

LCD TV

OWNER'S MANUAL

MODELS: 26LX2R | 32LX2R



Please read this manual carefully before operating your set. Retain it for future reference. Record model number and serial number of the set. See the label attached on the back cover and quote this information to your dealer when you require service.

P/NO : 38289U0498D (0512-REV01) Printed in Korea

Accessories

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







Twister Holder Arrange the wires with the twister holder.



Polishing Cloth Polish the screen with the cloth.



Remote Control / AA Batteries



Power Cord



DVI-D Cable



D sub to DVI Cable



PC Sound Cable



2-TV Bracket Bolts



2-TV Brackets, 2-Wall Bracket



- If the TV feels cold to the touch, there may be a small "flicker" when turned on. This is normal, there is nothing wrong with TV.
- Some dot defects may appear on the screen, like red, green or blue spots. However, this will have no adverse effect on the monitor's performance.
- Avoid touching the LCD screen or holding your fingera(s) against it for long periods of time. Doing so may produce some temporary distortion effects on the screen.

Safety Instructions

WARNING : TO REDUCE THE RISK OF FIRE OR ELECTRIC SHOCK, DO NOT EXPOSE THIS PRODUCT TO

RAIN OR MOISTURE.

CAUTION: TO REDUCE THE RISK OF ELECTRIC SHOCK, DO NOT REMOVE COVER(OR BACK). NO USER-

SERVICEABLE PARTS IN SIDE. REFER SERVICING TO QUALIFIED SERVICE PERSONNEL.

Cleaning

Unplug this television receiver from the wall outlet before cleaning. Do not use liquid cleaners or aerosol cleaners. Use a damp cloth for cleaning.

Do not use attachments not recommended by the television receiver manufacturer as they may cause hazards.

Power Supply

This television receiver should be operated only from the type of power source indicated on the marking label. If you are not sure of the type of power supplied to your home, consult your television dealer or local power company.

Installation

Do not use this television receiver near water, for example, near a bathtub, washbowl, kitchen sink, or laundry tub, in a wet basement, or near a swimming pool, etc. Do not place this television receiver on an unstable cart, stand, or table. The television receiver may fall, causing serious injury to a child or an adult, and serious damage to the appliance.

Use only with a cart or stand recommended by the manufacturer, or sold with the television receiver. Wall or shelf mounting should follow the manufacturer's instructions and should use a mounting kit approved by the manufacturer

Slots and openings in the cabinet and the back or bottom are provided for ventilation, and to insure reliable operation of the television receiver, and to protect it from overheating. These openings must not be blocked or covered. The openings should never be blocked by placing the

television receiver on a bed, sofa, rug, or other similar surface. This television receiver should not be placed in a builtin installation such as a bookcase unless proper ventilation is provided.

It is recommended not to operate this unit near speakers or big metallic furnitures in order to keep their magnetism from disturbing colors purity (uniformity) on the screen.

Use

Do not allow anything to rest on the power cord. Do not locate this television receiver where the cord will be abused by persons walking on it.

Do not overload wall outlets and extension cords as this can result in fire or electric shock.

Never push objects of any kind into this television receiver through cabinet slots as they may touch dangerous voltage points or short out parts that could result in a fire or electric shock.

Never spill liquid of any kind on the television receiver.

Service

Do not attempt to service this television yourself as opening or removing covers may expose you to dangerous voltage or other hazards. Refer all servicing to qualified personnel.

Writing Model And Serial Numbers

The serial number and model number are found on the back of this unit. The serial number is unique to this unit. You should record requested information here and retain this guide as a permanent record of your purchase. Please retain your purchase receipt as your proof of purchase.

Date of Purchase	
Dealer Purchased from	
Dealer Address	
Dealer Phone No.	
Model No.	
Serial No.	

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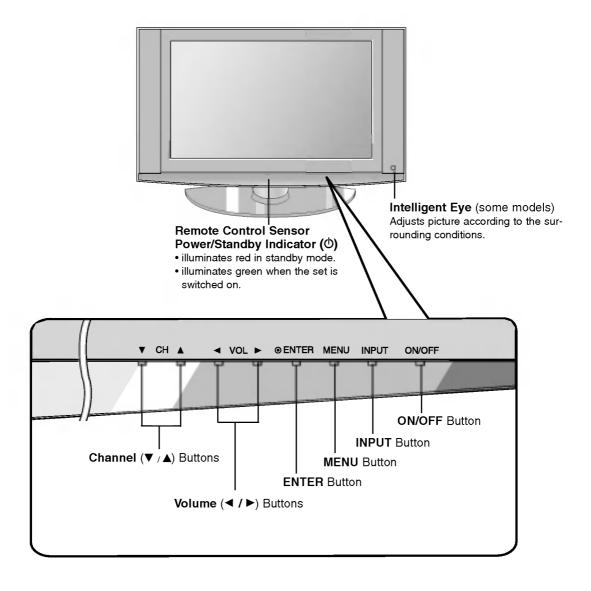
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Auto Off Sleep Timer

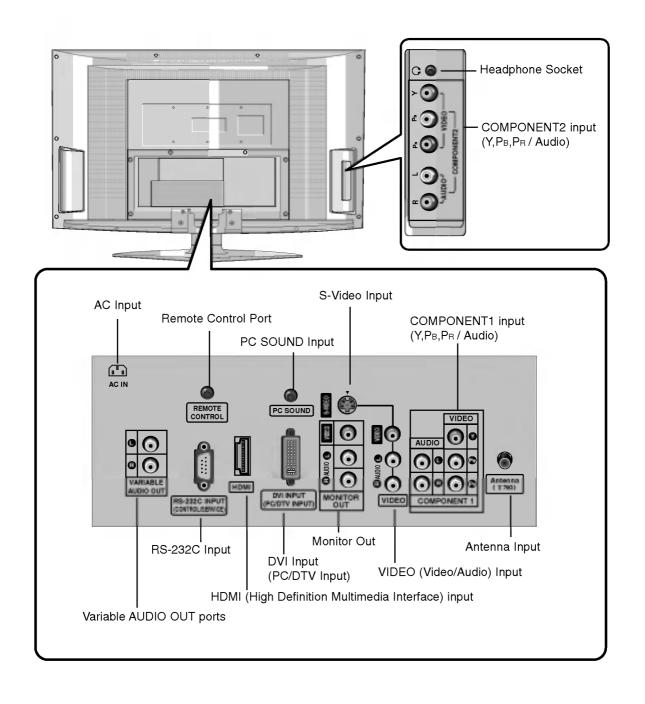
39

Introduction Controls

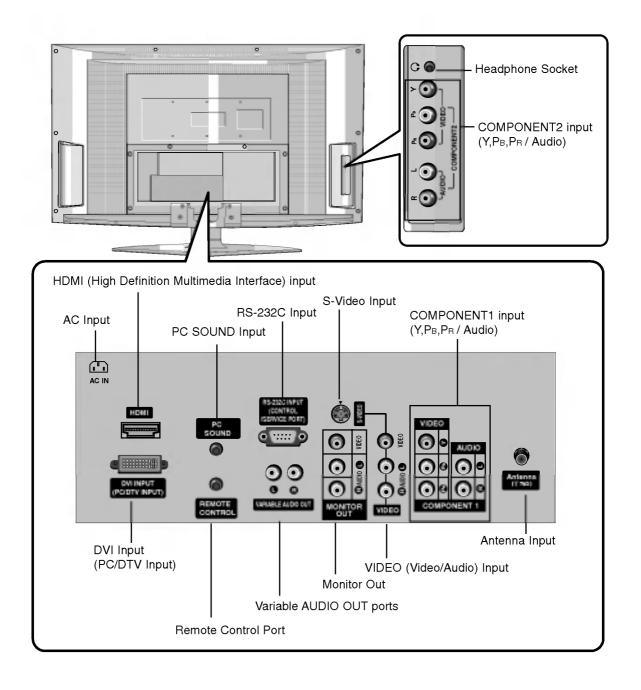
- This is a simplified representation of front panel.
- Here shown may be somewhat different from your TV.



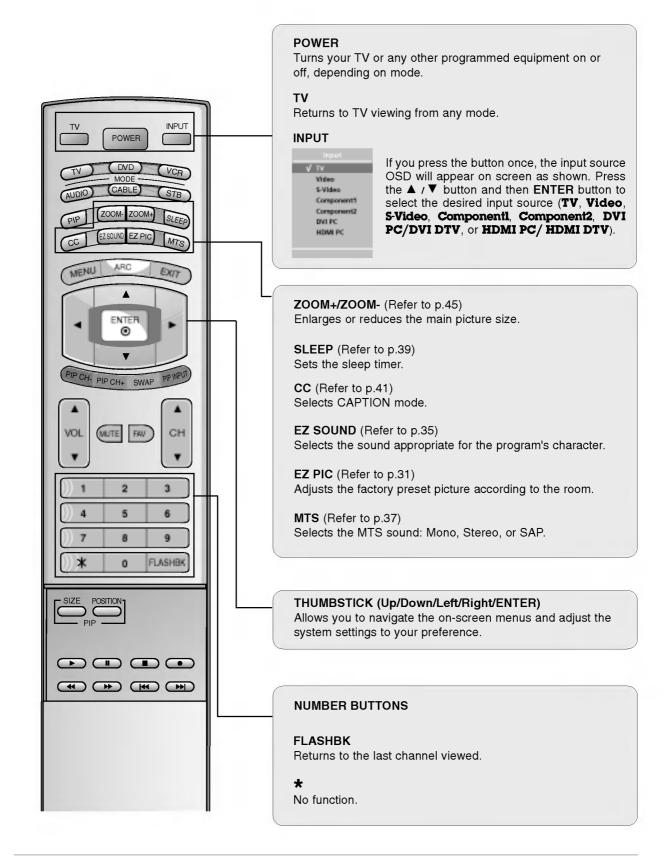
Connection Options (Model: 32LX2R)



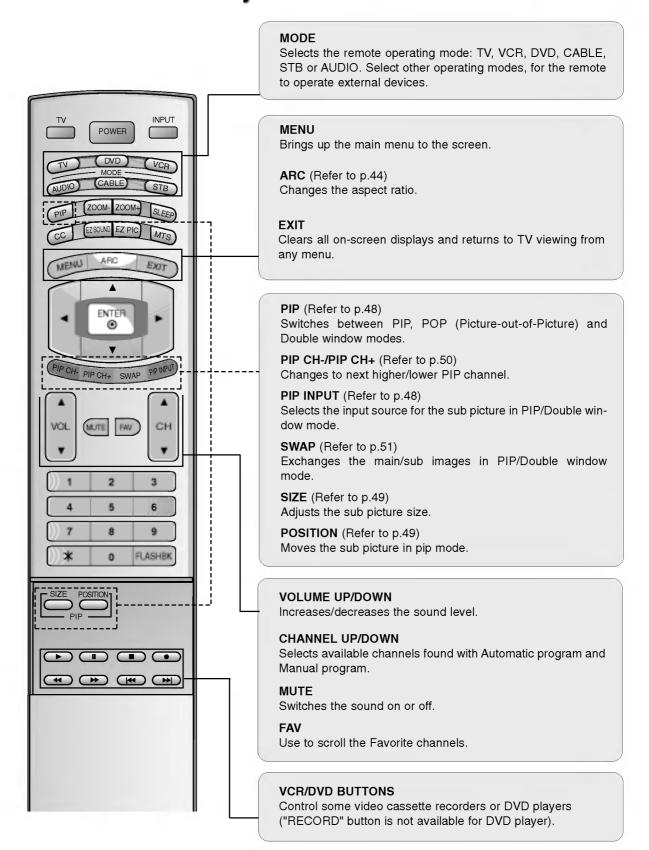
Connection Options (Model:26LX2R)



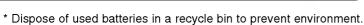
Remote Control Key Functions

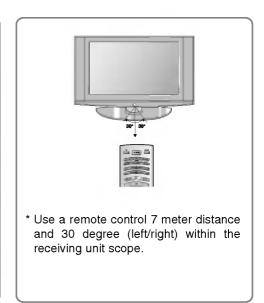


Remote Control Key Functions



Installing Batteries 1 Open the battery compartment cover on the back side. 2 Insert two 1.5V AA batteries in correct polarity (+ with +, - with -). Don't mix old or used batteries with new ones. 3 Close the cover.

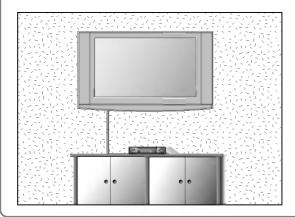




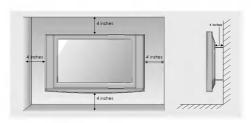
Installation

Various Installation

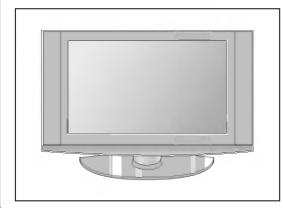
Wall Mount installation



For proper ventilation, allow a clearance of 4" on each side and from the wall. Detailed installation instructions are available from your dealer, see the optional Tilt Wall Mounting Bracket Installation and Setup Guide.



Desktop Pedestal Installation

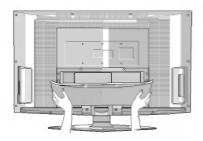


For proper ventilation, allow a clearance of 4" on each side and from the wall.

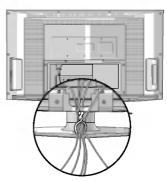


How to use back cover

Hold the cover with both hands and pull it backward.

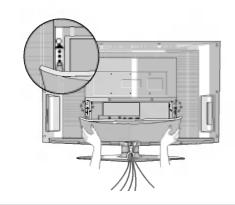


2 Install wires as necessary.
(To install various wires, refer to p.15~26.)

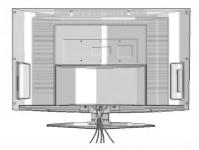


* Arrange the signal input cable and the power cord by holder, as shown.

3 Align the holes on the TV back panel with the four protuberance on the back cover and insert.



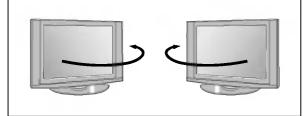
4 Reinstall the cover.



Wire Arrangement

- Pull the cables through the hole on the set.

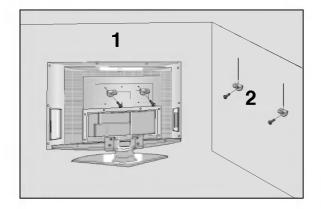
Swivel Stand

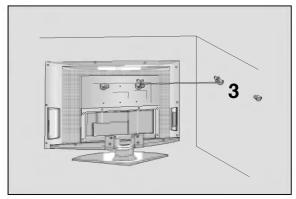


- The TV can be conveniently swivelled on its stand 30° to the left or right to provide the optimum viewing angle.

How to join the product assembly to the wall to protect the set tumbling

- Set it up close to the wall so the product doesn't fall over when it is pushed backwards.
- The instructions shown below is a safer way to set up the product, which is to fix it on the wall so the product doesn't fall over when it is pulled in the forward direction. It will prevent the product from falling forward and hurting people. It will also prevent the product from damage caused by fall. Please make sure that children don't climb on or hang from the product.





- 1 Use the bracket and the bolt to fix the product to the wall as shown in the picture.
- 2 Secure the bracket with the bolt (not provided as parts of the product, must purchase separately) on the wall.
- 3 Use a sturdy rope (not provided as parts of the product, must purchase separately) to tie the product. It is safer to tie the rope so it becomes horizontal between the wall and the product.

Notes

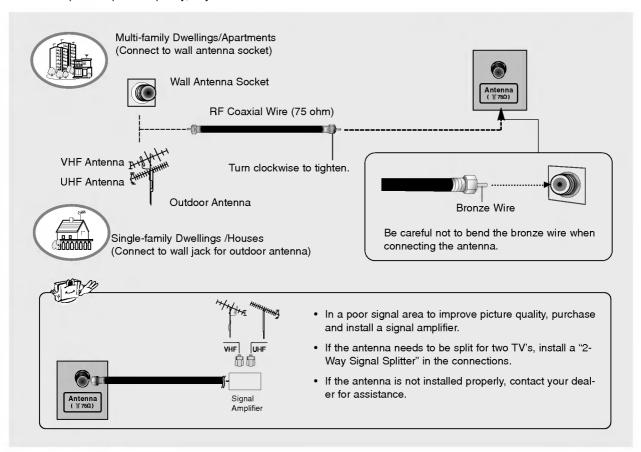
- When moving the product to another place undo the ropes first.
- Use a product holder or a cabinet that is big and strong enough for the size and weight of the product.
- To use the product safely make sure that the height of the bracket that is mounted on the wall is same as that of the product.

External Equipment Connections

NOTE: All cables shown are not included with the TV

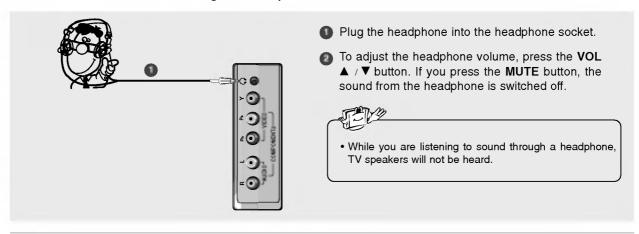
Antenna Connection

- Antenna or Cable Service without a Cable Box Connection.
- For optimum picture quality, adjust antenna direction if needed.



Headphone Socket

- You can listen to the sound through the headphone.



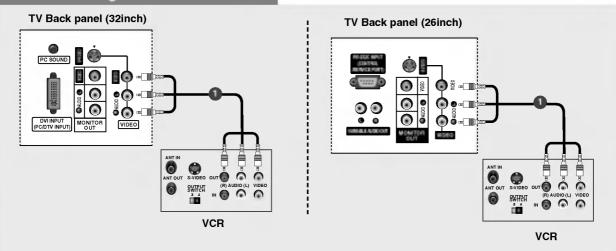
NOTE: All cables shown are not included with the TV.

VCR Setup

- To avoid picture noise (interference), leave an adequate distance between the VCR and TV.
- Typically a frozen still picture from a VCR. If the 4:3 picture format is used; the fixed images on the sides of the screen may remain visible on the screen.

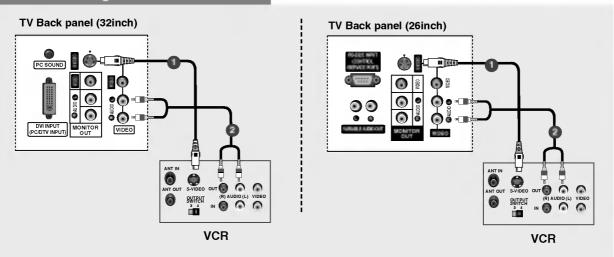
TV Back panel (32inch) Connect the RF antenna out socket of the VCR to the Antenna socket on the set. Connect the antenna cable to the RF antenna in socket of the VCR. Set VCR output switch to 3 or 4 and then tune TV to the same channel number. Insert a video tape into the VCR and press PLAY on the VCR. (Refer to the VCR owner's manual.)

When connecting with a RCA cable



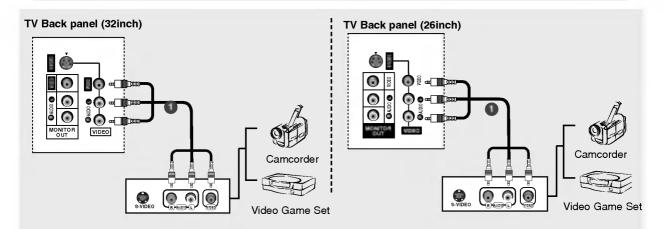
- Onnect the AUDIO/VIDEO jacks between TV and VCR. Match the jack colors (Video = yellow, Audio Left = white, and Audio Right = red)
- Insert a video tape into the VCR and press PLAY on the VCR. (Refer to the VCR owner's manual.)
- Select Video input source with using the INPUT button on the remote control.

When connecting with an S-Video cable



- Connect the an S-VIDEO output of the VCR to the S-VIDEO input on the set. The picture quality is improved; compared to connecting a regular VCR to the Video input.
- Connect the audio outputs of the VCR to the AUDIO input jacks on the set.
- Insert a video tape into the VCR and press PLAY on the VCR. (Refer to the VCR owner's manual.)
- Select S-Video input source with using the INPUT button on the remote control.

External AV Source Setup

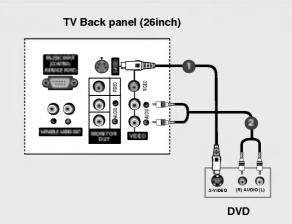


- Connect the AUDIO/VIDEO jacks between TV and external equipment. Match the jack colors (Video = yellow, Audio Left = white, and Audio Right = red).
- Select Video input source with using the INPUT button on the remote control.
- Operate the corresponding external equipment. Refer to external equipment operating guide.

DVD Setup

When connecting with a S-Video cable

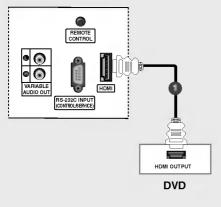
TV Back panel (32inch) PC SOUND DVI INPUT MONITOR VIDEO (P) AUDIO (L) DVD

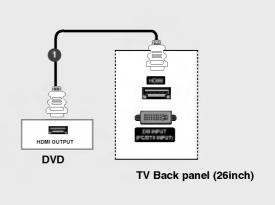


- Connect the S-VIDEO output of the DVD to the S-VIDEO input on the set.
- Connect the audio outputs of the DVD to the AUDIO input jacks on the set.
- Turn on the DVD player, insert a DVD.
- Select S-Video input source with using the INPUT button on the remote control.
- Sefer to the DVD player's manual for operating instructions.

When connecting with a HDMI cable

TV Back panel (32inch)





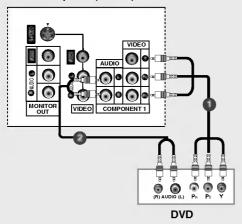
- Onnect the HDMI output of the DVD to the **HDMI** jack on the set.
- Select HDMI DTV input source with using the INPUT button on the remote control.
- Refer to the DVD player's manual for operating instructions.

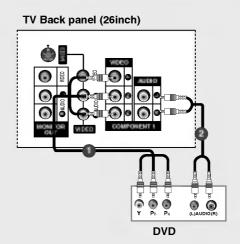


• TV can receive the video and audio signal simultaneously with using a HDMI cable.

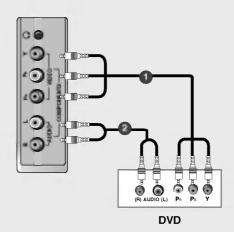
When connecting with a component cable

TV Back panel (32inch)





TV side panel (32, 26inch)



- Connect the video outputs (Y, PB, PR) of the DVD to the COMPONENT1 VIDEO (Y, PB, PR) jacks on the set.
- Connect the audio outputs of the DVD to the COM-PONENT1 AUDIO jacks on the set.
- Turn on the DVD player, insert a DVD.
- Select Component 1 input source with using the INPUT button on the remote control.
 If connected to COMPONENT2, select Component2
 - input source.
- Sefer to the DVD player's manual for operating instructions.

Component Input ports

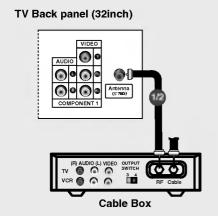
To get better picture quality, connect a DVD player to the component input ports as shown below.

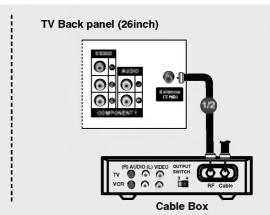
Component ports on the TV	Υ	Рв	PR
	Υ	Pb	Pr
Video output ports	Υ	B-Y	R-Y
on DVD player	Υ	Cb	Cr
, ,	Υ	Рв	PR

Cable TV Setup

- After subscribing to a cable TV service from a local provider and installing a converter, you can watch cable TV programming. The TV cannot display TV programming unless a TV tuner device or cable TV converter box is connected to the TV.
- For further information regarding cable TV service, contact your local cable TV service provider(s).

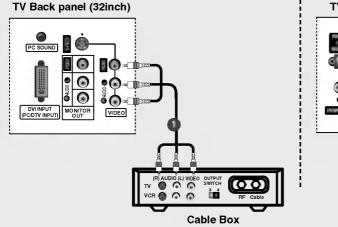
When connecting with an antenna

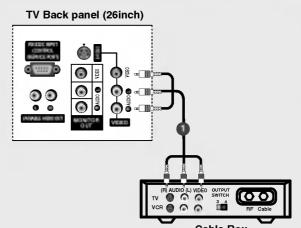




- Connect the RF antenna socket of the cable box to the Antenna socket on the set.
- Connect the antenna cable to the RF antenna socket of the cable box.
- Select 3 or 4 with channel switch on the cable box.
- Tune the TV channel to the same selected output channel on the cable box.
- Select channels at the cable box or with the cable box remote control.

When connecting with a RCA cable

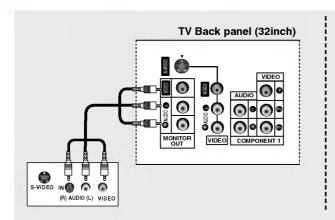


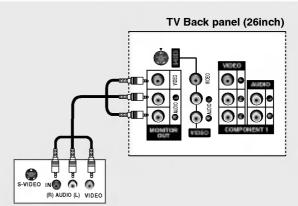


- Connect the AUDIO/VIDEO jacks between TV and Cable box. Match the jack colors (Video = yellow, Audio Left = white, and Audio Right = red)
- Select Video input source with using the INPUT button on the remote control.
- Select your desired channel with the remote control for the cable box.

Monitor Out Setup

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





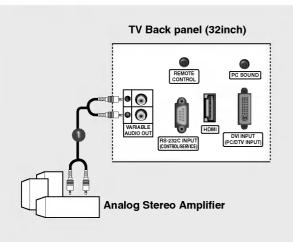
- Connect the second TV or monitor to the TV's MONITOR OUT jacks.
- See the Operating Manual of the second TV or monitor for further details regarding that device's input settings.

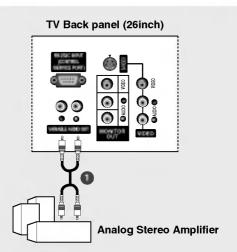


• S-Video, Component 1-2, DVI PC/DVI DTV, HDMI PC/HDMI DTV input sources cannot be used for Monitor out.

External Stereo

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



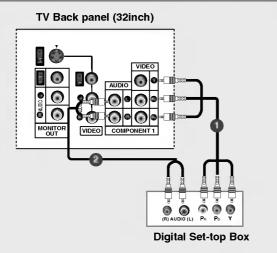


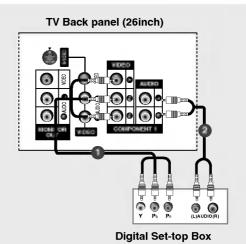
- Onnect the input jack of the stereo's amplifier to the VARIABLE AUDIO OUT jacks on the set.
- Set up your speakers through your analog stereo amplifier, according to the instructions provided with the amplifier.
 - When connecting with external audio equipments, such as amplifiers or speakers, please turn the TV speakers
 off. (Refer to p.37)

STB Setup

- To watch digitally broadcast programs, purchase and connect a digital set-top box.

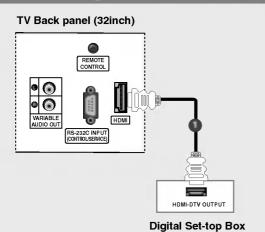
When connecting with a component cable

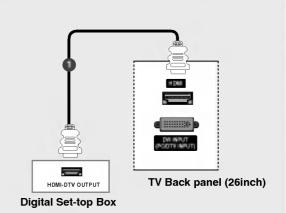




- Connect the video outputs (Y, Pв, PR) of the digital set-top box to the COMPONENT1 VIDEO (Y, Pв, PR) jacks on the set.
- Connect the audio outputs of the digital set-top box to the COMPONENT1 AUDIO jacks on the set.
- Turn on the digital set-top box. (Refer to the owner's manual for the digital set-top box.)
- Select Component 1 input source with using the INPUT button on the remote control. If connected to COMPONENT2 input, select Component 2 input source.

When connecting with a HDMI cable





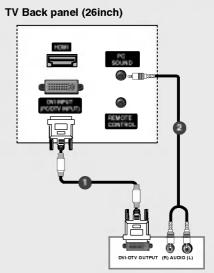
- Onnect the HDMI output of the digital set-top box to the HDMI jack on the set.
- Turn on the digital set-top box. (Refer to the owner's manual for the digital set-top box.)
- Select HDMI DTV input source with using the INPUT button on the remote control.



• TV can receive the video and audio signal simultaneously with using a HDMI cable.

When connecting with a DVI cable

TV Back panel (32inch) REMOTE CONTROL WARIABLE WORLD OUT FUT (R) AUDIO (L) Digital Set-top Box

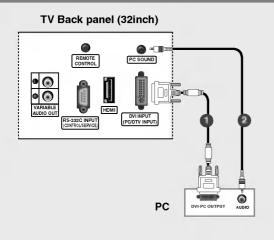


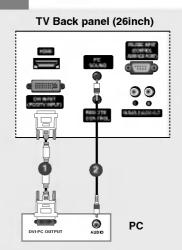
- Digital Set-top Box
- 1 Connect the DVI output of the digital set-top box to the DVI INPUT (PC/DTV INPUT) jack on the set.
- ② Connect the digital audio outputs of the set-top box to the PC SOUND jack on the set.
- Turn on the digital set-top box. (Refer to the owner's manual for the digital set-top box.)
- Select DVI DTV input source with using the INPUT button on the remote control.

PC Setup

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

When connecting with a DVI-D cable



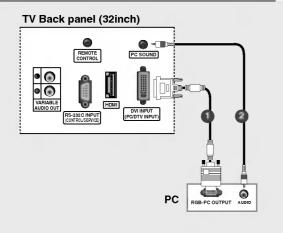


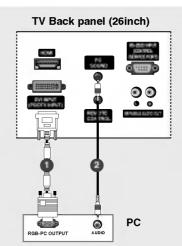
- Onnect the DVI output of the PC to the DVI INPUT (PC/DTV INPUT) jack on the set.
- Connect the PC audio outputs to the PC SOUND jack on the set.
- Turn on the PC and the set.
- Select DVI PC input source with using the INPUT button on the remote control.



 Connect the signal cable (DVI-D cable, Not DVI to D-Sub cable) from the DVI output socket of the PC to the DVI input socket of the set when using a PC with DVI output. In some video cards, DVI-Analog output may not be supported.

When connecting with a DVI to D-Sub cable

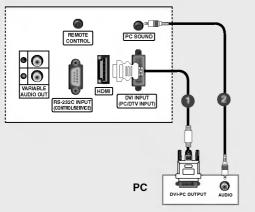




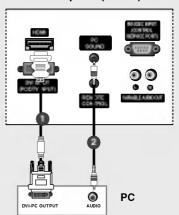
- ① Connect the RGB output of the PC to the DVI INPUT (PC/DTV INPUT) jack on the set.
- Onnect the PC audio outputs to the PC SOUND jack on the set.
- Turn on the PC and the set.
- Select DVI PC input source with using the INPUT button on the remote control.

When connecting with a HDMI to DVI cable

TV Back panel (32inch)



TV Back panel (26inch)



- ① Connect the DVI output of the PC to the **HDMI** jack on the set.
- Onnect the PC audio output to the PC SOUND jack on the set.
- Turn on the PC and the set.
- Select HDMI PC input source with using the INPUT button on the remote control.



- If the PC has a DVI output and no HDMI output, a separated audio connection is necessary.
- It's not available to connect with a HDMI to DVI cable to the DVI INPUT jack on the set.

Supported Display Resolution

■ PC

Resolution	Horizontal Frequency (kHz)	Vertical Frequency (Hz)	
720x400	31.468	70	
640x480	31.469	60	
040400	37.500	75	
800x600	37.879	60	
000,000	46.875	75	
832x624	49.725	75	
	48.363	60	
1024x768	56.470	70	
	60.123	75	
1280 x 768	47.776	60	
1360 x 768	47.720	60	
1366 x 768	47.720	60	



- a. For optimum picture quality, use standard WXGA 1360x768 computer output at a 60Hz refresh rate. Using other formats (VGA, SVGA, etc.) or refresh rates may result in reduced picture quality. (To change the computer video output format, please refer to the operating manual for the computer you are using).
- b. If the message **No signal** appears on the screen, adjust the PC output to a format listed in the **Monitor Display Specifications** table.
- c. The synchronization input form for Horizontal and Vertical frequencies is separate.

DPM (Display Power Management) mode

If the PC goes to power saving mode, the monitor automatically switches to DPM mode. If you don't use the PC cable provided, DPM mode may not work.

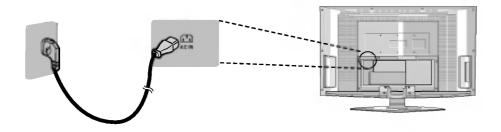
* In HDMI PC mode, DPM mode is not available.

■ DTV

Terminal Mode	Component	DVI (DTV)	HDMI (DTV)
480i	0	Х	х
480p	0	0	0
720p	0	0	0
1080i	0	0	0

Power Cord Connection

- Connect the power cord as shown.



Operation

Basic operation

Turning on the TV

- 1. First, connect power cord correctly. At this moment, the TV switches to standby mode.
 - Press the **ON/OFF**, **INPUT**, **CH** \blacktriangle / \blacktriangledown button on the TV or press the **POWER**, **TV**, **INPUT**, **CH** \blacktriangle / \blacktriangledown , Number (0 ~ 9) button on the remote control and then the TV will turn on.
- 2. Select the viewing source by using **INPUT** button on the remote control.

 This TV is programmed to remember which power state it was last set to, even if the power cord is out.
- 3. When finished using the TV, press the POWER button on the remote control. The TV reverts to standby mode.

Volume Adjustment

- 1. Press the **VOL** ▲ / ▼ button to adjust the volume.
- 2. If you want to switch the sound off, press the MUTE button.
- 3. You can cancel this function by pressing the **MUTE** or **VOL** ▲ / ▼ button.

Channel Selection

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



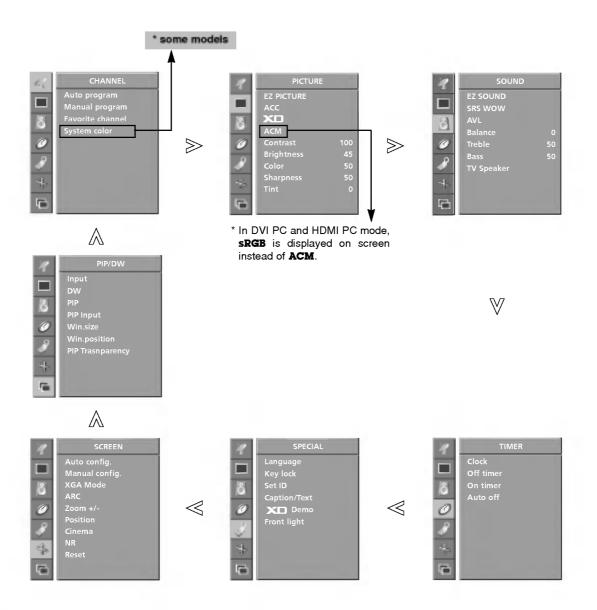
• If you intend to be away on vacation, disconnect the power plug from the wall power outlet.

Menu 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 **SPECIAL** 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 of your choice.
- Press the EXIT button to save and return to TV viewing.

How to adjust the OSD screen

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





• Your TV's OSD (On Screen Display) may differ slightly from what is shown in this manual.



Channel Menu Options

- Auto Program should be used to memorize all the active channels in your area before you are able to use the TV.
- There are two ways of storing channels in the TV's memory. You can use either.
- One is called AUTO PROGRAM and the other is called MANUALPROGRAM.
- In AUTO PROGRAM mode, the TV will memorize the channels in ascending numerical order. If there are additional channels you want to add or delete, you can manually add or delete those channels with Manual Program.

Auto Program: Channel Search







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



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

- 1 Press the MENU button and then use ▲ / ▼ button to select the **CHANNEL** menu.
- 2 Press the ▶ button and then use ▲ / ▼ button to select **Auto program**.
- 3 Press the ▶ button. AUTO PROGRAM starts the channel search.
- 4 If you want to stop auto programming, press the **ENTER** button. Only the channels found up to at that time are memorized.

Manual Program: Adding/Deleting Channels





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

 Auto program

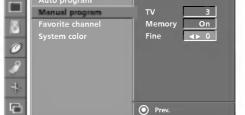
 Favorite channel
 System color

 Prev.
- 1 Press the MENU button and then use ▲ / ▼ button to select the **CHANNEL** menu.
- Press the ▶ button and then use ▲ / ▼ button to select **Manual program**.
- 3 Press the ▶ button and then use ◀ / ▶ button to select a channel you want to add or erase.
- 4 Press the ▼ button and then use ◄ / ► button to select On (memory) or Off (erase).
- Press the **EXIT** button to return to normal TV viewing. The current channel is added to Memory or Erased from the channel list.

Fine Tuning Adjustment







- Use this function to correct the picture's instability and condition if it is poor.
- To remove fine tuning from a channel, reprogram the finelytuned channel with Auto program or Manual Program.
- If a finely-tuned channel is memorized, the color of the channel number changes to yellow.
- Press the **MENU** button and then use **▲**/▼ button to select the **CHANNEL** menu.
- 2 Press the button and then use **△** / verton to select **Manual program**.
- 3 Press the ▶ button and then use ▲ / ▼ button to select **Fine**.
- **4** Use **◄** / **▶** button to adjust the picture to your preference.
- Press the **EXIT** button to return to normal TV viewing.

Favorite Channels Setup







- Favorite Channels is a convenient feature that lets you quickly scan up to 8 channels of your choice without having to wait for the TV to scan through all the inbetween channels.
- To tune to a favorite channel, press the FAV button repeatedly. The eight favorite channels appear on the screen in numerical order.
- Press the **MENU** button and then use **▲**/▼ button to select the **CHANNEL** menu.
- 2 Press the ▶ button and then use ▲ / ▼ button to select Favorite channel.
- Press the ▶ button and then use ▲ / ▼ button to select the first favorite channel position.
- Use the ◀/▶ button to set the desired channel number for first favorite channel. 4
- Press the ENTER button to save. 5
- Repeat steps 3 to 5 to memorize other favorite channels.

System color (Some models)





- Manual program System color
- When the screen is wrong color, you can adjust this function.
- It's avaiable to use this function in TV mode. (This function doesn't work for sub picture in PIP mode.)
- Press the **MENU** button and then use **▲**/▼ button to select the **CHANNEL** menu.
- Press the ▶ button and then use ▲ / ▼ button to select **System color**.
- Press the ▶ button and then use ▲ / ▼ button to select **PAL-M**, **PAL-N**, NTSC ou Multi.
- 4 Press the **EXIT** button to return to normal TV viewing.

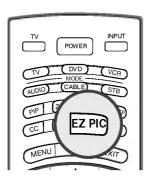


Picture Menu Options

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EZ PICTURE

- **EZ PICTURE** adjusts the TV to the best picture appearance.
- If adjusting picture options (Contrast, Brightness, Color, Sharpness, or Tint) manually, EZ PICTURE automatically changes to User.
- Clear, Optimum, and Soft, settings are preset for good picture quality at the factory and cannot be changed.



- 1 Press the EZ PIC button repeatedly to select the picture appearance setup option as shown: Intelligent Eye (some models), Clear, Optimum, Soft, and User.
 - You can also adjust **EZ PICTURE** in the **PICTURE** menu.
- Press the EXIT button to return to normal TV viewing.



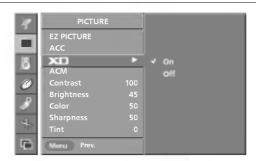




- When selecting **EZ PICTURE** options (**Clear**, **Optimum**, and **Soft**), **XD** is automatically change to **On**.

ing algorithm.

- If XD setting is Off, EZ PIC-TURE is automatically change to User and ACM function is not available.
- This function is not available in DVI PC and HDMI PC sources.



- 1 Press the MENU button and then use ▲ / ▼ button to select the **PICTURE** menu
- Press the ▶ button and then use ▲ / ▼ button to select **XD**.
- 3 Press the ▶ button and then use ▲ / ▼ button to set On or Off.
- 4 Press the **EXIT** button to return to normal TV viewing.



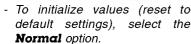
Picture Menu Options Continued

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Color Temperature Control

* Auto Color Temperature Control







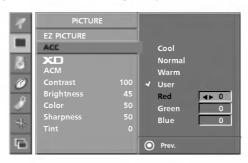
- 1 Press the MENU button and then use ▲ / ▼ button to select the **PICTURE** menu.
- 2 Press the ▶ button and then use ▲ / ▼ button to select ACC.
- 3 Press the ▶ button and then use ▲ / ▼ button to select either: Cool (Preset), Normal (Default), or Warm (Preset).
- 4 Press the **EXIT** button to return to normal TV viewing.

* Manual Color Temperature Control (ACC set to User option)

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 You can adjust red, green, or blue to any color temperature you prefer.



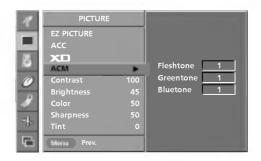
- Press the MENU button and then use ▲ / ▼ button to select the PICTURE menu.
- 2 Press the ▶ button and then use ▲ / ▼ button to select ACC.
- 3 Press the ▶ button and then use ▲ / ▼ button to select User.
- 4 Press the ▶ button and then use ▲ / ▼ button to select Red, Green, or Blue.
- Use the ◀ / ▶ button to make appropriate adjustments.
 The adjustment range of Red, Green, or Blue is -30 ~ +30.
- 6 Press the EXIT button to return to normal TV viewing.

ACM (Active Color Management)





- Adjust the **ACM** to select the desired skin color option.
- This function is not available in DVI PC and HDMI PC sources.



- 1 Press the MENU button and then ▲ /▼ button to select the PICTURE menu.
- 2 Press the ▶ button and then ▲ / ▼ button to select **ACM**.
- 3 Press the ▶ button and then ▲ / ▼ button to select **Fleshtone**, **Greentone**, or **Bluetone**.
- 4 Press the

 ✓ /

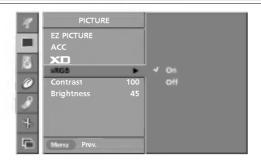
 ✓ button to make appropriate adjustments.
 The adjustment range of Fleshtone, Greentone, or Bluetone is 0 ~ 3.
- 5 Press the EXIT button to return to normal TV viewing.

sRGB (DVI PC or HDMI PC mode only)





 If the TV is connected to external equipment using sRGB, set sRGB to On to adjust for the color difference.



- 1 Press the MENU button and then ▲ / ▼ button to select the PICTURE menu.
- 2 Press the ▶ button and then ▲ / ▼ button to select **sRGB**.
- 3 Press the ▶ button and then ▲ / ▼ button to select On or Off.
- 4 Press the **EXIT** button to return to normal TV viewing.



Picture Menu Options Continued

Manual Picture Control (EZ Picture set to User option)





- You can adjust picture Contrast, Brightness, Color, Sharpness, and Tint options to the levels you prefer.
- In the broadcasting system PAL-M/N, the picture item **Tint** is not displayed.
- In PC mode, Color, Sharpness, and Tint is not available.



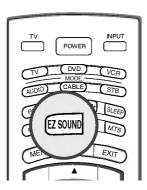
- 1 Press the MENU button and then ▲ / ▼ button to select the **PICTURE** menu.
- Press the ▶ button and then ▲ / ▼ button to select the desired picture option (Contrast, Brightness, Color, Sharpness, or Tint).
- **3** Press the ▶ button and then ◄ / ▶ button to make appropriate adjustments.
- 4 Press the **EXIT** button to return to normal TV viewing.



Sound Menu Options

EZ SOUND

- This function lets you enjoy the best sound without any special adjustment because the TV has the appropriate sound options based on the program content.
- If you adjust sound options (Treble and Bass) manually, EZ SOUND automatically changes to User.
- Flat, Music, Movie, and Sports are preset for good sound quality at the factory and cannot be changed.



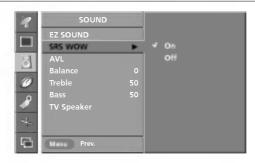
- 1 Press the EZ SOUND button repeatedly to select the appropriate sound setup as shown below: Flat, Music, Movie, Sports, and User.
 - You can also adjust **EZ SOUND** in the **SOUND** menu.
- Press EXIT button to save and return to TV viewing.

SRS WOW





- The SRS WOW function plays back the mono or stereo sound input with the dynamic surround effects. It will provide rich and profound sound tone.
- If you set the SRS WOW ON, Treble/Bass can not be adjusted.



- 1 Press the **MENU** button and then use ▲ / ▼ button to select the **SOUND** menu.
- 2 Press the ▶ button and then use ▲ / ▼ button to select **SRS WOW**.
- 3 Press the ▶ button and then use ▲ / ▼ button to select On or Off.
- 4 Press the **EXIT** button to return to normal TV viewing.



is a trademark of SRS Labs, Inc. technology is incorporated under license from SRS Labs, Inc.



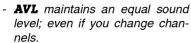
Sound Menu Options continued

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AVL (Auto Volume Leveler)







- 1 Press the MENU button and then use ▲ / ▼ button to select the SOUND menu.
- 2 Press the ▶ button and then use ▲ / ▼ button to select **AVL**.
- **3** Press the \triangleright button and then use \triangle / \lor button to select **On** or **Off**.
- 4 Press the EXIT button to return to normal TV viewing.

Manual Sound Control



 You can adjust sound options Balance, Treble, and Bass to the levels you prefer.



- 1 Press the MENU button and then use ▲ /▼ button to select the **SOUND** menu.
- 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 the **EXIT** button to return to normal TV viewing.

TV Speakers Setup



status.



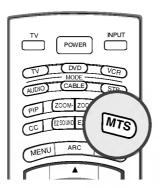
- You can adjust internal speaker
- If you want to use your external hi-fi stereo system, turn off the internal speakers of the set.



- Press the MENU button and then use ▲ / ▼ button to select the SOUND 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**.
- Press the EXIT button to return to normal TV viewing.

Stereo/SAP Broadcasts Setup

- The TV can receive MTS stereo programs and any SAP (Secondary Audio Program) that accompanies the stereo program; if the broadcaster transmits one additional sound signal in addition to the original one.
- Mono: The primary language is heard from left and right speakers. Signal mode is mono.
- Stereo: The primary language is heard from left and right speakers. Signal mode is stereo.
- SAP: The secondary language is heard from left and right speakers in mono sound.



- 1 Press the MTS button repeatedly. Mono, Stereo, or SAP appear in
 - Select mono sound mode if the signal is not clear or in poor signal reception areas.
 - Stereo, SAP modes are available only if included on the broadcast signal.
- **2** Press the **ENTER** button to save.



Timer Menu Options

Clock Setup







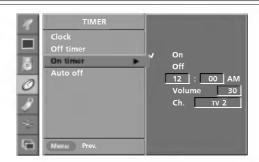
- If current time setting is wrong, reset the clock manually.

- Press the **MENU** button and then use ▲ / ▼ button to select the **TIMER** menu.
- **2** Press the \triangleright button and then use \triangle / \lor button to select **Clock**.
- Press the ▶ button and then use ▲ / ▼ button to set the hour.
- Press the ▶ button and then use ▲ / ▼ button to set the minutes.
- Press the **EXIT** button to return to normal TV viewing.

On/Off Timer Setup







- TIMER function operates only if current time has been set.
- Off timer function overrides On timer function if they are set 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.

- Press the **MENU** button and then use **▲**/▼ button to select the **TIMER** menu.
- 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 set the volume level at turn-on. Press the ▶ button and then use ▲ /▼ button to select the channel at turn-on.
- 7 Press the EXIT button to return to normal TV viewing.

Auto Off



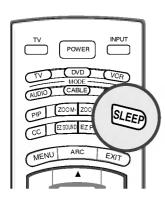




- If set to on and there is no input signal, the TV turns off automatically after 10 minutes.
- 1 Press the MENU button and then use ▲ / ▼ button to select the **TIMER** menu.
- Press the ▶ button and then use ▲ / ▼ button to select Auto off.
- 3 Press the ▶ button and then use ▲ / ▼ button to select Off or On.
- 4 Press the **EXIT** button to return to normal TV viewing.

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





Special Menu Options

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Key Lock



- The TV can be set up so that it can only be used with the remote control.



- 1 Press the MENU button and then use ▲ / ▼ button to select the SPECIAL menu.
- 2 Press the ▶ button and then use ▲ / ▼ button to select **Key lock**.
- 3 Press the ▶ button and then use ▲ / ▼ button to select **On** or **Off**.
- ⚠ Press the EXIT button to return to normal TV viewing.



- This feature can be used to prevent unauthorized viewing by locking out the front panel controls.
- This TV is programmed to remember which option it was last set to even if you turn the TV off.
- With the Key lock On, the display ' Key lock' appears on the screen if any button on the front panel is pressed.
- In **Key lock** 'On', if the set is turned off, press the **POWER**, **INPUT**, **CH** ▲ /▼ button on the set or **POWER**, **INPUT**, **CH** ▲ /▼ or **NUMBER** buttons on the remote control.

XD Demo



- Use it to see the difference between XD Demo on and XD Demo off.
- This function is not available in DVI PC and HDMI PC sources.



- 1 Press the MENU button and then use ▲ / ▼ button to select the SPECIAL menu.
- **2** Press the ▶ button and then use ▲ / ▼ button to select **XD Demo**.
- 3 Press the ▶ button to begin **XD Demo**.
- 4 Press the EXIT button to stop XD Demo.

Closed Captions

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

Using Closed Captions

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

and computer for translation into English.

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

 The picture at left shows a typical caption.



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

1. Poor reception conditions are encountered:



• IGNITION:

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



• GHOSTS:

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

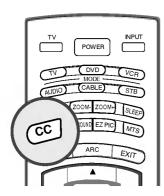


• SNOW:

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

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

Caption/Text



- 1 Press the CC button repeatedly to select your caption selection as shown below: **Model**, **Mode2**, **Text1**, **Text2**, or **Off**.
 - You can also adjust Caption/Text in the SPECIAL menu.
- Press the EXIT button to return to normal TV viewing.



Special Menu Options Continued

Front Light







- If you select on, the lamp on the TV front panel turns on.
- 1 Press the MENU button and then use ▲ / ▼ button to select the **SPECIAL** menu.
- 2 Press the ▶ button and then use ▲ / ▼ button to select Front light.
- 3 Press the ▶ button and then use ▲ / ▼ button to select On or Off.
- 4 Press the **EXIT** button to return to normal TV viewing.



Screen Menu Options

Auto Adjustment (DVI PC (RGB), Analogue PC mode only)





- SCREEN

 Auto config.

 Manual config.

 XGA Mode
 ARC

 Zoom +/Position
 Clinema
 NR
 Reset

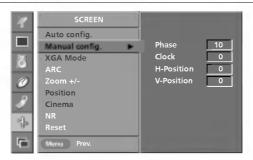
 Prev.
- Automatically adjusts picture position and minimizes image shaking.
- After adjustment, if the image is still not correct, your TV is functioning properly but needs further adjustment.
- Automatically adjusts the screen position, clock, and phase. (The displayed image will disappear for a few seconds while Auto-configuration is in progress.)
- 1 Press the MENU button and then use ▲ / ▼ button to select the SCREEN menu.
- 2 Press the ▶ button and then use ▲ / ▼ button to select **Auto config.**.
- **?** Press the ▶ button to run Auto configure.
 - When Auto config. has finished, OK will be shown on screen.
 - If the position of the image is still not correct, try Auto adjustment again.
- 4 If the image needs to be adjusted more after using **Auto config.**, you can make further adjustments with the **Manual config.** option.

Manual Configure





- If the image still isn't clear after auto adjustment and especially if characters are still jittery, adjust the picture Phase manually.
- To correct the screen size, adjust Clock.
- This function is available in DVI PC (RGB) and Component sources. (In some input mode, the Manual config. options (Phase, Clock, H-Position, or V-Position) may not work.)



- Press the MENU button and then use ▲ / ▼ button to select the SCREEN menu.
- Press the ▶ button and then use ▲ / ▼ button to select Manual config.
- 3 Press the ▶ button and then use ▲ / ▼ button to select **Phase**, **Clock**, **H-Position**, or **V-Position**.
 - Phase: Remove any horizontal noise and clear up or sharpen the character images.
 - Clock: Minimizes any vertical bars or stripes appearing on the screen background.
 - **H-Position** / **V-Position**: Adjusts picture left/right and up/down.
- **4** Press the **◄** / **▶** button to make appropriate adjustments.
- **5** Press the **EXIT** button to return to normal TV viewing.

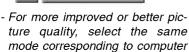


Screen Menu Options continued

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Selecting XGA mode (DVI PC (RGB) and XGA/WXGA (60Hz) mode only)





resolution.



- 1 Press the MENU button and then use ▲ / ▼ button to select the SCREEN menu.
- Press the ▶ button and then use ▲ / ▼ button to select **XGA Mode**.
- 3 Press the ▶ button and then use ▲ / ▼ button to select the desired XGA resolution.
 From this point on, the adjustment starts.

Setting Picture Format

- Caution: If a 4:3 fixed image is on the screen for a long time, it may remain visible.
- Set every aspect ratio for TV, Video, and S-Video input sources.
- Press the ARC button repeatedly to select the desired picture format.You can also adjust ARC in the SCREEN menu.
 - **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.

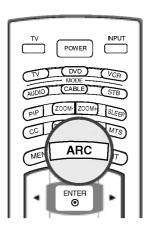
Horizon

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.

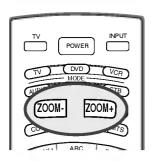
• Zoom

Choose Zoom when you want to view the picture without any alteration. However, the top and bottom portions of the picture will be cropped.

- Use 4:3, or 16:9 for other RGB-PC and HDMI-PC sources.
- In the DW (Double Window) mode, ARC function isn't available.
- In Component, DVI DTV and HDMI DTV mode, only 4:3, 16:9 and Zoom aspect ratios are available.



Picture Size Zoom



- When enlarging or reducing the picture, the screen may be display unnatural picture.
- You can also adjust **Zoom**+/- in the **SCREEN** menu.
- This function is not available in DVI PC (RGB) source.



- 1 Press the **Zoom+/Zoom-** button.
- Press the Zoom+/Zoom- button to enlarge or reduce the picture size.
 The adjustment range of Zoom is 100 ~ 300.
- 3 Adjust the picture position using the ▲ / ▼ / ▼ / ▶ buttons while in enlarged picture mode.

Screen Position





- When screen is enlarged, you can change the position of the picture.
- You are available to this function after adjusting **Zoom**+/-.
- This function is not available in DVI PC (RGB) source.



- Press the MENU button and then use ▲ / ▼ button to select the SCREEN menu.
- **2** Press the **▶** button and then use **▲** / **▼** button to select **Position**.
- **3** Press the ▶ button and then use ▲ /▼ / ◀ / ▶ button to adjust the position.
- 4 Press the **EXIT** button to return to normal TV viewing.



Screen Menu Options continued

Cinema Mode Setup (TV, Video, S-Video and Component 480i mode only)







 Sets up the TV for the best picture appearance for viewing movies.

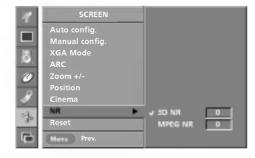
- Press the MENU button and then use ▲ / ▼ button to select the SCREEN menu.
- **?** Press the ▶ button and then use ▲ / ▼ button to select **Cinema**.
- 3 Press the ▶ button and then use ▲ / ▼ button to select **On** or **Off**.
- 4 Press the **EXIT** button to return to normal TV viewing.

NR (Noise Reduction)





- You can select 3D NR or MPEG NR to reduce the picture noise which may appear on the screen during watching in TV mode.
- This function is not available for use in **DVI PC**, **HDMI PC** mode.
- 3D NR is not available or use in Component, DVI DTV, HDMI DTV mode.



- 1 Press the MENU button and then use ▲ / ▼ button to select the SCREEN menu.
- 2 Press the ▶ button and then use ▲ /▼ button to select NR.
- 3 Press the ► button and then use ▲ / ▼ button to select 3D NR or MPEG NR.
- 4 Press the ◀ / ▶ button to make appropriate adjustments.
 - The adjustment range of **3D NR** is 0~2.
 - The adjustment range of **MPEG NR** is 0~15.
- **5** Press the **EXIT** button to return to normal TV viewing.

Reset to original factory value (Initializing)





- You can initialize Zoom +/-, Position, Manual Config., PIP size, PIP position and sub picture size for Double
- This function operates in every mode. To initialize the adjusted value.

window.



- 1 Press the MENU button and then use ▲ / ▼ button to select the SCREEN menu.
- 2 Press the ▶ button and then use ▲ / ▼ button to select **Reset**.
- Press the ► button. The display OK will appear.



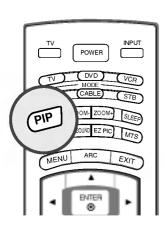
PIP (Picture-In-Picture) / DW (Double Window) Menu

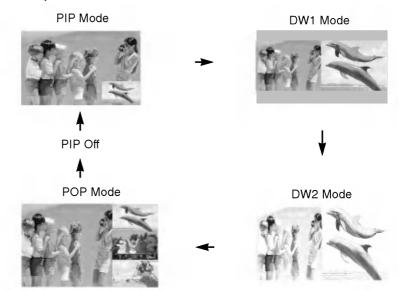
- PIP lets you view 2 different inputs (sources) on your TV screen at the same time. One source will be large, and the other source will show a smaller inset image.
- Double Window mode splits the screen into 2, allowing 2 picture sources to be shown on the TV screen at the same time. Each source is given half the screen.

Watching PIP/POP/Double Window

Press the **PIP** button to access the sub picture. Each press of PIP changes the PIP options as shown below. You can hear the main picture sound in PIP mode. Exchange the main and sub picture to hear the sub picture sound.

• You can also adjust PIP and DW in the PIP/DW menu.

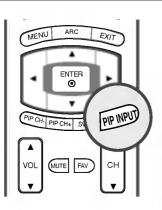




POP (Picture-out-of-Picture: Channel Scan) Mode

- Use POP to search the programs of all the memorized channels one-by-one
 on the 3 PIP screen display, (while the main picture source remains the current
 channel). The pictures of all the programmed channels are searched with the 3
 POP screen.
- Use the **SWAP** button to enlarge the selected channel being searched on the POP screen to shift it for viewing on the main screen.
- Run Auto programm channel search before using POP mode.

Selecting an Input Signal Source for PIP/Double Window

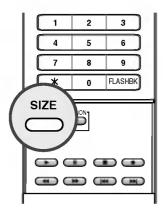


Use the **PIP INPUT** button to select the input source for the sub picture. Each press of **PIP INPUT** button changes the PIP source.

• You can also select sources for the PIP Input in the PIP/DW menu.

Main misture	Sub picture	
Main picture	PIP/DW	POP
TV	All (Except TV)	Not available
Video	All (Except Video)	
S-Video	All (Except S-Video)	
Component 1	All (Except Component 1)	
Component 2	All (Except Component 2)	TV
DVI PC / DVI DTV	All (Except DVI, HDMI)	
HDMI PC / HDMI DTV	All (Except DVI, HDMI)	

PIP Size

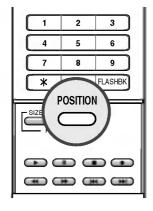




Press the SIZE button and then use ◀ / ▶ button to change the sub picture size.

- Using the **Win.size** function in Double Window mode, main and sub picture sizes are changed simultaneously. Using the **Win.size** function in PIP mode, sub picture size is changed.
- You can also change the sub picture size with Win.size in the PIP/DW menu.

Moving the PIP (PIP Mode only)





Press the **POSITION** button.

Press the \triangle / ∇ / \triangle button repeatedly until desired position is achieved. The sub picture moves up/down/left/right.

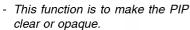
 You can also move the PIP position with Win.position in the PIP/DW menu.



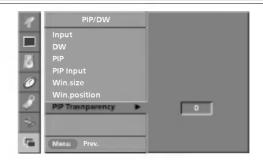
PIP (Picture-In-Picture) / DW (Double Window) Menu continued

PIP Transparency



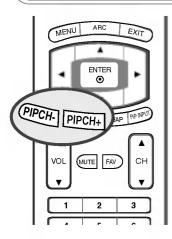


 \gg



- Press the MENU button and then use ▲ / ▼ button to select the PIP/DW menu.
- 2 Press the ▶ button and then use ▲ / ▼ button to select PIP Transparency.
- **3** Press the ▶ button and then use ◀ / ▶ button to adjust PIP transparency.
 - The adjustment range of **PIP Transparency** is 0 ~ 10.
- 4 Press the **EXIT** button to return to normal TV viewing.

TV Program Selection for PIP



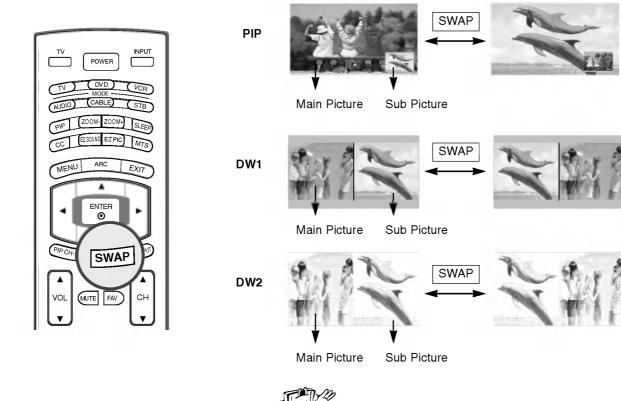
1 Press the PIPCH+ / PIPCH- button to select a channel for the sub picture in PIP mode.

Swapping the PIP/Double Window

Use the **SWAP** button to switch the main and sub pictures.

• In some case of PIP/DW mode, picture quality can be different between main picture and sub picture. The sub picture may

appear poor as compared to main picture.

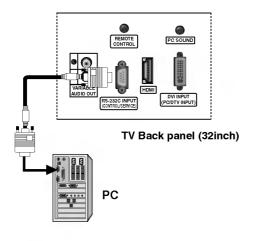


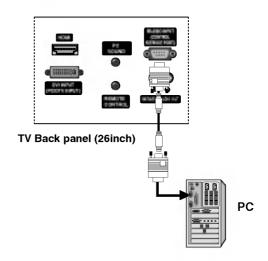
Reference

External Control Device Setup

- Connect the RS-232C input jack to an external control device (such as a computer or an A/V control system) and control the Monitor's functions externally.
- Connect the serial port of the control device to the RS-232C jack on the TV back panel.
- RS-232C connection cables are not supplied with the TV.

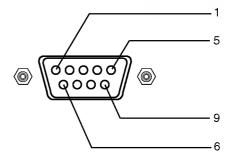
RS-232C Setup





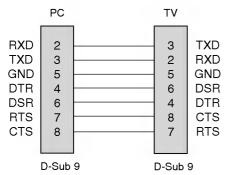
Type of Connector; D-Sub 9-Pin Male

No.	Pin Name
1	No connection
2	RXD (Receive data)
3	TXD (Transmit data)
4	DTR (DTE side ready)
5	GND
6	DSR (DCE side ready)
7	RTS (Ready to send)
8	CTS (Clear to send)
9	No Connection

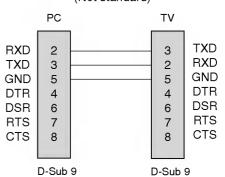


RS-232C Configurations

7-Wire Configurations (Serial female-female NULL modem cable)



3-Wire Configurations (Not standard)



Set ID

- Use this function to specify a TV ID number.
- Refer to 'Real Data Mapping'. See page 54.
- Press the MENU button and then use ▲ / ▼ button to select the SPECIAL menu.
- 2. Press the ▶ button and then use ▲ / ▼ button to select **Set ID**.
- Press the button and then use A / V button to adjust Set ID to choose the desired TV ID number. The adjustment range of Set ID is 1 ~ 99.
- 4. Press EXIT button to return to normal TV viewing.



Transmission / Receiving Protocol

Transmission

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

- * [Command 1]: First command. (k, x or m)
- * [Command 2]: Second command.
- * [Set ID]: You can adjust the set ID to choose desired monitor ID number in Special menu. Adjustment range is 1 ~ 99. When selecting Set ID '0', every connected TV set is controlled. Set ID is indicated as decimal (1~99) on menu and as Hexa decimal (0x0~0x63) on transmission/receiving protocol.
- * [DATA]: To transmit command data.
 - Transmit 'FF' data to read status of command.
- * [Cr]: Carriage Return
 - ASCII code '0x0D'
- * []: ASCII code 'space (0x20)'

OK Acknowledgement

[Command2][][Set ID][][OK][Data][x]

* The Monitor transmits ACK (acknowledgement) based on this format when receiving normal data. At this time, if the data is data read mode, it indicates present status data. If the data is data write mode, it returns the data of the PC computer.

Error Acknowledgement

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

* The Monitor transmits ACK (acknowledgement) based on this format when receiving abnormal data from non-viable functions or communication errors.

Data 1: Illegal Code

2: Not supported function

**Error messages

- 1. Illegal ID: If Wrong or no ID in the command is written.
- 2. **B_TokenLength !=2**: If the first argument of the command does not equals to 2.
- Error ==TOKEN_ERROR: If some Special character or Numeric are written to the first argument of the command or wrong Space position is written to the first argument of the command.
- 4. **Illegal Opcodes**: If the Wrong Alphabet is written to the first argument of the command.
- Illegal Params: If the Wrong parameter is supplied to the end of the command line (means that value of the parameter that is not supported).

Communication Parameters

• Baud rate: 9600 bps (UART)

Data length: 8 bitsParity: NoneStop bit: 1 bit

· Communication code : ASCII code

* Use a crossed (reverse) cable.

Command Reference List

COMMAND	1 C	OMMAND	_	DATA lexadecimal)
01. Power	k	а	0 ~	1
02. Input Select (Main Picture)	х	b	*	
03. Input Select (Sub Picture)	х	у	*	
04. Aspect Ratio	k	С	0 ~	3
05. Screen Mute	k	d	0 ~	1
06. Volume Mute	k	е	0 ~	1
07. Volume Control	k	f	0 ~	64
08. Contrast	k	g	0 ~	64
09. Brightness	k	h	0 ~	64
10. Color	k	i	0 ~	64
11. Tint	k	j	0 ~	64
12. Sharpness	k	k	0 ~	64
13. OSD Select	k	- 1	0 ~	1
14. Key Lock	k	m	0 ~	1
15. Balance	k	t	0 ~	64
16. Key	m	С	Key	/ Code

^{*:} Refer to '02~03 Input select'. See page 54.

01. Power On (Command:a)

► To control Power On/Off of the TV.

Transmission

[k][a][][Set ID][][Data][Cr]

Data 0 : Power Off 1 : Power On

<u>Acknowledgement</u>

[a][][Set ID][][OK][Data][x]

► To show Power On/Off.

Transmission

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

Acknowledgement

[a][][Set ID][][OK][Data][x]

Data 0 : Power Off 1 : Power On

02. Input Select (Command:b) (Main Picture Input)

To select input source for the TV. You can also select an input source using the INPUT button on the TV's remote control.

Transmission

[x][b][][Set ID][][Data][Cr]

 Data
 10 : TV
 50 or 60 : DVI PC

 20 : Video
 51 or 61 : DVI DTV

 30 : S-Video
 90 : HDMI PC

 40 : Component 1
 91 : HDMI DTV

 41 : Component 2

<u>Acknowledgement</u>

[b][][Set ID][][OK][Data][x]

03. Input Select (Command:y) (Sub Picture Input)

Transmission

1[7][7]	ISet IDII][Data][Cr]
	IIOGL ID II	IIDalaijoij

<u>Acknowledgement</u>

[y][][Set ID][][OK][Data][x]

04. Aspect Ratio (Command:c) (Main picture format)

To adjust the screen format.

You can also adjust the screen format using the ARC (Aspect Ratio Control) button on remote control or in the Screen menu.

Transmission

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

Data 0 : Normal screen (4:3)

1 : Wide screen (16:9)

2 : Horizon

3 : Zoom

* In PC mode only 16:9 and 4:3 aspect ratios are available.

<u>Acknowledgement</u>

[c][][Set ID][][OK][Data][x]

05. Screen Mute (Command:d)

To select screen mute on/off.

Transmission

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

Data 0 : Screen mute off (Picture on)
1 : Screen mute on (Picture off)

06. Volume Mute (Command:e)

To control volume mute on/off. You can also adjust mute using the MUTE button on remote control.

Transmission

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

Data 0: Volume mute on (Volume off)
1: Volume mute off (Volume on)

Acknowledgement

[e][][Set ID][][OK][Data][x]

07. Volume Control (Command:f)

To adjust volume.

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

Transmission

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

Data Min: 0 ~ Max: 64 (transmit by Hexadecimal code)
• Refer to 'Real data mapping 1' as shown below.

<u>Acknowledgement</u>

[f][][Set ID][][OK][Data][x]

08. Contrast (Command:g)

▶ To adjust screen contrast. You can also adjust contrast in the Picture menu.

Transmission

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

Data Min: 0 ~ Max: 64 (transmit by Hexadecimal code)
• Refer to 'Real data mapping 1' as shown below.

<u>Acknowledgement</u>

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

Real data mapping 1

0 : Step 0

A : Step 10

F: Step 15

64 : Step 100

* Tint : R50 ~ G50

* Balance : L50 ~ R50

09. Brightness (Command:h)

To adjust screen brightness. You can also adjust brightness in the Picture menu.

<u>Transmission</u>

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

Data Min: 0 ~ Max: 64 (transmit by Hexadecimal code)
• Refer to 'Real data mapping 1'. See page 54.

Acknowledgement

[h][][Set ID][][OK][Data][x]

10. Color (Command:i)

To adjust the screen color. You can also adjust color in the Picture menu.

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

Data Min: 0 ~ Max: 64 (transmit by Hexadecimal code)
• Refer to 'Real data mapping 1'. See page 54.

<u>Acknowledgement</u>

[i][][Set ID][][OK][Data][x]

11. Tint (Command:j)

To adjust the screen tint. You can also adjust tint in the Picture menu.

Transmission

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

Data Min: 0 ~ Max: 64 (transmit by Hexadecimal code)
• Refer to 'Real data mapping 1'. See page 54.

<u>Acknowledgement</u>

[j][][Set ID][][OK][Data][x]

12. Sharpness (Command:k)

To adjust the screen sharpness. You can also adjust sharpness in the Picture menu.

<u>Transmission</u>

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

Data Min: 0 ~ Max: 64 (transmit by Hexadecimal code)
• Refer to 'Real data mapping 1'. See page 54.

<u>Acknowledgement</u>

[k][][Set ID][][OK][Data][x]

13. OSD Select (Command:I)

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

Transmission

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

Data 0: OSD mute on 1: OSD mute off

<u>Acknowledgement</u>

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

14. Key Lock (Command:m)

To lock the front panel controls on the TV.

Transmission

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

Data 0: Lock off 1: Lock on

Acknowledgement

[m][][Set ID][][OK][Data][x]

 If you're not using the front panel controls on the TV, use this mode. When main power is on/off, remote control lock is released.

15. Balance (Command:t)

To adjust balance.

<u>Transmission</u>

[k][t][][Set ID][][Data][Cr]

Data Min: 0 ~ Max: 64 (transmit by Hexadecimal code)
• Refer to 'Real data mapping 1'. See page 54.

<u>Acknowledgement</u>

[t][][Set ID][][OK][Data][x]

16. Key (Command:m c)

To send IR remote key code.

Transmission

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

Data: Key code (Refer to P.57)

<u>Acknowledgement</u>

[c][][Set ID][][OK][Data][x]

IR Codes

How to Connect

Connect your wired remote control to the Remote Control port on the TV.

Remote Control IR Codes

► Output waveform

Single pulse, modulated with 37.917KHz signal at 455KHz

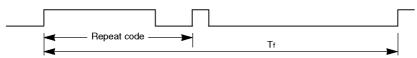


► Configuration of frame

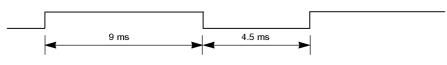
• 1st frame

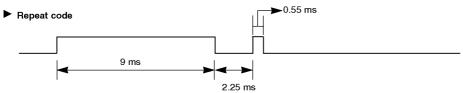
Lead code		Lov	v stom	ı co	de					Hig cus	h tom	co	de						D	ata	coc	le					D	ata	cod	le			
	C0	C1	C2	СЗ	C4	C5	C6	C7	C0	C1	C2	СЗ	C4	C5	C6	C7	D0	D1	D2	DЗ	D4	D5	D6	D7	D0	D1	D2	D3	D4	D5	D6	D7	

• Repeat frame

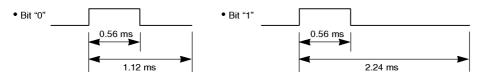


► Lead code





► Bit description



Frame interval : Tf

The waveform is transmitted as long as a key is depressed.



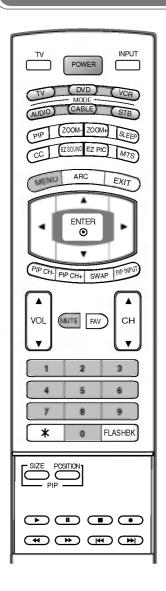
Code (Hexa)	Function	Note
OF	TV	Remote Control Button
08	POWER	Remote Control Button
0B	INPUT	Remote Control Button
C4	POWER ON	Discrete IR Code (Only Power On)
C5	POWER OFF	Discrete IR Code (Only Power OFF)
60	PIP	Remote Control Button
5D	ZOOM-	Remote Control Button
5C	ZOOM+	Remote Control Button
0E	SLEEP	Remote Control Button
39	CC	Remote Control Button
52	EZ SOUND	Remote Control Button
4D	EZ PIC	Remote Control Button
0A	MTS	Remote Control Button
43	MENU	Remote Control Button
79	ARC	Remote Control Button
5B	EXIT	Remote Control Button
07	◀	Remote Control Button
06	>	Remote Control Button
40	A	Remote Control Button
41	▼	Remote Control Button
44	ENTER	Remote Control Button
72	PIP CH-	Remote Control Button
71	PIP CH+	Remote Control Button
63	SWAP	Remote Control Button
61	PIP INPUT	Remote Control Button
02	VOL ▲	Remote Control Button
03	VOL ▼	Remote Control Button
00	CH ▲	Remote Control Button
01	CH ▼	Remote Control Button
09	MUTE	Remote Control Button
1E	FAV	Remote Control Button
10~19	Number Key 0~ 9	Remote Control Button
1A	FLASHBK	Remote Control Button
64	SIZE	Remote Control Button
62	POSITION	Remote Control Button

Programming the Remote

The remote control is a multi-brand or universal remote control. It can be programmed to operate most remote-controllable devices of other manufacturers.

Note that the remote control may not control all models of other brands.

Programming a code into a remote mode



- Test your remote control.

 To find out whether your remote control can operate the component without programming, turn on the component such as a VCR and press the corresponding MODE button (VCR) on the remote control, while illuminating on the selected component. Test the POWER button to see if the component responds properly. If not, the remote requires programming to operate the device.
- **2** Turn on the component to be programmed, then press the corresponding **MODE** button on the remote control.
- 3 Press the MENU and MUTE buttons simultaneously for 2 seconds, the button selected component lights on the remote control. If you don't press any button for 20 seconds, the button selected component will turn off on the remote control. At a moment, you have to repeat from step 2.
- 4 Enter a code number using the number buttons on the remote. When pressing the button, the light is blinked at a time. Programming code numbers for the corresponding component can be found on the following pages. Again, if the code is correct, the device will turn off.
- **5** Press the **MENU** button to store the code. After blinking twice, this code is stored.
- 6 Test the remote control functions to see if the component responds properly. If not, repeat from step 2.

Programming Codes

VCRs

Brand	Codes	Brand	Codes	Brand	Codes	Brand	Codes
AIWA	034	KENWOOD	014 034 039 043	PORTLAND	108	TATUNG	039 043
AKAI	016 043 046 124		047 048	PULSAR	072	TEAC	034 039 043
	125 146	LG (GOLDSTAR)	001 012 013 020	QUARTZ	011 014	TECHNICS	031 033 070
AMPRO	072	, ,	101 106 114 123	QUASAR	033 066 075 145	TEKNIKA	019 031 033 034
ANAM	031 033 103	LLOYD	034	RCA	013 020 033 034		101
AUDIO DYNAMICS	012 023 039 043	LXI	003 009 013 014		040 041 062 063	THOMAS	034
BROKSONIC	035 037 129		017 034 101 106		107 109 140 144	TMK	006
CANON	028 031 033	MAGIN	040		145 147	TOSHIBA	008 013 042 047
CAPEHART	108	MAGNAVOX	031 033 034 041	REALISTIC	003 008 010 014		059 082 112 131
CRAIG	003 040 135		067 068		031 033 034 040	TOTEVISION	040 101
CURTIS MATHES	031 033 041	MARANTZ	012 031 033 067		053 054 101	UNITECH	040
DAEWOO	005 007 010 064		069	RICO	058	VECTOR RESEARCH	012
	065 108 110 111	MARTA	101	RUNCO	148	VICTOR	048
	112 116 117 119	MATSUI	027 030	SALORA	014	VIDEO CONCEPTS	012 034 046
DAYTRON	108	MEI	031 033	SAMSUNG	032 040 102 104	VIDEOSONIC	040
DBX	012 023 039 043	MEMOREX	003 010 014 031		105 107 109 112	WARDS	003 013 017 024
DYNATECH	034 053		033 034 053 072		113 115 120 122		031 033 034 040
ELECTROHOME	059		101 102 134 139		125		053 054 131
EMERSON	006 017 025 027	MGA	045 046 059	SANSUI	022 043 048 135	YAMAHA	012 034 039 043
	029 031 034 035	MINOLTA	013 020	SANYO	003 007 010 014	ZENITH	034 048 056
	036 037 046 101	MITSUBISHI	013 020 045 046		102 134		058 072 080 101
	129 131 138 153		049 051 059 061	SCOTT	017 037 112 129		
FISHER	003 008 009 010		151		131		
FUNAI	034	MTC	034 040	SEARS	003 008 009 010		
GE	031 033 063 072	MULTITECH	024 034		013 014 017 020		
	107 109 144 147	NEC	012 023 039 043		031 042 073 081		
GO VIDEO	132 136		048		101		
HARMAN KARDON	012 045	NORDMENDE	043	SHARP	031 054 149		
HITACHI	004 018 026 034	OPTONICA	053 054	SHINTOM	024		
	043 063 137 150	PANASONIC	066 070 074 083	SONY	003 009 031 052		
INSTANTREPLAY	031 033		133 140 145		056 057 058 076		
JCL	031 033	PENTAX	013 020 031 033		077 078 149		
JCPENNY	012 013 015 033		063	SOUNDESIGN	034		
	040 066 101	PHILCO	031 034 067	STS	013		
JENSEN	043	PHILIPS	031 033 034 054	SYLVANIA	031 033 034 059		
JAC	012 031 033 043		067 071 101		067		
	048 050 055 060	PILOT	101	SYMPHONIC	034		
	130 150 152	PIONEER	013 021 048	TANDY	010 034		

Cable Box

Brand	Codes	Brand	Codes	Brand	Codes	Brand	Codes
ABC	003 004 039 042	GOLDEN CHANNEL	030		065 085 090	SPRUCER	047 078
	046 052 053	HAMLIN	049 050 055	PIONEER	034 051 052 063	STARCOM	002 004 008 009
AJIN	112	HITACHI	052 055		076	STARGATE	008 030
ANTRONIK	014	HOSPITALITY	070 077	POST NEWS WEEK	016	TADIRAN	030
ARCHER	005 007 014 024	JERROLD	002 003 004 008	PRUCER	059	TAEKWANG	110
CABLE STAR	026		009 010 052 069	PTS	011 048 071 072	TAIHAN	105
CENTURION	092		074		073 074	TANDY	017
CENTURY	007	LG (GOLDSTAR)	001 106 101 005	PULSAR	100	TEXSCAN	029
CITIZEN	007	M-NET	037	RCA	047	тосом	039 040 056
COLOUR VOICE	065 090	MACOM	033	REGAL	049 050	TOSHIBA	100
COMBANO	080 081	MAGNAVOX	010 012 064 079	REGENCY	057	UNIKA	007 014 024
COMTRONICS	019 030	MEMOREX	100	REMBRANT	025	UNITED CABLE	004 053
DIAMOND	023	MOVIE TIME	028 032	SAMSUNG	102 107 030 068	UNIVERSAL	005 007 014 024
EAGLE	020 030 040	NSC	015 028 038 071	SCIENTIFIC ATLANTA	003 011 041 042		026 027 032 035
EASTERN	057 062 066		073		043 045 046	VIEWSTAR	012 015 018 086
ELECTRICORD	032	OAK	016 031 037 053	SHERITECH	022		087 088 089
GE	072	PANASONIC	044 047	SIGNAL	030	ZENITH	100 114 060 093
GEMINI	008 022 025 054	PARAGON	100	SIGNATURE	052		
GI	052 074	PHILIPS	006 012 013 020	SL MARX	030		

Digital Cable/Satellite Box

Brand	Codes	Brand Codes		Brand	Codes	Brand	Codes
ALPHASTAR DSR	123	133 13	34	PACE SKY SATELLITE	143		088 090 107 130
AMPLICA	050	GENERAL INSTRUMENT 003 00	04 016 029	PANASONIC	060 142		137
BIRDVIEW	051 126 129	031 05	59 101	PANSAT	121	TOSHIBA	002 127
CHANNEL MASTER	013 014 015 018	HITACHI 139 14	40	PERSONAL CABLE	117	UNIDEN	016 025 042 043
	036 055	HOUSTON TRACKER 033 03	37 039 051	PHILIPS	071		044 045 048 049
CHAPARRAL	008 009 012 077	057 10	04	PICO	105		078 079 080 086
CITOH	054	HUGHES 068		PRESIDENT	019 102		101 135 136
CURTIS MATHES	050 145	JANIEL 060 14	47	PRIMESTAR	030 110 111	VIEWSTAR	115
DRAKE	005 006 007 010	JERROLD 061		PROSAT	072	WINEGARD	128 146
	011 052 112 116	KATHREIN 108		RCA	066 106	ZENITH	081 082 083 084
	141	LEGEND 057		REALISTIC	043 074		091 120
DX ANTENNA	024 046 056 076	LG 001		SAMSUNG	123		
ECHOSTAR	038 040 057 058	LUTRON 132		SATELLITE SERVICE CO	028 035 047 057		
	093 094 095 096	LUXOR 062 14	14		085		
	097 098 099 100	MACOM 010 05	59 063 064	SCIENTIFIC ATLANTA	032 138		
	122	065		SONY	103		
ELECTRO HOME	089	MEMOREX 057		STARCAST	041		
EUROPLUS	114	NEXTWAVE 028 12	24 125	SUPER GUIDE	020 124 125		
FUJITSU	017 021 022 027	NORSAT 069 07	70	TEECOM	023 026 075 087		

Audio

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

DVD

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

Troubleshooting Checklist

The operation does not work normally.							
The remote control doesn't work	 Check to see if there is any object between the product and the remote control causing obstruction. Are batteries installed with correct polarity (+ to +, - to -)? Correct remote operating mode set: TV, VCR etc.? Install new batteries. 						
Power is suddenly turned off	 Is the sleep timer set? Check the power control settings. Power interrupted No broadcast on station tuned with Auto off activated. 						

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

The audio function does not work.			
Picture OK & No sound	 Press the VOL or VOLUME button. Sound muted? Press MUTE button. Try another channel. The problem may be with the broadcast. Are the audio cables installed properly? 		
No output from one of the speakers	• Adjust Balance in menu option.		
Unusual sound from inside the product	 A change in ambient humidity or temperature may result in an unusual noise when the product is turned on or off and does not indicate a fault with the product. 		

There is a problem in PC mode. (Only PC mode applied)			
The signal is out of range.	 Adjust resolution, horizontal frequency, or vertical frequency. Check it whether the signal cable is connected or loose. Check the input source. 		
Vertical bar or stripe on back- ground & Horizontal Noise & Incorrect position	• Work the Auto configure or adjust clock, phase, or H/V position.		
Screen color is unstable or single color	Check the signal cable. Reinstall the PC video card.		

Product Specifications

MODEL	26LX2R	32LX2R	
Power Requirement	AC 100-240V~ 50/60Hz 1.5A	AC 100-240V~ 50/60Hz 2.0A	
Power Consumption	115W	140W	
Television System	NTSC, PAL - M/N		
Program Coverage	VHF 2 ~ 13, UHF 14 ~ 69, Cable 1 ~ 125		
External Antenna Impedance	75 Ω		

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

