



LCD TV OWNER'S MANUAL

22LG30R

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

Write the model number and serial number from the label on the back cabinet on the front or back of this manual.

P/NO : MFL41469212 (0808-REV03)
Printed in Korea

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.

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.



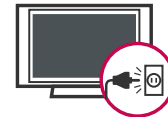
- 7 Only use attachments/accessories specified by the manufacturer.



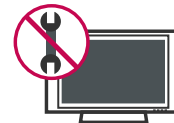
- 8 Use only with the cart, stand, tripod, bracket, or table specified by the manufacturer, or sold with the apparatus. When a cart is used, use caution when moving the cart/apparatus combination to avoid injury from tip-over.



- 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.



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

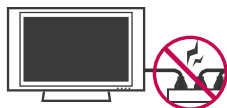
12 When mounting a TV on the wall, make sure not to install the TV by the hanging power and signal cables on the back of the TV.

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.



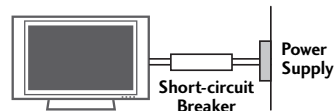
16 Do not expose to dripping or splashing and do not place objects filled with liquids, such as vases, cups, etc. on or over the apparatus (e.g. on shelves above the unit).



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, lightening rods, or gas pipes.



18 **DISCONNECTING DEVICE FROM MAINS**

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

19 Keep the product away from direct sunlight.

20 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.

21 Moving

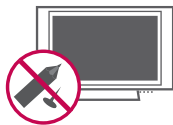
Make sure the product is turned off, unplugged and all cables have been removed. It may take 2 or more people to carry larger TVs. Do not press against or put stress on the front panel of the TV.

22 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.

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

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



CONTENTS

| | |
|--------------------------------|---|
| WARNING / CAUTION | 1 |
|--------------------------------|---|

| | |
|----------------------------------|---|
| SAFETY INSTRUCTIONS | 2 |
|----------------------------------|---|

PREPARATION

| | |
|--|----|
| Accessories | 7 |
| Front Panel Information | 8 |
| Back Panel Information | 9 |
| Stand Installation | 10 |
| Cable Management | 11 |
| Desktop Pedestal Installation | 12 |
| Wall Mount (Horizontal Installation) | 12 |
| Protection Cover | 13 |
| Positioning your Display | 14 |
| Kensington Security System | 14 |
| Antenna or Cable Connection | 15 |

EXTERNAL EQUIPMENT SETUP

| | |
|--------------------------------|----|
| HD Receiver Setup | 16 |
| DVD Setup | 19 |
| VCR Setup | 21 |
| PC Setup | 23 |
| Screen Setup For PC Mode | 25 |

WATCHING TV / CHANNEL CONTROL

| | |
|---|----|
| Remote Control Functions | 28 |
| Turning On TV | 30 |
| Channel Selection | 30 |
| Volume Adjustment | 30 |
| On-Screen Menus Selection | 31 |
| Channel Search | |
| - Auto Tuning (Program Search) | 32 |
| - Manual Tuning (Adding/Deleting Channels) .. | |
| | 33 |
| Fine Tuning Adjustment | 34 |
| Booster | 35 |
| Favorite Channels Setup | 36 |
| Key Lock | 37 |

PICTURE CONTROL

| | |
|---|----|
| Picture Size (Aspect Ratio) Control | 38 |
| Preset Picture Settings | |
| - Picture Mode - Preset | 39 |
| - Auto Color Tone Control | 40 |
| Manual Picture Adjustment | |
| - Picture Mode - User Mode | 41 |
| - Color Tone - User Mode | 42 |
| XD - Picture Improvement Technology | 43 |
| Advanced - Gamma | 44 |
| Advanced - Film Mode | 45 |
| Advanced - Black (Darkness) Level | 46 |
| Picture Reset | 47 |
| Factory Reset | 48 |

SOUND & LANGUAGE CONTROL

| | |
|--|----|
| Auto Volume Leveler (Auto Volume) | 49 |
| Preset Sound Settings (Sound Mode) | 50 |
| Sound Setting Adjustment - User Mode | 51 |
| Balance | 52 |
| On-Screen Menus Language Selection | 53 |
| Closed Captions | 54 |
| Stereo/SAP Broadcasts Setup | 55 |

TIME SETTING

| | |
|--------------------------------|----|
| Clock Setup | 56 |
| Auto On/Off Time Setting | 57 |
| Sleep Timer Setting | 58 |
| Auto Shut-Off Setting | 59 |

APPENDIX

| | |
|--|----|
| Troubleshooting | 60 |
| Maintenance | 62 |
| Product Specifications | 63 |
| External Control Through RS-232C | 64 |

-
- 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

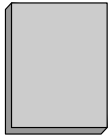
- a. The fluorescent lamp used in this product contains a small amount of mercury.
- b. Do not dispose of this product with general household waste.
- c. Disposal of this product must be carried out in accordance to the regulations of your local authority.

PREPARATION

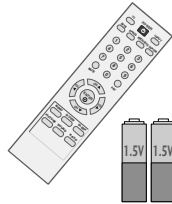
ACCESSORIES

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

The accessories included may differ from the images below.



Owner's Manual



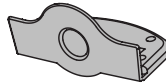
Remote Control,
Batteries



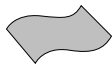
Power Cord



Cable Management Clip



Protection Cover



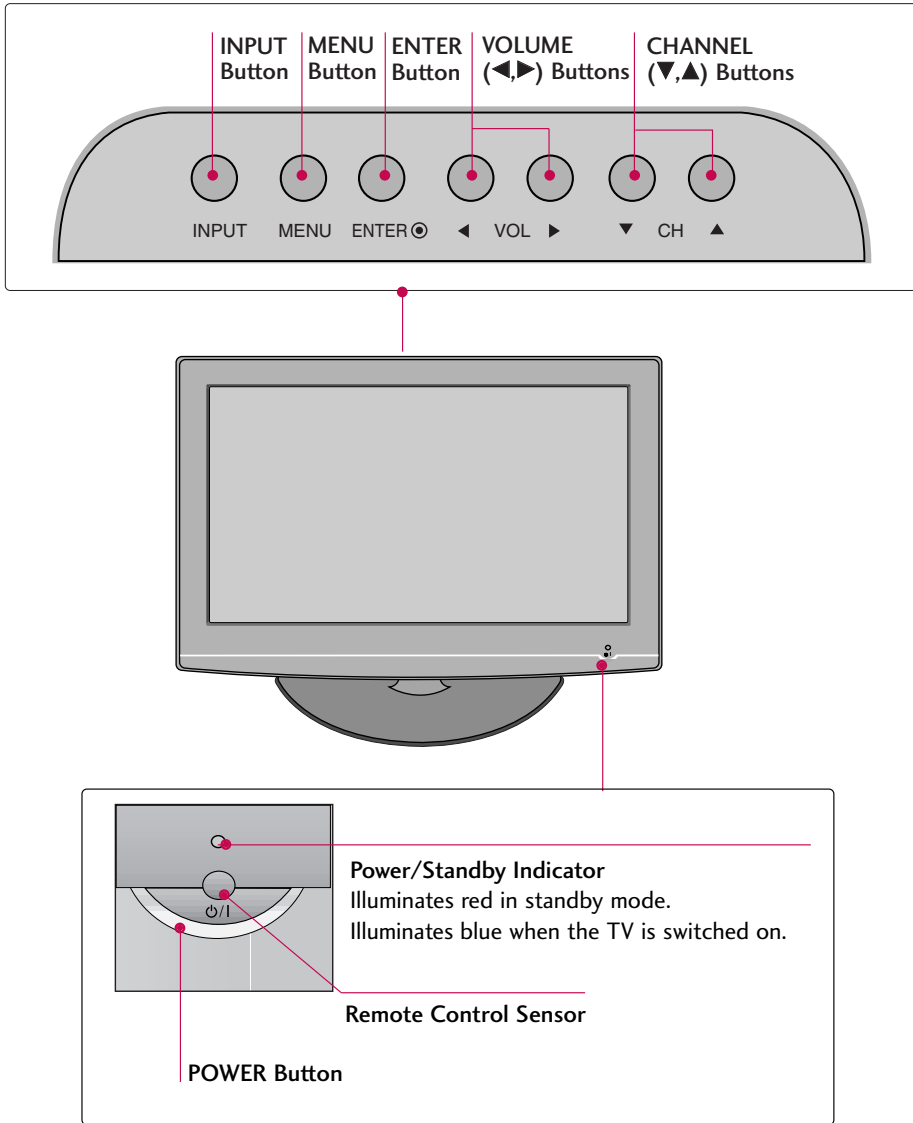
Polishing Cloth
(This feature is not available
for all models.)

- * Wipe spots on the exterior only with the polishing cloth.
- * Do not wipe roughly when removing stain. Please be cautious of that excessive pressure may cause scratch or discoloration.

PREPARATION

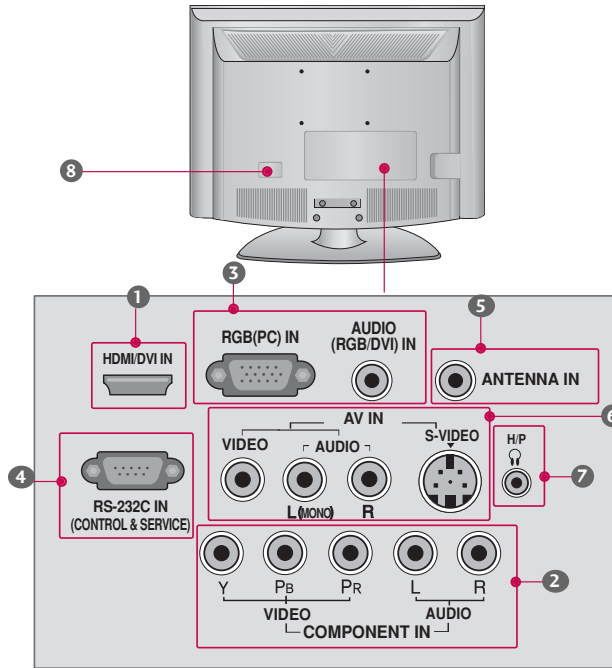
FRONT PANEL INFORMATION

- Image shown may differ from your TV.
- **NOTE:** If your TV has a protection tape attached, remove the tape. And then wipe the TV with a cloth (If a polishing cloth is included with your product, use it).



BACK PANEL INFORMATION

■ Image shown may differ from your TV.



1 HDMI/DVI 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 COMPONENT IN

Analog Connection.
 Supports HD.
 Uses a red, green, and blue cable for video & red and white for audio.

3 RGB (PC) IN

Analog PC Connection. Uses a D-sub 15 pin cable (VGA cable).
AUDIO (RGB/DVI) IN
 1/8" headphone jack for analog PC audio input.

4 RS-232C IN (CONTROL & SERVICE) PORT

Used by third party devices.

5 ANTENNA IN

Connect over-the air signals to this jack.

6 AV (Audio/Video) IN

Analog composite connection. Supports standard definition video only (480i).
S-VIDEO

Better quality than standard composition. Supports standard definition video only (480i).

7 Headphone INPUT

Plug the headphone into the headphone socket.

8 Power Cord Socket

For operation with AC power.
 Caution: Never attempt to operate the TV on DC power.

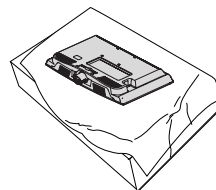
PREPARATION

STAND INSTALLATION

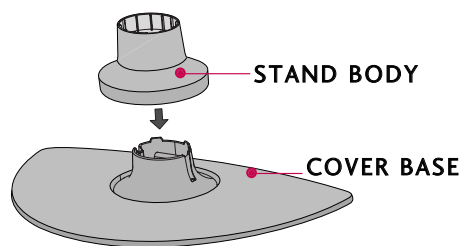
- Image shown may differ from your TV

PREPARATION

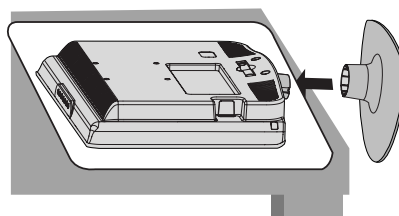
- 1 Carefully place the TV screen side down on a cushioned surface to protect the screen from damage.



- 2 Assemble the parts of the **STAND BODY** with **COVER BASE** of the TV. Insert the **STAND BODY** into a **COVER BASE** until clicking sound.



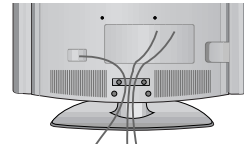
- 3 Assemble the TV as shown.



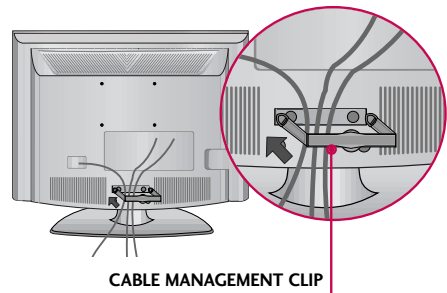
CABLE MANAGEMENT

■ Image shown may differ from your TV

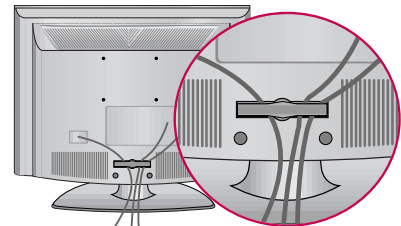
- 1 Connect the cables as necessary.
To connect additional equipment, see the **EXTERNAL EQUIPMENT SETUP** section.



- 2 Install the **CABLE MANAGEMENT CLIP** as shown.

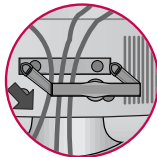


- 3 Fit the **CABLE MANAGEMENT CLIP** as shown.



How to remove the CABLE MANAGEMENT CLIP

- ▶ Hold the **CABLE MANAGEMENT CLIP** with both hands and pull it backward.



! NOTE

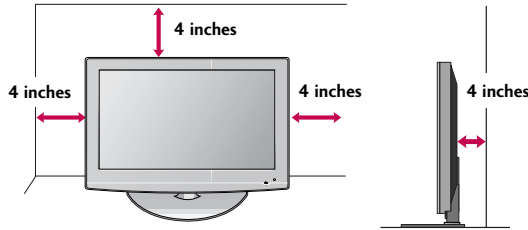
- ▶ Do not hold the **CABLE MANAGEMENT CLIP** when moving the TV.
- If the TV is dropped, you may be injured or the product may be broken.

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.

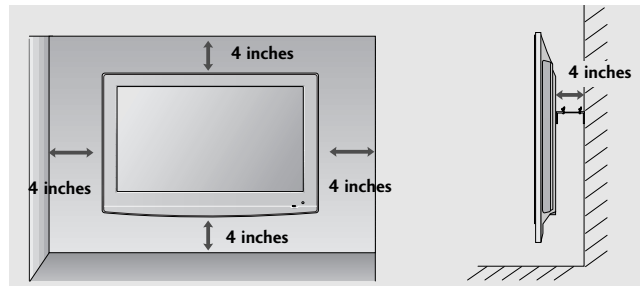
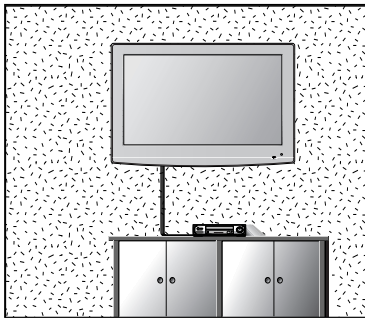


⚠ CAUTION

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

WALL MOUNT: HORIZONTAL INSTALLATION

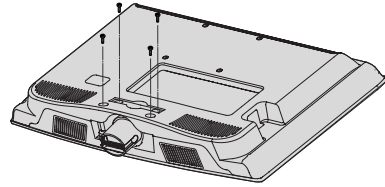
For adequate ventilation allow a clearance of 4" (10cm) all around the TV. We recommend that you use an LG brand wall mount when mounting the TV to a wall.



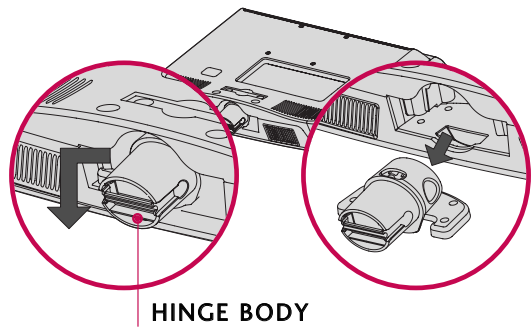
PROTECTION COVER

■ Image shown may differ from your TV.

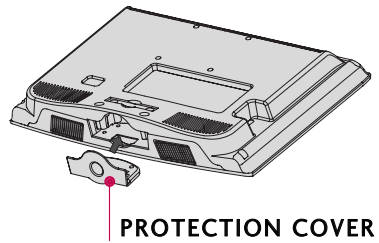
- 1 Loose the bolts from TV.



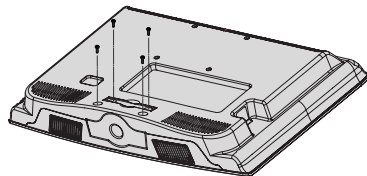
- 2 Bend the **HINGE BODY** and pull it backward.



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



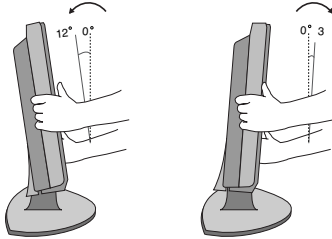
- 4 Fix the 4 bolts securely using the holes in the back of the TV.



PREPARATION

POSITIONING YOUR DISPLAY

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

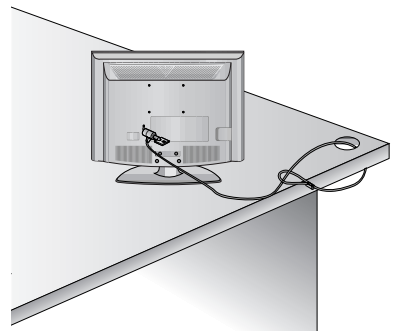


KENSINGTON SECURITY SYSTEM

- 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.



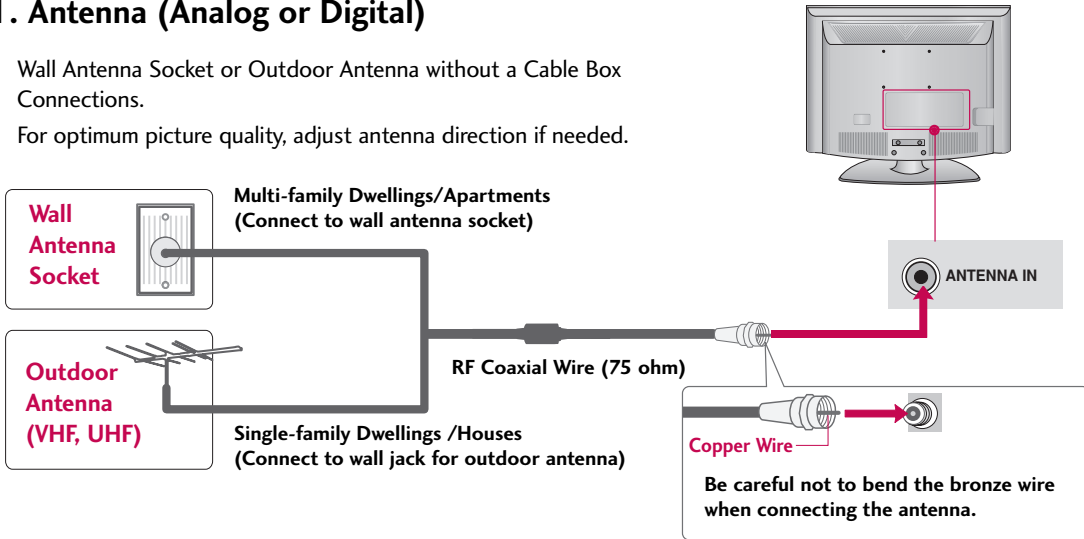
- To prevent damage do not connect to the power outlet until all connections are made between the devices.
- Image shown may differ from your TV.

ANTENNA OR CABLE CONNECTION

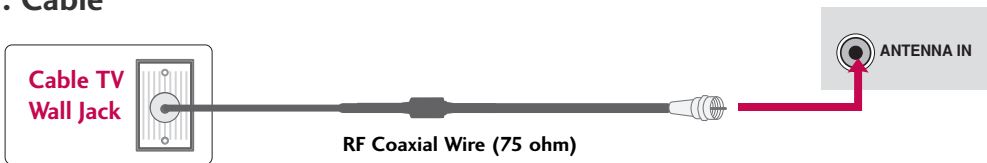
1. Antenna (Analog or Digital)

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

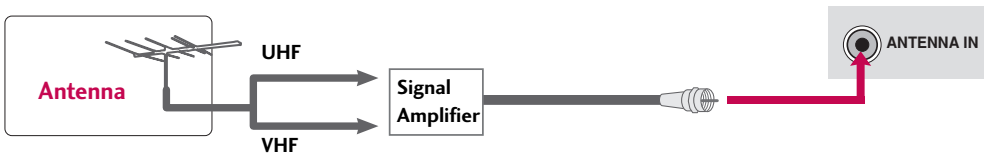
For optimum picture quality, adjust antenna direction if needed.



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.

HD RECEIVER SETUP

This TV can receive Digital Over-the-air/Cable signals with an external digital set-top box. If you do receive digital signals from a digital set-top box or other digital external device, refer to the figure as shown below.

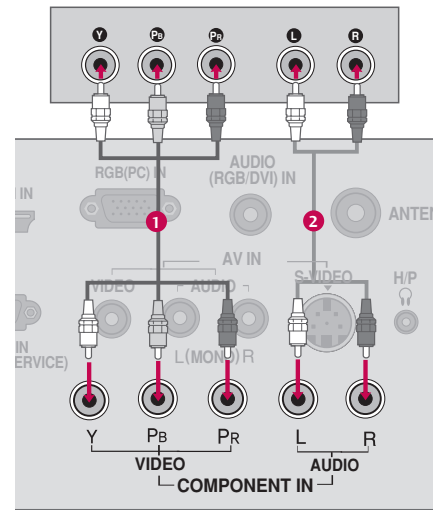
Component Connection

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.



| Signal | Component | HDMI/DVI |
|--------|-------------------|-------------------|
| 480i | Yes | No |
| 576i | Yes | No |
| 480p | Yes | Yes |
| 576p | Yes | Yes |
| 720p | Yes | Yes |
| 1080i | Yes | Yes |
| 1080p | Yes | Yes |
| | (Only 50Hz, 60Hz) | (Only 50Hz, 60Hz) |

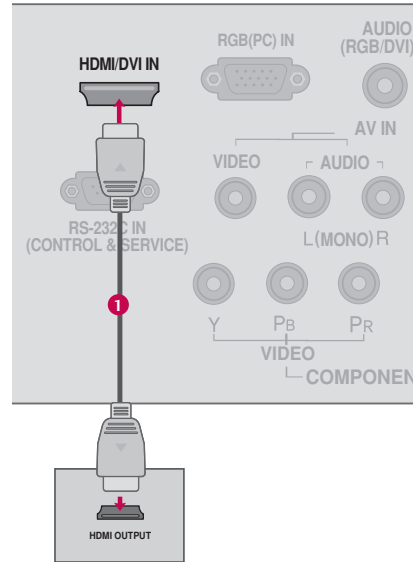
HDMI Connection

1. How to connect

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



HDMI-DTV

| Resolution | Horizontal Frequency(kHz) | Vertical Frequency(Hz) |
|------------|---------------------------|------------------------|
| 720x480p | 31.47 | 59.94 |
| | 31.50 | 60.00 |
| 720x576p | 31.25 | 50.00 |
| 1280x720p | 44.96 | 59.94 |
| | 45.00 | 60.00 |
| | 37.50 | 50.00 |
| 1920x1080i | 33.72 | 59.94 |
| | 33.75 | 60.00 |
| | 28.125 | 50.00 |
| 1920x1080p | 67.432 | 59.94 |
| | 67.50 | 60.00 |
| | 56.25 | 50.00 |

EXTERNAL EQUIPMENT SETUP

DVI to HDMI Connection

1. How to connect

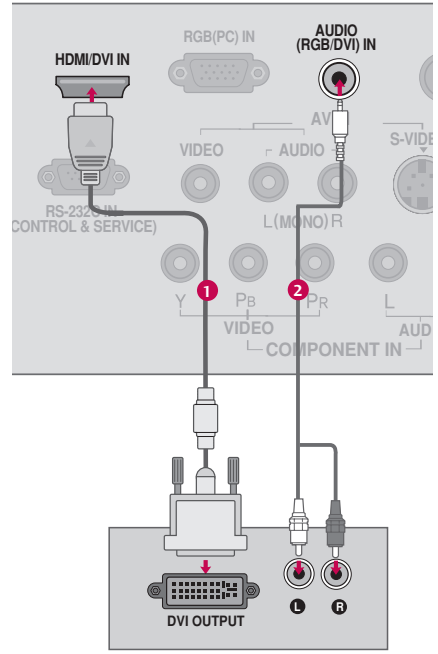
- 1 Connect the DVI output of the digital set-top box to the **HDMI/DVI IN** jack on the TV.
- 2 Connect the audio output of the digital set-top box to the **AUDIO (RGB/DVI) IN** jack on the TV.

2. How to use

- Turn on the digital set-top box.
(Refer to the owner's manual for the digital set-top box operation)
- Select the **HDMI/DVI** 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.

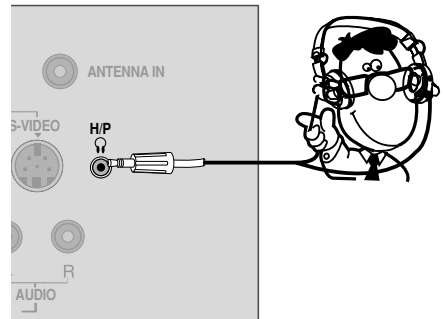


HEADPHONE SETUP

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.

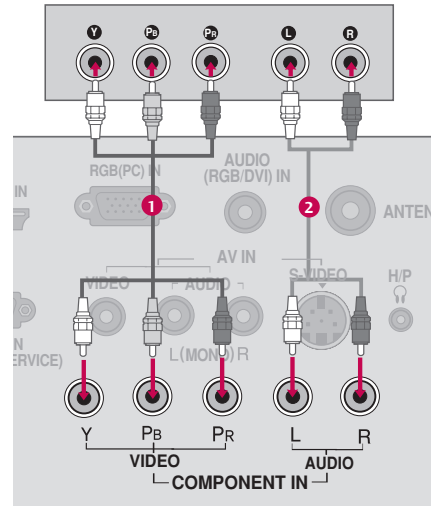


DVD SETUP

Component Connection

1. How to connect

- 1 Connect the video outputs (Y, Pb, Pr) of the DVD to the **COMPONENT IN VIDEO** jacks on the TV. Match the jack colors (Y = green, Pb = blue, and Pr = red).
- 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 _B | P _R |
|----------------------------------|---|----------------|----------------|
| Video output ports on DVD player | Y | P _B | P _R |
| | Y | B-Y | R-Y |
| | Y | C _b | C _r |
| | Y | P _b | P _r |

EXTERNAL EQUIPMENT SETUP

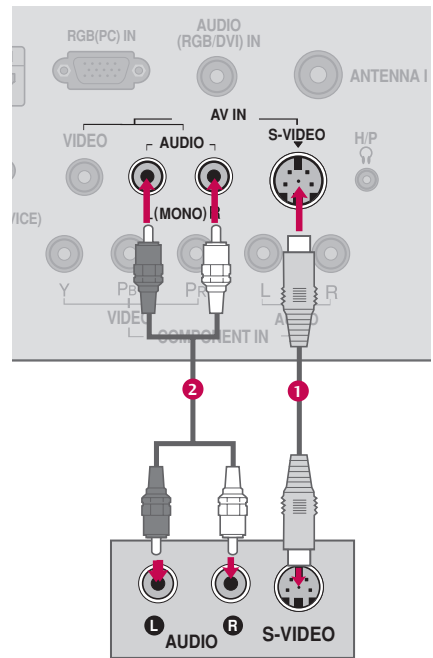
S-Video Connection

1. How to connect

- 1 Connect the S-VIDEO output of the DVD to the **S-VIDEO** input on the TV.
- 2 Connect the audio outputs of the DVD to the **AUDIO** input jacks on the TV.

2. How to use

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



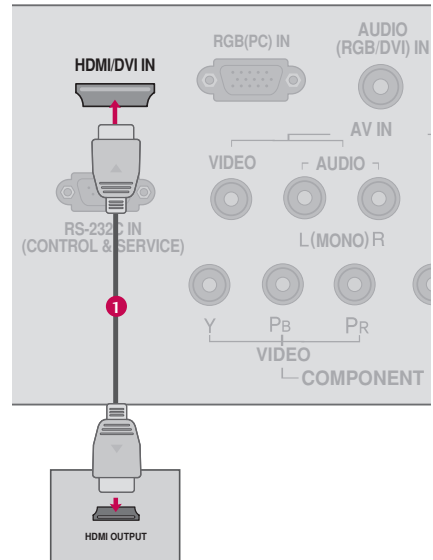
HDMI Connection

1. How to connect

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

2. How to use

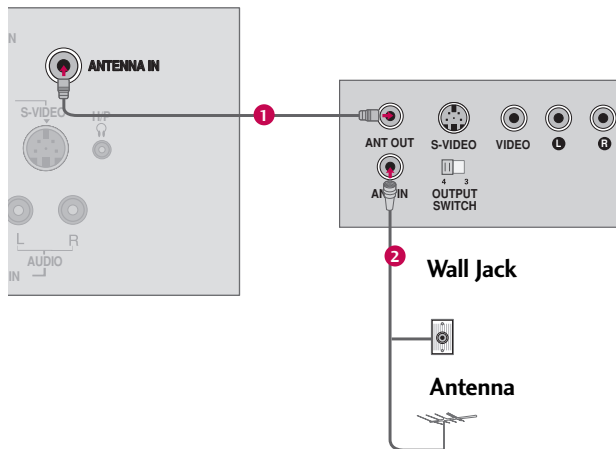
- Select the **HDMI/DVI** input source on the TV using the **INPUT** button on the remote control.
- Refer to the DVD player's manual for operating instructions.



VCR SETUP

- To avoid picture noise (interference), leave an adequate distance between the VCR and TV.
- If the 4:3 picture format is used; the fixed images on the sides of the screen may remain visible on the screen. This phenomenon is common to all TVs and is not covered by warranty.

Antenna Connection



1. How to connect

- 1 Connect the RF antenna out socket of the VCR to the **ANTENNA 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

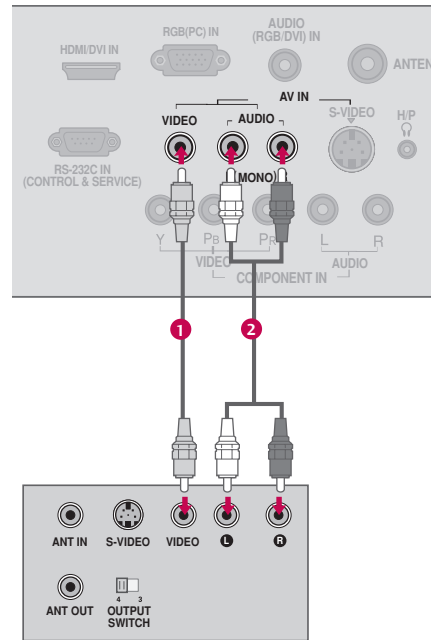
- 1 Connect the **AUDIO/VIDEO** jacks between TV and VCR. Match the jack colors (Video = yellow, Audio Left = white, and Audio Right = red)

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

NOTE

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



S-Video Connection

1. How to connect

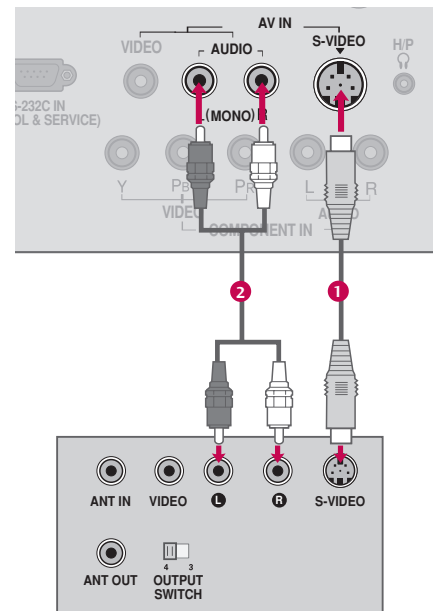
- 1 Connect the S-VIDEO output of the VCR to the **S-VIDEO** input on the TV.
- 2 Connect the audio outputs of the VCR to the **AUDIO** input jacks on the TV.

2. How to use

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

CAUTION

- ▶ Do not connect to both Video and S-Video at the same time. In the event that you connect both Video and the S-Video cables, only the S-Video will work.



NOTE

- ▶ S-Video provides better quality than composite. Use it when available.

PC SETUP

This TV provides Plug and Play capability, meaning that the PC adjusts automatically to the TV's settings.

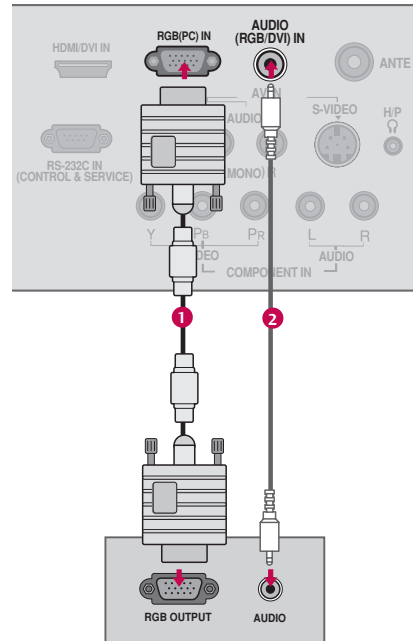
VGA (D-Sub 15 pin) Connection

1. How to connect

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

2. How to use

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



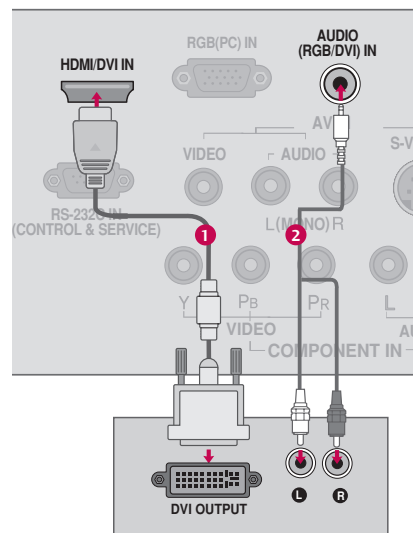
DVI to HDMI Connection

1. How to connect

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

2. How to use

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



EXTERNAL EQUIPMENT SETUP

! NOTES

- ▶ To get the the best picture quality, adjust the PC graphics card to 1680x1050.
- ▶ To enjoy vivid picture and sound, connect the PC to the TV.
- ▶ Avoid keeping a fixed image on the TV 's screen for prolonged periods of time. The fixed image may become permanently imprinted on the screen; use a screen saver when possible.
- ▶ Connect the PC to the RGB (PC) port of the TV; change the resolution output of PC accordingly.
- ▶ There may be interference relating to resolution, vertical pattern, contrast or brightness in PC mode. Change the PC mode to another resolution or change the refresh rate to another rate or adjust the brightness and contrast on the menu until the picture is clear. If the refresh rate of the PC graphic card can not be changed, change the PC graphic card or consult the manufacturer of the PC graphic card.
- ▶ The synchronization input waveform for Horizontal and Vertical frequencies are separate.
- ▶ Connect the audio cable from the PC to the Audio input on the TV. (Audio cables are not included with the TV).
- ▶ If you use too long an RGB-PC cable, there may be interference on the screen. We recommend using under 5m of the cable. This provides the best picture quality.

Supported Display Specifications (RGB PC)

| Resolution | Horizontal Frequency(KHz) | Vertical Frequency(Hz) |
|------------|---------------------------|------------------------|
| 640x480 | 31.469 | 59.94 |
| 800x600 | 37.879 | 60.317 |
| 1024x768 | 48.363 | 60.004 |
| 1280x1024 | 63.668 | 59.895 |
| 1680x1050 | 65.290 | 59.954 |

SCREEN SETUP FOR PC MODE

Auto Configure (RGB PC mode only)

Automatically adjusts picture position and minimizes image instability. After adjustment, if the image is still not correct, your TV is functioning properly but needs further adjustment.

Auto configure

This function is for the automatic adjustment of the screen position, clock, and phase. The displayed image will be unstable for a few seconds while the auto configuration is in progress.

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

2 Press the ► button and then use ▲ or ▼ button to select **Screen**.

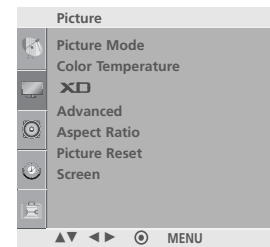
3 Press the ► button and then use ▲ or ▼ button to select **Auto Config..**

4 Press the ► button to start **Auto Config..**

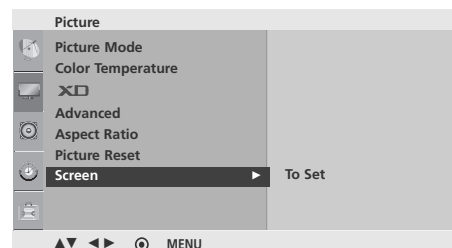
- When Auto config. has finished, OK will be shown on screen.
- If the position of the image is still not correct, try Auto adjustment again.

5 If picture needs to be adjusted again after Auto adjustment in RGB PC, you can adjust the **Manual Config..**

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



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EXTERNAL EQUIPMENT SETUP

Manual Configure - Adjustment for screen Phase, Clock, Position (RGB PC mode only)

If the picture isn't clear after auto adjustment and especially if characters are still trembling, adjust the picture phase manually.

It's not available to use Phase, Clock function in COMPONENT(480i/480p/576i/576p/720p/1080i/1080p), HDMI (480p/576p/720p/1080i/1080p).

Clock This function is to minimize any vertical bars or stripes visible on the screen background. And the horizontal screen size will also change.

Phase This function allows you to remove any horizontal noise and clear or sharpen the image of characters.

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

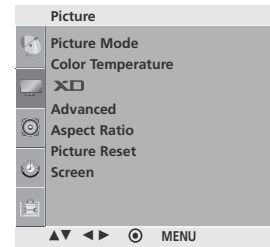
2 Press the ► button and then use ▲ or ▼ button to select **Screen**.

3 Press the ► button and then use ▲ or ▼ button to select **Manual Config..**

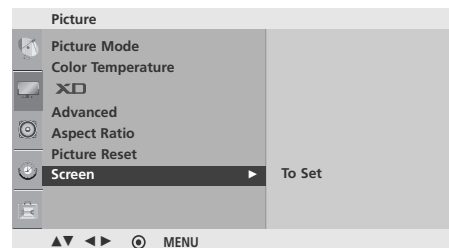
4 Press the ► button and then use ▲ or ▼ button to select **Phase, Clock, H-Position, V-Position**.

5 Press the ◀ or ▶ button to make appropriate adjustments.

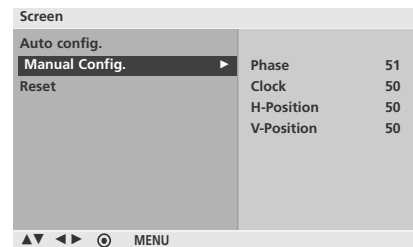
6 Press the **MENU** button to move to the previous menu.



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Initializing (Reset to original factory settings)

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

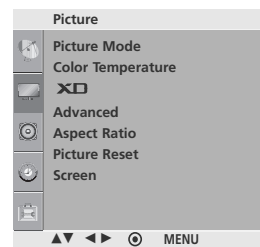
1 Press the **MENU** button and then use ▲ or ▼ button to select the **Picture** menu.

2 Press the ► button and then use ▲ or ▼ button to select **Screen**.

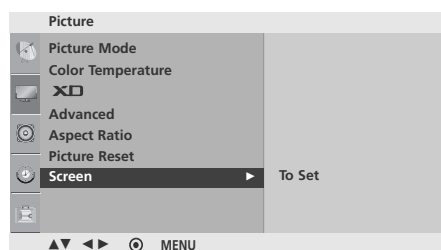
3 Press the ► button and then use ▲ or ▼ button to select **Reset**.

4 Press the ► button.

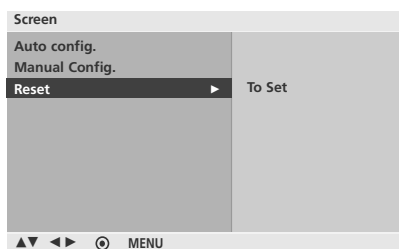
5 Press the **MENU** button to move to the previous menu.



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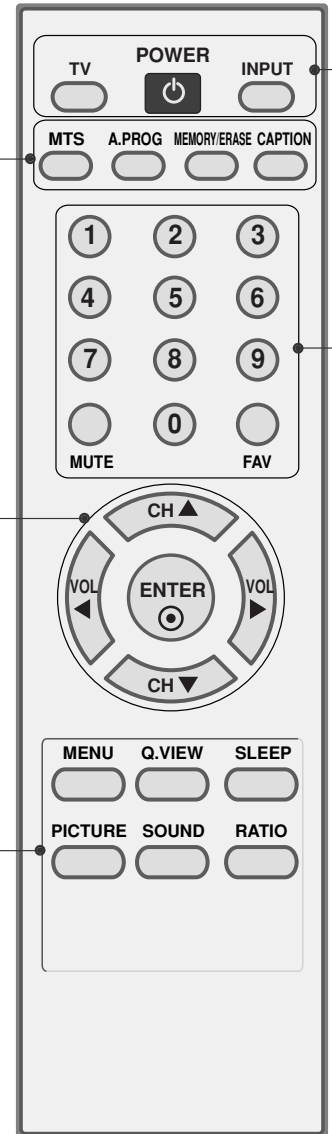
3 4

WATCHING TV / CHANNEL CONTROL

REMOTE CONTROL FUNCTIONS

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

- MTS** Selects the MTS sound: Mono, Stereo, or SAP. ▶ **p.55**
 - A.PROG (AUTO PROGRAM)** Searches for available channels. ▶ **p.32**
 - MEMORY/ERASE** Memorizes or erases selected channel. ▶ **p.33**
 - CAPTION** Selects CAPTION mode. ▶ **p.54**
- CHANNEL UP/DOWN** Select available channels.
 - VOLUME UP /DOWN** Increase/decrease the sound level.
 - THUMBSTICK (Up/Down/Left Right/ENTER)** Navigate the on-screen menus and adjust the system settings to your preference.
- MENU** Displays the main menu.
 - Q.VIEW** Tune to the last channel viewed.
 - SLEEP** Select the amount of time before your TV turns off automatically. ▶ **p.58**
 - PICTURE** Selects the factory preset picture depend on the viewing environment. ▶ **p.39**
 - SOUND** Selects the factory preset sound for type of program. ▶ **p.50**
 - RATIO** Change the aspect ratio.▶ **p.38**



POWER Turns your TV or any other programmed equipment on or off, depending on the mode.

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

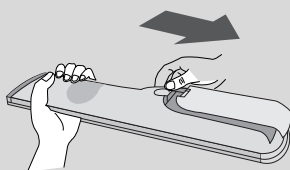
INPUT Select the desired input source: TV, AV, Component, RGB PC and HDMI/DVI.

NUMBER button

MUTE Switch the sound on or off. ► **p.30**

FAV Scroll through the programmed Favorite channels. ► **p.36**

Installing Batteries



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

WATCHING TV /CHANNEL CONTROL

TURNING ON TV

- 1 Firstly, connect the power cord correctly.
At this stage, the TV switches to standby mode.
 - In standby mode to turn TV on, press the $\phi/|$, **INPUT, CH** (\blacktriangle or \blacktriangledown) button on the TV or press the **POWER, INPUT, CH** (\blacktriangle or \blacktriangledown), **NUMBER(0~9)** button on the remote control.

! NOTE

- If you intend to be away on vacation, disconnect the power plug from the wall power outlet.

Initializing setup

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

Note:

- a. It will automatically disappear after approx. 40 seconds unless a button is pressed.
- b. "In - store" mode is only for shop display and not for general customer use.
- c. "Home" mode is the optimal setting for home environments, and is the TV's default mode.
- d. "In - store" mode is the optimal setting for store environments. If a user modifies image quality data, "In Store" mode initializes the product to the image quality set by us after a certain period of time.
- e. The mode (Home, In - store) can be changed by executing Factory Reset in the Option menu.

CHANNEL SELECTION

- 1 Press the **CH** (\blacktriangle or \blacktriangledown) or **NUMBER** buttons to select a channel number.

VOLUME ADJUSTMENT

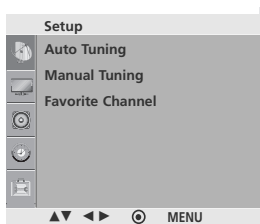
Adjust the volume to suit your personal preference.

- 1 Press the **VOL** (\blacktriangleleft or \blacktriangleright) button to adjust the volume.
- 2 If you want to switch the sound off, press the **MUTE** button.
- 3 You can cancel the Mute function by pressing the **MUTE** or **VOL** (\blacktriangleleft or \blacktriangleright) button.

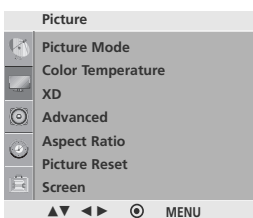
ON-SCREEN MENU SELECTION

In this manual, the OSD (On Screen Display) may be different from your TV's because it is just example to help the TV operation.

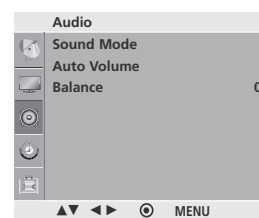
- 1 Press the **MENU** button and then use **▲** or **▼** button to select the each menu.
- 2 Press the **▶** button and then use **▲ ▼ ◀ ▶** button to display the available menus.



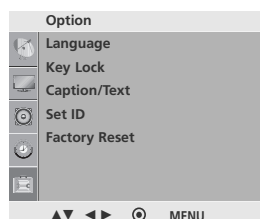
Setup MENU



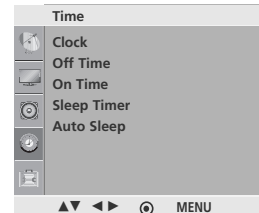
Picture MENU



Audio MENU



Option MENU



Time MENU

WATCHING TV /CHANNEL CONTROL

CHANNEL SEARCH

Auto Tuning: Program Search

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

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

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

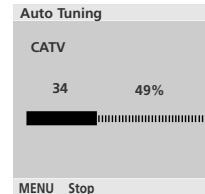
In **AUTO TUNING** mode, the TV will memorize the channels in ascending numerical order. If there are additional channels you want to add or delete, you can manually add or delete those channels with **Manual Tuning**.

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

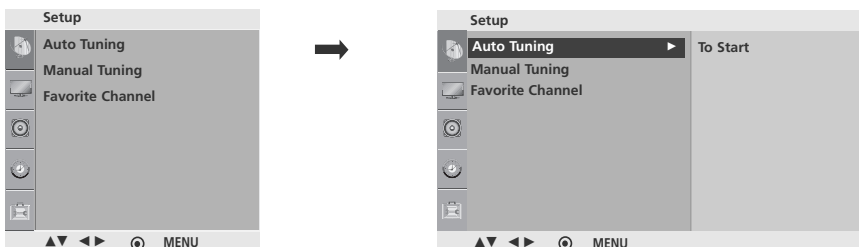


(For example, press 17 to go to the channel, press 17 again to go to the duplicated channel.)

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



- You can also use the **Channel** menu to adjust **Auto Tuning**.

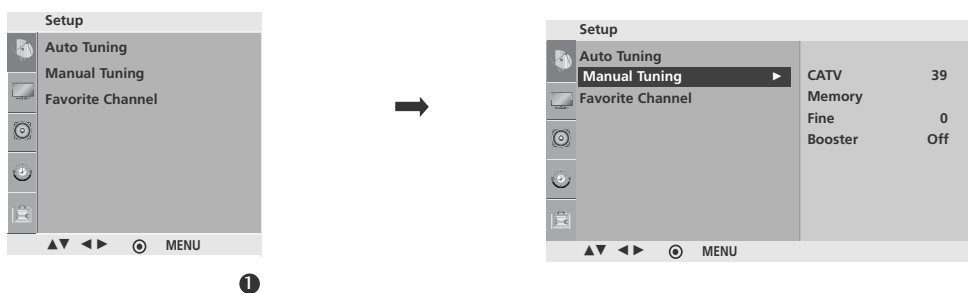


Manual Tuning: Adding/Deleting Channels

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

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

- You can also use the **Channel** menu to adjust **Manual Tuning**.



WATCHING TV /CHANNEL CONTROL

FINE TUNING ADJUSTMENT

Normally fine tuning is only necessary if reception is poor.

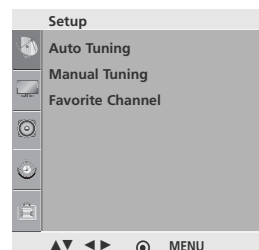
1 Press the **MENU** button and then use ▲ or ▼ button to select the **Setup** menu.

2 Press the ► button and then ▲ or ▼ button to select **Manual Tuning**

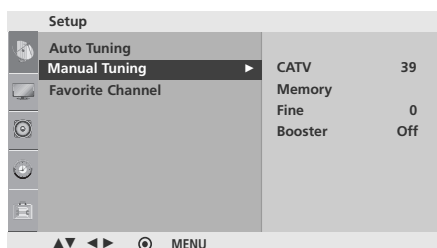
3 Press the ► button and then ▲ or ▼ button to select **Fine**.

4 Press the ◀ or ▶ button to adjust the picture to your preference.

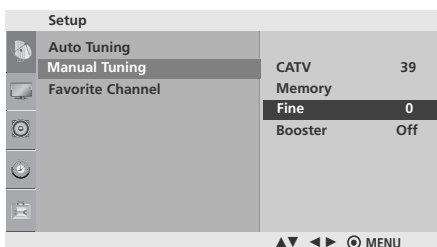
5 Press the **ENTER** button to save.



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BOOSTER

If reception is poor select **Booster** to **On**.
When the signal is strong, select "OFF".

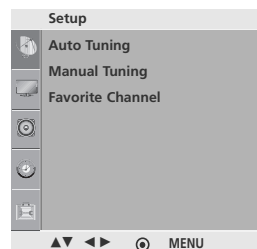
1 Press the **MENU** button and then ▲ or ▼ button to to select the **Setup** menu.

2 Press the ► button and then use ▲ or ▼ button to select **Manual Tuning**

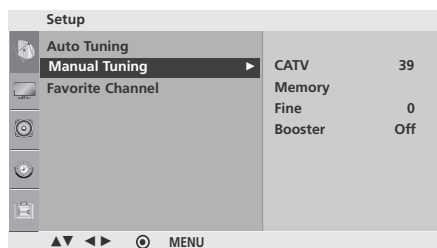
3 Press the ► button and then use ▲ or ▼ button to select **Booster**.

4 Press the ◀ or ▶ button to **On** or **Off**.

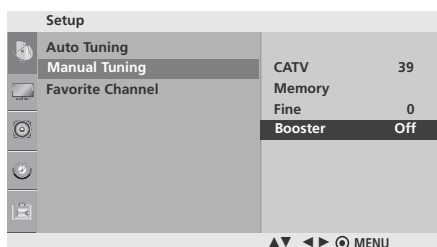
5 Press the **MENU** button to move to the previous menu.



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WATCHING TV /CHANNEL CONTROL

FAVORITE CHANNELS SETUP

This function lets you select your favorite channels directly.
Repeatedly press the FAV button to select stored favorite channels.

1 Press the **MENU** button and then use ▲ or ▼ button to select the **Setup** menu.

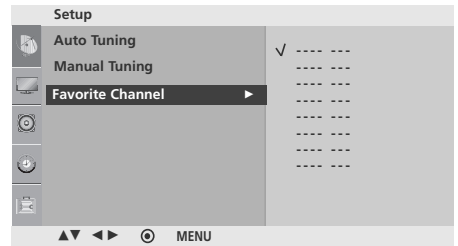
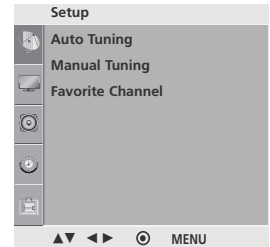
2 Press the ► button and then ▲ or ▼ button to select **Favorite Channel**.

3 Press the ► button and then ▲ or ▼ button to select the first favorite channel position.

4 Use the ◀ or ▶ button to set the desired channel number for first favorite channel.

5 Repeat steps 3 to 5 to memorize other favorite channels. You can store up to 8 channels.

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



2 3 4

KEY LOCK

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

This feature can be used to prevent unauthorized viewing.

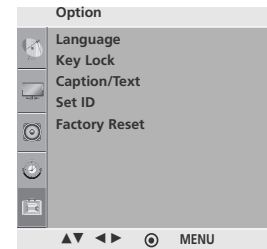
This TV is programmed to remember which option it was last set to even if you turn the TV off.

1 Press the **MENU** button and then use ▲ or ▼ button to select the **Option** menu.

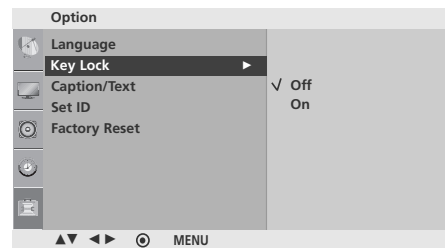
2 Press the ► button and then use ▲ or ▼ button to select **Key Lock**

3 Press the ► button and then use ▲ or ▼ button to select **On** or **Off**.

4 Press the **MENU** button to move to the previous menu.



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! NOTE

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

PICTURE CONTROL

PICTURE SIZE (ASPECT RATIO) CONTROL

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

- PC input source use 4:3 or 16:9 aspect ratio.

! NOTE

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

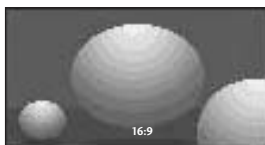
This phenomenon is common to all manufacturers and is not covered by warranty. Although, after watching video that did not fill the screen, any after-image from the black bars will normally dissipate after a few minutes.

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

- You can also adjust **Aspect Ratio** in the **PICTURE** menu.

16:9

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



4:3

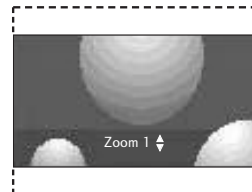
Following selection will lead you to view a picture with an original 4:3 aspect ratio, with gray bars appearing at both the left and right sides.



Zoom 1

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

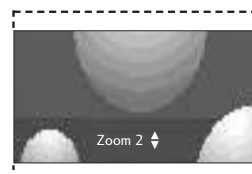
You can adjust the enlarge proportion of Cinema Zoom using ▲ or ▼ button.



Zoom 2

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

You can adjust the enlarge proportion of Cinema Zoom using ▲ or ▼ button.



PRESET PICTURE SETTINGS

Picture Mode - Preset

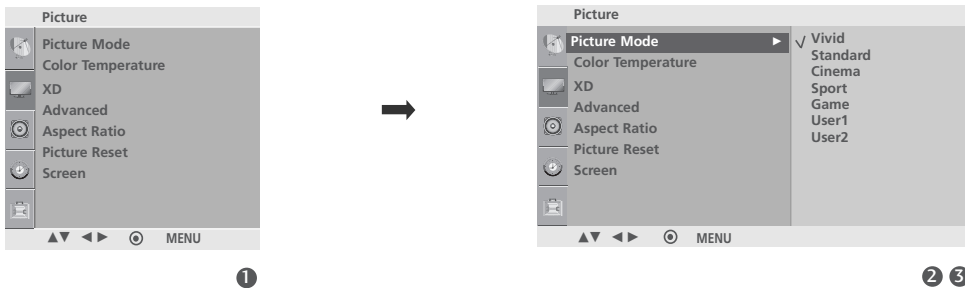
Picture Mode adjusts the TV for the best picture appearance. Select the preset value in the **Picture Mode** menu based on the program category.

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

- 1 Press the **PICTURE** button repeatedly to select the picture appearance setup option as below :
Vivid, Standard, Cinema, Sport, Game, User1 or User2.

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

- You can also use the **Picture** menu to adjust **Picture Mode**.



PICTURE CONTROL

Auto Color Tone Control (Cool/Medium/Warm)

To initialize values (reset to default settings), select the Cool option.

Choose one of three automatic color adjustments. Set to warm to enhance hotter colors such as red, or set to cool to see less intense colors with more blue.

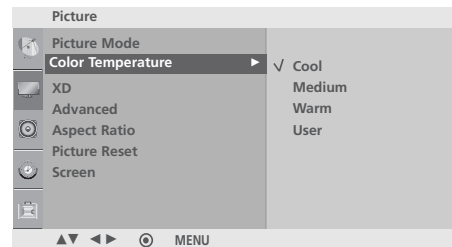
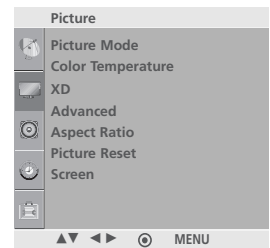
This menu is activated after selecting “User1” or “User2” in the Picture Mode.

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

2 Press the ► button and then ▲ or ▼ button to select **Color Temperature**.

3 Press the ► button and then ▲ or ▼ button to select either **Cool**, **Medium** or **Warm**.

4 Press the **MENU** button to move to the previous menu.

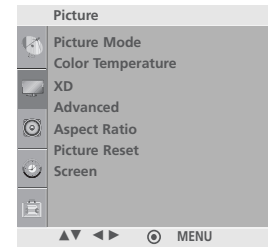


MANUAL PICTURE ADJUSTMENT

Picture Mode-User Mode

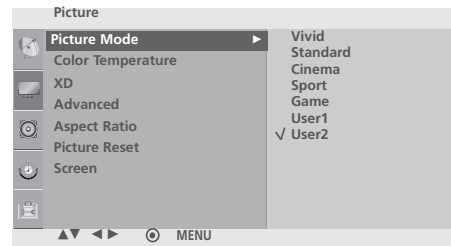
- Backlight** To control the brightness of the screen, adjust the brightness of LCD panel.
- Contrast** Adjusts the difference between light and dark.
- Brightness** Increases or decreases the amount of white in the picture.
- Color** Adjusts intensity of all colors.
- Sharpness** Adjusts the level of crispness in the edges between the light and dark areas of the picture. The lower the level, the softer the image.
- Tint** Adjusts the balance between red and green levels.

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



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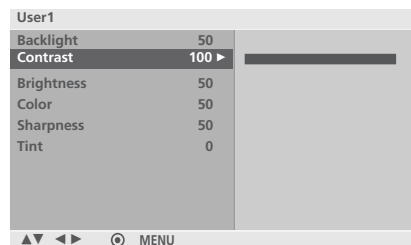
2 Press the ► button and then ▲ or ▼ button to select **Picture Mode**.



2 3

3 Press the ► button and then ▲ or ▼ button to select **User1** or **User2**.

4 Press the ► button and then ▲ or ▼ button to select the desired picture option (**Backlight**, **Contrast**, **Brightness**, **Color**, **Sharpness** and **Tint**).



4

5 Press the ◀ or ▶ button to make appropriate adjustments.

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



5

! NOTE

► You cannot adjust color, sharpness and tint in the RGB PC mode.

PICTURE CONTROL

Color Tone - User Mode

To adjust red, green, blue to any color temperature you prefer.

When selecting Picture Mode (User1 or User2), you can operate this function.

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

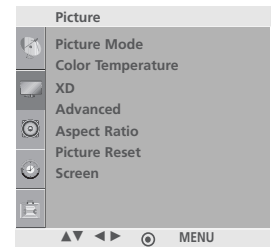
2 Press the ► button and then ▲ or ▼ button to select **Color Temperature**.

3 Press the ► button and then ▲ or ▼ button to select **User**.

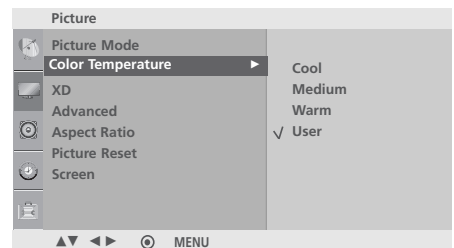
4 Press the ► button and then ▲ or ▼ button to select **Red, Green or Blue**.

5 Press the ◀ or ▶ button to make appropriate adjustments.

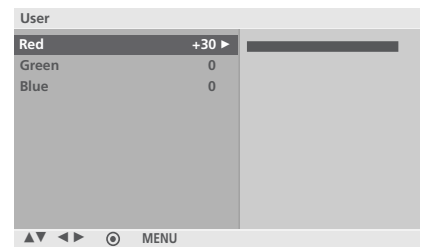
6 Press the **MENU** button to move to the previous menu.



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XD - PICTURE IMPROVEMENT TECHNOLOGY

XD is LG electronic's unique picture improving technology to display a real HD source through an advanced digital signal processing algorithm.

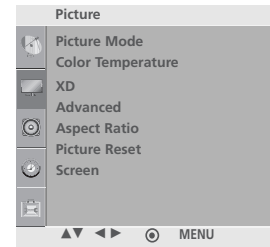
It is not possible to use this function in RGB PC mode.

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

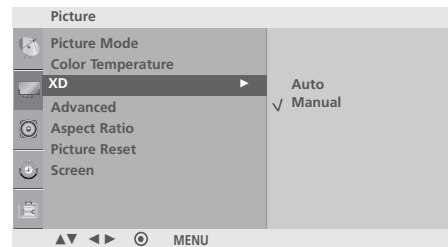
2 Press the ► button and then ▲ or ▼ button to select **XD**.

3 Press the ► button and then ▲ or ▼ button to select **Auto** or **Manual**.

4 Press the **MENU** button to move to the previous menu.



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* Manual Selection

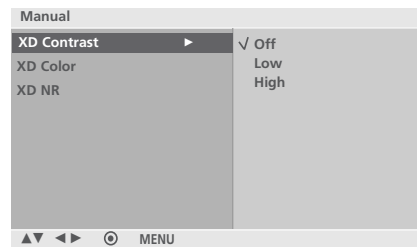
When selecting Picture Mode (User1 or User2), you can operate this function.

1 Press the ► button and then ▲ or ▼ button to select **XD Contrast**, **XD Color** or **XD NR**.

- **XD Contrast:** Optimizing the contrast automatically according to the brightness of the reflection.
- **XD Color:** Adjusting the colors of the reflection automatically to reproduce as closely as possible to the natural colors.
- **XD NR :** Removing the noise up to the point where it does not damage the original picture.

2 Press the ► button and then ▲ or ▼ button to make appropriate adjustments.

3 Press the **MENU** button to move to the previous menu.



1 2

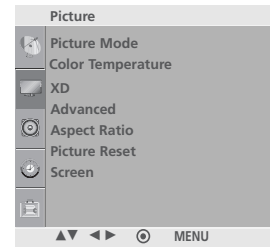
PICTURE CONTROL

ADVANCED - GAMMA

High gamma values display whitish images and low gamma values display high contrast images.

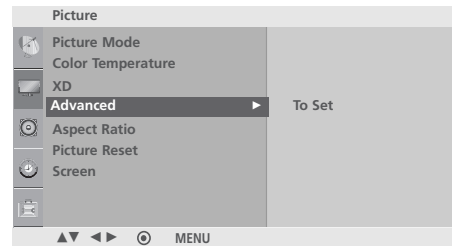
It is not possible to use this function in RGB PC mode.

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



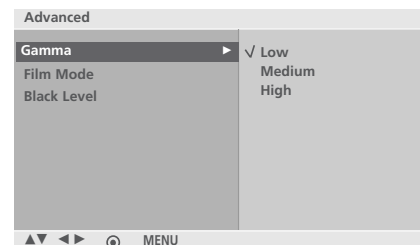
1

- 2 Press the ► button and then ▲ or ▼ button to select **Advanced**.



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- 3 Press the ► button and then ▲ or ▼ button to select **Gamma**.



4

- 4 Press the ► button and then ▲ or ▼ button to select **Low**, **Medium** or **High**.

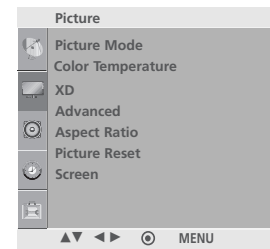
- 5 Press the **MENU** button to move to the previous menu.

ADVANCED - FILM MODE

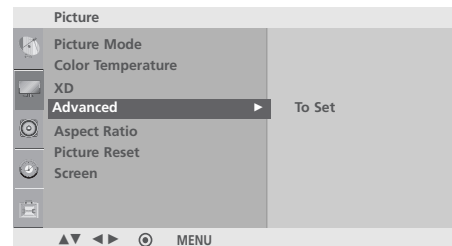
To set the TV up for the best picture quality for viewing films.

This feature operates only in Analog TV, AV, and Component 480i/576i mode.

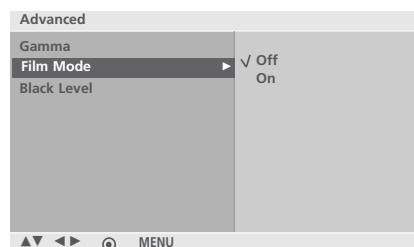
- 1 Press the **MENU** button and then ▲ or ▼ button to select the **Picture** menu.
- 2 Press the ► button and then ▲ or ▼ button to select **Advanced**.
- 3 Press the ► button and then ▲ or ▼ button to select **Film Mode**.
- 4 Press the ► button and then ▲ or ▼ button to select **On** or **Off**.
- 5 Press the **MENU** button to move to the previous menu.



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PICTURE CONTROL

ADVANCED - BLACK (DARKNESS) LEVEL

When you view a film this function adjust the TV to best picture quality. Adjusting the contrast and the brightness of the screen using the black level of the screen.

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

2 Press the ► button and then ▲ or ▼ button to select **Advanced**.

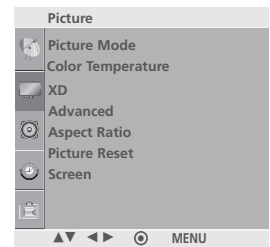
3 Press the ► button and then ▲ or ▼ button to select **Black Level**.

4 Press the ► button and then ▲ or ▼ button to select **Low** or **High**.

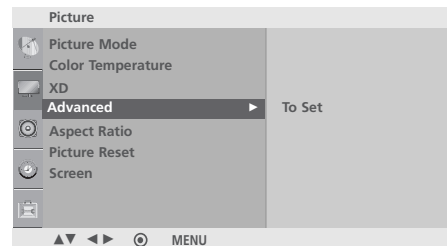
■ **Low** : The reflection of the screen gets darker.

■ **High** : The reflection of the screen gets brighter.

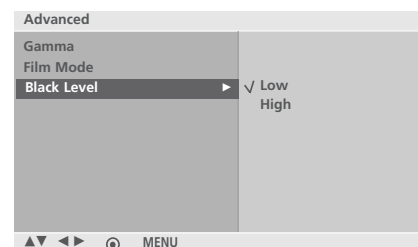
5 Press the **MENU** button to move to the previous menu.



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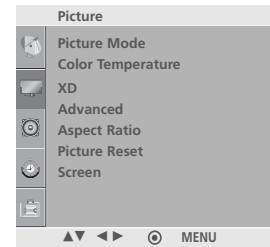


4

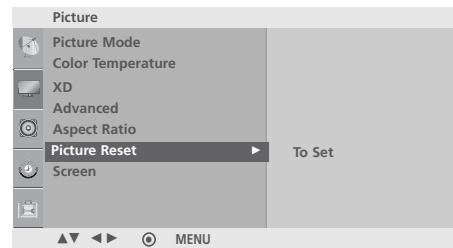
PICTURE RESET

Returns to the default factory setting for Picture Mode, Color Temperature, XD, Advanced, Aspect Ratio.

- 1 Press the **MENU** button and then ▲ or ▼ button to select the **Picture** menu.
- 2 Press the ► button and then ▲ or ▼ button to select **Picture Reset**.
- 3 Press the ► button to initialize the adjusted value.
- 4 Press the **MENU** button to move to the previous menu.



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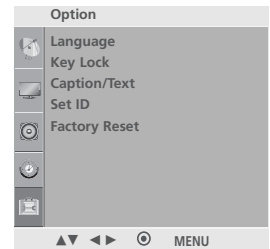
PICTURE CONTROL

FACTORY RESET

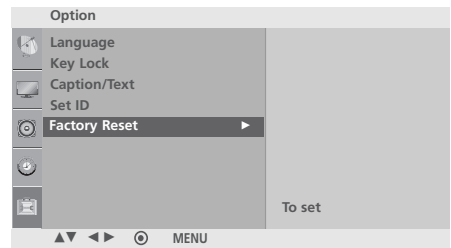
Use to quickly reset all the menu options to their original factory preset values.

This function deletes all TV programs.

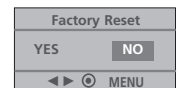
- 1 Press the **MENU** button and then ▲ or ▼ button to select the **Option** menu.
- 2 Press the ► button and then ▲ or ▼ button to select **Factory Reset**.
- 3 Press the ► button and then ◀ or ▶ button to select **YES** or **NO**.
- 4 Press the **MENU** button to move to the previous menu.



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SOUND & LANGUAGE CONTROL

AUTO VOLUME LEVELER (AUTO VOLUME)

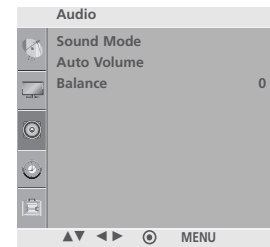
Auto Volume automatically remains on the same level of volume if you change programs.

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

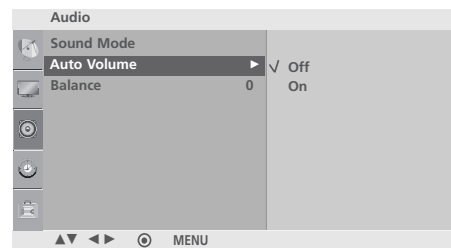
2 Press the ► button and then ▲ or ▼ button to select **Auto Volume**.

3 Press the ► button and then ▲ or ▼ button to select **On** or **Off**.

4 Press the **MENU** button to move to the previous menu.



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SOUND & LANGUAGE CONTROL

PRESET SOUND SETTINGS - SOUND MODE

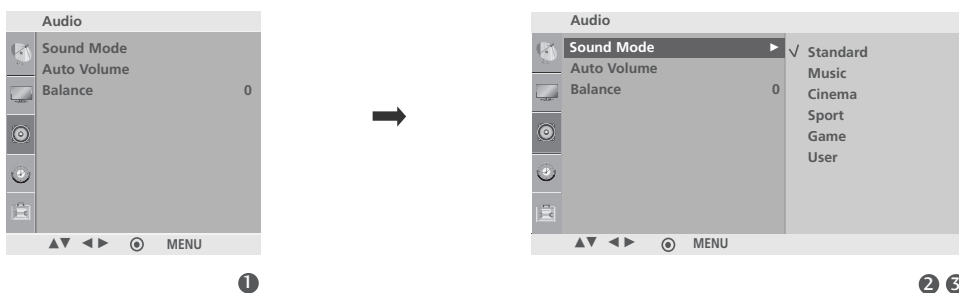
Sound Mode lets you enjoy the best sound without any Special adjustment as the TV sets the appropriate sound options based on the channel content.

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

1 Press the **SOUND** button repeatedly to select the appropriate sound setup as below :
Standard, Music, Cinema, Sport, Game or **User**.

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

■ You can also adjust **SOUND MODE** in the **Audio** menu.



SOUND SETTING ADJUSTMENT -USER MODE

Adjusting the audio equalizer.

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

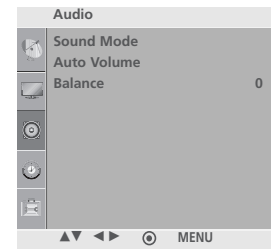
2 Press the ► button and then ▲ or ▼ button to select **Sound Mode**.

3 Press the ► button and then ▲ or ▼ button to select **User**.

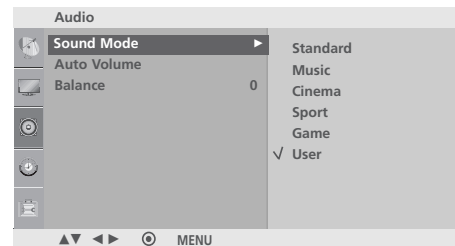
4 Press the ► button.

5 Select a frequency band by pressing the ◀ or ▶ button. Set the desired sound level with the ▲ or ▼ button.

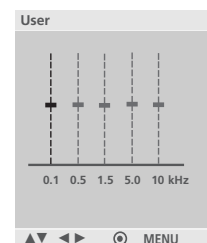
6 Press the **MENU** button to move to the previous menu.



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SOUND & LANGUAGE CONTROL

BALANCE

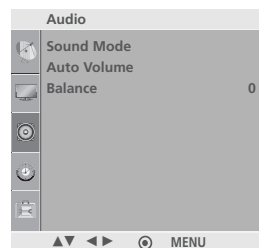
You can adjust the sound balance of the speakers to the preferred levels.

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

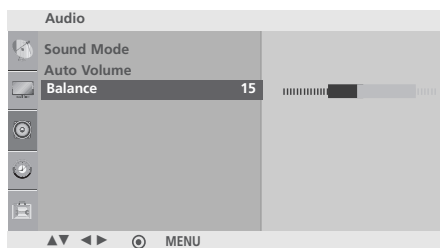
2 Press the ► button and then ▲ or ▼ button to select **Balance**.

3 Press the ► button and then ◀ or ▶ button to make desired adjustment.

4 Press the **MENU** button to move to the previous menu.



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ON-SCREEN MENUS LANGUAGE SELECTION

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

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

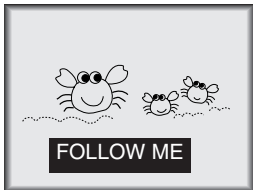
SOUND & LANGUAGE CONTROL

CLOSED CAPTIONS

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

Using Closed Captions

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



Captioning is an effective system for the hearing-impaired, and it can also aid in teaching language skills.

- The picture at left shows a typical caption.

Caption Tips

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

1. Poor reception conditions are encountered:



• IGNITION:

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



• GHOSTS:

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



• SNOW:

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

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

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

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

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

STEREO/SAP BROADCASTS SETUP

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

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

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

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

1 Use the **MTS** button to select your desired MTS mode in analog signal. Each time you press the **MTS** button, **Mono**, **Stereo**, or **SAP** appear in turn.

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

! NOTE

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

TIME SETTING

CLOCK SETUP

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

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

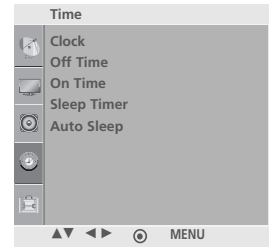
-
- 1 Press the **MENU** button and then ▲ or ▼ button to select the **Time** menu.
-

- 2 Press the ► button and then ▲ or ▼ button to select **Clock**.
-

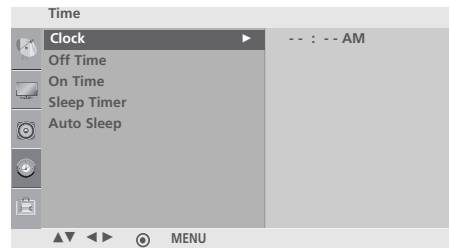
- 3 Press the ► button and then ▲ or ▼ button to set the hour.
-

- 4 Press the ► button and then ▲ or ▼ button to set the minute.
-

- 5 Press the **MENU** button to move to the previous menu.
-



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AUTO ON/OFF TIME SETTING

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

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

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

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

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

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

2 Press the ► button and then ▲ or ▼ button to select **On/Off Time**.

• To cancel **On/Off Time** function, select **Off**.

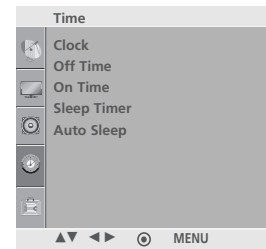
3 Press the ► button and then ▲ or ▼ button to set the hour.

4 Press the ► button and then ▲ or ▼ button to set the minutes.

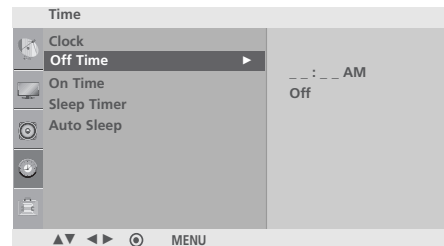
5 **For On Time function only**

- **Channel:** Press the ► button and then ▲ or ▼ button to select the channel.
- **Volume:** Press the ► button and then ▲ or ▼ button to adjust volume level at switch-on.

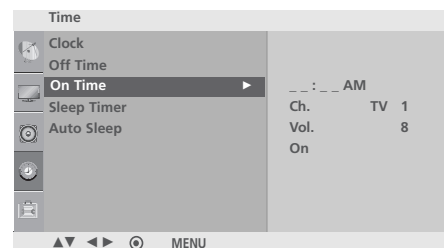
6 Press the **MENU** button to move to the previous menu.



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TIME SETTING

SLEEP TIMER SETTING

The Sleep Timer turns the TV off at the preset time.
Note that this setting is cleared when the TV is turned off.

-
- 1 Press the **SLEEP** button repeatedly to select the number of minutes. First the '🕒 - - -' option appears on the screen, followed by the following sleep timer options : 10, 20, 30, 60, 90, 120, 180, and 240 minutes.

 - 2 When the number of minutes you want is displayed on the screen, press the **ENTER** button. The timer begins to count down from the number of minutes selected.

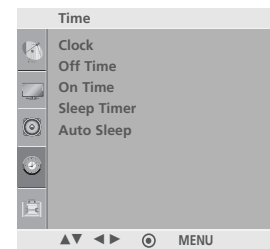
 - 3 To check the remaining minutes before the TV turns off, press the **SLEEP** button once.

 - 4 To cancel the Sleep Timer, press the **SLEEP** button repeatedly to select '🕒 - - -'.

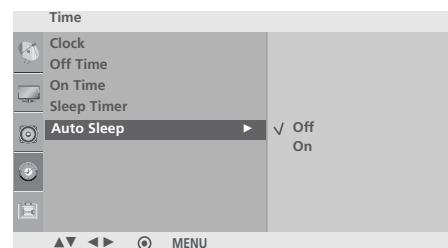
AUTO SHUT-OFF SETTING

If the TV set is switched on and there is no input signal, it will switch off automatically after 10 minutes.

- 1 Press the **MENU** button and then ▲ or ▼ button to select the **Time** menu.
- 2 Press the ► button and then ▲ or ▼ button to select **Auto Sleep**.
- 3 Press the ► button and then ▲ or ▼ button to select **On** or **Off**.
- 4 Press the **MENU** button to move to the previous menu.



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APPENDIX

TROUBLESHOOTING

The operation does not work normally.

The remote control doesn't work

- Check to see if there is any object between the product and the remote control causing obstruction. Ensure you are pointing the remote control directly at the TV.
- Ensure that the batteries are installed with correct polarity (+ to +, - to -).
- Ensure that the correct remote operating mode is set: TV, VCR etc.
- Install new batteries.

Power is suddenly turned off

- Is the sleep timer set?
- Check the power control settings. Power interrupted.

The video function does not work.

No picture & No sound

- Check whether the product is turned on.
- Try another channel. The problem may be with the broadcast.
- Is the power cord inserted into wall power outlet?
- Check your antenna direction and/or location.
- Test the wall power outlet, plug another product's power cord into the outlet where the product's power cord was plugged in.

Picture appears slowly after switching on

- This is normal, the image is muted during the product startup process. Please contact your service center, if the picture has not appeared after five minutes.

No or poor color or poor picture

- Adjust Color in menu option.
- Keep a sufficient distance between the product and the VCR.
- Try another channel. The problem may be with the broadcast.
- Are the video cables installed properly?
- Activate any function to restore the brightness of the picture.

Horizontal/vertical bars or picture shaking

- Check for local interference such as an electrical appliance or power tool.

Poor reception on some channels

- Station or cable product experiencing problems, tune to another station.
- Station signal is weak, reorient antenna to receive weaker station.
- Check for sources of possible interference.

Lines or streaks in pictures

- Check antenna (Change the direction of the antenna).

No picture when connecting HDMI

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

| The audio function does not work. | |
|---------------------------------------|---|
| Picture OK & No sound | <ul style="list-style-type: none"> ■ Press the VOL or VOLUME button. ■ Sound muted? Press MUTE button. ■ Try another channel. The problem may be with the broadcast. ■ Are the audio cables installed properly? |
| No output from one of the speakers | <ul style="list-style-type: none"> ■ Adjust Balance in menu option. |
| Unusual sound from inside the product | <ul style="list-style-type: none"> ■ A change in ambient humidity or temperature may result in an unusual noise when the product is turned on or off and does not indicate a fault with the product. |
| No sound when connecting HDMI or USB | <ul style="list-style-type: none"> ■ Check HDMI cable over version 1.3. ■ Check USB cable over version 2.0. ■ Use normal MP3 file. |

*This feature is not available for all models.

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

APPENDIX

MAINTENANCE

Early malfunctions can be prevented. Careful and regular cleaning can extend the amount of time you will have your new TV. 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 | | 22LG30R (22LG30R-MA) |
|--|-----------------------|--|
| Dimensions (Width x Height x Depth) | Including stand | 522.2 x 431.5 x 189.2 mm 20.5 x 16.9 x 7.4 inches |
| | Excluding stand | 522.2 x 384.2 x 69.0 mm 20.5 x 15.1 x 3.3 inches |
| Weight | including stand | 5.60 kg / 12.3 lbs |
| | excluding stand | 5.34 kg / 11.7 lbs |
| Power requirement | | AC100-240V ~ 50/60Hz |
| Television System | | NTSC, PAL M-N |
| Program Coverage | | VHF 2-13, UHF 14-69, CATV 1-125 |
| External Antenna Impedance | | 75 ohm |
| Environment condition | Operating Temperature | 32 ~ 104°F (0 ~ 40°C) |
| | Operating Humidity | Less than 80% |
| | Storage Temperature | -4 ~ 140°F (-20 ~ 60°C) |
| | Storage Humidity | Less than 85% |

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

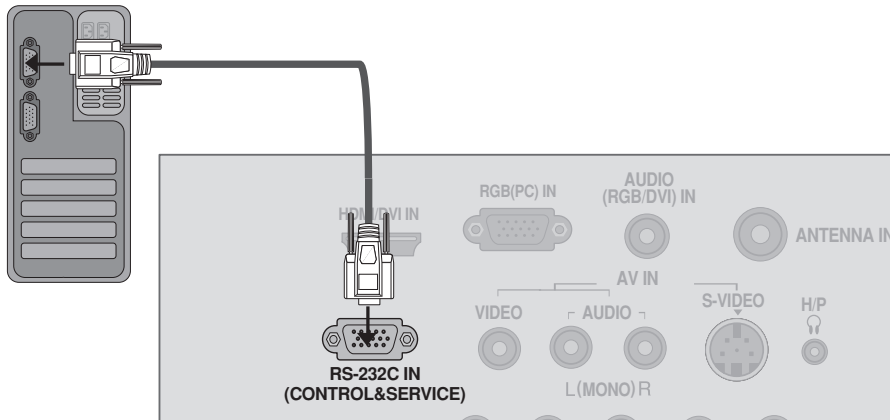
APPENDIX

EXTERNAL CONTROL THROUGH RS-232C

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

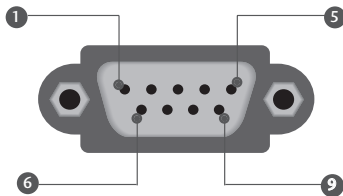
Connect the serial port of the control device to the RS-232C jack on the TV back panel. RS-232C connection cables are not supplied with the TV.

RS-232C Setup



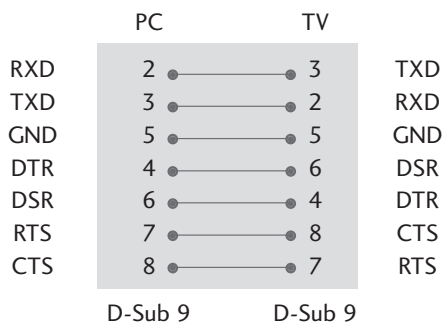
Type of Connector; D-Sub 9-Pin Male

| 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 |

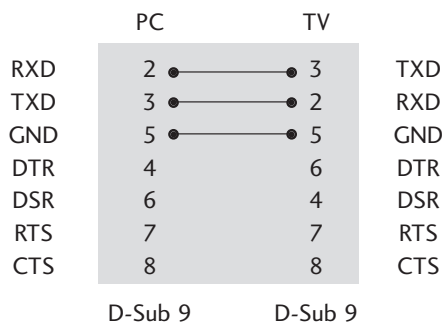


RS-232C Configurations

7-Wire Configurations (Standard RS-232C cable)



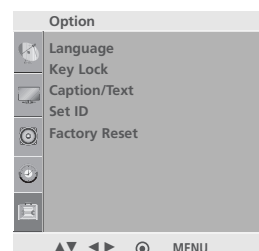
3-Wire Configurations(Not standard)



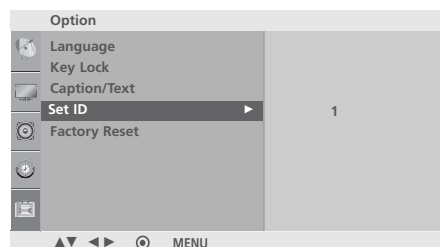
Set ID

Use this function to specify a set ID number.
Refer to 'Real Data Mapping'1. ▶ p.69.

- 1 Press the **MENU** button and then use ▲ or ▼ button to select the **Option** menu.
- 2 Press the ▶ button and then ▲ or ▼ button to select **Set ID**.
- 3 Press the ▶ button and then ▲ or ▼ button to adjust **Set ID** to choose the desired TV ID number.
 - The adjustment range of SET ID is 1~99.
- 4 Press the **MENU** button to move to the previous menu.



1



2 3

Communication Parameters

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

Command Reference List

| | COMMAND1 | COMMAND2 | DATA (Hexadecimal) | | COMMAND1 | COMMAND2 | DATA (Hexadecimal) |
|---|----------|----------|-----------------------|-----------------------|----------|----------|-----------------------|
| 01. Power | k | a | 00 ~ 01 | 13. Balance | k | t | 00 ~ 64 |
| 02. Aspect Ratio | k | c | (▶ p.67) | 14. Color Temperature | k | u | 00 ~ 03 |
| 03. Screen Mute | k | d | 00 ~ 01 | 15. Red Adjustment | k | v | 00 ~ 50 |
| 04. Volume Mute | k | e | 00 ~ 01 | 16. Green Adjustment | k | w | 00 ~ 50 |
| 05. Volume Control | k | f | 00 ~ 64 | 17. Blue Adjustment | k | \$ | 00 ~ 50 |
| 06. Contrast | k | g | 00 ~ 64 | 18. Abnormal Status | k | z | FF |
| 07. Brightness | k | h | 00 ~ 64 | 19. Auto Configure | j | u | 01 |
| 08. Color | k | i | 00 ~ 64 | 20. Equalize | j | v | (▶ p.69) |
| 09. Tint | k | j | 00 ~ 64 | 21. Tune Command | m | a | (▶ p.70) |
| 10. Sharpness | k | k | 00 ~ 64 | 22. Key | m | c | (▶ p.71) |
| 11. OSD Select | k | l | 00 ~ 01 | 23. Control Backlight | m | g | 0 ~ 64 |
| 12. Remote Control lock /Key Lock mode | k | m | 00 ~ 01 | | | | |

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 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 command data.

Transmit 'FF' data to read status of comand.

[Cr] : Carriage Return

ASCII code '0x0D'

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

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.

Error Acknowledgement

[Command2][][Set ID][][NG][Data][x]

TV transmits ACK(acknowledgement) based on this format when receiving abnormal data form non-viable functions or communication errors.

[Command 2] : use as command.

[Set ID]: use the small character, if set ID is 10, TV will send the '0', 'a'

[Data]: use the small character, if data is 0xab, TV 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]

To show Power On/Off.

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

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

* If there is the time delay between command and ack message during power on sequence, It should be described like "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. Aspect Ratio (Command: k c) (Main picture size)

To adjust the screen format. (Main picture format)

You can adjust the screen format using the Aspect Ratio in the Picture menu.

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

| | |
|----------------|----------------|
| Data 01: 4:3 | Data 05: Zoom2 |
| Data 02: 16:9 | ⋮ |
| Data 04: Zoom1 | Reserved |

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

* Using the RGB PC, Component or HDMI input, you select either 16:9 or 4:3 screen aspect ratio.

03. 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)

Data 01 : Screen mute on (Picture off)

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

04. 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]

05. 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

Refer to 'Real data mapping 1'. See page 69.

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

06. 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

Refer to 'Real data mapping 1'. See page 69.

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

07. 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

Refer to 'Real data mapping 1'. See page 69.

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

08. Color (Command: k i)

To adjust the screen color.

You can also adjust color in the Picture menu.

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

Data Min : 00 ~ Max : 64

Refer to 'Real data mapping 1'. See page 69.

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

09. Tint (Command: k j)

To adjust the screen tint.

You can also adjust tint in the Picture menu.

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

Data Red : 00 ~ Green : 64

Refer to 'Real data mapping 1'. See page 69.

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

10. Sharpness (Command: k k)

To adjust the screen sharpness.

You can also adjust sharpness in the Picture menu.

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

Data Min: 00 ~ Max: 64

Refer to 'Real data mapping 1': See page 69.

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

11. OSD Select (Command: k l)

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

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

Data 00: OSD off

Data 01: OSD on

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

12. Remote Control Lock/Key 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 are 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.

13. 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

Refer to 'Real data mapping 1': See page 69.

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

14. 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 03: User

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

15. Red Adjustment (Command: k v)

To adjust red in color temperature.

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

Data Min: 00 ~ Max: 50

Refer to 'Real data mapping 2': See page 69.

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

16. Green Adjustment (Command: k w)

To adjust green in color temperature.

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

Data Min: 00 ~ Max: 50

Refer to 'Real data mapping 2': See page 69.

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

17. Blue Adjustment (Command: k \$)

To adjust blue in color temperature.

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

Data Min: 00 ~ Max: 50

Refer to 'Real data mapping 2': See page 69.

Acknowledgement [\$][][Set ID][][OK/NG][Data][x]

18. Abnormal State (Command: k z)

To recognize an abnormal state.

Transmission [k][z][][Set ID][][FF][][Cr]

Data FF: Read

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

Data 00: Normal (Power on and signal exist)

Data 01: No signal (Power on)

Data 02: Turn the TV off by remote control

Data 03: Turn the TV off by sleep time function

Data 04: Turn the TV off by RS-232C function

Data 05: 5V down

Data 06: AC down

Data 07: Turn the TV off by Fan Alarm function (option)

Data 08: Turn the TV off by Off time function

Data 09: Turn the TV off by Auto off function

Data a: Turn the TV off by AV board detection.

* This function is "read only".

19 . Auto Configure (Command: j u)

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

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

Data 01: To set

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

*** Real data mapping 1**

00 : Step 0
 ⋮
 A : Step 10
 ⋮
 F : Step 15
 10 : Step 16
 ⋮
 64 : Step 100
 ⋮
 6E : Step 110
 ⋮
 73 : Step 115
 74 : Step 116
 ⋮
 C7 : Step 199
 ⋮
 FE : Step 254
 FF : Step 255

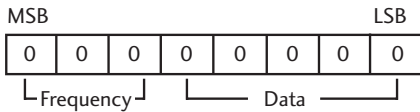
*** Real data mapping 2**

00: -30
 01: -29
 02: -28
 ⋮
 1E: 0
 ⋮
 28: +10
 ⋮
 3A: +28
 3B: +29
 3C: +30
 ⋮
 4E: N/A
 4F: N/A
 50: N/A

20. Equalize(Command: j v)

► To adjust equalize.

```
Transmission [j][v][ ][Set ID][ ][Data][Cr]
```



| 7 | 6 | 5 | Frequency | 4 | 3 | 2 | 1 | 0 | Step |
|---|---|---|-----------|---|---|---|---|---|-------------|
| 0 | 0 | 0 | 1'st Band | 0 | 0 | 0 | 0 | 0 | 0(decimal) |
| 0 | 0 | 1 | 2'st Band | 0 | 0 | 0 | 0 | 1 | 1(decimal) |
| 0 | 1 | 0 | 3'st Band | 0 | 0 | 0 | 1 | 0 | 2(decimal) |
| 0 | 1 | 1 | 4'st Band | | | | | | ... |
| 1 | 0 | 0 | 5'st Band | | | | | | |
| 1 | 0 | 1 | 6'st Band | | | | | | |
| 1 | 1 | 0 | 7'st Band | 1 | 1 | 1 | 1 | 0 | 30(decimal) |
| 1 | 1 | 1 | 8'st Band | 1 | 1 | 1 | 1 | 1 | 31(decimal) |

```
Acknowledgement [v][ ][Set ID][ ][OK/NG][Data][x]
```

APPENDIX

21 . Tune Command (Command: m a)

Tune Channel to following Physical/major/minor number

Transmission [m][a][][Set ID][][Data0][][Data1][][Data2][][Data3][][Data4][][Data5][Cr]

Data 0: Physical Channel Number(Transmit by Hexadecimal code)

NTSC air: 02~45

NTSC cable: 01, 0e~7d

Data1, Data2: Major Channel Number(two part) or Channel Number(one part)

Data1: High byte

Data2: Low byte

Two part channel number: Major number-Minor number

One part channel number:

In case of using one part channel number, minor channel does not need.

Data3, Data4: Minor Channel Number

Not needed for NTSC.

Data3: High byte

Data4: Low byte

Data5:

Attribute

| 7 | 6 | 5 | 4 | 3 | 2 | 1 | 0 | Step |
|------------------|----------------------|------------------------|----------|---|---|---|---|------------|
| Main/Sub Picture | Two/One Part Channel | Using Physical Channel | Reserved | | | | | |
| 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 |

* Two/One part Channel: 6th bit

This bit is used in a cable-ready system.

* Using physical channel: 5th bit

If the channel band is NTSC air or NTSC cable, channel tuning can be done by only physical channel. In this case, using physical channel bit must be low(0).

Example)

1. Analog channel: NTSC cable, channel number(35), main picture

Command: ma 00 23 xx xx xx xx 01

attribute(0x01): main picture, two part(it's not mandatory), using physical channel, NTSC cabl xx' data: don't care major and minor channel number in case analog channel tuning

Acknowledgement[a][][Set ID][][OK][Data0][Data1][Data2][Data3][Data4][Data5][x][a][][Set ID][][NG][Data0][x]

22. Key Code (Command: m c)

To send IR remote key code.

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

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

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

23. Control Backlight (Command : m g)

To control the back light.

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

Data: Min : 00 ~ Max : 64

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

Data: Min : 00 ~ Max : 64

LG Electronics Inc.