# APPENDIX H

## : USER'S MANUAL

**Installation and Operating Guide | Warranty**

Model Numbers | Z44SZ80/Z52SZ80 | DLP PROJECTION

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# Warning/Caution

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

## WARNING/CAUTION:

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

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

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

## WARNING/CAUTION:

TO PREVENT FIRE OR SHOCK HAZARDS, DO NOT EXPOSE THIS PRODUCT TO RAIN OR MOISTURE.

## POWER CORD POLARIZATION:

CAUTION: TO PREVENT ELECTRIC SHOCK, MATCH WIDE BLADE OF PLUG TO WIDE SLOT, FULLY INSERT.

ATTENTION: POUR ÉVITER LES CHOCS ÉLECTRIQUES, INTRODUIRE LA LAME LA PLUS LARGE DE LA FICHE DANS LA BORNE CORRESPONDANTE DE LA PRISE ET POUSSER JUSQU’AU FOND.

## NOTE TO CABLE/TV INSTALLER:

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

## REGULATORY INFORMATION:

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

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

Any changes or modifications not expressly approved by the party responsible for compliance could void the user’s authority to operate the equipment.

## CAUTION:

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

## COMPLIANCE:

The responsible party for this product’s compliance is:
Zenith Electronics Corporation
1-201-816-2000
Marked and Distributed in the United States by LG Electronics U.S.A., Inc.
1000 Sylvan Avenue, Englewood Cliffs, NJ 07632
http://www.zenith.com

# Safety Instructions

**IMPORTANT SAFETY INSTRUCTIONS**

Important safety instructions shall be provided with each apparatus. This information shall be given in a separate booklet or sheet, or be located before any operating instructions in an instruction for installation for use and supplied with the apparatus. This information shall be given in a language acceptable to the country where the apparatus is intended to be used. The important safety instructions shall be entitled "Important Safety Instructions". The following safety instructions shall be included where applicable, and, when used, shall be verbatim as follows. Additional safety information may be included by adding statements after the end of the following safety instruction list. At the manufacturer's option, a picture or drawing that illustrates the intent of a specific safety instruction may be placed immediately adjacent to that safety instruction :

**1. Read these instructions.**

**2. Keep these instructions.**

**3. Heed all warnings.**

**4. Follow all instructions.**

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

**6. Clean only with dry cloth.**

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

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

**9. 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.**

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

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

**12. 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.**

PORTABLE CART WARNING

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

14. 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 exposed to rain or moisture, does not operate normally, or has been dropped.

15. CAUTION concerning the Power Cord :

Most appliances recommend they 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 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.

16. Outdoor Use Marking :
WARNING - To Reduce The Risk Of Fire Or Electric Shock, Do Not Expose This Appliance To Rain Or Moisture.

17. Wet Location :
Apparatus shall not be exposed to dripping or splashing and no objects filled with liquids, such as vases, shall be placed on the apparatus.

# Contents


Warnings/Caution . . . . . .2
Digital Cable Compatibility . . . . . .3
Safety Instructions . . . . . .4~5

**Introduction**
Controls . . . . . .7
Connection Options . . . . . .8~9
Remote Control Key Functions . . . . . .10~11

**Installation**
External Equipment Connections . . . . . .12~30
Antenna or Cable Connection . . . . . .12
VCR Setup . . . . . .13
External A/V Source Setup . . . . . .14
DVD Setup . . . . . .14
CableCARD™ Setup . . . . . .15
HDSTB Setup . . . . . .15
Monitor Out Setup . . . . . .15
PC Setup . . . . . .16
Digital Audio Output . . . . . .17
External Stereo . . . . . .17
HDMI . . . . . .18~20
TV Guide On Screen Setup . . . . . .21~30

**IEEE 1394 Functions** . . . . . .31-37

**TV Guide On Screen™ System** . . . . . .38-56

**Operation**
Turning the TV On . . . . . .57
TV Setup
On-screen Menus Language Selection . . . . . .58
Setup Menu Options
EZ Scan (Channel Search) . . . . . .59
Manual Scan . . . . . .59
Channel Edit . . . . . .60
DTV Signal Strength . . . . . .60
Channel Label Setup . . . . . .61
Main Picture Source Selection . . . . . .61
Input Label . . . . . .61
Video Menu Options
EZ Picture . . . . . .62
Manual Picture Control (Custom Option) . . . . . .62
Color Temperature Control . . . . . .62
Video Reset . . . . . .62
Audio Menu Options
Audio Language . . . . . .63
EZ SoundRite / EZ Sound . . . . . .63
Manual Sound Control (Custom Option) . . . . . .63
Front Surround . . . . . .64
TV Speakers On/Off Setup . . . . . .64
Stereo/SAP Broadcasts Setup . . . . . .64
Time Menu Options
Auto Clock Setup . . . . . .65
Manual Clock Setup . . . . . .65
On/Off Timer Setup . . . . . .65
Sleep Timer / Auto Off . . . . . .66
Option Menu Options
Aspect Ratio Control . . . . . .67
Cinema 3:2 Mode Setup . . . . . .67
Caption . . . . . .68
Caption / Text . . . . . .68
Caption Option . . . . . .69
EZ Demo . . . . . .69
Lock Menu Options
Parental Lock Setup . . . . . .71
CableCARD™ Function
Cable menu options . . . . . .72
Scrambled channel . . . . . .72
Cable Channel List . . . . . .73
Emergency Alert Message . . . . . .73
XSTUDIO
Notes on Memory Card . . . . . .74~77
JEPG File Viewing Options . . . . . .78~82
MP3 File Playing Operation . . . . . .83~86
Remote Control
PIP (Picture-in-Picture)/POP/Twin Picture . . . . .87
Watching PIP/POP/Twin Picture . . . . . ..87
Selecting an Input Signal Source for PIP/Twin Picture . .87
Swapping the PIP/Twin Picture . . . . . .87
TV Program Selection for PIP . . . . . .87
Moving the PIP sub picture . . . . . .88
Adjusting Main and Sub Picture Sizes for Twin Picture . .88
POP (Picture-out-of-Picture: Channel Scan) . . .88
APM(Adaptive Picture Mode) . . . . . .89
Brief Info.. . . . . .90
EZ Mute . . . . . .91
Freeze & Magnify . . . . . .91
Screen Setup for PC mode . . . . . .92

**Programming the Remote . . . . . .93**

**Programming Codes . . . . . .94~95**

**Troubleshooting Checklist . . . . . .96~98**

**Maintenance . . . . . .99**

**Product Specifications . . . . . .100**

**Warranty . . . . . .103~104**

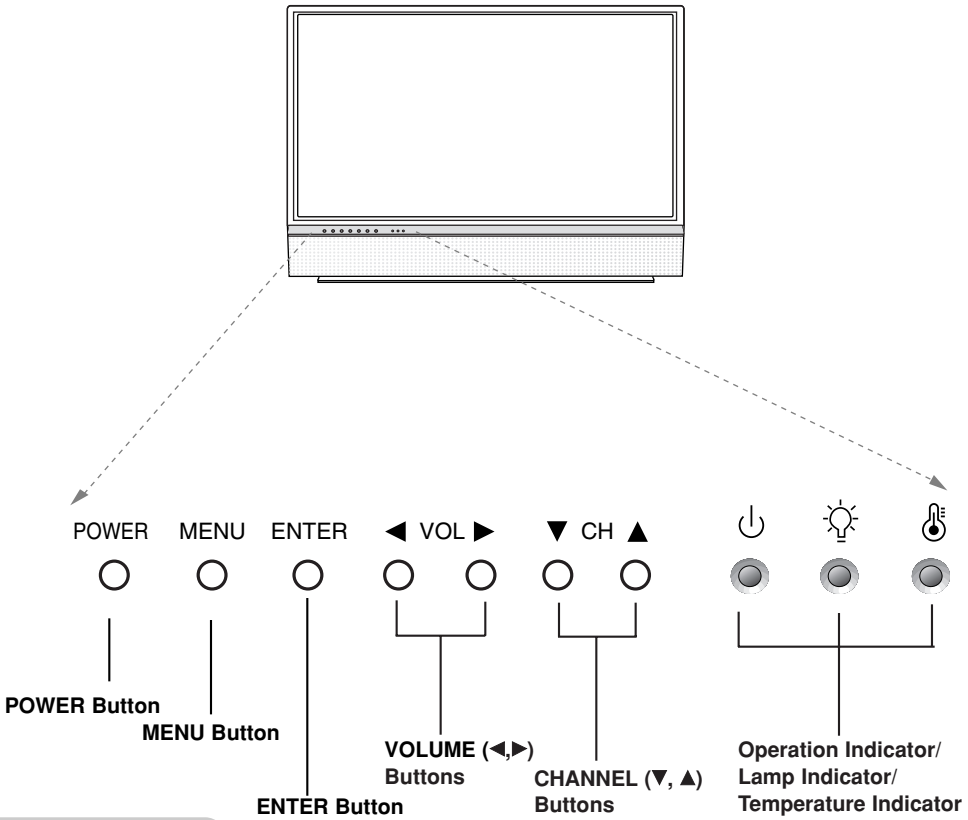

After reading this manual, keep it handy for future reference.

# Introduction

## Controls

- This is a simplified representation of a front panel.
- Here shown may be somewhat different from your TV.

### Front Panel Controls



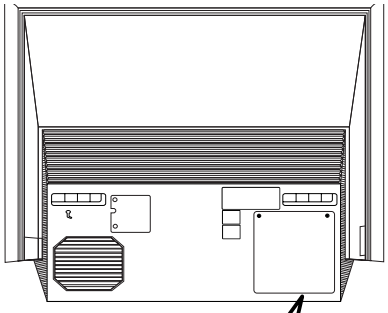

### Function Status Indicators

- Lamp indicator, operation indicator, and temperature indicator located below the front panel controls, reveal the operating status of the DLP projection TV.

| | | |
|---|---|---|
| Operation Indicator | Off | Power cord is not connected. |
| | Red | Power Cord is connected, TV is in standby mode. |
| | Green | TV turns on. |
| | Orange (flashing) | Preparing operation in standby mode. |
| Lamp Indicator | Orange | Projection lamp is reaching the end of its life and needs to be replaced with a new lamp. Contact your service center. |
| | Red (flashing) | There is a problem with the lamp or around it. Contact an authorized service center. |
| | Green (flashing) | The lamp cover is not closed. |
| Temperature Indicator | Orange | The projection TV is overheating. Check the blocked vents of the projection TV and the accumulated dust in the dust filter. |
| | Red | The projection TV shut down due to overheating. |
| | Red (flashing) | The projection TV shut down, check the cooling fan. Contact your service center. |

# Connection Options

## Back Connection Panel



**DIGITAL AUDIO OPTICAL OUTPUT**
Used to connect either an external amplifier, or add a sub-woofer to your surround sound system if it has a digital audio optical input. (Refer to ① )

**CABLE Inputs**
Connect cable signals to the TV, either directly or through your cable box.

**ANTENNA Inputs**
Connect antenna signals to the TV directly.

**RGB Input**
Connect the TV output connector from a PC/DTV to the appropriate input port.

**DIGITAL AUDIO OPTICAL INPUT1(COMPONENT2)**
Connect digital audio from the equipment connected to COMPONENT 2.

**S-VIDEO In**
A connection available with some high-end equipment that provides even better picture quality for Video 2.

**DIGITAL AUDIO OPTICAL INPUT2(DVI)**
Connect digital audio from the equipment connected to HDMI/DVI(VIDEO). (Refer to ② )

**VIDEO 1 or 2**
Connects the video signals from various types of equipment.

**HDMI1/DVI, HDMI 2**
Connect a HDMI signal to HDMI1/DVI or HDMI2. Or connect a DVI(Video) signal to HDMI1/DVI.

**Left/Right AUDIO**
Used for stereo sound from various types of equipment.

**MONITOR OUT**
Connect a second TV or Monitor.

**COMPONENT INPUT 1-2**
Connect a component video/audio device to these jacks. Refer to your DVD manual for further information.

**RGB/DVI INPUT**
Connect the monitor output connector from a PC to the appropriate input port.

**VARIABLE AUDIO OUT**
Used to connect either an external amplifier, or add a sub-woofer to your surround sound system.

*Notes:* ① *In standby mode, these port will not work.*

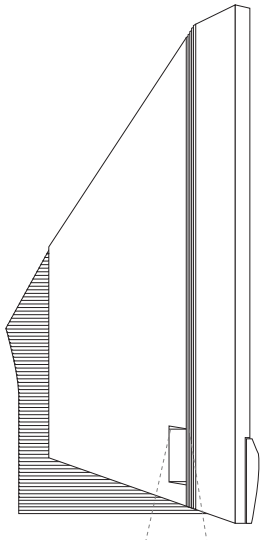
② *If the video is connected through HDMI-TO-HDMI cable, you don't need to connect digital audio. This port is used only when the video connected through DVI-TO-HDMI cable.*

## Front Connection Panel

There are four jacks on the left side on your projection TV that make connecting Audio/Video devices like video games and camcorders very simple.

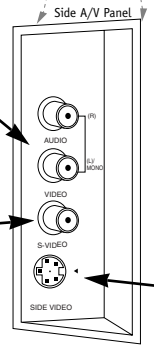
The jacks are like those found on the back jack connection panel. This means that most equipment that connects to those types of jacks on the rear jackpack, may be connected to the front connection panel.

To use the side jacks as the signal source, select them using Main Input menu as described on page 61. They will be named “Front Video” in the Main Input menu.



If you input both Front Video and S-Video, only the S-Video will work.

If you’re connecting a video game device, make sure to change the picture settings with the EZ Picture option in the Video menu (see page 62).




**LEFT/RIGHT AUDIO**
Used for stereo sound from various types of equipment.

**VIDEO**
Connects the video signals from any piece of equipment.

**S-VIDEO**
A connection available on some very high-end equipment that provides better picture quality than video input.

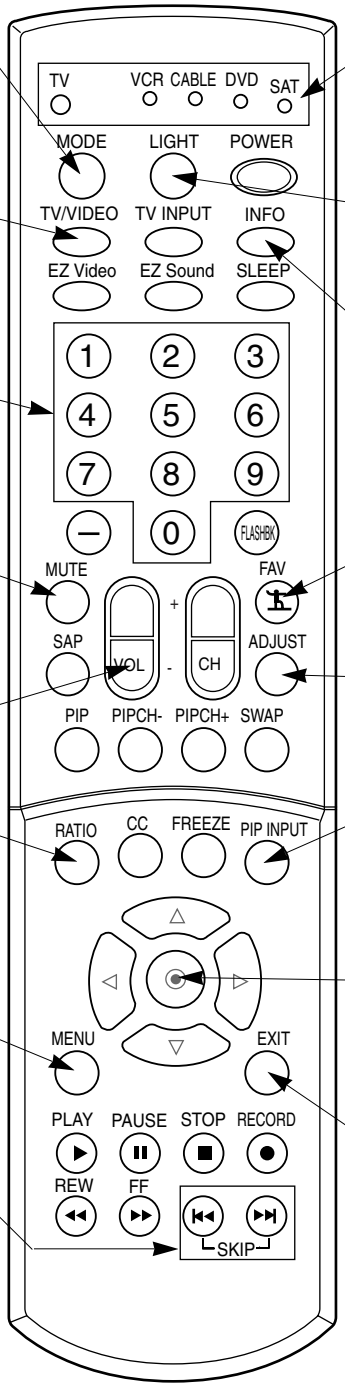
### Mini glossary

A/V CABLES Audio/Video cables. Three cable connector—Right audio (red), Left audio (white), and Video (yellow). A/V cables are used for stereo playback of videocassettes and for higher quality picture and sound from other A/V devices.

A/V DEVICE Any device that produces video or sound (VCR, DVD, cable box, or television).

# Remote Control Key Functions

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




**MODE**
Selects the remote operating mode: TV, VCR, Cable, DVD and Satellite. Select other operating modes, for the remote to control external devices.

**TV/VIDEO**
Selects: Analog, Video1, Video2, Side video, Component1-2, RGB, and DVI input sources.

**NUMBER KEYPAD**
For direct channel selection and programming functions.

**MUTE**
Switches the sound on or off.(Refer to p.91)

**VOLUME UP/DOWN**
Increases/decreases the sound level.

**RATIO**
Changes the screen format or aspect ratio.

**MENU**
Brings up the main menu to the screen.

**SKIP**
Playing CDs: Selects songs.
Playing DVDs: Selects movie chapters.

**INDICATOR LIGHTS**
Show active remote mode every time any button is pressed.

**LIGHT**
Illuminates the remote control keys.

**INFO**
When you watch the TV, information displays on top of the screen. Not available in Component 1-2, RGB, HDMI1/DVI and HDMI2 mode.(Refer to p.90)

**FAV**
Scrolls the Favorite channels.

**ADJUST**
Adjusts screen position, size, and phase in PC mode.

**PIP INPUT**
Selects the input source for the sub picture.

**ENTER**
When in the menu system and other on-screen displays, selects highlighted options.

**EXIT**
Clears all on-screen displays and returns to TV viewing from any menu.

# Remote Control Key Functions

**TV INPUT**
• Rotates the input mode between Antenna and Cable.
• Video 1-2, Front Video, Component 1-2, RGB-DTV (or RGB-PC), HDMI1/DVI, HDMI2 and IEEE1394 input sources, TV will return to the last TV channel.

**EZ Video**
Adjusts the factory preset picture depending on the viewing environment.

**EZ Sound**
Selects the sound appropriate for the program's character.

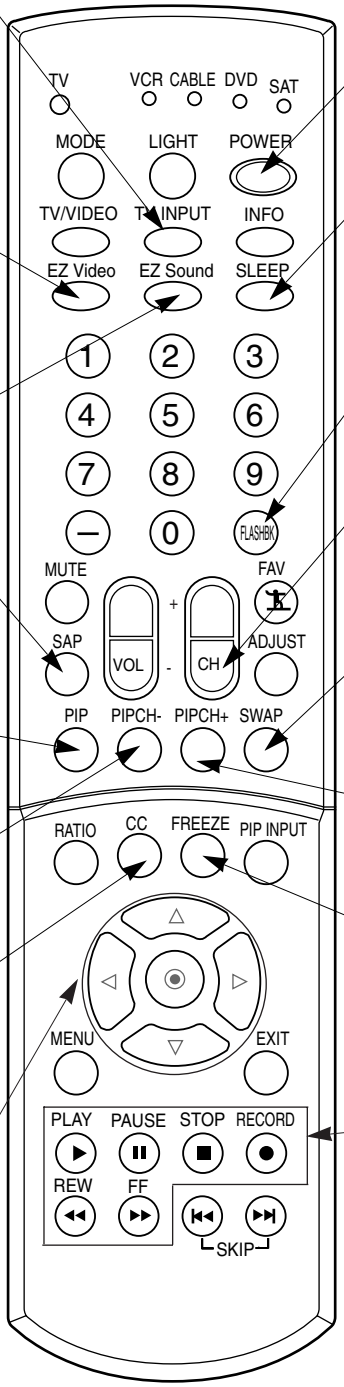
**SAP**
Selects MTS sound: Mono, Stereo, and SAP in Analog mode. Change the audio language in DTV mode.

**PIP**
Toggles between PIP, POP (Picture-out-of-Picture) and Twin picture mode.

**PIPCH-**
Changes to next lower PIP channel

**CC**
Selects a closed caption mode for displaying captioning information if available on program.

**THUMBSTICK**
Allows you to navigate the on-screen menus and to adjust the system settings and preferences, by moving to an option with ◄ ▲▼ ► and selecting the highlighted option with ◎.




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

**SLEEP**

**FLASHBK**
Tunes to the last channel viewed.

**CHANNEL UP/DOWN**
Scrolls through available channels in EZ Scan memory.

**SWAP**
Switches the picture from PIP, POP, or twin picture to the main screen.

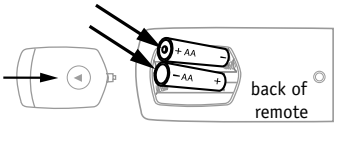
**PIPCH+**
Changes to next higher PIP channel.

**FREEZE**
Captures and freezes the currently-viewed main picture in PIP mode.

**RECORD, PAUSE, REW, FFWD, PLAY, STOP**
Control the functions on your VCR.

## Installing Batteries

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



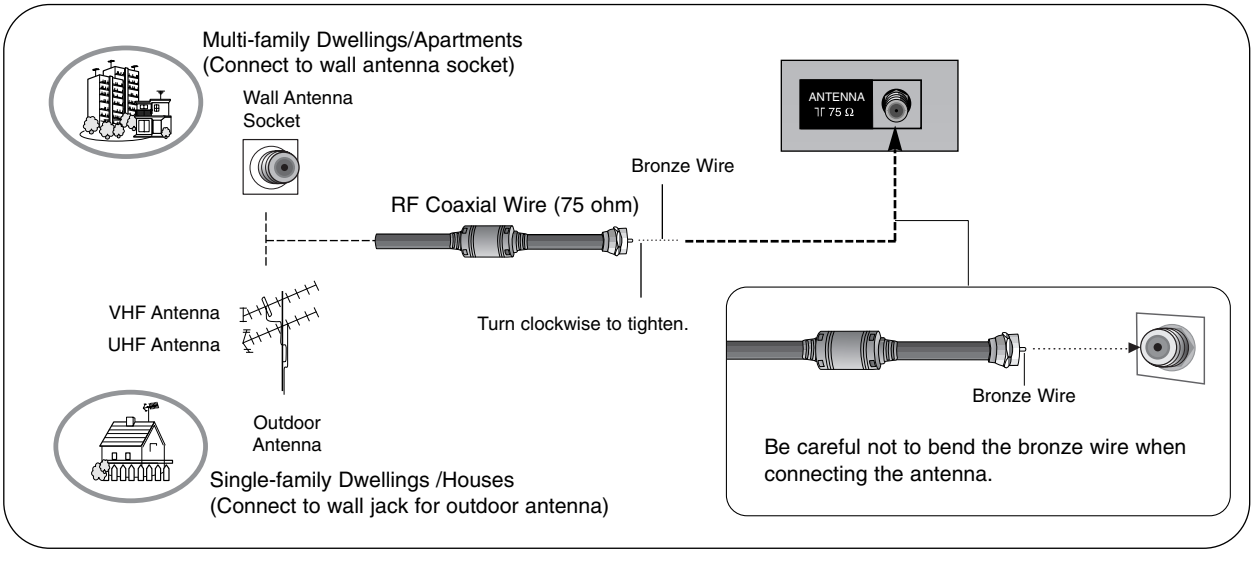
# Installation

## External Equipment Connections

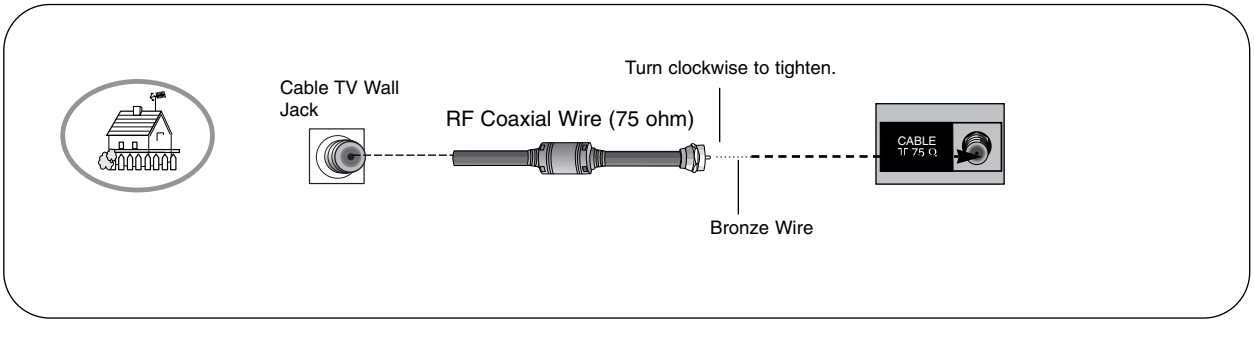
### Antenna or Cable Connection

**1. Analog and Digital TV signals provided on antenna**

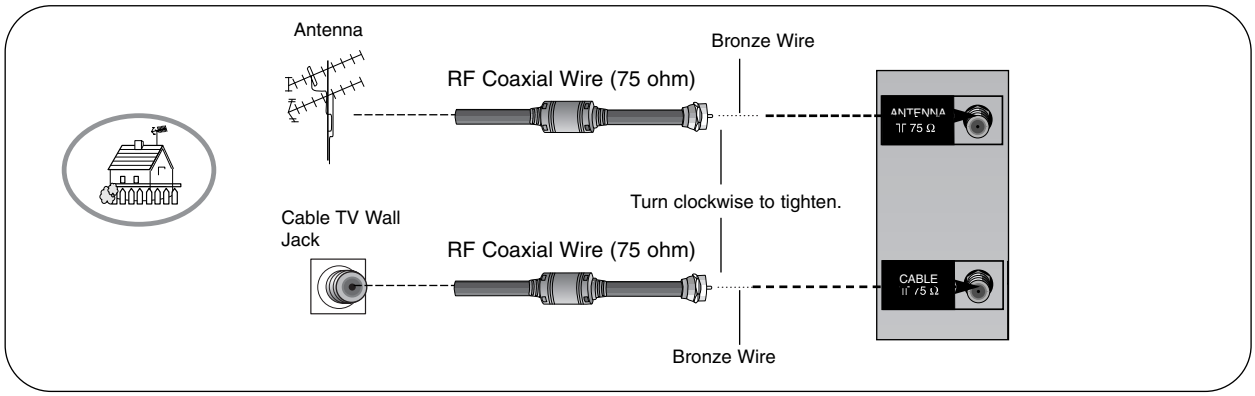
- Wall Antenna Socket or Outdoor Antenna without a Cable Box Connections
- For optimum picture quality, adjust antenna direction if needed.

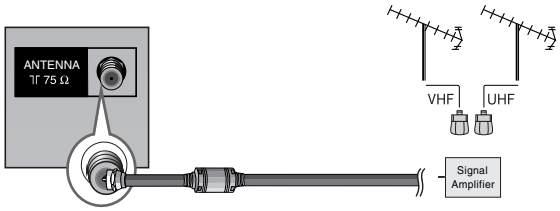



**2. Analog and Digital TV signals provided on cable**



### 3. Analog and Digital TV signals provided on cable and antenna




- 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" in the connections.
- If the antenna is not installed properly, contact your dealer for assistance.

***Note**: The TV will let you know when the TV(analog antenna), DTV(digital antenna), CATV(analog cable) and CADTV(digital cable) channel scans are complete.*

## VCR Setup

### Connection Option 1

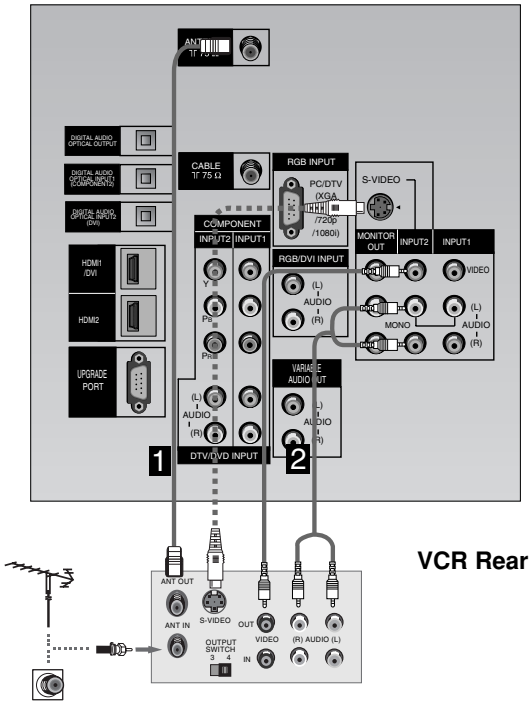
Set VCR output switch to channel 3 or 4 and then tune the TV to the same channel number.

### Connection Option 2

1. Connect the audio and video cables from the VCR's output jacks to the TV input jacks, as shown in the figure.
   When connecting the TV to VCR, match the jack colors (Video = yellow, Audio Left = white, and Audio Right = red).
   If you connect an S-VIDEO output from VCR to the S-VIDEO input, the picture quality is improved; compared to connecting only the Video input.
2. Insert a video tape into the VCR and press PLAY on the VCR. (Refer to the VCR owner's manual.)
3. Select the input source with using the **TV**/**VIDEO** button on the remote control. Note that this TV finds the connected input sources automatically for Video, Front Video and Component 1-2. It is presumed that RGB, HDMI1/DVI and HDMI2 sources are connected.



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.)




**VCR Rear**

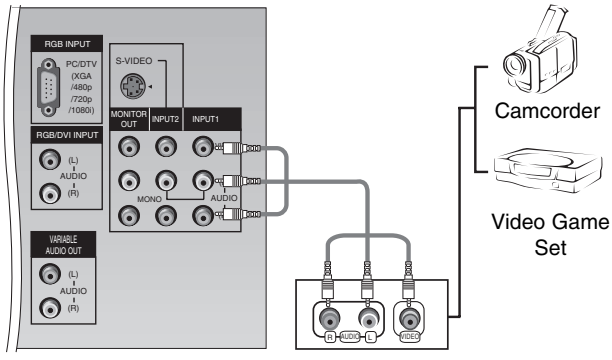
## External A/V Source Setup

### How to connect

Connect the audio and video cables from the external equipment's output jacks to the TV input jacks, as shown in the figure.
When connecting the TV to external equipment, match the jack colors (Video = yellow, Audio Left = white, and Audio Right = red).

### How to use

1. Select the input source by using the **TV**/**VIDEO** button on the remote control. Note that this TV finds the connected input sources automatically for Video 1-2 and Component 1-2. It is presumed that RGB, HDMI1/DVI and HDMI2 sources are connected.
2. Operate the corresponding external equipment. For connection instructions for operating the TV Guide On Screen system, see page 21~22.




## DVD Setup

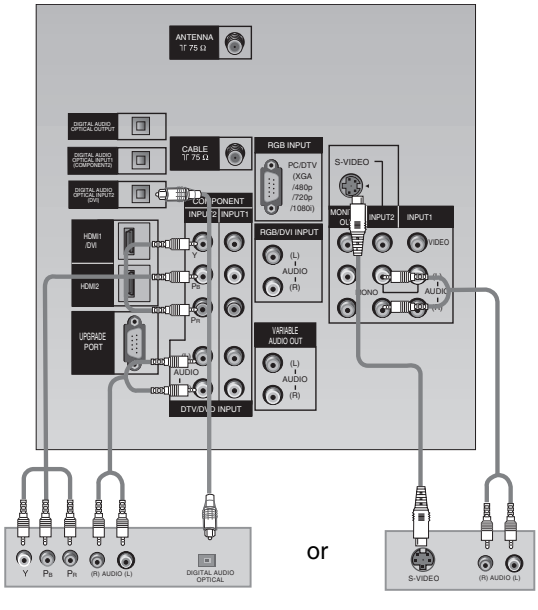
### How to connect

1. Connect the DVD video outputs (Y, PB, PR) to the COMPONENT (Y, PB, PR) INPUT jacks on the TV and connect the DVD audio outputs to the AUDIO INPUT jacks on the TV, as shown in the figure.
2. If your DVD only has an S-Video output jack, connect this to the S-VIDEO input on the TV and connect the DVD audio outputs to the AUDIO INPUT jacks on the TV, as shown in the figure.

***Note:*** *If your DVD player does not have component video output, use S-Video.*

### How to use

1. Turn on the DVD player, insert a DVD.
2. Use the **TV**/**VIDEO** button on the remote control to select **Component 1** or **Component 2**. (If connected to S-VIDEO, select the **Video** or **Front Video** external input source.)
3. Refer to the DVD player's manual for operating instructions.




**DVD**

- **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 | PB | PR |
|---|---|---|---|

| Video output ports on DVD player | | | |
|---|---|---|---|
| | Y | Pb | Pr |
| | Y | B-Y | R-Y |
| | Y | Cb | Cr |
| | Y | PB | PR |

***Notes:***
- *Digital Audio will not work for Component 1 input source.*
- *Digital Audio operation has priority if Digital Audio and AUDIO L/R are connected at the same time.*

## HDSTB Setup

- This TV can receive Digital Over-the-air/Cable signals without an external digital set-top box. However, if you do receive Digital signals from a digital set-top box or other digital external device, refer to the figure as shown below.
- This TV supports HDCP (High-bandwidth Digital Contents Protection) protocol for Digital Contents (480p,720p,1080i).

### How to connect

Use the TV's COMPONENT (Y, PB, PR) INPUT, RGB, HDMI1/DVI or HDMI2 jack for video connections, depending on your set-top box connector. Then, make the corresponding audio connections.

***Note**: HDMI(High Definition Multimedia Interface): Input that accepts uncompressed digital signal and multi channel digital audio signal.*

| Signal | Component 1/2 | RGB-DTV,HDMI1/DVI,HDMI2 |
|---|---|---|
| 480i | Yes | No |
| 480p | Yes | Yes |
| 720p | Yes | Yes |
| 1080i | Yes | Yes |

### How to use

1. Turn on the digital set-top box. (Refer to the owner's manual for the digital set-top box.)
2. Use **TV**/**VIDEO** on the remote control to select **Component 1**, **Component 2**, **RGB-DTV**, **HDMI1**/**DVI** or **HDMI2** source.

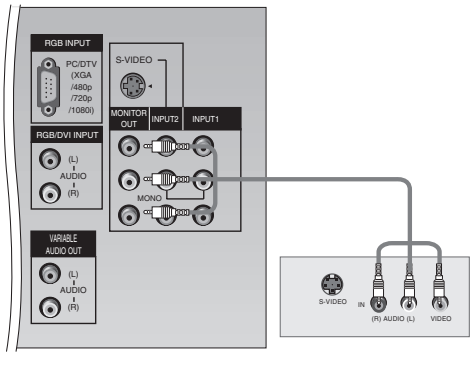
## Monitor Out Setup

The TV has a special signal output capability which allows you to hook up a second TV or monitor.

Connect the second TV or monitor to the TV's MONITOR OUTPUT. See the Operating Manual of the second TV or monitor for further details regarding that device's input settings.

***Note***

- *Component, RGB-PC/RGB-DTV, HDMI1/DVI,HDMI2, DTV input sources cannot be used for Monitor out.*



## PC Setup

- This TV provides Plug and Play capability, meaning that the PC adjusts automatically to the TV's settings.
- The TV perceives 640x480, 60Hz as DTV 480p based on the PC graphic card, change the screen scanning rate for the graphic card accordingly.

### <When the PC supports DVI>

**How to connect**

1. Connect the PC to HDMI1/DVI port of this TV with an HDMI-to-DVI cable(not supplied with this product).
   If you do not need to connect audio, HDMI2 port is also available for the DVI video connection.
2. If the PC(or the sound card of the PC) has a fiber optic digital audio output connector, connect the PC's audio output to DIGITAL AUDIO(OPTICAL) port for DVI INPUT.
3. If the PC(or the sound card of the PC) has an analog audio output connector, connect the PC's audio output to AUDIO INPUT port located on the right side of RGB INPUT port.

**How To Use**

1. To get the best picture quality, adjust the PC graphics card to 1024x768, 60Hz.
2. Select HDMI1/DVI input source in main input option of SETUP menu.(Refer to P.61)
   **TV**/**VIDEO** button is also available for this purpose.
3. Check the image on your TV. There may be noise associated with the resolution, vertical pattern, contrast or brightness in PC mode. If noise is present, change the PC output to another resolution, change the refresh rate to another rate or adjust the brightness and contrast on the VIDEO 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.

### <When the PC supports RGB>

**How to connect**

1. Connect the PC to RGB INPUT port of this TV with a RGB cable(not supplied with this product).
2. If the PC(or the sound card of the PC) has an analog audio output connector, connect the PC's audio output to AUDIO INPUT port located on the right side of RGB INPUT port.

**How To Use**

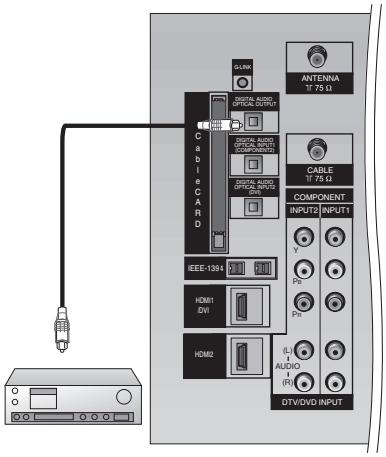
1. To get the best picture quality, adjust the PC graphics card to 1024x768, 60 Hz.
2. Select **RGB-PC** input source in main input option of SETUP menu.(Refer to P.61)
   Once you select **RGB-PC** in main input option of SETUP menu, **TV**/**VIDEO** button is also available for this purpose.
3. Check the image on your TV. There may be noise associated with the resolution, vertical pattern, contrast or brightness in PC mode. If noise is present, change the PC output to another resolution, change the refresh rate to another rate or adjust the brightness and contrast on the VIDEO 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.

**Monitor Display Specifications (RGB-PC** or **HDMI/DVI Mode)**

| Resolution | Horizontal Frequency(KHz) | Vertical Frequency(Hz) |
|---|---|---|
| 640x350 | 31.468 | 70.09 |
| 640x480 | 31.469 | 59.94 |
| | 37.861 | 72.80 |
| | 37.500 | 75.00 |
| 800x600 | 35.156 | 56.25 |
| | 37.879 | 60.31 |
| | 48.077 | 72.18 |
| | 46.875 | 75.00 |
| 1024x768 | 48.363 | 60.00 |
| | 56.476 | 70.06 |
| | 60.023 | 75.02 |

## Digital Audio Output

Send the TV's audio to external audio equipment (stereo system) via the Digital Audio Output (Optical) port.

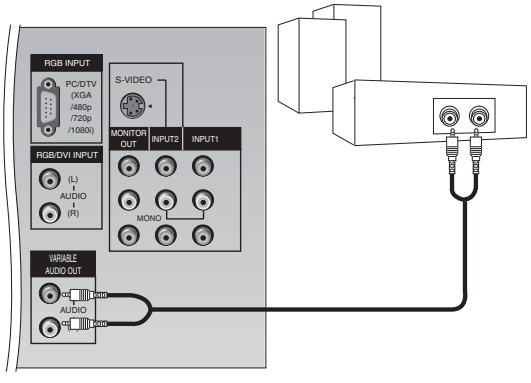



### How to connect

1. Connect one end of an optical cable to the TV Digital Audio (Optical) Output port.
2. Connect the other end of the optical cable to the digital audio (optical) input on the audio equipment.
3. Set the " **TV Speaker** option - **Off**" in the AUDIO menu. Refer to page 64.
   See the external audio equipment instruction manual for operation.

**Caution**: Do not look into the optical output port. Looking at the laser beam may damage your vision.

## External Stereo




Hook up Variable Audio Output, L-Audio-R to Amplifier system for Left/Right front speaker sound.

### How to connect

1. Locate the Variable Audio Out jacks on the back of your TV and the Input jacks on the back of your stereo's amplifier.
2. Connect the two jacks, making sure that the right and left channels are connected correctly.
3. Set up your speakers through your analog stereo amplifier, according to the instructions provided with the amplifier.

# HDMI

- HDMI™, the HDMI logo and High-Definition Multimedia Interface is a trademark or registered trademark of HDMI Licensing.
- This TV can receive the High-Definition Multimedia Interface(HDMI) or the Digital Visual Interface(DVI).
- This TV supports HDCP(High-bandwidth Digital Contents Protection) Protocol for 720x480p, 1280x720p, and 1920x1080i resolution.
- When you connect this TV with a source device(DVD player, Set Top Box or PC) supporting Auto HDMI/DVI function, the output resolution of the source device will be automatically set to 1280x720p.
- If the source device does not support Auto HDMI/DVI, you need to set the output resolution appropriately.
  To get the best picture quality, adjust the DVD Player or Set Top Box's output resolution to 1280x720p, and the PC graphics card's output resolution to 1024x768, 60Hz.
- If the source device has an HDMI output, no other audio connection is necessary because HDMI-to-HDMI connection includes both video and audio.
- If the source device has a DVI output and no HDMI output, a separated audio connection is necessary.

### <When the source device(DVD player or Set Top Box) supports HDMI>

### How To Connect

1. Connect the source device to HDMI1/DVI or HDMI2 port of this TV with an HDMI cable(not supplied with this product).
2. No separated audio connection is necessary.

### How To Use

- If the source device supports Auto HDMI function, the output resolution of the source device will be automatically set to 1280x720p.
- If the source device does not support Auto HDMI, you need to set the output resolution appropriately.
  To get the best picture quality, adjust the output resolution of the source device to 1280x720p.
- Select HDMI1/DVI or HDMI2 input source in main input option on the SETUP menu.(Refer to P.61)
  **TV**/**VIDEO** button is also available for this purpose.

### <When the source device(DVD player or Set Top Box) supports DVI>

### How To Connect

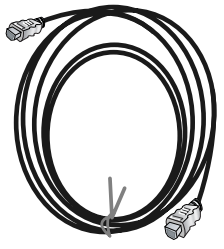
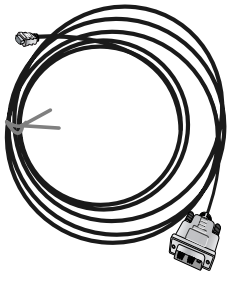
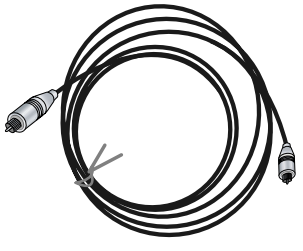
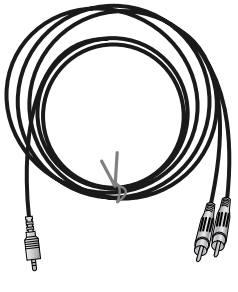
1. Connect the source device to HDMI1/DVI port of this TV with a HDMI-to-DVI cable(not supplied with this product).
   Do not use HDMI2 port for DVI connection if you want to connect audio.
2. A separated audio connection is necessary.
3. If the source device has a fiber optic digital audio output, connect the audio output to DIGITAL AUDIO(OPTICAL) port for DVI INPUT.
4. , connect the PC's audio output to AUDIO INPUT port located on the right side of RGB INPUT port.

### How To Use

- If the source device supports Auto DVI function, the output resolution of the source device will be automatically set to 1280x720p.
- If the source device does not support Auto DVI, you need to set the output resolution appropriately.
  To get the best picture quality, adjust the output resolution of the source device to 1280x720p.
- Select HDMI1/DVI input source in main input option on the SETUP menu.(Refer to P.61)
  **TV**/**VIDEO** button is also available for this purpose.

Reference

## Cable sample

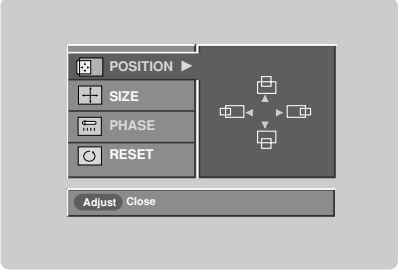
| | |
|---|---|
|  | HDMI Cable<br>(not supplied with the product) |
|  | HDMI to DVI Cable<br>(not supplied with the product) |
|  | Fiber Optic Digital Audio Cable<br>(not supplied with the product) |
| | Analog Audio Cable(RCA type)<br>(not supplied with the product) |
|  | Analog Audio Cable(Stereo to RCA type)<br>(not supplied with the product) |

## How to use

1. Connect the HDMI1/DVI Source Devices(DVD Player or Set Top Box or PC) and the TV SET.
2. Turn on the display by pressing the POWER button on the TV SET and HDMI1/DVI Source Devices remote control.
3. Select HDMI1/DVI Input source in Main Input option on the SETUP menu.(Refer to P.61)
4. Check the image on your TV SET. There may be noise associated with the resolution, vertical pattern, contrast or brightness in HDMI1/DVI Source Devices. If noise is present, change the HDMI1/DVI Source Devices to another resolution, change the refresh rate or adjust the brightness and contrast on the menu until the picture is clear. If the refresh rate of the PC graphics card can not changed, change the PC graphics card or consult the manufacturer of the PC graphics card.

***Notes**:*

*- Depending on the graphics card, DOS mode may not work if a HDMI to DVI Cable is in use.*
*- Avoid keeping a fixed image on the screen for a long period of time. The fixed image may become permanently imprinted on the screen.*
*- When Source Devices connected with HDMI1/DVI Input, output PC Resolution(VGA, SVGA, XGA), Position and Size may not fit to Screen. As shown the picture below, press the **ADJUST** button to adjust the screen Position of TV SET and contact an PC graphics card service center.*
*- When Source Devices connected with HDMI1/DVI Input, output TV SET Resolution(480p, 720p, 1080i) and TV SET Display fit EIA/CEA-861-B Specification to Screen. If not, refer to the Manual of HDMI1/DVI Source Devices or contact your service center.*
*- In case HDMI1/DVI Source Devices is not connected Cable or poor cable connection, "NO SIGNAL" OSD display in HDMI1/DVI Input. In case that Video Resolution is not supported TV SET output in HDMI1/DVI Source Devices, "INVALID FORMAT" OSD display. Refer to the Manual of HDMI1/DVI Source Devices or contact your service center.*




**PC mode**

## In This Mode, the Supported TV Set Resolution Specification

- 1920 x 1080 I @ 59.94Hz / 60Hz, 16:9
- 1280 x 720 P @ 59.94Hz / 60Hz, 16:9(preferred format)
- 720 x 480 P @ 59.94Hz / 60Hz, 16:9
- 720 x 480 P @ 59.94Hz / 60Hz, 4:3

## In This Mode, the Supported PC Resolution Specification

- 640 x 350 @ 70Hz
- 640 x 480 @ 60Hz
- 640 x 480 @ 72Hz
- 640 x 480 @ 75Hz
- 800 x 600 @ 56Hz
- 800 x 600 @ 60Hz
- 800 x 600 @ 72Hz
- 800 x 600 @ 75Hz
- 1024 x 768 @ 60Hz(preferred format)
- 1024 x 768 @ 70Hz
- 1024 x 768 @ 75Hz

# Operation

## Turning the TV On

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

### Turning on the TV just after installation

1. Connect power cord correctly.
2. Press the **POWER** button on the TV. At this moment, the TV is switched to standby mode. Press the **TV INPUT**, **TV/VIDEO**, **CH (▲ / ▼)**, **Number (0 ~ 9)** button on the remote control or press the **CH (▲ / ▼)** button on the TV front panel and then the TV will switch on.

### Turning on the TV (power cord is still connected)

**1. If the TV was turned off with indicators on the TV**

- Check the power cable.

**2. If the TV was turned off with the remote control and the POWER button on the TV**

- Press the **POWER** button on the TV or press the **POWER**, **TV/VIDEO**, **CH (▲ / ▼)**, **Number (0 ~ 9)** button on the remote control to turn the TV on.

***Notes:***

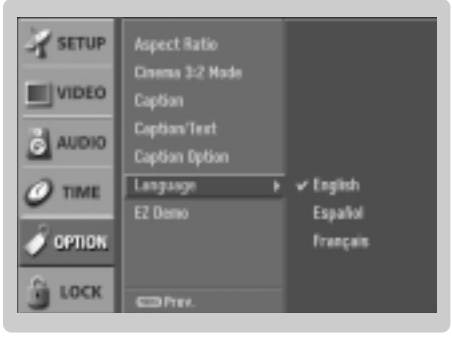
- *If you intend to be away on vacation, disconnect the power plug from the wall power outlet.*
- *The TV Guide On Screen and any CableCARD™ Software upgrades work while the TV is in standby mode. If you pull the power plug cord the TV Guide On Screen will not update its listings and no CableCARD™ Software upgrades will occur.*
- *After turning on the TV, it could take up to a week for the TV Guide On Screen system to receive full listings data.*

# TV Setup

## On-screen Menus Language Selection

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

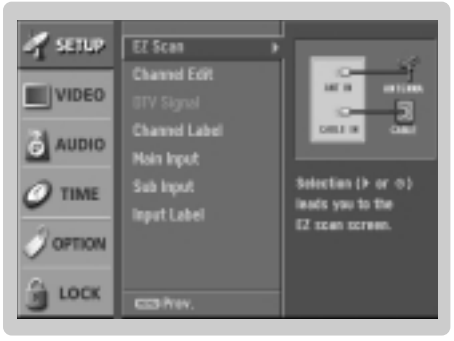
1. Press the **MENU** button and then use ▲ / ▼ button to select the **OPTION** menu.
2. Press the ► button and then use ▲ / ▼ button to select **Language**.
3. Press the ► button and then use ▲ / ▼ button to select your desired language. From this point on, the on-screen menus will be shown in the selected language.
4. Press **EXIT** button to return to TV viewing or press **MENU** button to return to the previous menu.

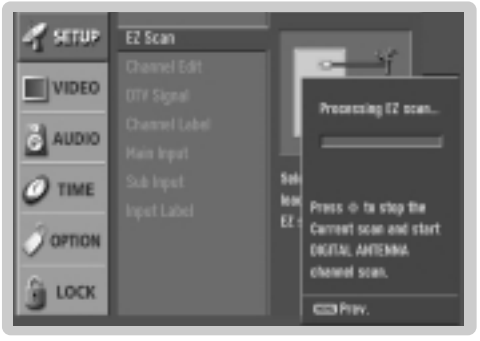


# Setup Menu Options

## EZ Scan (Channel Search)

- Automatically finds all channels available through antenna or cable inputs, and stores them in memory on the channel list.
- Run EZ Scan again after any Antenna/Cable connection changes.
- A password is required to gain access to EZ Scan menu if the Lock System is turned on.

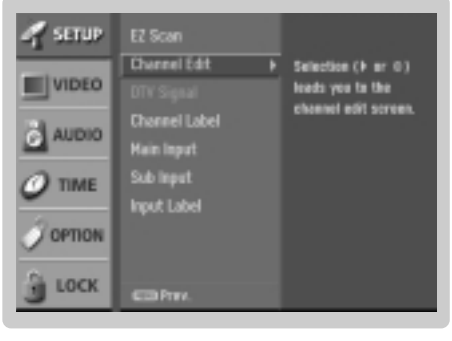



1. Press the **MENU** button and then use ▲ / ▼ button to select the **SETUP** menu.
2. Press the ► button and then use ▲ / ▼ button to select **EZ Scan**.
3. Press the ► button or **ENTER** button to begin the channel search.
   Allow EZ Scan to complete the channel search cycle for TV, DTV, CATV, and CADTV.

## Channel Edit

- Create two different types of channel lists in memory: “Custom List” and “Favorite List” from the default channel list created from the EZ Scan channel search.
- A Custom List can be created by toggling each channel on or off with **ENTER** button. The channels in the Custom List are displayed in black color, and the channels deleted from the Custom List are displayed in gray color. Once a channel is highlighted you can add or delete the channel by referring to the small window at the top-left corner of the screen.You can create your own Favorite List.
  Use the **FAV** button on the remote control when a channel is highlighted and then you can add or delete the channel to/from the Favorite List.



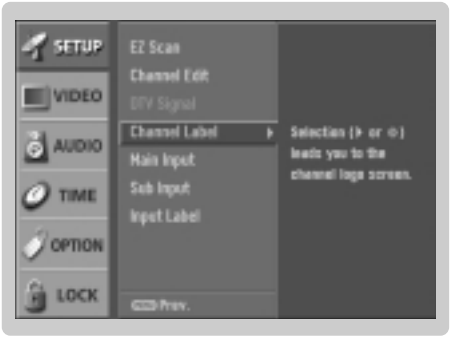

1. Press the **MENU** button and then use ▲ / ▼ button to select the **SETUP** menu.
2. Press the ► button and then use ▲ / ▼ button to select **Channel Edit**.
3. Press the ► button. You will now see a screen filled with channel numbers and a preview picture.
4. Use ▲ / ▼ / ◄ / ► button to select a channel and then use the **ENTER** button to add or delete it. Press **FAV** to add or delete the channel to the Favorite List.
5. Press **EXIT** button to return to TV viewing or press **MENU** button to return to the previous menu.

***Note:***

*• When a cable box connects to the physical channel 2, 3, or 4 in TV Guide On Screen Setup, cable channels(CATV or CADTV) will not be editable by Channel Edit. Instead, use the cable box's Channel Edit if available.*

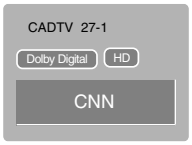
## Channel Label Setup

- Choose preset labels for your channels.
- If a channel label is provided on the signal from the broadcasting station, the TV displays a short name for a DTV channel - even if you didn't preset a label for the channel.



1. Press the **MENU** button and then use ▲ / ▼ button to select the **SETUP** menu.
2. Press the ► button and then use ▲ / ▼ button to select **Channel Label**.
3. Press the ► button. You will now see a screen filled with Labels and a preview screen.
4. Use the **CH** ▲ / ▼ button to select a channel to Label.
5. Use ▲ / ▼ / ◄ / ► button to select the appropriate label for the channel, then press **ENTER** button to set the Label to the selected channel.

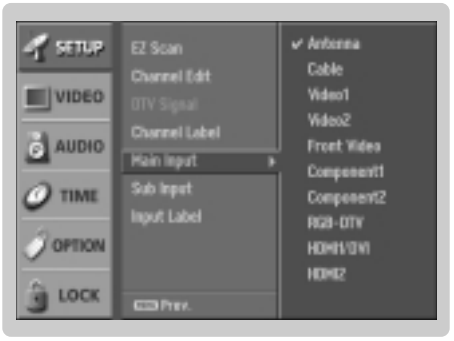
- If you press **ENTER** button in TV viewing mode, you will see the channel banner. ------►




## Main Picture Source Selection

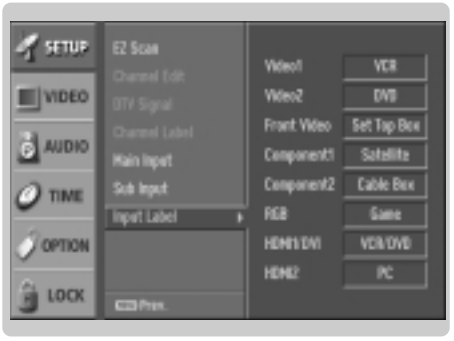
- Changes the picture source so you can watch your off-air TV, cable TV, VCR, DVD, or any other devices that are connected to your TV.

1. Press the **MENU** button and then use ▲ / ▼ button to select the **SETUP** menu.
2. Press the ► button and then use ▲ / ▼ button to select **Main Input**.
3. Press the ► button and then use ▲ / ▼ button to select the source: Antenna, Cable, Video1, Video2, Front Video, Component1, Component2, RGB-DTV (or RGB-PC), HDMI1/DVI or HDMI2.
4. Press **EXIT** button to return to TV viewing or press **MENU** button to return to the previous menu.




## Input Label

1. Press the **MENU** button and then use ▲ / ▼ button to select the **SETUP** menu.
2. Press the ► button and then use ▲ / ▼ button to select **Input Label**.
3. Press the ► button and then use ▲ / ▼ button to select the source: Video1, Video2, Front Video, Component1, Component2, RGB, HDMI1/DVI or HDMI2.
4. Press **EXIT** button to return to TV viewing or press **MENU** button to return to the previous menu.



# Video Menu Options

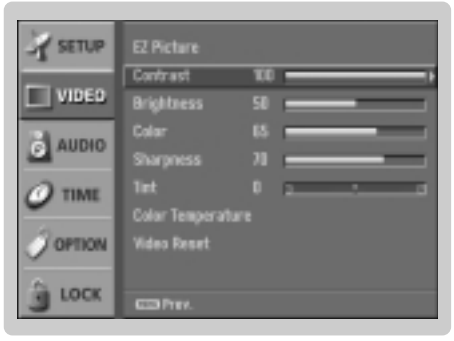
## EZ Picture

- EZ Picture adjusts the TV for the best picture appearance. Select the preset value in the EZ Picture menu based on the program category.
- When adjusting Video menu options (contrast, brightness, color, sharpness, tint, and color temperature) manually, EZ Picture automatically changes to **Custom**.
- **Daylight**, **Normal**, **Night Time**, **Movie**, **Video Game**, and **Sports** settings are preset for optimum picture quality at the factory and are not adjustable.

1. Press the **EZ PIC** button repeatedly to select the picture appearance setup option as shown below:
   **Custom** (your own settings), **Daylight**, **Normal**, **Night Time**, **Movie**, **Video Game**, and **Sports**.
   • You can also use the **VIDEO** menu to adjust **EZ Picture**.
2. Press the **EXIT** button to save and return to TV viewing.

## Manual Picture Control (**Custom** option)

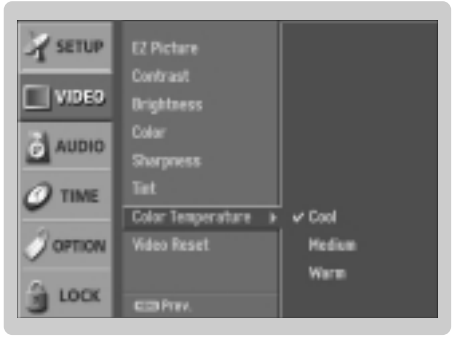
- Adjust the picture appearance to suit your preference and viewing situations.




1. Press the **MENU** button and then use ▲ / ▼ button to select the **VIDEO** menu.
2. Press the ► button and then use ▲ / ▼ button to select the desired picture option (**Contrast**, **Brightness**, **Color**, **Sharpness**, or **Tint**).
3. Press the ► button and then use ◄ / ► button to make appropriate adjustments.
4. Press **EXIT** button to return to TV viewing or press **MENU** button to return to the previous menu.

## Color Temperature Control

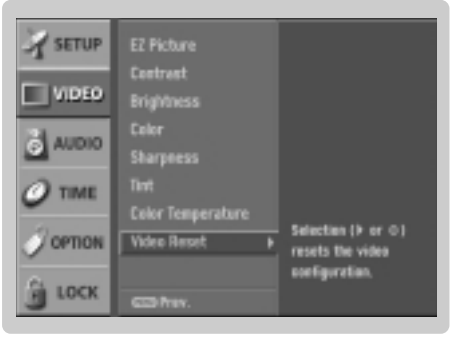
- Choose one of three automatic color adjustments. Set to warm to enhance hotter colors such as red, or set to cool to see less intense colors with more blue.




1. Press the **MENU** button and then use ▲ / ▼ button to select the **VIDEO** menu.
2. Press the ► button and then use ▲ / ▼ button to select **Color Temperature** .
3. Press the ► button and then use ▲ / ▼ button to select either **Cool**, **Medium**, or **Warm**.
4. Press **EXIT** button to return to TV viewing or press **MENU** button to return to the previous menu.

## Video Reset

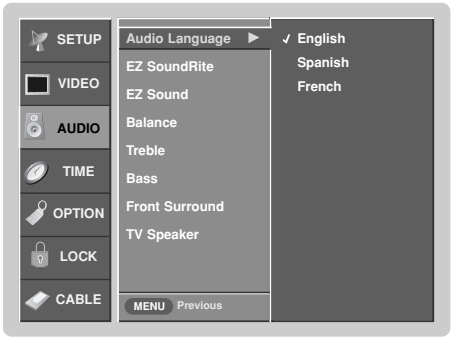
- Use to quickly reset all the Video menu options to their original factory preset values.




1. Press the **MENU** button and then use ▲ / ▼ button to select the **VIDEO** menu.
2. Press the ► button and then use ▲ / ▼ button to select **Video Reset** .
3. Press the ► button to reset the Video menu options to original values.

# Audio Menu Options

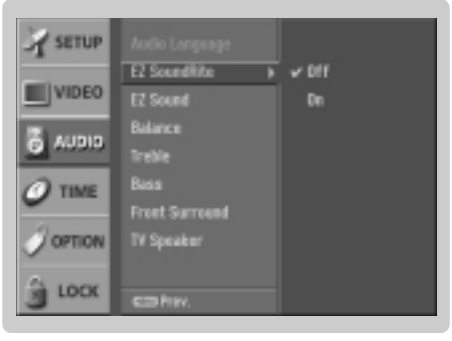
## Audio Language




- Other languages may be available if a digital signal is provided by the broadcasting station.

1. Press the **MENU** button and then use ▲ / ▼ button to select the **AUDIO** menu.
2. Press the ► button and then use ▲ / ▼ button to select **Audio Language**.
3. Press the ► button and then use ▲ / ▼ button to select: English, Spanish, or French.
4. Press **EXIT** button to return to TV viewing or press **MENU** button to return to the previous menu.

## EZ SoundRite




- Scans for changes in sound level during commercials, then adjusts the sound to match the specified audio level. SoundRite makes sure that the volume level remains consistent whether you are watching a commercial or a regular TV program.

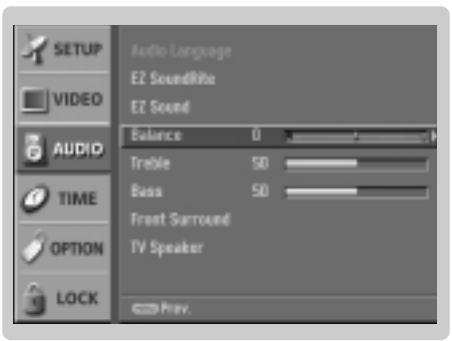
1. Press the **MENU** button and then use ▲ / ▼ button to select the **AUDIO** menu.
2. Press the ► button and then use ▲ / ▼ button to select **EZ SoundRite**.
3. Press the ► button and then use ▲ / ▼ button to select **On** or **Off**.
4. Press **EXIT** button to return to TV viewing or press **MENU** button to return to the previous menu.

## EZ Sound

- EZ Sound lets you enjoy the best sound without any special adjustment because the TV sets the appropriate sound options based on the program content.
- When adjusting sound options (treble, bass, and front surround) manually, EZ Sound automatically switches **Custom**.
- **Normal**, **Stadium**, **News**, **Music** and **Theater** are preset for good sound quality at the factory and are not adjustable.

1. Press the **EZ SOUND** button repeatedly to select the appropriate sound setup as shown below:
   **Custom** (your own settings), **Normal**, **Stadium**, **News**, **Music** and **Theater**.
   • You can also adjust **EZ Sound** in the **AUDIO** menu.
2. Press **EXIT** button to save and return to TV viewing.

## Manual Sound Control (**Custom** option)



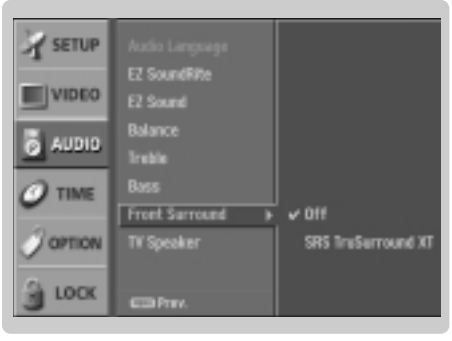

- Adjust the sound to suit your taste and room situations.

1. Press the **MENU** button and then use ▲ / ▼ button to select the **AUDIO** menu.
2. Press the ► button and then use ▲ / ▼ button to select the desired sound option (**Balance**, **Treble**, or **Bass**).
3. Press the ► button and then use ◄ / ► button to make appropriate adjustments.
4. Press **EXIT** button to return to TV viewing or press **MENU** button to return to the previous menu.

# Audio Menu Options

## Front Surround

- SRS is a trademark of SRS Labs, Inc.
- TruSurround XT technology is incorporated under license from SRS Labs, Inc.
- Manufactured under license from Dolby Laboratories. “Dolby” and the double-D symbol are trademarks of Dolby Laboratories.



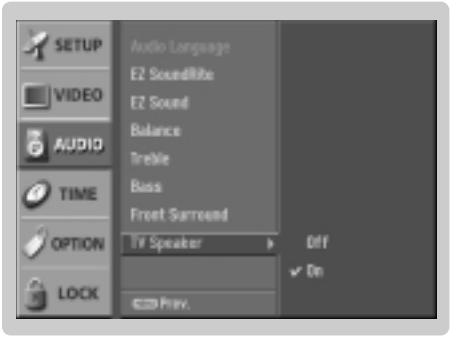

1. Press the **MENU** button and then use ▲ / ▼ button to select the **AUDIO** menu.
2. Press the ► button and then use ▲ / ▼ button to select **Front Surround**.
3. Press the ► button and then use ▲ / ▼ button to select **Off**, **3D EchoSound System** or **SRS** (Sound Retrieval System) **TruSurround XT**.

   • **3D EchoSound System**
   Creates a stunning simulated stereo effects from any mono sound and a realistic three-dimensional sound with a very wide and deep sound stage into stereo sound

   • **SRS TruSurround XT**
   Takes advantage of any multi-channel format without needing to add extra speakers or equipment. Dialog clarity, bass enrichment, and the addition of stereo audio enhancement that produces an immersive sound experience from standard stereo material.
4. Press **EXIT** button to return to TV viewing or press **MENU** button to return to the previous menu.

## TV Speaker On/Off Setup

- Turn TV speaker off if using external audio equipment. Feature turns the TV Speaker option On or Off.




1. Press the **MENU** button and then use ▲ / ▼ button to select the **AUDIO** menu.
2. Press the ► button and then use ▲ / ▼ button to select **TV Speaker**.
3. Press the ► button and then use ▲ / ▼ button to select **On** or **Off** .
4. Press **EXIT** button to return to TV viewing or press **MENU** button to return to the previous menu.

## Stereo/SAP Broadcasts Setup

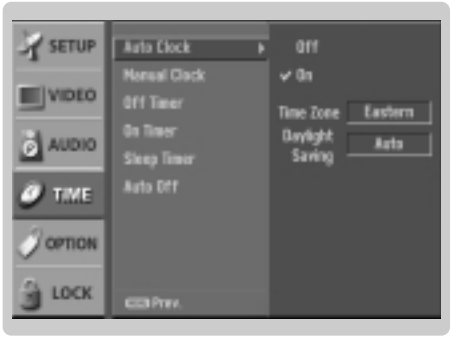
- This TV can receive MTS stereo programs and any SAP (Secondary Audio Program) that accompanies the stereo program; if the station transmits an additional sound signal as well as the original one.
- When having selected Stereo or SAP button on the remote control, this TV can only receive the signal when the TV station transmits the proper signals.
- Mono sound is automatically received if the broadcast is only in Mono; even though Stereo or SAP has been selected.
- Select Mono if you want to listen to the mono sound in remote fringe areas during stereo/SAP broadcasting.
- Stereo or SAP can be received in Analog channel.

1. Use the **SAP** button to select your desired MTS mode in analog signal. Each time you press the **SAP** button, **Mono**, **Stereo**, or **SAP** appear in turn.
   • If other languages available on the digital signal, select them with the **SAP** button.
2. Press **EXIT** button to save and return to TV viewing.

# Time Menu Options

## Auto Clock Setup

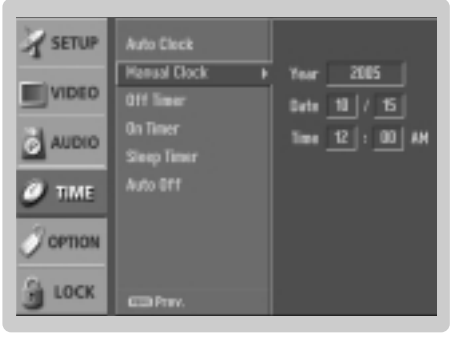
- The time is set automatically from a digital channel signal.
- The digital channel signal includes information for the current time provided by the broadcasting station.
- Set the clock manually, if the current time is set incorrectly by the auto clock function.
- When you set up TV Guide, **Auto Clock** menu is not selected.




1. Press the **MENU** button and then use ▲ / ▼ button to select the **TIME** menu.
2. Press the ► button and then use ▲ / ▼ button to select **Auto Clock**.
3. Press the ► button and then use ▲ / ▼ button to select **On**.
4. Press the ► button and then use ▲ / ▼ button to select your viewing area time zone: **Eastern**, **Central**, **Mountain**, **Pacific**, **Alaska**, or **Hawaii**.
5. Press the ► button and then use ▲ / ▼ button to set Daylight Saving **Auto**, **Off** or **On**, depending on whether or not your viewing area observes Daylight Savings Time.
6. Press **EXIT** button to return to TV viewing or press **MENU** button to return to the previous menu.

## Manual Clock Setup

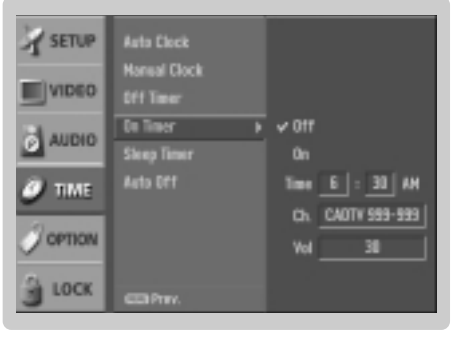
- If current time setting is wrong, reset the clock manually.
- When you set up TV Guide, **Manual Clock** menu is not set.




1. Press the **MENU** button and then use ▲ / ▼ button to select the **TIME** menu.
2. Press the ► button and then use ▲ / ▼ button to select **Manual Clock**.
3. Press the ► button and then use ◄ / ► button to select either the year, date, or time option. Once selected, use the ▲ / ▼ button to set the year, date, and time options.
4. Press **EXIT** button to return to TV viewing or press **MENU** button to return to the previous menu.

## On/Off Timer Setup

- Timer function operates only if current time has been set.
- Off-Timer function overrides On-Timer function if they are both set to the same time.
- The TV must be in standby mode for the On-Timer to work.
- If you do not press any button within 2 hours after the TV turns on with the On Timer function, the TV will automatically revert to standby mode.




1. Press the **MENU** button and then use ▲ / ▼ button to select the **TIME** menu.
2. Press the ► button and then use ▲ / ▼ button to select **Off Timer** or **On Timer**.
3. Press the ► button and then use ▲ / ▼ button to select **On**.
   • To cancel **On/Off timer** function, select **Off**.
4. Press the ► button and then use ▲ / ▼ button to set the hour.
5. Press the ► button and then use ▲ / ▼ button to set the minutes.
6. **For only On timer function**
   Press the ► button and then use ▲ / ▼ button to select the channel at turn-on.
   Press the ► button and then use ▲ / ▼ button to set the sound level at turn-on.
7. Press **EXIT** button to return to TV viewing or press **MENU** button to return to the previous menu.

# Time Menu Options

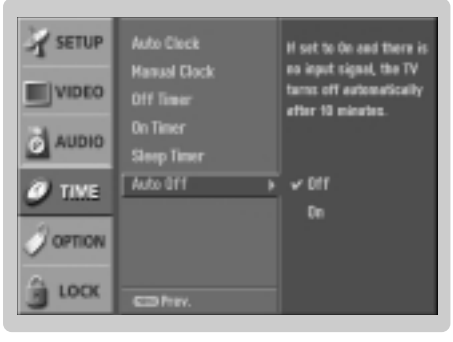
## Sleep Timer

- The Sleep Timer turns the TV off at the preset time. Note that this setting is cleared when the TV is turned off.
- You can also set up the **Sleep Timer** in the **TIME** menu.

1. Press the **TIMER** button repeatedly to select the number of minutes. First the **Off** 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 **TIMER** button once.
4. To cancel the Sleep Timer, press the **TIMER** button repeatedly to select **Off**.

## Auto Off

- If set to on and there is no input signal, the TV turns off automatically after 10 minutes.




1. Press the **MENU** button and then use ▲ / ▼ button to select the **TIME** menu.
2. Press the ► button and then use ▲ / ▼ button to select **Auto Off**.
3. Press the ► button and then use ▲ / ▼ button to select **On** or **Off**.
4. Press **EXIT** button to return to TV viewing or press **MENU** button to return to the previous menu.

# Option Menu Options

## Aspect Ratio Control

- Lets you choose the way an analog picture with a 4:3 aspect ratio is displayed on your TV with a 16:9 ratio picture format. 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.
- If you are viewing a picture with a 16:9 aspect ratio, you can't use the Horizon aspect ratio option.
- Horizon aspect ratio is not available for Component 1-2 (720p/1080i)/RGB-DTV (720p/1080i)//HDMI1/DVI-DTV (720p/1080i)/DTV(720p/1080i), HDMI2-DTV(720p/1080i) input source.
- RGB-PC/DVI-PC input source use 4:3 or 16:9 aspect ratio.

1. Press the **RATIO** button repeatedly to select the desired picture format.
   You can also adjust the **Aspect Ratio** in the **OPTION** menu.

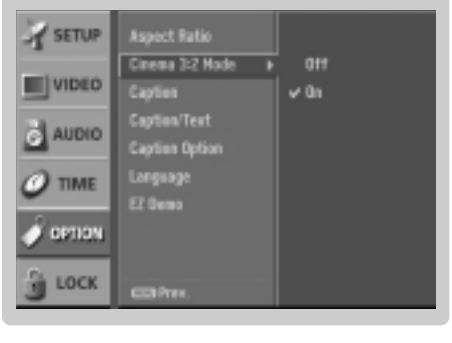
   - **Set By Program**
     Selects the proper picture proportion to match the source's image. (4:3 → 4:3, 16:9 → 16:9)
   - **4:3**
     Choose **4:3** when you want to view a picture with an original 4:3 aspect ratio, with black bars appearing at both the left and right sides.
   - **16:9**
     Choose **16:9** when you want to adjust the picture horizontally, in a linear proportion to fill the entire screen.
   - **Horizon**
     Choose **Horizon** when you want to adjust the picture in a non-linear proportion, that is, more enlarged at both sides, to create a spectacular view.
   - **Zoom 1**
     Choose **Zoom 1** when you want to view the picture without any alteration. However, the top and bottom portions of the picture will be cropped.
   - **Zoom 2**
     Choose **Zoom 2** 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.
   - **Cinema Zoom**
     Choose **Cinema Zoom** when you want to enlarge the picture in correct proportion. Note: When enlarging or reducing the picture, the image may become distorted.
     You can adjust the enlarge proportion of Cinema Zoom using ▲ / ▼ button. The adjustment range is 1~16.

## Cinema 3:2 Mode Setup

- Most movies are 24 frames/sec, but TV signal is 30 frames/sec.
  This option lets the TV do 3:2 pull-down operation for you to watch movies at the best motion appearance.

1. Press the **MENU** button and then use ▲ / ▼ button to select the **OPTION** menu.
2. Press the ► button and then use ▲ / ▼ button to select **Cinema 3:2 Mode**.
3. Press the ► button and then use ▲ / ▼ button to select **On** or **Off**.
4. Press **EXIT** button to return to TV viewing or press **MENU** button to return to the previous menu.

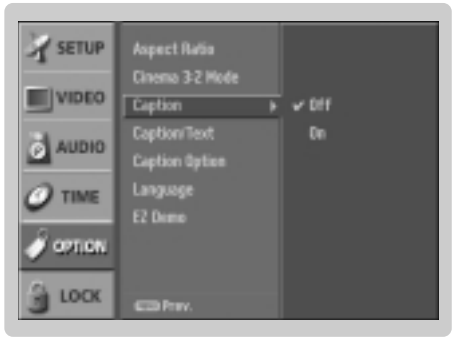
***Note:*** *This feature operates only in 480i mode.*



# Option Menu Options

## Caption

1. Press the **MENU** button and then use ▲ / ▼ button to select the **OPTION** menu.
2. Press the ► button and then use ▲ / ▼ button to select **Caption**.
3. Press the ► button and then use ▲ / ▼ button to select **On** or **Off**.
4. Press **EXIT** button to return to TV viewing or press **MENU** button to return to the previous menu.




## Caption/Text

### Analog Broadcasting System Captions

- Select a caption mode for displaying captioning information if provided on a program.
- Analog caption displays information at any position on the screen usually the program's dialog.
- Text displays information, usually at the bottom position and is used for a data service, generally not program related.
- Caption/Text, if provided by the broadcaster, would be available for both digital and analog channels on the Antenna/Cable.
- This TV is programmed to remember the caption/text mode it was last set to, when you turn the power off.

1. Use the **CC** button repeatedly to select Caption **CC1**, **CC2**, **CC3**, **CC4**, **Text1**, **Text2**, **Text3**, or **Text4**.
   • **EZ Mute** shows the selected captions option (if available on program) when the TV sound is muted
2. Press **EXIT** button to save and return to TV viewing.

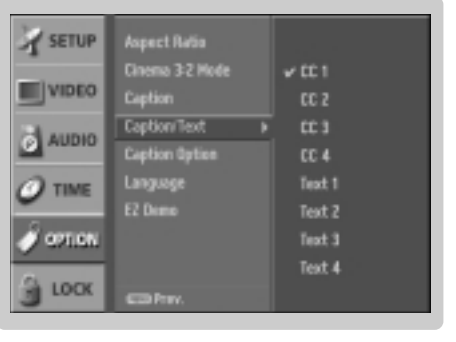
• You can also use the **OPTION** menu to select **Caption/Text**.

1. Press the **MENU** button and then use ▲ / ▼ button to select the **OPTION** menu.
2. Press the ► button and then use ▲ / ▼ button to select **Caption/Text**.
3. Press the ► button and then use ▲ / ▼ button to select caption: **CC1**, **CC2**, **CC3**, **CC4**, **Text1**, **Text2**, **Text3**, or **Text4**.

   • **CAPTION**
   The term for the words that scroll across the bottom of the TV screen; usually the audio portion of the program provided for the hearing impaired.

   • **TEXT**
   The term for the words that appear in a large black frame and almost cover the entire screen; usually messages provided by the broadcaster.

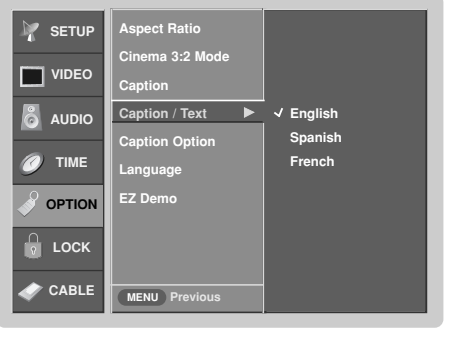
4. Press **EXIT** button to return to TV viewing or press **MENU** button to return to the previous menu.




### Digital Broadcasting System Captions

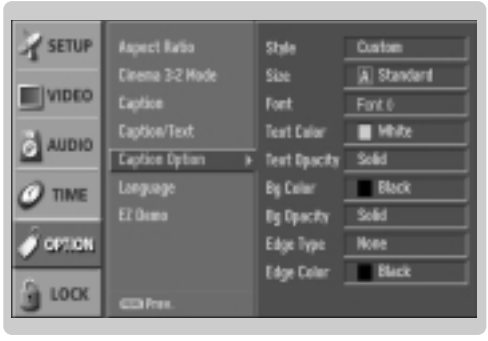
- Choose the language you want the DTV/CADTV Captions to appear in.
- Languages can be chosen for digital sources only if they are included on the program.

1. Press the **MENU** button and then use ▲ / ▼ button to select the **OPTION** menu.
2. Press the ► button and then use ▲ / ▼ button to select **Caption/Text**.
3. Press the ► button and then use ▲ / ▼ button to select available caption languages: **English**, **Spanish**, or **French**.
4. Press **EXIT** button to return to TV viewing or press **MENU** button to return to the previous menu.



## Caption Option

- Customize the DTV/CADTV captions that appear on your screen.




1. Press the **MENU** button and then use ▲ / ▼ button to select the **OPTION** menu.
2. Press the ► button and then use ▲ / ▼ button to select **Caption Option**.
3. Press the ► button and then use ◄ / ► button to select **Custom**.
4. Use ▲ / ▼ button to customize the Style, Font, etc., to your preference. A preview icon is provided at the bottom of the screen, use it to see the caption language.

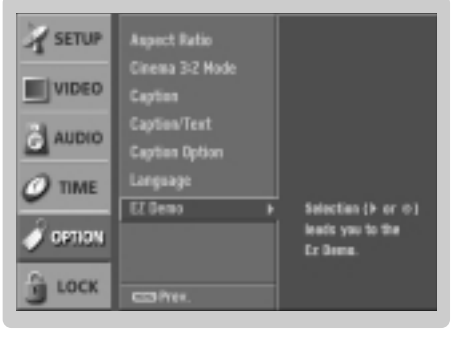
   • **Size**: Set the size the words will appear in.
   • **Font**: Select a typeface for the words.
   • **Text Color**: Choose a color for the text.
   • **Text Opacity**: Specify the opacity for the text color.
   • **Bg (Background) Color**: Select a background color.
   • **Bg (Background) Opacity**: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

5. Press **EXIT** button to return to TV viewing or press **MENU** button to return to the previous menu.

## EZ Demo

Shows you how to navigate the TV's on-screen menus.

**EZ Demo** Use to scan the features and menu options available on your TV.




1. Press the **MENU** button and then use ▲ / ▼ button to select the **OPTION** menu.
2. Press the ► button and then use ▲ / ▼ button to select **EZ Demo**, then use the ► button to start EZ Demo.
3. Press **EXIT** button to stop EZ Demo.

.

# Lock Menu Options

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

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

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

**V-Chip rating and categories**

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

**Ratings for Movies previously shown in theaters:**

**Movie Ratings :**

- Blocking Off (Permits all programs)
- G (General audience)
- PG (Parental guidance suggested)
- PG-13 (Parents strongly cautioned)
- R (Restricted)
- NC-17 (No one 17 and under admitted)
- X (Adult only)

If you set PG-13 : G and PG movies will be available , PG-13, R, NC-17 and X will be blocked.

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

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

**TV Rating Children:**

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

**TV Rating General:**

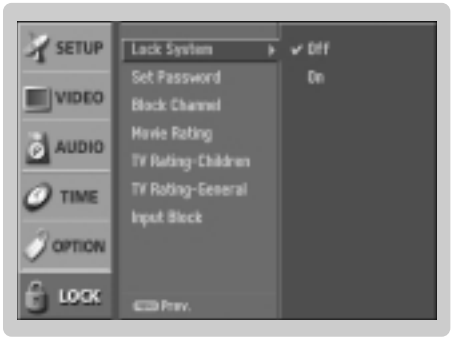
- Age (applies to TV-G, TV-PG, TV-14, TV-MA)
- Dialogue - sexual dialogue (applies to TV-PG, TV-14)
- Language - adult language (applies to TV-PG, TV-14, TV-MA)
- Sex - sexual situations (applies to TV-PG, TV-14, TV-MA)
- Violence (applies to TV-PG, TV-14, TV-MA)

**Input Block**

- Video 1, 2, Front Video (On, Off)
- Component 1, 2 (On, Off)
- RGB, HDMI1/DVI or HDMI2 (On, Off)

## Parental Lock Setup

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




1. Press the **MENU** button and then use ▲ / ▼ button to select the **LOCK** menu. Then, press the ► button
   - Enter the password as requested.
   - The TV is set up with the initial password “0-0-0-0”.
2. Use the ▲ / ▼ button to choose from the following Lock Menu options. Once the option is selected, change the settings to your preference.
   - **Lock System:** Activates or disables the blocking scheme you set up previously.
   - **Set Password**: Change the password by inputting a new password twice.
   - **Block Channel:** Blocks any channels that you do not want to watch or that you do not want your children to watch.
   - **Movie Rating (MPAA):** Blocks movies according to the movie ratings limits specified, so children cannot view certain movies. You can set the ratings limit by blocking out all the movies with the ratings above a specified level. Keep in mind that the movie ratings limit only applies to movies shown on TV, not TV programs, such as soap operas.
   - **TV Rating-Children:** Prevents children from watching certain children's TV programs, according to the ratings limit set. The children rating does not apply to other TV programs. Unless you block certain TV programs intended for mature audiences in the TV Rating - sub menu, your children can view those programs.
   - **TV Rating-General:** Based on the ratings, blocks certain TV programs that you and your family do not want to view.
   - **Input Block:** Enables you to select a source to block from the external source devices you have hooked up.
3. Press **EXIT** button to return to TV viewing or press **MENU** button to return to the previous menu.

***Note*** *: If you ever forget your password, key in ‘7’, ‘7’, ‘7’, ‘7’ on the remote control.*

# CableCARD™ Function

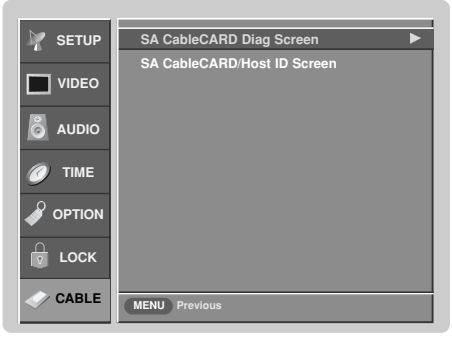
*** In this manual, the OSD (On Screen Dispaly) may be different from your TV's because it is just example to help the TV operation.**

## Cable menu options

- The Cable sub menu displays when inserting the CableCARD™ to the TV.
- The CableCARD™ type is Motorola, Scientific Atlanta (SA), or SCM etc. The OSD (On screen display) is different from your TV according to your CableCARD™ type.

1. Press the **MENU** button and then use ▲ / ▼ button to select the **CABLE** menu.
2. Press the ► button and then use ▲ / ▼ button to select your desired item.
3. Press the ► button.
4. Press **EXIT** button to return to TV viewing.

In case of Scientific Atlanta CableCARD™

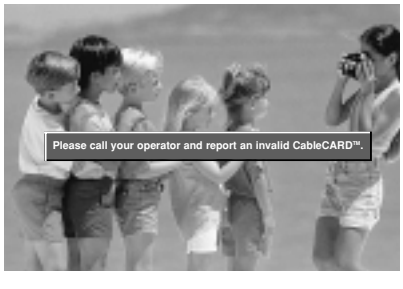



i.e) CableCARD™/ Host ID Screen

As shown, the pairing number means your TV and CableCARD™ ID. For further information regarding cable TV service, contact your local cable TV service provider(s).

## Scrambled channel

- Insert the CableCARD™. If you do it at first, it takes about 1 minute to exchange the data between the TV and the CableCARD™. Then, TV screen displays as shown right.
- Let your cable TV service provider know the CableCARD™ ID and Host ID.
- If your cable TV service provider has registered the CableCARD™ ID and Host ID, you can watch the premium or high value channel.
- If you ever registered to the cable TV service provider, you can watch the premium or high value channel without a message.

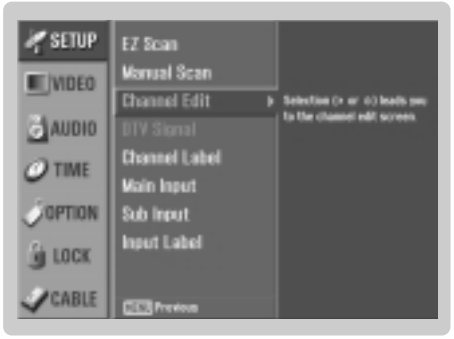



- If the certificate doesn't match between the TV and the cableCARD™, the OSD (On screen display) displays as shown left.

## Cable Channel List

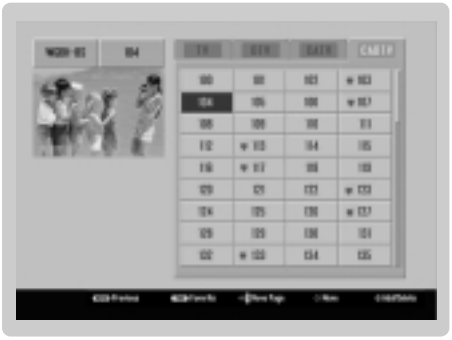
1.

2.




3.

4.



1. If you enter the **Channel Edit** after running the EZ Scan without CableCARD™, you can see the cable channel list as the picture 3 above.
2. Insert the CableCARD™. Then, the TV will receive a new cable channel list which is usually one part channel. It takes about 2~3 minutes to gather the cable channel list after inserting the CableCARD™ as the picture 4 above. (Occasionally more than that time)

***Note:***

*• As data gathering is done by the CableCARD™, you may hear a fan run in standby mode.*

## Emergency Alert Message

- If an emergency situation occurs while watching the TV/DTV/CATV/CADTV, you can see a message from cable TV service provider(s).
- When receiving an emergency message, the message is displayed on the screen as shown below or the channel is changed automatically to a channel that maintains the emergency message. The message will automatically disappear.

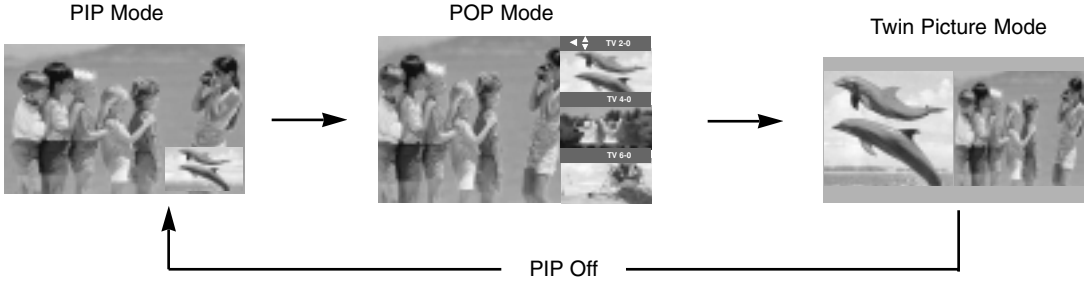
# Remote Control

## PIP (Picture-In-Picture) / Twin Picture

- PIP lets you view 2 different inputs (sources) on your TV screen at the same time. One source will be large, and the other source will show a smaller inset image.
- Twin Picture mode splits the screen into 2, allowing 2 picture sources to be shown on the TV screen at the same time. Each source is given half the screen.
- If you set the block/rating for Lock menu options in PIP/Twin Picture mode, "**Rating Blocked**" doesn't display on screen.

### Watching PIP/Twin Picture

Press the PIP button to access the sub picture. Each press of PIP changes the PIP options as shown below.



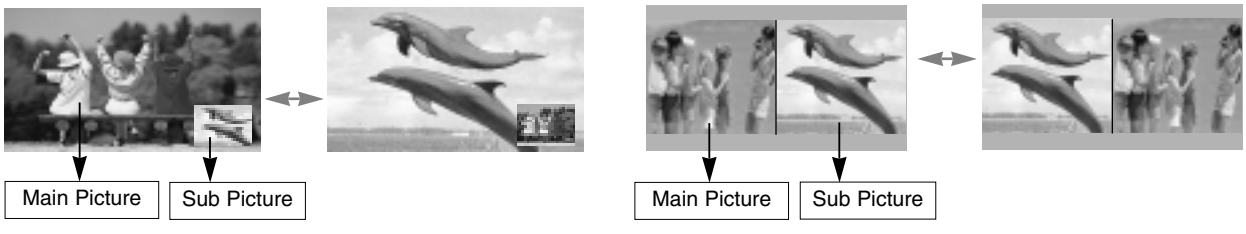

### Selecting an Input Signal Source for PIP/Twin Picture

Use the **PIP INPUT** button to select the input source for the sub picture. Each press of **PIP INPUT** button changes the PIP source. You can also select sources for the **Sub Input** in the **SETUP** menu.

| Main Picture Source | Available Sub Picture Sources |
|---|---|
| DTV | Analog, Video, and Front Video |
| Analog | DTV, Analog, Video, and Front Video |

### Swapping the PIP/Twin Picture

Repeatedly, use the **SWAP** button to switch the main and sub pictures.
• Component 1, Component 2, RGB-PC (or RGB-DTV), HDMI/DVI input sources for the main picture can't be used to swap the main and sub pictures.




### TV Program selection for PIP

1. Press the **PIP** button.
2. Select the Antenna or Cable option on the Sub input menu or with the **PIP INPUT** button. Use the **PIPCH+** / **PIPCH-** button to select a channel for the sub picture.
   (You can't select DTV for main and sub picture simultaneously).

## Moving the PIP sub picture

In PIP mode, press the ▲ / ▼ / ◄ / ► button to move the sub picture to a different location on the screen.

## Adjusting Main and Sub Picture Sizes for Twin Picture

Use the ▲ / ▼ / ◄ / ► button to change main and sub picture sizes in Twin Picture mode.

i.e)

If screen is adjusted to the maximal size, the large screen appears the black part at both the up and down sides.

# Brief Info.

Operation:
- Watching TV/DTV/CATV/CADTV
- Watching Video1, Video2, Video3
- Watching IEEE 1394
- In Component1, Component2, RGB, HDMI/DVI modes, **INFO** button is not working.

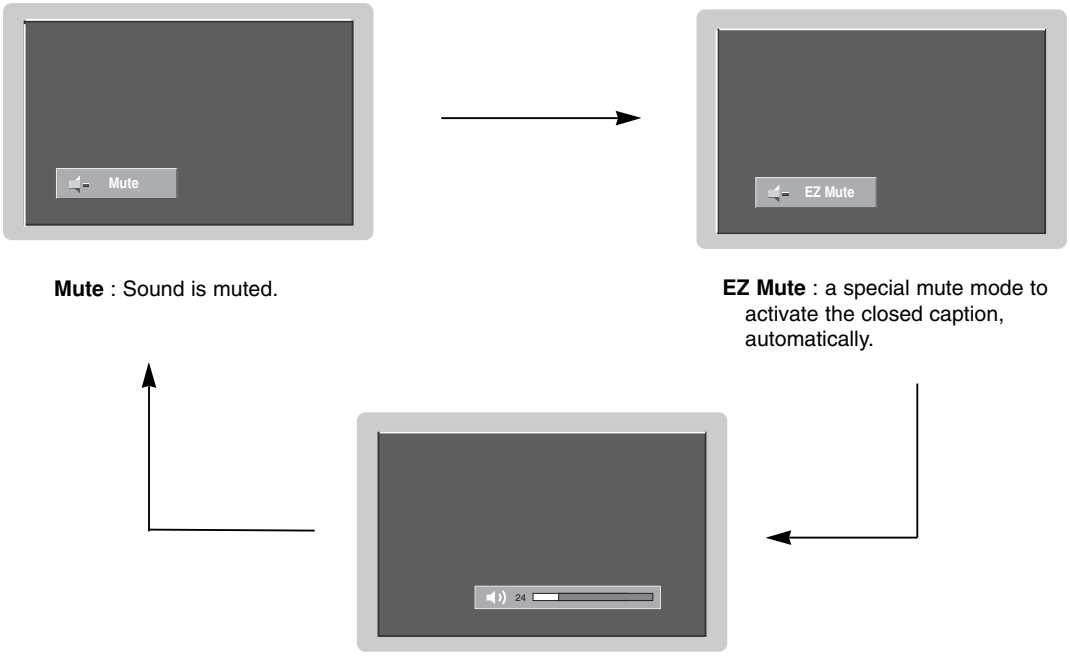
Function:
- Show the present screen information.
- On Watching with the upper Input signal, press the **INFO** button.
- Press the **INFO** button or **EXIT** button to exit.

A: Banner information
B: Program title
C: Day, Month, Year
D: Program start time
E: Program finish time
F: Show the prosessing rate
G: Present time
H: Added information. Refer to the icon explanation.

| | |
|---|---|
| 4:3 | Screen Ratio of Input Signal 4:3 |
| 16:9 | Screen Ratio of Input Signal 16:9 |
| 480i | Resolution of Input Signal 720x480i |
| 480p | Resolution of Input Signal 720x480p |
| 720p | Resolution of Input Signal 1280x720p |
| 1080i | Resolution of Input Signal 1920x1080i |
| | Multilingual : Input Signal have over two Audio information. Press the **SAP** button to select wanted Audio. |
| CC | Caption: Input Signal have over one Close service. Press the **CC** button to select wanted Closed caption. |
| | Input Signal has rating information . Refer to the <Lock Menu>. D (Dialogue), L (Language), S (Sex), V (Violence), FV (Fantasy Violence) |

# EZ Mute

- If you set the Caption on, nothing to do with the **MUTE** button, Caption function operates as Caption on or off.
- When you repeatedly press the **MUTE** button, the screen is displayed in turn. (Refer to the lower picture)




**Mute** : Sound is muted.

**EZ Mute** : a special mute mode to activate the closed caption, automatically.

**Mute Off** : Sound is enabled.

***Note:*** *EZ Mute only operates in DTV/Analog/Video/Front Video.*

## Freeze & Magnify

- Enlarges the picture with correct proportions.
- When enlarging the picture, the image may become distorted.

1. Press the **FREEZE** button in DTV 720p, or 1080i modes.
2. Use the ▲ / ▼ / ◄ / ► buttons to select the screen split zoom section.
3. To return to normal viewing, press the **FREEZE** button again.

# Screen Setup for PC mode

## Operation

• When RGB connect to PC input and select the RGB-PC in Main Input, this function is used.
• When HDMI/DVI connect to PC input and select HDMI/DVI input, this function is used.
• In RGB-DTV mode, SIZE and PHASE is not available.

## Adjustment for screen Position, Size, Phase, Reset

•After connecting RGB-PC or HDMI/DVI to PC input and checking the screen quality.

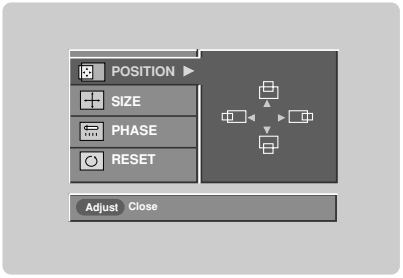
- Display PC Adjust Menu using **ADJUST** button.

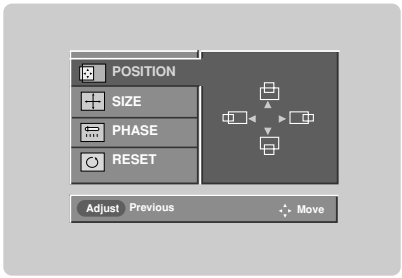
- Position : Adjust the screen position. After displaying the Adjust, select the screen position.

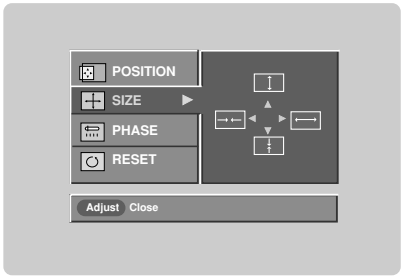
- Size : Adjust the screen size.

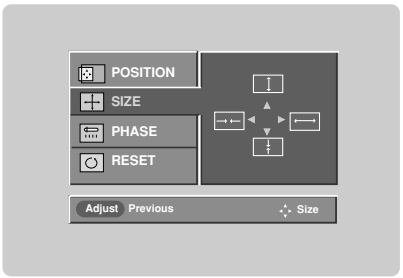
- Phase : Adjust the phase of Pixel clock.
  (Only available in RGB-PC mode)

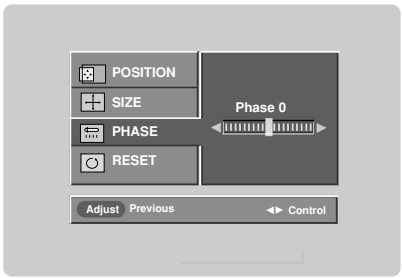
- Reset : Initializating Size, Position, Phase adjustment .

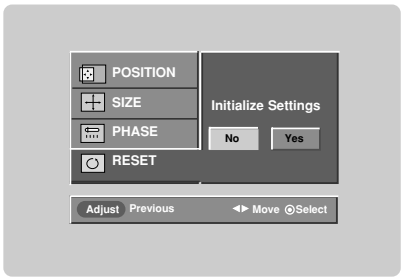


# Programming the Remote

► The remote is a multi-brand or a universal remote . It can be programmed to operate most remote-controllable devices of other manufacturers.
Note that the remote may not control all models of other brands.

## Programming a code into a remote mode

1. To find out whether your remote can operate the device without programming, turn on the device such as a VCR and press the corresponding device button on the remote.
   After that, press the **POWER** button. If the device is turned off then it responds properly and the remote need not to be programmed. If not, the remote should be programmed to operate the device. The programming procedures are explained below.

2. Press the **MENU** and **MUTE** button continuously at the same time for 2 seconds, the current selected device button will be illuminated.
   If you don't press any button for 20 seconds, the light on the device button will be turned off. In that case, you have to repeat from step 2.

3. Enter code numbers using the number button on the remote by refering the code table on the following pages. When pressing the button, the light blinks at a time. If the device turned off, the programming is successful.

4. Press the **MENU** button to store the code. After blinking twice, this code is stored.

5. Test the remote functions to see if the device responds properly. If not, repeat from step 2.

# Programming Codes

## VCRs

| Brand | Codes |
|---|---|
| AIWA | 034 |
| AKAI | 016 043 046 124 |
| | 125 146 |
| AMPRO | 072 |
| ANAM | 031 033 103 |
| AUDIO DYNAMICS | 012 023 039 043 |
| BROKSONIC | 035 037 129 |
| CANON | 028 031 033 |
| CAPEHART | 108 |
| CRAIG | 003 040 135 |
| CURTIS MATHES | 031 033 041 |
| DAEWOO | 005 007 010 064 |
| | 065 108 110 111 |
| | 112 116 117 119 |
| DAYTRON | 108 |
| DBX | 012 023 039 043 |
| DYNATECH | 034 053 |
| ELECTROHOME | 059 |
| EMERSON | 006 017 025 027 |
| | 029 031 034 035 |
| | 036 037 046 101 |
| | 129 131 138 153 |
| FISHER | 003 008 009 010 |
| FUNAI | 034 |
| GE | 031 033 063 072 |
| | 107 109 144 147 |
| GO VIDEO | 132 136 |
| HARMAN KARDON | 012 045 |
| HITACHI | 004 018 026 034 |
| | 043 063 137 150 |
| INSTANTREPLAY | 031 033 |
| JCL | 031 033 |
| JCPENNY | 012 013 015 033 |
| | 040 066 101 |
| JENSEN | 043 |
| JVC | 012 031 033 043 |
| | 048 050 055 060 |
| | 130 150 152 |

| Brand | Codes |
|---|---|
| KENWOOD | 014 034 039 043 |
| | 047 048 |
| LG (GOLDSTAR) | 001 012 013 020 |
| | 101 106 114 123 |
| LLOYD | 034 |
| LXI | 003 009 013 014 |
| | 017 034 101 106 |
| MAGIN | 040 |
| MAGNAVOX | 031 033 034 041 |
| | 067 068 |
| MARANTZ | 012 031 033 067 |
| | 069 |
| MARTA | 101 |
| MATSUI | 027 030 |
| MEI | 031 033 |
| MEMOREX | 003 010 014 031 |
| | 033 034 053 072 |
| | 101 102 134 139 |
| MGA | 045 046 059 |
| MINOLTA | 013 020 |
| MITSUBISHI | 013 020 045 046 |
| | 049 051 059 061 |
| | 151 |
| MTC | 034 040 |
| MULTITECH | 024 034 |
| NEC | 012 023 039 043 |
| | 048 |
| NORDMENDE | 043 |
| OPTONICA | 053 054 |
| PANASONIC | 066 070 074 083 |
| | 133 140 145 |
| PENTAX | 013 020 031 033 |
| | 063 |
| PHILCO | 031 034 067 |
| PHILIPS | 031 033 034 054 |
| | 067 071 101 |
| PILOT | 101 |
| PIONEER | 013 021 048 |

| Brand | Codes |
|---|---|
| PORTLAND | 108 |
| PULSAR | 072 |
| QUARTZ | 011 014 |
| QUASAR | 033 066 075 145 |
| RCA | 013 020 033 034 |
| | 040 041 062 063 |
| | 107 109 140 144 |
| | 145 147 |
| REALISTIC | 003 008 010 014 |
| | 031 033 034 040 |
| | 053 054 101 |
| RICO | 058 |
| RUNCO | 148 |
| SALORA | 014 |
| SAMSUNG | 032 040 102 104 |
| | 105 107 109 112 |
| | 113 115 120 122 |
| | 125 |
| SANSUI | 022 043 048 135 |
| SANYO | 003 007 010 014 |
| | 102 134 |
| SCOTT | 017 037 112 129 |
| | 131 |
| SEARS | 003 008 009 010 |
| | 013 014 017 020 |
| | 031 042 073 081 |
| | 101 |
| SHARP | 031 054 149 |
| SHINTOM | 024 |
| SONY | 003 009 031 052 |
| | 056 057 058 076 |
| | 077 078 149 |
| SOUNDESIGN | 034 |
| STS | 013 |
| SYLVANIA | 031 033 034 059 |
| | 067 |
| SYMPHONIC | 034 |
| TANDY | 010 034 |

| Brand | Codes |
|---|---|
| TATUNG | 039 043 |
| TEAC | 034 039 043 |
| TECHNICS | 031 033 070 |
| TEKNIKA | 019 031 033 034 |
| | 101 |
| THOMAS | 034 |
| TMK | 006 |
| TOSHIBA | 008 013 042 047 |
| | 059 082 112 131 |
| TOTEVISION | 040 101 |
| UNITECH | 040 |
| VECTOR RESEARCH | 012 |
| VICTOR | 048 |
| VIDEO CONCEPTS | 012 034 046 |
| VIDEOSONIC | 040 |
| WARDS | 003 013 017 024 |
| | 031 033 034 040 |
| | 053 054 131 |
| YAMAHA | 012 034 039 043 |
| ZENITH | 034 048 056 |
| | 058 072 080 101 |

## CATV

| Brand | Codes |
|---|---|
| ABC | 003 004 039 042 |
| | 046 052 053 |
| AJIN | 112 |
| ANTRONIK | 014 |
| ARCHER | 005 007 014 024 |
| CABLE STAR | 026 |
| CENTURION | 092 |
| CENTURY | 007 |
| CITIZEN | 007 |
| COLOUR VOICE | 065 090 |
| COMBANO | 080 081 |
| COMTRONICS | 019 030 |
| DIAMOND | 023 |
| EAGLE | 020 030 040 |
| EASTERN | 057 062 066 |
| ELECTRICORD | 032 |
| GE | 072 |
| GEMINI | 008 022 025 054 |
| GI | 052 074 |

| Brand | Codes |
|---|---|
| GOLDEN CHANNEL | 030 |
| HAMLIN | 049 050 055 |
| HITACHI | 052 055 |
| HOSPITALITY | 070 077 |
| JERROLD | 002 003 004 008 |
| | 009 010 052 069 |
| | 074 |
| LG (GOLDSTAR) | 001 106 101 005 |
| M-NET | 037 |
| MACOM | 033 |
| MAGNAVOX | 010 012 064 079 |
| MEMOREX | 100 |
| MOVIE TIME | 028 032 |
| NSC | 015 028 038 071 |
| | 073 |
| OAK | 016 031 037 053 |
| PANASONIC | 044 047 |
| PARAGON | 100 |
| PHILIPS | 006 012 013 020 |

| Brand | Codes |
|---|---|
| | 065 085 090 |
| PIONEER | 034 051 052 063 |
| | 076 |
| POST NEWS WEEK | 016 |
| PRUCER | 059 |
| PTS | 011 048 071 072 |
| | 073 074 |
| PULSAR | 100 |
| RCA | 047 |
| REGAL | 049 050 |
| REGENCY | 057 |
| REMBRANT | 025 |
| SAMSUNG | 102 107 030 068 |
| SCIENTIFIC ATLANTA | 003 011 041 042 |
| | 043 045 046 |
| SHERITECH | 022 |
| SIGNAL | 030 |
| SIGNATURE | 052 |
| SL MARX | 030 |

| Brand | Codes |
|---|---|
| SPRUCER | 047 078 |
| STARCOM | 002 004 008 009 |
| STARGATE | 008 030 |
| TADIRAN | 030 |
| TAEKWANG | 110 |
| TAIHAN | 105 |
| TANDY | 017 |
| TEXSCAN | 029 |
| TOCOM | 039 040 056 |
| TOSHIBA | 100 |
| UNIKA | 007 014 024 |
| UNITED CABLE | 004 053 |
| UNIVERSAL | 005 007 014 024 |
| | 026 027 032 035 |
| VIEWSTAR | 012 015 018 086 |
| | 087 088 089 |
| ZENITH | 100 114 060 093 |

## HDSTB

| Brand | Codes |
|---|---|
| ALPHASTAR DSR | 123 |
| AMPLICA | 050 |
| BIRDVIEW | 051 126 129 |
| CHANNEL MASTER | 013 014 015 018 036 055 |
| CHAPARRAL | 008 009 012 077 |
| CITOH | 054 |
| CURTIS MATHES | 050 145 |
| DRAKE | 005 006 007 010 011 052 112 116 141 |
| DX ANTENNA | 024 046 056 076 |
| ECHOSTAR | 038 040 057 058 093 094 095 096 097 098 099 100 122 |
| ELECTRO HOME | 089 |
| EUROPLUS | 114 |
| FUJITSU | 017 021 022 027 |
| | 133 134 |
| GENERAL INSTRUMENT | 003 004 016 029 031 059 101 |
| HITACHI | 139 140 |
| HOUSTON TRACKER | 033 037 039 051 057 104 |
| HUGHES | 068 |
| JANIEL | 060 147 |
| JERROLD | 061 |
| KATHREIN | 108 |
| LEGEND | 057 |
| LG | 001 |
| LUTRON | 132 |
| LUXOR | 062 144 |
| MACOM | 010 059 063 064 065 |
| MEMOREX | 057 |
| NEXTWAVE | 028 124 125 |
| NORSAT | 069 070 |
| PACE SKY SATELLITE | 143 |
| PANASONIC | 060 142 |
| PANSAT | 121 |
| PERSONAL CABLE | 117 |
| PHILIPS | 071 |
| PICO | 105 |
| PRESIDENT | 019 102 |
| PRIMESTAR | 030 110 111 |
| PROSAT | 072 |
| RCA | 066 106 |
| REALISTIC | 043 074 |
| SAMSUNG | 123 |
| SATELLITE SERVICE CO | 028 035 047 057 085 |
| SCIENTIFIC ATLANTA | 032 138 |
| SONY | 103 |
| STARCAST | 041 |
| SUPER GUIDE | 020 124 125 |
| TEECOM | 023 026 075 087 |
| | 088 090 107 130 137 |
| TOSHIBA | 002 127 |
| UNIDEN | 016 025 042 043 044 045 048 049 078 079 080 086 101 135 136 |
| VIEWSTAR | 115 |
| WINEGARD | 128 146 |
| ZENITH | 081 082 083 084 091 120 |

## Audio

| Brand | Codes |
|---|---|
| AIWA | 014 028 070 096 125 129 139 229 230 |
| AKAI | 163 |
| ANAM | 003 014 017 023 059 106 189 216 217 235 236 |
| BURMECTER | 252 |
| CARVER | 086 |
| CLARION | 199 |
| DAEWOO | 027 053 060 084 102 148 198 221 |
| DENON | 015 075 130 143 |
| FANTASIA | 071 |
| FINEARTS | 022 |
| FISHER | 089 099 |
| LG(GOLDSTAR) | 001 021 024 029 087 107 108 110 190 191 192 210 211 212 239 |
| HAITAI | 034 035 188 222 |
| HARMAN/KARDON | 068 |
| INKEL | 037 058 062 069 078 079 095 121 122 149 150 151 152 153 154 155 157 158 159 160 189 207 222 224 225 226 227 243 247 |
| JVC | 004 013 141 |
| KEC | 185 186 187 |
| KENWOOD | 038 050 067 089 170 171 197 206 215 222 |
| KOHEL | 030 |
| NAD | 045 046 |
| LOTTE | 014 016 036 098 100 172 173 174 175 176 177 178 179 180 181 183 201 202 208 213 214 219 223 232 238 240 |
| LXI | 103 |
| MAGNAVOX | 111 |
| MARANTZ | 002 018 020 025 034 041 081 090 097 112 |
| MCINTOSH | 049 |
| MCS | 104 |
| MEMOREX | 107 |
| NAD | 046 |
| ONKYO | 013 040 041 047 048 056 057 132 133 140 |
| OPTIMUS | 158 |
| PANASONIC | 007 033 064 113 142 220 241 251 |
| PENNEY | 104 |
| PHILIPS | 026 112 143 |
| PIONEER | 039 042 043 063 065 091 093 094 115 123 127 250 |
| QUASAR | 113 |
| RCA | 080 |
| RCX | 092 |
| REALISTIC | 103 106 |
| SAMSUNG | 124 145 146 182 193 194 195 203 204 244 245 246 |
| SANSUI | 011 135 138 144 |
| SANYO | 019 083 234 |
| SCOTT | 106 186 |
| SHARP | 031 032 051 052 072 082 117 119 156 184 199 200 206 209 |
| SHERWOOD | 005 006 158 |
| SONY | 044 045 109 114 118 126 248 249 |
| TAEKWANG | 012 020 073 074 076 077 105 161 162 163 164 165 166 167 168 169 205 231 233 242 |
| TEAC | 010 085 106 136 185 187 237 |
| TECHNICS | 101 113 128 134 |
| | 147 218 |
| TOSHIBA | 137 |
| THE | 061 |
| VICTOR | 088 131 |
| WARDS | 089 |
| YAMAHA | 054 055 066 092 199 |

## DVD

| Brand | Codes |
|---|---|
| APEX DIGITAL | 022 |
| DENON | 020 014 |
| GE | 005 006 |
| HARMAN KARDON | 027 |
| JVC | 012 |
| LG | 001 010 016 025 |
| MAGNAVOX | 013 |
| MARANTZ | 024 |
| MITSUBISHI | 002 |
| NAD | 023 |
| ONKYO | 008 017 |
| PANASONIC | 003 009 |
| PHILIPS | 013 |
| PIONEER | 004 026 |
| PROCEED | 021 |
| PROSCAN | 005 006 |
| RCA | 005 006 |
| SAMSUNG | 011 015 |
| SONY | 007 |
| THOMPSON | 005 006 |
| TOSHIBA | 019 008 |
| YAMAHA | 009 018 |
| ZENITH | 010 016 025 |

# Troubleshooting Checklist

| | |
|---|---|
| **No picture & No sound** | • Check whether the TV is turned on.<br>• Is the power cord inserted into wall power outlet?<br>• Test the wall power outlet, plug another product's power cord into the outlet where the TV's power cord was plugged in. |
| **Picture OK & No sound** | • Press the **VOLUME** (►) button.<br>• Sound muted? Press **MUTE** button. |
| **The remote control doesn't work** | • Check to see if there is any object between the TV and the remote control causing obstruction.<br>• Are batteries installed with correct polarity (+ to +, - to -)? (Refer to p.11)<br>• Correct remote operating mode set: TV, VCR etc.?<br>• Install new batteries. (Refer to p.11) |
| **Picture appears slowly after switching on** | • This is normal, the image is muted during the TV startup process. Please contact your service center, if the picture has not appeared after five minutes. |
| **No or poor color or poor picture** | • Select **Color** in the **Picture** menu and press the ► button. (Refer to p.62)<br>• Keep a sufficient distance between the TV and the VCR.<br>• Activate any function to restore the brightness of the picture. (If still picture is on the screen for more than 5 minutes, the screen gets dark.) |
| **Horizontal/vertical bars or picture shaking** | • Check for local interference such as an electrical appliance or power tool. |

| | |
|---|---|
| **No output from one of the speakers** | • Adjust **Balance** in the **AUDIO** menu. (Refer to p.63) |
| **Unusual sound from inside the TV** | • A change in ambient humidity or temperature may result in the unit turning off and does not indicate a fault with the TV. |
| **Poor TV input signal** | • Check ANTENNA and CABLE connection. |
| **Poor Video signal** | • Check ANTENNA and CABLE connection. |
| **No channel or a few channel** | • Start EZ Scan. |
| **Unsuitable Aspect Ratio** | • You can adjust the **RATIO** button or **Aspect Ratio** in the **OPTION** menu. |
| **My Guide listings disappeared after a power failure** | • You should begin to receive listings again within 24 hours. |

# Troubleshooting Checklist

| | |
|---|---|
| **Some channel numbers in the Guide are incorrect.** | • You can correct them using Change Channel Display under Setup. |
| **I have not received any Guide listings.** | • Listings usually appear within 24 hours after a successful Setup.<br>• It may take up to a week to fill the Listings grid with the full 8 days of listings.<br>• If you see a Listings grid with the message "No Listings" displayed you should start to receive updated program listings within 24 hours. To receive listings:<br>◆ Make sure the cable box is left On, if applicable.<br>◆ Turn off your recorder when not in use.<br>• If the message "No data for this screen" is displayed:<br>◆ Check the connections between the TV, cable, antenna, and the IR cable if using a cable box.<br>◆ Verify Setup information under Change System Settings.<br>◆ Make sure the cable box is On, if applicable.<br>◆ If this message is still displayed after multiple days, please contact the LG® Brand Customer Support. |
| **A show I set to Record did not occur.** | • Make sure your recorder is turned Off before the recording begins.<br>• Make sure there is a tape.<br>• Check the Schedule menu and verify that the show is listed before recording begins.<br>• Check the placement of the IR cable in front of your recorder. |
| **I set a show to Auto-Tune and it did not.** | • Check the Schedule menu and verify that the show is listed as a Reminder.<br>• Highlight the show under Listings and do the following:<br>◆ Press the Menu key on the remote.<br>◆ Use the down arrow to highlight Edit Reminder, and press **ENTER**.<br>◆ Verify the Auto-Tune option reads Yes.<br>• The TV must be On at the scheduled time for Auto-Tune.<br>• If you have a cable box, check the IR cable. |
| **I set a show with the Power On TV option and it did not.** | • Check the Schedule menu and verify that the show is listed as a Reminder.<br>• Highlight the show under Listings and do the following:<br>◆ Press the Menu key on the remote.<br>◆ Use the down arrow to highlight Edit Reminder, and press **ENTER**.<br>◆ Verify the Power On TV option reads Yes. |

# 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

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

| MODEL | Z44SZ80 | Z52SZ80 |
|---|---|---|
| Horizontal Size (inches) | 39.2 | 47.5 |
| Height (inches) | 29.2 | 33.8 |
| Depth (inches) | 14.4 | 15.7 |
| Weight (lbs.) | 50.7 | 66.1 |
| Power requirement | AC120V ~ 60Hz | |
| Television System | NTSC-M, ATSC, 64 & 256 QAM | |
| Program Coverage | VHF 2 ~ 13, UHF 14 ~ 69, CATV 1 ~ 135, CADTV 1 ~ 135. DTV 2 ~ 69 | |
| Power Consumption (W) | 210W | |
| Antenna | 75 ohm External Terminal for VHF/UHF | |
| Audio Output (W) | 20Wx2 | |
| Supplied Accessories | Remote control, 2 size AA batteries, D-sub 15 pin Cable | |

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