



PLASMA TV OWNER'S MANUAL

MODELS: 42PX4RV/50PX5R

42PX4RV-UC/ 42PX4RV-MC/ 50PX5R-UC

Please read this manual carefully and completely before operating your TV.

Retain this manual for future reference.

Record model number and serial number of the TV in the spaces provided below.

See the label attached on the back cover and relate this information to your dealer if you require service.

Model Number :

Serial Number :



Warning/Caution



WARNING/CAUTION
RISK OF ELECTRIC SHOCK
DO NOT OPEN



WARNING/CAUTION:

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



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



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

WARNING/CAUTION:

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

FCC NOTICE

• A Class B digital device

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

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

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

CAUTION:

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

COMPLIANCE:

The responsible party for this product's compliance is:
LG Electronics U.S.A., Inc
1000 Sylvan Avenue, Englewood Cliffs, NJ 07632
1-800-243-0000
<http://www.lgusa.com>

WARNING/CAUTION

TO REDUCE THE RISK OF FIRE AND ELECTRIC SHOCK, DO NOT EXPOSE THIS PRODUCT TO RAIN OR MOISTURE.

Safety Instructions

IMPORTANT SAFETY INSTRUCTIONS

Important safety instructions shall be provided with each apparatus. This information shall be given in a separate booklet or sheet, or be located before any operating instructions in an instruction for installation for use and supplied with the apparatus.

This information shall be given in a language acceptable to the country where the apparatus is intended to be used.

The important safety instructions shall be entitled "Important Safety Instructions". The following safety instructions shall be included where applicable, and, when used, shall be verbatim as follows. Additional safety information may be included by adding statements after the end of the following safety instruction list. At the manufacturer's option, a picture or drawing that illustrates the intent of a specific safety instruction may be placed immediately adjacent to that safety instruction :

1. Read these instructions.
2. Keep these instructions.
3. Heed all warnings.
4. Follow all instructions.
5. Do not use this apparatus near water.
6. Clean only with dry cloth.
7. Do not block any ventilation openings. Install in accordance with the manufacturer's instructions.
8. Do not install near any heat sources such as radiators, heat registers, stoves, or other apparatus (including amplifiers) that produce heat.
9. Do not defeat the safety purpose of the polarized or grounding-type plug. A polarized plug has two blades with one wider than the other. A grounding type plug has two blades and a third grounding prong. The wide blade or the third prong are provided for your safety. If the provided plug does not fit into your outlet, consult an electrician for replacement of the obsolete outlet.
10. Protect the power cord from being walked on or pinched particularly at plugs, convenience receptacles, and the point where they exit from the apparatus.
11. Only use attachments/accessories specified by the manufacturer.
12. Use only with the cart, stand, tripod, bracket, or table specified by the manufacturer, or sold with the apparatus. When a cart is used, use caution when moving the cart/apparatus combination to avoid injury from tip-over.



PORTABLE CART WARNING

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

Introduction

What is a Plasma Display Panel (PDP)?

A plasma display panel is the latest display technology and the best way to achieve flat panel displays with excellent image quality and large screen sizes that are easily viewable. The PDP can be thought of as a descendant of the neon lamp and it can be also be viewed as a series of fluorescent lamps.

How does it work?

PDP is an array of cells, known as pixels, which are comprised of 3 sub pixels, corresponding to the colors red, green, and blue. Gas in a plasma state is used to react with phosphors in each sub-pixel to produce colored light (red, green, or blue). These phosphors are the same types used in Cathode Ray Tube (CRT) devices such as televisions and common computer monitors.

You get the rich, dynamic colors that you expect. Each sub-pixel is individually controlled by advanced electronics to produce over 16 million different colors. All of this means that you get perfect images that are easily viewable in a display that is less than 5 inches thick.

160° - Wide angle range of vision

Your flat panel plasma screen offers an exceptionally broad viewing angle -- over 160 degrees. This means that the display is clear and visible to viewers anywhere in the room who can see the screen.

Wide Screen

The screen of the Plasma Display is so wide that your viewing experience is as if you are in a theater.

Multimedia

Connect your plasma display to a PC and you can use it for conferencing, games, and Internet browsing. The Picture-in-Picture feature allows you to view your PC and video images simultaneously.

Versatile

The light weight and thin size makes it easy to install your plasma display in a variety of locations where conventional TVs will not fit.

The PDP Manufacturing Process: a few minute colored dots may be present on the PDP screen

The PDP (Plasma Display Panel), which is the display device of this product is composed of 0.9 to 2.2 million cells. A few cell defects will normally occur in the PDP manufacturing process. Several tiny, minute colored dots visible on the screen should be acceptable. This also occurs in other PDP manufacturers' products. The tiny dots appearing does not mean that this PDP is defective. Thus a few cell defects are not sufficient cause for the PDP to be exchanged or returned. Our production technology minimizes these cell defects during the manufacture and operation of this product.

Cooling Fan Noise (50PX5R only)

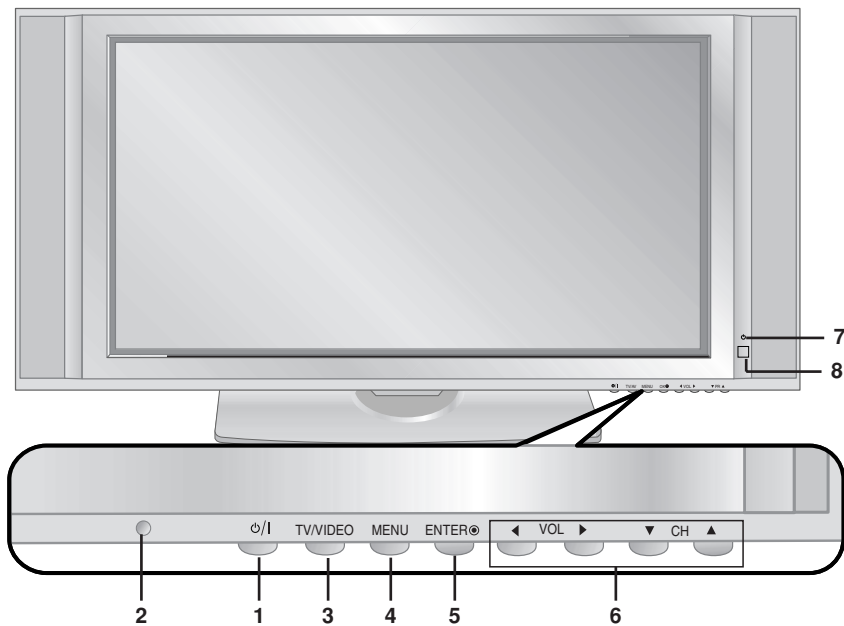
In the same way that a fan is used in a PC computer to keep the CPU (Central Processing Unit) cool, the PDP is equipped with cooling fans to cool the Monitor and improve its reliability. Therefore, a certain level of noise could occur while the fans are operating and cooling the PDP.

The fan noise doesn't have any negative effect on the PDP's efficiency or reliability. The noise from these fans is normal during the operation of this product. We hope you understand that a certain level of noise from the cooling fans is acceptable and is not sufficient cause for the PDP to be exchanged or returned.

Controls

- This is a simplified representation of front panel.
Here shown may be somewhat different from your TV.
- This manual explains the features available on the 42PX4RV series TVs.

Front Panel Controls



1. Power Button

Switches the set on from standby or off to standby.

2. Remote Control Sensor

3. TV/VIDEO Button

Selects the TV, VIDEO, Component, RGB or HDMI modes.
Switches the set on from standby.

4. MENU

Displays on screen menus one by one.
Exits the current menu.
Memorizes menu changes.

5. ENTER

Accepts your selection or displays the current mode.

6. ▲ / ▼ (Programme Up/Down)

Selects a programme or a menu item.
Switches the set on from standby.

◀ / ▶ (Volume Up/Down)

Adjusts the volume.
Adjusts menu settings.

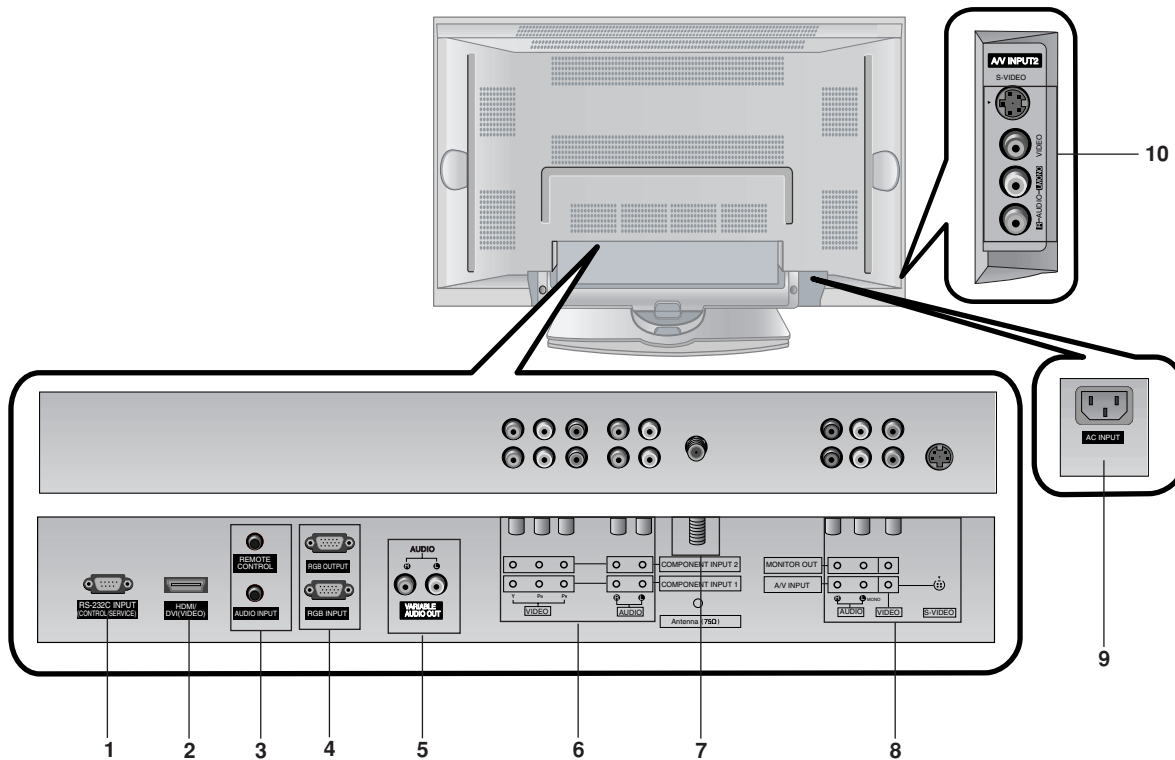
7. Power Indicator

Illuminates red in standby mode, Illuminates green when the set is turned on.

8. Intelligent Eye

Adjusts picture according to the surrounding conditions.

Connection Options



1. RS-232C INPUT(CONTROL/SERVICE) PORT

Connect to the RS-232C port on a PC.

2. HDMI(DVI VIDEO)

Connect a HDMI signal to this jack. Or connect a DVI(Video) signal.

3. REMOTE CONTROL / AUDIO INPUT (for RGB, DVI)

4. RGB INPUT / RGB OUTPUT

Connect to the RS-232C port on a PC.

5. VARIABLE AUDIO OUTPUT

6. COMPONENT INPUT

Connect DVD video outputs to Y, P_B, P_R of COMPONENT INPUT and audio outputs to Audio sockets of AUDIO INPUT.

7. ANTENNA INPUT

8. VIDEO/AUDIO IN/OUT SOCKETS (AV1)

Connect the video/audio out sockets of external equipment to these sockets.

S-VIDEO/AUDIO IN SOCKETS

Connect the S-VIDEO out socket of an VCR to the **S-VIDEO** socket.

Connect the audio out sockets of the VCR to the audio sockets as in **AV1**.

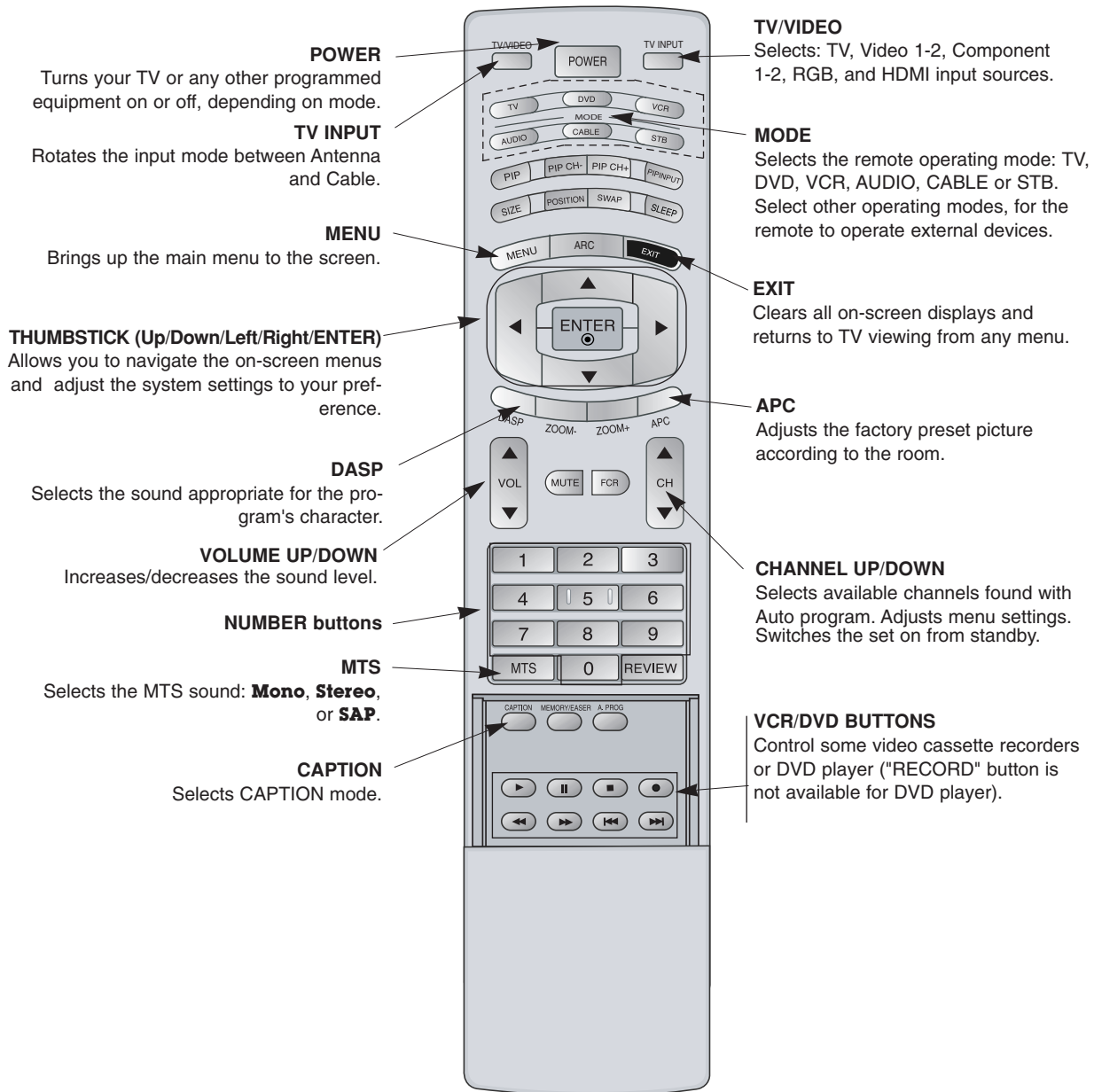
9. POWER CORD SOCKET

This the set operates on an AC power. The voltage is indicated on the Specifications page. Never attempt to operate the set on DC power.

10. AUDIO/VIDEO INPUT (AV2) S-VIDEO/AUDIO IN SOCKETS

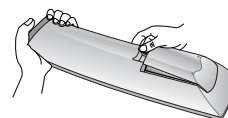
Remote Control Key Functions

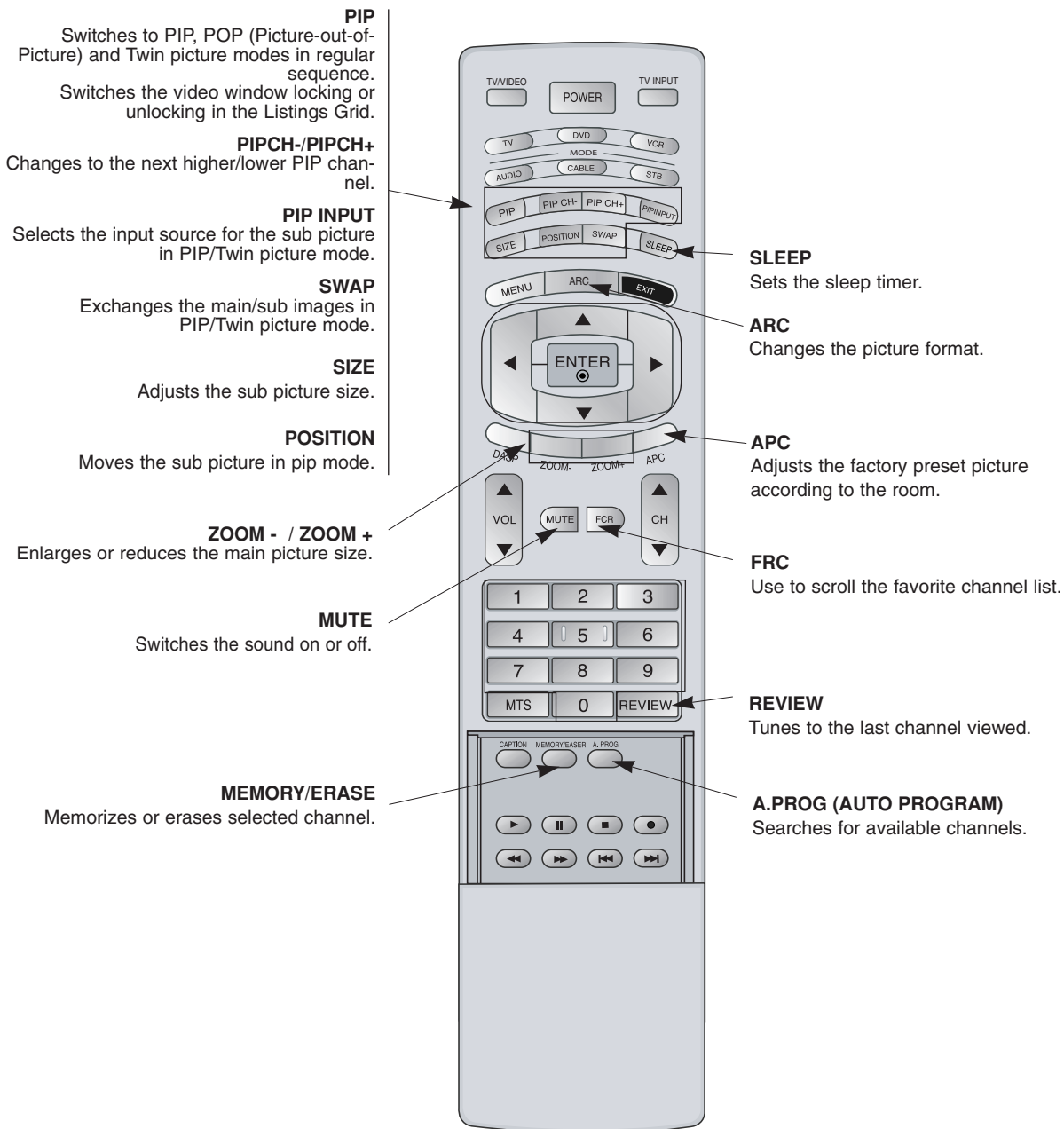
- When using the remote control, aim it at the remote control sensor on the TV.



Installing Batteries

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







- HDMI™, the HDMI logo and High-Definition Multimedia Interface are trademarks or registered trademarks of HDMI Licensing LLC.
- This set can receive the High-Definition Multimedia Interface (HDMI) or Input of Digital Visual Interface(DVI).
- This set supports HDCP (High-bandwidth Digital Contents Protection) Protocol for the set (480p, 720p, 1080i) modes.
- When you Connect with HDMI/DVI Source Devices (DVD Player or Set Top Box or PC) supporting Auto HDMI/DVI function, automatically, support Plug & Play and then set the HDMI/DVI Source Devices (640 x 480p) (or 50PX5R series: 1280 x 720p). After reading in HDMI/DVI Source Devices using Display Data Channel(DDC) Protocol, EDID stored in the set is used. If HDMI/DVI Source Devices not supported Auto HDMI/DVI is been, the Resolution is set, manually.
- To get the best picture quality, adjust the DVD Player or Set Top Box output resolution to 640 x 480p (or 50PX5R series: 1280 x 720p).
- To get the best picture quality, adjust the PC graphics card to 640 x 480 (or 50PX5R series: 1024 x 768), 60Hz.
- When Source Devices have DVI Output Connector, you must connect audio with separated cable.(Refer to **<How to connect>**)

How to connect

1. When Source Devices (DVD Player or Set Top Box) support HDMI.

- If Source Devices have HDMI Output Connector, Source Devices connect to the set with HDMI Cable .(not supplied with the product).
- If Source Devices support Auto HDMI, automatically, Source Devices divert output resolution in 640x480p (or 50PX5R series: 1280 x 720p). But if not, resolution divert Manually Setting for reference Manual of Source Devices.
- To get the best picture quality, adjust the DVD Player or Set Top Box output resolution to 640x480p (or 50PX5R series: 1280 x 720p).
- Because HDMI sends Digital Video and Audio with one cable, need not especial Audio Cable for using HDMI Cable.

2. When Source Devices (DVD Player or Set Top Box) supports DVI.

- If Source Devices have DVI Output Connector, Source Devices connect to the set with HDMI to DVI Cable (not supplied with the product).
- If Source Devices support Auto DVI, automatically, Source Devices divert output resolution in 640x480p (or 50PX5R series: 1280 x 720p). But if not, resolution divert Manually Setting for reference Manual of Source Devices.
- To get the best picture quality, adjust the DVD Player or Set Top Box output resolution to 640x480p (or 50PX5R series: 1280 x 720p).
- In this case, Audio use other cable. When Source Devices have Analog Audio Output Connector, RGB/DVI Audio Input of the set connect to Audio Cable (not supplied with the product). And then you can listen to normal Audio.

3. When PC supports DVI.

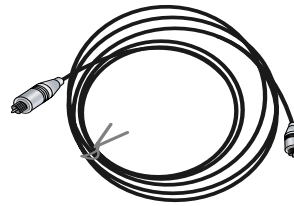
- If PC have DVI Output Connector, Source Devices connect to the set with HDMI to DVI Cable (not supplied with the product).
- To get the best picture quality, adjust the PC graphics card to 640x480 (or 50PX5R series: 1024 x 768), 60Hz.
- Use the the set's HDMI/DVI (VIDEO) for video connections, depending on your PC connector.
- If the graphics card on the PC does not output analog RGB and DVI simultaneously, connect only one of either RGB Input or HDMI/DVI Input to display the PC on the set.
- If he graphics card on the PC does output analog RGB and DVI simultaneously, the set to either RGB Input or HDMI/DVI Input; (the other mode is set to Plug and Play automatically by the set.)
- Then, make the corresponding audio connections. If using a sound card, adjust the PC sound as required.
- In this case, Audio use other cable. When PC (or sound card of PC) have Analog Audio Output Connector, RGB/DVI Audio Input of the set connect to Analog Audio Cable (not supplied with the product). And then you can listen to normal Audio.

Reference

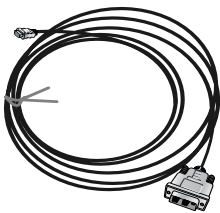
Cable sample



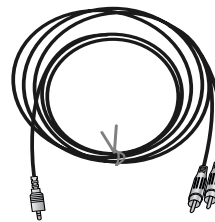
HDMI Cable
(not supplied with the product)



Analog Audio Cable (RCA type)
(not supplied with the product)



HDMI to DVI Cable
(not supplied with the product)



Analog Audio Cable (Stereo to RCA type)
(not supplied with the product)

How to use

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

Notes:

- Depending on the graphics card, DOS mode may not work if you use a HDMI to DVI Cable.
- Avoid keeping a fixed image on the set screen for a long period of time. The fixed image may become permanently imprinted on the screen. Use the Orbiter screen saver when possible.
- When Source Devices connected HDMI/DVI Input, output PC Resolution(VGA, SVGA, XGA), Position, Size may not fit to Screen. As shown the lower picture, press the **MENU** button to adjust the screen Position of the set and contact an PC graphics card service center.
- When Source Devices connected HDMI/DVI Input output the set Resolution(480p, 720p, 1080i), the 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.
- In case HDMI/DVI Source Devices is not connected Cable or poor cable connection, "No Signal" OSD display in HDMI/DVI Input. And In case of Video Resolution not supported the set output in HDMI/DVI Source Devices, "No Signal" OSD display. Refer to the Manual of HDMI/DVI Source Devices or contact your service center.

Installation

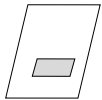
Installation Instructions

- The TV can be installed in various ways such as on a wall, or on a desktop etc.
- The TV is designed to be mounted horizontally. The speakers shown are optional.
- It is recommended that 42PX4RV / RP-42PX40/51X model only be used at an altitude of less than 3281 feet (1000m) to get the best quality picture and sound.
- It is recommended that RP-42PX40H model only be used at an altitude of less than 6561 feet (2000m) to get the best quality picture and sound.

GROUNDING

Ensure that you connect the grounding / earth wire to prevent possible electric shock. If grounding methods are not possible, have a qualified electrician install a separate circuit breaker. Do not try to ground the unit by connecting it to telephone wires, lightening rods, or gas pipes.

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



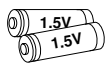
Owner's Manual



Remote Control handset



2-Eye Bolts



Alkaline batteries



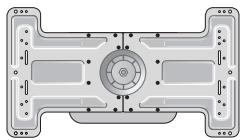
Power Cord



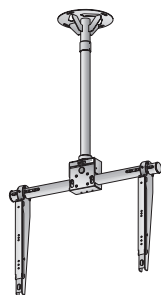
2-Wall brackets

Option Extras

- Optional extras can be changed or modified for quality improvement without any notification new optional extras can be added.
- Contract your dealer for buying these items.



Tilt wall mounting bracket



Ceiling mounting bracket



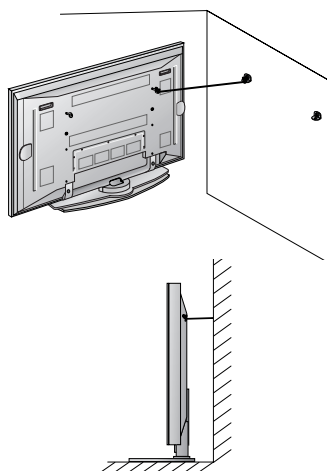
Video cables



Audio cables

Attaching the TV assembly to the wall

- Secure the TV assembly by joining it to a wall by using the Eye Bolts/Wall brackets.



- If the set will be mounted on a desk top, insert the 2 eye-bolts and tighten them securely in the upper holes as shown.
Install the wall brackets on the wall with 2 bolts*, (not supplied with the product), as shown.
Match the height of the eye-bolts and the wall brackets.
Check to be sure the eye-bolts and the brackets are tightened securely.

- Secure the TV assembly to the wall with strong strings or wound wire cables, (not supplied with the product), as shown.

Installation Options

- The set can be installed in different ways such as on a wall, or on a desktop etc.
- Install this set only in a location where adequate ventilation is available.

Wall Mount: Horizontal Installation



- The set can be installed on a wall as shown above. (For further information, refer to the optional 'Wall Mounting Bracket Installation and Setup Guide'.)

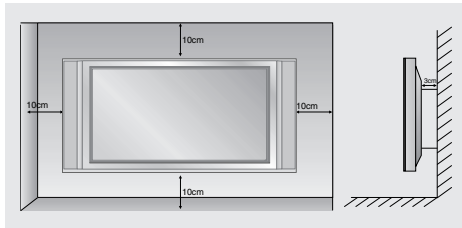
Desktop Pedestal Installation



- The set can be mounted on a desk as shown above. (For further information, refer to the optional 'Desktop Stand Installation and Setup Guide'.)

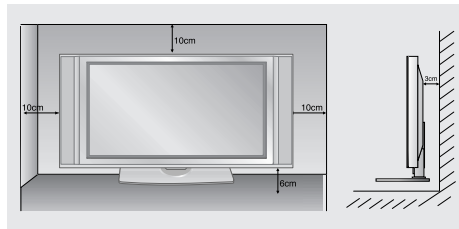
To Mount on a Wall

Wall mount minimum allowable clearances for adequate ventilation.

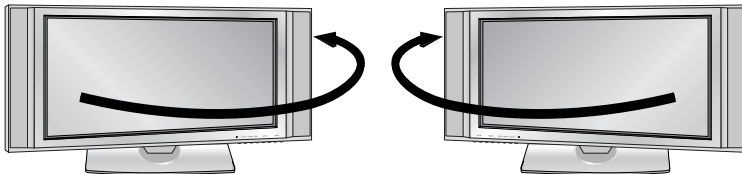


To Install on a Desktop

Pedestal mount minimum allowable clearances for adequate ventilation.



Swivel function (option)



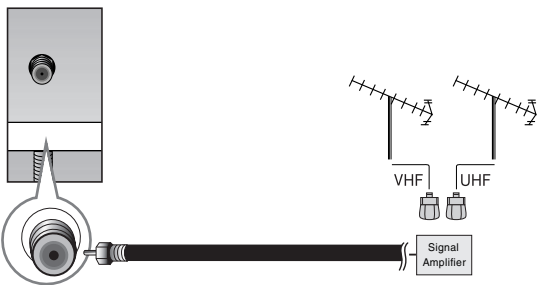
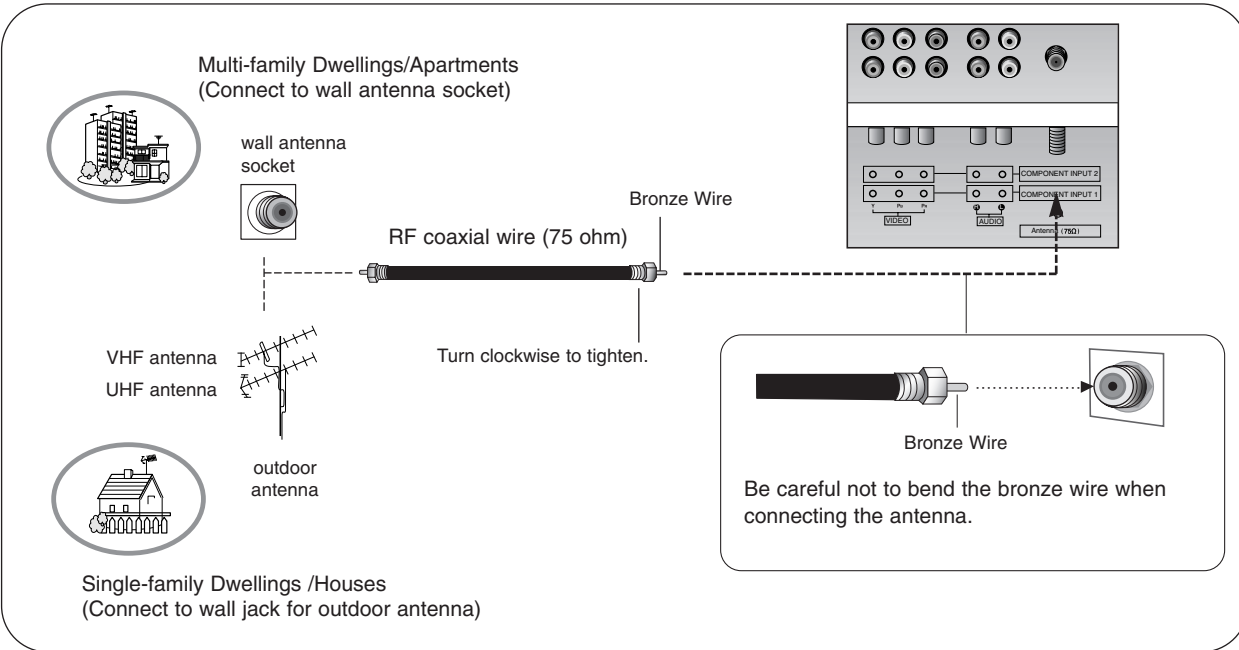
- After installing the set, you can adjust the the set manually to the left or right direction by 20 degrees to suit your viewing position.

Note : Before adjusting the angle, you must loosen (to the left) the shaft bolt on the middle of stand's back. And when stand be level with set, you must close (to the right) the shaft bolt to set the hole.

External Equipment Connections

Antenna Connection

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



- In a poor signal area to improve picture quality, purchase and install a signal amplifier.
- If the antenna needs to be split for two TV's, install a "2-Way Signal Splitter" in the connections.
- If the antenna is not installed properly, contact your dealer for assistance.

NOTE: 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.
- Use the ISM Method (on the Option menu) feature to avoid having a fixed image remain on the screen for a long period of time. 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.

Connection Option 1

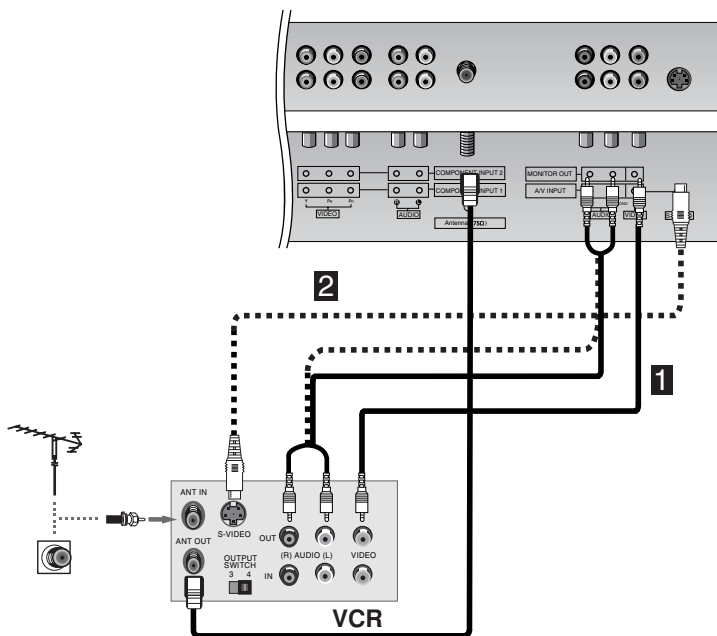
Set VCR output switch to 3 or 4 and then tune TV to the same channel number.

Connection Option 2

1. Connect the audio and video cables from the VCR's output jacks to the TV input jacks, as shown in the figure.
When connecting the TV to VCR, match the jack colors (Video = yellow, Audio Left = white, and Audio Right = red).
If you connect an S-VIDEO output from VCR to the S-VIDEO input, the picture quality is improved; compared to connecting a regular VCR to the Video input.
2. Insert a video tape into the VCR and press PLAY on the VCR. (Refer to the VCR owner's manual.)
3. Select the input source with using the **TV/VIDEO** button on the remote control. (If connected to A/V INPUT 1, select **Video 1** input source)



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



Cable TV Setup

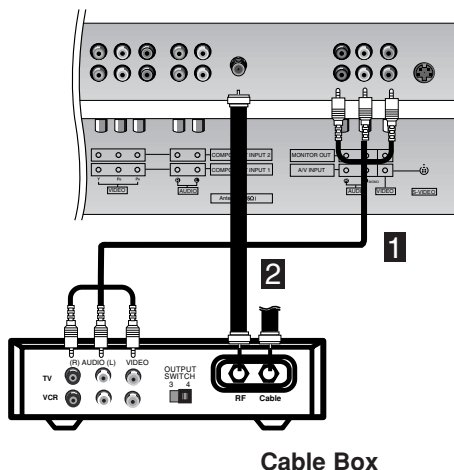
- After subscribing to a cable TV service from a local provider and installing a converter, you can watch cable TV programming. The TV cannot display TV programming unless a TV tuner device or cable TV converter box is connected to the TV.
- For further information regarding cable TV service, contact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

Connection Option 1

1. Select 3 or 4 with channel switch on cable box.
2. Tune the TV channel to the same selected output channel on cable box.
3. Select channels at the cable box or with the cable box remote control.

Connection Option 2

1. Connect the audio and video cables from the Cable Box's output jacks to the TV input jacks, as shown in the figure.
When connecting the TV to a Cable Box, match the jack colors (Video = yellow, Audio Left = white, and Audio Right = red).
2. Select the input source with using the **TV/VIDEO** button on the remote control. (If connected to A/V INPUT 1, select **Video 1** input source)
3. Select your desired channel with the remote control for cable box.



External A/V Source Setup

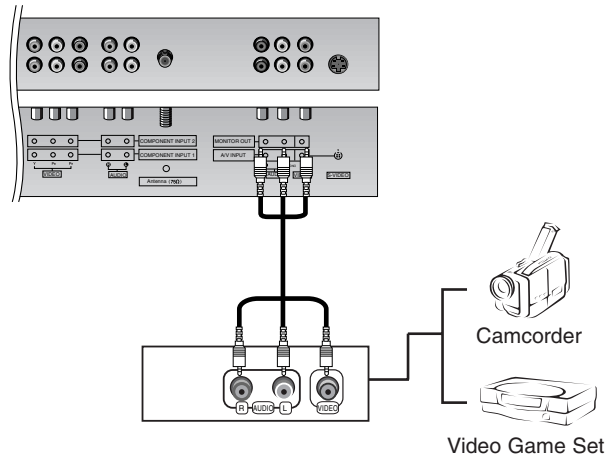
How to connect

Connect the audio and video cables from the external equipment's output jacks to the TV input jacks, as shown in the figure.

When connecting the TV to external equipment, match the jack colors (Video = yellow, Audio Left = white, and Audio Right = red).

How to use

1. Select the input source with using the **TV/VIDEO** button on the remote control. (If connected to A/V INPUT 1, select **Video 1** input source).
2. Operate the corresponding external equipment. Refer to external equipment operating guide.



DVD Setup

How to connect

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

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

How to use

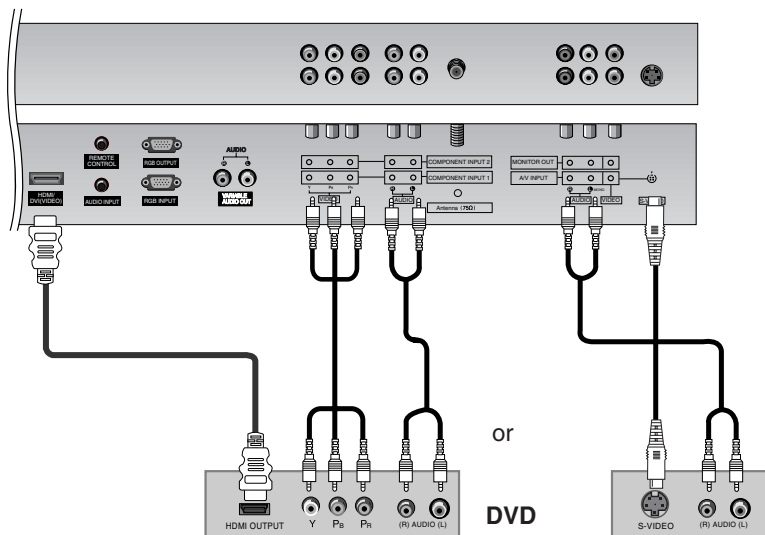
1. Turn on the DVD player, insert a DVD.
2. Use the **TV/VIDEO** button on the remote control to select **Component 1** or **Component 2**. (If connected to S-VIDEO, select the **Video 1** or **Video 2** external input source.)
3. Refer to the DVD player's manual for operating instructions.

Component Input ports

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

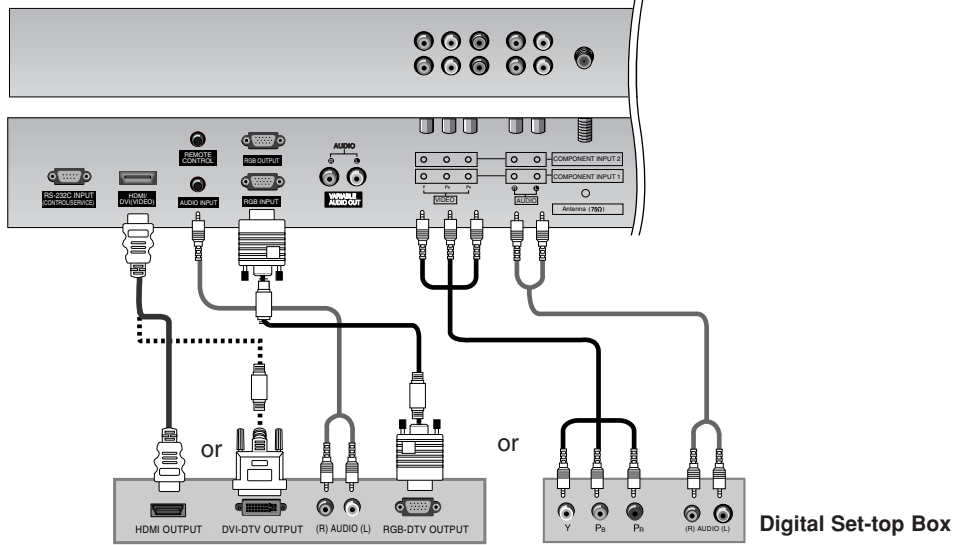
Component ports on the TV	Y	P _B	P _R
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Video output ports on DVD player	Y	P _b	P _r
	Y	B-Y	R-Y
	Y	Cb	Cr
	Y	P _B	P _R



DTV Setup

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



How to connect

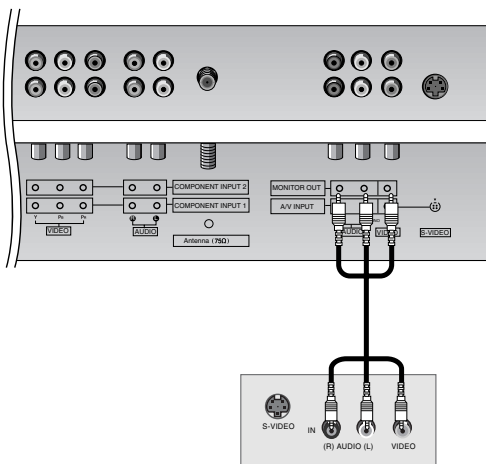
Use the TV's COMPONENT (Y, Pb, Pr) INPUT, RGB or HDMI jack for video connections, depending on your set-top box connector. Then, make the corresponding audio connections.

How to use

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

Signal	Component 1/2	RGB, HDMI
480i	Yes	No
480p	Yes	Yes
720p	Yes	Yes
1080i	Yes	Yes

Monitor Out Setup



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

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

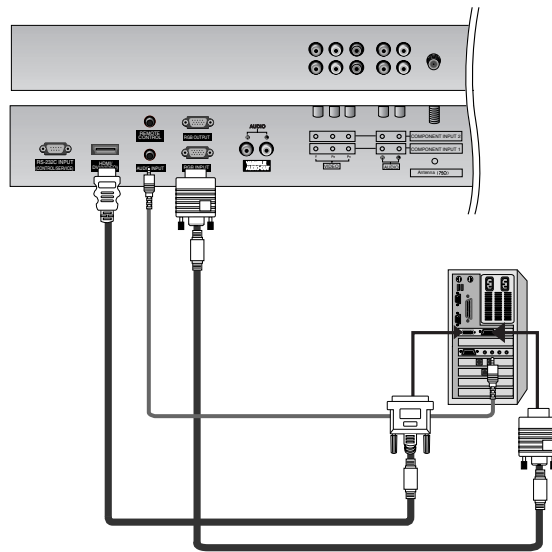
NOTE

- Component, RGB, HDMI input sources cannot be used for Monitor out.

PC Setup

How to connect

1. To get the best picture quality, adjust the PC graphics card to 640x 480, 60Hz.
2. Use the TV's RGB INPUT or HDMI(DVI VIDEO) INPUT port for video connections, depending on your PC connector.
 - If the graphic card on the PC does not output analog and digital RGB simultaneously, connect only one of either RGB INPUT or HDMI(DVI VIDEO) to display the PC on the TV.
 - If the graphic card on the PC does output analog and digital RGB simultaneously, set the TV to either RGB or HDMI(DVI VIDEO); (the other mode is set to Plug and Play automatically by the TV.)
3. Then, make the corresponding audio connection. If using a sound card, adjust the PC sound as required.

**How to use**

1. Turn on the PC and the TV.
2. Turn on the display by pressing the POWER button on the TV's remote control.
3. Use **TV/VIDEO** on the remote control to select **RGB**, or **HDMI** source.
4. Check the image on your TV. There may be noise associated with the resolution, vertical pattern, contrast or brightness in PC mode. If noise is present, change the PC 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.

- NOTES:**
- 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. Use the Orbiter screen saver when possible.
 - The synchronization input form for Horizontal and Vertical frequencies is separate.

Displayable Monitor Specifications

RGB / HDMI mode

Resolution	Horizontal Frequency(KHz)	Vertical Frequency(Hz)
640x350	31.468	70.09
	37.861	85.08
720x400	31.469	70.08
	37.927	85.03
640x480	31.469	59.94
	35.000	66.66
	37.861	72.80
	37.500	75.00
848x480	43.269	85.00
	31.500	60.00
	37.799	70.00
852x480	39.375	75.00
	31.500	60.00
800x600	37.799	70.00
	39.375	75.00
	35.156	56.25
	37.879	60.31
832x624	48.077	72.18
	46.875	75.00
	53.674	85.06
	49.725	74.55
1024x768	48.363	60.00
	56.476	70.06
	60.023	75.02
	68.677	85.00
1152x864	60.05	70.01
	63.995	75.00
	67.500	85.00
1152x870	68.681	75.06
1280x960	60.023	60.02
1280x1024	63.981	60.02

42PX4RV series

RGB / HDMI mode

Resolution	Horizontal Frequency(KHz)	Vertical Frequency(Hz)
640x350	31.468	70.09
	37.861	85.08
720x400	31.469	70.08
	37.927	85.03
640x480	31.469	59.94
	35.000	66.66
	37.861	72.80
	37.500	75.00
848x480	43.269	85.00
	31.500	60.00
	37.799	70.00
852x480	39.375	75.00
	31.500	60.00
800x600	37.799	70.00
	39.375	75.00
	35.156	56.25 (RGB)
	37.879	60.31
832x624	48.077	72.18
	46.875	75.00
	53.674	85.06
	49.725	74.55
1024x768	48.363	60.00
	56.476	70.06
	60.023	75.02
	68.677	85.00
1360x768	60.05	70.01
	59.625	75.02
	68.500	85.00
1366x768	47.700	60.00
	59.625	75.02
1152x864	69.500	85.00
	54.348	60.05
	63.995	70.01
	67.500	75.00
1152x870	77.487	85.00
1152x870	68.681	75.06
1280x768	47.693	60.00
	60.091	75.00
	68.504	85.00
1280x960	60.023	60.02
1280x1024	63.981	60.02

50PX5R series

Operation

Turning the TV On

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

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

Turning on the set just after installation

1. Connect power cord correctly, the set is switched to standby mode.
2. Press the \odot / I, TV/VIDEO or CH \blacktriangle / \blacktriangledown button on the set or press the **POWER**, TV/VIDEO, TV INPUT, CH \blacktriangle / \blacktriangledown or NUMBER buttons on the remote control and then the set will switch on.

Turning on the set (power cord is still connected)

If the set was turned off with the remote control power button and the \odot / I button on the set

- Press the \odot / I, TV/VIDEO or CH \blacktriangle / \blacktriangledown button on the set or press the **POWER**, TV/VIDEO, TV INPUT, CH \blacktriangle / \blacktriangledown or NUMBER button on the remote control to turn the set on.

NOTE

- 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 \blacktriangle / \blacktriangledown button to select the **SPECIAL** menu.
2. Press the \blacktriangleright button and then use \blacktriangle / \blacktriangledown button to select **Language**.
3. Press the \blacktriangleright button and then use \blacktriangle / \blacktriangledown button to select your desired language.
From this point on, the on-screen menus will be shown in the language of your choice.
4. Press the **ENTER** button to save.

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.

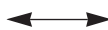
One is called AUTO PROGRAM and the other is called MANUAL PROGRAM.

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 Plasma Display is ever moved to another location.
- Auto Program will search for channels only through the ANT IN 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:

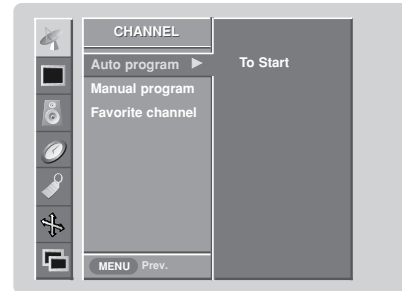
Broadcast TV Channels



Cable TV Channels

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

1. Press the **A.PROG** button and then press the **▶** button. AUTO PROGRAM starts the channel search. If you want to stop auto programming, press the **ENTER** button. Only the channels found up to that time are memorized.
 - You can also select the **Auto program** option and do a channel search in the **CHANNEL** menu.



Manual Program: Adding/Deleting Channels

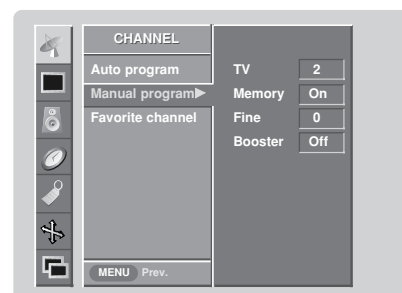
- You can add or delete channels from the channel scan manually.
1. Use the **◀ / ▶** or **NUMBER** buttons to select the channel number you want to add or delete.
 2. Press the **MEMORY/ERASE** button.
 3. Use the **MEMORY/ERASE** button to select **Memory** or **Erase**.
 4. Press the **ENTER** button.
 - You can also do **Manual program** with the **CHANNEL** menu.

Fine Tuning Adjustment

- Use this function to correct the picture's instability and condition if it is poor.
1. Press the **MENU** button and then use **▲ / ▼** button to select the **CHANNEL** menu.
 2. Press the **▶** button and then use **▲ / ▼** button to select **Manual program**.
 3. Press the **▶** button and then use **▲ / ▼** button to select **Fine**.
 4. Use the **◀ / ▶** button to adjust the picture to your preference.
 5. Press the **ENTER** button to save.

Notes

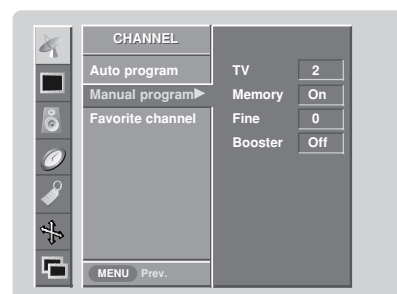
- To remove fine tuning from a channel, reprogram the finely-tuned channel with Auto program or Manual Program.
- If a finely-tuned channel is memorized, the color of the channel number changes to yellow.



Signal Reception Booster

- If TV signal reception is poor because you are in a fringe area, set Booster to On. If the picture condition is good, set Booster to Off.
- Adjustments for one channel don't affect the adjustment for other channels. Set booster to on or off for each channel separately.

1. Press the **MENU** button and then use ▲ / ▼ button to select the **CHANNEL** menu.
2. Press the ► button and then use ▲ / ▼ button to select **Manual program**.
3. Press the ► button and then use ▲ / ▼ button to select **Booster**.
4. Use ◀ / ▶ button to select **On** or **Off**.
5. Press the **ENTER** button to save.

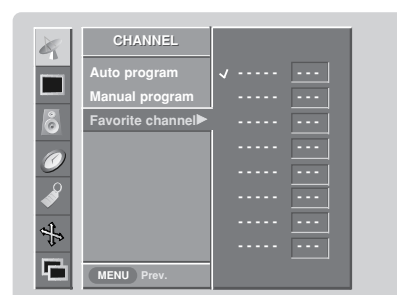


Favorite Channels Setup

- 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 in-between channels.

1. 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**.
3. Press the ► button and then use ▲ / ▼ button to select the first favorite channel position.
4. Use the ◀ / ▶ button to set the desired channel number for first favorite channel.
5. Press the **ENTER** button to save.
6. Repeat steps 3 to 5 to memorize other favorite channels.

- To tune to a favorite channel, press the **FCR** (Favorite Channel Review) button repeatedly. The eight favorite channels appear on the screen in numerical order.



Picture Menu Options

APC (Auto Picture Control)

- APC adjusts the TV to the best picture appearance.
- If adjusting picture options (contrast, brightness, color, sharpness, or tint) manually, APC automatically changes to **User**.

1. Press the **APC** button repeatedly to select the picture appearance setup option as shown below.



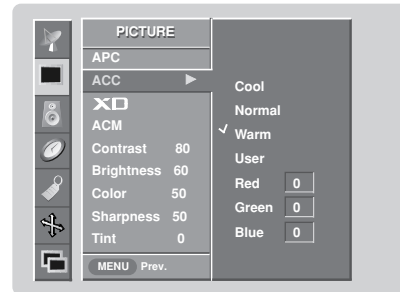
- You can also adjust **APC** in the **PICTURE** menu.
- **Intelligent Eye, Clear, Optimum, and Soft** settings are preset for good picture quality at the factory and cannot be changed.

Color Temperature Control

Auto Color Temperature Control

- To initialize values (reset to default settings), select the **Normal** option.

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 **ENTER** button to save.



Manual Color Temperature Control (ACC set to User option)

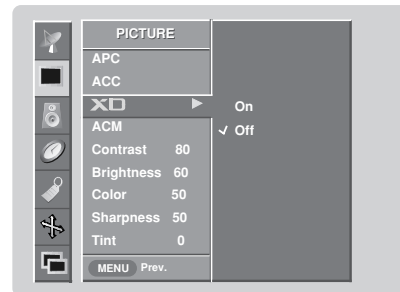
- You can adjust red, green, or blue to any color temperature you prefer.

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 **User**.
4. Press the **▶** button and then use **▲ / ▼** button to select **Red, Green** or **Blue**.
5. Use the **◀ / ▶** button to make appropriate adjustments.
 - The adjustment range of **Red, Green, and Blue** is -30 ~ +30.
6. Press the **ENTER** button to save.

XD

- XD is LG Electronic's unique picture improving technology to display a real HD source through an advanced digital signal processing algorithm.
- When selecting APC options (Clear, Optimum and Soft), XD is automatically change to On.

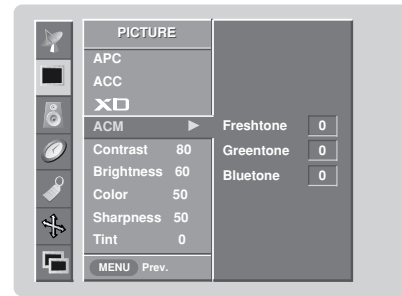
1. Press the **MENU** button and then use **▲ / ▼** button to select the **PICTURE** menu.
2. Press the **▶** button and then use **▲ / ▼** button to select **XD**.
3. Press the **▶** button and then use **▲ / ▼** button to set **On** or **Off**.
4. Press the **ENTER** button to save.



ACM (Active Colour Management)

- Adjust the **ACM** to select the desired skin colour option.
- This function works in the following mode:
TV, Video 1, Video 2, COMPONENT1/2, RGB, HDMI.
- It's not available to use this function in **XD Off** mode.

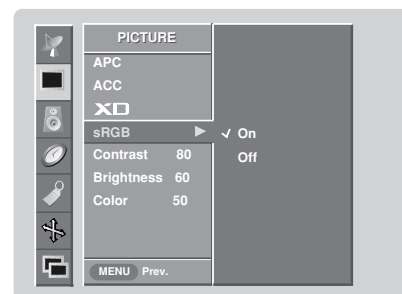
1. Press the **MENU** button and then use **▲ / ▼** button to select the **PICTURE** menu.
2. Press the **▶** button and then use **▲ / ▼** button to select **ACM**.
3. Press the **▶** button and then use **◀ / ▶** button to make appropriate adjustments.
4. Press the **ENTER** button to save.



sRGB (only RGB-PC, DVI-PC Modes)

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

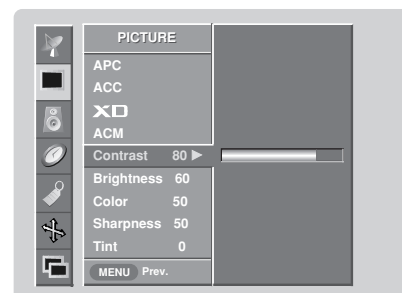
1. Press the **MENU** button and then use **▲ / ▼** button to select the **PICTURE** menu.
2. Press the **▶** button and then use **▲ / ▼** button to select **sRGB**.
3. Press the **▶** button and then use **▲ / ▼** button to select **On** or **Off**.
4. Press the **ENTER** button to save.



Manual Picture Control (APC set to User option)

- You can adjust picture contrast, brightness, color, sharpness, and tint options to the levels you prefer.

1. Press the **MENU** button and then use **▲ / ▼** button to select the **PICTURE** menu.
2. Press the **▶** button and then use **▲ / ▼** button to select the desired picture option (**Contrast, Brightness, Color, Sharpness, Tint**).
3. Press the **▶** button and then use **◀ / ▶** button to make appropriate adjustments.
4. Press the **ENTER** button to save.




Sound Menu Options

DASP (Digital Auto Sound Processing)

- 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, DASP automatically changes to **User**.

1. Press the **DASP** button repeatedly to select the appropriate sound setup as shown below.



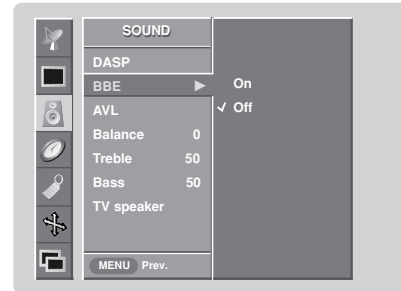
- You can also adjust **DASP** in the **SOUND** menu.
- **SRS TSXT**, **Flat**, **Music**, **Movie**, and **Sports** are preset for good sound quality at the factory and cannot be changed.
- **SRS**  is a trademark of SRS Labs, Inc.
- TruSurround XT technology is incorporated under license from SRS Labs, Inc.

BBE

- BBE High Definition Sound restores clarity and presence for better speech intelligibility and music realism.

1. Press the **MENU** button and then use **▲ / ▼** button to select the **SOUND** menu.
2. Press the **▶** button and then use **▲ / ▼** button to select **BBE**.
3. Press the **▶** button and then use **▲ / ▼** button to select **On** or **Off**.
4. Press the **ENTER** button to save.

- **BBE**. Manufactured under license from BBE Sound, Inc.
- Treble, Bass or BBE aren't suitable for **SRS TSXT** mode.



AVL (Auto Volume Leveler)

- AVL maintains an equal sound level; even if you change channels.

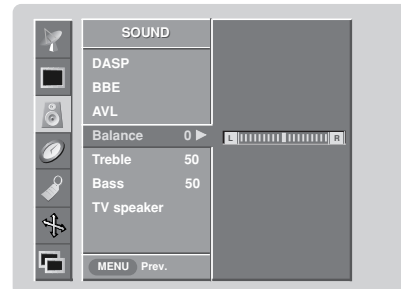
1. Press the **MENU** button and then use **▲ / ▼** button to select the **SOUND** menu.
2. Press the **▶** button and then use **▲ / ▼** button to select **AVL**.
3. Press the **▶** button and then use **▲ / ▼** button to select **On** or **Off**.
4. Press the **ENTER** button to save.



Manual Sound Control (**DASP** set to **user** option)

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

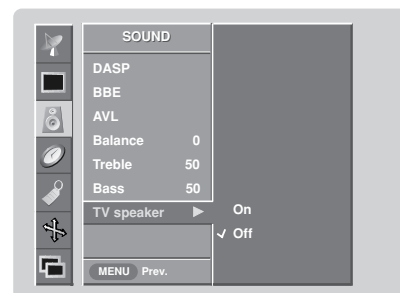
1. Press the **MENU** button and then use **▲ / ▼** button to select the **SOUND** menu.
2. Press the **▶** button and then use **▲ / ▼** button to select the desired sound option (**Balance, Treble, Bass**).
3. Press the **▶** button and then use **◀ / ▶** button to make appropriate adjustments.
4. Press the **ENTER** button to save.



TV speaker Setup

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

1. 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**.
4. Press the **ENTER** button to save.



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.



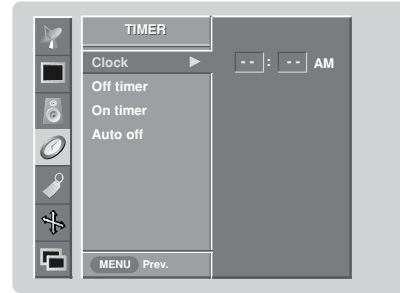
- Select mono sound mode if the signal is not clear or in poor signal reception areas.
- **Stereo, SAP** modes are available only if included on the broadcast signal.

Timer Menu Options

Clock Setup

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

1. Press the **MENU** button and then use **▲ / ▼** button to select the **TIMER** menu.
2. Press the **▶** button and then use **▲ / ▼** button to select **Clock**.
3. Press the **▶** button and then use **▲ / ▼** button to set the hour.
4. Press the **▶** button and then use **▲ / ▼** button to set the minutes.
5. Press the **ENTER** button to save.



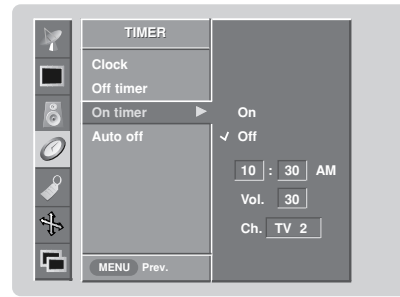
On/Off Timer Setup

- 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.

1. Press the **MENU** button and then use **▲ / ▼** button to select the **TIMER** menu.
2. Press the **▶** button and then use **▲ / ▼** button to select **Off timer** or **On timer**.
3. Press the **▶** button and then use **▲ / ▼** button to select **On**.

• To cancel **On/Off timer** function, select **Off**.
 can adjust internal speaker status.
 COMPONENT 1/2, RGB and HDMI modes TV speaker variable audio can be
 ut even though there is no video signal.
 5. Press the **▶** button; and then use **▲ / ▼** button to set the minutes
 u want to use your external Hi-Fi stereo system, turn on the internal speakers
 e set. 6. **For only On timer function**

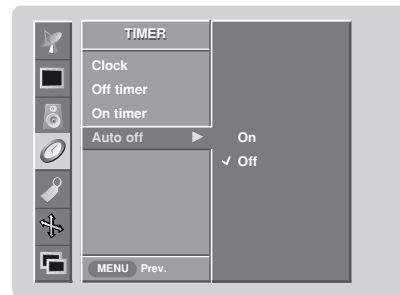
4. Press the **▶** button and then use **▲ / ▼** button to set the volume level at turn-on.
5. Press the **▶** button and then use **▲ / ▼** button to select the channel at turn-on.
7. Press the **ENTER** button to save.



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.
2. Press the **▶** button and then use **▲ / ▼** button to select **Auto off**.
3. Press the **▶** button and then use **▲ / ▼** button to select **On** or **Off**.
4. Press the **ENTER** button to save.



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 minutes. First the **zz --- Min** 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 monitor turns off, press the **SLEEP** or **ENTER** button once.
4. To cancel the Sleep Timer, press the **SLEEP** button repeatedly until **zz --- Min** appears.

Special Menu Options

Key Lock

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

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

- With the Key lock On, the display '▲ Key lock' appears on the screen if any button on the front panel is pressed.



ISM (Image Sticking Minimization) Method

- A frozen still picture from a PC/video game displayed on the screen for prolonged periods will result in a ghost image remaining even when you change the image. Avoid allowing a fixed image to remain on the TV's screen for a long period of time.

1. Press the **MENU** button and then use **▲** / **▼** button to select the **SPECIAL** menu.
2. Press the **▶** button and then use **▲** / **▼** button to select **ISM Method**.
3. Press the **▶** button and then use **▲** / **▼** button to select either **Normal**, **White wash**, **Orbiter** or **Inversion**.

• Normal

If image sticking is never a problem, ISM is not necessary - set to Normal.

• White wash

White Wash removes permanent images from the screen. Note: An excessive permanent image may be impossible to clear entirely with White Wash. To return to normal viewing, press any button.

• Orbiter

Orbiter may help prevent ghost images. However, it is best not to allow any fixed image to remain on the screen. To avoid a permanent image on the screen, the image will move every 2 minutes: Right → Right → Downside → Downside → Left → Left → Upside → Upside.

• Inversion

Inversion will automatically invert the TV panel color every 30 minutes.

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



Special Menu Options continued

Low Power

- Low power reduces the plasma display power consumption.

1. Press the **MENU** button and then use ▲ / ▼ button to select the **SPECIAL** menu.
2. Press the ► button and then use ▲ / ▼ button to select **Low power**.
3. Press the ► button and then use ▲ / ▼ button to select **On** or **Off**.
 - When you select **On**, the screen darkens.
4. Press the **ENTER** button to save.



XD Demo

- Use it to see the difference between XD Demo on and XD Demo off.

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 **MENU** button to stop **XD Demo**.

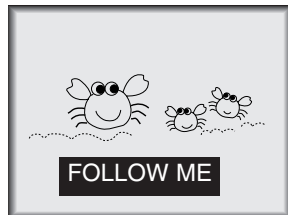


Closed Captions

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. It's possible to caption a live program by using a process called real-time captioning, which creates captions instantly. Real-time captioning is normally done by professional reporters using a machine shorthand system and computer for translation into English.



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

- The picture at left shows a typical caption.

Caption Tips

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

1. Poor reception conditions are encountered:



• IGNITION:

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



• GHOSTS:

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



• SNOW:

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

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

Caption/Text

- Low power reduces the plasma display power consumption.

1. Press the **MENU** button and then use **▲ / ▼** button to select the **SPECIAL** menu.
2. Press the **▶** button and then use **▲ / ▼** button to select **Caption / Text**.
3. Press the **▶** button and then use **▲ / ▼** button to select caption: **Model**, **Mode2**, **Text1**, or **Text2**.

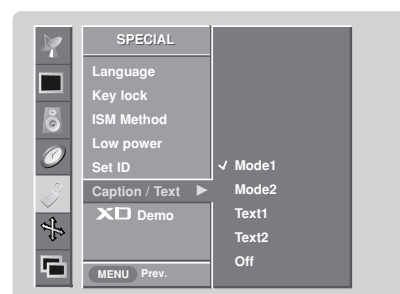
• CAPTION

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

• TEXT

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

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

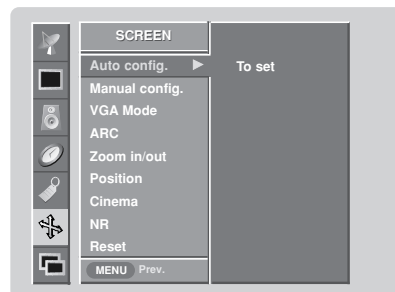


Screen Menu Options

Auto Adjustment

- RGB (PC) mode only; This function doesn't work for RGB (DTV) mode.
- 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.
- The **Auto config.** and **Manual config.** are not active in HDMI 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 **Auto config.**
3. 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. In RGB (PC) mode, if the image needs to be adjusted more after using **Auto config.**, you can make further adjustments with the **Manual config.** option.



Setting Picture Format

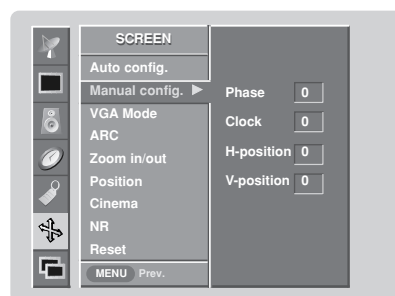
- Caution: If a 4:3 fixed image is on the screen for a long time, it may remain visible.
- Set every aspect ratio for TV, Video, Component 480i sources.
- Use 4:3, or 16:9 for other RGB sources.
- Horizon is not available for Component (480p,720p,1080i), DTV (480p,720p,1080i) sources.

1. 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.

Manual Configure (RGB mode only)

- 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 works in the following mode : RGB, COMPONENT (480p/576p/720p/1080i), HDMI (480p/576p/720p/1080i).
- It's not available to use Phase, Clock function in RGB, COMPONENT (480p/576p/720p/1080i), HDMI (480p/576p/720p/1080i) mode.

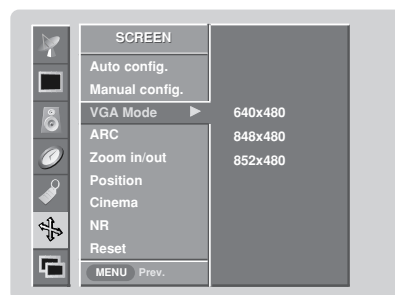
1. Press the **MENU** button and then use **▲ / ▼** button to select the **SCREEN** menu.
2. Press the **▶** button and then use **▲ / ▼** button to select **Manual config.**
3. Press the **▶** button and then use **▲ / ▼** button to select **Phase**, **Clock**, **H-Position** or **V-Position**.
4. Use the **◀ / ▶** button to make appropriate adjustments.
 - The **Phase** adjustment range is 0 ~ 30.
 - The **Clock** adjustment range is -127 ~ +128.
5. Press the **ENTER** button to save.



Selecting VGA Mode (RGB mode only)

- To see a normal picture, match the resolution of RGB mode and selection of VGA mode.

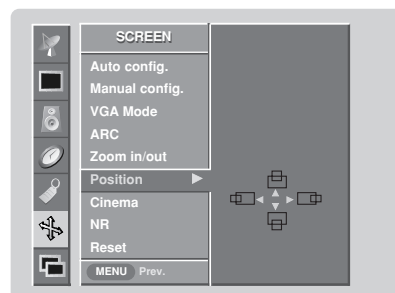
1. Press the **MENU** button and then use **▲ / ▼** button to select the **SCREEN** menu.
2. Press the **▶** button and then use **▲ / ▼** button to select **VGA Mode**.
3. Press the **▶** button and then use **▲ / ▼** button to select the desired VGA resolution.
4. Press the **ENTER** button to save.



Screen Position

- This function works in the following modes:
RGB (480p,720p,1080i), HDMI (480p,720p,1080i), COMPONENT (480p,720p,1080i).

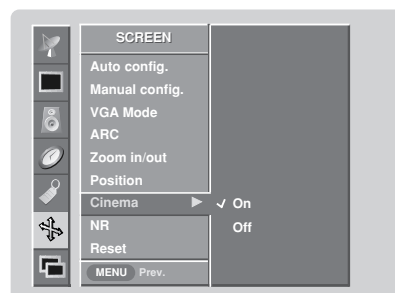
1. Press the **MENU** button and then use **▲ / ▼** button to select the **SCREEN** menu.
2. Press the **▶** button and then use **▲ / ▼** button to select **Position**.
3. Press the **▶** button and then use **▲ / ▼ / ◀ / ▶** button to adjust the position.
4. Press the **ENTER** button to save.



Cinema Mode Setup (TV, Video1-2 and Component 480i mode only)

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

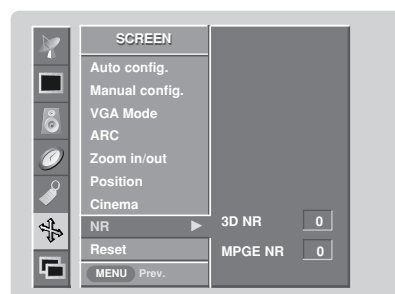
1. Press the **MENU** button and then use **▲ / ▼** button to select the **SCREEN** menu.
2. Press the **▶** button and then use **▲ / ▼** button to select **Cinema**.
3. Press the **▶** button and then use **▲ / ▼** button to select **On** or **Off**.
4. Press the **ENTER** button to save.



NR (Noise Reduction)

- You can select **3D NR** or **MPEG NR** to reduce the picture noise which may appear on the screen during watching the TV.

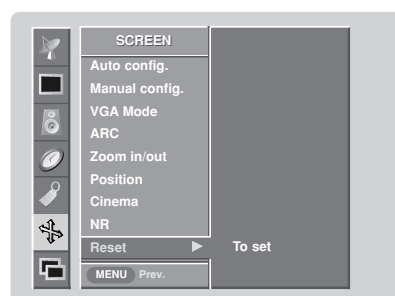
1. Press the **MENU** button and then use **▲ / ▼** button to select the **SCREEN** menu.
2. Press the **▶** button and then use **▲ / ▼** button to select **NR**.
3. Press the **▶** button and then use **▲ / ▼** button to select **3D NR** or **MPEG NR**.
4. Press the **◀ / ▶** button to make appropriate adjustments.
5. Press the **ENTER** button to save.



Initializing (Reset to original factory value)

- Reset is unique to each function: Manual config., Position, Split zoom, PIP position and sub picture size for double window.
- Use the Reset option to initialize the adjusted settings.

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**.
3. Press the **▶** button.
 - You can initialize Position, Split zoom, PIP Transparency, PIP position, PIP size and sub picture size for double window.

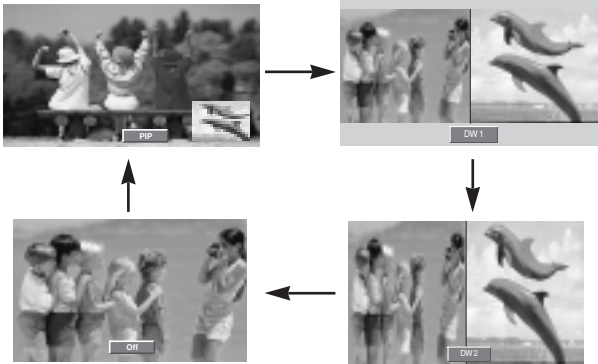


PIP (Picture-In-Picture)/Double Window Feature

- PIP lets you view 2 different inputs pictures (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.

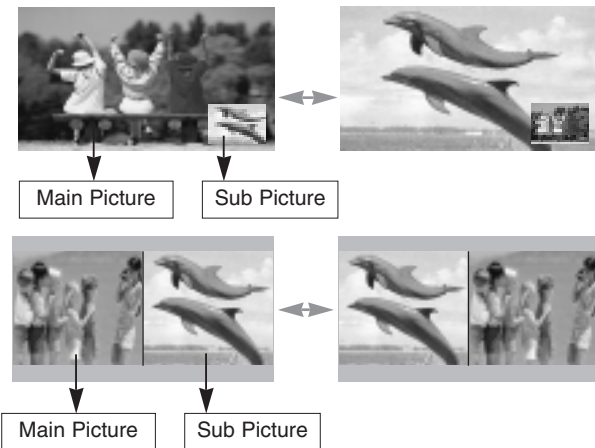
Watching PIP/Double Window

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



Swapping the PIP/Double Window

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



TV Program selection for PIP

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

Main Picture Source	Available Sub Picture Sources
TV, Video 1-2, Component 480i	TV, Video 1-2, Component 480i/480p/720p/1080i, RGB and HDMI
Component 480p/720p/1080i, RGB and HDMI	TV, Video 1-2, Component 480i

Moving the PIP (PIP Mode only)

Press the **POSITION** button.

Press the **▲ / ▼ / ◀ / ▶** 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 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.



PIP Transparency (PIP Mode only)

- To make the PIP clear or opaque

1. 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.
4. Use the **◀ / ▶** button to make appropriate adjustments.
 - The adjustment range of **PIP Transparency** is 0 ~ 10.
5. Press the **ENTER** button to save.

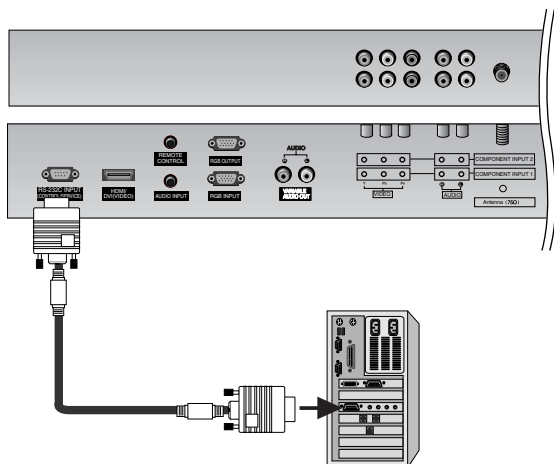
External Control Device Setup

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

How to connect external control equipment

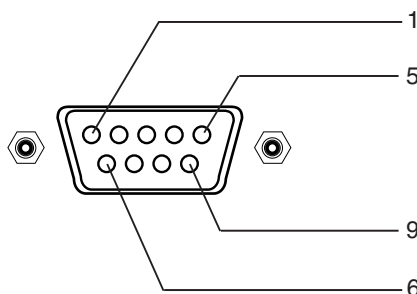
- Connect the serial port of the control device to the RS-232C jack on the Monitor back panel.
- RS-232C connection cables are not supplied with the set.
- The set remote control and front panel controls (except main power) will not be functional if the Monitor is controlled by a PC computer or other external device.

< Back panel of the set >

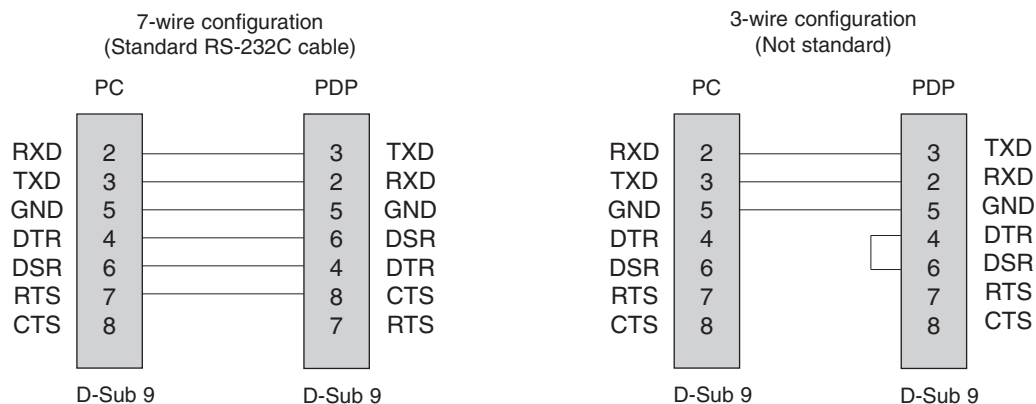


Type of connector; D-Sub 9-pin male

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



Set ID

- Use this function to specify a monitor ID number.
- Refer to 'Real Data Mapping 1'. See page 32.

1. 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**.
3. Press the **▶** button and then use **◀ / ▶** button to adjust **Set ID** to choose the desired monitor ID number. The adjustment range of **Set ID** is 1 ~ 99.
4. Press the **ENTER** button to save.



Communication Parameters

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

Command Reference List

	COMMAND 1	COMMAND 2	DATA (Hexadecimal)
01. Power	k	a	0 ~ 1
02. Input Select	k	b	0 ~ 6
03. Aspect Ratio	k	c	Refer to p. 37
04. Screen Mute	k	d	0 ~ 1
05. Volume Mute	k	e	0 ~ 1
06. Volume Control	k	f	0 ~ 64
07. Contrast	k	g	0 ~ 64
08. Brightness	k	h	0 ~ 64
09. Colour	k	i	0 ~ 64
10. Tint (option)	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/DW	k	n	Refer to p. 38
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. Colour Temperature (CSM)	k	u	0 ~ 3
20. Red Adjustment	k	v	0 ~ 3C
21. Green Adjustment	k	w	0 ~ 3C
22. Blue Adjustment	k	\$	0 ~ 3C
23. PIP input Source	k	y	0 ~ 6
24. Abnormal Status	k	z	0 ~ a
25. ISM Method	j	p	0 ~ 3
26. Low Power	j	q	0 ~ 1
27. Orbiter Time Setting	j	r	1 ~ FE
28. Orbiter Pixel Setting	j	s	1 ~ 3
29. Picture Size	j	t	0 ~ 20
30. Auto Configure	j	u	1
31. Tune command	m	a	01 ~ 7D
32. Channel Add/Del	m	b	00 ~ 01
33. Key	m	c	Key Code
34. Input select (Main)	x	b	Refer to p. 41
35. Input select (PIP)	x	y	Refer to p. 41

* When setting the 23 ~ 32, a menu doesn't display on screen.

Transmission / Receiving Protocol

Transmission

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

- * [Command 1] : First command to control PDP set.
(j or k)
- * [Command 2] : Second command to control PDP set.
- * [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 PDP 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 support function
3: Wait more time

01. Power (Command 2 : a)

- To control Power On/Off of the TV.

Transmission

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

Data 0 : Power Off 1 : Power On

Ack

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

- To show Power On/Off.

Transmission

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

Ack

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

* In like manner, if other functions transmit '0xFF' data based on this format, Acknowledgement data feed back presents status about each function.

02. Input Select (Command 2 : b)

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

Transmission

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

Data 0 : RGB 4 : Component1
1 : HDMI1 5 : Component2
2 : Video1 6 : TV
3 : Video2

Ack

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

03. Aspect Ratio (Command 2 : c) (Main Picture Size)

- To adjust the screen format. (Main picture 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 1 : Normal screen (4:3)
2 : Wide screen (16:9)
3 : Horizon
4 : Full screen (Zoom)

Ack

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

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

04. Screen Mute (Command 2 : 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)

Ack

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

05. Volume Mute (Command 2 : 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)

Ack

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

06. Volume Control (Command 2 : 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 1'. See page 40.

Ack

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

07. Contrast (Command 2 : 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

* Refer to 'Real data mapping 1'. See page 40.

Ack

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

08. Brightness (Command 2 : h)

- To adjust screen brightness.
You can also adjust brightness in the PICTURE menu.

Transmission

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

Data Min : 0 ~ Max : 64

* Refer to 'Real data mapping 1'. See page 40.

Ack

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

09. Colour (Command 2 : i)

- ▶ To adjust the screen colour.
You can also adjust colour in the PICTURE menu.

Transmission

Data Min : 0 ~ Max : 64
* Refer to 'Real data mapping 1'. See page 40.

Ack

10. Tint (Command 2 : j) (option)

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

Transmission

Data Red : 0 ~ Green : 64
* Refer to 'Real data mapping 1'. See page 40.

Ack

11. Sharpness (Command 2 : k)

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

Transmission

Data Min : 0 ~ Max : 64
* Refer to 'Real data mapping 1'. See page 40.

Ack

12. OSD Select (Command 2 : l)

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

Transmission

Data 0 : OSD off 1 : OSD on

Ack

13. Remote control lock mode (Command 2 : m)

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

Transmission

Data 0 : Lock off 1 : Lock on

Ack

- * If you're not using the remote control, use this mode.
When main power is on/off, external control lock is released.

14. PIP / DW (Command 2 : n)

- ▶ To control the PIP (Picture In picture)/DW.
You can also control the PIP/DW using the PIP button on the remote control or in the PIP/DW menu.

Transmission

Data 0: PIP/DW off 3: DW2
1: PIP 5: POP
2: DW1

Ack

15. PIP Position (Command 2 : q)

- ▶ To select sub picture position for PIP.
You can also adjust the sub picture position using POSITION button on the remote control or in the PIP/DW menu.

Transmission

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

Ack

16. Treble (Command 2 : r)

- ▶ To adjust treble.
You can also adjust treble in the SOUND menu.

Transmission

Data Min : 0 ~ Max : 64
* Refer to 'Real data mapping 1'. See page 40.

Ack

17. Bass (Command 2 : s)

- ▶ To adjust bass.
You can also adjust bass in the SOUND menu.

Transmission

Data Min : 0 ~ Max : 64
* Refer to 'Real data mapping 1'. See page 40.

Ack

18. Balance (Command 2 : t)

- ▶ To adjust balance.
You can also adjust balance in the SOUND menu.

Transmission

Data Min : 0 ~ Max : 64

* Refer to 'Real data mapping 1'. See page 40.

Ack

19. Colour Temperature (Command 2 : u)

- ▶ To adjust colour temperature.
You can also adjust CSM in the PICTURE menu.

Transmission

Data 0: Cool 1: Normal 2: Warm 3: User

Ack

20. Red Adjustment (Command 2 : v)

- ▶ To adjust red in colour temperature.

Transmission

Data Min : 0 ~ Max : 3C

* Refer to 'Real data mapping 2'. See page 40.

Ack

21. Green Adjustment (Command 2 : w)

- ▶ To adjust green in colour temperature.

Transmission

Data Min : 0 ~ Max : 3C

* Refer to 'Real data mapping 2'. See page 40.

Ack

22. Blue Adjustment (Command 2 : \$)

- ▶ To adjust blue in colour temperature.

Transmission

Data Min : 0 ~ Max : 3C

* Refer to 'Real data mapping 2'. See page 40.

Ack

23. PIP Input Select (Command 2 : y)

- ▶ To select input source for sub picture in PIP/DW picture mode. You can also adjust input source for sub picture using PIP INPUT button on remote control.

Transmission

Data 0 : RGB	4 : Component1
1 : HDMI1	5 : Component2
2 : Video1	6 : TV
3 : Video2	

Ack

24. Abnormal State (Command 2 : z)

- ▶ To recognize an abnormal state.

Transmission

Data FF : Read

Ack

Data 0: Normal (Power on and signal exist)
1: No signal (Power on)
2: Turn the TV off by remote control
3: Turn the TV off by sleep time function
4: Turn the TV off by RS-232C function
5: 5V down
6: AC down
7: Turn the TV off by Fan Alarm function (option)
8: Turn the TV off by Off time function
9: Turn the TV off by Auto sleep function
a: Turn the TV off by AV board detect

* This function is "read only".

25. ISM Method (Command 1 : j, Command 2 : p)

- ▶ To control the ISM method. You can also adjust ISM Method in SPECIAL menu.

Transmission

Data 0 : Normal Mode	2 : Orbiter
1 : White Wash	3 : Inversion

Ack

26. Low Power
(Command 1 : j, Command 2 : q)

▶ To reduce the power consumption of the TV. You can also adjust Low Power in SPECIAL menu.

Transmission

[j][q][][Set ID][][Data][][Cr]

Data 0 : Off
1 : On

Ack

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

27. Orbiter Time Setting
(Command 1 : j, Command 2 : r)

▶ To adjust orbiter operation time term.

Transmission

[j][r][][Set ID][][Data][][Cr]

Data Min: 1 ~ Max: FE
* Refer to 'Real data mapping 1'.

Ack

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

28. Orbiter Pixel Setting
(Command 1 : j, Command 2 : s)

▶ To adjust pixel number in orbiter function.

Transmission

[j][s][][Set ID][][Data][Cr]

Data Min: 1 ~ Max: 3
* Refer to 'Real data mapping 1'.

Ack

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

29. Picture Size Setting for DW Mode
(Command 1 : j, Command 2 : t)

▶ To select the DW picture format.
You can also select the DW picture format using the SIZE on the remote control.

Transmission

[j][t][][Set ID][][Data][Cr]

Data Min: 0 ~ Max: 20
* Refer to 'Real data mapping 1'.

Ack

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

30. Auto Configure
(Command 1 : j, Command 2 : u)

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

Transmission

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

Data 1: To set

Ack

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

31. Tune Command
(Command 1 : m, Command 2 : a)

▶ Tune Channel to following Physical number.

Transmission

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

Data0 Min: 0 ~ Max: 7D
Data1~4 Don't care
Data5 High -> Main channel: 0 Sub channel: 8
Low -> Air : 0, CATV : 1

Ack

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

32. Channel Add/Del
(Command 1 : m, Command 2 : b)

▶ To add and delete the channels.

Transmission

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

Data 0 : Channel Memory
1 : Channel Erase

Ack

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

* Real data mapping 1

0	: Step 0
⋮	
A	: Step 10 (Set ID 10)
⋮	
F	: Step 15 (Set ID 15)
10	: Step 16 (Set ID 16)
⋮	
64	: Step 100
⋮	
6E	: Step 110
⋮	
73	: Step 115
74	: Step 116
⋮	
C7	: Step 199

* Real data mapping 2

0	: -30
1	: -29
2	: -28
⋮	
1E	: 0
⋮	
3A	: +28
3B	: +29
3C	: +30

33. Key
(Command 1 : m, Command 2 : c)

► To send IR remote key code.

Transmission

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

Data Key code - Refer to page 43.

Ack

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

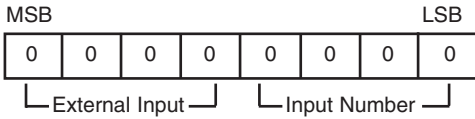
34. Input select (Command 1 : x, Command 2 : b)
(Main Picture Input)

► To select input source for TV

Transmission

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

Data Structure



External Input				Data
0	0	0	1	Analog
0	0	1	0	AV
0	1	0	0	Component
0	1	0	1	RGB-DTV
0	1	1	0	RGB-PC
1	0	0	1	HDMI

Input Number				Data
0	0	0	0	Input1
0	0	0	1	Input2

Ack

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

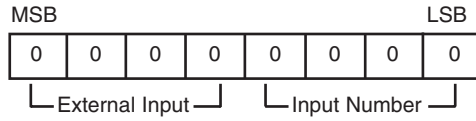
35. Input select (Command 1 : x, Command 2 : y)

► To adjust input source for sub picture in PIP mode

Transmission

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

Data Structure



External Input				Data
0	0	0	1	Analog
0	0	1	0	AV
0	1	0	0	Component
0	1	0	1	RGB-DTV
0	1	1	0	RGB-PC
1	0	0	1	HDMI

Input Number				Data
0	0	0	0	Input1
0	0	0	1	Input2

Ack

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

IR Codes

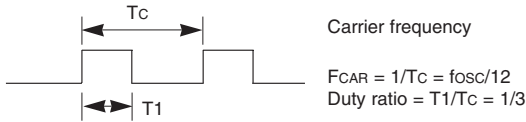
How to Connect

- ▶ Connect your wired remote control to the Remote Control port on the Monitor.

Remote Control IR Code

▶ Output waveform

Single pulse, modulated with 37.917KHz signal at 455KHz

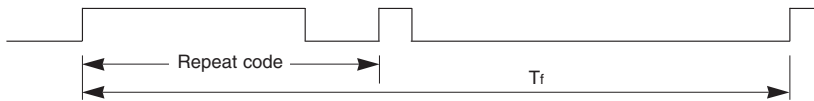


▶ Configuration of frame

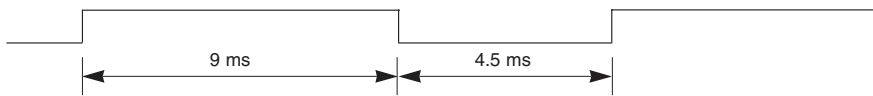
- 1st frame

Lead code	Low custom code							High custom code							Data code							$\overline{\text{Data code}}$										
	C0	C1	C2	C3	C4	C5	C6	C7	C0	C1	C2	C3	C4	C5	C6	C7	D0	D1	D2	D3	D4	D5	D6	D7	$\overline{D0}$	$\overline{D1}$	$\overline{D2}$	$\overline{D3}$	$\overline{D4}$	$\overline{D5}$	$\overline{D6}$	$\overline{D7}$

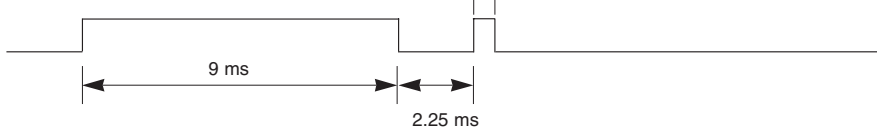
- Repeat frame



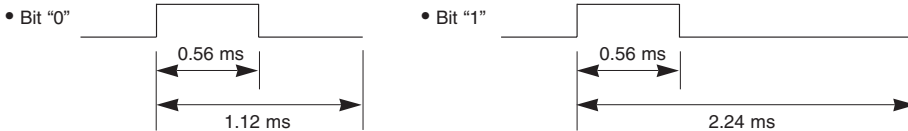
▶ Lead code



▶ Repeat code

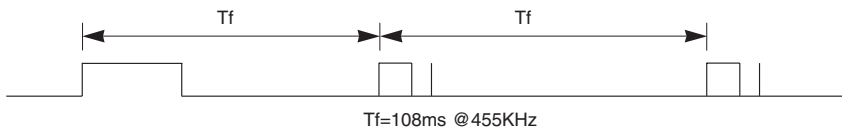


▶ Bit description



▶ Frame interval : Tf

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



Code (Hexa)	Function	Note
00	CH (▲)	R/C Button
01	CH (▼)	R/C Button
02	VOL (▶)	R/C Button
03	VOL (◀)	R/C Button
03	▲	R/C Button
40	▼	R/C Button
41	▶	R/C Button
07	◀	R/C Button
06	POWER	R/C Button (Power On/Off)
C4	POWER ON	Discrete IR Code (Only Power On)
C5	POWER OFF	Discrete IR Code (Only Power Off)
09	MUTE	R/C Button
5B	EXIT	R/C Button
10	Number Key 0	R/C Button
11	Number Key 1	R/C Button
12	Number Key 2	R/C Button
13	Number Key 3	R/C Button
14	Number Key 4	R/C Button
15	Number Key 5	R/C Button
16	Number Key 6	R/C Button
17	Number Key 7	R/C Button
18	Number Key 8	R/C Button
19	Number Key 9	R/C Button
98	TV/VIDEO	R/C Button
0B	TV INPUT	R/C Button
D6	TV	Discrete IR Code (Input TV Selection)
5A	VIDEO1	Discrete IR Code (Input VIDEO1 Selection)
D0	VIDEO2	Discrete IR Code (Input VIDEO2 Selection)
BF	COMPONENT1	Discrete IR Code (Input COMPONENT1 Selection)
D4	COMPONENT2	Discrete IR Code (Input COMPONENT2 Selection)
C6	DVI	Discrete IR Code (Input DVI Selection)
D5	RGB	Discrete IR Code (Input RGB Selection)
0E	SLEEP	R/C Button
43	MENU	R/C Button
44	OK	R/C Button
4D	APC	R/C Button
52	DASP	R/C Button
60	PIP	R/C Button
61	PIP INPUT	R/C Button
63	SWAP	R/C Button
64	SIZE	R/C Button
62	POSITION	R/C Button
71	PIP CH+	R/C Button
72	PIP CH-	R/C Button
5D	ZOOM -	R/C Button
5C	ZOOM +	R/C Button
79	ARC	R/C Button
76	ARC (4:3)	Discrete IR Code (Only 4:3 mode)
77	ARC (16:9)	Discrete IR Code (Only 16:9 mode)
AF	ARC (Zoom)	Discrete IR Code (Only Zoom mode)
1E	FCR	R/C Button
1A	REVIEW	R/C Button
54	AUTO PROGRAM	R/C Button
55	MEMORY/ERASE	R/C Button
0A	MTS	R/C Button
39	CAPTION	R/C Button
99	AUTO CONFIG	Discrete IR Code

Programming the Remote

- The remote control is a multi-brand or a 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

1. 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 the desired component button on the remote control, while illuminating on the selected component. Test the **POWER** buttons 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 the desired component button on the remote control.
3. Simultaneously, press the **MENU** and **MUTE** buttons 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. There is a way to find the right code for the component.
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 brinking 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		
JVC	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		

CATV

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

HDSTB

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

Audio

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

DVD

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

Troubleshooting Checklist

No picture & No sound

- Check whether the TV is turned on.
- Is the power cord inserted into wall power outlet?
- Test the wall power outlet, plug another product's power cord into the outlet where the TV's power cord was plugged in.

Picture OK & No sound

- Press the **VOLUME** (▶) button.
- Sound muted? Press **MUTE** button.

The remote control doesn't work

- Check to see if there is any object between the TV and the remote control causing obstruction.
- Are batteries installed with correct polarity (+ to +, - to -)? (Refer to p.8)
- Correct remote operating mode set: TV, VCR etc.?
- Install new batteries. (Refer to p.8)

Picture appears slowly after switching on

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

No or poor color or poor picture

- Select **Color** in the **Picture** menu and press the **VOLUME** (▶) button. (Refer to p.18)
- Keep a sufficient distance between the TV and the VCR.
- Activate any function to restore the brightness of the picture. (If still picture is on the screen for more than 5 minutes, the screen gets dark.)

Horizontal/vertical bars or picture shaking

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

No output from one of the speakers

- Adjust **Balance** in the **Sound** menu. (Refer to p.27)

Unusual sound from inside the TV

- A change in ambient humidity or temperature may result in an unusual noise when the plasma display is turned on or off and does not indicate a fault with the TV.

Product Specifications

MODELS	42PX4RV-UC
Width (inches / mm)	48.4 / 1210
Height (inches / mm)	27.6 / 701
Depth (inches / mm)	11.6 / 295
Weight (pounds / kg)	76 / 34.6
Resolution	852 x 480 (Dot)
Power requirement	AC100-240V, 50/60Hz
Television System	NTSC, PAL-M/N
Program Coverage	VHF 2 ~ 13, UHF 14 ~ 69, CATV 1 ~ 125
External Antenna Impedance	75 Ω
Color	16,770,000 (256 steps of each R, G and B)
Operating Temperature Range	32 ~ 104°F (0 ~ 40°C)
Operating Humidity Range	Less than 80%

MODELS	50PX5R-UC
Width (inches / mm)	55.1 / 1400
Height (inches / mm)	32.3 / 821
Depth (inches / mm)	3.9 / 99
Weight (pounds / kg)	115 / 52.15
Resolution	1366 x 768 (Dot)
Power requirement	AC100-240V, 50/60Hz
Television System	NTSC, PAL-M/N
Program Coverage	VHF 2 ~ 13, UHF 14 ~ 69, CATV 1 ~ 125
External Antenna Impedance	75 Ω
Color	16,770,000 (256 steps of each R, G and B)
Operating Temperature Range	32 ~ 104°F (0 ~ 40°C)
Operating Humidity Range	Less than 80%

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

Notes

Notes

Notes



LG ELECTRONICS, INC.
PLASMA TV — U.S. LIMITED WARRANTY

Your LG Plasma TV will be repaired or replaced in accordance with the terms of this warranty, at LGE's option, if it proves to be defective in material or workmanship under normal use, during the warranty period ("Warranty Period") listed below, effective from the date ("Date of Purchase") of original consumer purchase of the product. This warranty is good only to the original purchaser of the product and effective only when used in the United States, including Alaska, Hawaii, and U.S. Territories.

<p><u>WARRANTY PERIOD:</u></p> <p>LABOR and PARTS: 2 YEARS from the Date of Purchase. Your unit will be repaired or replaced with a new, substitute model or factory reconditioned unit, at LGE's option. If repaired, parts used in the repair may be new or remanufactured.</p> <p>Replacement Units and Repair Parts are warranted for the remaining portion of the original unit's warranty period.</p> <p>EFFECTIVE DATE OF WARRANTY: Your warranty period begins on the date of sale to the original consumer/end user. KEEP THE DEALER'S DATED BILL OF SALE OR PROOF OF DELIVERY as evidence of the purchase date. You will be required to submit a legible copy of your bill of sale or proof of delivery when requesting warranty service.</p>	<p><u>HOW SERVICE IS HANDLED:</u></p> <p>In-Home Service: Please retain dealer's dated bill of sale or delivery ticket as evidence of the Date of Purchase for proof of warranty, and submit a copy of the bill of sale to the service person at the time warranty service is provided.</p> <p>Please call 1-800-243-0000 to locate your nearest LGE Authorized Service Center.</p> <p>Visit our website at: http://www.lgservice.com</p>
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THIS WARRANTY IS IN LIEU OF ANY OTHER WARRANTY, EXPRESS OR IMPLIED, INCLUDING WITHOUT LIMITATION, ANY WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE. TO THE EXTENT ANY IMPLIED WARRANTY IS REQUIRED BY LAW, IT IS LIMITED IN DURATION TO THE EXPRESS WARRANTY PERIOD ABOVE. NEITHER THE MANUFACTURER NOR ITS U.S. DISTRIBUTOR SHALL BE LIABLE FOR ANY INCIDENTAL, CONSEQUENTIAL, INDIRECT, SPECIAL, OR PUNITIVE DAMAGES OF ANY NATURE, INCLUDING WITHOUT LIMITATION, LOST PROFITS, LOST OR CORRUPTED PROGRAMMING OR DATA, OR ANY OTHER DAMAGE WHETHER BASED IN CONTRACT, TORT, OR OTHERWISE. Some states do not allow the exclusion or limitation of incidental or consequential damages or limitations on how long an implied warranty lasts, so the above exclusion or limitation may not apply to you. This warranty gives you specific legal rights and you may also have other rights that vary from state to state.

CONCERNING PIXEL FUNCTIONALITY: Your Plasma TV contains about one million individual pixels. Plasma TV typically contain a small number of pixels that do not function normally. Your display has been inspected and is in compliance with manufacturer's specifications, indicating that any pixel defects do not effect the operation or use of your display.

IMPORTANT: Please fill out and mail in your Product Registration Card or go to www.lgservice.com to register your product online. This information will allow us to reach you promptly should we discover a safety or reliability problem that could affect you.

THIS LIMITED WARRANTY DOES NOT APPLY TO:

<ul style="list-style-type: none">● damage caused in shipping or transit● service required as a result of improper installation, including incorrect or insufficient AC supply (please consult the owner's manual for power supply requirements)● installation or repair of antenna systems, cable converters, cable company supplied equipment, or other components in a video system● set-up or adjustment on consumer controls, or damage caused by improper adjustments● damage caused by other system components● any panel that has been modified or incorporated into any other product● replacement of batteries on the remote control.● damage (including cosmetic damage), failure, loss or personal injury due to misuse, abuse, negli-	<p>gence, improper maintenance or storage, or to acts of nature or other causes beyond our control. (Causes beyond our control include but are not limited to lightning strike, power surges, power outages and water damage.)</p> <ul style="list-style-type: none">● image burn-in● repair or replacement of warranted parts by other than LGE authorized service centers.● units purchased or serviced outside of the coverage area.● product where the original factory serial numbers have been removed, defaced or changed in any way.● product sold and labeled as "as is, where is" or similar disclaimer.
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The cost of repair or replacement under these excluded circumstances shall be borne by the consumer.

CUSTOMER INTERACTIVE CENTER NUMBERS:

<p>To obtain customer assistance, product information or Dealer or Service locations</p>	<p>Call 1-800-243-0000 24 hours a day, 365 days per year</p>
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FOR SERVICE:

Before you call for warranty service, check your operating guide – you may avoid a service call.

For warranty service information, please contact the LGE Customer Interactive Center telephone number.

When calling for service, **please have your product model number, serial number and the date of purchase or the date of original installation available.**

If a replacement unit is required, under some circumstances you may be asked to provide a reserve deposit to the LGE Service Center against a credit card number as surety for advanced shipment. Your credit card will not be charged if you return the defective unit within 10 working days.

If a replacement unit is received, please use the carton and packaging from that unit in returning the defective unit to the LG®Brand Service Center.

Parts and service in accordance with the LGE warranty are LGE's responsibility and will be provided without charge. Other service requirements will be at the owner's expense. If you have problems in obtaining satisfactory warranty service, write or call the LGE Customer Interactive Center. Service may be provided by independently owned and operated service organizations.

To assure proper credit and avoid unnecessary charges, you must obtain an LGE Return Authorization before returning any product to the LGE Service Center. Contact the Customer Interactive Center for details.

TO CONTACT THE LGE CUSTOMER SERVICE CENTER BY MAIL:

LGE Customer Interactive Center
P.O. Box 240007
201 James Record Road
Huntsville, Alabama 35824
<http://www.lgservice.com>

P/NO : 3828VA0542A