



**APPENDIX G**  
**: USER'S MANUAL**



**LG**  
Life's Good

## LCD TV OWNER'S MANUAL

|         |         |
|---------|---------|
| 19LD350 | 32LD450 |
| 22LD350 | 37LD450 |
| 26LD350 | 42LD450 |
| 32LD350 | 47LD450 |

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

The model and serial number of the TV is located on the back and one side of the TV.

Record it below should you ever need service.

**Model:**

**Serial:**



This product qualifies for ENERGY STAR in the "factory default (Home Use)" setting.

Changing the factory default settings or enabling other features may increase power consumption that could exceed the limits necessary to qualify for ENERGY STAR.

|                       |                      |
|-----------------------|----------------------|
| <b>1-800-243-0000</b> | USA, Consumer User   |
| <b>1-888-865-3026</b> | USA, Commercial User |
| <b>1-888-542-2623</b> | CANADA               |

LG Customer Information Center

P/NO : SAC? (0910-REV00)

# WARNING / CAUTION



**WARNING / CAUTION**  
RISK OF ELECTRIC SHOCK  
DO NOT OPEN



**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.**

## NOTE TO CABLE/TV INSTALLER

This reminder is provided to call the CATV system installer’s attention to Article 820-40 of the National Electric Code (U.S.A.). The code provides guidelines for proper grounding and, in particular, specifies that the cable ground shall be connected to the grounding system of the building, as close to the point of the cable entry as practical.

# WARNING / CAUTION

To prevent fire or shock hazards, do not expose this product to rain or moisture.

## FCC NOTICE

### Class B digital device

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment to an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

This device complies with part 15 of the FCC Rules.

Operation is subject to the following two conditions: (1) This device may not cause (harmful) interference, and (2) this device must accept any interference received, including interference that may cause undesired operation (of the device).

Any changes or modifications in construction of this device which are not expressly approved by the party responsible for compliance could void the user’s authority to operate the equipment.

## CAUTION

Do not attempt to modify this product in any way without written authorization from LG Electronics. Unauthorized modification could void the user’s authority to operate this product.

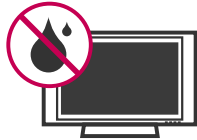
# SAFETY INSTRUCTIONS

## IMPORTANT SAFETY INSTRUCTIONS

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



**1** Do not use this apparatus near water.



**2** Clean only with dry cloth.



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



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



**5** Do not defeat the safety purpose of the polarized or grounding-type plug. A polarized plug has two blades with one wider than the other. A grounding type plug has two blades and a third grounding prong. The wide blade or the third prong are provided for your safety. If the provided plug does not fit into your outlet, consult an electrician for replacement of the obsolete outlet.



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



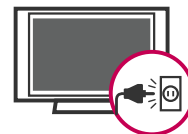
**7** Only use attachments/accessories specified by the manufacturer.



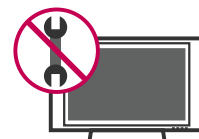
**8** Use only with the cart, stand, tripod, bracket, or table specified by the manufacturer, or sold with the apparatus. When a cart is used, use caution when moving the cart/apparatus combination to avoid injury from tip-over.



**9** Unplug this apparatus during lightning storms or when unused for long periods of time.



**10** Refer all servicing to qualified service personnel. Servicing is required when the apparatus has been damaged in any way, such as power-supply 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

**11** Never touch this apparatus or antenna during a thunder or lightning storm.

**12** 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.

**13** Do not allow an impact shock or any objects to fall into the product, and do not drop onto the screen with something.

**14** 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 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.



**15** 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.



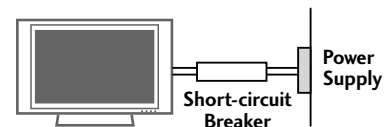
**16** Do not expose to dripping or splashing and do not place objects filled with liquids, such as vases, cups, etc. on or over the apparatus (e.g. on shelves above the unit).



**17** 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, lightning rods, or gas pipes.



**18** DISCONNECTING DEVICE FROM MAINS

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

**19** 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.

## 20 ANTENNAS

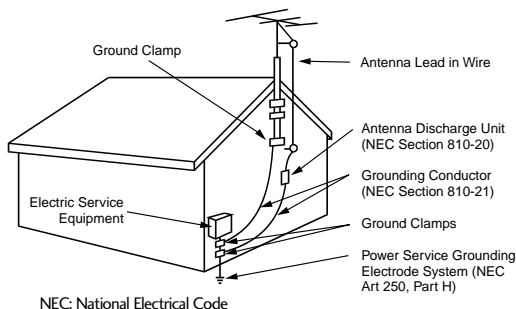
### Outdoor antenna grounding

If an outdoor antenna is installed, follow the precautions below. An outdoor antenna system should not be located in the vicinity of overhead power lines or other electric light or power circuits, or where it can come in contact with such power lines or circuits as death or serious injury can occur.

Be sure the antenna system is grounded so as to provide some protection against voltage surges and built-up static charges.

Section 810 of the National Electrical Code (NEC) in the U.S.A. provides information with respect to proper grounding of the mast and supporting structure, grounding of the lead-in wire to an antenna discharge unit, size of grounding conductors, location of antenna discharge unit, connection to grounding electrodes and requirements for the grounding electrode.

### Antenna grounding according to the National Electrical Code, ANSI/NFPA 70



## 21 Cleaning

When cleaning, unplug the power cord and scrub 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.

## 22 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.

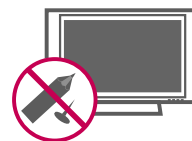
## 23 Ventilation

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.

24 Take care not to touch the ventilation openings. When watching the TV for a long period, the ventilation openings may become hot.

25 If you smell smoke or other odors coming from the TV or hear strange sounds, unplug the power cord contact an authorized service center.

26 Do not press strongly upon the panel with hand or sharp object such as nail, pencil or pen, or make a scratch on it.



27 Keep the product away from direct sunlight.

## 28 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



High-definition television. High-resolution digital television broadcast and playback system composed of roughly a million or more pixels, 16:9 aspect-ratio screens, and AC3 digital audio. A subset of digital television, HDTV formats include 1080i and 720p resolutions.



This TV contains the detailed calibrations necessary for professional certification by the Imaging Science Foundation. The resulting ISF "day" and "night" modes will then be accessible by the user to experience the best their LG HDTV has to offer.

**CALIBRATE LIKE A PRO:** Sophisticated and detailed calibrations can be made through the ISFccc mode.

Detailed calibration requires a licensed technician.

Please contact your local dealer to inquire about an ISF certified technician.



The AV Mode optimizes the picture into Cinema, Sports, and game Mode according to the video and audio content. The viewer has the ability to quickly choose the correct mode for the picture they are viewing.



Manufactured under license from Dolby Laboratories. "Dolby" and the double-D symbol are trademarks of Dolby Laboratories.



Automatically enhances and amplifies the sound of human voice frequency range to help keep dialogue audible when background noise swells.



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

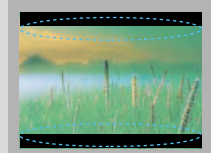
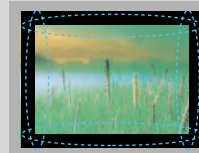
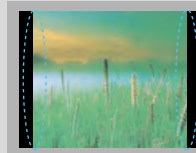


LG TV include a unique invisible speaker system, tuned by renowned audio expert, Mr. Mark Levinson. Speakers are embedded in strategic spots behind the front cabinet and use minute vibrations to turn the entire front bezel into the speaker system. The result is a clean, polished look, and enhanced audio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

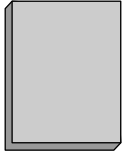


# PREPARATION

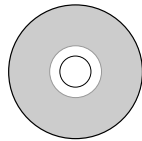
## ACCESSORIES

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

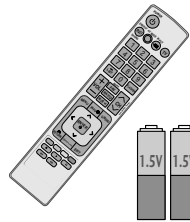
The accessories included may differ from the images below.



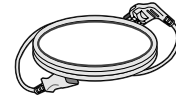
Owner's Manual



CD Manual

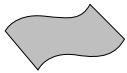


Remote Control,  
Batteries



Power Cord

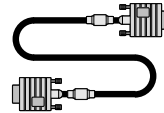
### Not included with all models



Polishing Cloth

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

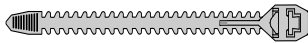
### Option Extras



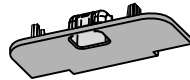
D-sub 15 pin Cable

When using the VGA (D-sub 15 pin cable) PC connection, the user must use shielded signal interface cables with ferrite cores to maintain standards compliance.

### For 19/22LD350



Cable Holder  
(Refer to P.23)

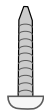


Protection Cover  
(Refer to P.17)

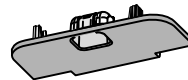
### Only 26/32LD350



(M4x20)  
Bolts for stand assembly  
(Refer to P.18)



Screw for stand fixing  
(Refer to P.27)

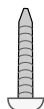


Protection Cover  
(Refer to P.19)

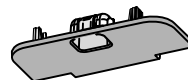
### Only 32/37/42/47LD450



(M4x20)  
Bolts for stand assembly  
(Refer to P.20)



Screw for stand fixing  
(Refer to P.27)



Protection Cover  
(Refer to P.21)

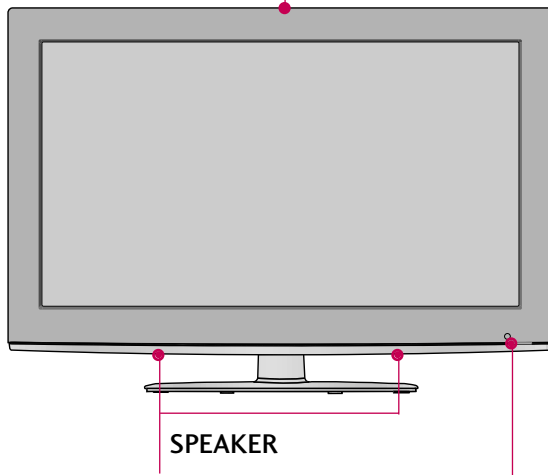
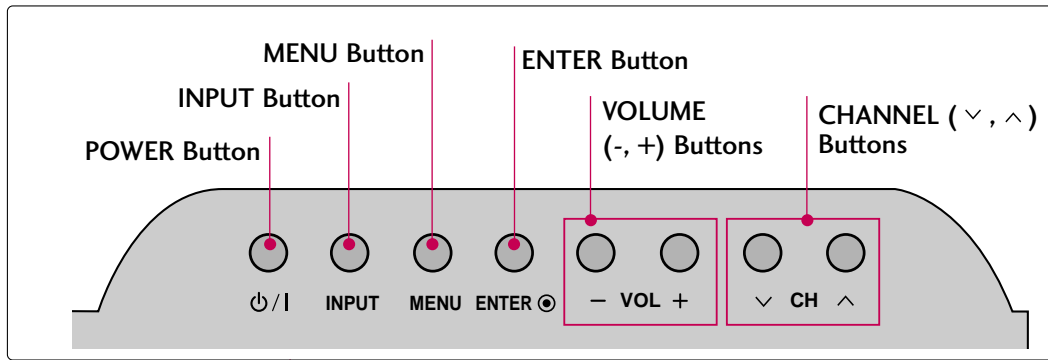
# PREPARATION

## FRONT PANEL INFORMATION

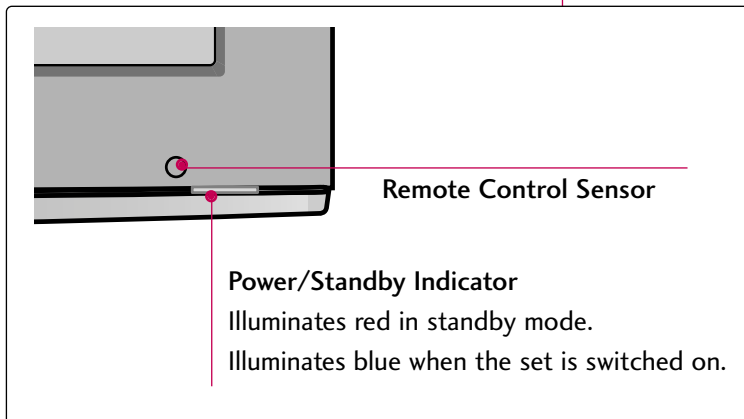
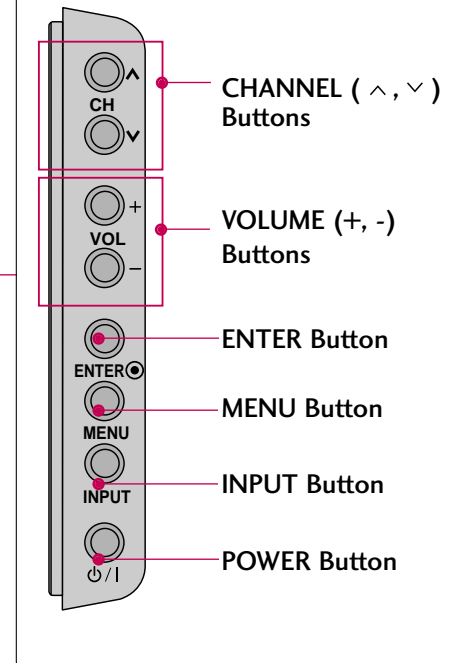
■ Image shown may differ from your TV.

PREPARATION

### 19/22LD350

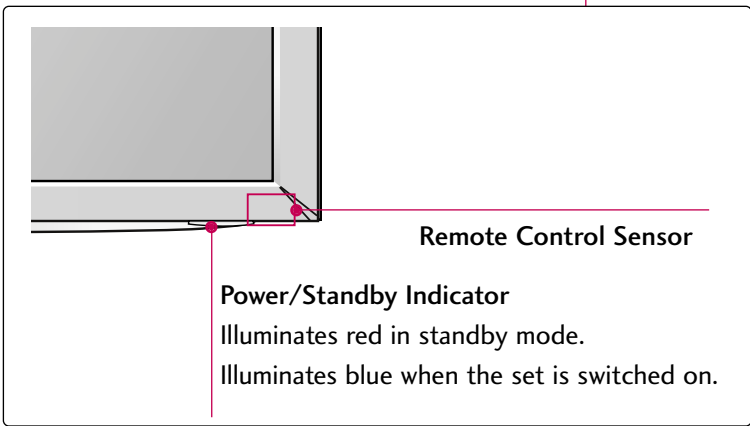
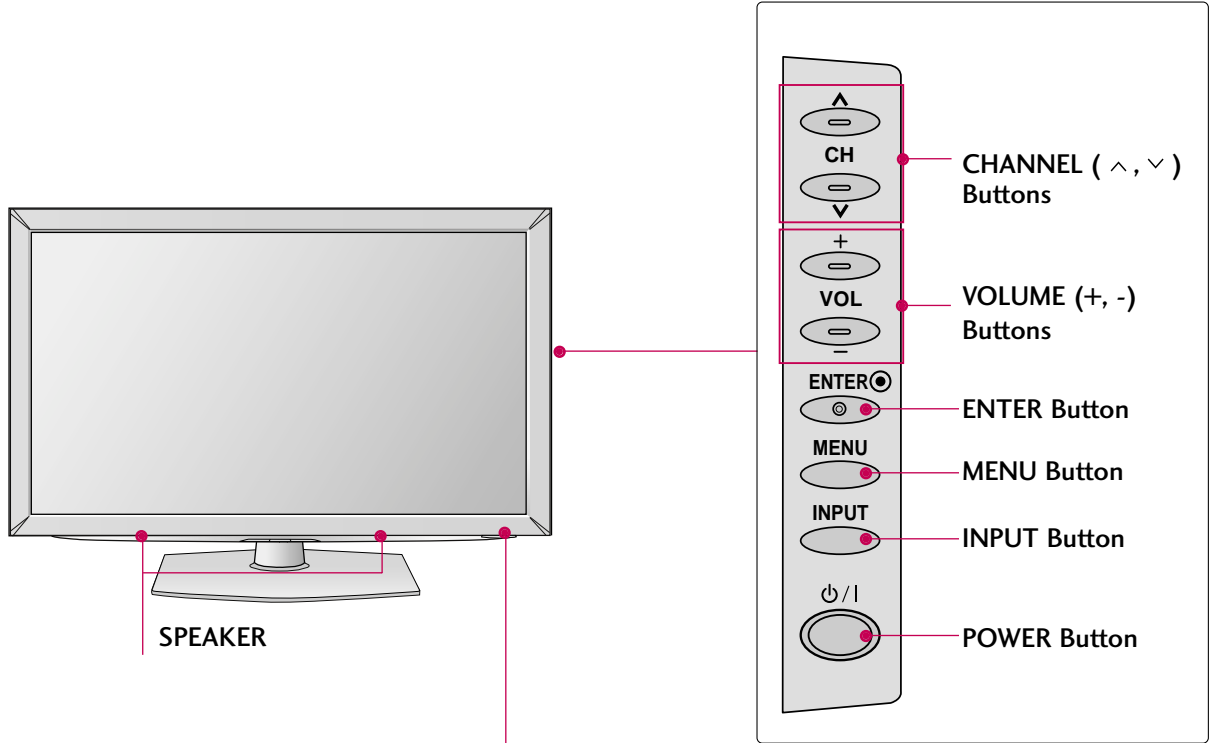


### 26/32LD350



■ Image shown may differ from your TV.

32/37/42/47LD450

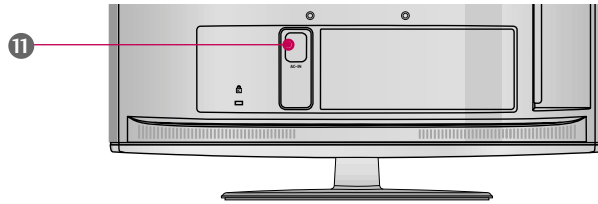


# PREPARATION

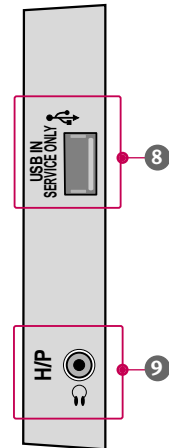
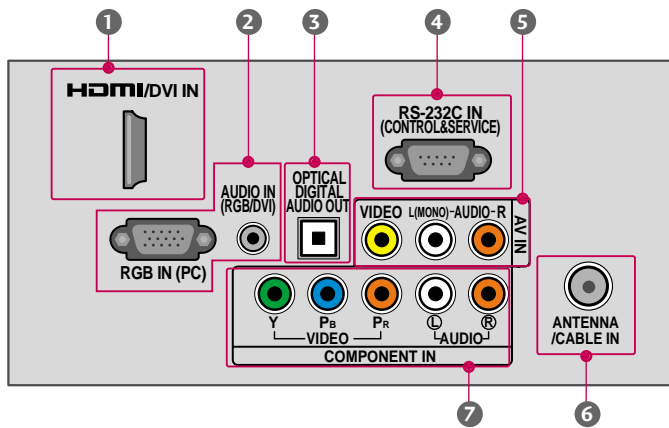
## BACK PANEL INFORMATION

Image shown may differ from your TV.

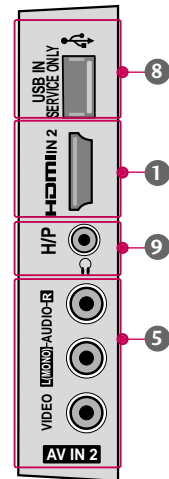
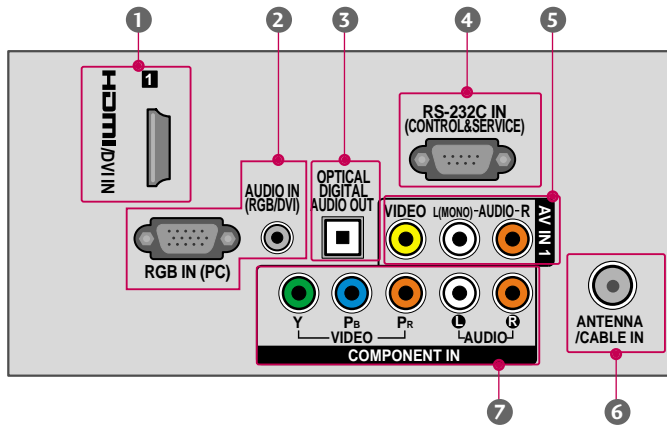
PREPARATION



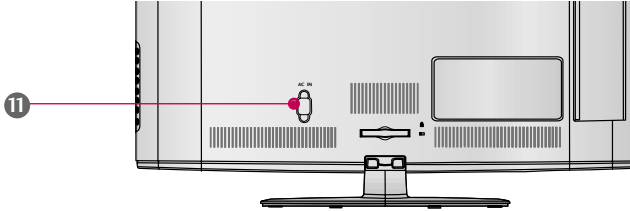
### 19/22LD350



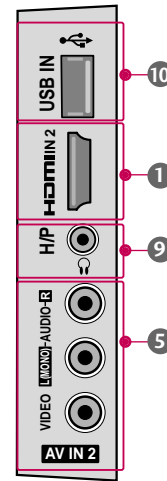
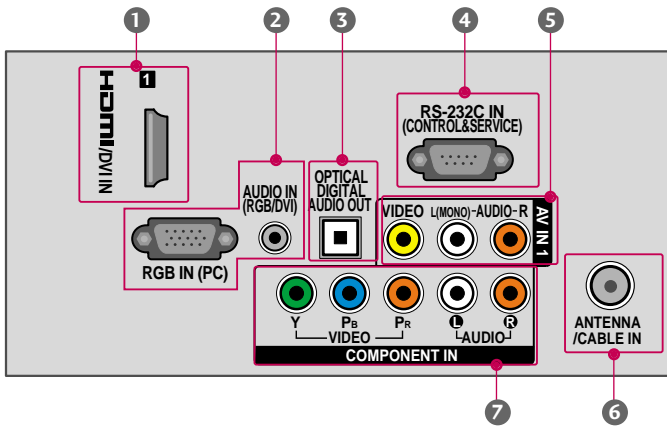
### 26LD350



■ Image shown may differ from your TV.



32LD350



- 1 HDMI/DVI IN, HDMI IN**  
Digital Connection.  
Supports HD video and Digital audio. Doesn't support 480i.  
Accepts DVI video using an adapter or HDMI to DVI cable (not included).
- 2 RGB IN (PC)**  
Analog PC Connection. Uses a D-sub 15 pin cable (VGA cable).  
**AUDIO IN (RGB/DVI)**  
1/8" (0.32 cm) headphone jack for analog PC audio input.
- 3 OPTICAL DIGITAL AUDIO OUT**  
Digital optical audio output for use with amps and home theater systems.  
Note: In standby mode, this port doesn't work.
- 4 RS-232C IN (CONTROL & SERVICE) PORT**  
Used by third party devices.  
This port is used for Service or Hotel mode.
- 5 AV (Audio/Video) IN**  
Analog composite connection. Supports standard definition video only (480i).
- 6 ANTENNA/CABLE IN**  
Connect over-the air signals to this jack.  
Connect cable signals to this jack.
- 7 COMPONENT IN**  
Analog Connection.  
Supports HD.  
Uses a red, green, and blue cable for video & red and white for audio.
- 8 USB IN SERVICE ONLY**  
Used for software updates.
- 9 HEADPHONE INPUT**  
Plug the headphone into the headphone socket.
- 10 USB INPUT**  
Used for viewing photos and listening to MP3s.
- 11 Power Cord Socket**  
For operation with AC power.  
Caution: Never attempt to operate the TV on DC power.

# PREPARATION

## VESA WALL MOUNTING

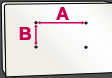
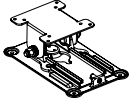
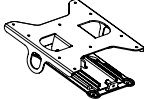
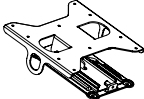
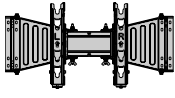
Install your wall mount on a solid wall perpendicular to the floor. When attaching to other building materials, please contact your nearest installer.

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.

PREPARATION

| Model                           | VESA (A * B)<br> | Standard Screw | Quantity | Wall Mounting Bracket<br>(sold separately)  |
|---------------------------------|---|----------------|----------|---|
| 19LD350,<br>22LD350             | 100 * 100   | M4             | 4        | <br>RW120        |
| 26LD350                         | 200 * 100   | M4             | 4        | <br>RW230        |
| 32LD350,<br>32LD450             |   |                |          | <br>RW230      |
| 37LD450,<br>42LD450,<br>47LD450 | 200 * 200   | M6             | 4        | <br>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 than the standard dimension, as they may cause damage to the inside to the TV.
- ▶ 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.

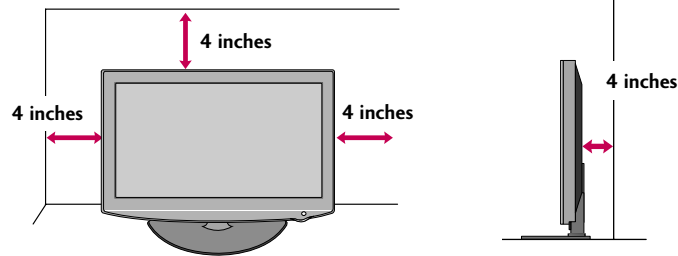


# PREPARATION

## 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.

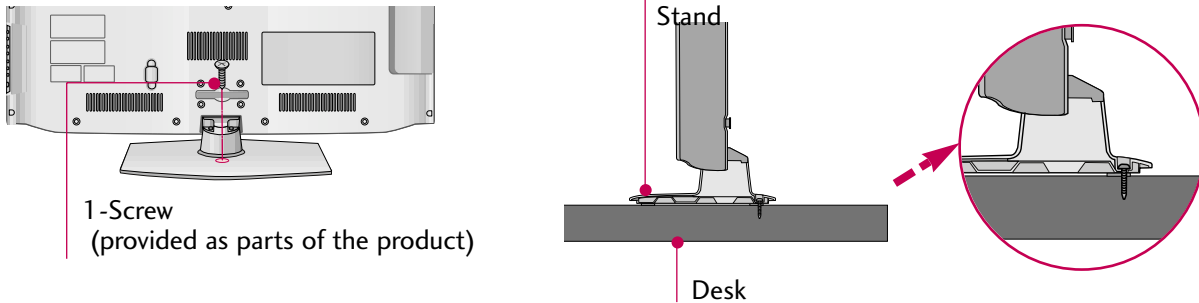


### **CAUTION**

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

## ATTACHING THE TV TO A DESK (Except 19/22LD350)

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.



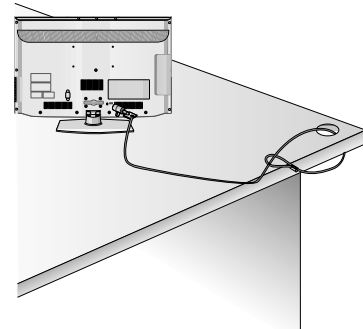
### ⚠ WARNING

- ▶ 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

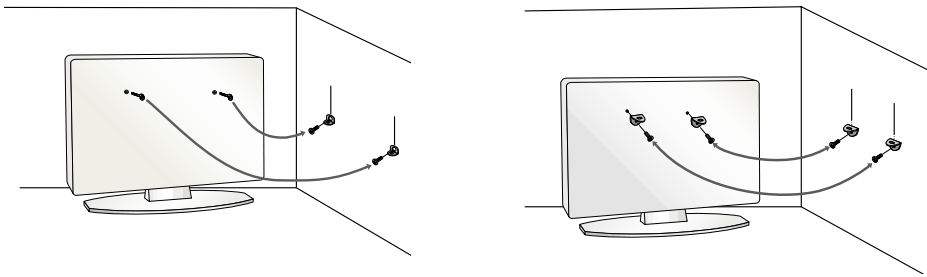
PREPARATION

## 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.



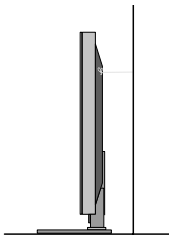
- Insert the eye-bolts (or TV brackets and bolts) to tighten the product to the wall as shown in the picture.

\* 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.

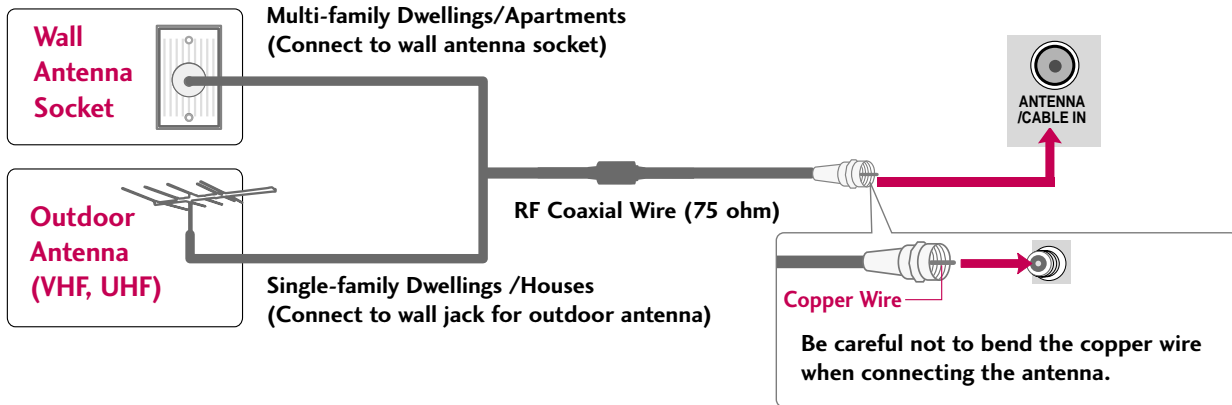
- To prevent damage do not connect to the power outlet until all connections are made between the devices.
- Image shown may differ from your TV.

## ANTENNA OR CABLE CONNECTION

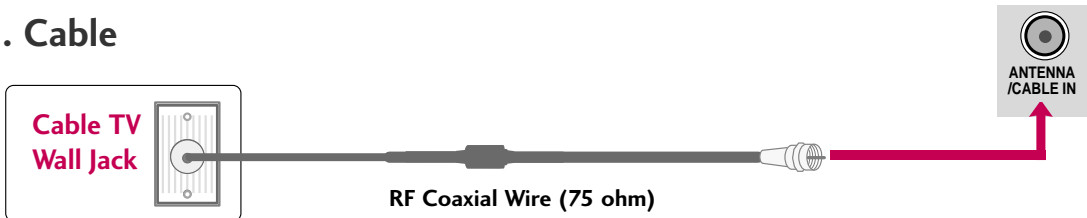
### 1. Antenna (Analog or Digital)

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

For optimum picture quality, adjust antenna direction if needed.



### 2. Cable



- 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.
- This part of EXTERNAL EQUIPMENT SETUP mainly use picture for 32LD350.

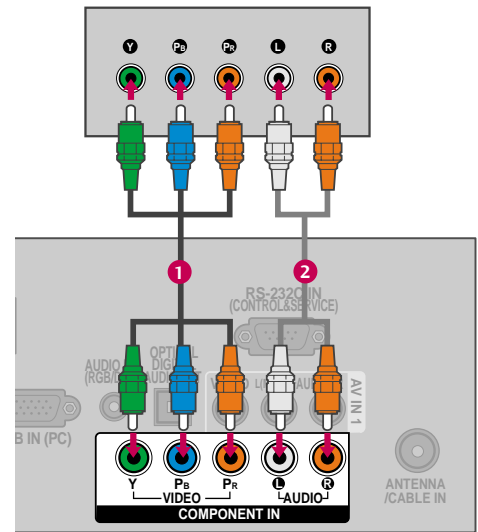
## HD RECEIVER SETUP

This TV can receive digital over-the-air/digital cable signals without an external digital set-top box. However, if you do receive digital signals from a digital set-top box or other digital external device.

### Component Connection

#### 1. How to connect

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



#### 2. How to use

- 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  | Yes       | Yes  |
| 1080p  | Yes       | Yes  |

#### Y, CB/PB, CR/PR

| Resolution | Horizontal Frequency(KHz) | Vertical Frequency(Hz) |
|------------|---------------------------|------------------------|
| 720x480i   | 15.73                     | 59.94                  |
|            | 15.73                     | 60.00                  |
| 720x480p   | 31.47                     | 59.94                  |
|            | 31.50                     | 60.00                  |
| 1280x720p  | 44.96                     | 59.94                  |
|            | 45.00                     | 60.00                  |
| 1920x1080i | 33.72                     | 59.94                  |
|            | 33.75                     | 60.00                  |
| 1920x1080p | 26.97                     | 23.976                 |
|            | 27.00                     | 24.00                  |
|            | 33.71                     | 29.97                  |
|            | 33.75                     | 30.00                  |
|            | 67.432                    | 59.94                  |
|            | 67.50                     | 60.00                  |

## HDMI Connection

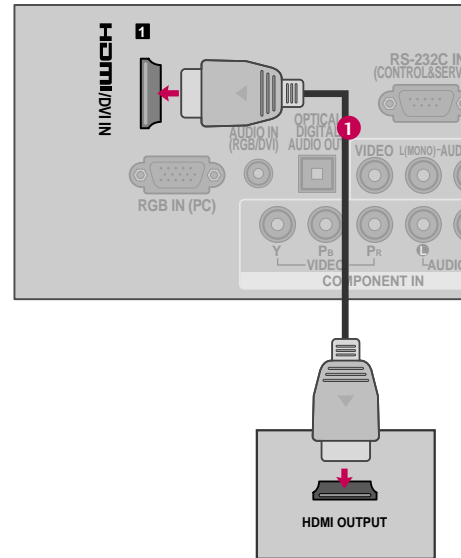
### 1. How to connect

- 1 Connect the digital set-top box to the **HDMI/DVI IN** or **HDMI/DVI IN 1/2\*** jack on the TV.
- 2 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** or **HDMI 1/2\*** input source on the TV using the **INPUT** button on the remote control.

\* **HDMI 2:** For 26/32LD350



#### ! NOTE

- ▶ Check HDMI cable over version 1.3.  
If the HDMI cables don't support HDMI version 1.3, it can cause flickers or no screen display. In this case use the latest cables that support HDMI version 1.3.

#### HDMI-DTV

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

# EXTERNAL EQUIPMENT SETUP

## DVI to HDMI Connection

### 1. How to connect

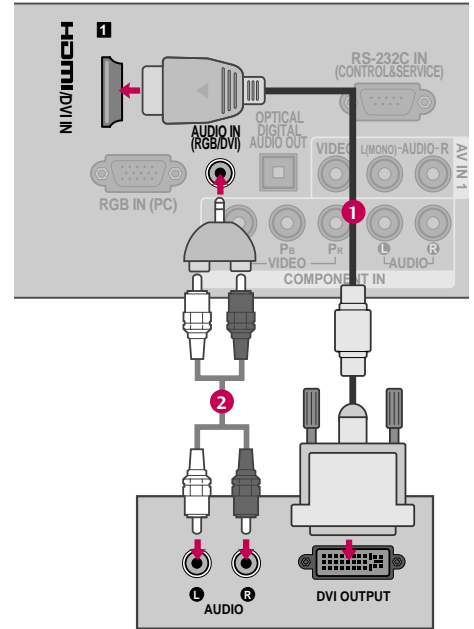
- 1 Connect the DVI output of the digital set-top box to the **HDMI/DVI IN** or **HDMI/DVI IN 1** jack on the TV.
- 2 Connect the digital set-top box audio output to the **AUDIO IN (RGB/DVI)** jack on the TV.

### 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** or **HDMI1** input source on the TV using the **INPUT** button on the remote control.

#### ! NOTE

- ▶ A DVI to HDMI cable or adapter is required for this connection. DVI doesn't support audio, so a separate audio connection is necessary.



# DVD SETUP

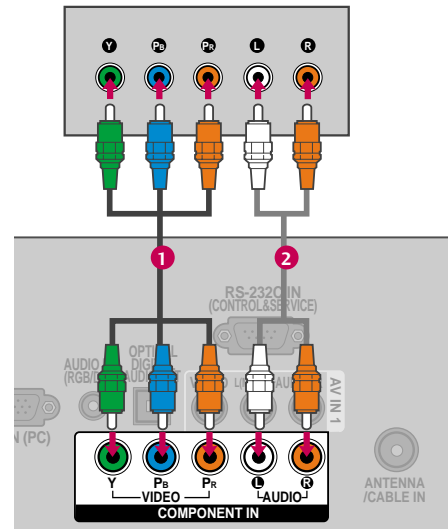
## Component Connection

### 1. How to connect

- 1 Connect the video outputs (Y, P<sub>B</sub>, P<sub>R</sub>) of the DVD to the **COMPONENT IN VIDEO** jacks on the TV. Match the jack colors (Y = green, P<sub>B</sub> = blue, and P<sub>R</sub> = red).
- 2 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 | P <sub>B</sub> | P <sub>R</sub> |
|----------------------------------|---|----------------|----------------|
| Video output ports on DVD player | Y | P <sub>B</sub> | P <sub>R</sub> |
|                                  | Y | B-Y            | R-Y            |
|                                  | Y | C <sub>b</sub> | C <sub>r</sub> |
|                                  | Y | P <sub>b</sub> | P <sub>r</sub> |



# EXTERNAL EQUIPMENT SETUP

## Composite (RCA) Connection

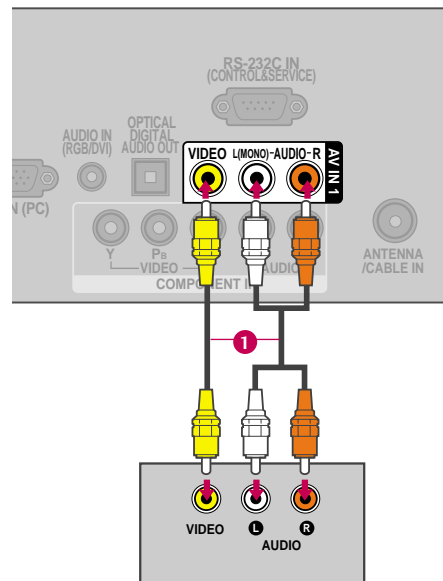
### 1. How to connect

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

### 2. How to use

- Turn on the DVD player, insert a DVD.
- Select the **AV** or **AV1/2\*** input source on the TV using the **INPUT** button on the remote control.
- Refer to the DVD player's manual for operating instructions.

\* AV2: For 26/32LD350



## HDMI Connection

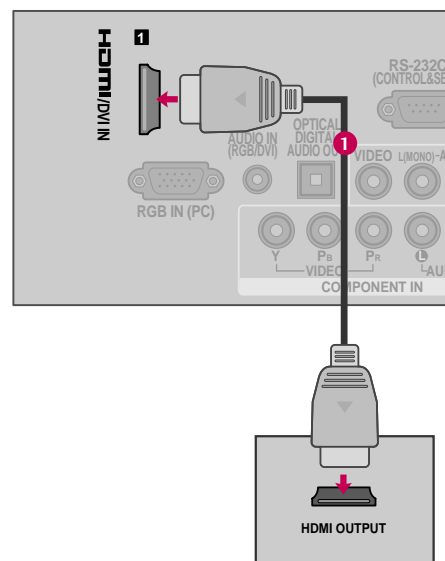
### 1. How to connect

- 1 Connect the HDMI output of the DVD to the **HDMI/DVI IN** or **HDMI/DVI IN 1/2** jack on the TV.
- 2 No separated audio connection is necessary. HDMI supports both audio and video.

### 2. How to use

- Select the **HDMI** or **HDMI1/2\*** input source on the TV using the **INPUT** button on the remote control.
- Refer to the DVD player's manual for operating instructions.

\* HDMI 2: For 26/32LD350



### ! NOTE

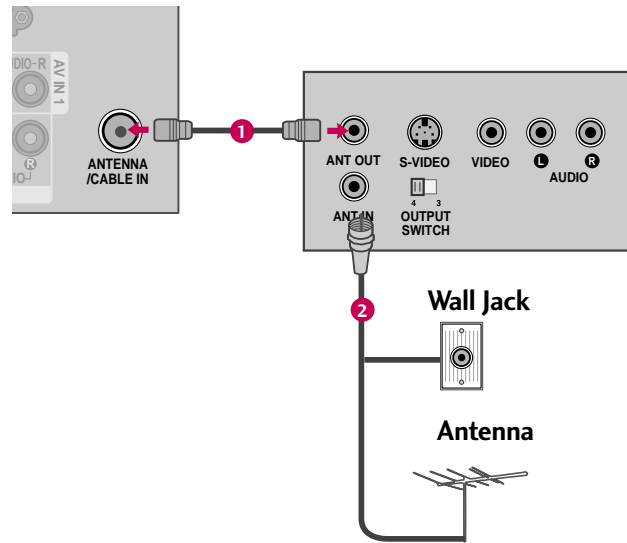
- ▶ Check HDMI cable over version 1.3. If the HDMI cables don't support HDMI version 1.3, it can cause flickers or no screen display. In this case use the latest cables that support HDMI version 1.3.

# VCR SETUP

## Antenna Connection

### 1. How to connect

- 1 Connect the RF antenna out socket of the VCR to the **ANTENNA/CABLE IN** socket on the TV.
- 2 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.)

# EXTERNAL EQUIPMENT SETUP

## Composite (RCA) Connection

### 1. How to connect

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

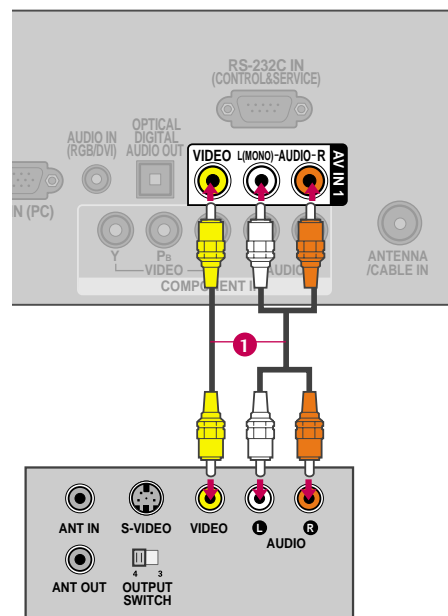
### 2. How to use

- Insert a video tape into the VCR and press **PLAY** on the VCR. (Refer to the VCR owner's manual.)
- Select the **AV** or **AV1/2\*** input source on the TV using the **INPUT** button on the remote control.

\* AV2: For 26/32LD350

#### ! 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

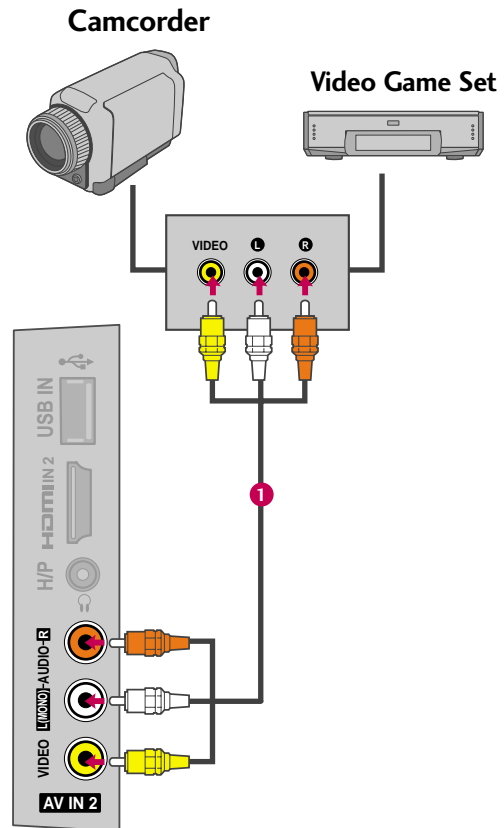
### 1. How to connect

- 1 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 **AV2\*** input source on the TV using the **INPUT** button on the remote control.
- If connected to **AV** or **AV IN 1** input, select the **AV** or **AV1** input source on the TV.
- Operate the corresponding external equipment.

\* AV2: For 26/32LD350



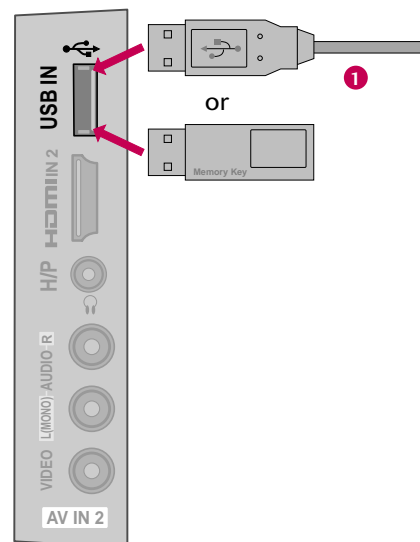
## USB CONNECTION (For 32LD350, 32/37/42/47LD450)

### 1. How to connect

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

### 2. How to use

- After connecting the **USB IN** jack, you use the USB function. (▶ p.66)



# EXTERNAL EQUIPMENT SETUP

## AUDIO OUT CONNECTION

Send the TV's audio to external audio equipment via the Audio Output port.

If you want to enjoy digital broadcasting through 5.1-channel speakers, connect the OPTICAL DIGITAL AUDIO OUT terminal on the back of TV to a Home Theater (or amp).

### 1. How to connect

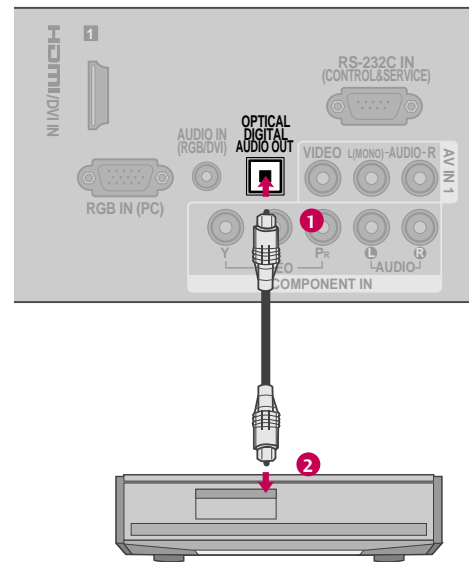
- 1 Connect one end of the optical cable to the TV port of OPTICAL DIGITAL AUDIO OUT.
- 2 Connect the other end of the optical cable to the digital audio input on the audio equipment.
- 3 Set the "TV Speaker option - Off" in the AUDIO menu. (▶ p.93). See the external audio equipment instruction manual for operation.

#### ! NOTE

- ▶ When connecting with external audio equipments, such as amplifiers or speakers, you can turn the TV speakers off in the menu. (▶ p.93)

#### ! CAUTION

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

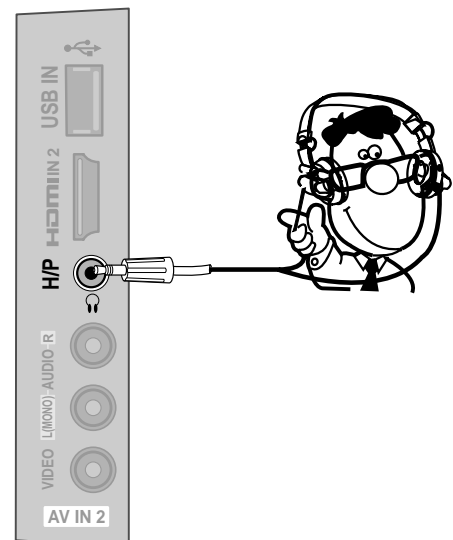


## HEADPHONE SETUP

You can listen to the sound through the headphone.

### 1. How to connect

- 1 Plug the headphone into the headphone socket.
- 2 To adjust the headphone volume, press the VOL + or - button. If you press the MUTE button, the sound from the headphone is switched off.





# EXTERNAL EQUIPMENT SETUP

## DVI to HDMI Connection

### 1. How to connect

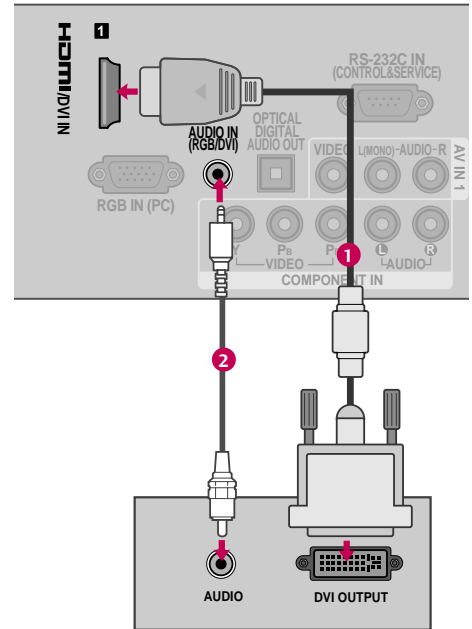
- 1 Connect the DVI output of the PC to the **HDMI/DVI IN** or **HDMI/DVI IN 1** jack on the TV.
- 2 Connect the PC audio output to the **AUDIO IN (RGB/DVI)** jack on the TV.

### 2. How to use

- Turn on the PC and the TV.
- Select the **HDMI** or **HDMI1** input source on the TV using the **INPUT** button on the remote control.

#### ! NOTE

- ▶ Check HDMI cable over version 1.3.  
If the HDMI cables don't support HDMI version 1.3, it can cause flickers or no screen display. In this case use the latest cables that support HDMI version 1.3.



## ! NOTES

- ▶ To get the the best picture quality, adjust the PC graphics card to **1360x768**.
- ▶ Depending on the graphics card, DOS mode may not work if a HDMI to DVI Cable is in use.
- ▶ In PC mode, there may be noise associated with the resolution, vertical pattern, contrast or brightness. If noise is present, change the PC output to another resolution, change the refresh rate to another rate or adjust the brightness and contrast on the PICTURE menu until the picture is clear.
- ▶ Avoid keeping a fixed image on the screen for a long period of time. The fixed image may become permanently imprinted on the screen.
- ▶ The synchronization input form for Horizontal and Vertical frequencies is separate.
- ▶ Depending on the graphics card, some resolution settings may not allow the image to be positioned on the screen properly.
- ▶ If there are overscan in HDMI-PC 1920x1080, change aspect ratio to **Just scan**.
- ▶ When selecting HDMI-PC, set the “Input Label - PC” in the OPTION menu.

## Supported Display Specifications (RGB-PC, HDMI-PC)

### For 19/22/26/32LD350

| Resolution | Horizontal Frequency(KHz) | Vertical Frequency(Hz) |
|------------|---------------------------|------------------------|
| 640x350    | 31.469                    | 70.08                  |
| 720x400    | 31.469                    | 70.08                  |
| 640x480    | 31.469                    | 59.94                  |
| 800x600    | 37.879                    | 60.31                  |
| 1024x768   | 48.363                    | 60.00                  |
| 1280x768   | 47.776                    | 59.87                  |
| 1360x768   | 47.720                    | 59.799                 |



# PICTURE CONTROL

|                                      |   |
|--------------------------------------|---|
| Color Temperature (Advanced Control) | <ul style="list-style-type: none"> <li>■ Set to warm to enhance hotter colors such as red, or set to cool to make picture bluish.</li> </ul>  |
| Dynamic Contrast                     | <ul style="list-style-type: none"> <li>■ 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.</li> </ul>   |
| Dynamic Color                        | <ul style="list-style-type: none"> <li>■ 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.</li> </ul>   |
| Noise Reduction                      | <ul style="list-style-type: none"> <li>■ Reduces screen noise without compromising video quality.</li> </ul>  |
| Gamma                                | <p><i>Low : Make dark and middle gray level area of the picture brighter.</i><br/> <i>Medium: Express original picture levels.</i><br/> <i>High: Make dark and middle gray level area of the picture darker.</i></p> <ul style="list-style-type: none"> <li>■ You can adjust brightness of dark area and middle gray level area of the picture.</li> </ul>  |
| Black Level                          | <p><i>Low: The reflection of the screen gets darker.</i><br/> <i>High: The reflection of the screen gets brighter.</i><br/> <i>Auto: Realizing the black level of the screen and set it to High or Low automatically.</i></p> <ul style="list-style-type: none"> <li>■ Set black level of the screen to proper level.</li> <li>■ This function enables to select 'Low' or 'High' in the following mode: AV (NTSC-M), HDMI or Component. Otherwise, 'Black level' is set to 'Auto'.</li> </ul> |
| Eye Care                             | <p><i>*This feature is not available for all models.</i></p> <ul style="list-style-type: none"> <li>■ Adjust the brightness of the screen to prevent the screen from being too bright. Dims extremely bright pictures.</li> <li>■ This feature is disabled in "<b>Picture Mode-Vivid, Cinema</b>".</li> </ul>   |
| Real Cinema                          | <ul style="list-style-type: none"> <li>■ Makes video clips recorded in film look more natural by eliminating judder effect.</li> </ul>  |

|                                    |  |
|------------------------------------|--|
| Color Gamut                        | <p><i>Standard: Displays standard set of colors.</i><br/> <i>Wide: Increase number of colors used.</i></p> <ul style="list-style-type: none"> <li>■ Maximize the utilization of color to increase color quality.</li> </ul>  |
| Edge Enhancer                      | <ul style="list-style-type: none"> <li>■ Show clearer and distinctive yet natural edges in of the video.</li> <li>■ This function is enabled in "<b>Picture Mode - Cinema, Expert</b>".</li> </ul>   |
| Color Standard                     | <ul style="list-style-type: none"> <li>■ Convert the color of a different video to HD color.</li> </ul>  |
| Color Filter                       | <ul style="list-style-type: none"> <li>■ This is the function to filter the specific colors of the video.<br/> You can use the RGB filter to set color saturation and hue accurately.</li> </ul>   |
| xvYCC                              | <p><i>*This feature is not available for all models.</i></p> <ul style="list-style-type: none"> <li>■ This is the function to express richer color.</li> <li>■ This feature represents rich color as much as conventional video signal.</li> <li>■ This function is enabled in "<b>Picture mode - Cinema, Expert</b>" when xvYCC signal is inputted through HDMI.</li> </ul>   |
| Expert Pattern                     | <ul style="list-style-type: none"> <li>■ This is the pattern necessary for expert adjustment.</li> <li>■ This function is enabled in "<b>Picture Mode - Expert</b>" when you watch DTV.</li> </ul>   |
| Color Temperature (Expert Control) | <ul style="list-style-type: none"> <li>■ Adjusts the overall color of the screen by changing the color of white.</li> </ul> <p>a. Method : 2 Points</p> <ul style="list-style-type: none"> <li>- Pattern: Inner, Outer</li> <li>- Red/Green/Blue Contrast, Red/Green/Blue Brightness:<br/> The adjustment range is -50 - +50.</li> </ul> <p>b. Method : 10 Point IRE</p> <ul style="list-style-type: none"> <li>- Pattern: Inner, Outer</li> <li>- IRE (Institute of Radio Engineers) is the unit to display the size of the video signal and can be set among 10, 20, 30 - 100. You can adjust Red, Green or Blue according to each setting.</li> <li>- Luminance: This function displays calculated luminance value for 2.2 gamma. You can input luminance value you want at 100 IRE, than the target luminance value for 2.2 gamma is displayed at every 10 steps from 10 IRE to 90 IRE.</li> <li>- Red/Green/Blue: The adjustment range is -50 - +50.</li> </ul> |
| Color Management System            | <ul style="list-style-type: none"> <li>■ As the tool used by the experts to make adjustments by using the test patterns, this does not affect other colors but can be used to selectively adjust the 6 color areas (Red/Green/Blue/Cyan/Mgt/Yellow).<br/> Color difference may not be distinctive even when you make the adjustments for the general video.</li> </ul> <p>Adjusts Red/Green/Blue/Yellow/Cyan, Magenta.</p> <ul style="list-style-type: none"> <li>- Red/Green/Blue/Yellow/Cyan, Magenta Color: The adjustment range is -30 - +30.</li> <li>- Red/Green/Blue/Yellow/Cyan, Magenta Tint: The adjustment range is -30 - +30.</li> <li>- This feature is disable in RGB-PC and HDMI-PC mode.</li> </ul>  |
| OPC                                | <p><i>*This feature is not available for all models.</i></p> <ul style="list-style-type: none"> <li>■ As the technology to reduce the power consumption while keeping the same brightness, this has the effect of reducing power consumption, improvement in contrast.</li> </ul>  |

# APPENDIX

## TROUBLESHOOTING

| The operation does not work normally. |  |
|---------------------------------------|--|
| The remote control doesn't work       | <ul style="list-style-type: none"> <li>■ 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.</li> <li>■ Ensure that the batteries are installed with correct polarity (+ to +, - to -).</li> <li>■ Ensure that the correct remote operating mode is set: TV, VCR etc.</li> <li>■ Install new batteries.</li> </ul> <p style="text-align: right;">*This feature is not available for all models.</p> |
| Power is suddenly turned off          | <ul style="list-style-type: none"> <li>■ Is the sleep timer set?</li> <li>■ Check the power control settings. Power interrupted.</li> <li>■ TV will be automatically turned off, in case of no signal for 15 minutes.</li> </ul>   |

| The video does not work.                    |   |
|---|---|
| No picture & No sound                       | <ul style="list-style-type: none"> <li>■ Check whether the product is turned on.</li> <li>■ Try another channel. The problem may be with the broadcast.</li> <li>■ Is the power cord inserted into wall power outlet?</li> <li>■ Check your antenna direction and/or location.</li> <li>■ Test the wall power outlet, plug another product's power cord into the outlet where the product's power cord was plugged in.</li> </ul> |
| Picture appears slowly after switching on   | <ul style="list-style-type: none"> <li>■ 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.</li> </ul>  |
| No or poor color or poor picture            | <ul style="list-style-type: none"> <li>■ Adjust Color in menu option.</li> <li>■ Keep a sufficient distance between the product and the VCR.</li> <li>■ Try another channel. The problem may be with the broadcast.</li> <li>■ Are the video cables installed properly?</li> <li>■ Activate any function to restore the brightness of the picture.</li> </ul>   |
| Horizontal/vertical bars or picture shaking | <ul style="list-style-type: none"> <li>■ Check for local interference such as an electrical appliance or power tool.</li> </ul>   |
| Poor reception on some channels             | <ul style="list-style-type: none"> <li>■ Station or cable product experiencing problems, tune to another station.</li> <li>■ Station signal is weak, reorient antenna to receive weaker station.</li> <li>■ Check for sources of possible interference.</li> </ul>  |
| Lines or streaks in pictures                | <ul style="list-style-type: none"> <li>■ Check antenna (Change the direction of the antenna).</li> </ul>  |
| No picture when connecting HDMI             | <ul style="list-style-type: none"> <li>■ Check HDMI cable over version 1.3.</li> </ul> <p>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.</p>   |

### The audio does not work.

|                                       |  |
|---------------------------------------|--|
| Picture OK & No sound                 | <ul style="list-style-type: none"><li>■ Press the VOL or VOLUME button.</li><li>■ Sound muted? Press MUTE button.</li><li>■ Try another channel. The problem may be with the broadcast.</li><li>■ Are the audio cables installed properly?</li></ul> |
| No output from one of the speakers    | <ul style="list-style-type: none"><li>■ Adjust Balance in menu option.</li></ul>   |
| Unusual sound from inside the product | <ul style="list-style-type: none"><li>■ 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.</li></ul>                                    |
| No sound when connecting HDMI or USB  | <ul style="list-style-type: none"><li>■ Check HDMI cable over version 1.3.</li><li>■ Check USB cable over version 2.0.</li><li>■ Use normal MP3 file.</li></ul>  |

\*This feature is not available for all models.

### There is a problem in PC mode. (Only PC mode applied)

|  |   |
|--|---|
| The signal is out of range   | <ul style="list-style-type: none"><li>■ Adjust resolution, horizontal frequency, or vertical frequency.</li><li>■ Check the input source.</li></ul> |
| Vertical bar or stripe on background & Horizontal Noise & Incorrect position | <ul style="list-style-type: none"><li>■ Work the Auto configure or adjust clock, phase, or H/V position. (Option)</li></ul>                         |
| Screen color is unstable or single color                                     | <ul style="list-style-type: none"><li>■ Check the signal cable.</li><li>■ Reinstall the PC video card.</li></ul>                                    |

# APPENDIX

## 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.

## PRODUCT SPECIFICATIONS

| MODELS   |   | 19LD350<br>(19LD350-UA)  | 22LD350<br>(22LD350-UA)                              |
|--|---|--|--|
| Dimensions<br>(Width x Height<br>x Depth)  | With stand                                  | 17.9 x 13.2 x 6.4 inches<br>457.0 x 336.0 x 164.9 mm   | 20.7 x 14.8 x 6.4 inches<br>526.0 x 377.0 x 164.9 mm |
|  | Without stand                               | 17.9 x 11.4 x 3.0 inches<br>457.0 x 290.0 x 78.4 mm  | 20.7 x 13.0 x 3.0 inches<br>526.0 x 331.0 x 78.4 mm  |
| Weight   | With stand                                  | 7.4 lbs / 3.4 kg   | 9.4 lbs / 4.3 kg                                     |
|  | Without stand                               | 6.8 lbs / 3.1 kg   | 8.8 lbs / 4.0 kg                                     |
| Power requirement<br>Television System<br>Program Coverage<br>External Antenna Impedance |   | AC100-240V ~ 50/60Hz<br>NTSC-M, ATSC, 64 & 256 QAM<br>VHF 2-13, UHF 14-69, CATV 1-135, DTV 2-69, CADTV 1-135<br>75 ohm |  |
| Environment<br>condition   | Operating Temperature<br>Operating Humidity | 32 ~ 104°F (0 ~ 40°C)<br>Less than 80%   |  |
|  | Storage Temperature<br>Storage Humidity     | -4 ~ 140°F (-20 ~ 60°C)<br>Less than 85%   |  |

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

# APPENDIX

| MODELS   |   | 26LD350<br>(26LD350-UA)  | 32LD350<br>(32LD350-UA)                              |
|--|---|--|--|
| Dimensions<br>(Width x Height<br>x Depth)  | With stand                                  | 26.1 x 19.0 x 8.1 inches<br>663.0 x 484.0 x 206.8 mm   | 31.4 x 22.2 x 8.1 inches<br>800.0 x 565.0 x 206.8 mm |
|  | Without stand                               | 26.1 x 16.6 x 3.1 inches<br>663.0 x 423.0 x 79.9 mm  | 31.4 x 20.0 x 2.9 inches<br>800.0 x 509.0 x 73.8 mm  |
| Weight   | With stand                                  | 16.0 lbs / 7.3 kg  | 20.2 lbs / 9.2 kg                                    |
|  | Without stand                               | 13.6 lbs / 6.2 kg  | 18.0 lbs / 8.2 kg                                    |
| Power requirement<br>Television System<br>Program Coverage<br>External Antenna Impedance |   | AC100-240V ~ 50/60Hz<br>NTSC-M, ATSC, 64 & 256 QAM<br>VHF 2-13, UHF 14-69, CATV 1-135, DTV 2-69, CADTV 1-135<br>75 ohm |  |
| Environment<br>condition   | Operating Temperature<br>Operating Humidity | 32 ~ 104°F (0 ~ 40°C)<br>Less than 80%   |  |
|  | Storage Temperature<br>Storage Humidity     | -4 ~ 140°F (-20 ~ 60°C)<br>Less than 85%   |  |

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

## IR CODES

| Code (Hexa) | Function       | Note                                 | Code (Hexa) | Function      | Note                            |
|-------------|----------------|--------------------------------------|-------------|---------------|---------------------------------|
| 08          | POWER          | Remote control Button (Power On/Off) | D6          | TV            | Discrete IR Code                |
| 45          | Q.MENU         | Remote control Button                |             |               | (TV Input Selection)            |
| 43          | MENU           | Remote control Button                | C4          | POWER ON      | Discrete IR Code                |
| 0B          | INPUT          | Remote control Button                |             |               | (Only Power On)                 |
| 10-19       | Number Key 0-9 | Remote control Button                | C5          | POWER OFF     | Discrete IR Code                |
| 4C          | - (Dash)/LIST  | Remote control Button                |             |               | (Only Power Off)                |
| 1A          | FLASHBK        | Remote control Button                | 5A          | AV or AV1     | Discrete IR Code                |
| 09          | MUTE           | Remote control Button                |             |               | (AV or AV1 Input Selection)     |
| 02          | VOL +          | Remote control Button                | D0          | AV2           | Discrete IR Code                |
| 03          | VOL -          | Remote control Button                |             |               | (AV2 Input Selection)           |
| 00          | CH ^           | Remote control Button                | BF          | COMPONENT     | Discrete IR Code                |
| 01          | CH v           | Remote control Button                |             |               | (Component Input Selection)     |
| 1E          | FAV/MARK       | Remote control Button                | D5          | RGB-PC        | Discrete IR Code                |
| 40          | ^              | Remote control Button                |             |               | (RGB-PC Input Selection)        |
| 41          | v              | Remote control Button                | CE          | HDMI or HDMI1 | Discrete IR Code                |
| 07          | <              | Remote control Button                |             |               | (HDMI or HDMI1 Input Selection) |
| 06          | >              | Remote control Button                | CC          | HDMI2         | Discrete IR Code                |
| 44          | ENTER          | Remote control Button                |             |               | (HDMI2 Input Selection)         |
| 28          | RETURN         | Remote control Button                | E9          | HDMI3         | Discrete IR Code                |
| 95          | ENERGY SAVING  | Remote control Button                |             |               | (HDMI3 Input Selection)         |
| 7E          | SIMPLINK       | Remote control Button                | 76          | Ratio 4:3     | Discrete IR Code                |
| AA          | INFO           | Remote control Button                |             |               | (Only 4:3 Mode)                 |
| 30          | AV MODE        | Remote control Button                | 77          | Ratio 16:9    | Discrete IR Code                |
| 72          | RED            | Remote control Button                |             |               | (Only 16:9 Mode)                |
| 71          | GREEN (■)      | Remote control Button                | AF          | Ratio Zoom    | Discrete IR Code                |
| 63          | YELLOW (▶)     | Remote control Button                |             |               | (Only Zoom Mode)                |
| 61          | BLUE (■)       | Remote control Button                |             |               |                                 |
| 8F          | ◀◀             | Remote control Button                |             |               |                                 |
| 8E          | ▶▶             | Remote control Button                |             |               |                                 |

\* Use this feature depending on your model.

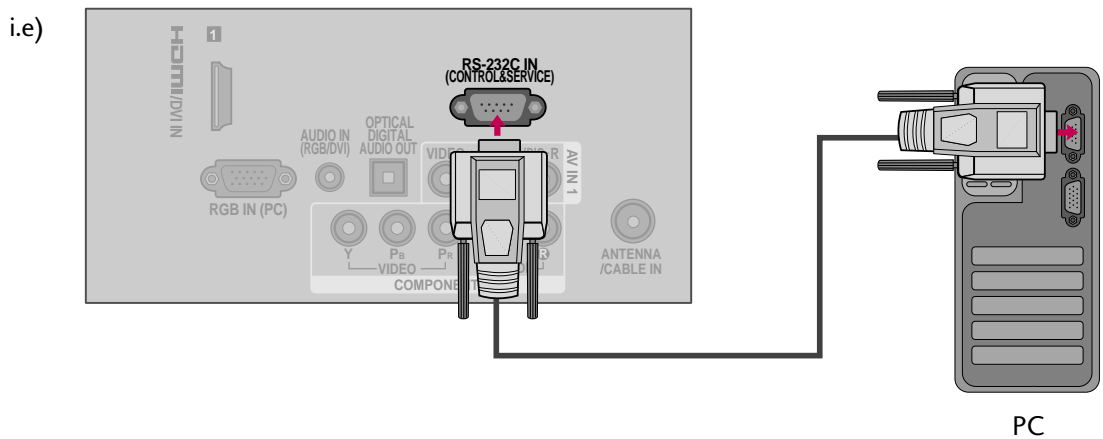


## EXTERNAL CONTROL THROUGH RS-232C

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.

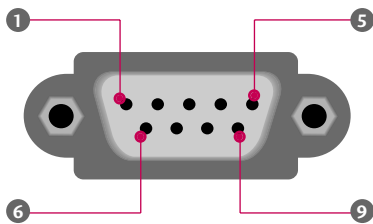
- **Note:** RS-232C on this unit is intended to be used with third party RS-232C control hardware and software. The instructions below are provided to help with programming software or to test functionality using telenet software.

### RS-232C Setup



### Type of Connector; D-Sub 9-Pin Male

| 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        |



### Communication Parameters

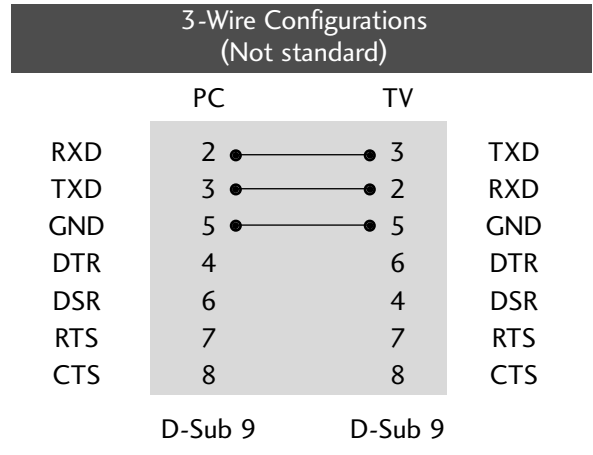
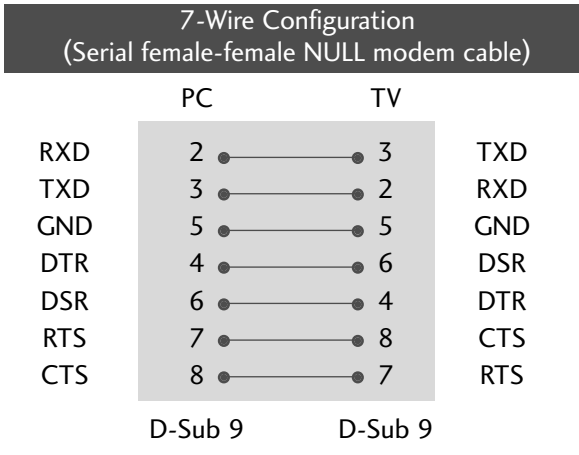
- Baud rate : 9600 bps (UART)
- Data length : 8 bits
- Parity : None
- Stop bit : 1 bit
- Communication code : ASCII code
- Use a crossed (reverse) cable.

#### ! NOTE

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

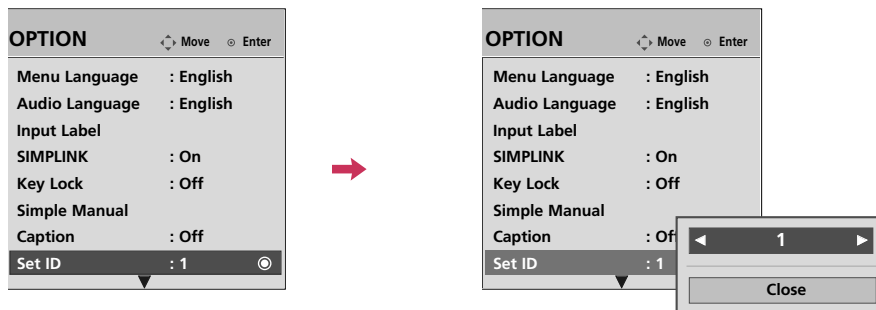
## RS-232C Configurations

Either cable below can be used.



## Set ID

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



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

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

## Command Reference List

|                                 | COMMAND1 | COMMAND2 | DATA<br>(Hexadecimal) |                        | COMMAND1 | COMMAND2 | DATA<br>(Hexadecimal) |
|---------------------------------|----------|----------|-----------------------|------------------------|----------|----------|-----------------------|
| 01. Power                       | k        | a        | 00 ~ 01               | 14. Treble             | k        | r        | 00 ~ 64               |
| 02. Input Select                | x        | b        | (▶ p.125)             | 15. Bass               | k        | s        | 00 ~ 64               |
| 03. Aspect Ratio                | k        | c        | (▶ p.125)             | 16. Balance            | k        | t        | 00 ~ 64               |
| 04. Screen Mute                 | k        | d        | (▶ p.125)             | 17. Color Temperature  | k        | u        | 00 ~ 02               |
| 05. Volume Mute                 | k        | e        | 00 ~ 01               | 18. Energy Saving      | j        | q        | (▶ p.127)             |
| 06. Volume Control              | k        | f        | 00 ~ 64               | 19. Auto Configuration | j        | u        | (▶ p.127)             |
| 07. Contrast                    | k        | g        | 00 ~ 64               | 21. Channel Add/Del    | m        | b        | 00 ~ 01               |
| 08. Brightness                  | k        | h        | 00 ~ 64               | 22. Key                | m        | c        | (▶ p.127)             |
| 09. Color                       | k        | i        | 00 ~ 64               | 23. Backlight          | m        | g        | 00 ~ 64               |
| 10. Tint                        | k        | j        | 00 ~ 64               |                        |          |          |                       |
| 11. Sharpness                   | k        | k        | 00 ~ 64               |                        |          |          |                       |
| 12. OSD Select                  | k        | l        | 00 ~ 01               |                        |          |          |                       |
| 13. Remote Control<br>Lock Mode | k        | m        | 00 ~ 01               |                        |          |          |                       |

|                    | COMMAND1 | COMMAND2 | DATA00<br>(Hexadecimal)  | DATA01<br>(Hexadecimal) | DATA02<br>(Hexadecimal) | DATA03<br>(Hexadecimal) | DATA04<br>(Hexadecimal) | DATA05<br>(Hexadecimal) |
|--------------------|----------|----------|--------------------------|-------------------------|-------------------------|-------------------------|-------------------------|-------------------------|
| 20. Channel Tuning | m        | a        | physical<br>program high | major<br>program low    | major low               | minor high              | minor low               | attribute               |

## Transmission / Receiving Protocol

### Transmission

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

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

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

[Set ID] : You can adjust the set ID to choose desired 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/AV1      Data 21: AV2  
Data 40: Component      Data 60: RGB-PC  
Data 90: HDMI/HDMI1      Data 91: HDMI2

*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      09: Just scan  
02: 16:9      10: Cinema Zoom1  
04: Zoom      ⋮  
06: Set by program      1F: Cinema Zoom16

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

**04. Screen Mute (Command: k d)**

To select screen mute on/off.

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

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

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

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

**05. Volume Mute (Command: k e)**

To control volume mute on/off.

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

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

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

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

**06. Volume Control (Command: k f)**

To adjust volume.

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

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

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

\*Refer to 'Real data mapping'.

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

**07. Contrast (Command: k g)**

To adjust screen contrast.

You can also adjust contrast in the PICTURE menu.

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

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

\*Refer to 'Real data mapping'.

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

**08. Brightness (Command: k h)**

To adjust screen brightness.

You can also adjust brightness in the PICTURE menu.

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

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

\*Refer to 'Real data mapping'.

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

**09. Color (Command: k i)**

To adjust screen color.

You can also adjust color in the PICTURE menu.

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

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

\*Refer to 'Real data mapping'.

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

**10. Tint (Command: k j)**

To adjust screen tint.

You can also adjust tint in the PICTURE menu.

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

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

\*Refer to 'Real data mapping'.

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

## 11. Sharpness (Command: k k)

To adjust screen sharpness.

You can also adjust sharpness in the PICTURE menu.

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

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

\*Refer to 'Real data mapping'.

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

## 12. OSD Select (Command: k l)

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

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

Data 00: OSD off      Data 01: OSD on

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

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

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

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

Data 00: Lock off      Data 01: Lock on

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

If you're not using the remote control and front panel controls on the 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: k u)

To adjust color temperature.

You can also adjust color temperature in the PICTURE menu.

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

Data 00: Medium    01: Cool    02: Warm

**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

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 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

```
Acknowledgement[a][ ][Set ID][ ][OK][Data00][Data01]
[Data02][Data03][Data04][x][a][ ][Set ID]
[ ][NG][Data00][x]
```

## 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 121.

*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]

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This option is useful when you wish to copy part of the code of the library into a program that is not a library.

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5. A program that contains no derivative of any portion of the Library, but is designed to work with the Library by being compiled or linked with it, is called a “work that uses the Library”. Such a work, in isolation, is not a derivative work of the Library, and therefore falls outside the scope of this license.

However, linking a “work that uses the library” with the Library creates an executable that is a derivative of the Library (because it contains portions of the library), rather than a “work that uses the library”. The executable is therefore covered by this license. Section 6 states terms for distribution of such executable.

When a “work that uses the library” uses material from a header file that is part of the library, the object code for the work may be a derivative work of the library even though the source code is not.

Whether this is true is especially significant if the work can be linked without the library, or if the work is itself a library. The threshold for this to be true is not precisely defined by law.

If such an object file uses only numerical parameters, data structure layouts and accessories, and small macros and small inline functions (ten lines or less in length), then the use of

the object file is unrestricted, regardless of whether it is legally a derivative work. (Executable containing this object code plus portions of the library will still fall under Section 6.)

Otherwise, if the work is a derivative of the library, you may distribute the object code for the work under the terms of Section 6. Any executable containing that work also fall under Section 6, whether or not they are linked directly with the library itself.

6. As an exception to the sections above, you may also combine or link a “work that uses the library” with the library to produce a work containing portions of the library, and distribute that work under terms of your choice, provided that the terms permit modification of the work for the customer’s own use and reverse engineering for debugging such modifications.

You must give prominent notice with each copy of the work that the library is used in it and that the Library and its use are covered by this license. You must supply a copy of this license. If the work during execution displays copyright notices, you must include the copyright notice for the library among them, as well as a reference directing the user to the copy of this license. Also, you must do one of these things:

- a) Accompany the work with the complete corresponding machine-readable source code for the library including whatever changes were used in the work (which must be distributed under Sections 1 and 2 above); and, if the work is an executable linked with the Library, with the complete machine-readable “work that uses the Library”, as object code and/or source code, so that the user can modify the library and then relink to produce a modified executable containing the modified library. (It is understood that the user who changes the contents of definitions files in the library will not necessarily be able to recompile the application to use the modified definitions.)
- b) Use a suitable shared library mechanism for linking with the library. A suitable mechanism is one that (1) uses at run time a copy of the library already present on the user’s computer system, rather than copying library functions into the executable, and (2) will operate properly with a modified version of the library, if the user installs one, as long as the modified version is interface-compatible with the version that the work was made with.
- c) Accompany the work with a written offer, valid for at least three years, to give the same user the materials specified in Subsection 6, above, for a charge no more than the cost of performing this distribution.
- d) If distribution of the work is made by offering access to copy from a designated place, offer equivalent access to copy the above specified materials from the same place.
- e) Verify that the user has already received a copy of these materials or that you have already sent this user a copy.

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Version 1.1

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

**LG Electronics Inc.**

## ■■■ Regulatory Information cont.

### :: FCC Compliance Statement

This equipment has been tested and found to comply within the limits of a Class B digital device pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation.

This equipment generates, uses, and can radiate radio frequency energy and if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation.

If this equipment does cause harmful interference to radio or television reception (which can be determined by turning the equipment on and off), the user is encouraged to try to correct the interference by using one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and the receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

Caution: Changes or modifications not expressly approved by the party responsible for compliance could void the user's (or your) authority to operate the equipment. Only peripherals (digital input/output devices, terminals, printers, etc.) certified to comply with the Class B limits may be attached to this monitor. Operation with non-certified peripherals is likely to result in interference to radio and TV reception. Only shielded signal cables may be used with this System.

#### NOTICE

The regulations are applied only to the products with the ID LABEL indicating specific requirements.

### :: Canadian DOC Notice

This Class B digital apparatus meets all requirements of the Canadian Interference-Causing Equipment Regulations. Cet appareil numérique de la classe B

respecte toutes les exigences du Règlement sur le matériel brouilleur du Canada.

#### NOTICE

The regulations are applied only to the products with the ID LABEL indicating specific requirements.

### :: CE Conformity Notice (for Europe)

Products with the "CE" Marking comply with the EMC Directive(89/336/EEC) and LOW VOLTAGE Directive (73/23/EEC) issued by the Commission of the European Community.

Compliance with these directives implies conformity to the following European Norms :

- EN 55022 ; Radio Frequency Interference
- EN 55024 ; Electromagnetic Immunity
- EN 61000-3-2 ; Power Line Harmonics
- EN 61000-3-3 ; Voltage Fluctuations
- EN 60950-1 ; Product Safety

#### NOTICE

The regulations are applied only to the products with the ID LABEL indicating specific requirements.

### :: Low Radiation Compliance (MPR II)

This monitor meets one of the strictest guidelines available today for low radiation emissions, offering the user extra shielding and an antistatic screen coating. These guidelines, set forth by a government agency in Sweden, limit the amount of emission allowed in the Extremely Low Frequency (ELF) and Very Low Frequency (VLF) electromagnetic range.

### :: TCO'99 (TCO'99 applied model only)



#### Congratulations!

You have just purchased a TCO'99 approved and labelled product! Your choice has provided you with a product developed for professional use. Your purchase has also contributed to reducing the burden on the environment and also to the further development of environmentally adapted electronics products.

## ■■■ Regulatory Information cont.

### **Why do we have environmentally labelled computers?**

In many countries, environmental labelling has become an established method for encouraging the adaptation of goods and services to the environment. With the growing manufacture and usage of electronic equipment throughout the world, there is a recognized concern for the materials and substances used by electronic products with regards to their eventual recycling and disposal. By proper selection of these materials and substances, the impact on the environment can be minimized.

There are also other characteristics of a computer, such as energy consumption levels, that are important from the viewpoints of both the work (internal) and natural (external) environments. Electronic equipment in offices is often left running continuously, resulting in unnecessary consumption of large amounts of energy and additional power generation. From the standpoint of carbon dioxide emissions alone, it is vital to save energy.

### **What does labelling involve?**

The product meets the requirements for the TCO'99 scheme which provides for international and environmental labelling of personal computers and/or displays.

The labelling scheme was developed as a joint effort by the TCO (The Swedish Confederation of Professional Employees), Svenska Naturskyddsforeningen (The Swedish Society for Nature Conservation) and Statens Energimyndighet (The Swedish National Energy Administration).

Approval requirements cover a wide range of issues: ecology, ergonomics, emission of electrical and magnetical fields, energy consumption and electrical safety.

Ecological criteria impose restrictions on the presence and use of heavy metals, brominated and chlorinated flame retardants, and other substances. The product must be prepared for recycling and the manufacturing site(s) shall be certified according to ISO14001 or EMAS registered.

Energy requirements include a demand that the system unit and/or display, after a certain period of inactivity, shall reduce its power consumption to a lower level in one or more stages. The length of time to reactivate the system unit shall be reasonable for the user.

Labelled products must meet strict environmental demands, for example, in respect of the reduction of electrical and magnetical fields as well as work load and

visual ergonomics.

Below you will find a brief summary of the ecological requirements met by this product. The complete ecological criteria document can be found at TCO Development's website <http://www.tcodevelopment.com> or may be ordered from:

#### **TCO Development**

SE-114 94 STOCKHOLM, Sweden

Fax: +46 8 782 92 07

Email : [development@tco.se](mailto:development@tco.se)

Information regarding TCO'99 approved and labelled products may also be obtained at <http://www.tcodevelopment.com>

### **Ecological requirements**

#### **Flame retardants**

Flame retardants may be present in printed wiring board laminates, cables, and housings. Their purpose is to prevent, or at least to delay the spread of fire. Up to 30% by weight of the plastic in a computer casing can consist of flame retardant substances. Many flame retardants contain bromine or chlorine, and these flame retardants are chemically related to PCBs (polychlorinated biphenyls). Both the flame retardants containing bromine or chlorine and the PCBs are suspected of giving rise to health effects, including reproductive damage in fish-eating birds and mammals, due to the bio-accumulative\* processes when not disposed of in accordance with strict standards for disposal.

TCO'99 requires that plastic components weighing more than 25 grams shall not contain flame retardants with organically bound bromine or chlorine. Flame retardants are allowed in the printed wiring board laminates due to the lack of commercially available alternatives.

#### **Cadmium\*\***

Cadmium is present in rechargeable batteries and in the colour-generating layers of certain computer displays. TCO'99 requires that batteries, the colour-generating layers of display screens, and the electrical or electronics components shall not contain any cadmium.

#### **Mercury\*\***

Mercury is sometimes found in batteries, relays and switches. TCO'99 requires that batteries shall not contain any mercury. It also demands that mercury is not present in any of the electrical or electronics components associated with the labelled unit. There is however one



## ■■■ Regulatory Information cont.

exception. Mercury is, for the time being, permitted in the back light system of flat panel monitors as there today is no commercially available alternative. TCO aims on removing this exception when a mercury free alternative is available.

### Lead\*\*

Lead can be found in picture tubes, display screens, solders and capacitors. TCO'99 permits the use of lead due to the lack of commercially available alternatives, but in future requirements TCO Development aims at restricting the use of lead.

\* Bio-accumulative is defined as substances which accumulate in living organisms.

\*\*Lead, Cadmium and Mercury are heavy metals which are bio-accumulative.

:: **TCO'03** (TCO'03 applied model only)



### Congratulations!

The display you have just purchased carries the TCO'03 Displays label.

This means that your display is designed, manufactured and tested according to some of the strictest quality and environmental requirements in the world. This makes for a high performance product, designed with the user in focus that also minimizes the impact on our natural environment. Some of the features of the TCO'03 Display requirements:

### Ergonomics

- Good visual ergonomics and image quality in order to improve the working environment for the user and to reduce sight and strain problems. Important parameters are luminance, contrast, resolution, reflectance, colour rendition and image stability.

### Energy

- Energy-saving mode after a certain time – beneficial both for the user and the environment
- Electrical safety

### Emissions

- Electromagnetic fields

- Noise emissions

### Ecology

- The product must be prepared for recycling and the manufacturer must have a certified environmental management system such as EMAS or ISO 14 001
- Restrictions on
  - chlorinated and brominated flame retardants and polymers
  - heavy metals such as cadmium, mercury and lead.

The requirements included in this label have been developed by TCO Development in co-operation with scientists, experts, users as well as manufacturers all over the world. Since the end of the 1980s TCO has been involved in influencing the development of IT equipment in a more user-friendly direction. Our labelling system started with displays in 1992 and is now requested by users and IT-manufacturers all over the world.

For more information, please visit  
[www.tcodevelopment.com](http://www.tcodevelopment.com)

## English

### Information for Environmental Preservation

LGE. announced the 'LG Declaration for a Cleaner Environment' in 1994, and this ideal has served as a guiding managerial principle ever since. The Declaration is a foundation that has allowed us to undertake environmentally friendly activities in careful consideration of economic, environmental, and social aspects.

We promote activities for environmental preservation, and we specifically develop our products to embrace the concept of environment-friendly.

We minimize the hazardous materials contained in our products. For example, there is no cadmium to be found in our monitors.

### Information for recycling

This monitor may contain parts which could be hazardous to the environment. It is important that this monitor be recycled after use.

LGE. handles all waste monitors through an environmentally acceptable recycling method. There are several take-back and recycling systems currently in



## ■■■ Regulatory Information cont.

operation worldwide. Many parts will be reused and recycled, while harmful substances and heavy metals are treated by an environmentally friendly method.

If you want to find out more information about our recycling program, please contact your local LG vendor or a corporate representative of LG.

We set our vision and policies on a cleaner world by selecting the issue of the global environment as a task for corporate improvement. Please visit our website for more information about our 'green' policies.

<http://www.lge.com/about/environment/html/Recycling.jsp>

### ■ ■ ■ Deutsch

#### Informationen zur Erhaltung der Umwelt

Im Jahr 1994 verkündete LGE die 'LG Declaration for a Cleaner Environment' (LG Erklärung für eine sauberere Umwelt). Seitdem dient dieses Ideal als führendes Prinzip des Unternehmens. Diese Erklärung war die Basis für die Durchführung von

umweltfreundlichen Aktivitäten, wobei wirtschaftliche, umweltbezogene und soziale Aspekte in die Überlegungen mit einbezogen wurden.

Wir fördern Aktivitäten zum Schutz der Umwelt und die Entwicklung unserer Produkte ist darauf ausgerichtet, unserem Konzept bezüglich Umweltfreundlichkeit gerecht zu werden.

Wir sind darauf bedacht, den Anteil der in unseren Produkten enthaltenen schädlichen Materialien zu minimieren. So ist in unseren Monitoren beispielsweise kein Kadmium zu finden.

#### Informationen zum Thema Recycling

Dieser Monitor enthält Teile, die umweltschädlich sein können. Es ist unbedingt erforderlich, dass der Monitor recycelt wird, nachdem er außer Dienst gestellt wurde.

Bei LGE werden alle ausrangierten Monitore in einem unter umweltbezogenen Aspekten geeigneten Verfahren recycelt. Augenblicklich sind weltweit mehrere Rücknahme- und Recyclingsysteme im Einsatz. Viele Teile werden wieder verwendet und recycelt. Schädliche Substanzen und Schwermetalle werden durch umweltverträgliche Verfahren behandelt.

Falls Sie mehr über unser Recyclingprogramm erfahren möchten, wenden Sie sich bitte an Ihren lokalen LG-Händler oder einen Unternehmensvertreter von LG.

Wir richten unsere Firmenpolitik auf eine sauberere Umwelt hin aus, indem wir umweltspezifische Aspekte als wichtigen Punkt in die Weiterentwicklung unseres Unternehmens einfließen lassen. Zusätzliche Informationen über unsere 'grüne' Firmenpolitik erhalten Sie auf unserer Website.

<http://www.lge.com/about/environment/html/Recycling.jsp>

### ■ ■ ■ Français

#### Information sur la protection de l'environnement

LGE a publié sa 'Déclaration en faveur d'un environnement plus propre' en 1994 et celle-ci est restée, depuis lors, un principe directeur de notre entreprise. Cette déclaration a servi de base à notre réflexion et nous a permis de prendre en compte à la fois les aspects économiques et sociaux de nos activités, tout en respectant l'environnement.

Nous encourageons les activités en faveur de la préservation de l'environnement et c'est dans cet esprit que nous développons nos produits : nous réduisons au minimum les matières dangereuses qui entrent dans leur composition et l'on ne trouve pas de cadmium, par exemple, dans nos moniteurs.

#### Information sur le recyclage

Ce moniteur peut contenir des composants qui présentent un risque pour l'environnement. Il est donc important que celui-ci soit recyclé après usage.

LGE traite les moniteurs en fin de cycle conformément à une méthode de recyclage respectueuse de l'environnement. Nous reprenons nos produits et les recyclons dans plusieurs sites répartis dans le monde entier. De nombreux composants sont réutilisés et recyclés, et les matières dangereuses, ainsi que les métaux lourds, sont traités selon un procédé écologique.

Si vous souhaitez plus de renseignements sur notre programme de recyclage, veuillez contacter votre revendeur LG ou un l'un de nos représentants.

Nous voulons agir pour un monde plus propre et croyons au rôle de notre entreprise dans l'amélioration de l'environnement. Pour plus de renseignements sur notre politique "verte", rendez visite à notre site :

<http://www.lge.com/about/environment/html/Recycling.jsp>

## Regulatory Information cont.

### Italiano

#### Informazioni per la tutela dell'ambiente

La LGE. ha annunciato nel 1994 la cosiddetta 'LG Declaration for a Cleaner Environment' (Dichiarazione di LG a favore di un ambiente più pulito), un ideale che da allora funge da principio ispiratore della gestione aziendale. La dichiarazione rappresenta il fondamento che consente di intraprendere attività a favore dell'ambiente tenendo conto degli aspetti economici, ambientali e sociali. Noi della LG, promuoviamo attività a favore della tutela dell'ambiente sviluppando appositamente i nostri prodotti per cogliere il concetto del rispetto dell'ambiente riducendo i materiali dannosi presenti nei nostri prodotti. Ad esempio nei nostri monitor non è presente il cadmio.

#### Informazioni per il riciclaggio

Il monitor può presentare componenti che potrebbero risultare eventualmente dannosi per l'ambiente. È importante che il monitor sia riciclato al termine del suo utilizzo.

La LGE. gestisce tutti i monitor di rifiuto con un metodo di riciclaggio soddisfacente dal punto di vista ambientale. In tutto il mondo sono attualmente in funzione numerosi sistemi di riciclaggio e recupero. I diversi componenti sono riutilizzati e riciclati, mentre le sostanze dannose e i metalli pesanti vengono trattati con un metodo rispettoso dell'ambiente.

Se si desiderano maggiori informazioni in merito al programma di riciclaggio, è consigliabile rivolgersi al proprio rivenditore LG o ad un rappresentante aziendale della LG.

Noi della LG impostiamo la nostra visione e le nostre politiche a favore di un mondo più pulito ponendo la questione dell'ambiente dal punto di vista globale come una mansione rivolta al miglioramento della nostra azienda. Vi invitiamo a visitare il nostro sito internet per ulteriori informazioni sulla nostra politica "verde".  
<http://www.lge.com/about/environment/html/Recycling.jsp>

### Espanol

#### Información para la conservación medioambiental

LGE. presentó la 'Declaración para un entorno más limpio de LG' en 1994 y este ideal ha servido para guiar nuestros principios empresariales desde entonces. La Declaración es la base que nos ha permitido llevar a cabo tareas que

respetan el medio ambiente siempre teniendo en cuenta aspectos sociales, económicos y medioambientales.

Promocionamos actividades orientadas a la conservación del medio ambiente y desarrollamos nuestros productos específicamente para que se ajusten a la filosofía que protege el entorno.

Reducimos al máximo el uso de materiales de riesgo en nuestros productos. Un ejemplo de ello es la ausencia total de cadmio en nuestros monitores.

#### Información para el reciclaje

Este monitor puede contener piezas que entrañen riesgos medioambientales. Es importante reciclar este monitor después de su utilización.

LGE. trata todos los monitores usados siguiendo un método de reciclaje que no daña al entorno. Contamos con diversos sistemas de recuperación y reciclaje que funcionan a nivel mundial en la actualidad. Es posible reciclar y reutilizar muchas de las piezas, mientras que las sustancias dañinas y los metales pesados se tratan siguiendo un método que no perjudique al medio ambiente. Si desea obtener más información acerca del programa de reciclaje, póngase en contacto con su proveedor local de LG o con un representante empresarial de nuestra marca.

Basamos nuestra visión y nuestras políticas en un mundo más limpio y para ellos optamos por un entorno global como tarea principal de nuestra evolución como empresa. Visite nuestra página Web para obtener más información sobre nuestras políticas ecológicas.

<http://www.lge.com/about/environment/html/Recycling.jsp>

### Português

#### Informações relacionadas à preservação ambiental

A LGE. anunciou a 'LG Declaration for a Cleaner Environment' (Declaração da LG para um ambiente mais limpo) em 1994 e esse ideal tem servido desde então como um princípio administrativo de orientação. A Declaração é a base que nos tem permitido realizar atividades favoráveis ao ambiente com consideração atenta aos aspectos econômicos, ambientais e sociais.

Promovemos atividades de preservação ambiental e desenvolvemos nossos produtos para englobar

## ■■■ Regulatory Information cont.

especificamente o conceito de favorável ao ambiente.

Reduzimos os materiais perigosos contidos em nossos produtos. Por exemplo, não há cádmio em nossos monitores.

### Informações relacionadas à reciclagem

Este monitor pode conter peças que podem representar riscos ao ambiente. É importante que ele seja reciclado após o uso.

A LGE, cuida de todos os monitores descartados através de um método de reciclagem agradável ao ambiente. Há vários sistemas de devolução e reciclagem atualmente em operação no mundo. Muitas peças serão reutilizadas e recicladas e as substâncias nocivas e os metais pesados passarão por tratamento através de um método favorável ao ambiente.

Para obter mais informações sobre nosso programa de reciclagem, entre em contato com seu fornecedor LG local ou com um representante corporativo da LG.

Definimos nossa visão e nossas políticas relacionadas a um mundo mais limpo selecionando a questão do ambiente global como uma tarefa de aprimoramento corporativo. Visite nosso site para obter mais informações sobre nossas políticas de meio ambiente.

<http://www.lge.com/about/environment/html/Recycling.jsp>

### ■ ■ ■ Nederlands

#### Informatie met betrekking tot het behoud van het milieu

LGE. publiceerde in 1994 de 'LG Declaration for a Cleaner Environment' (de LG-verklaring met betrekking tot een schoner milieu). Deze verklaring en het ideaal van een schoner milieu fungeren sindsdien als een bestuurlijke leidraad voor onze onderneming. Op basis van deze verklaring ontplooiën wij milieuvriendelijke activiteiten, waarbij er zowel met sociale en economische aspecten, als met milieuaspecten zorgvuldig rekening wordt gehouden.

Wij ondersteunen activiteiten die zijn gericht op het behoud van het milieu en wij houden bij het ontwikkelen onze producten specifiek rekening met de milieuvriendelijkheid van onze producten.

Wij minimaliseren het gebruik van schadelijke stoffen in onze producten. Er wordt bijvoorbeeld geen cadmium verwerkt in onze monitoren.

#### Informatie met betrekking tot recycling

Deze monitor bevat materialen die schadelijk zouden kunnen zijn voor het milieu. Het is belangrijk dat deze monitor aan het einde van zijn levensduur wordt gerecycled.

LGE. verwerkt alle afvalmonitoren via een milieuvriendelijke recyclingmethode. Hiervoor worden er momenteel wereldwijd verscheidene inname- en recyclingsystemen gehanteerd. Een groot aantal onderdelen wordt opnieuw gebruikt en gerecycled, waarbij schadelijke stoffen en zware metalen volgens een milieuvriendelijke methode worden verwerkt.

Voor meer informatie over ons recyclingprogramma kunt u contact opnemen met uw plaatselijke LG-vertegenwoordiger of een LG-vestiging.

Onze visie en ons beleid met betrekking tot een schonere wereld vloeien voort uit het feit dat wij het milieu hebben aangemerkt als een onderwerp dat speciale aandacht verdient binnen onze onderneming. Bezoek onze website voor meer informatie over ons 'groene' beleid.

<http://www.lge.com/about/environment/html/Recycling.jsp>

### ■ ■ ■ Russian

#### Информация по охране окружающей среды

В 1994 году корпорация LGE опубликовала 'Декларацию LG по охране окружающей среды', которая с тех пор служит основным принципом управления. На основе этой декларации мы смогли предпринять действия, обеспечивающие безопасность окружающей среды, уделяя при этом должное внимание экономическим, экологическим и социальным аспектам.

Мы стимулируем деятельность по охране окружающей среды, уделяя особое внимание разработке нашей продукции в соответствии с концепцией экологической безопасности.

Мы сводим к минимуму содержание опасных веществ в нашей продукции. Например, в наших мониторах вы не найдете кадмия.

#### Информация по утилизации отходов

Этот монитор может содержать компоненты, которые могут нанести ущерб окружающей среде.

■■■ Regulatory Information cont.

Необходимо утилизировать монитор после использования.

Корпорация LGE перерабатывает все бракованные мониторы с помощью экологически приемлемого метода утилизации отходов. По всему миру действуют системы утилизации отходов и возврата использованной продукции. Многие компоненты будут вторично использованы и утилизированы, в то время как вредные вещества и тяжелые металлы будут обработаны с помощью экологически приемлемого метода.

За более подробной информацией по нашей программе утилизации отходов обращайтесь к местному поставщику или представителю корпорации LG.

Мы ориентируемся на обеспечение экологической безопасности, ставя себе целью глобальную защиту окружающей среды. Дополнительную информацию о нашей политике по охране окружающей среды вы можете найти на нашем сайте:  
<http://www.lge.com/about/environment/html/Recycling.jsp>

한국어

환경 보존 정보

LG 전자는 1994년 'LG 환경 선언문'을 발표한 후 현재까지 이를 기업 경영의 이념으로 삼아왔습니다. 이 선언문을 바탕으로 LG 전자는 모든 경영 활동에서 경제성뿐만 아니라 환경성 및 사회성을 주요 의사 결정의 기준으로 삼음으로써 지속적으로 환경 친화적인 경영을 전개하고 있습니다.

본사는 보다 활발한 환경 보존 활동과 더불어 환경 친화적 제품 개발에 주력해 왔습니다.

또한 제품에 포함되는 환경 위해 요소를 최소화하는 데에도 노력을 기울이지 않고 있습니다. LG 전자 모니터의 경우 카드뮴을 전혀 사용하지 않는 것에서도 이러한 노력을 알 수 있습니다.

재활용 정보

본 모니터에는 환경에 위해를 주는 부품이 포함되어 있을 수도 있습니다. 따라서 사용이 끝난 모니터는 재활용하는 것이 좋습니다.

폐모니터는 모두 환경 친화적 방식으로 처리됩니다. 현재 세계적으로 운영되고 있는 회수 및 재활용 시스템에는

여러 가지가 있습니다. 대부분의 부품의 경우 재사용 또는 재활용되지만 환경 위해 물질과 중금속은 환경 친화적 방법으로 처리됩니다.

본사의 재활용 프로그램에 대한 자세한 정보는 각 지역의 LG 공급업체나 LG 기업 대표부에 문의하시기 바랍니다.

LG 전자는 기업 개선 정책의 하나로 지구 환경 문제를 채택함으로써 보다 나은 환경을 만들어 나가기 위한 비전과 정책을 수립했습니다. 본사의 친환경 정책에 대한 자세한 정보를 보시려면 아래의 웹 사이트를 방문하십시오.

[http://www.lge.co.kr/cckr/about/environ/purity\\_02.jsp](http://www.lge.co.kr/cckr/about/environ/purity_02.jsp)

∴EPA (EPA applied model only)

ENERGY STAR is a set of power-saving guidelines issued by the U.S. Environmental Protection Agency(EPA).



As an ENERGY STAR Partner LGE U. S. A.,Inc. has determined that this product meets the ENERGY STAR guidelines for energy efficiency.

∴NOM MARK (Mexico only)



## ■■■ Regulatory Information cont.

### :: WEEE (for Europe )



#### English

##### Disposal of your old appliance

1. When this crossed-out wheeled bin symbol is attached to a product it means the product is covered by the European Directive 2002/96/EC.
2. All electrical and electronic products should be disposed of separately from the municipal waste stream via designated collection facilities appointed by the government or the local authorities.
3. The correct disposal of your old appliance will help prevent potential negative consequences for the environment and human health.
4. For more detailed information about disposal of your old appliance, please contact your city office, waste disposal service or the shop where you purchased the product.

#### French

##### Élimination de votre ancien appareil

1. Ce symbole, représentant une poubelle sur roulettes barrée d'une croix, signifie que le produit est couvert par la directive européenne 2002/96/EC.
2. Les éléments électriques et électroniques doivent être jetés séparément, dans les vide-ordures prévus à cet effet par votre municipalité.
3. Une élimination conforme aux instructions aidera à réduire les conséquences négatives et risques éventuels pour l'environnement et la santé humaine.
4. Pour plus d'information concernant l'élimination de votre ancien appareil, veuillez contacter votre mairie, le service des ordures ménagères ou encore la magasin où vous avez acheté ce produit.

#### Italian

##### Smaltimento delle apparecchiature obsolete

1. Quando su un prodotto è riportato il simbolo di

un bidone della spazzatura barrato da una croce significa che il prodotto è coperto dalla direttiva europea 2002/96/EC.

2. Tutti i prodotti elettrici ed elettronici dovrebbero essere smaltiti separatamente rispetto alla raccolta differenziata municipale, mediante impianti di raccolta specifici designati dal governo o dalle autorità locali.
3. Il corretto smaltimento delle apparecchiature obsolete contribuisce a prevenire possibili conseguenze negative sulla salute umana e sull'ambiente.
4. Per informazioni più dettagliate sullo smaltimento delle apparecchiature obsolete, contattare il comune, il servizio di smaltimento rifiuti o il negozio in cui è stato acquistato il prodotto.

#### Swedish

##### Kassering av din gamla apparat

1. När den här symbolen med en överkryssad soptunna på hjul sitter på en produkt innebär det att den regleras av European Directive 2002/96/EC.
2. Alla elektriska och elektroniska produkter bör kasseras via andra vägar än de som finns för hushållsavfall, helst via för ändamålet avsedda uppsamlingsanläggningar som myndigheterna utser.
3. Om du kasserar din gamla apparat på rätt sätt så bidrar du till att förhindra negativa konsekvenser för miljön och människors hälsa.
4. Mer detaljerad information om kassering av din gamla apparat kan fås av kommunen, renhållningsverket eller den butik där du köpte produkten.

#### Dutch

##### Uw oude toestel wegdoen

1. Als het symbool met de doorgekruiste verrijdbare afvalbak op een product staat, betekent dit dat het product valt onder de Europese Richtlijn 2002/96/EC.
2. Elektrische en elektronische producten mogen niet worden meegegeven met het huishoudelijk afval, maar moeten worden ingeleverd bij speciale inzamelingspunten die door de lokale of landelijke overheid zijn aangewezen.
3. De correcte verwijdering van uw oude toestel helpt negatieve gevolgen voor het milieu en de menselijke gezondheid voorkomen.

## Regulatory Information cont.

4. Wilt u meer informatie over de verwijdering van uw oude toestel? Neem dan contact op met uw gemeente, de afvalophaaldienst of de winkel waar u het product hebt gekocht.

### Finnish

#### Vanhonjen laitteiden hävittäminen

1. Tämä merkki tuotteessa tarkoittaa, että tuote kuuluu sähkö- ja elektroniikkalaiteromusta annetun EU-direktiivin 2002/96/EY soveltamisalaan.
2. Kaikki elektroniset laitteet ovat ongelmajätettä, joten ne on toimitettava paikalliseen keräyspisteeseen.
3. Vanhan laitteen asianmukainen hävittäminen ehkäisee mahdollisia ympäristöön ja terveyteen kohdistuvia haittavaikutuksia.
4. Lisätietoa vanhan laitteen hävittämisestä saat ottamalla yhteyden paikallisiin viranomaisiin, kierrätyskeskukseen tai myymälään, josta ostit laitteen.

### German

#### Entsorgung von Altgeräten

1. Wenn dieses Symbol eines durchgestrichenen Abfalleimers auf einem Produkt angebracht ist, unterliegt dieses Produkt der europäischen Richtlinie 2002/96/EC.
2. Alle Elektro- und Elektronik-Altgeräte müssen getrennt vom Hausmüll über dafür staatlich vorgesehenen Stellen entsorgt werden.
3. Mit der ordnungsgemäßen Entsorgung des alten Geräts vermeiden Sie Umweltschäden und eine Gefährdung der persönlichen Gesundheit.
4. Weitere Informationen zur Entsorgung des alten Geräts erhalten Sie bei der Stadtverwaltung, beim Entsorgungsamt oder in dem Geschäft, wo Sie das Produkt erworben haben.

### Danish

#### Sådan smider du dit gamle apparat ud

1. Når der er et tegn med et kryds over en skraldespand, betyder det, at produktet er omfattet af EU-direktiv 2002/96/EC.
2. Alle elektriske og elektroniske produkter skal smides ud et andet sted end gennem den kommunale affaldsordning ved hjælp af specielle indsamlingsfaciliteter, der er organiseret af staten

eller de lokale myndigheder.

3. Korrekt bortskaffelse af dit gamle apparat er med til at forhindre mulige skadevirkninger på miljøet og menneskelig sundhed.
4. Mere detaljerede oplysninger om bortskaffelse af dit gamle apparat kan fås ved at kontakte dit lokale kommunekontor, renovationselskab eller den butik, hvor du købte produktet.

### Greek

#### Απόρριψη της παλιάς σας συσκευής

1. Όταν ένα προϊόν διαθέτει το σύμβολο ενός διαγραμμένου κάλαθου απορριμμάτων, τότε το προϊόν καλύπτεται από την Ευρωπαϊκή Οδηγία 2002/96/ΕΟΚ.
2. Η απόρριψη όλων των ηλεκτρικών και ηλεκτρονικών προϊόντων πρέπει να γίνεται χωριστά από τα γενικά οικιακά απορρίμματα μέσω καθορισμένων εγκαταστάσεων συλλογής απορριμμάτων, οι οποίες έχουν δημιουργηθεί είτε από την κυβέρνηση ή από τις τοπικές αρχές.
3. Η σωστή απόρριψη της παλιάς σας συσκευής θα βοηθήσει στην αποτροπή πιθανών αρνητικών συνεπειών ως προς το περιβάλλον και την υγεία του ανθρώπου.
4. Για πιο λεπτομερείς πληροφορίες σχετικά με την απόρριψη της παλιάς σας συσκευής, επικοινωνήστε με το αρμόδιο τοπικό γραφείο, υπηρεσία διάθεσης οικιακών απορριμμάτων ή το μαγαζί από το οποίο αγοράσατε το προϊόν.

### Spanish

#### Cómo deshacerse de aparatos eléctricos y electrónicos viejos

1. Si en un producto aparece el símbolo de un contenedor de basura tachado, significa que éste se acoge a la Directiva 2002/96/CE.
2. Todos los aparatos eléctricos o electrónicos se deben desechar de forma distinta del servicio municipal de recogida de basura, a través de puntos de recogida designados por el gobierno o las autoridades locales.
3. La correcta recogida y tratamiento de los dispositivos inservibles contribuye a evitar riesgos potenciales para el medio ambiente y la salud pública.
4. Para obtener más información sobre cómo deshacerse de sus aparatos eléctricos y electrónicos viejos, póngase en contacto con su ayuntamiento, el servicio de recogida de basuras o el establecimiento donde adquirió el producto.



## Regulatory Information cont.

### Portuguese

#### Eliminação do seu antigo aparelho

1. Quando este símbolo de latão cruzado estiver afixado a um produto, significa que o produto é abrangido pela Directiva Europeia 2002/96/EC.
2. Todos os produtos eléctricos e electrónicos devem ser eliminados separadamente do lixo doméstico através de pontos de recolha designados, facilitados pelo governo ou autoridades locais.
3. A eliminação correcta do seu aparelho antigo ajuda a evitar potenciais consequências negativas para o ambiente e para a saúde humana.
4. Para obter informações mais detalhadas acerca da eliminação do seu aparelho antigo, contacte as autoridades locais, um serviço de eliminação de resíduos ou a loja onde comprou o produto.

### Slovak

#### Likvidácia váš ho starého prístroja

1. Keď sa na produkte nachádza tento symbol prečiarknutej smetnej nádoby s kolieskami, znamená to, že daný produkt vyhovuje európskej Smernici č. 2002/96/EC.
2. Všetky elektrické a elektronické produkty by mali byť zlikvidované oddelene od komunálneho odpadu prostredníctvom na to určených zberných zariadení, ktoré boli ustanovené vládou alebo orgánmi miestnej správy.
3. Správnu likvidáciu starých zariadení pomôžete predchádzať potenciálnym negatívnym následkom pre prostredie a ľudské zdravie.
4. Podrobnejšie informácie o likvidácii starých zariadení nájdete na miestnom úrade, v službe na likvidáciu odpadu alebo u predajcu, kde ste tento produkt zakúpili.

### Czech

#### Likvidace starých spotřebičů

1. Pokud je u výrobku uveden symbol pojízdného kontejneru v přeškrtnutém poli, znamená to, že na výrobek se vztahuje směrnice Evropské unie číslo 2002/96/EC.
2. Všechny elektrické a elektronické výrobky by měly být likvidovány odděleně od běžného komunálního odpadu prostřednictvím sběrných zařízení zřízených za tímto účelem vládou nebo místní samosprávou.
3. Správný způsob likvidace starého elektrického spotřebiče pomáhá zamezit možným negativním dopadům na životní prostředí a zdraví.
4. Bližší informace o likvidaci starého spotřebiče získáte u místní samosprávy, ve sběrném zařízení nebo v obchodě, ve kterém jste výrobek zakoupili.

### Croatian

#### Uklanjanje starog aparata

1. Ako se na proizvodu nalazi simbol prekrizhene kante za smeće, to znači da je proizvod pokriven europskom direk-

tivom 2002/96/EC.

2. Električni i elektronski proizvodi ne smiju se odlagati zajedno s komunalnim otpadom, već u posebna odlagališta koja je odredila vlada ili lokalne vlasti.
3. Pravilno odlaganje starog proizvoda sprečiti će potencijalne negativne posljedice po okoliš i zdravlje ljudi.
4. Podrobnije informacije o odlaganju starog proizvoda potražite u gradskom uredu, službi za odlaganje otpada ili u trgovini u kojoj ste kupili proizvod.

### Hungarian

#### Régi eszközök ártalmatlanítása

1. A termékhez csatolt áthúzott, keresek szeméttároló jel jelöli, hogy a termék a 2002/96/EC EU-direktíva hatálya alá esik.
2. Minden elektromos és elektronikai terméket a lakossági hulladéktól elkülönítve kell begyűjteni, a kormány vagy az önkormányzatok által kijelölt begyűjtő eszközök használatával.
3. Régi eszközeinek megfelelő ártalmatlanítása segíthet megelőzni az esetleges egészségre vagy környezetre ártalmas hatásokat.
4. Ha több információra van szüksége régi eszközeinek ártalmatlanításával kapcsolatban, tanulmányozza a vonatkozó környezetvédelmi szabályokat, vagy lépjen kapcsolatba az üzlettel, ahol a terméket vásárolta.

### Polish

#### Utylizacja starych urządzeń

1. Kiedy do produktu dołączony jest niniejszy przekreślony symbol kołowego pojemnika na śmieci, oznacza to, że produkt jest objęty dyrektywą 2002/96/EC.
2. Wszystkie elektryczne i elektroniczne produkty powinny być utylizowane niezależnie od odpadów miejskich, z wykorzystaniem przeznaczonych do tego miejsc składowania wskazanych przez rząd lub miejscowe władze.
3. Właściwy sposób utylizacji starego urządzenia pomoże zapobiec potencjalnie negatywnemu wpływowi na zdrowie i środowisko.
4. Aby uzyskać więcej informacji o sposobach utylizacji starych urządzeń, należy skontaktować się z władzami lokalnymi, przedsiębiorstwem zajmującym się utylizacją odpadów lub sklepem, w którym produkt został kupiony.

## ■ ■ ■ Regulatory Information cont.

### ■ ■ Estonian

#### Kasutuskõlbmatu seadme käitlemise kord

1. Kui seade on märgistatud selle elektri- ja elektroonikaseadmete lahuskogumist märgistava tähisega (ratastega prügikonteineri kujutis, millele on rist peale tõmmatud), tuleb toodet käidelda vastavalt Eurodirektiivile 2002/96/EÜ.
2. Elektri- ja elektroonikaseadmeid ei tohi visata tavalise prügi hulka. Nad kuuluvad lahuskogumisele selleks määratud kogumispunktides.
3. Kasutuskõlbmatu tervikseadme käitlemine tavaprügist lahus on korraldatud selleks, et vältida negatiivseid tagajärgi, mida põhjustaksid seadme osade purunemisel vabaneda võivad ohtlikud jäätmed loodusele või inimorganismile.
4. Täpsemat informatsiooni selle kohta, kuhu ja millal saab ära anda oma kasutamiskõlbmatu elektri- ja elektroonikaseadme, küsige kohalikus omavalitsuselt, prügifirmalt või kaupluselt, kust seadme ostsite.

### ■ ■ Latvian

#### Vecās elektroierīces nodošana

1. Ja uz produkta ir simbols ar pārsvītrotu atkritumu tvertni, tas nozīmē, ka produkts ir iekļauts Eiropas direktīvā 2002/96/EC.
2. Visi elektriskie un elektroniskie produkti ir jāutilizē, nododot pašvaldības īpaši noteiktās pieņemšanas vietās. Tos nedrīkst izmest parastās municipalitātes atkritumu urnās.
3. Ievērojot prasības veco elektroierīču utilizēšanā, jūs pasargāsiet apkārtējo vidi un cilvēku veselību no iespējami nelabvēlīgajām sekām, kādas varētu rasties, ierīcēm sadaloties nepiemērotā vietā.
4. Lai gūtu plašāku informāciju par veco ierīču utilizēšanas iespējām, sazinieties ar pilsētas pašvaldību, atkritumu savākšanas saimniecību vai veikalu, kurā ierīci iegādājāties.

### ■ ■ Lithuanian

#### Senos įrangos atliekų tvarkymas

1. Užbrauktas konteinerio simbolis priverčia ant prekės reiškia, kad įrangą saugo Europos direktyva 2002/96/EC.
2. Visos elektros ir elektroninės įrangos atliekos turi būti renkamos atskirai ir neišmetamos į atliekų konteinerį kartu su kitomis komunalinėmis atliekomis, taikant specialią atliekų surinkimo sistemą, patvirtintą vyriausybės ar vietos valdžios.
3. Teisingas senos įrangos atliekų tvarkymas, padės išvengti neigiamų pasekmių aplinkai ir žmonių sveikatai.
4. Dėl išsamesnės informacijos apie senos įrangos tvarkymą, prašome kreiptis į miesto valdžią, atliekų perdirbimo tarnybą arba parduotuvę, kurioje pirkote įrangą.