PLASMA TV

OWNER'S MANUAL

MODELS: 50PC1DR | 50PC1DRA
50PC1DR-UA | 50PC1DRA-UA

LCD TV

OWNER'S MANUAL

MODELS: 42LB1DR | 42LB1DRA

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 : 38289U0512A

Warning

CAUTION

RISK OF ELECTRIC SHOCK
DO NOT OPEN

WARNING:

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.

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 Corporation. Unauthorized modification could void the user’s authority to operate this product.

U.S.A. only ----------

COMPLIANCE:

The responsible party for this product’s compliance is:
LG Electronics U.S.A., Inc.
1000 Sylvan Avenue, Englewood Cliffs, NJ 07632
Phone: 1-201-816-2000
http://www.lgusa.com

Safety Instructions

WARNING :

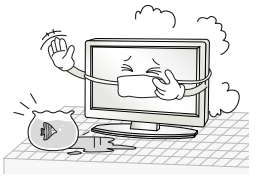
To Reduce The Risk Of Fire Or Electric Shock, Do Not Expose This Apparatus To Rain Or Moisture.

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

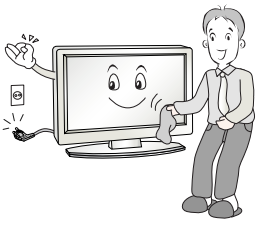
IMPORTANT SAFETY INSTRUCTIONS

1. Read these instructions.
2. Keep these instructions.
3. Heed all warnings.
4. Follow all instructions.

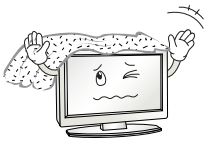
5. Do not use this apparatus near water.



6. Clean only with a dry cloth.



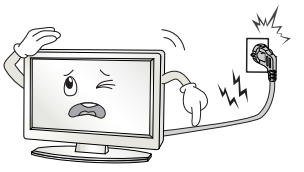
7. Do not block any of the ventilation openings. Install in accordance with the manufacturer's instructions.



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 is provided for your safety. When the provided plug does not fit into your outlet, consult an electrician for replacement of the obsolete outlet.

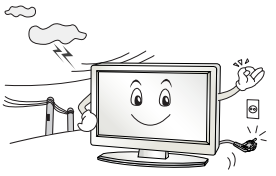
10. Protect the power cord from being walked on or pinched particularly at plugs, convenience receptacles, and the point where they exit from the apparatus.



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

12. Use only with a 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.

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

Note

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

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.

On Disposal

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

	Official term for an HDTV that conforms to the plug-and-play digital cable TV standard using POD (point of deployment) access cards, also called CableCARDs. Users can plug the cable directly into an HDTV set, then enjoy HDTV and digital cable without having to use a separate set-top box.
	Manufactured under license from Dolby Laboratories. “Dolby” and the double-D symbol are trademarks of Dolby Laboratories.
	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.
	High-definition television. High-resolution digital television broadcast and playback system composed of roughly a million or more pixels, 16:9 aspect-ratio screens, and AC3 digital audio. A subset of digital television, HDTV formats include 1080i and 720p resolution.
	HDMI™, the HDMI logo and High-Definition Multimedia Interface is a trademark or registered trademark of HDMI Licensing."
	LG's own special digital image generator. It consists of full digital image processor, APM mode & 6 different main picture quality factors.
	Manufactured under license from BBE Sound, Inc.

TV Guide On Screen Notices for U.S.A.

Trademark Notice

In the United States, TV GUIDE and other related marks are registered marks of Gemstar-TV Guide International, Inc. and/or one of its affiliates. In Canada, TV GUIDE is a registered mark of Transcontinental Inc., and is used under license by Gemstar-TV Guide International, Inc.

License Notice

The TV Guide On Screen system is manufactured under license from Gemstar-TV Guide International, Inc. and/or one of its affiliates.

Patent Notice

The TV Guide On Screen system is protected by one or more of the following issued United States patents 6,498,895, 6,418,556, 6,331,877; 6,239,794; 6,154,203; 5,940,073; 4,908,713; 4,751,578; 4,706,121.

Use of the CableCARD™ TradeMark.

“CableCARD™ is a trademark of Cable Television Laboratories, Inc.”

Digital Cable Compatibility

This digital television is capable of receiving basic analog, digital basic and digital premium cable television programming by direct connection to a cable system providing such programming. A security card provided by your cable operator is required to view encrypted digital programming. Cable operator enhanced program (For example, electronic program guide provided by the cable operator), and data enhanced television service may require the use of a set top box. For more information contact your local cable operator.

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Introduction

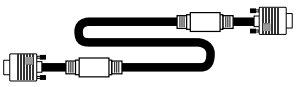
Accessories

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.

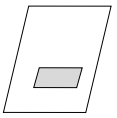
Power Cord

75Ω Round Cable

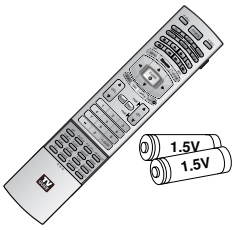
G-LINK Cable



D-sub 15 pin cable



Owner's Manual



Remote Control / Batteries

50PC1DR / 50PC1DRA Only

2-Wall brackets

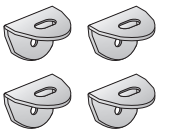
2-eye-bolts

42LB1DR / 42LB1DRA Only

Polishing Cloth
Polish the screen with the cloth.

Twister Holder
Arrange the wires with the twister holder.

2-TV Bracket Bolts

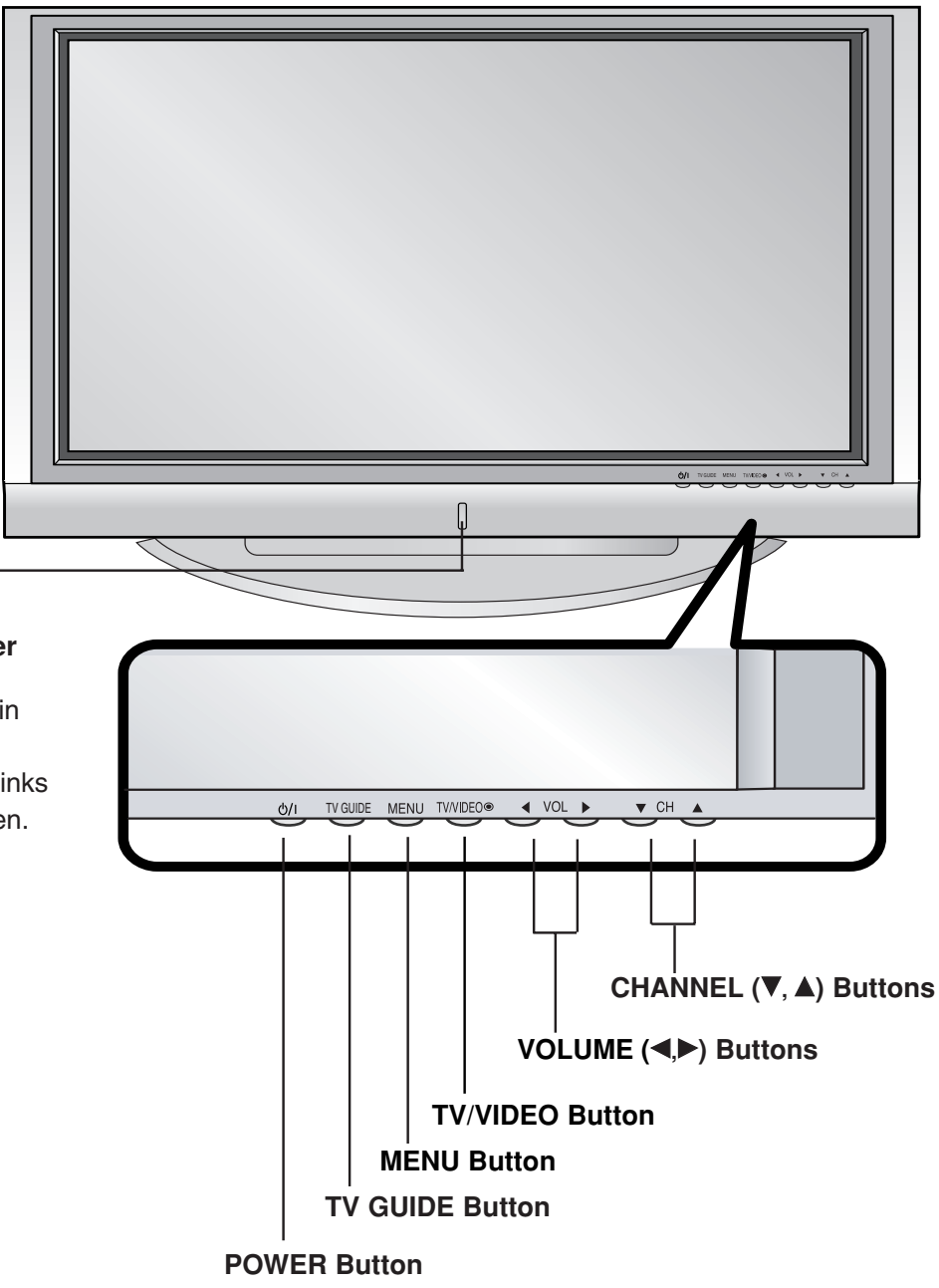


2-TV Brackets,
2-Wall Brackets

Controls (Model Name: 50PC1DR/50PC1DRA)

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

Front Panel Controls



Remote Control Sensor/Power Standby Indicator
Illuminates red when the TV is in standby mode.
When the TV is switched on, blinks green and then illuminates green.

CHANNEL (▼, ▲) Buttons

VOLUME (◄,►) Buttons

TV/VIDEO Button

MENU Button

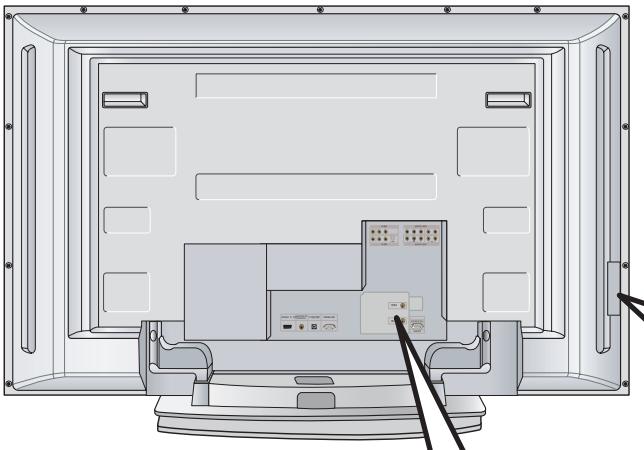
TV GUIDE Button

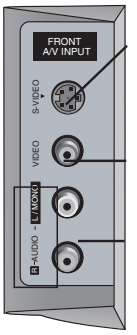
POWER Button

Connection Options (Model Name: 50PC1DR / 50PC1DRA)

- Here shown may be somewhat different from your TV.

Back Connection Panel





S-VIDEO Input
A connection available to provide better picture quality than the video input.

VIDEO Input
Connects the video signal from a video device.

AUDIO Input
Use to connect to hear stereo sound from an external device.

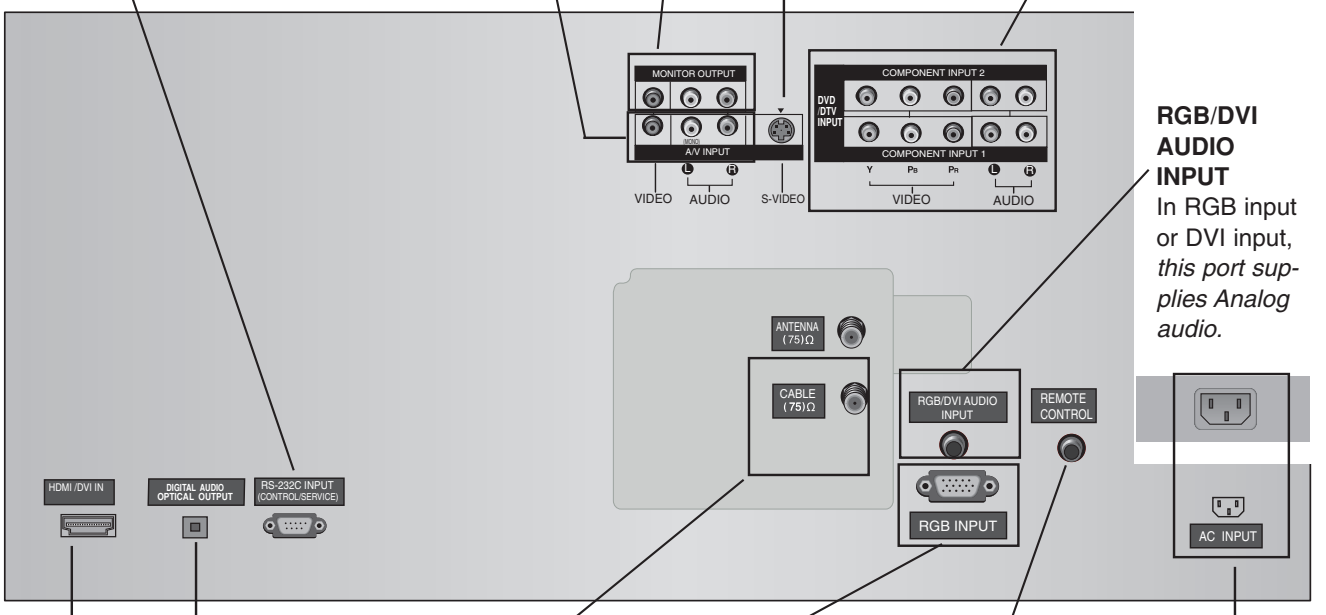
RS-232C INPUT (CONTROL/SERVICE) PORT
Connect to the RS-232C port on a PC.

Audio/Video Input
Connect audio/video output from an external device to these jacks.

Monitor Output
Connect a second TV or Monitor.

S-Video Input
Connect S-Video out from an S-VIDEO device to the S-VIDEO input.

DVD/DTV Input (Component 1-2)
Connect a component video/audio device to these jacks.



RGB/DVI AUDIO INPUT
In RGB input or DVI input, *this port supplies Analog audio.*

HDMI/DVI (VIDEO)INPUT
connect a DVI(Video) signal to HDMI/DVI.

Digital Audio Output
Connect digital audio from various types of equipment.
***Note**: In standby mode, this port will not work.*

Antenna Input
Connect over-the-air signals to this jack.

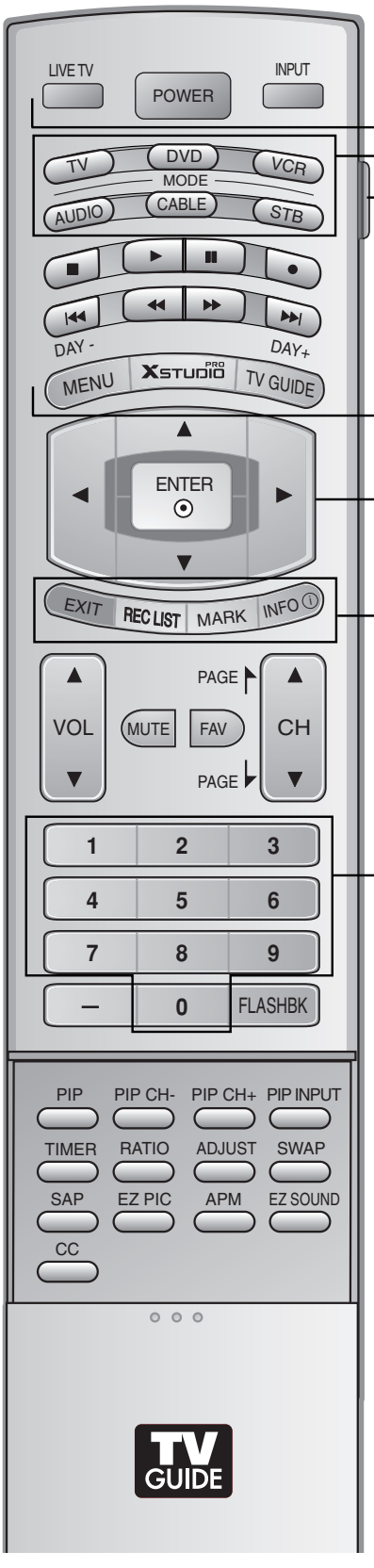
CABLE Input
Connect cable signals to this jack.

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

Remote Control Port
Connect your wired remote control here.

Power Cord Socket
This TV operates on an AC power. The voltage is indicated on the Specifications page. Never attempt to operate the TV on DC power.

Remote Control Key Functions



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

LIVE TV
Rotates the input mode between Antenna and Cable. In Video1-2, Component 1-2, RGB-DTV (or RGB-PC), HDMI/DVI, and IEEE1394 input sources, screen returns to the last TV channel.

INPUT (Refer to p.17)
External input modes rotate in regular sequence: Antenna, Cable, Video1-2, Component 1-2, RGB-DTV (or RGB-PC), HDMI/DVI). *(Video 1-2, Component 1-2 input sources are linked automatically, Only if these are connected)*

MODE
Selects the remote operating mode: TV, VCR, DVD, CABLE, STB or AUDIO.

LIGHT
Illuminates the remote control buttons.

MENU
Brings up the main menu to the screen. Enters or exits a Panel Menu in the TV Guide On Screen system.

TV GUIDE
Brings up the TV Guide On Screen system to the screen.

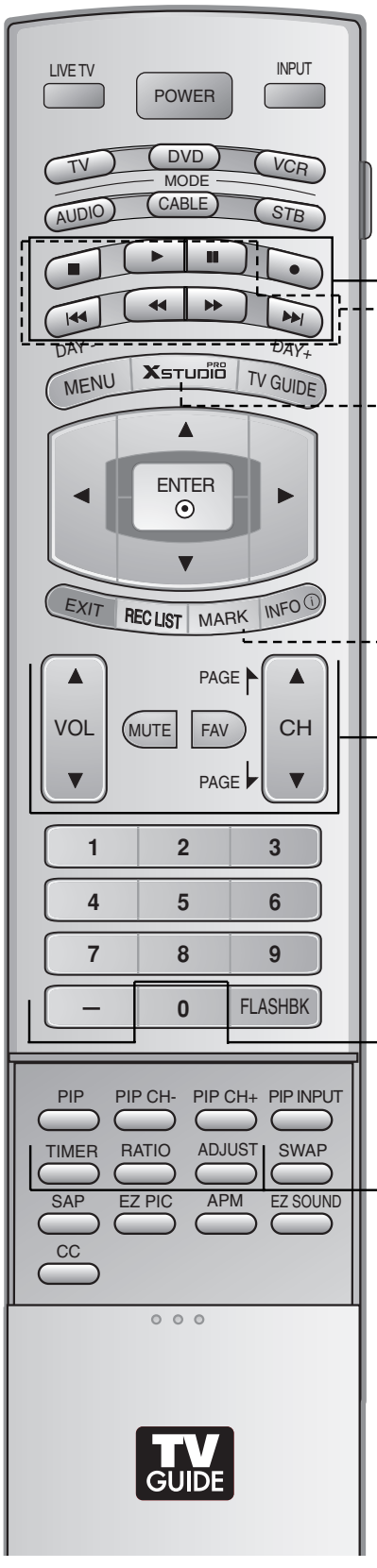
THUMBSTICK (Up/Down/Left/Right/ENTER)
Allows you to navigate the on-screen menus and adjust the system settings to your preference.

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

REC LIST
Appear the thumbnail recorded list.

INFO (Refer to p.93)
When you watch the TV, information displays on top of the screen. Not available in Component 1-2, RGB and HDMI/DVI mode.

NUMBER BUTTONS



VCR/DVD BUTTONS
Controls some video cassette recorders or DVD players when you have already selected DVD or VCR mode button.

DAY + / DAY-
Moves forward or backward in 24 hour increments.

XSTUDIO PRO Mode Control Buttons
Controls the XSTUDIO PRO Mode.
Use for DVR record or trick play.
For further details, see the 'XSTUDIO PRO' or '**DVR**' section.

XSTUDIO PRO
Enter to the XSTUDIO PRO Mode.

MARK
Selects a recorded lists you want to view or play in XSTUDIO PRO mode.

VOLUME UP/DOWN
Increases/decreases the sound level.

CHANNEL UP/DOWN
Selects available channels found with EZ scan and Manual scan.

PAGE UP/DOWN
Moves from one full set of screen information to the next one.

MUTE (Refer to p.18)
Switches the sound on or off.

FAV
Use to scroll the Favorite channels.

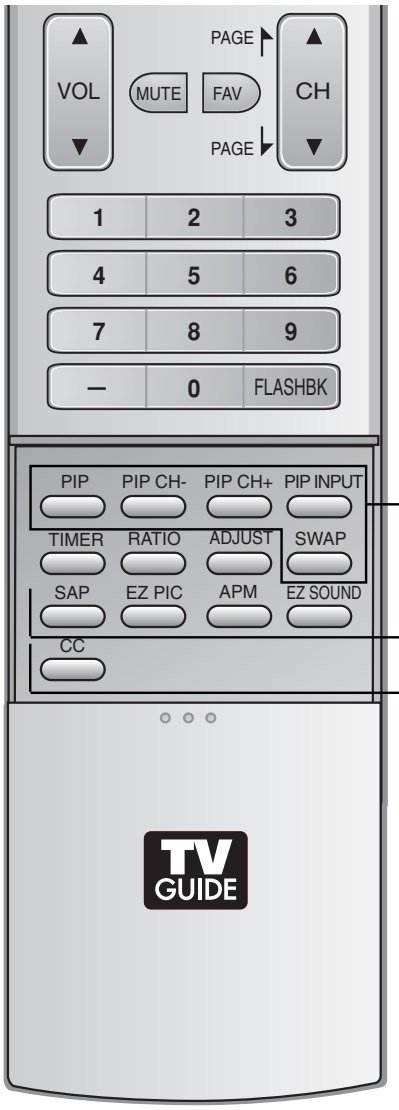
— (DASH)
Used to enter a program number for multiple program channels such as 2-1, 2-2,etc.

FLASHBK
Returns to the last channel viewed.

TIMER (Refer to p.82)
Lets you select the amount of time before your TV turns itself off automatically.

RATIO (Refer to p.84)
Changes the aspect ratio.

ADJUST (Refer to p.35)
Adjusts screen position, size, and phase in PC mode.



PIP (Refer to p.94)
Switches between PIP, POP (Picture-out-of-Picture) and Twin picture modes. Switches the video window locking or unlocking in the Listings Grid.

PIP CH-/PIP CH+ (Refer to p.94)
Changes to next higher/lower PIP channel.

PIP INPUT (Refer to p.94)
Selects the input source for the sub picture in PIP/Twin picture mode.

SWAP (Refer to p.95)
Exchanges the main/sub images in PIP/Twin picture mode.

SAP (Refer to p.79)
Selects MTS sound: Mono, Stereo, and SAP in analog mode. Change the audio language in DTV mode.

EZ PIC (Refer to p.75)
Selects a factory preset picture mode depending on the viewing environment.

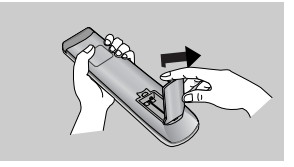
APM (Refer to p.75)
Concurrently, compare with the Daylight, Normal, Night Time and Custom on the screen.

EZ SOUND (Refer to p.78)
Selects the sound appropriate for the program's character.

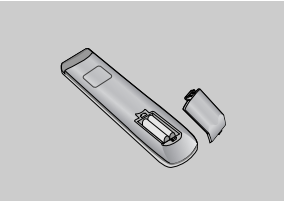
CC (Refer to p.86)
Select a closed caption: Off, CC1~4, Text1~4.

Installing Batteries

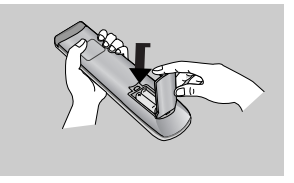
1 Open the battery compartment cover on the back side.



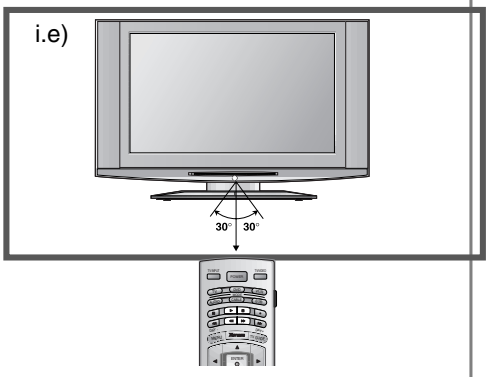
2 Insert two batteries in correct polarity (+ with +, - with -). Don't mix old or used batteries with new ones.



3 Close the cover.



i.e)



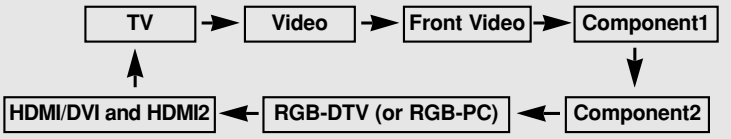
* Use a remote control 7 meter distance and 30 degree (left/right) within the receiving unit scope.

* Dispose of used batteries in a recycle bin to prevent environment.

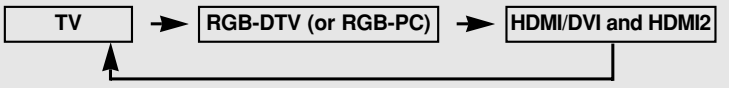
Auto Link

- Only, display the connected external equipment list on the screen. (Not connected external equipment is marked to deactivate.)
- At this time, if you press the **ENTER** button, change the main input to the active external equipment.

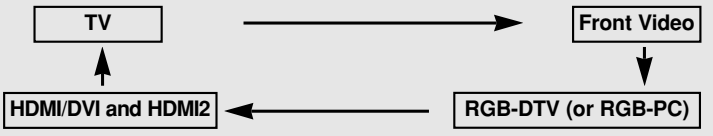
1. When every external equipment is connected:



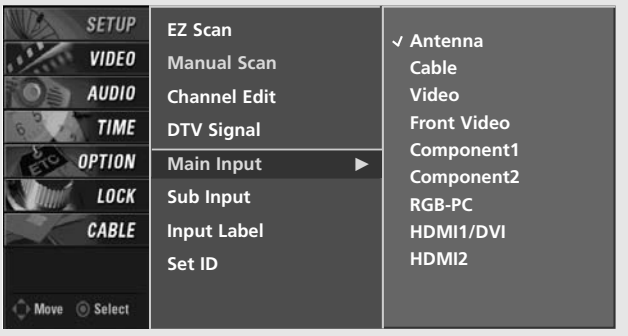
2. When any external equipment is not connected:



3. When some External Equipment is connected:
(ex: When connected to Video 2)

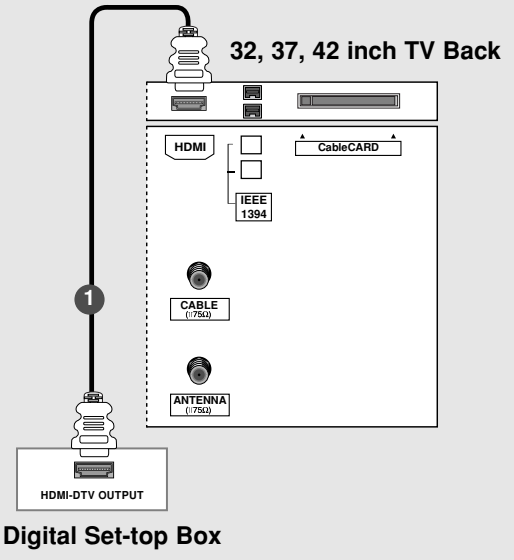


- You can also select **Main Input** in the **SETUP** menu.

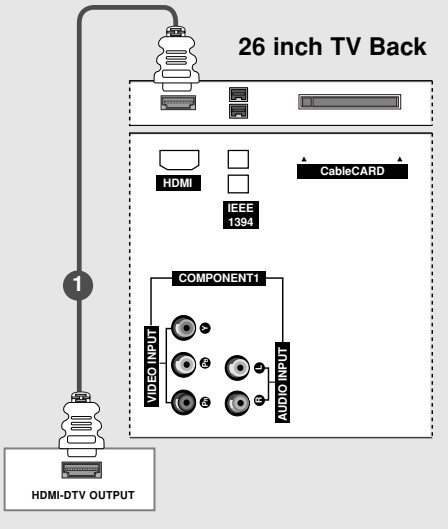


- **Antenna**: Select it when watching the TV/DTV.
- **Cable**: Select it when watching the CATV/CADTV.
- **Video**, **Front Video**: Select it when watching the VCR or external equipment.
- **Component 1-2**: Select it when using the DVD or the Digital set-top box depend on connector.
- **RGB-PC / RGB-DTV**: Select it when using PC or Digital set-top box depend on connector.
- **HDMI / DVI**, **HDMI2**: Select it when using DVD, PC or Digital set-top box depend on connector.

When connecting with a HDMI cable



Digital Set-top Box



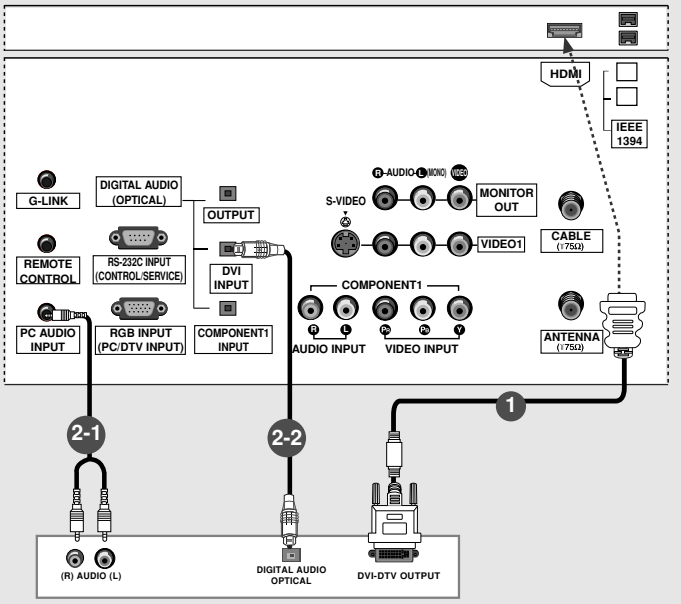
Digital Set-top Box

1. Connect the HDMI output of the digital set-top box to the **HDMI** jack on the set.
2. Select **HDMI**/**DVI** input source with using the **TV**/**VIDEO** button on the remote control.
3. Turn on the digital set-top box. (Refer to the owner's manual for the digital set-top box.)

- TV can receive the video and audio signal simultaneously with using a HDMI cable.
- If the digital set-top box supports Auto HDMI function, output resolution of the digital set-top box will be automatically set to 1280x720p.
- If the digital set-top box 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 digital set-top box to 1280x720p.

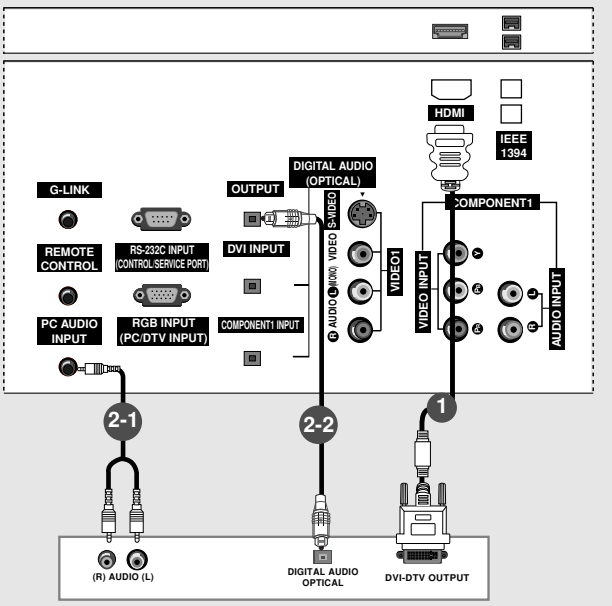
When connecting with a HDMI to DVI cable

32, 37, 42 inch TV Back



Digital Set-top Box

26 inch TV Back



Digital Set-top Box

Select 2-1 or 2-2 , depending on your digital set-top box connector.

1 Connect the DVI output of the digital set-top box to the **HDMI** jack on the set.

2-1 Connect the audio output of the digital set-top box to the **PC AUDIO INPUT** jack on the set.

2-2 Connect the optical audio output of the digital set-top box to the **DIGITAL AUDIO DVI INPUT** jack on the set.

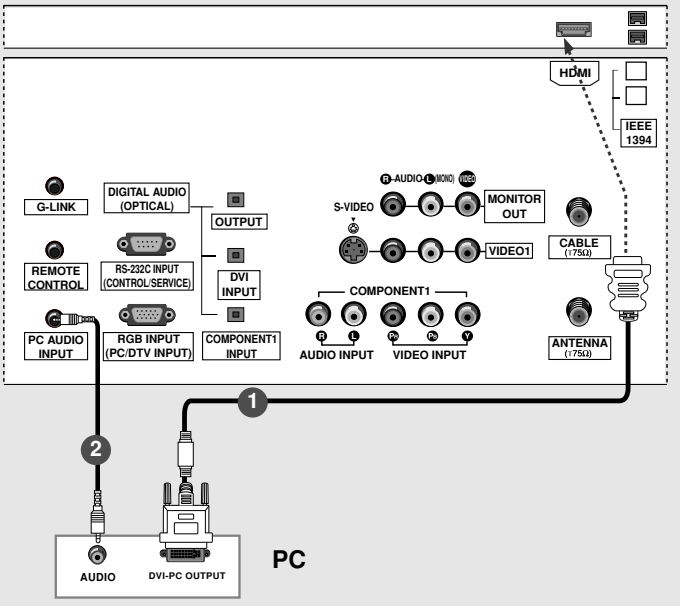
4 Turn on the digital set-top box. (Refer to the owner's manual for the digital set-top box.)

5 Select **HDMI**/**DVI** input source with using the **TV**/**VIDEO** button on the remote control.

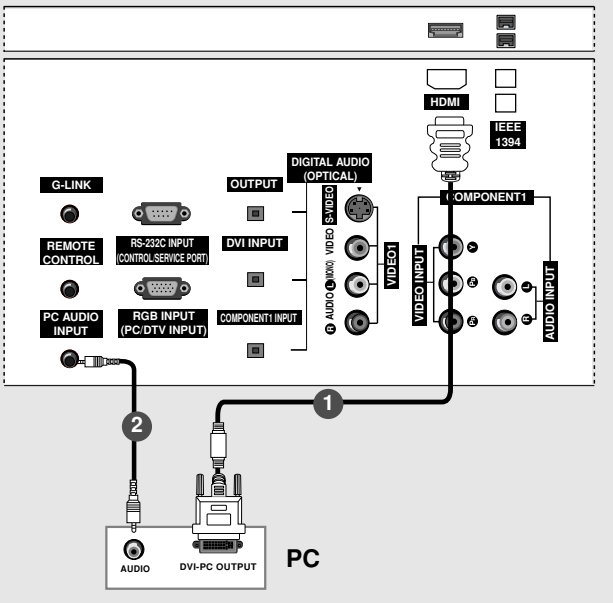
- If the digital set-top box has a DVI output and no HDMI output, a separated audio connection is necessary.
- If the digital set-top box supports Auto DVI function, the output resolution of the digital set-top box will be automatically set to 1280x720p.
- If the digital set-top box does not support Auto DVI, you need to set the output resolution appropriately. To get the best picture quality, adjust the output resolution of the digital set-top box to 1280x720p.

When connecting with a HDMI to DVI cable

32, 37, 42 inch TV Back



26 inch TV Back



1. Connect the DVI output of the PC to the **HDMI** jack on the set.
2. Connect the PC audio output to the **PC AUDIO INPUT** jack on the set.
3. Turn on the PC and the set.
4. Select **HDMI**/**DVI** input source with using the **TV**/**VIDEO** button on the remote control.

- If the PC has a DVI output and no HDMI output, a separated audio connection is necessary.
- If the PC does not support Auto DVI, you need to set the output resolution appropriately. To get the best picture quality, adjust the output resolution of PC graphics card's output resolution to 1024x768, 60Hz.

1. To get the best picture quality, adjust the PC graphics card to 1024x768, 60Hz.
2. Depending on the graphics card, DOS mode may not work if a HDMI to DVI Cable is in use.
3. When Source Devices connected with HDMI/DVI Input, output PC Resolution (VGA, SVGA, XGA), Position and Size may not fit to Screen.Press the ADJUST button to adjust the screen Position of TV SET and contact an PC graphics card service center.
4. When Source Devices connected with HDMI/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 HDMI/DVI Source Devices or contact your service center.
5. In case HDMI/DVI Source Devices is not connected Cable or poor cable connection, "NO SIGNAL" OSD display in HDMI/DVI Input. In case that Video Resolution is not supported TV SET output in HDMI/DVI Source Devices, "INVALID FORMAT" OSD display. Refer to the Manual of HDMI1/DVI Source Devices or contact your service center.
6. Check the image on your TV. There may be noise associated with the resolution, vertical pattern, contrast or brightness in PC, HDMI/DVI mode. If noise is present, change the PC or HDMI/DVI mode to another resolution, change the refresh rate to another rate or adjust the brightness and contrast on the menu until the picture is clear. If the refresh rate of the PC graphic card can not be changed, change the PC graphic card or consult the manufacturer of the PC graphic card.
7. Avoid keeping a fixed image on the TV's screen for a long period of time. The fixed image may become permanently imprinted on the screen.
8. The synchronization input form for Horizontal and Vertical frequencies is separate.

Supported Display Resolution (RGB-PC, HDMI/DVI Mode)

Resolution	Horizontal Frequency (kHz)	Vertical Frequency (Hz)
640x350	31.468	70.09
720x400	31.469	70.08
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
1280x768	60	60
1360x768	60	60

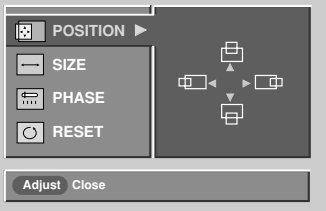
Supported Display Resolution (RGB-DTV, HDMI/DVI Mode)

Resolution	Horizontal Frequency (kHz)	Vertical Frequency (Hz)
1280x720p	45	60
1920x1080i	33.75	60
720x480p	31.5	60

Screen Setup for PC mode

- *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.*
- *In HDMI/DVI-PC mode, PHASE is not available.*
- *After connecting RGB-PC or HDMI/DVI to PC input and checking the screen quality.*

*** Adjustment for screen Position, Size, and Phase**



Mini Glossary

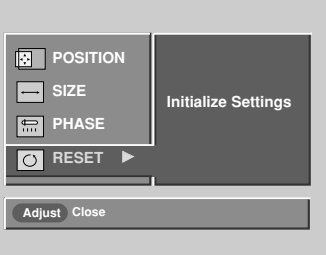
Position	This function is to adjust picture to left/right and up/down as you prefer.
Size	This function is to minimize any vertical bars or stripes visible on the screen background. And the horizontal screen size will also change.
Phase	This function allows you to remove any horizontal noise and clear or sharpen the image of characters.

1 Press the **ADJUST** button and then use ▲ / ▼ button to select **POSITION**, **SIZE**, or **PHASE**.

2 Press **ENTER** button and then use ▲ / ▼ / ◀ / ▶ buttons to make appropriate adjustments.
- The **PHASE** adjustment range is -16 ~ +16.
- The **SIZE** adjustment range is -50 ~ +50.

3 Press **ENTER** button.

*** Initializing (Reset to original factory values)**



- To initialize the adjusted values

1 Press the **ADJUST** button and then use ▲ / ▼ button to select the **RESET** option.

2 Press **ENTER** button and then use ◀ / ▶ button to select **Yes**.

3 Press **ENTER** button.

Operation

Basic operation

Turning on the TV

1. First, connect power cord correctly. At this moment, the TV switches to standby mode.

   In standby mode to turn TV on, press the ⏻/I (or **ON/OFF**), **INPUT**, **CH ▲ / ▼** button on the TV or press the **POWER**, **INPUT**, **CH ▲ / ▼**, Number (0 ~ 9) button on the remote control .

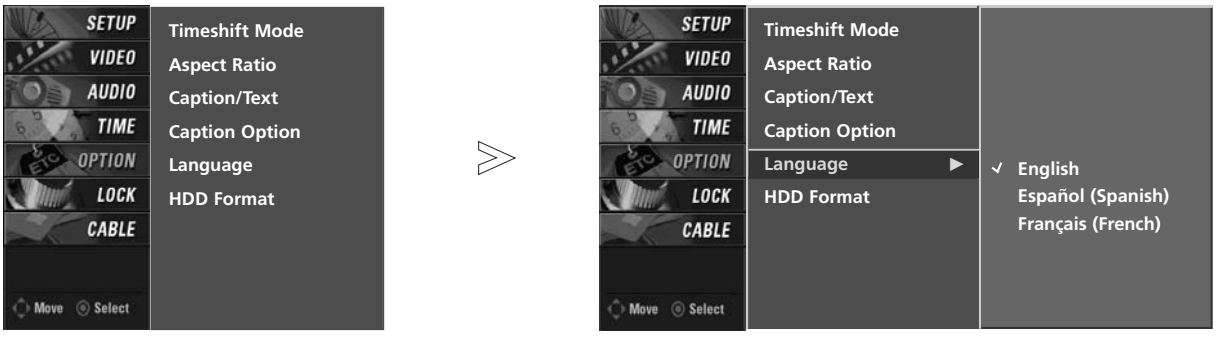
2. Select the viewing source by using **INPUT** button on the remote control.
   This TV is programmed to remember which power state it was last set to, even if the power cord is out.

3. When finished using the TV, press the **POWER** button on the remote control. The TV reverts to standby mode.

- If you intend to be away on vacation, disconnect the power plug from the wall power outlet.
- After turning on the TV, it will take up to a week for the TV Guide On Screen system to receive full listings data.
- When the TV is turned On, the TV Guide On Screen system is automatically displayed. The screen may be slightly delayed if the TV was unplugged and then powered On.

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.

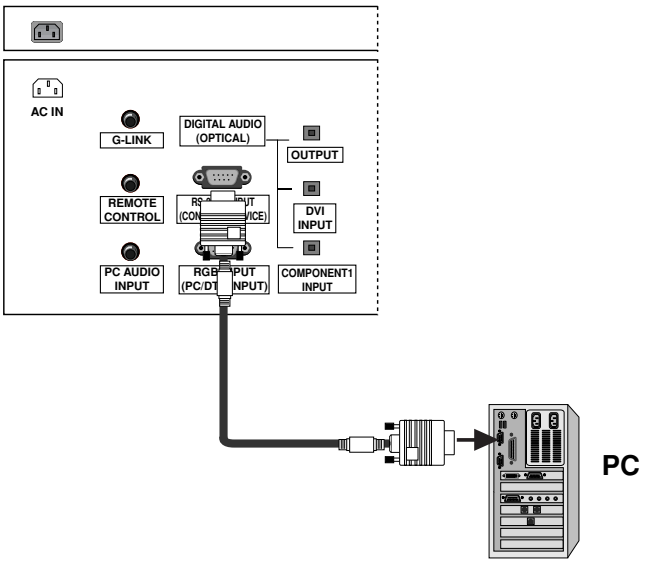
4 Press **EXIT** button to return to TV viewing or press **MENU** button to return to the previous menu.

External Control Device Setup

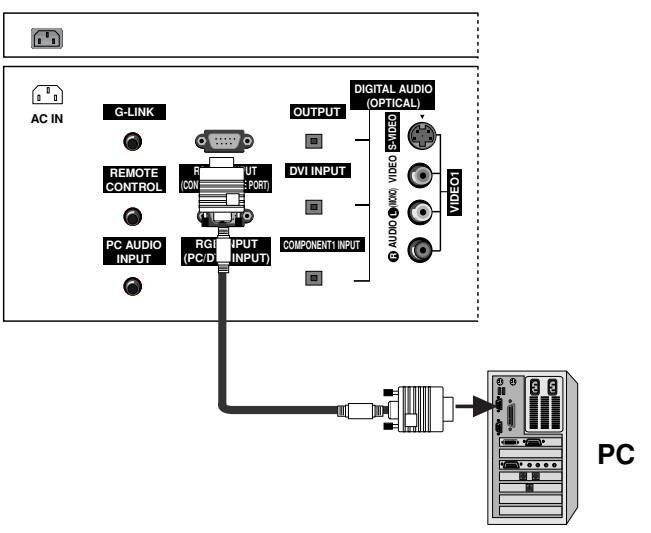
- Connect the RS-232C input jack to an external control device (such as a computer or an A/V control system) and control the Monitor's functions externally.
- Connect the serial port of the control device to the RS-232C jack on the TV back panel.
- RS-232C connection cables are not supplied with the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

RS-232C Setup

32, 37, 42 inch TV Back

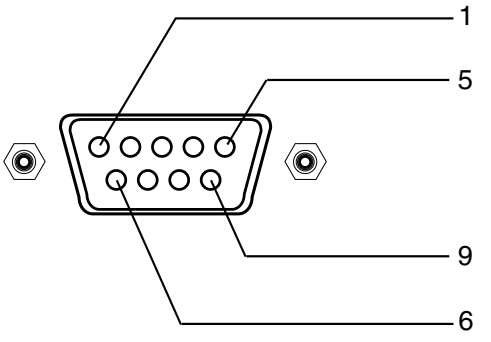


26 inch TV Back



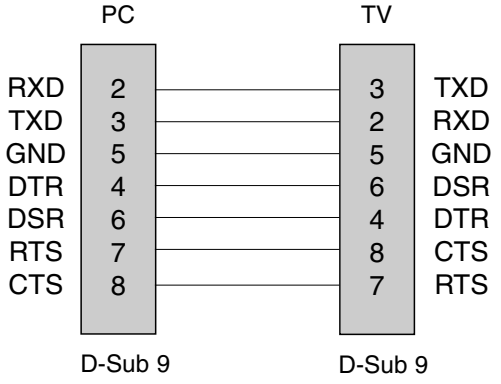
Type of Connector; D-Sub 9-Pin Male

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

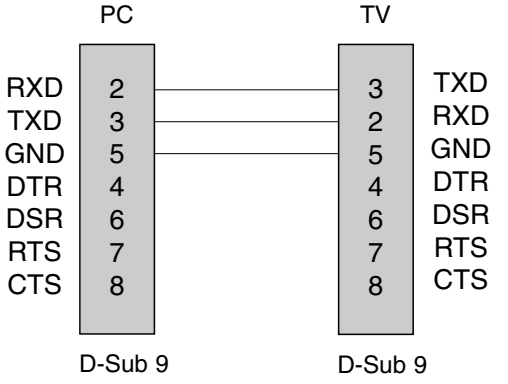


RS-232C Configurations

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



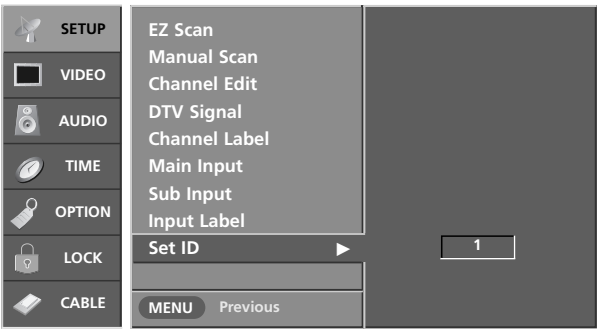
3-Wire Configurations
(Not standard)



Set ID

- Use this function to specify a TV ID number.
- Refer to 'Real Data Mapping'. See page 104.

1. Press the **MENU** button and then use ▲ / ▼ button to select the **SETUP** menu.
2. Press the ► button and then use ▲ / ▼ button to select **SET ID**.
3. Press the ► button and then use ▲ / ▼ 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 TV viewing or press **MENU** button to return to the previous menu.



Communication Parameters

- Baud rate : 9600 bps (UART)
- Data length : 8 bits
- Parity : None
- Stop bit : 1 bit
- Communication code : ASCII code

* Use a crossed (reverse) cable.

Command Reference List

	COMMAND 1	COMMAND 2	DATA (Hexadecimal)
01. Power	k	a	0 ~ 1
02. Input Select	k	b	0 ~ 8
03. Aspect Ratio	k	c	*
04. Screen Mute	k	d	0 ~ 1
05. Volume Mute	k	e	0 ~ 2
06. Volume Control	k	f	0 ~ 64
07. Contrast	k	g	0 ~ 64
08. Brightness	k	h	0 ~ 64
09. Color	k	i	0 ~ 64
10. Tint	k	j	0 ~ 64
11. Sharpness	k	k	0 ~ 64
12. OSD Select	k	l	0 ~ 1
13. Remote Control Lock Mode	k	m	0 ~ 1
14. PIP/POP/Twin Picture	k	n	0,1,2,5
15. PIP Position	k	q	0 ~ 3
16. Treble	k	r	0 ~ 64
17. Bass	k	s	0 ~ 64
18. Balance	k	t	0 ~ 64
19. Color Temperature	k	u	0 ~ 2
20. PIP Input Source	k	y	0 ~ 3
24. Input Select	x	b	*
25. PIP Input Select	x	y	*

Transmission / Receiving Protocol

Transmission

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

* [Command 1]: First command to control the set. (j or k)
* [Command 2]: Second command to control the set.
* [Set ID]: You can adjust the set ID to choose desired monitor ID number in Setup menu. Adjustment range is 1 ~ 99. When selecting Set ID '0', every connected the TV is controlled. Set ID is indicated as decimal (1~99) on menu and as Hexa decimal (0x0~0x63) on transmission/receiving protocol.
* [DATA]: To transmit 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
3: Wait more time

	COM-MAND 1	COM-MAND 2	DATA 0 (Hexadecimal)	DATA 1 (Hexadecimal)	DATA 2 (Hexadecimal)	DATA 3 (Hexadecimal)	DATA 4 (Hexadecimal)	DATA 5 (Hexadecimal)
21. Channel Tuning	m	a	01 ~ 87	01 ~ 87	00 ~ FE	00 ~ FE	00 ~ FE	00 ~ FE
22. Channel Add/Del	m	b	00 ~ 01					
23. Key	m	c	*					

01. Power (Command2:a)

► To control Power On/Off of the TV.

Transmission

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

Data 0 : Power Off 1 : Power On

Acknowledgement

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

* In a like manner, if other functions transmit 'FF' data based on this format, Acknowledgement data feedback presents status about each function.

02. Input Select (Command2:b) (Main Picture Input)

► To select input source for the TV.

Transmission

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

Data 0: DTV
1: Analog
2: Video 1
3: Video 2
4: Component 1
5: Component 2
6: RGB-DTV
7: RGB-PC
8: HDMI/DVI

Acknowledgement

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

03. Aspect Ratio (Command2:c) (Main picture format)

► To adjust the screen format.
You can also adjust the screen format using the RATIO button on remote control or in the Option menu.

Transmission

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

Data 1: Normal screen (4:3)
2: Wide screen (16:9)
3: Horizon
4: Zoom 1
5: Zoom 2
6: Auto (Set by program)
10: Cinema Zoom (1)
⋮
1F: Cinema Zoom (16)

Acknowledgement

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

04. Screen Mute (Command2: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)

Acknowledgement

[d][ ][Set ID][ ][OK][Data][x]

05. Volume Mute (Command2: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 off (Volume on)
1 : Volume mute on (Volume off)
2 : Volume mute on, Caption on

Acknowledgement

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

06. Volume Control (Command2: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

- Refer to 'Real data mapping' as shown below.

Acknowledgement

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

07. Contrast (Command2:g)

► To adjust screen contrast.
You can also adjust contrast in the Video menu.

Transmission

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

Data Min : 0 ~ Max : 64

- Refer to 'Real data mapping' as shown below.

Acknowledgement

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

08. Brightness (Command2:h)

► To adjust screen brightness.
You can also adjust brightness in the Video menu.

Transmission

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

Data Min : 0 ~ Max : 64

- Refer to 'Real data mapping' as shown below.

Acknowledgement

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

*** Real data mapping**

0 : Step 0
⋮
A : Step 10 (SET ID 10)
⋮
F : Step 15 (SET ID 15)
10 : Step 16 (SET ID 16)
⋮
64 : Step 100

*** Tint: R 50 ~ G 50**

09. Color (Command2:i)

▶ To adjust the screen color.
You can also adjust color in the Video menu.

Transmission

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

Data Min : 0 ~ Max : 64

• Refer to 'Real data mapping'. See page 104.

Acknowledgement

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

10. Tint (Command2:j)

▶ To adjust the screen tint.
You can also adjust tint in the Video menu.

Transmission

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

Data Red : 0 ~ Green : 64

• Refer to 'Real data mapping'. See page 104.

Acknowledgement

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

11. Sharpness (Command2:k)

▶ To adjust the screen sharpness.
You can also adjust sharpness in the Video menu.

Transmission

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

Data Min: 0 ~ Max: 64

• Refer to 'Real data mapping'. See page 104.

Acknowledgement

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

12. OSD Select (Command2:l)

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

Transmission

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

Data 0: OSD off 1: OSD on

Acknowledgement

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

13. Remote Control Lock Mode (Command2:m)

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

Transmission

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

Data 0: Lock off 1: Lock on

Acknowledgement

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

14. PIP/POP/Twin Picture (Command2:n)

▶ To control the PIP (Picture-in-Picture)/POP/Twin picture.
You can also control the PIP/POP/Twin picture using the PIP button on the remote control.

Transmission

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

Data 0: PIP off 2: Twin Picture
1: PIP 5: POP

Acknowledgement

[n][ ][Set ID][ ][OK][Data][x]

15. PIP Position (Command2:q)

▶ To select sub picture position for PIP.

Transmission

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

Data 0: Right down on screen
1: Left down on screen
2: Left up on screen
3: Right up on screen

Acknowledgement

[q][ ][Set ID][ ][OK][Data][x]

16. Treble (Command2:r)

▶ To adjust treble.
You can also adjust treble in the Audio menu.

Transmission

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

Data Min: 0 ~ Max: 64

• Refer to 'Real data mapping'. See page 104.

Acknowledgement

[r][ ][Set ID][ ][OK][Data][x]

17. Bass (Command2:s)

▶ To adjust bass.
You can also adjust bass in the Audio menu.

Transmission

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

Data Min: 0 ~ Max: 64

• Refer to 'Real data mapping'. See page 104.

Acknowledgement

[s][ ][Set ID][ ][OK][Data][x]

18. Balance (Command2:t)

▶ To adjust balance.
You can also adjust balance in the Audio menu.

Transmission

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

Data Min: 0 ~ Max: 64

• Refer to 'Real data mapping'. See page 104.

Acknowledgement

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

19. Color Temperature (Command2:u)

► To adjust color temperature.
You can also adjust color temperature in the Video menu.

Transmission

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

Data 0: Medium 1: Cool 2: Warm

Acknowledgement

[u][ ][Set ID][ ][OK][Data][x]

20. PIP Input Select (Command2:y)

► To select input source for sub picture in PIP/Twin picture mode.

Transmission

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

Data 0: DTV
1: Analog
2: Video 1
3: Video 2

Acknowledgement

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

21. Channel Tuning (Command: m a)

► To tune channel to following physical/major/minor number

Transmission

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

Data 0: Physical channel number (Transmit by Hexadecimal code)
* NTSC air: 02 ~ 45
NTSC cable: 01, 0E ~ 7D
ATSC air: 01 ~ 45
ATSC cable: 01 ~ 87

Data 1, 2: Major channel number(two part)/channel number(One part)
* Data1: High byte
Data2: Low byte
Two part channel number: Major number-Minor number
One part channel number: If the channel band is ATSC digital cable, it can be used. In case of using one part channel number, minor channel does not need.

Data 3, 4: Minor Channel Number
* Data3: High byte
* Data4: Low byte

Data 5:

7	Main/Sub Picture	6	Two/One Part Channel	5	Using Physical Channel	4 Reserved	3	2	1	0	Step
0	Main	0	Two	0	Use	x	0	0	0	0	NTSC Air
1	Sub	1	One	1	No Use	x	0	0	0	1	NTSC Cable
						x	0	0	1	0	ATSC Air
						x	0	0	1	1	ATSC cable_std
						x	0	1	0	0	ATSC cable_hrc
						x	0	1	0	1	ATSC cable_irc
						x	0	1	1	0	ATSC cable auto
						x	0	1	1	1	Reserved
						x	x	x	x	x	...
						x	1	1	1	1	Reserved

* All data are transmitted by Hexadecimal code
* Two/One part Channel: 6th bit
This bit is used in a cable-ready system.

*Using physical channel: 5th bit
If the channel band is NTSC air or NTSC cable, channel tuning can be done by only physical channel. In this case, using physical channel bit must be low(0).
But if the channel band is ATSC air or ATSC cable, there are two cases that physical channel enable or disable.
If the physical channel sending is meaningful, you should set this bit low(0). If the physical channel sending is meaningless, you should set this bit high(1).

Example)
1. Analog channel: NTSC cable, channel number(35), main picture
Command: ma 00 23 xx xx xx xx 01
attribute(0x01): main picture, two part(it's not mandatory), using physical channel, NTSC cable
'xx' data: don't care major and minor channel number in case analog channel tuning
2. Digital channel: ATSC air, channel number(don't know physical channel, major(30), minor(3)), sub picture
Command: ma 00 xx 00 1E 00 03 A2
attribute(0xA2): sub picture, two part, not using physical channel, ATSC air
'xx' data: don't care analog channel number in case digital channel tuning.
3. Digital channel: ATSC air, channel number(physical(20), major(30), minor(3)), sub picture
Command: ma 00 14 00 1E 00 03 82
attribute(0x82): sub picture, two part, using physical channel, ATSC air

Acknowledgement

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

22. Channel Add/Del (Command: m b)

► To add and delete the channels

Transmission

[m][b][ ][Set ID][ ][Data][Cr]

Data 0: Channel Delete
1: Channel Add

Acknowledgement

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

23. Key (Command: m c)

► To send IR remote key code

Transmission

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

Data Key code: See page 109.

Acknowledgement

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

24. Input Select (Command:x b) (Main Picture Input)

► To select input source for TV.

Transmission

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

Data Structure

INPUT	DATA(Hex)
DTV (Antenna)	00
DTV (Cable)	01
Analog (Antenna)	10
Analog (Cable)	11
Video 1	20
Video 2	21
Component 1	40
Component 2	41
RGB-DTV	50
RGB-PC	60
HDMI/DVI	90

Acknowledgement

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

25. PIP Input Select (Command:x y)

► To adjust the input source for sub picture in PIP mode

Transmission

[x][y][ ][Set ID][ ][Data][Cr]

Data Structure

INPUT	DATA(Hex)
DTV (Antenna)	00
DTV (Cable)	01
Analog (Antenna)	10
Analog (Cable)	11
Video 1	20
Video 2	21

Acknowledgement

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

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	50PC1DR-UA/50PC1DRA-UA	42LB1DR/42LB1DRA
Width (inches / mm)	55.9 / 1420	36.3 / 922
Height (inches / mm)	3520 / 889	23.6 / 599.7
Depth (inches / mm)	14 / 356.8	8.6 / 218.5
Weight (pounds / kg)	137.8 / 62.5	54 / 24.5
Power requirement	AC 100-240V~ 50/60Hz	AC 100-240V~ 50/60Hz 2.0A
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	
External Antenna Impedance	75 Ω	

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