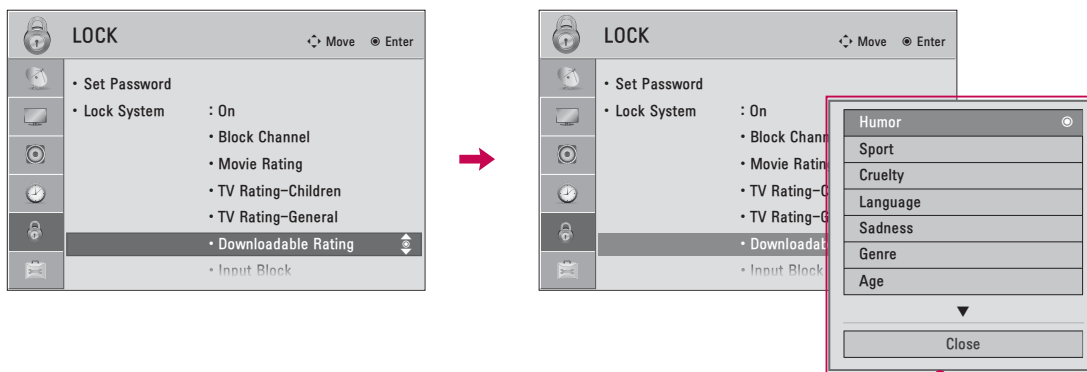
- 1    Select **LOCK**.
- 2  Input the password.
- 3  Select **TV Rating-French**.
- 4   Select **E, G, 8ans+, 13ans+, 16ans+, 18ans+,** or **Blocking Off**.
- 5  or  Return to the previous menu.
-  Return to TV viewing.

- **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 or Return to the previous menu.

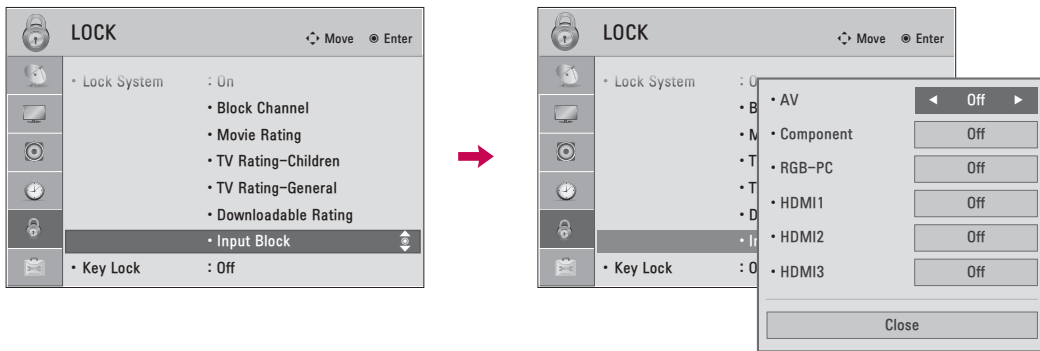
Return to TV viewing.

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


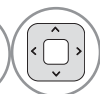


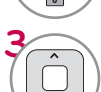






PARENTAL CONTROL / RATINGS

EXTERNAL INPUT BLOCKING

Enables you to block an input.



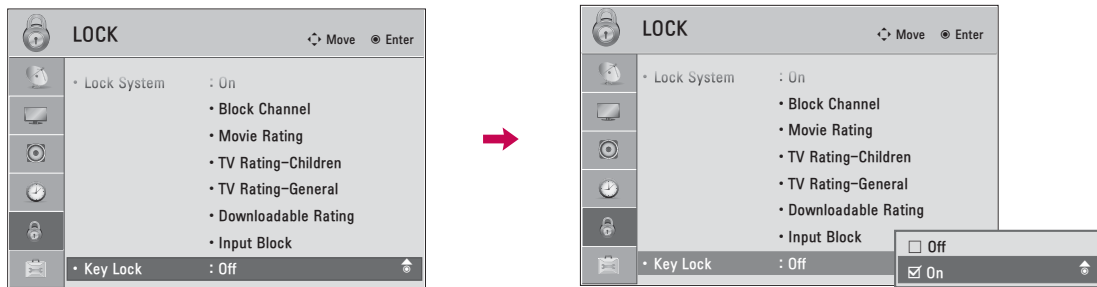
i.e)











-    Select **LOCK**.
-  Input the password.
-  Select **Input Block**.
-   Select input source.
-  Select **On** or **Off**.
-  or  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**.
- 5  or  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. <small>*This feature is not available for all models.</small>
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.

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 $\overline{=}$, 1.6A 22LE5300: 24V $\overline{=}$, 1.7 A 22LE5500: 24V $\overline{=}$, 1.7 A 26LE5300: 24V $\overline{=}$, 1.8 A 26LE5500: 24V $\overline{=}$, 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)
Current Value		1.3 A	1.4 A

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)
Current Value		1.5 A	1.7 A

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)
Current Value		2.0 A

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.

APPENDIX

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)
Current Value		1.3 A	1.5 A
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)	
Current Value		1.8 A	
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.

MODELS		26LD352C (26LD352C-UA)
Dimensions (Width x Height x Depth)	With stand	663.0 mm x 484.0 mm x 206.8 mm (26.1 inch x 19.0 inch x 8.1 inch)
	Without stand	663.0 mm x 423.0 mm x 79.9 mm (26.1 inch x 16.6 inch x 3.1 inch)
Weight	With stand	7.3 kg (16.0 lbs)
	Without stand	6.2 kg (13.6 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.

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)	
Current Value		1.4 A	
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)
Current Value		1.9 A	2.6 A
MODELS		32LD450 (32LD450-UA) 32LD452C (32LD452C-UA) 32LD452B (32LD452B-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)
Current Value		1.2 A	1.6 A
MODELS		42LD450 (42LD450-UA) 42LD450C (42LD450C-UA) 42LD451C (42LD451C-UA) 42LD452C (42LD452C-UA) 42LD452B (42LD452B-UA)	47LD450 (47LD450-UA) 47LD450C (47LD450C-UA) 47LD451C (47LD451C-UA) 47LD452C (47LD452C-UA) 47LD452B (47LD452B-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)
Current Value		1.9 A	2.6 A
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)
Current Value		1.5 A	1.9 A
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)
Current Value		2.5 A	3.4 A
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)
Current Value		2.1 A	2.5 A
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)	
Current Value		3.4 A	
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	0C	POTAL	Remote Control Button
01	CH v	Remote Control Button	AB	GUIDE	Remote Control Button
02	VOL +	Remote Control Button	B0	▶	Remote Control Button
03	VOL -	Remote Control Button	B1	■	Remote Control Button
06	›	Remote Control Button	BA		Remote Control Button
07	◀	Remote Control Button	D6	TV	Discrete IR Code (TV Input Selection)
08	⏻	Remote Control Button (Power On/Off)	C4	POWER ON	Discrete IR Code (Only Power On)
09	MUTE	Remote Control Button	C5	POWER OFF	Discrete IR Code (Only Power Off)
0B	INPUT	Remote Control Button	5A	AV or AV1	Discrete IR Code (AV1 Input Selection)
0F	TV	Remote Control Button	D0	AV2	Discrete IR Code (AV2 Input Selection)
10-19	Number 0-9	Remote Control Button	BF	COMPONENT	Discrete IR Code (Component Input Selection)
1A	FLASHBK	Remote Control Button	D5	RGB-PC	Discrete IR Code (RGB-PC Input Selection)
1E	FAV/MARK	Remote Control Button	CE	HDMI1	Discrete IR Code (HDMI1 Input Selection)
28	BACK or RETURN	Remote Control Button	CC	HDMI2	Discrete IR Code (HDMI2 Input Selection)
30	AV MODE	Remote Control Button	E9	HDMI3	Discrete IR Code (HDMI3 Input Selection)
40	^	Remote Control Button	DA	HDMI4	Discrete IR Code (HDMI4 Input Selection)
41	v	Remote Control Button	76	Ratio 4:3	Discrete IR Code (Only 4:3 Mode)
43	MENU	Remote Control Button	77	Ratio 16:9	Discrete IR Code (Only 16:9 Mode)
44	ENTER	Remote Control Button	AF	Ratio Zoom	Discrete IR Code (Only Zoom Mode)
45	Q.MENU	Remote Control Button			
4C	- (Dash)/LIST	Remote Control Button			
5B	EXIT	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			
61	C3 BLUE	Remote Control Button			
63	C2 YELLOW	Remote Control Button			
71	C0 GREEN	Remote Control Button			
72	C1 RED	Remote Control Button			

For 32/37/42/47LD452C, 32/42/47LD452B

- Use this feature depending on your models.

APPENDIX

EXTERNAL CONTROL THROUGH RS-232C

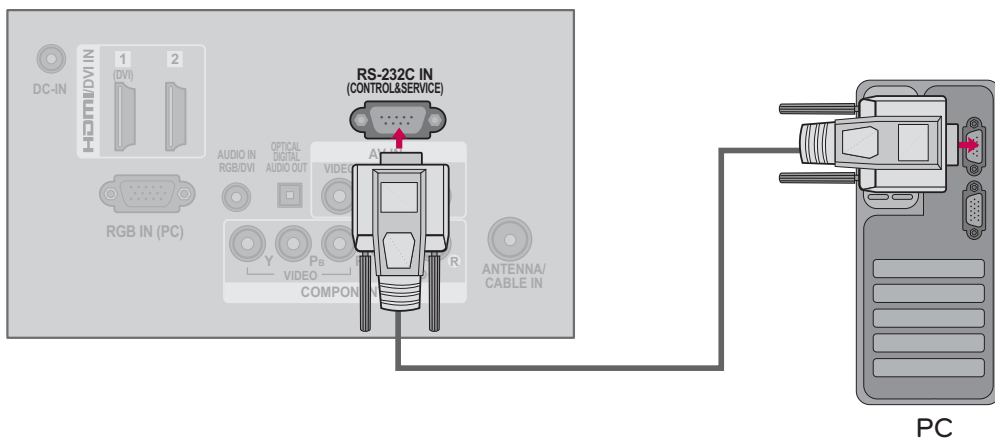
The RS-232C port allows you connect the RS-232C input jack to an external control device (such as a computer or an A/V control system) to control the TV's functions externally.

- 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

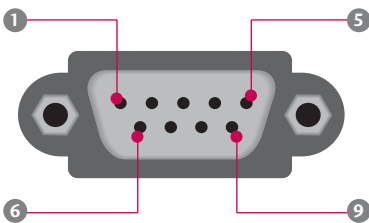
Communication Parameters

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

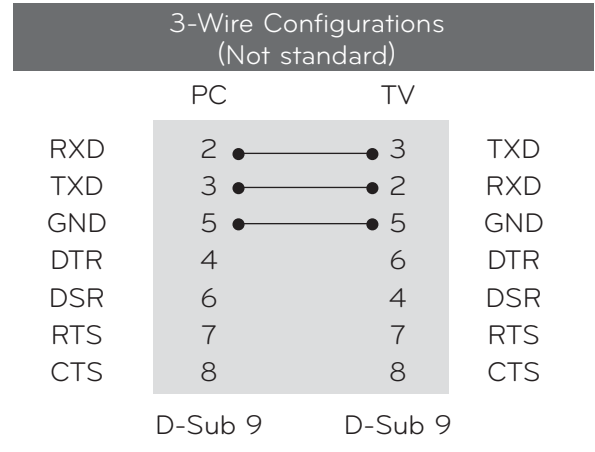
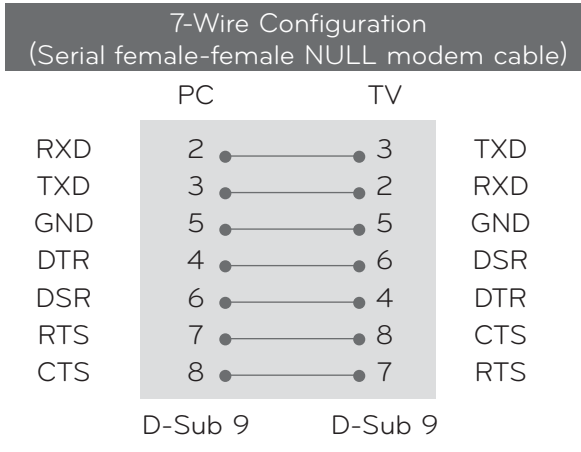
- Baud rate : 9600 bps (UART)
- Data length : 8 bits
- Parity : None
- Stop bit : 1 bit
- Communication code : ASCII code
- Use a crossed (reverse) cable.

! NOTE

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

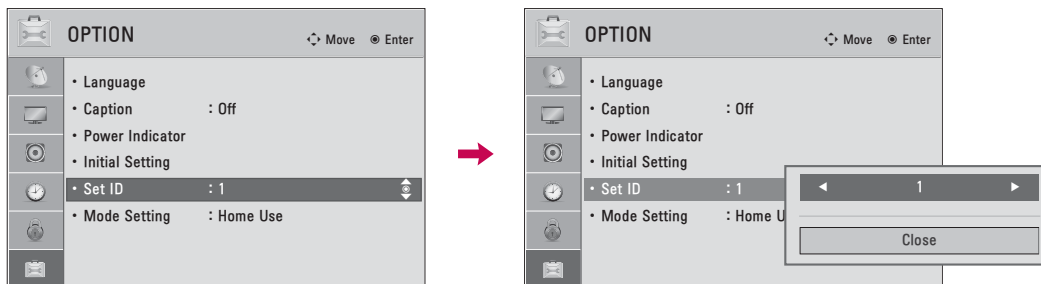


RS-232C Configurations



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 or 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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Version 2, June 1991

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Version 1.1

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