

LCD TV

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

22LD310 26LD310 32LD310

WARNING / CAUTION







TO REDUCE THE RISK OF ELECTRIC SHOCK DO NOT REMOVE COVER (OR BACK). NO USER SERVICEABLE PARTS INSIDE. REFER TO QUALIFIED SERVICE PERSONNEL.

The lightning flash with arrowhead symbol, within an equilateral triangle, is intended to alert the user to the presence of uninsulated "dangerous voltage" within the product's enclosure that may be of sufficient magnitude to constitute a risk of electric shock to persons.

The exclamation point within an equilateral triangle is intended to alert the user to the presence of important operating and maintenance (servicing) instructions in the literature accompanying the appliance.

WARNING/CAUTION

TO REDUCE THE RISK OF FIRE AND ELECTRIC SHOCK, DO NOT EXPOSE THIS PRODUCT TO RAIN OR MOISTURE.

SAFETY INSTRUCTIONS

IMPORTANT SAFETY INSTRUCTIONS

Read these instructions. Keep these instructions. Heed all warnings. Follow all instructions.



Do not use this apparatus near water.



Clean only with dry cloth.



Do not block any ventilation openings. Install in accordance with the manufacturer's instructions.



Do not install near any heat sources such as radiators, heat registers, stoves, or other apparatus (including amplifiers) that produce heat.

Protect the power cord from being walked on or pinched particularly at plugs, convenience receptacles, and the point where they exit from the apparatus.



Only use attachments/accessories specified by the manufacturer.



Use only with the cart, stand, tripod, bracket, or table specified by the manufacturer, or sold with the apparatus. When a cart is used, use caution when moving the cart/apparatus combination to avoid injury from tip-over.





Unplug this apparatus during lighting storms or when unused for long periods of time.



Refer all servicing to qualified service personnel. Servicing is required when the apparatus has been damaged in any way, such as powersupply cord or plug is damaged, liquid has been spilled or objects have fallen into the apparatus, the apparatus has been exposed to rain or moisture, does not operate normally, or has been dropped.



SAFETY INSTRUCTIONS

- Never touch this apparatus or antenna during a thunder or lighting storm.
- When mounting a TV on the wall, make sure not to install the TV by the hanging power and signal cables on the back of the TV.
- Do not allow an impact shock or any objects to fall into the product, and do not drop onto the screen with something.
- CAUTION concerning the Power Cord:

 It is recommend that appliances be placed upon a dedicated circuit; that is, a single outlet circuit which powers only that appliance

outlet circuit which powers only that appliance and has no additional outlets or branch circuits. Check the specification page of this owner's manual to be certain.

Do not connect too many appliances to the same AC power outlet as this could result in fire or electric shock.

Do not overload wall outlets. Overloaded wall outlets, loose or damaged wall outlets, extension cords, frayed power cords, or damaged or cracked wire insulation are dangerous. Any of these conditions could result in electric shock or fire. Periodically examine the cord of your appliance, and if its appearance indicates damage or deterioration, unplug it, discontinue use of the appliance, and have the cord replaced with an exact replacement part by an authorized servicer. Protect the power cord from physical or mechanical abuse, such as being twisted, kinked, pinched, closed in a door, or walked upon. Pay particular attention to plugs, wall outlets, and the point where the cord exits the appliance.

Do not make the TV with the power cord plugged in. Do not use a damaged or loose power cord. Be sure do grasp the plug when unplugging the power cord. Do not pull on the power cord to unplug the TV.



WARNING - To reduce the risk of fire or electrical shock, do not expose this product to rain, moisture or other liquids. Do not touch the TV with wet hands. Do not install this product near flammable objects such as gasoline or candles or expose the TV to direct air conditioning.



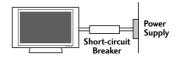
Do not expose to dripping or splashing and do not place objects filled with liquids, such as vases, cups, etc. on or over the apparatus (e.g. on shelves above the unit).



GROUNDING

Ensure that you connect the earth ground wire to prevent possible electric shock (i.e. a TV with a three-prong grounded AC plug must be connected to a three-prong grounded AC outlet). If grounding methods are not possible, have a qualified electrician install a separate circuit breaker.

Do not try to ground the unit by connecting it to telephone wires, lightening rods, or gas pipes.



DISCONNECTING DEVICE FROM MAINS

Mains plug is the disconnecting device. The plug must remain readily operable.

As long as this unit is connected to the AC wall outlet, it is not disconnected from the AC power source even if you turn off this unit by SWITCH.

Cleaning

When cleaning, unplug the power cord and rub gently with a soft cloth to prevent scratching. Do not spray water or other liquids directly on the TV as electric shock may occur. Do not clean with chemicals such as alcohol, thinners or benzene.

Moving

Make sure the product is turned off, unplugged and all cables have been removed. It may take 2 or more people to carry larger TVs. Do not press against or put stress on the front panel of the TV.

Ventilation

Install your TV where there is proper ventilation. Do not install in a confined space such as a bookcase. Do not cover the product with cloth or other materials (e.g.) plastic while plugged in. Do not install in excessively dusty places.

- Take care not to touch the ventilation openings. When watching the TV for a long period, the ventilation openings may become hot.
- If you smell smoke or other odors coming from the TV, unplug the power cord and contact an authorized service center.
- No presione en exceso el panel con sus manos u objetos afilados, como tornillos, lápices o bolígrafos, y evite rayarlo.



Keep the product away from direct sunlight.

26 I

Dot Defect

The Plasma or LCD panel is a high technology product with resolution of two million to six million pixels. In a very few cases, you could see fine dots on the screen while you'reviewing the TV. Those dots are deactivated pixels and do not affect the performance and reliability of the TV.

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Generated Sound

"Cracking" noise: A cracking noise that occurs when watching or turning off the TV is generated by plastic thermal contraction due to temperature and humidity. This noise is common for products where thermal deformation is required.

Electrical circuit humming/panel buzzing: A low level noise is generated from a high-speed switching circuit, which supplies a large amount of current to operate a product. It varies depending on the product. This generated sound does not affect the performance and reliability of the product.



For LCD TV

If the TV feels cold to the touch, there may be a small "flicker" when it is turned on. This is normal, there is nothing wrong with TV.

Some minute dot defects may be visible on the screen, appearing as tiny red, green, or blue spots. However, they have no adverse effect on the monitor's performance.

Avoid touching the LCD screen or holding your finger(s) against it for long periods of time. Doing so may produce some temporary distortion effects on the screen.

ON DISPOSAL

(Only Hg lamp used LCD TV)

The fluorescent lamp used in this product contains a small amount of mercury. Do not dispose of this product with general household waste. Disposal of this product must be carried out in accordance to the regulations of your local authority.

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FEATURE OF THIS TV



HDMI, the HDMI logo and High-Definition Multimedia Interface are trademarks or registered trademarks of HDMI Licensing LLC."



LG TV include a unique invisible speaker system, Invisible tuned by renowned audio expert, Mr. Mark Levinson. Speakers are embedded in strategic spots behind the front cabinet and use minute vibrations to turn the entire front bezel into the speaker system. The result is a clean, polished look, and enhanced audio by increasing the "sweet spot", giving a wider and richer sound field.

IMPORTANT INFORMATION TO PREVENT "IMAGE BURN / BURN-IN" ON YOUR TV SCREEN

- When a fixed image (e.g. logos, screen menus, video game, and computer display) is displayed on the TV for an extended period, it can become permanently imprinted on the screen. This phenomenon is known as "image burn" or "burn-in." Image burn is not covered under the manufacturer's warranty.
- In order to prevent image burn, avoid displaying a fixed image on your TV screen for a prolonged period (2 or more hours for LCD, 1 or more hours for Plasma).
- Image burn can also occur on the letterboxed areas of your TV if you use the 4:3 aspect ratio setting for an extended period.







PREPARATION

ACCESSORIES

Ensure that the following accessories are included with your TV. If an accessory is missing, please contact the dealer where you purchased the TV.

The accessories included may differ from the images below.











Owner's Manual

Remote Control

Power Cord

Batteries (Some models)

RF Adapter (Some models)

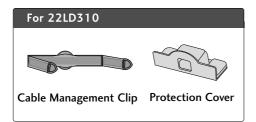
You must connect it to the antenna wire after fixing in Antenna Input.
This adapter is For supplied in **Argentina**.

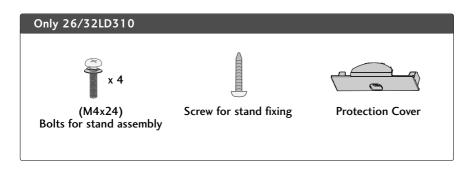
Not included with all models



Polishing Cloth

- * Wipe spots on the exterior only with the polishing cloth.
- * Do not wipe roughly when removing stains. Excessive pressure may cause scratches or discoloration.

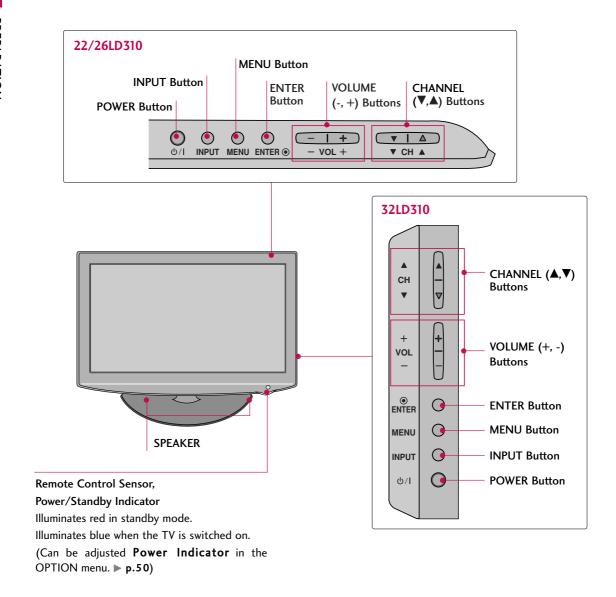




PREPARATION

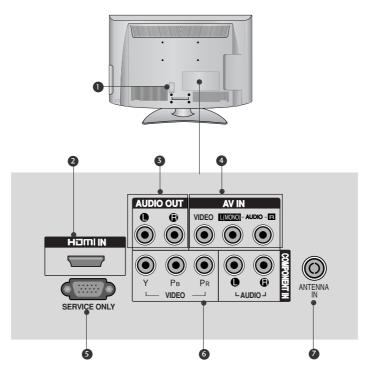
FRONT PANEL INFORMATION

■ Image shown may differ from your TV.



BACK PANEL INFORMATION

■ Image shown may differ from your TV.



- Power Cord Socket This TV operates on an AC power. The voltage is indicated on the Specifications page. Never attempt to operate the TV on DC power.
- 2 HDMI Input Connect a HDMI signal to HDMI IN. This TV does not support DVI(VIDEO) signal using DVI to HDMI cable.
- 3 Audio Output
 Connect an external amplifier, or add a subwoofer to your surround sound system.
- 4 Audio/Video Input (AV IN) Connect audio/video output from an external device to these jacks.

- **5** SERVICE ONLY PORT
- Component Input Connect a component video/audio device to these jacks.
- Antenna Input Connect RF antenna to this jack.

PREPARATION

STAND INSTRUCTIONS (For 22LD310)

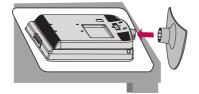
■ Image shown may differ from your TV.

INSTALLATION

Carefully place the TV screen side down on a cushioned surface to protect the screen from damage.



Assemble the TV as shown until you hear it click.

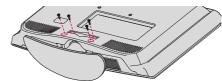


DETACHMENT

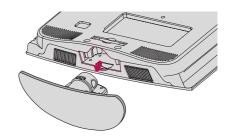
Carefully place the TV screen side down on a cushioned surface to protect the screen from damage.



Loose the bolts from TV.



Oetach the stand from TV.



PROTECTION COVER

Insert the **PROTECTION COVER** into the TV.



Fix the 4 bolts securely using the holes in the back of the TV.



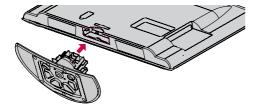
STAND INSTRUCTIONS (For 26/32LD310)

INSTALLATION

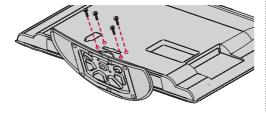
1 Carefully place the TV screen side down on a cushioned surface to protect the screen from damage.



Assemble the TV as shown.



Fix the 4 bolts securely using the holes in the back of the TV.



NOTE

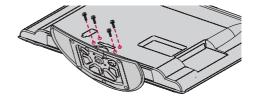
▶ When assembling the desk type stand, make sure the bolt is fully tightened (If not tightened fully, the TV can tilt forward after the product installation). Do not over tighten.

DETACHMENT

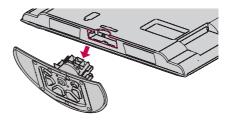
Carefully place the TV screen side down on a cushioned surface to protect the screen from damage.



Loose the bolts from TV.



Detach the stand from TV.



PROTECTION COVER

After removing the stand, install the included **protection cover** over the hole for the stand. Press the **PROTECTION COVER** into the TV until you hear it click.



PREPARATION

VESA WALL MOUNTING

Install your wall mount on a solid wall perpendicular to the floor. When attaching to other building materials, please contact your nearest installer.

If installed on a ceiling or slanted wall, it may fall and result in severe personal injury.

We recommend that you use an LG brand wall mount when mounting the TV to a wall.

LG recommends that wall mounting be performed by a qualified professional installer.

Model	VESA (A * B)	Standard Screw	Quantity	Wall Mounting Bracket (sold separately)
22LD310	100 * 100	M4	4	RW 120
26LD310	200 100 144			RW230
32LD310	200 * 100	M4	4	RW230 AW-47LG30M

NOTE

- ► Screw length needed depends on the wall mount used. For further information, refer to the instructions included with the mount.
- ► Standard dimensions for wall mount kits are shown in the table.
- ▶ When purchasing our wall mount kit, a detailed installation manual and all parts necessary for assembly are provided.
- ▶ Do not use screws longer then the standard dimension, as they may cause damage to the inside to
- ► For wall mounts that do not comply with the VESA

- standard screw specifications, the length of the screws may differ depending on their specifications.
- Do not use screws that do not comply with the VESA standard screw specifications.
 - Do not use fasten the screws too strongly, this may damage the TV or cause the TV to a fall, leading to personal injury. LG is not liable for these kinds of accidents.
- LG is not liable for TV damage or personal injury when a non-VESA or non specified wall mount is used or the consumer fails to follow the TV installation instructions.

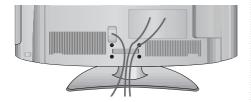
▲ CAUTION ▶ Do not install your wall mount kit while your TV is turned on. It may result in personal injury due to electric shock.

CABLE MANAGEMENT

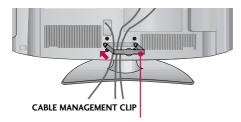
■ Image shown may differ from your TV.

For 22LD310

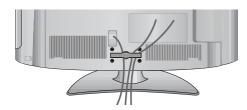
Connect the cables as necessary.
To connect additional equipment, see the EXTERNAL EQUIPMENT SETUP section.



2 Install the CABLE MANAGEMENT CLIP as shown.



Fit the CABLE MANAGEMENT CLIP as shown.



How to remove the CABLE MANAGEMENT CLIP

► Hold the CABLE MAN-AGEMENT CLIP with both hands and pull it backward.

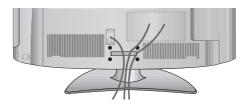


NOTE

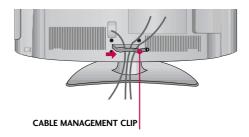
- ▶ Do not hold the CABLE MANAGEMENT CLIP when moving the TV.
 - If the TV is dropped, you may be injured or the product may be broken.

For 26/32LD310

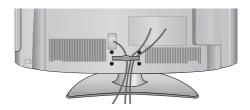
Connect the cables as necessary.
To connect additional equipment, see the EXTERNAL EQUIPMENT SETUP section.



2 Install the CABLE MANAGEMENT CLIP as shown.



Put the cables inside the CABLE MANAGE-MENT CLIP and snap it closed.

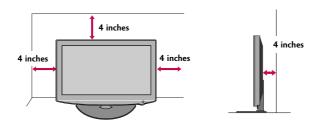


PREPARATION

DESKTOP PEDESTAL INSTALLATION

■ Image shown may differ from your TV.

For proper ventilation, allow a clearance of 4 inches on all four sides from the wall.

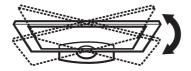




- ▶ Ensure adequate ventilation by following the clearance recommendations.
- ▶ Do not mount near or above any type of heat source.

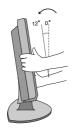
SWIVEL STAND (Except 22LD310)

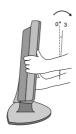
After installing the TV, you can adjust the TV set manually to the left or right direction by 20 degrees to suit your viewing position.



POSITIONING YOUR DISPLAY (For 22LD310)

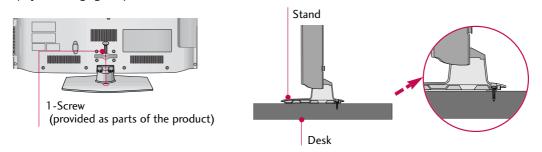
- Here shown may be somewhat different from your TV.
- Adjust the position of the panel in various ways for maximum comfort.
- Tilt range





ATTACHING THE TV TO A DESK (Except 22LD310)

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



▲ WARNING

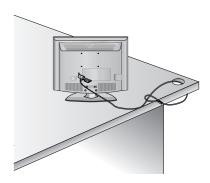
▶ To prevent TV from falling over, the TV should be securely attached to the floor/wall per installation instructions. Tipping, shaking, or rocking the machine may cause injury.

KENSINGTON SECURITY SYSTEM

- This feature is not available for all models.
- The TV is equipped with a Kensington Security System connector on the back panel. Connect the Kensington Security System cable as shown below.
- For the detailed installation and use of the Kensington Security System, refer to the user's guide provided with the Kensington Security System.

For further information, contact http://www.kensington.com, the internet homepage of the Kensington company. Kensington sells security systems for expensive electronic equipment such as notebook PCs and LCD projectors.

NOTE: The Kensington Security System is an optional accessory.



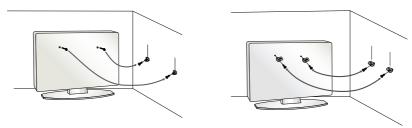
PREPARATION

SECURING THE TV TO THE WALL TO PREVENT FALLING WHEN THE TV IS USED ON A STAND

- You should purchase necessary components to prevent the TV from tipping over (when not using a wall mount).
- Image shown may differ from your TV.

We recommend that you set up the TV close to a wall so it cannot fall over if pushed backwards. Additionally, we recommend that the TV be attached to a wall so it cannot be pulled in a forward direction, potentially causing injury or damaging the product.

Caution: Please make sure that children don't climb on or hang from the TV.



- Insert the eye-bolts (or TV brackets and bolts) to tighten the product to the wall as shown in the picture.
 - * If your product has the bolts in the eye-bolts position before inserting the eye-bolts, loosen the bolts.
 - * Insert the eye-bolts or TV brackets/bolts and tighten them securely in the upper holes.

 Secure the wall brackets with the bolts (sold separately) to the wall. Match the height of the bracket that is mounted on the wall to the holes in the product.

Ensure the eye-bolts or brackets are tightened securely.



■ Use a sturdy rope (sold separately) to tie the product. It is safer to tie the rope so it becomes horizontal between the wall and the product.

NOTE

- ▶ Use a platform or cabinet strong enough and large enough to support the size and weight of the TV.
- To use the TV safely make sure that the height of the bracket on the wall and the one on the TV are the same.

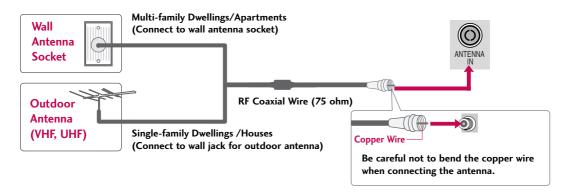
- To prevent damage do not connect to the power outlet until all connections are made between the devices.
- Image shown may differ from your TV.

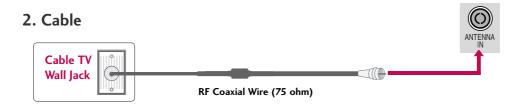
ANTENNA OR CABLE CONNECTION

1. Antenna (Analog)

Wall Antenna Socket or Outdoor Antenna without a Cable Box Connections.

For optimum picture quality, adjust antenna direction if needed.





- To improve the picture quality in a poor signal area, please purchase a signal amplifier and install properly.
- If the antenna needs to be split for two TV's, install a 2-Way Signal Splitter.
- If the antenna is not installed properly, contact your dealer for assistance.

EXTERNAL EQUIPMENT SETUP

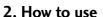
■ To prevent the equipment damage, never plug in any power cords until you have finished connecting all equipment.

HD RECEIVER SETUP

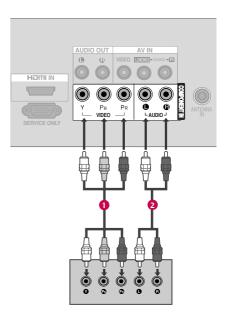
Component Connection

1. How to connect

- Connect the video outputs (Y, PB, PR) of the digital settop box to the **COMPONENT IN VIDEO** jacks on the TV. Match the jack colors (Y = green, PB = blue, and PR = red).
- Connect the audio output of the digital set-top box to the COMPONENT IN AUDIO jacks on the TV.



- Turn on the digital set-top box.
 (Refer to the owner's manual for the digital set-top box operation.)
- Select the Component input source on the TV using the INPUT button on the remote control.



Supported Resolutions

Signal	Component	HDMI	
480i	Yes	No	
480p	Yes	Yes	
720p	Yes	Yes	
1080i	No	No	
1080p	No	No	

Y, CB/PB, CR/PR

Resolution	Horizontal Frequency(KHz)	Vertical Frequency(Hz)
720x480i	15.73 15.75	59.94 60.00
720x576i	15.625	50.00
720x480p	31.47 31.50	59.94 60.00
720x576p	31.25	50.00
1280x720p	44.96 45.00 37.50	59.94 60.00 50.00

HDMI Connection

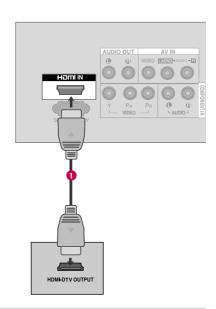
1. How to connect

- Connect the digital set-top box to the **HDMI IN** jack on the TV.
- No separate audio connection is necessary.

 HDMI supports both audio and video.

2. How to use

- Turn on the digital set-top box.(Refer to the owner's manual for the digital set-top box.)
- Select the HDMI input source on the TV using the INPUT button on the remote control.



NOTE

- ▶ If the DVD player supports Auto HDMI function, the output resolution of the source device will be automatically TV to 1280*720p.
- ▶ If the DVD player does not support Auto HDMI, you must TV the output resolution appropriately. To get the best picture quality, adjust the output resolution of the source device to 1280*720p.
- We recommend less than 10m for HDMI cable.
- ► HDMI Audio Supported Format: PCM
- ▶If the Auto setting is set to Dolby/DTS/Bitstream in some DVDP/STB, make sure to change the setting to PCM.
- ▶If the resolution of external equipment is over 1280*720p, there will be no picture on the TV.

HDMI-DTV

Resolution	Horizontal Frequency(kHz)	Vertical Frequency(Hz)	
720x480p	31.47 31.5	59.94 60.00	
720x576p	31.25	50.00	
1280x720p	44.96 45 37.5	59.94 60.00 50.00	

EXTERNAL EQUIPMENT SETUP

DVD SETUP

Component Connection

1. How to connect

- Connect the video outputs (Y, PB, PR) of the DVD to the **COMPONENT IN VIDEO** jacks on the TV. Match the jack colors (Y = green, PB = blue, and PR = red).
- Connect the audio outputs of the DVD to the COMPONENT IN AUDIO jacks on the TV.

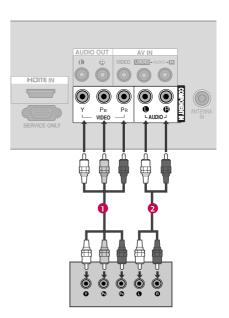
2. How to use

- Turn on the DVD player, insert a DVD.
- Select the Component input source on the TV using the INPUT button on the remote control.
- Refer to the DVD player's manual for operating instructions.

Component Input ports

To get better picture quality, connect a DVD player to the component input ports as shown below.

Component ports on the TV	Y	Рв	PR
	Y	Рв	PR
Video output ports on DVD player	Y	B-Y	R-Y
	Y	СЬ	Cr
	Y	Pb	Pr



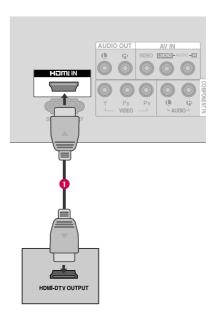
HDMI Connection

1. How to connect

- Connect the HDMI output of the DVD to the HDMI IN iack on the TV.
- No separated audio connection is necessary. HDMI supports both audio and video.

2. How to use

- Select the HDMI input source on the TV using the INPUT button on the remote control.
- Refer to the DVD player's manual for operating instructions.



NOTE

- ▶ If the DVD player supports Auto HDMI function, the output resolution of the source device will be automatically TV to 1280*720p.
- ▶ If the DVD player does not support Auto HDMI, you must TV the output resolution appropriately. To get the best picture quality, adjust the output resolution of the source device to 1280*720p.

 We recommend less than 10m for HDMI cable.
- ► HDMI Audio Supported Format: PCM
- ▶If the Auto setting is set to Dolby/DTS/Bitstream in some DVDP/STB, make sure to change the setting to PCM.
- ▶If the resolution of external equipment is over 1280*720p, there will be no picture on the TV.

EXTERNAL EQUIPMENT SETUP

VCR SETUP

■ To avoid picture noise (interference), allow adequate distance between the VCR and TV.

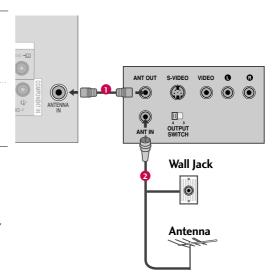
Antenna Connection

1. How to connect

- Connect the RF antenna out socket of the VCR to the **ANTENNA IN** socket on the TV.
- Connect the antenna cable to the RF antenna in socket of the VCR.

2. How to use

- Set VCR output switch to 3 or 4 and then tune TV to the same channel number.
- Insert a video tape into the VCR and press PLAY on the VCR. (Refer to the VCR owner's manual.)



Composite (RCA) Connection

1. How to connect

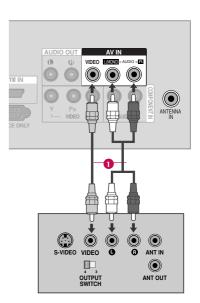
Connect the **AUDIO/VIDEO** jacks between TV and VCR. Match the jack colors (Video = yellow, Audio Left = white, and Audio Right = red).

2. How to use

- Insert a video tape into the VCR and press PLAY on the VCR. (Refer to the VCR owner's manual.)
- Select the AV input source on the TV using the INPUT button on the remote control.

NOTE

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



OTHER A/V SOURCE SETUP

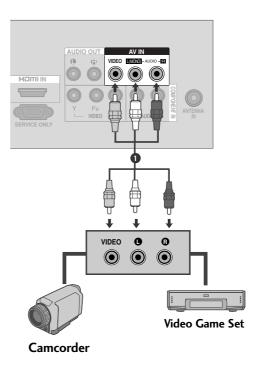
1. How to connect

Connect the AUDIO/VIDEO jacks between TV and external equipment. Match the jack colors.

> (Video = yellow, Audio Left = white, and Audio Right = red)

2. How to use

- Select the AV input source on the TV using the INPUT button on the remote control.
- Operate the corresponding external equipment.



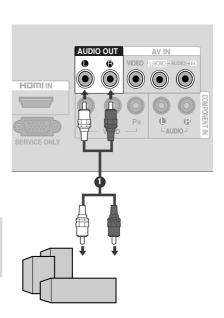
EXTERNAL STEREO SETUP

Use to connected either an external amplifier, or add a sub-woofer to your surround sound system.

- Connect the input jack of the stereo amplifier to the AUDIO OUT jacks on the TV.
- 2 Set up your speakers through your analog stereo amplifier, according to the instructions provided with the amplifier.



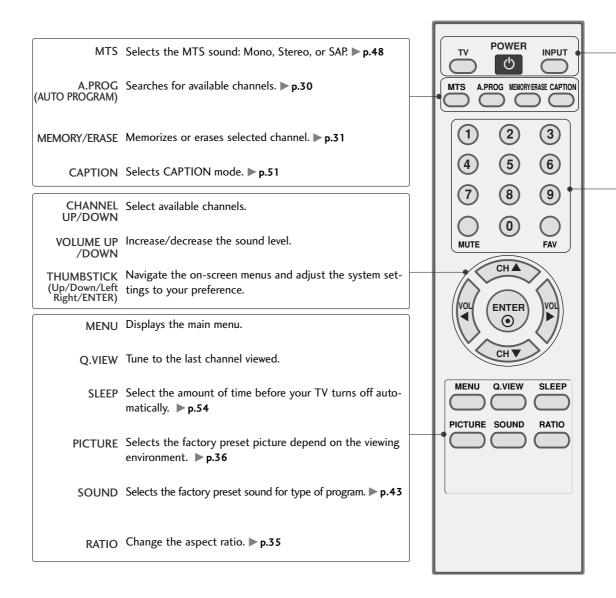
This function works in following mode: TV, AV, Component, HDMI



WATCHING TV / CHANNEL CONTROL

REMOTE CONTROL FUNCTIONS

When using the remote control, aim it at the remote control sensor on the TV.



POWER Turns your TV.

TV In AV, Component and HDMI input sources, screen returns to the last TV channel.

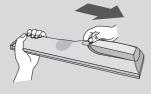
INPUT Select the desired input source.

NUMBER button

MUTE Switch the sound on or off.

FAV Scroll through the programmed Favorite channels. ▶ p.33

Installing Batteries



- Open the battery compartment cover on the back side and install the batteries matching correct polarity (+ with +, with -).
- Install two 1.5V AAA batteries. Don't mix old or used batteries with new ones.
- Close cover.

WATCHING TV / CHANNEL CONTROL

TURNING ON THE TV

- First, connect power cord correctly.
 - At this moment, the TV switches to standby mode.
 - In standby mode to turn TV on, press the ७/। button on the TV or press the POWER button on the remote control.
- 2 Select the viewing source by using the INPUT button on the remote control.
 - This TV is programmed to remember which power state it was last set to, even if the power cord is out.
- When finished using the TV, press the **POWER** button on the remote control. The TV reverts to standby mode.

NOTE

- ▶ If you intend to be away on vacation, disconnect the power plug from the wall power outlet.
- If you do not complete the **Initial setting**, it will appear whenever the TV is switched on until the **Initial setting** procedure is completed.

Initializing setup

If the OSD (On Screen Display) is displayed on the screen after turning on the TV, you can adjust the **Language**, **Auto Tuning**.

Note:

It will automatically disappear after approx. 40 seconds unless a button is pressed.

CHANNEL SELECTION

Press the CH (▲ or ▼) or NUMBER buttons to select a channel number.

VOLUME ADJUSTMENT

Adjust the volume to suit your personal preference.

- Press the VOL (◀ or ►) button to adjust the volume.
- If you want to switch the sound off, press the MUTE button.
- 3 You can cancel the Mute function by pressing the MUTE or VOL (◀ or ►) button.

ON-SCREEN MENUS SELECTION

- Press the MENU button and then use ▲ or ▼ button to select the each menu.
- Press the ▶ button and then use ▲ ▼ ◀ ▶ button to display the available menus.







Picture MENU



Audio MENU

11





Option MENU





Time MENU

WATCHING TV / CHANNEL CONTROL

CHANNEL SEARCH

Auto Tuning: Program Search

Auto Tuning should be used to memorize all the active channels in your area before you are able to use the TV.

There are two ways of storing channels in the TV's memory. You can use either.

One is called AUTO TUNING and the other is called MANUAL TUNING.

In AUTO TUNING mode, the TV will memorize the channels in ascending numerical order. If there are additional channels you want to add or delete, you can manually add or delete those channels with Manual Tuning.

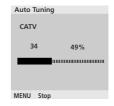
- Redo Auto Tuning if the TV is ever moved to another location.
- Auto Tuning will search for channels only through the Antenna jack.
- If channels numbers for broadcast over-the air TV and cable TV are duplicated where different channels have the same number, press the same number buttons again to toggle between:



(For example, press 17 to go to the channel, press 17 again to go to the duplicated channel.)



Press the **A.PROG** button. **AUTO TUNING** starts the channel search. If you want to stop auto tuning, press the **MENU** button. Only the channels found up to at that time are memorized.



■ You can also use the **Setup** menu to adjust **Auto Tuning**.





Manual Tuning: Adding/Deleting Channels

You can add or delete channels from the channel scan manually.

- Use the CH ▲ ▼ or NUMBER buttons to select the channel number you want to add or delete.
- 2 Press the MEMORY/ERASE button to select Memory or Erase.
- 3 Press the **ENTER** button to return to TV viewing.

■ You can also use the **Setup** menu to adjust **Manual Tuning**.







WATCHING TV / CHANNEL CONTROL

FINE TUNING ADJUSTMENT

Normally fine tuning is only necessary if reception is poor.

- Press the **MENU** button and then use ▲ or ▼ button to select the **Setup** menu.
- Press the ▶ button and then ▲ or ▼ button to select Manual Tuning.
- Press the ▶ button and then ▲ or ▼ button to select Fine.
- Press the ◀ or ▶ button to adjust the picture to your preference.
- Press the **ENTER** button to save.







FAVORITE CHANNELS SETUP

This function lets you select your favorite channels directly.

Repeatedly press the FAV button to select stored favorite channels.

- Press the **MENU** button and then use ▲ or ▼ button to select the **Setup** menu.
- Press the ▶ button and then ▲ or ▼ button to select Favorite Channel.
- Press the ▶ button and then ▲ or ▼ button to select the first favorite channel position.
- Use the ◀ or ▶ button to set the desired channel number for first favorite channel.
- Repeat steps 3 to 5 to memorize other favorite channels. You can store up to 8 channels.
- 6 Press the MENU button to move to the previous menu.







WATCHING TV / CHANNEL CONTROL

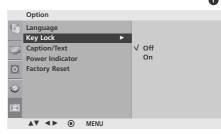
KEY LOCK

The TV can be set so that the remote control is needed to control it.

This feature can be used to prevent unauthorized viewing. This TV is programmed to remember which option it was last set to even if you turn the TV off.

- Press the **MENU** button and then use ▲ or ▼ button to select the **Option** menu.
- Press the ► button and then use ▲ or ▼ button to select **Key Lock**
- Press the ▶ button and then use ▲ or ▼ button to select On or Off.
- Press the MENU button to move to the previous menu.







- NOTE
- ▶ In **Key Lock** 'On', if the TV is turned off, press the ७/I button on the TV or **POWER** buttons on the remote control.
- ▶ With the **Key Lock On**, the display 'Key Lock On' appears on the screen if any button on the front panel is pressed while viewing the TV.

FACTORY RESET

Use to quickly reset all the menu options to their original factory preset values.

- Press the MENU button and then ▲ or ▼ button to select the Option menu.
- Press the ► button and then ▲ or ▼ button to select Factory Reset.
- Press the ▶ button and then ◀ or ▶ button to select YES or NO.







PICTURE CONTROL

PICTURE SIZE (ASPECT RATIO) CONTROL

This feature allows an analog picture with a 4:3 aspect ratio is displayed on your TV. When you receive an analog picture with a 4:3 aspect ratio on your 16:9 TV, you need to specify how the picture is to be displayed.

NOTE

▶ If a fixed image is displayed on the screen for a long time, the image could become imprinted on the screen and remain visible.

This phenomenon is common to all manufacturers and is not covered by warranty. Although, after watching video that did not fill the screen, any after-image from the black bars will normally dissipate after a few minutes.



Press the **RATIO** button repeatedly to select the desired picture format.

■ You can also adjust Aspect Ratio in the Picture menu.

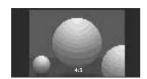
16:9

Following selection will lead you to adjust the picture horizontally, in a linear proportion, to fill the entire screen (useful for viewing 4:3 formatted DVDs).



4:3

Following selection will lead you to view a picture with an original 4:3 aspect ratio, with gray bars appearing at both the left and right sides.



Just Scan

Following selection will lead to you view the picture of best quality without loss of original picture in high resolution image.

Notes: If there are noise in original picture, you can see the noise at the edge.

Just Scan operates only in Component (720p), HDMI(720p) input source.



Zoom 1

Following selection will lead you to view the picture without any alternation, while filling the entire screen. However, the top and bottom portions of the picture will be cropped.

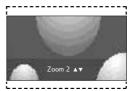
You can adjust the enlarge proportion of Zoom1 using \blacktriangle or \blacktriangledown button.



Zoom 2

Choose Zoom2 when you want the picture to be altered, both horizontally extended and vertically cropped. The picture taking a halfway trade off between alteration and screen coverage.

You can adjust the enlarge proportion of Zoom2 using \blacktriangle or \blacktriangledown button.



PICTURE CONTROL

PRESET PICTURE SETTINGS

(Picture Mode - Preset)

Picture Mode adjusts the TV for the best picture appearance. Select the preset value in the **Picture Mode** menu based on the program category.

Vivid, Standard, and Cinema are programmed for optimum picture reproduction at the factory and cannot be changed.

- Press the PICTURE button repeatedly to select the picture appearance setup option as below:

 Vivid, Standard, or Cinema.
- Press the **ENTER** button to return to TV viewing.
- You can also use the **Picture** menu to adjust **Picture Mode**.





MANUAL PICTURE ADJUSTMENT

Picture Mode-User Mode

Backlight To control the brightness of the screen, adjust the bright-

ness of LCD panel.

Contrast Adjusts the difference between light and dark.

Brightness Increases or decreases the amount of white in the picture. **Sharpness** Adjusts the level of crispness in the edges between the light

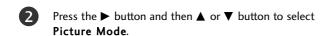
and dark areas of the picture. The lower the level, the softer

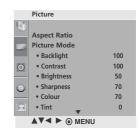
the image.

Color Adjusts intensity of all colors.

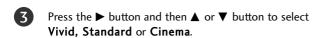
Tint Adjusts the balance between red and green levels.

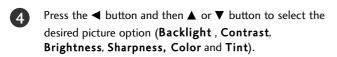
Press the **MENU** button and then ▲ or ▼ button to select the **Picture** menu.





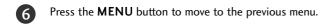
23

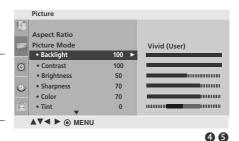






Press the ◀ or ▶ button to make appropriate adjustments.







PICTURE CONTROL

PICTURE IMPROVEMENT TECHNOLOGY

You can calibrate the screen for each Picture Mode or set the video value according to the special video screen.

You can set the video value differently for each input.

To reset to the factory default screen after making adjustments to each video mode, execute the "Picture Reset" function for each Picture Mode.

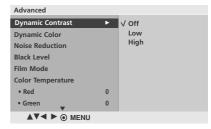
- Press the **MENU** button and then **△** or **▼** button to select the **Picture** menu.
- Press the ▶ button and then ▲ or ▼ button to select Advanced.











2

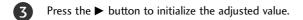
Dynamic Contrast (Off/Low/High)	■ Adjusts the contrast to keep it at the best level according to the brightness of the screen. The picture is improved by making bright parts brighter and dark parts darker.
Dynamic Color (Off/Low/High)	Adjusts screen colors so that they look livelier, richer and clearer. This feature enhances hue, saturation and luminance so that red, blue, green and white look more vivid.
Noise Reduction (Off/Low/High)	■ Reduces screen noise without compromising video quality.
Black Level (Low/High)	Low: The reflection of the screen gets darker. High: The reflection of the screen gets brighter. Set black level of the screen to proper level.
Film Mode (On/Off)	■ Makes video clips recorded in film look more natural by eliminating judder effect.
Color Temperature (Cool/Medium/Warm)	■ Set to warm to enhance hotter colors such as red, or set to cool to make picture bluish.

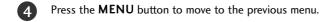
PICTURE CONTROL

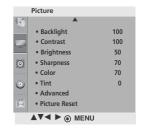
PICTURE RESET

Returns to the default factory setting for Picture Mode, Advanced.

- Press the **MENU** button and then ▲ or ▼ button to select the **Picture** menu.
- Press the ▶ button and then ▲ or ▼ button to select Picture Reset.











PICTURE CONTROL

SCREEN SETUP

Manual Configure - Adjustment for screen Position

This function works in the following mode when the signal exist: HDMI, Component

- Press the **MENU** button and then use ▲ or ▼ button to select the **Picture** menu.
- Press the ▶ button and then use ▲ or ▼ button to select Screen.
- Press the ▶ button and then use ▲ or ▼ button to select Manual Config..
- Press the ▶ button and then use ▲ or ▼ button to select H-Position or V-Position.
- Press the ◀ or ▶ button to make appropriate adjust-
- Press the **MENU** button to move to the previous menu.









Screen Reset (Reset to original factory settings)

This function operates in current mode. To initialize the adjusted value.

This function works in the following mode when the signal exist: HDMI, Component

- Press the **MENU** button and then use ▲ or ▼ button to select the **Picture** menu.
- Press the ▶ button and then use ▲ or ▼ button to select Screen.
- Press the ▶ button and then use ▲ or ▼ button to select **Reset**.
- Press the ▶ button.
- Press the MENU button to move to the previous menu.







PRESET SOUND SETTINGS - SOUND MODE

Sound Mode lets you enjoy the best sound without any Special adjustment as the TV sets the appropriate sound options based on the channel content.

Standard, **Music**, and **Cinema** are preset for optimum sound quality at the factory and are not adjustable.

Press the **SOUND** button repeatedly to select the appropriate sound setup as below :

Standard. Music. or Cinema.

- Press the **ENTER** button to return to TV viewing.
- You can also adjust **SOUND MODE** in the **Audio** menu.



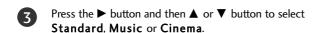


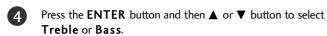
23

SOUND SETTING ADJUSTMENT -USER MODE

- Press the **MENU** button and then **▲** or **▼** button to select the **Audio** menu.
- Press the ▶ button and then ▲ or ▼ button to select **Sound Mode**.









Press the ◀ or ➤ button to make appropriate adjustments.



6 Press the MENU button to move to the previous menu.

AUDIO RESET

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

- Press the **MENU** button and then **△** or **▼** button to select the **Audio** menu.
- Press the ▶ button and then ▲ or ▼ button to select
- Press the ▶ button.
- Press the **MENU** button to move to the previous menu.





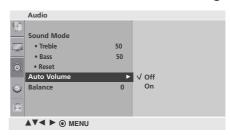


AUTO VOLUME LEVELER (AUTO VOLUME)

Auto Volume automatically remains on the same level of volume if you change programs.

- Press the **MENU** button and then ▲ or ▼ button to select the **Audio** menu.
- Press the ► button and then ▲ or ▼ button to select Auto Volume.
- Press the ▶ button and then ▲ or ▼ button to select On or Off.
- 4 Press the **MENU** button to move to the previous menu.



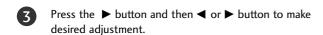


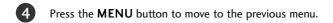


BALANCE

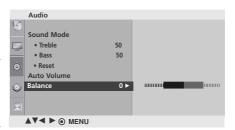
You can adjust the sound balance of the speakers to the preferred levels.

- Press the **MENU** button and then **△** or **▼** button to select the **Audio** menu.
- Press the ▶ button and then ▲ or ▼ button to select Balance.











STEREO/SAP BROADCASTS SETUP

The TV can receive MTS stereo programs and any SAP (Secondary Audio Program) that accompanies the stereo program; if the broadcaster transmits one additional sound signal in addition to the original one.

Mono: The primary language is heard from left and right speakers. Signal mode is mono.

Stereo: The primary language is heard from left and right speakers. Signal mode is stereo.

SAP: The secondary language is heard from left and right speakers in mono sound.

- Use the MTS button to select your desired MTS mode in analog signal. Each time you press the MTS button, Mono, Stereo, or SAP appear in turn.
- Press the ENTER button to return to TV viewing.

NOTE

- ▶ Select mono sound mode if the signal is not clear or in poor signal reception areas.
- ▶ Stereo, SAP modes are available only if included on the broadcast signal.

ON-SCREEN MENUS LANGUAGE SELECTION

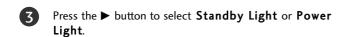
The menus can be shown on the screen in the selected language. First select your language.

- Press the MENU button and then use ▲ or ▼ button to select the Option menu.
- 2 Press the ▶ button and then use ▲ or ▼ button to select Language.
- Press the ▶ button and then use ◀ or ▶ button to select your desired language.
- 4 Press the **Enter** button to move to the previous menu.

POWER INDICATOR

It is function to control of IR LED(turn on/ off).

- Press the MENU button and then ▲ or ▼ button to select the Option menu.
- Press the ▶ button and then ▲ or ▼ button to select Power Indicator.



- Press the ▶ button and then ▲ or ▼ button to select On or Off.
- Press the MENU button to move to the previous menu.







4

CLOSED CAPTIONS

Closed captioning is a process which converts the audio portion of a television program into written words which then appear as subtitles on the television screen. Closed captions allow viewers to read the dialogue and narration of television programs.

Using Closed Captions

Captions are the subtitles of the dialogue and narration of television programs. For prerecorded programs, program dialogue can be arranged into captions in advance. Its possible to caption a live program by using a process called real-time captioning, which creates captions instantly. Real-time captioning is normally done by professional reporters using a machine shorthand



system and computer for translation into English. Captioning is an effective system for the hearingimpaired, and it can also aid in teaching language skills.

• The picture at left shows a typical caption.

Caption Tips

- Not all TV broadcasts include closed caption signals.
- Sometimes TV stations broadcast four different caption signals on the same channel. By selecting Mode1 to Mode2, you can choose which signal you view. Mode1 is usually the signal with the captions, while another mode might show demonstration or programming information.
- Your TV might not receive caption signals normally in the following situations.

1. Poor reception conditions are encountered:



• IGNITION:

Picture may flutter, drift, suffer from black spots, or horizontal streaking. Usually caused by interference from automobile ignition systems, neon lamps, electrical drills, and other electrical appliances.





Ghosts are caused when the TV signal splits and follows two paths. One is the direct path and the other is reflected off tall buildings, hills or other objects. Changing the direction or position of the antenna may improve reception.

• SNOW:



If your receiver is located at the weak, fringe area of a TV signal, your picture may be marred by small dots. It may be necessary to install a special antenna to improve the picture.

- 2. An old, bad, or illegally recorded tape is being played.
- Strong, random signals from a car or airplane interfere with the TV signal.
- 4. The signal from the antenna is weak.
- The program wasn't captioned when it was produced, transmitted, or taped.

Use the **CAPTION** button repeatedly to select your caption Mode 1, Mode 2, Text1, Text2, or Off.

Press the **ENTER** button to return to TV viewing.

■ You can also adjust Caption/Text in the Option menu.

TIME SETTING

CLOCK SETUP

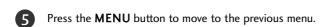
You must set the time correctly before using on/off timer function.

If current time setting is erased by a power failure or the TV is unplugged, reset the clock.

- Press the **MENU** button and then ▲ or ▼ button to select the **Time** menu.
- Press the ▶ button and then ▲ or ▼ button to select Clock.



- Press the ▶ button and then ▲ or ▼ button to set the hour.
- Press the ▶ button and then ▲ or ▼ button to set the minute.





AUTO ON/OFF TIME SETTING

The Off time function automatically switches the TV to standby at a preset time.

Two hours after the TV is switched on by the on time function it will automatically switch back to standby mode unless a button has been pressed.

Once the on time/off time is set, these functions operate daily at the preset time.

The Off time function overrides the On time function if both are set to the same time

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

- Press the MENU button and then ▲ or ▼ button to select the Time menu.
- Press the ▶ button and then ▲ or ▼ button to select On/Off Time.
 - To cancel On/Off Time function, select Off.
- Press the ▶ button and then ▲ or ▼ button to set the hour.
- Press the ▶ button and then ▲ or ▼ button to set the minutes.
- For On Time function only
 - Channel: Press the ▶ button and then ▲ or ▼ button to select the channel.
- 6 Press the MENU button to move to the previous menu.









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TIME SETTING

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.

- Press the **SLEEP** button repeatedly to select the number of minutes. First the ' of off' option appears on the screen, followed by the following sleep timer options: 10, 20, 30, 60, 90, 120, 180, and 240 minutes.
- When the number of minutes you want is displayed on the screen, press the **ENTER** button. The timer begins to count down from the number of minutes selected.
- To check the remaining minutes before the TV turns off, press the **SLEEP** button once.
- To cancel the Sleep Timer, press the **SLEEP** button repeatedly to select ' © off'.

APPENDIX

TROUBLESHOOTING

The operation does not work normally.		
The remote control doesn't work	 Check to see if there is any object between the product and the remote control causing obstruction. Ensure you are pointing the remote control 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. 	
Power is suddenly turned off	 Is the sleep timer set? Check the power control settings. Power interrupted. TV will be automatically turned off, in case of no signal for 15 minutes. 	

The video does not wor	k.
No picture &No sound	 Check whether the product is turned on. Try another channel. The problem may be with the broadcast. Is the power cord inserted into wall power outlet? Check your antenna direction and/or location. Test the wall power outlet, plug another product's power cord into the outlet where the product's power cord was plugged in.
Picture appears slowly after switching on	■ This is normal, the image is muted during the product startup process. Please contact your service center, if the picture has not appeared after five minutes.
No or poor color or poor picture	 Adjust Color in menu option. Keep a sufficient distance between the product and the VCR. Try another channel. The problem may be with the broadcast. Are the video cables installed properly? Activate any function to restore the brightness of the picture.
Horizontal/vertical bars or picture shaking	■ Check for local interference such as an electrical appliance or power tool.
Poor reception on some channels	 Station or cable product experiencing problems, tune to another station. Station signal is weak, reorient antenna to receive weaker station. Check for sources of possible interference.
Lines or streaks in pictures	■ Check antenna (Change the direction of the antenna).
No picture when connecting HDMI	■ Check HDMI cable over version 1.3. The HDMI cables don't support HDMI version 1.3, it cause flickers or no screen display. In this case use the latest cables that support HDMI version 1.3.

APPENDIX

The audio does not work.		
Picture OK & No sound	 Press the VOL or VOLUME button. Sound muted? Press MUTE button. Try another channel. The problem may be with the broadcast. Are the audio cables installed properly? 	
No output from one of the speakers	■ Adjust Balance in menu option.	
Unusual sound from inside the product	A change in ambient humidity or temperature may result in an unusual noise when the product is turned on or off and does not indicate a fault with the product.	
No sound when connecting HDMI or USB	 Check HDMI cable over version 1.3. Check USB cable over version 2.0. Use normal MP3 file. *This feature is not available for all models. 	

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

- 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

A 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

٨	MODELS	22LD3 (22LD310		
Dimensions (Width x Height x Depth)	With stand	533.4 mm x 397.0 mm x 171.0 mm (21.0 inch x 15.6 inch x 6.7 inch)		
	Without stand	533.4 mm x 351.7 mm x 65.0 mm (21.0 inch x 13.8 inch x 2.6 inch)		
Weight	With stand Without stand	4.8 kg / 10.6 lbs 4.6 kg / 10.1 lbs		
Current Value		0.9 <i>i</i> 26LD310	A 32LD310	
М	ODELS	(26LD310-MA)	(32LD310-MA)	
Dimensions (Width x Height x Depth)	With stand	667.0 mm x 504.0 mm x 224.0 mm (26.3 inch x 19.8 inch x 8.8 inch)	805.0 mm x 583.0 mm x 224.0 mm (31.7 inch x 23.0 inch x 8.8 inch)	
	Without stand	667.0 mm x 446.2 mm x 80.0 mm (26.3 inch x 17.6 inch x 3.1 inch)	805.0 mm x 528.0 mm x 79.9mm (31.7 inch x 20.8 inch x 3.1 inch)	
Weight	With stand Without stand	8.9 kg / 19.6 lbs 7.8 kg / 17.2 lbs	11.5 kg / 25.4 lbs 10.4 kg / 23.0 lbs	
Current Value		1.1 A	1.5 A	
Power requirement Television System Program Coverage External Antenna Impedance		AC100-240V ~ 50/60Hz NTSC, PAL M-N VHF 2-13, UHF 14-69, CATV 1-125 75 ohm		
Environment	Operating Temperature Operating Humidity	32 ~ 104°F (0 ~ 40°C) Less than 80%		
condition	Storage Temperature Storage Humidity	-4 ~ 140°F (-20 ~ 60°C) Less than 85%		

 $[\]blacksquare$ The specifications shown above may be changed without prior notice for quality improvement.

IR CODES

Code (Hexa)	Remote control	Code (Hexa)	Remote control
OF	TV	44	ENTER
OB	INPUT	1A	Q.VIEW
08	POWER	52	SOUND
79	RATIO	4D	PICTURE
10-19	Number Key 0-9	39	CAPTION
09	MUTE	OE	SLEEP
02	VOL ►	54	A.PROG
03	VOL ◀	55	MEMORY/ERASE
00	CH ▲	1 E	FAV
01	CH ▼	OA	MTS
43	MENU		



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

MODEL	
SERIAL	