

# User's Guide Specification

담당	관리자
Park SY 06.09.13	KIM JONG OK 06.09.13

## 1. Model Description

MODEL	50PB2DR-AC, 42LC2DR-AC 42/47LB2DE-AA	BRAND	LG	Part No.	38289U0569D (0702-REV05)
SUFFIX	AUSTRALIA	Product Name	50PB2DR, 42LC2DR, 42/47LB2DE		

## 2. Printing Specification

1. Trim Size (Format) : 210mm x 280 mm
2. Printing Colors
  - Cover : 3 COLORS (PMS207C, PMS431C, BLACK)
  - Inside : 2 COLOR (BLACK, PMS207U)
3. Stock (Paper)
  - Cover : Coated paper , Snow White 150 g/m<sup>2</sup>
  - Inside : Uncoated paper , 백상지 80 g/m<sup>2</sup>
4. Printing Method : Off set
5. Bindery : Perfect bind
6. Language : English (1)
7. Number of pages : 124

NOTES

“This part contains Eco-hazardous substances(Pb, Cd, Hg, Cr6+, PBB, PBDE, etc.)within LG standard level, Details should be followed Eco-SCM management standard[LG(56)-A-2524]. Especially, Part should be followed and controlled the following specification.  
 (1)Eco-hazardous substances test report should be submitted when Part certification test and First Mass Production.  
 (2) Especially, Don't use or contain lead(Pb) and cadmium(Cd) in ink.

## 3. Special Instructions

### (1) Origin Notification

- \* LGEIN : Printed in Indonesia
- \* LGEWA : Printed in U.K.
- \* LGESP : Printed in Brazil
- \* LGEMX : Printed in Mexico
- \* LGEND : Printed in China
- \* LGEIL : Printed in India
- \* LGEMA : Printed in Poland

## 4. Changes

9				
8				
7				
6				
5	Feb./27/07	Song ju seok	S7-74160	Deleted logos.
4	Feb./08/07	Song ju seok	S7-72191	Amended spec.
3	Feb./02/07	Song ju seok	S7-71767	Applied the PQ test results
2	Dec./11/06	Song ju seok	S6-64970	1. Amended progress bar 2. Added the model name (42/47LB2DE-AA)
1	Sep./13/06	Park sun young	S6-56409	Applied the PQ test results
REV. NO.	MM/DD/YY	SIGNATURE	CHANGE NO.	CHANGE CONTENTS

# Pagination sheet

P/NO.38289U0569D

Total pages : 124 pages

Front cover

<b>LG(EN)</b>
<b>P/NO.</b>

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Rear cover

<b>LG</b>
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**LG Electronics Inc.**

PLASMA TV | LCD TV | OWNER'S MANUAL



## LCD TV | PLASMA TV OWNER'S MANUAL

LCD TV MODEL  
42LC2DR  
42LB2DE  
47LB2DE

PLASMA TV MODEL  
50PB2DR

Please read **Information Manual** included together before reading this manual and operating your set.

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

LG Electronics Inc.



DVB is a registered trademark of the DVB Project



(42/47LB2DE ONLY)

P/NO : 38289U0569D (0702-REV05)  
Printed in Korea





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

# INTRODUCTION

## FEATURE OF THIS TV

### What is a Plasma TV?

Using plasma is the best way to achieve flat panel displays with excellent image quality and large screen sizes that are easily viewable. The Plasma TV can be thought of as a descendant of the neon lamp and or a series of fluorescent lamps.

### How does it work?

Plasma TV is an array of cells, known as pixels, which are comprised of three 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.

Plasma TV offers a rich, dynamic display because each sub-pixel is individually controlled by advanced electronics to produce over 16 million different colors. This means that you get perfect images that are easily viewable in a display that is fewer than five inches thick.

### 160° - Wide angle range of vision

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

### Wide Screen

The wide screen offers a theater-like experience in your own home.

### Multimedia

Connect your plasma display to a PC and 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 do not fit.

### The Plasma TV Manufacturing Process: a few minute colored dots may be present on the Plasma TV screen

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

### Cooling Fan Noise - This feature is not available for all models.

In the same way that a fan is used in a PC computer to keep the CPU (Central Processing Unit) cool, the Plasma TV 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 Plasma TV.

The fan noise doesn't have any negative effect on the Plasma TV'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 Plasma TV to be exchanged or returned.



## FOR LCD TV

If the TV feels cold to the touch, there may be a small “flicker” when it is turned on. This is normal, there is nothing wrong with TV.

Some minute dot defects may be visible on the screen, appearing as tiny red, green, or blue spots. However, they have no adverse effect on the monitor’s performance.

Avoid touching the LCD screen or holding your finger(s) against it for long periods of time. Doing so may produce some temporary distortion effects on the screen.

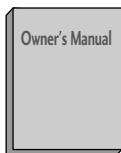
### On Disposal

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

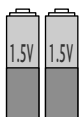
# INTRODUCTION

## ACCESSORIES

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



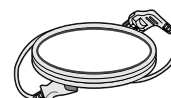
**Owner's Manual**



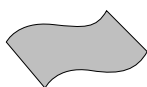
**Batteries**



**Remote Control**



**Power Cord**



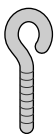
**Polishing Cloth**  
Polish the screen with the cloth.

- \* lightly wipe stained spot on the exterior only with the cleansing cloths for the product exterior if there is stain or fingerprint on surface of the exterior.
- \* Do not wipe roughly when removing stain. Please be aware that excessive force may cause scratch or discoloration.

### For 50PB2DR

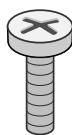


**2-Wall brackets**



**2-eye-bolts**

### For 42LC2DR/42LB2DE/47LB2DE



**2-TV Bracket Bolts**



**2-TV Brackets,  
2-Wall Brackets**



**Cable Management  
(Refer to p.17)**

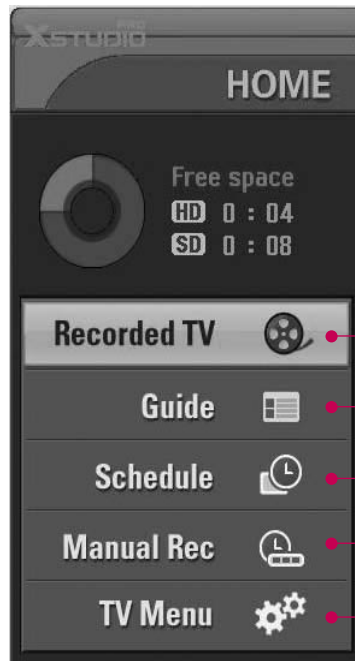
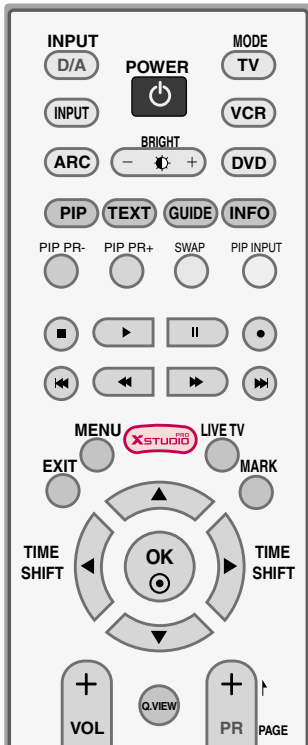


**Twister Holder**  
Arrange the wires  
with the twister holder.

# HOME MENU

This menu is a contents guide.

In the HOME Menu, you can access the recorded list of DVR, the TV Guide, the DVR recording schedule, Manual Recording of the DVR or the TV Menu.



- Recorded TV DVR p.36
- Guide Guide p.58
- Schedule Schedule p.49
- Manual Rec
- TV Menu TV Menu p.59

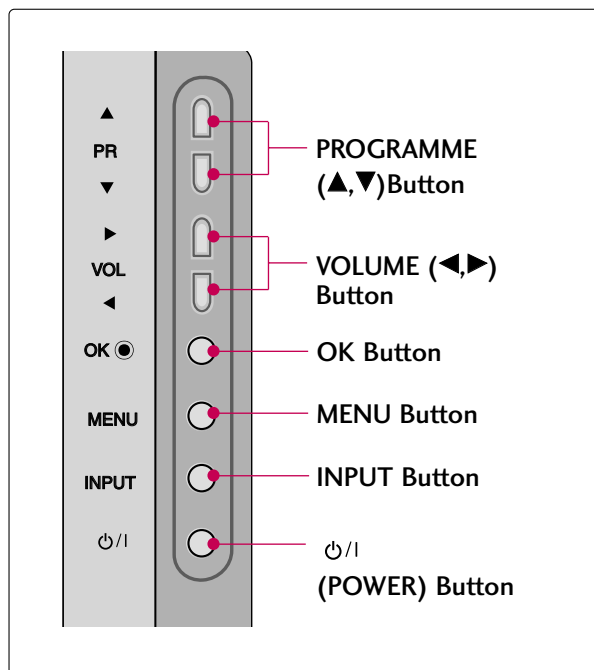
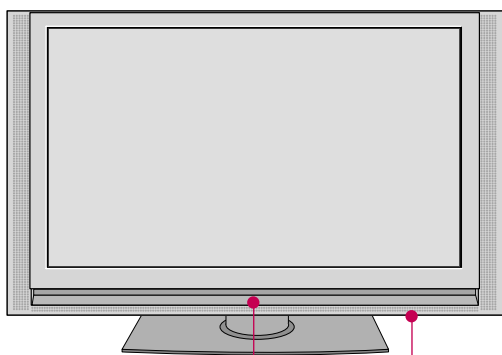
# INTRODUCTION

## FRONT & BACK PANEL INFORMATION

This is a representation of the front panel of model 50PB2DR.

- Image shown may be somewhat different from your TV.

### Front Panel Controls



Remote Control Sensor

A diagram of the front panel indicator lights. From left to right, there are five indicators: a 'TV' icon, 'PR 3', a 'DVD VIDEO' icon, an AV mode icon (two circles with dots), and an 'HDMI' icon. A red line points from the power symbol icon to the text 'Power Standby Indicator'.

**Power Standby Indicator**  
Illuminates red in standby mode.  
When the TV is turned on, the indicator blinks white and then illuminates white before the picture is displayed.

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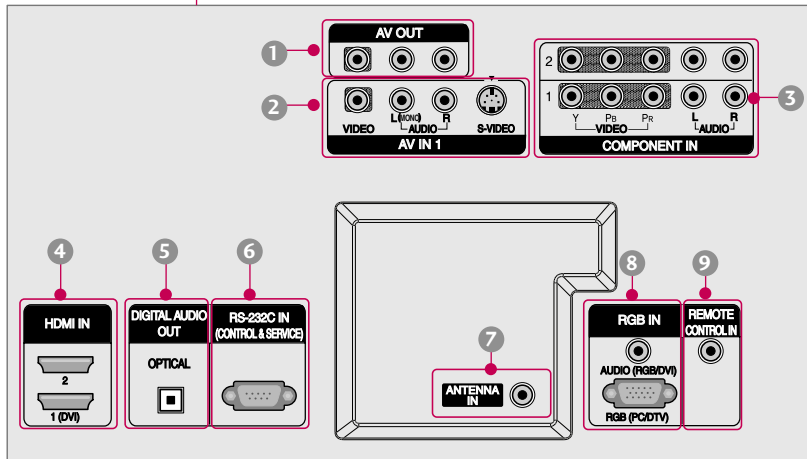
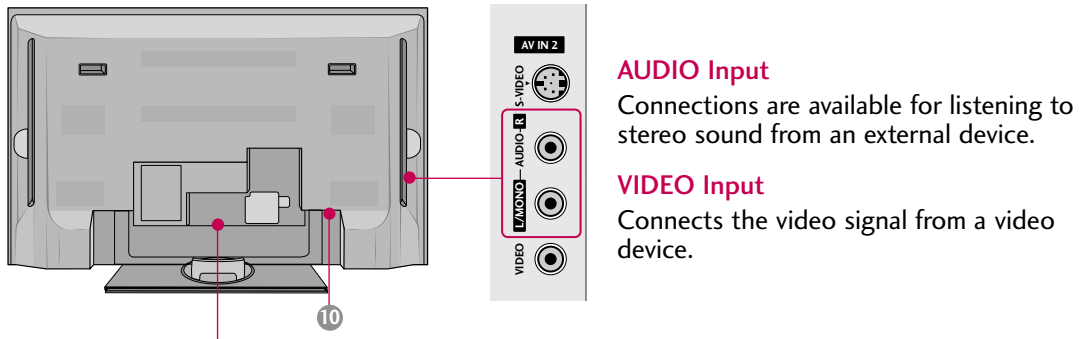
**INDEX**

TV	Digital, Analogue	AV mode	AV mode
DVD VIDEO	Component mode	HDMI	HDMI1/DVI or HDMI2 mode

This manual explains the features available on the **50PB2DR**.

▪ Image shown may be somewhat different from your TV.

## Back Connection Panel



- 1 AV OUT**  
Connect a second TV or monitor.
- 2 AV (Audio/Video) IN 1**  
Connect audio/video output from an external device to these jacks.  
**S-VIDEO**  
Connect S-Video out from an S-VIDEO device.
- 3 COMPONENT IN**  
Connect a component video/audio device to these jacks.
- 4 HDMI IN**  
Connect a HDMI signal.  
Or DVI(VIDEO)signal to the this port with a HDMI to DVI cable.
- 5 DIGITAL AUDIO OUT OPTICAL**  
Connect digital audio from various types of equipment. Note: In standby mode, these ports do not work.
- 6 RS-232C IN (CONTROL &SERVICE) PORT**  
Connect to the RS-232C port on a PC.
- 7 ANTENNA IN**  
Connect antenna signals to this jack.
- 8 RGB/AUDIO IN**  
Connect the output from a set-top box or PC to the appropriate input port.
- 9 Remote Control Port**  
Connect your wired remote control.
- 10 Power Cord Socket**  
For operation with AC power.  
Caution: Never attempt to operate the TV on DC power.

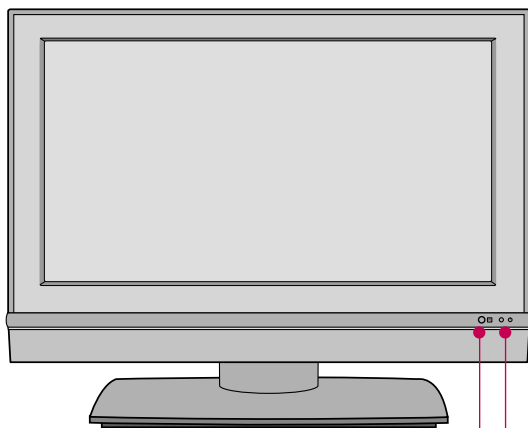
## FRONT & BACK PANEL INFORMATION

This is a front panel of 42LC2DR/42LB2DE/47LB2DE.

- Image shown may be somewhat different from your TV.

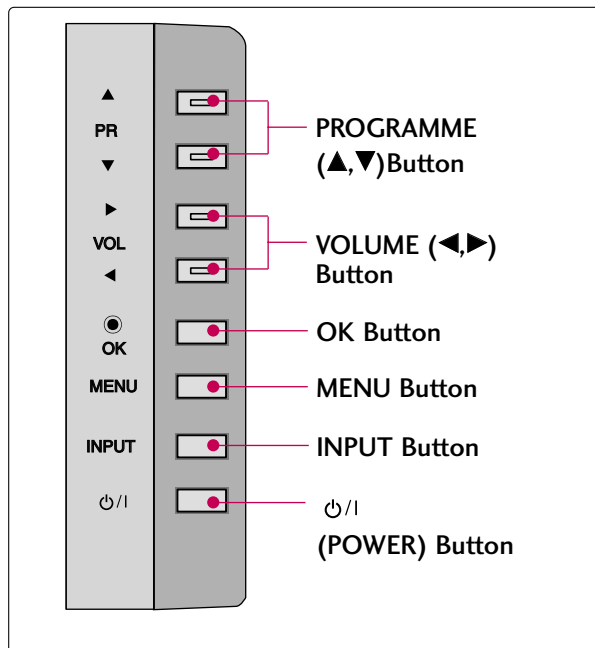
### Front Panel Controls

#### 42LC2DR

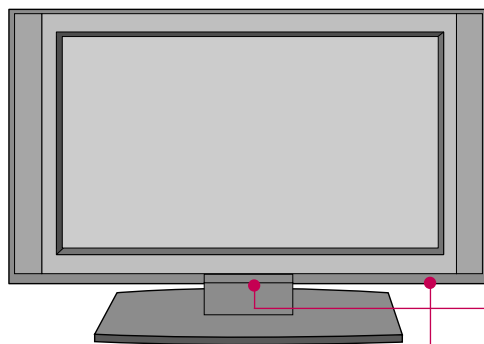


Remote Control Sensor

Power Standby Indicator  
Illuminates red in standby mode.  
When the TV is turned on, the indicator  
blinks white and then illuminates white  
before the picture is displayed.



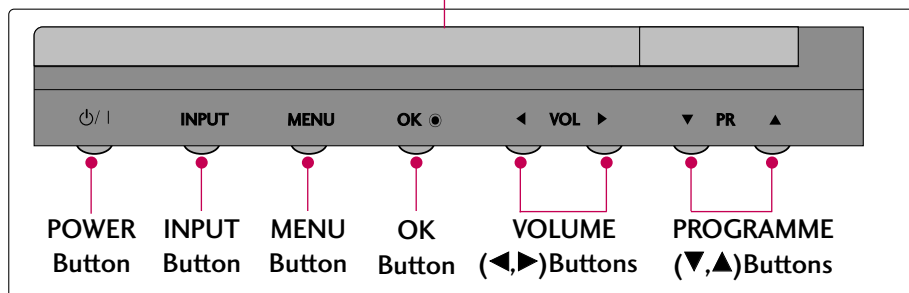
#### 42/47LB2DE



Remote Control Sensor

Power Standby Indicator

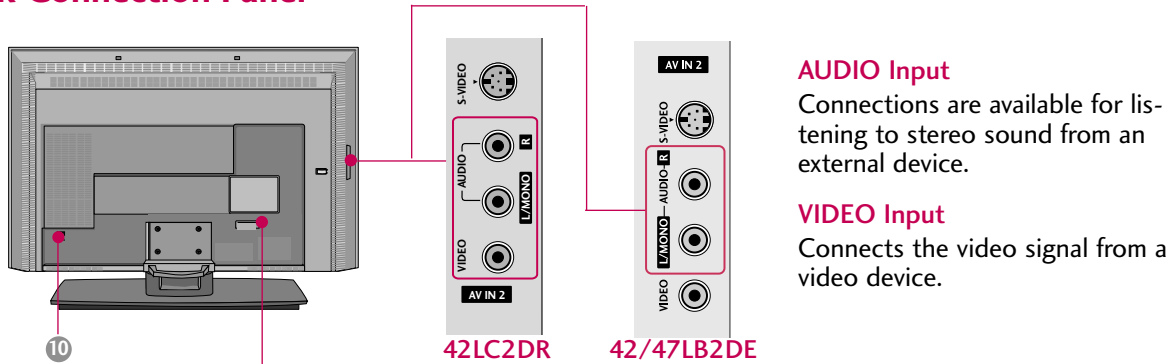
- illuminates red in standby mode.
- illuminates white when the set is switched on.



This is the back panel of **42LC2DR/42LB2DE/47LB2DE**.

■ Image shown may be somewhat different from your TV.

## Back Connection Panel

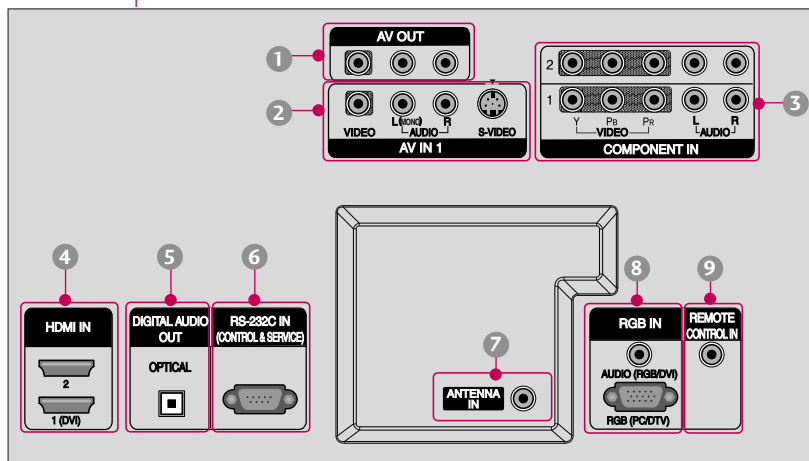


### AUDIO Input

Connections are available for listening to stereo sound from an external device.

### VIDEO Input

Connects the video signal from a video device.



- 1 AV OUT**  
Connect a second TV or monitor.
- 2 AV (Audio/Video) IN 1**  
Connect audio/video output from an external device to these jacks.  
**S-VIDEO**  
Connect S-Video out from an S-VIDEO device.
- 3 COMPONENT IN**  
Connect a component video/audio device to these jacks.
- 4 HDMI IN**  
Connect a HDMI signal.  
Or DVI(VIDEO)signal to the this port with a HDMI to DVI cable.
- 5 DIGITAL AUDIO OUT OPTICAL**  
Connect digital audio from various types of equipment. Note: In standby mode, these ports do not work.
- 6 RS-232C IN (CONTROL &SERVICE) PORT**  
Connect to the RS-232C port on a PC.
- 7 ANTENNA IN**  
Connect cable signals to this jack.
- 8 RGB/AUDIO IN**  
Connect the output from a set-top box or PC to the appropriate input port.
- 9 Remote Control Port**  
Connect your wired remote control.
- 10 Power Cord Socket**  
For operation with AC power.  
Caution: Never attempt to operate the TV on DC power.

## REMOTE CONTROL KEY FUNCTIONS

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

<p><b>D/A INPUT</b> (Digital TV / Analogue TV) Selects digital or analogue mode.</p> <p><b>INPUT</b> External input modes rotate in regular sequence: Digital, Analogue, AV1-2, Component 1-2, RGB-DTV (or RGB-PC), HDMI1/DVI, HDMI2.</p> <p><b>POWER</b> Switches the set between ON and STANDBY.</p>	
<p><b>ARC</b> Selects your desired picture format. ▶ p.95</p> <p><b>BRIGHT +/-</b></p> <ul style="list-style-type: none"> <li>Adjusts brightness on screen. ▶ p.73</li> <li>It returns to the default settings brightness by changing mode source.</li> </ul>	
<p><b>XSTUDIO PRO mode control buttons</b></p> <ul style="list-style-type: none"> <li>Use for DVR record or trick play. ▶ p.42, 43, 49</li> <li>Controls the XSTUDIO PRO mode.</li> <li>For further details, see the DVR section.</li> </ul> <p><b>VCR/DVD control buttons</b> Control some video cassette recorders or DVD players ("RECORD" button is not available for DVD player).</p>	
<p><b>OK</b> Accepts your selection or displays the current mode.</p> <p><b>THUMBSTICK</b> (Up/Down/Left/Right/OK)</p> <ul style="list-style-type: none"> <li>Adjusts menu settings.</li> <li>Selects menu item.</li> </ul>	
<p><b>VOLUME +/-</b> Increase/decrease the sound level.</p> <p><b>Q.VIEW</b> Returns to the previously viewed programme.</p> <p><b>MUTE</b> Switches the sound on or off.</p> <p><b>PROGRAMME +/-</b> Selects a programme.</p> <p><b>PAGE UP/DOWN</b> Move from one full set of screen information to the next one.</p>	
<p><b>NUMBER button</b></p> <p><b>LIST</b> Displays the programme list. ▶ p.67</p> <p><b>FAV (FAVOURITE)</b> Displays the selected favourite programmes.</p>	
<p><b>I/II</b> Selects the sound output or the audio mode. ▶ p.87</p> <p><b>APM</b> Concurrently, compare with the Dynamic, Standard, Mild, User1 and User2 on the screen. ▶ p.73</p> <p><b>SLEEP</b> Sets the sleep timer. ▶ p.91</p> <p><b>ADJUST</b> Adjust the screen Resolution, position, clock, and phase. ▶ p.33</p>	



**TV, VCR, DVD**, Selects the remote operating mode: TV, VCR, DVD. Select other operating modes, for the remote to operate external devices.

**GUIDE** Shows a programme schedule. ► p.58

**INFO** Shows the present screen information.

**PIP** Switches to PIP, POP and Twin picture modes or off mode. ► p.52-55

**PIP PR +/-** Selects a programme for the sub picture.► p.53

**SWAP** Alternates between main and sub picture in PIP/Twin picture mode.► p.54

**PIP INPUT** Selects the input mode for the sub picture.► p.53

**COLOUR Button** They are used as per the indications or functions displayed on the TV screen in the case of Text displays (Teletext, EPG) and programme edit.

**EXIT** Returns to TV viewing from any menu.

**MENU** Selects a menu.

**XSTUDIO<sup>PRO</sup>** Enter to the **XSTUDIO<sup>PRO</sup>** mode.

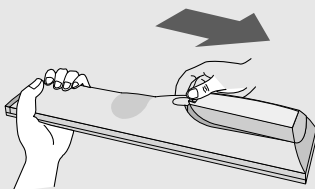
**LIVE TV**

- When playing the recorded program: Return to the last selected input source.
- When delaying: Return to the last selected input source.

**MARK** Selects the wanted functions.

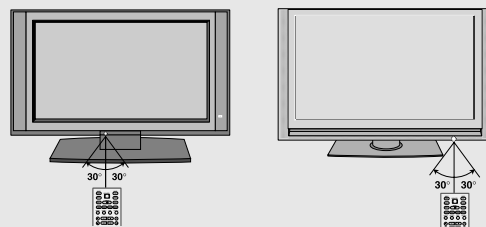
**1 TELETEXT BUTTONS** These buttons are used for teletext. Text button is used to enable teletext services while other buttons are for teletext functions. \* For further details, see the 'Teletext' section. ► p.56-57

## Installing Batteries



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

## Remote control effective range



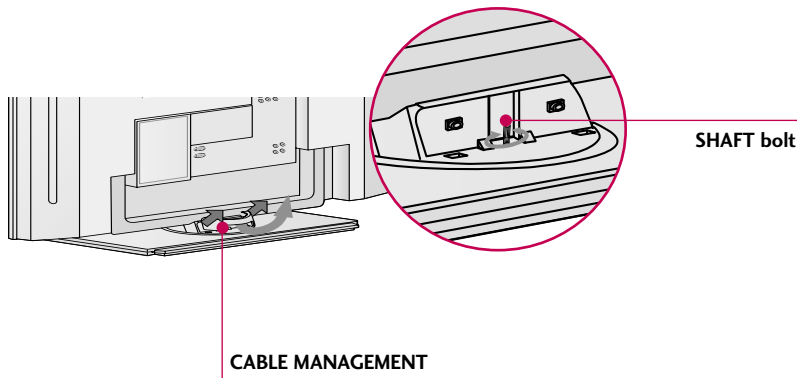
- Use a remote control up to 7 meters distance and 30 degree (left/right) within the receiving unit scope.
- Dispose of used batteries in a recycle bin to preserve environment.

# INSTALLATION

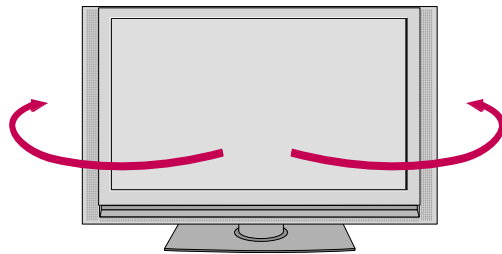
## SWIVEL STAND

This feature is available on the **50PB2DR**.

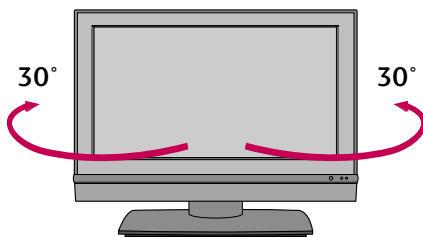
- 1 Separate the **CABLE MANAGEMENT** from TV.  
And loosen the shaft bolt counterclockwise completely.



The TV can be conveniently swivelled on its stand  $20^\circ$  to the left or right to provide the optimum viewing angle.



This feature is available on the **42LC2DR/42LB2DE/47LB2DE**.



The TV can be conveniently swivelled on its stand  $30^\circ$  to the left or right to provide the optimum viewing angle.

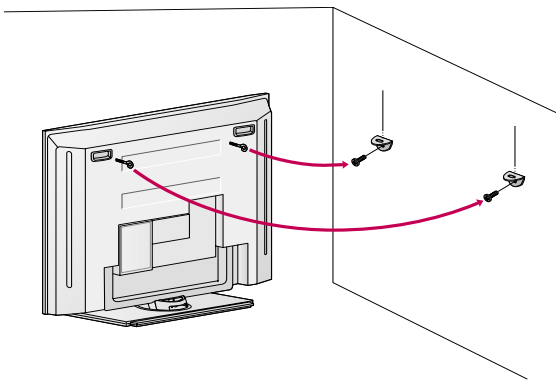
## ATTACHING THE TV TO A WALL

- Image shown may be somewhat different from your TV.

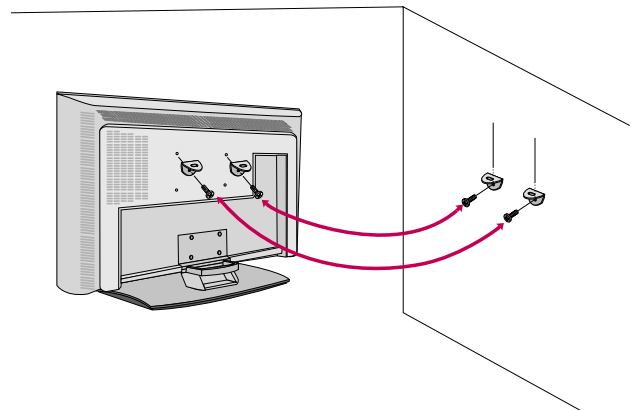
Set it up close to the wall so the product doesn't fall over when it is pushed backwards.

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

### 50PB2DR



### 42LC2DR/42LB2DE/47LB2DE



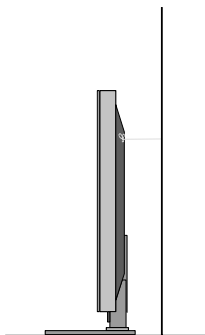
- Insert the eye-bolts (or TV brackets and bolts) to tighten the product to the wall as shown in the picture.

\* If your product has the bolts in the eye-bolts position before inserting the eye-bolts, loosen the bolts.

Insert the eye-bolts and tighten them securely in the upper holes.

Secure the wall brackets with the bolts (not provided as parts of the product, must purchase separately ) on the wall. Match the height of the bracket that is mounted on the wall to the holes in the product.

Ensure the eye-bolts or brackets are tightened securely.



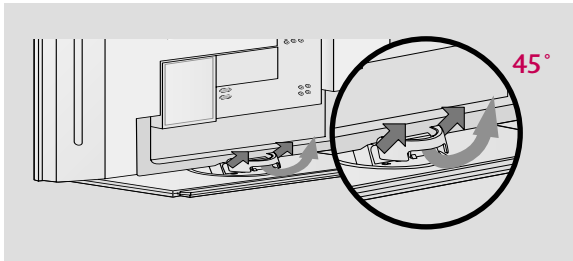
- Use a sturdy rope (must be purchased separately) to secure the TV. It is safer to tie the rope so it runs horizontally between the wall and the TV.

# INSTALLATION

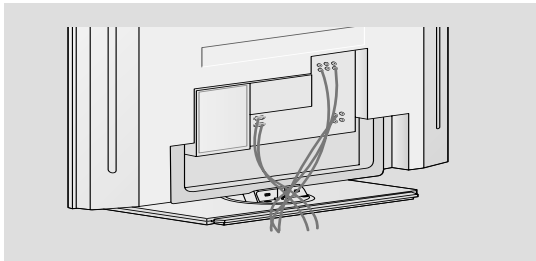
## BACK COVER FOR WIRE ARRANGEMENT

This feature is available on the **50PB2DR**.

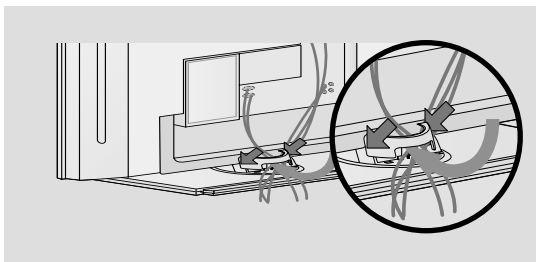
- 1 Hold the **CABLE MANAGEMENT** with both hands and pull it backward as shown.



- 2 Connect the cables as necessary.  
To connect additional equipment, see the **Connections & Setup** section.



- 3 Install the **CABLE MANAGEMENT** as shown.



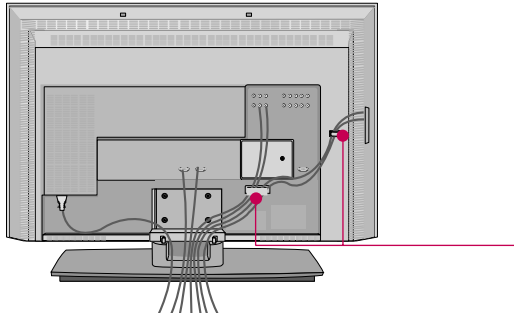
### ! NOTE

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

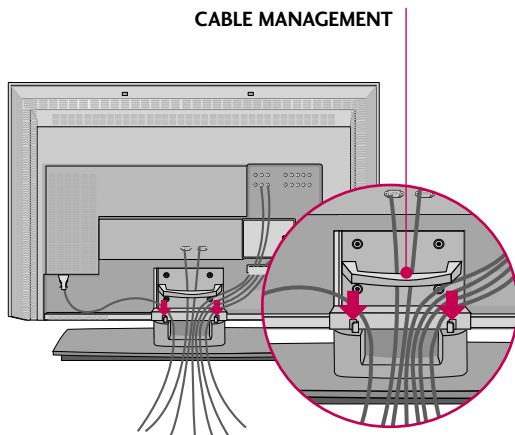
This feature is available on the **42LC2DR/42LB2DE/47LB2DE**.

■ Image shown may be somewhat different from your TV.

- 1 Connect the cables as necessary.  
After connecting the cables neatly, arrange the cables to the Cable Holder.  
To connect an additional equipment, see the **Connections & Setup** section.

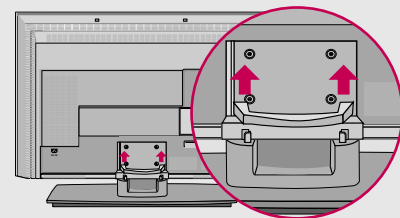


- 2 Install the **CABLE MANAGEMENT** as shown.

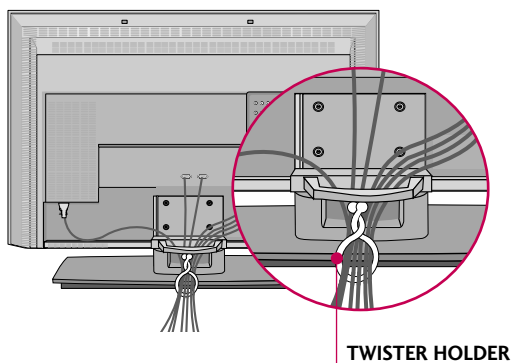


### How to remove the **CABLE MANAGEMENT**

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



- 3 Bundle the cables using the supplied twister holder.



### ! **NOTE**

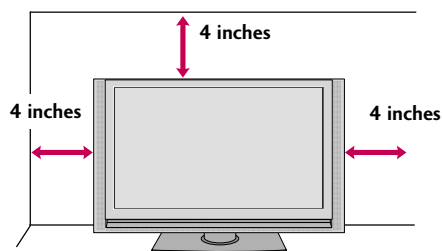
- ▶ Do not hold the **CABLE MANAGEMENT** when moving the product.
- If the product is dropped, you may be injured or the product may be broken.

# INSTALLATION

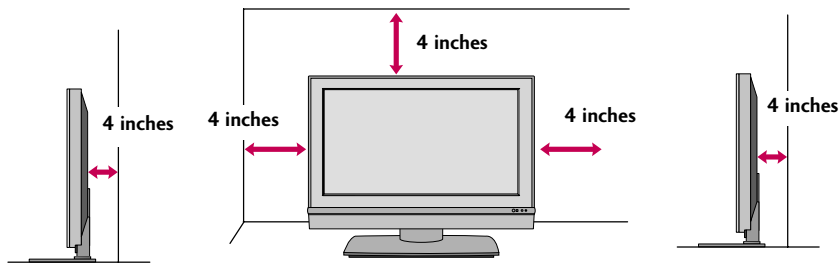
## DESKTOP PEDESTAL INSTALLATION

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

50PB2DR



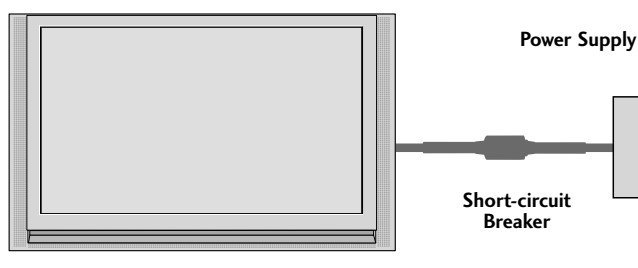
42LC2DR/42LB2DE/47LB2DE



### ⚠ CAUTION

- ▶ Ensure adequate ventilation by following the clearance recommendations.

- Image shown may be somewhat different from your TV.



### GROUNDING

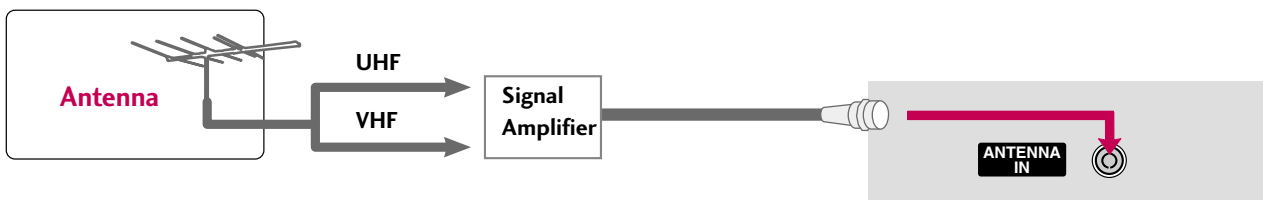
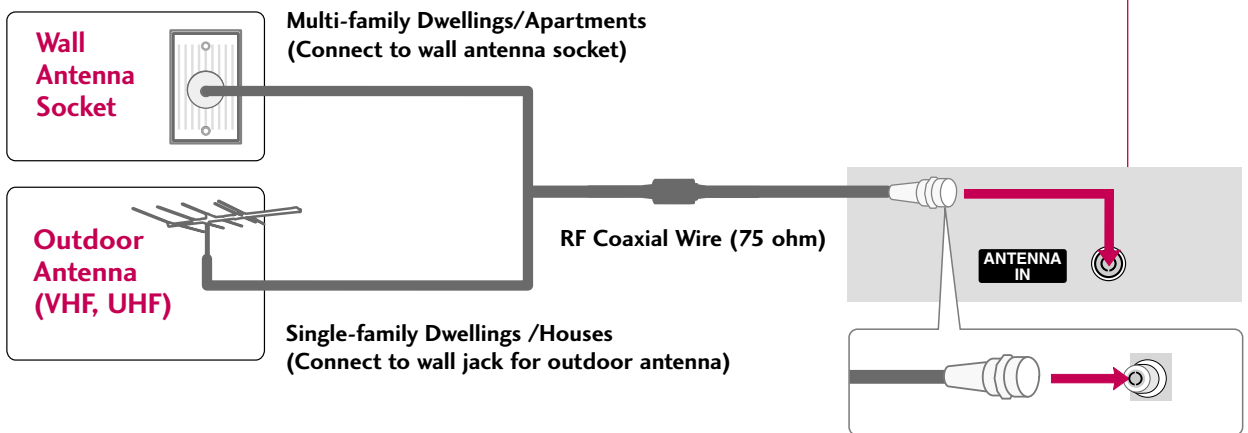
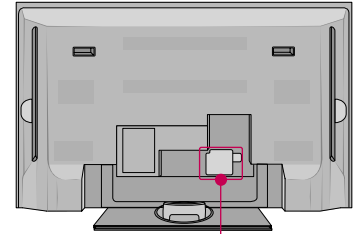
Ensure that you connect the earth ground wire to prevent possible electric shock. If grounding methods are not possible, have a qualified electrician install a separate circuit breaker.

Do not try to ground the unit by connecting it to telephone wires, lightning rods, or gas pipes.

# CONNECTIONS & SETUP

## ANTENNA CONNECTION

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



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

### ! NOTE

- ▶ The TV will let you know when the analogue and digital programme scans are complete.

# CONNECTIONS & SETUP

## HDSTB SETUP

This TV can receive Digital Over-the-air signal without an external digital set-top box. However, if you do receive digital signals from a digital set-top box or other digital external device, refer to the figure as shown below.

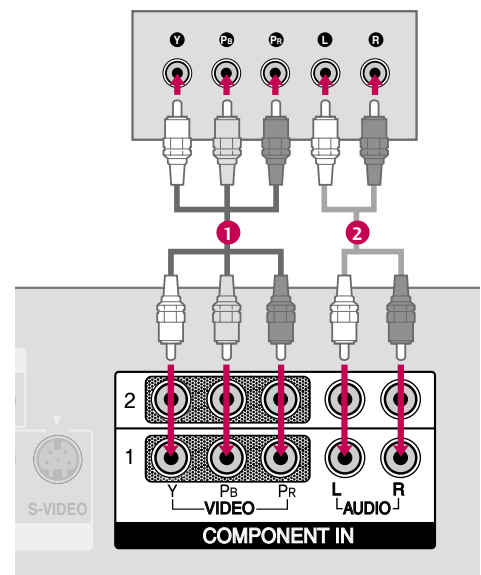
### When connecting Component cable

#### 1. How to connect

- 1 Connect the video outputs (Y, PB, PR) of the digital set top box to the **COMPONENT IN VIDEO 1** jacks on the set. Match the jack colors (Y = green, PB = blue, and PR = red)
- 2 Connect the audio output of the digital set-top box to the **COMPONENT IN AUDIO 1** jacks on the set.

#### 2. How to use

- Turn on the digital set-top box.  
(Refer to the owner's manual for the digital set-top box.)
- Select **Component 1** input source using the **INPUT** button on the remote control.
- If connected to **COMPONENT IN 2** input, select **Component 2** input source.



Signal	Component 1/2	RGB-DTV	HDMI
480i	Yes	No	No
480p	Yes	Yes	Yes
576i	Yes	No	No
576p	Yes	Yes	Yes
720p	Yes	Yes	Yes
1080i	Yes	Yes	Yes
1080p (24, 30, 50, 60 Hz) (42/47LB2DE only)	24p/30p	No	Yes

\* In some resolution (1080p), the PIP, Twin Picture, TV Guide, and some other functions are not available.



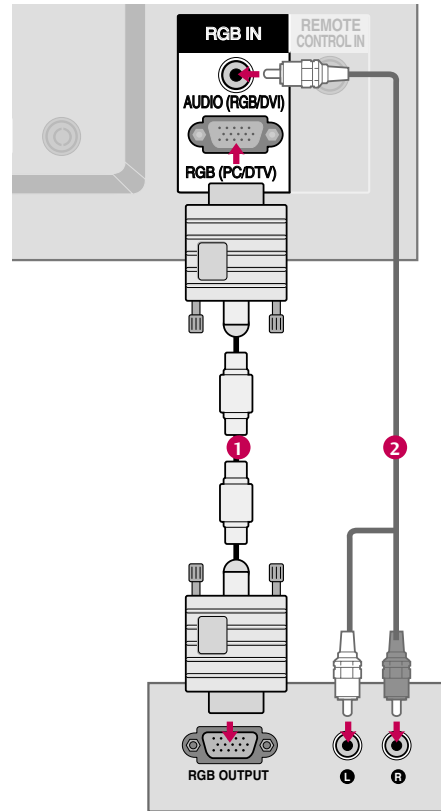
## When connecting D-sub 15pin cable

### 1. How to connect

- 1 Connect the RGB output of the digital set-top box to the **RGB (PC/DTV)** jack on the set.
- 2 Connect the audio outputs of the digital set-top box to the **AUDIO (RGB/DVI)** jack on the set.

### 2. How to use

- Turn on the digital set-top box.  
(Refer to the owner's manual for the digital set-top box.)
- Select **RGB-DTV** input source using the **INPUT** button on the remote control.



## When connecting HDMI cable

### 1. How to connect

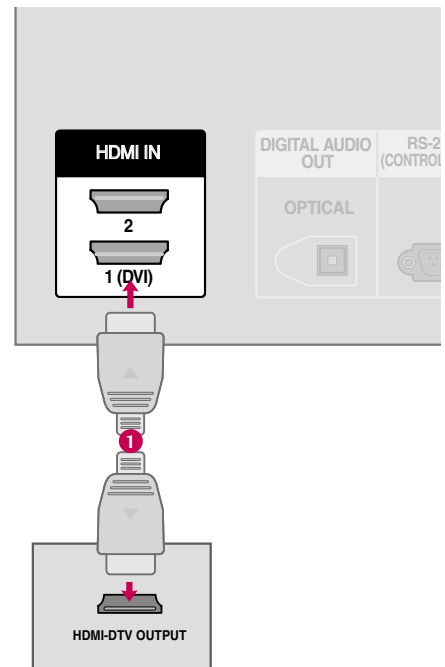
- 1 Connect the digital set-top box to **HDMI IN** jack on the set.
- 2 No separated audio connection is necessary.

### 2. How to use

- Turn on the digital set-top box.  
(Refer to the owner's manual for the digital set-top box.)
- Select **HDMI1/DVI** or **HDMI2** input source using the **INPUT** button on the remote control.

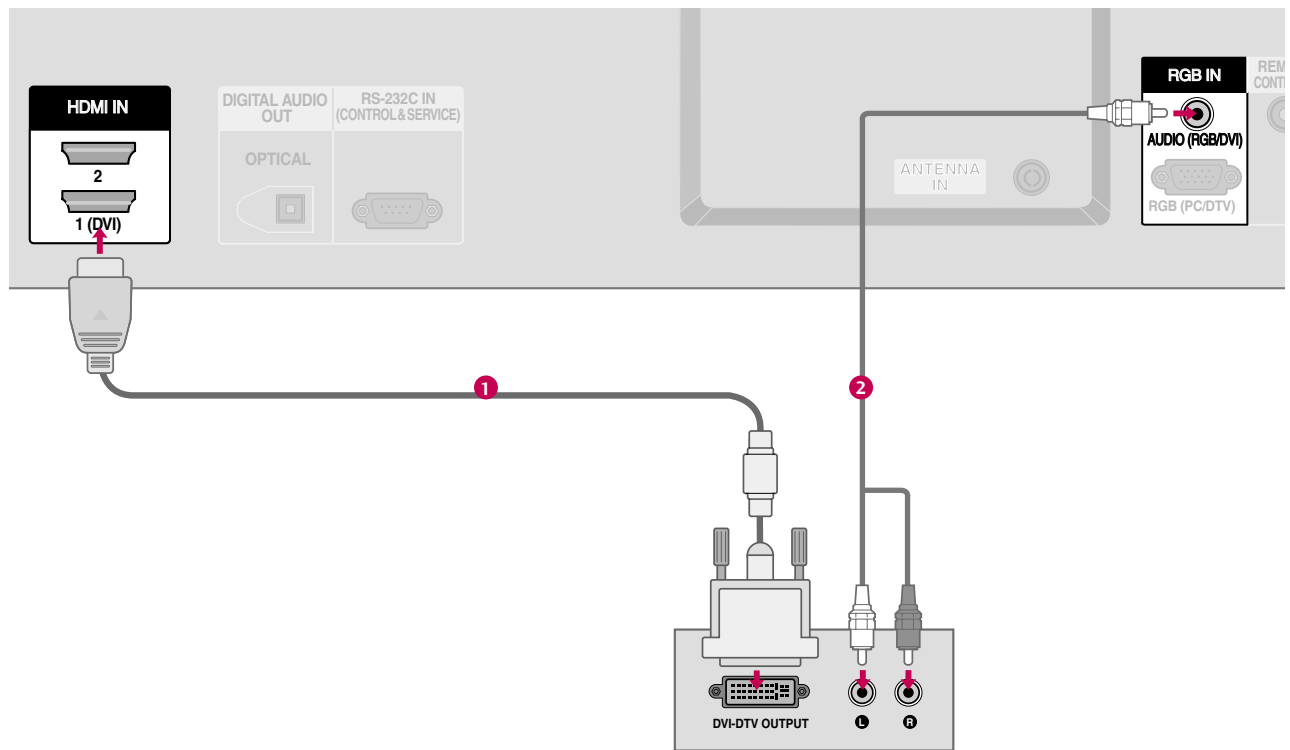
#### ! NOTE

- ▶ If the digital set-top box supports Auto HDMI function, the output resolution of the source device will be automatically set to 1280x720p.
- ▶ If the digital set-top box player does not support Auto HDMI function, you need to set the output resolution appropriately. To get the best picture quality, adjust the output resolution of the source device to 1280x720p.



# CONNECTIONS & SETUP

## When connecting HDMI to DVI cable



### 1. How to connect

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

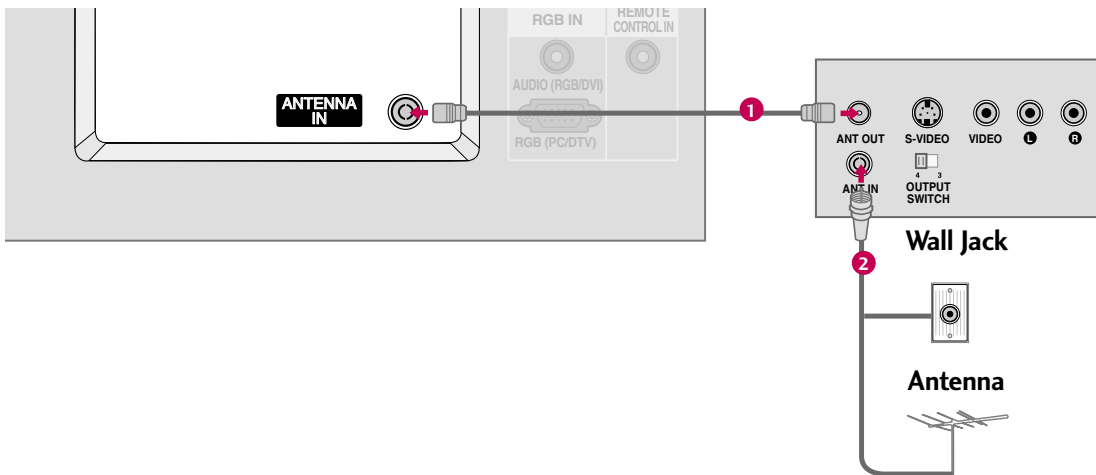
### 2. How to use

- Turn on the digital set-top box. (Refer to the owner's manual for the digital set-top box.)
- Select **HDMI1/DVI** input source using the **INPUT** button on the remote control.

## VCR SETUP

- To avoid picture noise (interference), leave an adequate distance between the VCR and TV.
- If the 4:3 picture format is used; the fixed images on the sides of the screen may remain visible on the screen. This phenomenon is common to all manufactures and in consequence the manufactures warranty does not cover the product bearing this phenomenon.

### When connecting with an antenna



### 1. How to connect

- 1 Connect the RF antenna out socket of the VCR to the **Antenna** socket on the set.
- 2 Connect the antenna cable to the RF antenna in socket of the VCR.

### 2. How to use

- Match the appropriate programme between the TV and VCR for viewing.
- Insert a video tape into the VCR and press PLAY on the VCR. (Refer to the VCR owner's manual.)

# CONNECTIONS & SETUP

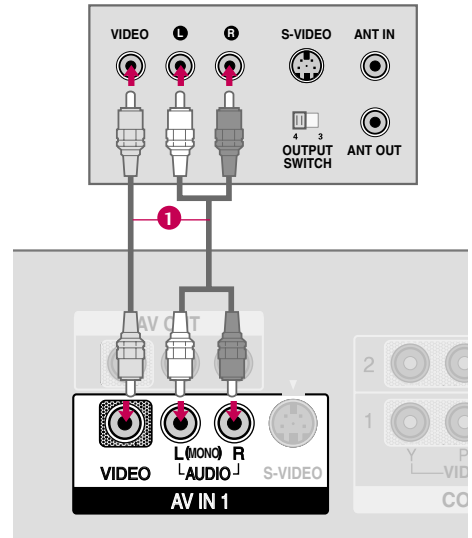
## When connecting with an RCA cable

### 1. How to connect

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

### 2. How to use

- Insert a video tape into the VCR and press **PLAY** on the VCR. (Refer to the VCR owner's manual.)
- Select **AV1** input source using the **INPUT** button on the remote control.
- If connected to **AV IN2**, select **AV2** input source.



#### NOTE

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

## When connecting with an S-Video cable

### 1. How to connect

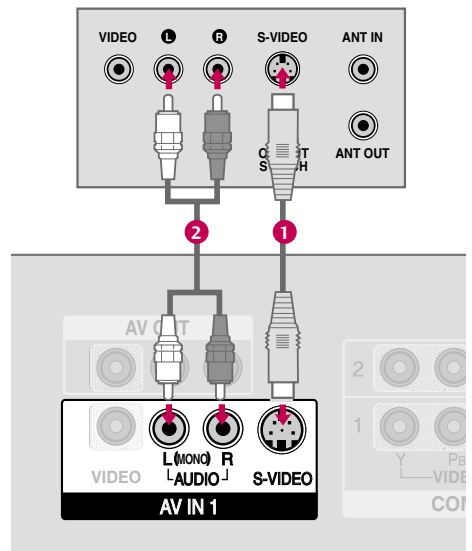
- 1 Connect the **S-VIDEO** output of the VCR to the **S-VIDEO** input on the set. The picture quality is improved; compared to normal composite (RCA cable) input.
- 2 Connect the audio outputs of the VCR to the **AUDIO** input jacks on the set.

### 2. How to use

- Insert a video tape into the VCR and press **PLAY** on the VCR. (Refer to the VCR owner's manual.)
- Select **AV1** input source using the **INPUT** button on the remote control.
- If connected to **AV IN2**, select **AV2** input source.

#### NOTE

- ▶ The picture quality is improved; compared to normal composite (RCA cable) input.



#### CAUTION

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

## ANOTHER A/V SOURCE SETUP

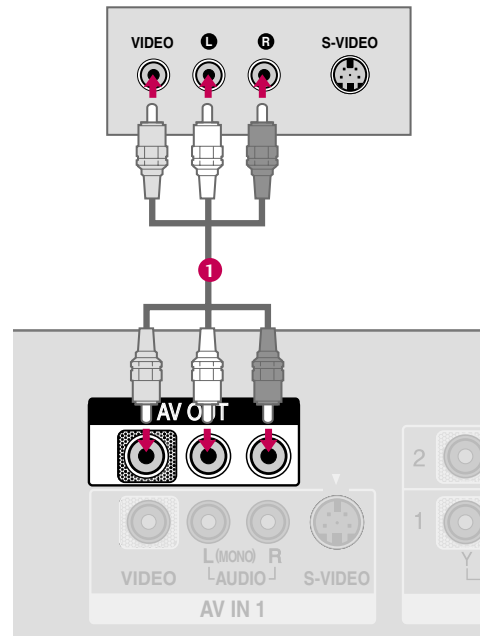
The TV has a special signal output capability which allows you to hook up a second TV or monitor.

### 1. How to connect

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

#### ! NOTE

- ▶ Component 1-2, RGB-PC/RGB-DTV, HDMI/DVI, DTV input sources cannot be used for AV out.
- ▶ We recommend to use the AV OUT jacks for VCR recording.



# CONNECTIONS & SETUP

## DIGITAL AUDIO OUTPUT

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

### 1. How to connect

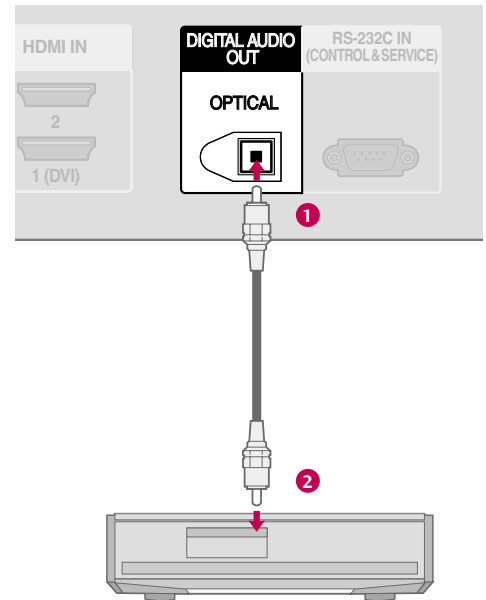
- 1 Connect one end of an optical cable to the TV Digital Audio (Optical) Output port.
- 2 Connect the other end of the optical cable to the digital audio (optical) input on the audio equipment.
- 3 Set the "TV Speaker option - Off" in the AUDIO menu. (▶ p.86). See the external audio equipment instruction manual for operation.

#### ! NOTE

- ▶ When connecting with external audio equipment, such as amplifiers or speakers, please turn the TV speakers off. (▶ p.86)

#### ⚠ CAUTION

- ▶ Do not look into the optical output port. Looking at the laser beam may damage your vision.



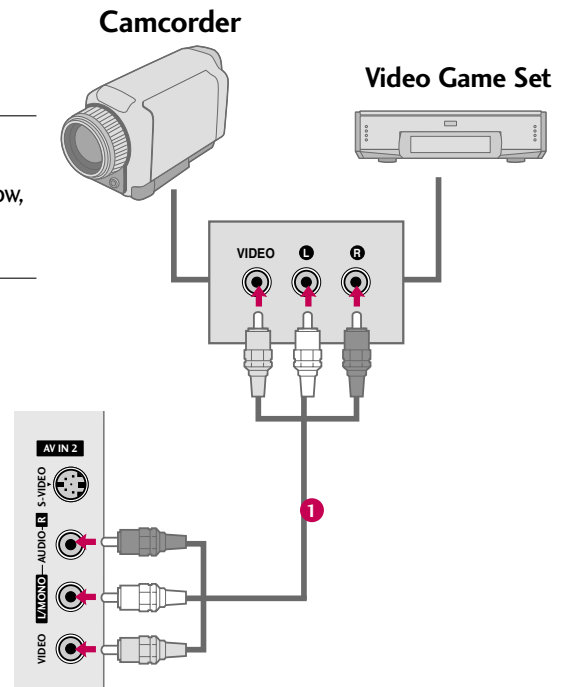
# EXTERNAL A/V SOURCE SETUP

## 1. How to connect

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

## 2. How to use

- Select **AV1** input source using the **INPUT** button on the remote control.
- If connected to **AV IN2** input, select **AV2** input source.
- Operate the corresponding external equipment.



i.e) 50PB2DR

# CONNECTIONS & SETUP

## DVD SETUP

### When connecting Component cables

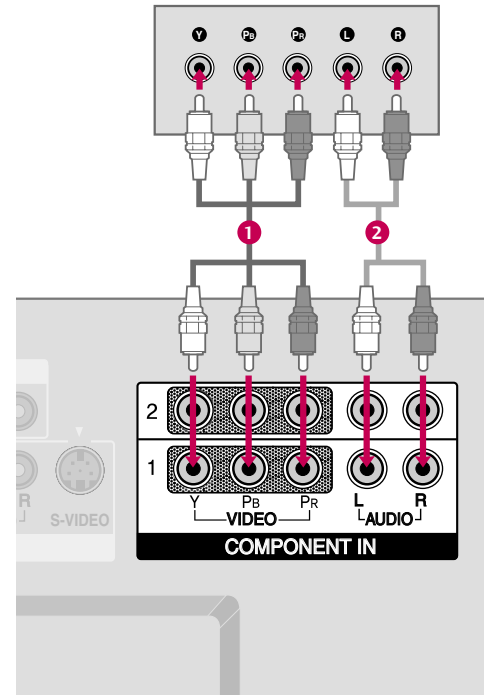
#### 1. How to connect

**1** Connect the video outputs (Y, Pb, Pr) of the DVD to the **COMPONENT IN VIDEO1** jacks on the set. Match the jack colors (Y = green, Pb = blue, and Pr = red).

**2** Connect the audio outputs of the DVD to the **COMPONENT IN AUDIO1** jacks on the set.

#### 2. How to use

- Turn on the DVD player, insert a DVD.
- Select **Component 1** input source using the **INPUT** button on the remote control.
- If connected to **COMPONENT IN 2** input, select **Component 2** input source.
- 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	Pb	Pr
Video output ports on DVD player	Y	Pb	Pr
	Y	B-Y	R-Y
	Y	Cb	Cr
	Y	Pb	Pr



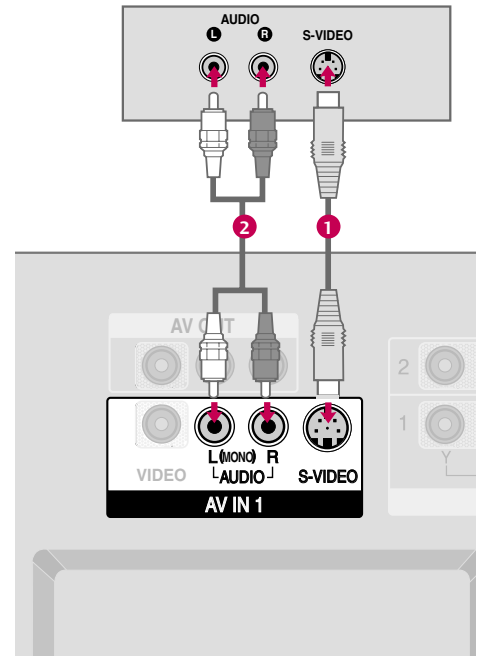
## When connecting with an S-Video cable

### 1. How to connect

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

### 2. How to use

- Turn on the DVD player, insert a DVD.
- Select **AV1** input source using the **INPUT** button on the remote control.
- If connected to **AV IN2**, select **AV2** input source.
- Refer to the DVD player's manual for operating instructions.



## When connecting HDMI cable

### 1. How to connect

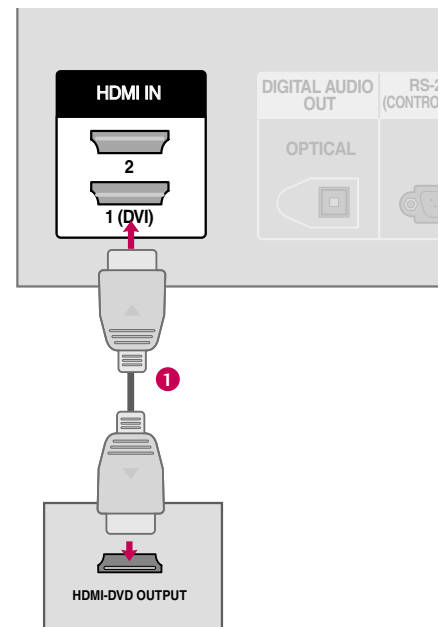
- 1 Connect the HDMI output of the DVD to the **HDMI IN** jack on the set.
- 2 No separate audio connection is necessary.

### 2. How to use

- Select **HDMI1/DVI** or **HDMI2** input source with using the **INPUT** button on the remote control.
- Refer to the DVD player's manual for operating instructions.

#### ! NOTE

- ▶ If the DVD supports Auto HDMI function, the DVD output resolution will be automatically set to 1280x720p.
- ▶ If the DVD does not support Auto HDMI, you need to set the output resolution appropriately.  
To get the best picture quality, adjust the output resolution of the DVD to 1280x720p.



# CONNECTIONS & SETUP

## PC SETUP

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

### When connecting D-sub 15pin cable

#### 1. How to connect

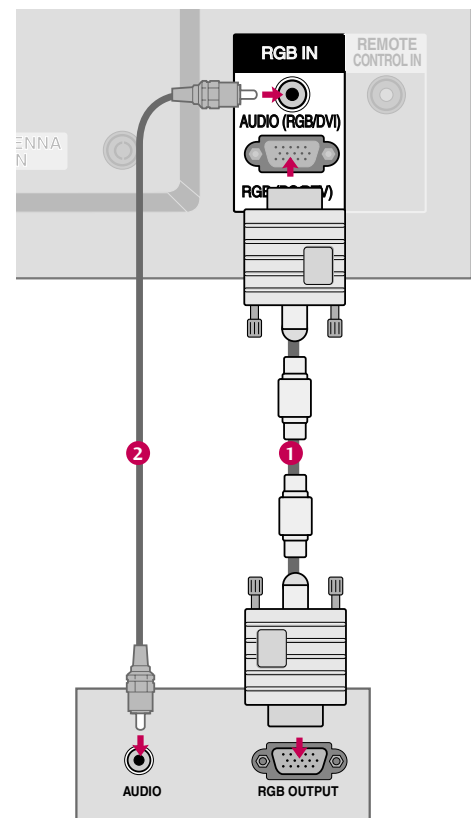
- 1 Connect the RGB output of the PC to the **RGB (PC/DTV)** jack on the set.
- 2 Connect the PC audio output to the **AUDIO (RGB/DVI)** jack on the set.

#### 2. How to use

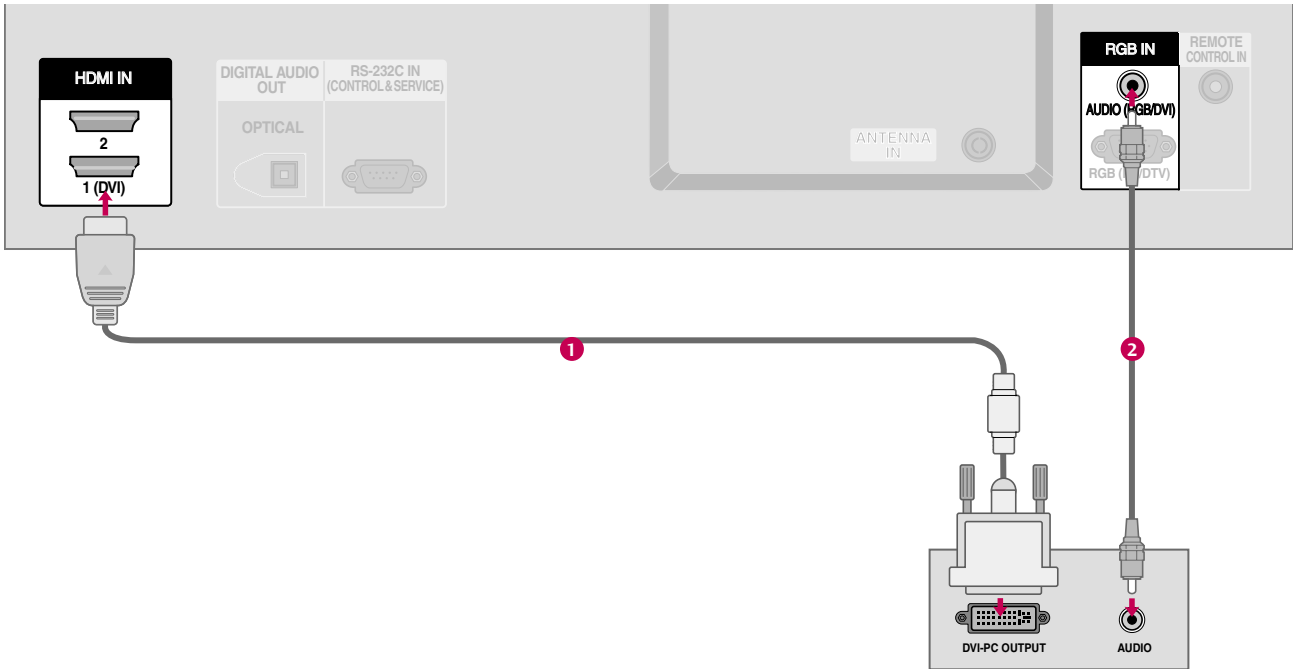
- Turn on the PC and the set.
- Select **RGB-PC** input source in main input option of SETUP menu. (▶ p.69)
- Once you select **RGB-PC** in main input option of Special menu, **INPUT** button is also available for this purpose.

#### ! NOTE

- ▶ Check the image on your TV. There may be noise associated with the resolution, vertical pattern, contrast or brightness in PC mode. If noise is present, change the PC output to another resolution, change the refresh rate to another rate or adjust the brightness and contrast on the VIDEO menu until the picture is clear. If the refresh rate of the PC graphic card can not be changed, change the PC graphic card or consult the manufacturer of the PC graphic card.



## When connecting HDMI to DVI cable



### 1. How to connect

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

### 2. How to use

- Turn on the PC and the set
- Select **HDMI1/DVI** input source using the **INPUT** button on the remote control.

#### ! NOTE

- ▶ If the PC has a DVI output and no HDMI output, a separated audio connection is necessary.

# CONNECTIONS & SETUP

## NOTES

- ▶ To get the best picture quality, adjust the HDMI to 1920x1080, 60Hz (42/47LB2DE only).
- ▶ To get the the best picture quality, adjust the PC graphics card to 1024x768, 60Hz.
- ▶ Depending on the graphics card, DOS mode may not work if a HDMI to DVI Cable is in use.
- ▶ When Source Devices are connected with HDMI/DVI Input, the output PC Resolution(VGA, SVGA, XGA), Position and Size may not fit on the Screen. As shown in the picture below, press the ADJUST button to adjust the screen Position of the TV SET and contact a PC graphics card service center.
- ▶ When Source Devices connected with HDMI/DVI Input, output TV SET Resolution (480p, 576p, 720p, 1080i) and TV SET Display fit EIA/CEA-861-B Specification to Screen. If not, refer to the Manual of HDMI/DVI Source Devices or contact your service center.
- ▶ If the HDMI/DVI Source Device is not connected to the Cable or if there is a poor cable connection, "No signal" is displayed in the HDMI/DVI Input. In this case, that Video Resolution is not supported. If "Invalid Format" is displayed, refer to the Source Device manual or contact your service center.
- ▶ Avoid keeping a fixed image on the screen for a long period of time. The fixed image may become permanently imprinted on the screen.
- ▶ The synchronization input form for Horizontal and Vertical frequencies is separate.
- ▶ If you select HDMI/DVI, HDMI2 input source in main input option of SETUP menu and set HDMI-PC 1920 x 1080 in your PC format, you can get best picture quality with matching 1:1 pixel (42/47LB2DE only).

### Supported Display Specifications (RGB/HDMI-PC )

Resolution	Horizontal Frequency(kHz)	Vertical Frequency(Hz)
640x350	31.468	70.09
640x480	31.469	59.94
	37.861	72.80
	37.500	75.00
720x400	31.46	70.08
800x600	35.156	56.25
	37.879	60.31
	48.077	72.18
	46.875	75.00
1024x768	48.363	60.00
	56.476	70.06
	60.023	75.02
1280x768	47.776	59.870
1360x768	47.720	59.799
1366x768	47.130	59.65
1920x1080 (42/47LB2DE only)	67.500	60.00

\* RGB-PC mode only: 640x350, 720x400

\* HDMI-PC mode only: 1920x1080(42/47LB2DE only)

### Supported Display Specifications (RGB/HDMI-DTV)

Resolution	Horizontal Frequency(kHz)	Vertical Frequency(Hz)
720x576	31.25	50.00
720x480	31.47	59.94
	31.50	60.00
1280x720	37.50	50.00
	44.96	59.94
	45.00	60.00
1920x1080i	28.125	50.00
	33.72	59.94
	33.75	60.00
1920x1080p (42/47LB2DE only)	27.00	24.00
	33.75	30.00
	56.25	50.00
	67.50	60.00

\* HDMI-DTV mode only: 1920x1080p(42/47LB2DE only)

## Screen Setup for External Input Mode

### Overview

When Component, RGB or HDMI/DVI are selected in Main Input, the following restrictions apply.

In HDMI/DVI-PC and HDMI/DVI-DTV mode, only **Position** is available.

In Component and RGB-DTV mode, **Clock** is not available.

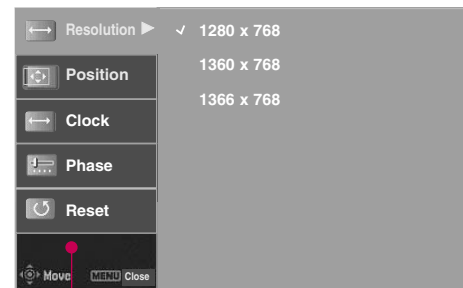
After connecting RGB-PC to PC input and checking the screen quality.

When you change the resolution, select the proper resolution in present input to see the best picture appearance.



### Adjustment for screen Resolution, Position, Clock, Phase, Reset

- 1 Press the **ADJUST** button and then use ▲ or ▼ button to select **Resolution, Position, Clock, or Phase**.
- 2 Press the **OK** button and then use ▲ / ▼ or ◀ / ▶ button to make appropriate adjustments.
  - The **Phase** adjustment range is -32 ~ +32.
  - The **Clock** adjustment range is -30 ~ +30.
- 3 Press the **OK** button.



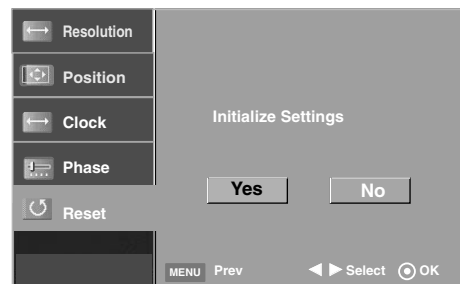
1 2 3

- Resolution** This function allows you select resolution of XGA/WXGA. (Up to 1366x768, 60Hz)
- Position** This function is to adjust picture to left/right and up/down as you prefer.
- Clock** This function is to minimize any vertical bars or stripes visible on the screen background. And the horizontal screen size will also change.
- Phase** This function allows you to remove any horizontal noise and clear or sharpen the image of characters.

### Initializing (Reset to original factory values)

To initialize the adjusted values.

- 1 Press the **ADJUST** button and then use ▲ or ▼ button to select **Reset**.
- 2 Press the **OK** button and then use ◀ or ▶ button to select **Yes**.
- 3 Press the **OK** button.

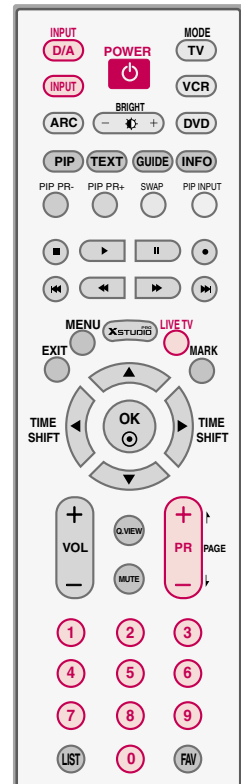


1 2 3

# BASIC OPERATION

## TURNING THE TV ON

- 1** Ensure the power cord is connected correctly.  
When connected to power the TV switches to standby mode.
  - In standby mode, press the **⏻/I**, **INPUT**, **PR + / -** button on the TV or press the **POWER**, **INPUT**, **D/A INPUT**, **LIVE TV**, **PR + / -**, **Number (0-9)** button on the remote control.
- 2** Select the viewing source by using the **INPUT** button on the remote control.
  - This TV is programmed to remember which mode it was last set to, even if you turn the TV off.
- 3** When finished using the TV, press the **POWER** button on the remote control. The TV reverts to standby mode.



### NOTE

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

## INITIALIZING SETUP

- 1** If the OSD (On Screen Display) is displayed on the screen as figure 1 after turning on the set, you can adjust the Auto Programme tuning, Time Zone selection or Password setting.

### NOTE

- ▶ It will automatically disappear after approx. 40 seconds unless a button is pressed.
- ▶ This OSD (On Screen Display) is displayed only once when you purchase TV and turn it on.

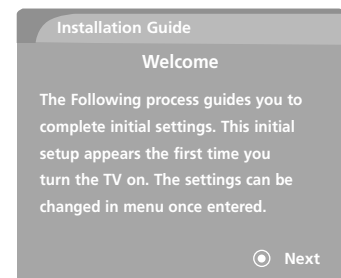
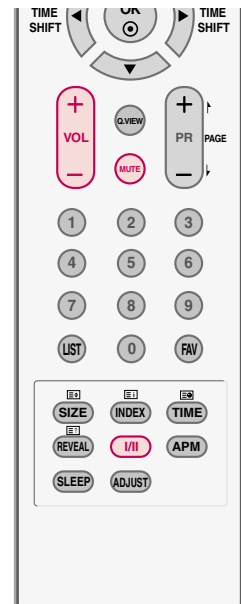


Figure 1.

## VOLUME ADJUSTMENT

Adjust the volume to suit your personal preference.

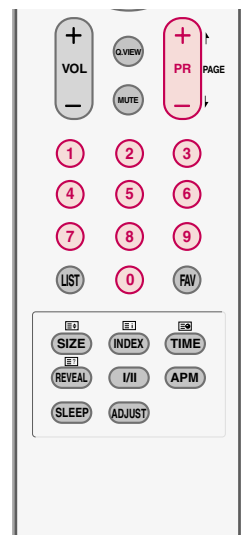
- 1 Press the **VOL + / -** button to adjust the volume.
- 2 If you want to switch the sound off, press the **MUTE** button.
- 3 You can cancel the Mute function by pressing the **MUTE**, **I/II** or **VOL + / -** button.



## PROGRAMME SELECTION

Automatically finds all programmes available through antenna or cable inputs, and stores them in memory on the programme list.

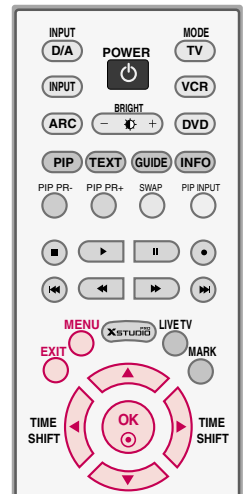
- 1 Press the **PR + / -** or **NUMBER** buttons to select a programme number.



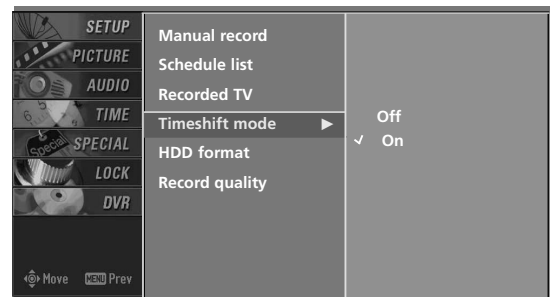
# SPECIAL FUNCTIONS | DVR (DIGITAL VIDEO RECORDER)

## TIMESHIFT

This function allows the unit to automatically record live TV and make it available for reviewing at any time. With Timeshift turned on, you may pause and rewind normal TV viewing at any time without missing any of the live broadcast.



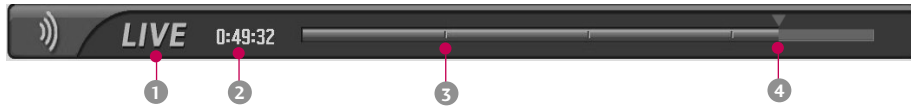
- 1 Press the **MENU** button and then use ▲ or ▼ button to select the **DVR** menu.
- 2 Press the ► button and then use ▲ or ▼ button to select the **Timeshift mode**.
- 3 Press the ► button and then use ▲ or ▼ button to select **On** or **Off**.
- 4 Press **EXIT** button to return to normal TV viewing.



2 3



## Using the Timeshift function



**1** After selecting the **Timeshift Mode On**, press the **OK** button.

- As soon as Timeshift starts, a progress bar indicating the current recording status is displayed in the bottom of the screen.
- Press the **EXIT** button to hide the 'Progress Bar' or press the **OK** button to display the 'Progress Bar'.
- This function is preserved even change a programme on progressing the Timeshift.

### The 'Progress Bar'?

This function indicates a possible DVR reshowing section, a current on-screen and real on-broadcasting position, a section of section-recording.

- ① Status of current displayed video.
- ② Current save time.
- ③ 30 minute intervals from Timeshift start time. (Total - 2 hours).
- ④ Indicates current Timeshift position.

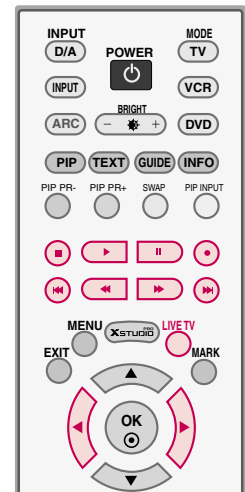
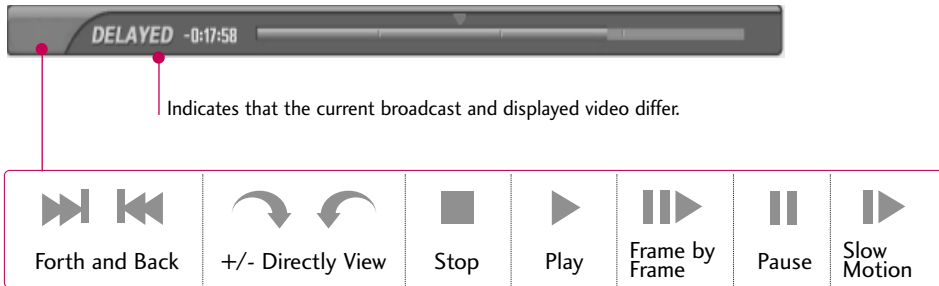
**2** When finished with the Timeshift function, enter the option menu and turn **Timeshift Mode Off**.

### ! NOTE

- ▶ DVR (Digital Video Recorder) : A device which records and plays broadcast program contents onto a hard disk in TV or SET TOP BOX.
- ▶ If available hard-disk space is low when Timeshift is initiated, the oldest information is deleted.
- ▶ In order to save hard-disk space, nothing is saved when there is no signal.
- ▶ The total storage space of the hard-disk is 250GB(42LC2DR/50PB2DR), 160GB(42/47LB2DE). 10GB minimum is reserved for Timeshift.
- ▶ When turning power on, it may take up to 3 minutes to initialize the HDD.
- ▶ Because an analog broadcast is transferred to a digital signal, video that contains rapid movement may show "cross stripes". This happens when the analog signal is compressed and then restored in the digital signal. The unit will attempt to reduce this excessive picture noise.
- ▶ When using the PIP/POP mode, Timeshift is stopped.
- ▶ Timeshift is available in AV1-2, Antenna, Component1-2 mode.
- ▶ Timeshift is not available for Audio only programmes.
- ▶ In 42/47LB2DE models, when the set is connected to 1080p external equipment, Timeshift is stopped.


















## Using the Timeshift function, play

When using Timeshift, there are diverse playback options.



## Using the remote control

You can shift playback to any point within the recorded program.



	<p>When playing, press the <b>REW</b> (◀) or <b>FF</b> (▶) button.</p> <ul style="list-style-type: none"> <li>Press  -&gt;  -&gt;  -&gt;  to speed up.</li> <li>Pressing these buttons repeatedly increases the fast forward/reverse speed.</li> </ul>
	<p>Press the  or  button to move back and forth within the current program.</p> <ul style="list-style-type: none"> <li>Press the  button to jump about 30 seconds forward.</li> <li>Pressing the  button to jump about 8 seconds backward.</li> </ul>
	<p>During playback, press the <b>Pause</b> (⏸) button.</p> <ul style="list-style-type: none"> <li>Still screen is displayed.</li> <li>Repeatedly press the <b>Pause</b> (⏸) button to advance frame by frame.</li> <li>Press the <b>Pause</b> (⏸) button and then the <b>FF</b> (▶) button for slow motion (as indicated by  .)</li> </ul>
	<ul style="list-style-type: none"> <li>When using the  or  button during playback the cursor can be viewed on the screen.</li> </ul>
	<p>Press the <b>PLAY</b> (▶) button to return to normal playback.</p>
	<p>If you want to return to the last selected input mode, press the <b>LIVE TV</b> button.</p>


# RECORDING



Use this function to record the program you are watching on the main screen (Analogue or Digital broadcast.)

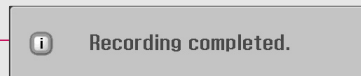
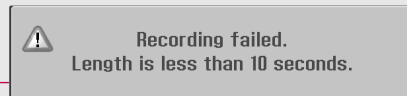
## Instant Record






This function records the currently displayed programme.

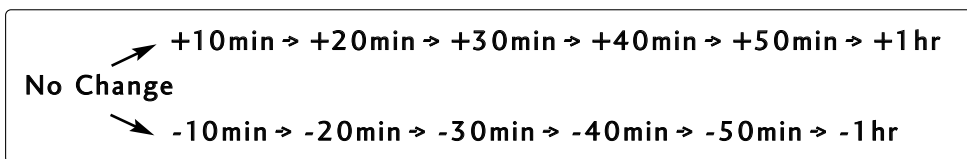
- 1 Select the desired programme to record and then press the  button. During recording  is displayed. Use this feature to record up to 2 hours of programming.

- 2 If you want to stop recording, press the  button. And then recording will stop.

- While recording, if you press the  button before 10 seconds of recording time has passed, this message is displayed.
- If you press the  button after more than 10 seconds of recording time has passed, this message is displayed.

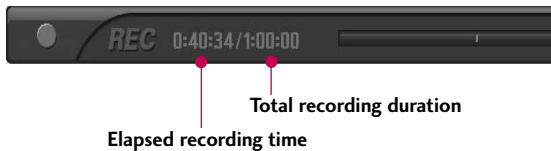


- 3 You can add/subtract recording time by pressing the  button while recording. Press the  or  button repeatedly to add/subtract to the recording time. Each time you press  or  button the recording duration changes as shown below.



The extra recording time added to the existing setting equals the final recording time.

- After adjusting the recording time, select **OK**. Press the **OK** button to check the adjusted recording time. The progress bar will be displayed.



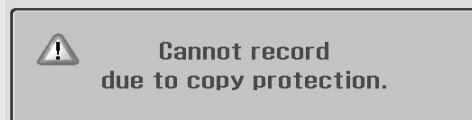
3

- Recording stops when the selected duration is reached or when you press the **⏻** button.  
Note: Although recording has stopped, the Timeshift feature remains active.

## ! NOTE

- ▶ When recording, if the available storage space becomes low, the recording will be automatically stopped.
- ▶ Recordings of less than 10 seconds will not be saved.
- ▶ To save disk space while recording analog or digital broadcasts, no data is saved if there is no signal.
- ▶ The recording function will not initiate for a copy-protected program.
- ▶ The displayed time differs slightly from the actual time.
- ▶ In no signal or film source, the displayed time slightly differ from the actual time.

- ▶ The recording can not be used with content-protected programs on progressing Timeshift.



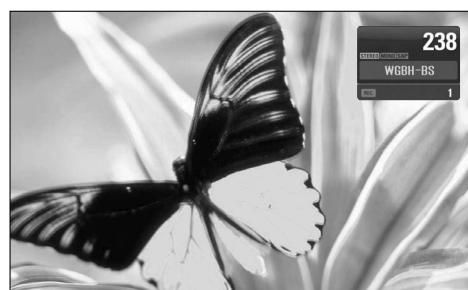
If you press Record while watching a broadcast (with content-protected program) using the Timeshift function, recording begins from that point.

- ▶ If you record for a long time, in a state of the Analogue signal is weak, remained recording time may be short.

## Watching & Record

While recording, you can change programmes or inputs without disturbing the recording.

- 1 After starting an Instant Record or Reserved Record, change the programme or input.
  - When changing to the programme being recorded in Watch & Record, the screen is changed to Instant Record state or Reserved Record state.



### ! NOTE

- ▶ When a digital broadcast is being recorded, another digital broadcast cannot be watched.
- ▶ When a component input source is being recorded, another programme or source cannot be watched.

### ! CAUTION

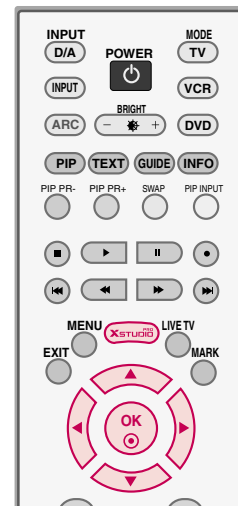
- ▶ if you turn the power off while recording, the message shown below is displayed.



- ▶ If you select Yes, recording continues and the power is turned off.
- ▶ If you select No, recording stops and then power is turned off.

## MANUAL RECORDING

This function is used to perform reserved recording.

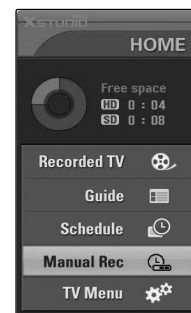


**1** Press the **Xstudio** button to display **HOME** menu. Use the **▲** or **▼** button to select the **Manual Rec** and then use the **OK** or **▶** button.

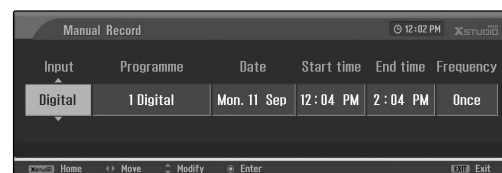
**2** **Manual Rec** screen is displayed as shown below. Use the **▲ ▼ ◀ ▶** buttons to set the **Input, Programme, Date, Start Time, End Time, Frequency**.

- ▶ **Input** : Select the input source from the available options (Digital, Analogue, AV1-2, Component1-2).
- ▶ **Programme** : Select either the current programme or a scanned programme.
- ▶ **Date** : You can select a date up to one month in the future. The max duration is 8 hours.
- ▶ **Start Time /End Time** : Ensure you have set AM or PM correctly.
- ▶ **Frequency** : Choose either Once, Daily, Weekly, Weekday, Weekend.

**3** After setting the **Manual Rec**, press the **OK** button.



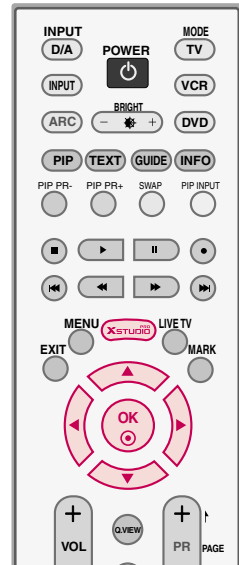
**1**



**2**

# RECORDED TV

You can view the recorded program list at a glance.



- 1 Press the **Xstudio** button to display **HOME** menu.  
Use the **▲** or **▼** button to select the **Recorded TV** and then use the **OK** or **▶** button.



## Screen Components

- 1 Usable HDD
- 2 Folder List
- 3 Current page/Total pages
- 4 Marked thumbnail photo number
- 5 Direct Buttons

## Recorded programme Selection and PopUp Menu

The thumbnail recorded list is shown above.

- 1 Use the **PR +/-** button for page up/down navigation.
- 2 Use the **MARK** button to move or delete from the list. A  is displayed next to the thumbnail photo if an item is marked.

- 3 Use **▲ ▼ ◀ ▶** buttons to navigate the appropriate thumbnail photo, then press the **OK** button to open the pop-up menu.

- ▶ **Play** : Begin playback of selected recorded program.
- ▶ **Mark All** : mark all recorded programmes on the current folder.
- ▶ **Unmark All** : Change marked recorded programmes to unmarked recorded programmes.
- ▶ **Move** : Move recorded programme saved in HDD to a different folder.
- ▶ **Delete** : Delete the selected recorded programs.
- ▶ **Rename** : Edit recorded programme title.
- ▶ **Cancel** : Close the Pop-up menu.

- 4 Press **EXIT** button to return to TV viewing or press **Xstudio** button to return to the **HOME** menu.

- If the HDD has a problem performing a function (Recording) related to the DVR, select **Yes** or **No** to initialize HDD.

If you select **Yes**, the Recorded List (Recording) will be deleted. If you select **No**, the DVR may not function properly.

- If the temperature is below zero (0°C), a warning message is displayed to protect the HDD from error and the DVR from incorrect operation.



1



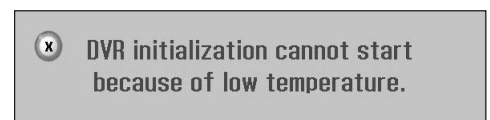
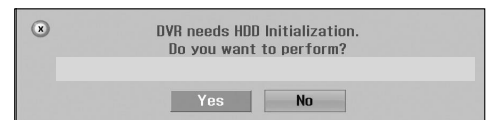
2



3



4



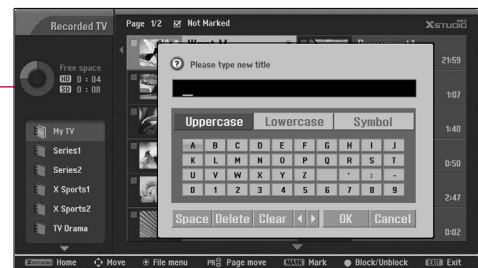
4



## Folder List

Select a desired folder in the folder list and then press the **OK** button to view the detailed menu.

- ▶ Create: Create new folder.
- ▶ Delete: Delete folder (except 'My TV').
- ▶ Rename: Edit folder name (except 'MyTV').
  - Use the ▲ ▼ ◀ ▶ and **OK** buttons to edit folder name.
  - Move the cursor to OK and press the **OK** button to save.
- ▶ Cancel: Close the detailed menu.



## Block/Unblock for the recorded programme

Blocks any recorded programmes that you do not want to watch or that you do not want another person to watch.

- 1 Use ▲ ▼ ◀ ▶ buttons to select the desired recorded programme.

- 2 Press the BLUE button to block or unblock it.


### ! NOTE

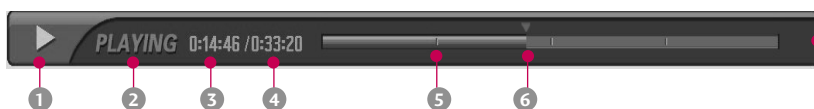
- ▶ If you change your password, change the password in Set password option of LOCK menu.

## Playing recorded programs

You can play the selected program in the recorded program list.

- 1 Play a recorded program.
- 2 While playing, You can see a diversified playback screen as shown below.

- At first, an icon showing current playback mode is displayed as marking . Then press the **OK** button to display the progress bar.
- To stop displaying the recorded programs icon, press the **EXIT** button.


















### The 'Progress Bar'?

This function indicates a possible DVR reshooting section, a current on-screen and real on-broadcasting position, a section of section-recording.

- 1 Indicates movement of recorded program.
- 2 Indicates status of recorded program.
- 3 Indicates elapsed playback time.
- 4 Indicates total playback time.
- 5 Indicates a quarter of program runtime.
- 6 Indicates current playback position.




## Using the remote control


You can shift playback to any point within the recorded program.

	<p>When playing, press the <b>REW</b> (◀) or <b>FF</b> (▶) button.</p> <ul style="list-style-type: none"> <li>▪ Press  to speed up.</li> <li>▪ Pressing these buttons repeatedly increases the fast forward/reverse speed.</li> </ul>
	<p>Press the  or  button to move back and forth within the current program.</p> <ul style="list-style-type: none"> <li>▪ Press the  button to jump about 30 seconds forward.</li> <li>▪ Pressing the  button to jump about 8 seconds backward.</li> </ul>
	<p>During playback, press the <b>Pause</b> (⏸) button.</p> <ul style="list-style-type: none"> <li>▪ Still screen is displayed.</li> <li>▪ Repeatedly press the <b>Pause</b> (⏸) button to advance frame by frame.</li> <li>▪ Press the <b>Pause</b> (⏸) button and then the <b>FF</b> (▶) button for slow motion (as indicated by ).</li> </ul>
	<p>After using  to rewind while playing, press the  button to return to the prior screen.</p>
	<p>Press the <b>PLAY</b> (▶) button to return to a normal playback.</p>
	<p>When playing the recorded program: Return to the last selected input source. When delaying: Return to the last selected input source.</p>
	<p>If you press the <b>STOP</b> (⏹) button, you can watch TV.</p>

## Editing a section


You can save the desired screen in the recorded program list after editing the recorded program.

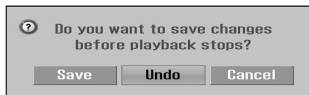
- 1 At the point you wish to start editing, press the  button.
  - ▀ The progress bar will show the edited section as red.
  - ▀ It is possible to search ( or ) , and pause while editing the section.

- 2 When you wish to stop, press the  button.
  - ▀ Stop editing the section.

- 3 If you repeat steps 1,2, it is possible to edit more programs.




- 4 If you press the  button to stop the recorded program playback, this message is displayed as shown below.




- ▶ **Save** : Save contents of the edited section and finish the playback of the recorded program.
- ▶ **Undo** : Don't save contents of the edited section and finish the playback of the recorded program.
- ▶ **Cancel** : The screen returns to playback.

### ! NOTE


- ▶ It is possible to play the recording / reserved recording.
- ▶ You may hear noise from the hard-disk during playback of the recorded program. This is normal and does not indicate a problem.
- ▶ When saving the content of the edited section, delete the portion not selected.
- ▶ When power fails during editing, the program may not be saved or edited. Press the **STOP** () button after checking the recording list.
- ▶ You can edit up to 10 sections.
- ▶ You must select at least 10 seconds for the edited portion to be saved.



## On playing the recorded programme, repeat a section


You can set the recording to repeat the same section.

- 1 At the point you wish to start, press the  button.







- The following symbol will appear: .

- 2 At the point you wish to finish, press the  button.
  - The following symbol appears: .
  - Repeatedly play the marked section.
  - You can not make sections of less than 5 seconds.
  - The progress bar for the repeated section will be shown in blue.

- 3 Press the  button to stop playing the repeat section.

### ! NOTE

- ▶ It is possible to search using (  /  ).  
Pause to edit a section while repeating.
- ▶ When the progress bar is out of the repeat section using the  or  button, the repeat section playing will be stop.

# SCHEDULED

This function is available to use in DVR menu.

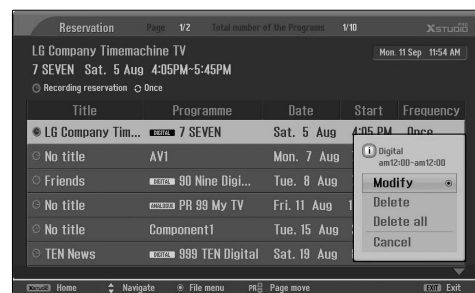
- 1 Press the **Xstudio** button to display **HOME** menu.  
Use the **▲** or **▼** button to select the **Schedule** and then use the **OK** or **▶** button.



- 2 **Schedule** screen is displayed as shown.  
Use **▲** or **▼** button to select recorded programme.

## Recorded programme Selection and PopUp Menu

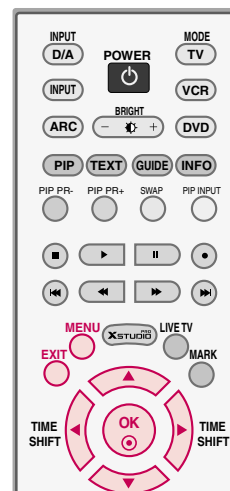
- 1 Use **▲** or **▼** button to select the recorded programme you want.
- 2 Press the **OK** button to open the pop-up menu.
  - ▶ **Modify** : Modify the schedule of the recorded program selection.
  - ▶ **Delete** : Delete the recorded program.
  - ▶ **Delete All** : Delete all recorded programs.



- 3 Press **EXIT** button to return to TV viewing or press **Xstudio** button to return to the **HOME** menu.

## HDD FORMAT

Erases all programs and initializes the hard drive.



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

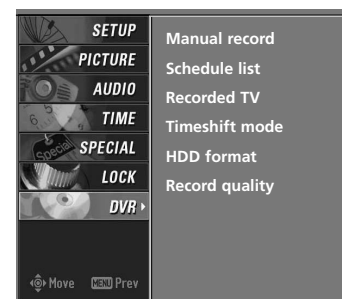
**2** Press the **▶** button and then use **▲** or **▼** button to select **HDD Format**.

**3** Press the **OK** or **▶** button.  
Select **Yes** or **No** to format HDD as shown below.

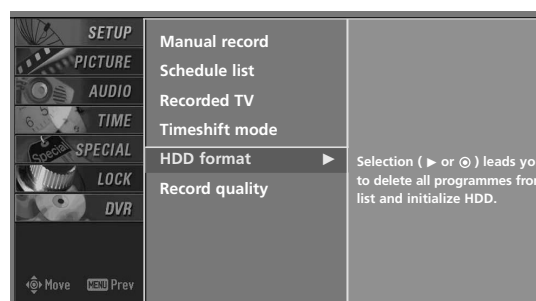
Do you want to format HDD?  
'Yes' will delete all recorded programmes.

- If you select **Yes**, the Recorded List (Recording) will be deleted. Even if you select **No**, the DVR may not function if there are problems with the hard drive.

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



**1**



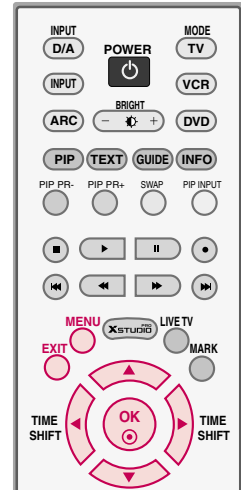
**2 3**

# RECORD QUALITY

This function is available on Manual record.

In Analogue, AV1-2, Component 1-2 mode, this function is also available.

The record quality always works **best** on Timeshift and Instant record.



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

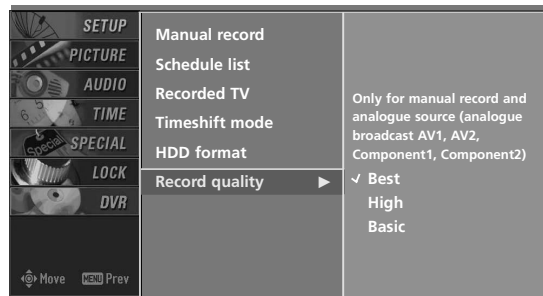
2 Press the ► button and then use ▲ or ▼ button to select **Record quality**.

3 Press the ► button and then use ▲ or ▼ button to select **Best, High** or **Basic**.

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



1

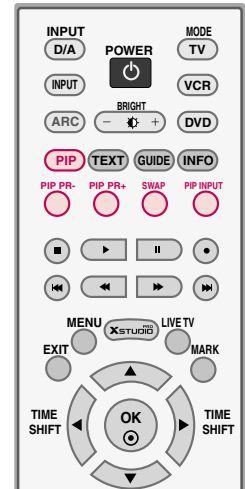


2 3

# SPECIAL FUNCTIONS | PIP / POP / Twin Picture

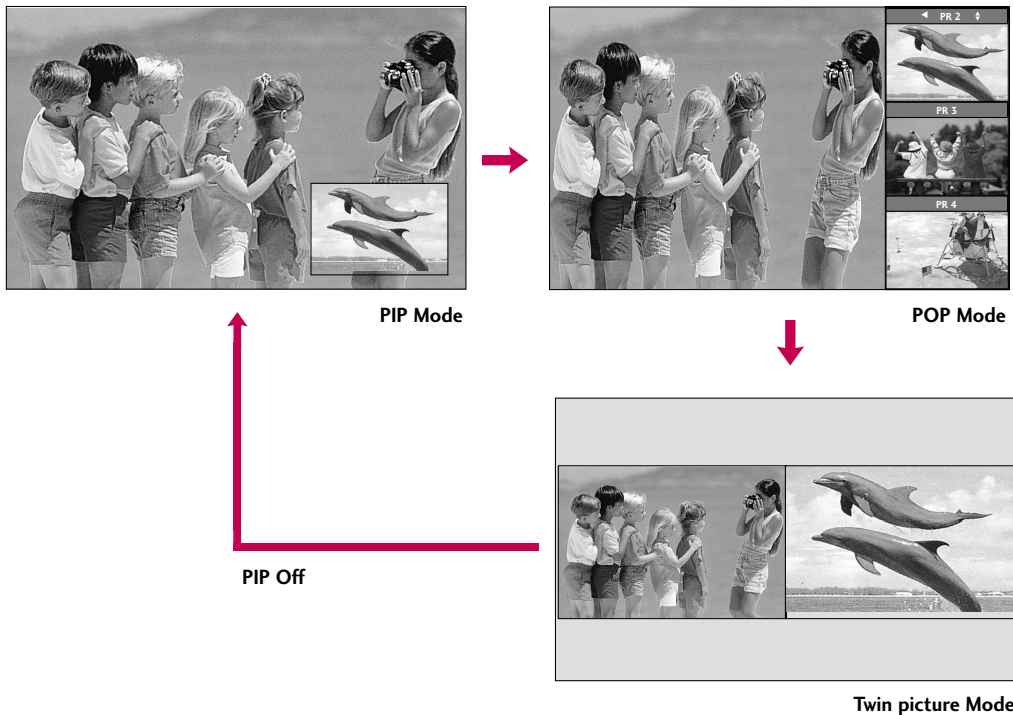
PIP lets you view 2 different inputs (sources) on your TV screen at the same time. One source will be large and the other source will be shown in a smaller inset image.

Twin Picture mode splits the screen into two images, allowing two picture sources to be shown on the TV screen at the same time. Each source is given half the screen.



## Watching PIP/POP/Twin Picture

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



### NOTE

- ▶ When the sub picture size is 1/2 of the main picture, the picture quality may deteriorate.
- ▶ The motion of the sub picture can be unnatural because the set displays full screen by synchronizing the main picture source when the refresh rate between the main picture source and the sub picture source is different in PIP mode.



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

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

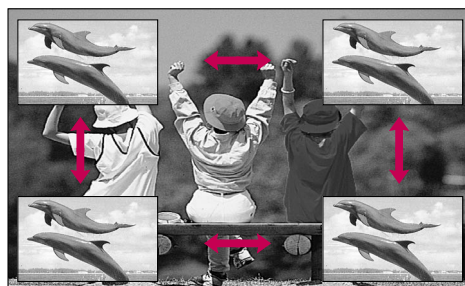
Main Picture Source	Available Sub Picture Sources
Digital	Analogue, AV1, and AV2
Analogue	Analogue, Digital, AV1, and AV2
AV1-2, Component1-2, RGB, HDMI/DVI	Digital, Analogue, AV1-2

## TV Program selection for PIP

- 1 Press the **PIP** button.
- 2 Select the **Digital** or **Analogue** option on the Sub input menu or with the **PIP INPUT** button. Use the **PIP PR+** / **PIP PR-** button to select a programme for the sub picture.

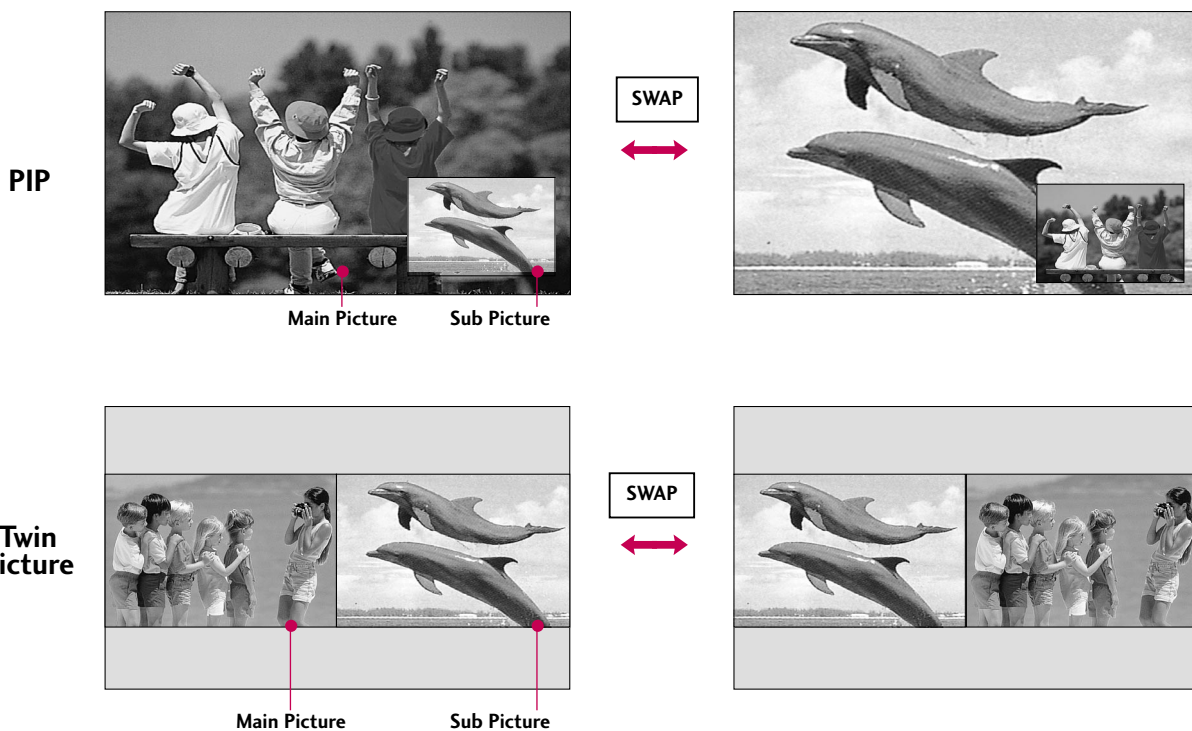
## Moving the PIP sub picture

- 1 In PIP mode, press the **▲ ▼ ◀ ▶** buttons to move the sub picture to a different location on the screen.



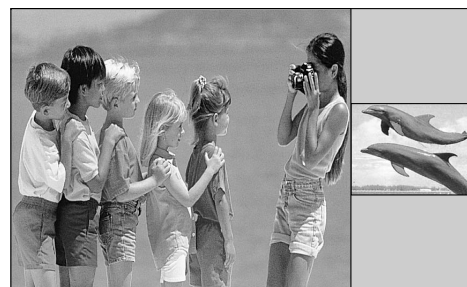
## Swapping the PIP/Twin Picture

- 1 Repeatedly, use the **SWAP** button to switch the main and sub pictures.
  - When the main picture is in Digital, Analogue or AV modes, swapping is available.



## Adjusting Main and Sub Picture Sizes for Twin Picture

- 1 Use the ▲ ▼ ◀ ▶ buttons to change main and sub picture sizes in Twin Picture mode.
  - If the screen is adjusted to the maximal size, the large screen is filled with entire program vertically as shown.



## POP (Picture-out-of-Picture : Programme Scan)

Use POP to search the programs of all the memorized programmes one-by-one on the 3 PIP screen display, (while the main picture source remains the current programme). The pictures of all the programmed programmes are searched with the 3 POP screens.

**1** Press the **PIP** button to activate the **POP mode** while in **PIP mode**.

- **Programme selection** : Use ◀ button to enlarge the selected programme being searched on the PIP screen to shift it for viewing on the Main screen.
- **PIP selection** : Use ▲ or ▼ button to select one of 3 PIP screen pictures in **POP** mode.
- When watching Analogue TV on Main picture, Digital TV channels are scanned as the Sub pictures. However, when watching Digital TV on Main picture, only Analogue TV channels are scanned as the Sub picture.

**2** Press the **EXIT** button to cancel POP mode.



### ! NOTE

- ▶ Run Auto programme before using POP mode.

# SPECIAL FUNCTIONS | TELETEXT

\* This feature is not available in all countries.

- Teletext is a free service broadcast by some TV stations which gives up-to-the-minute information on news, weather, television programmes, share prices and many other topics.
- The teletext decoder of this TV can support the SIMPLE, TOP and FASTEXT systems. SIMPLE (standard teletext) consists of a number of pages which are selected by directly entering the corresponding page number. TOP and FASTEXT are more modern methods allowing quick and easy selection of teletext information.

## Switch On/Off

Press the **TEXT** button to switch to teletext. The initial page or last page appears on the screen.

Two page numbers, TV station name, date and time are displayed on the screen headline. The first page number indicates your selection, while the second shows the current page displayed.

Press the **TEXT** or **EXIT** button to switch off teletext.

## SIMPLE Text

\* This feature is not available in all countries.

### ■ Page selection

- 1 Enter the desired page number as a three digit number with the NUMBER buttons. If during selection you press a wrong number, you must complete the three digit number and then re-enter the correct page number.
- 2 The **PR +/-** button can be used to select the preceding or following page.

## TOP Text

\* This feature is not available in all countries.

- The user guide displays four fields-red, green, yellow and blue at the bottom of the screen. The yellow field denotes the next group and the blue field indicates the next block.

### ■ Block / group / page selection

- 1 With the **BLUE** button you can progress from block to block.
- 2 Use the yellow button to proceed to the next group with automatic overflow to the next block.
- 3 With the **GREEN** button you can proceed to the next existing page with automatic overflow to the next group. Alternatively the **PR +** button can be used.
- 4 The red button permits to return to previous selection. Alternatively the **PR-** button can be used.


### ■ Direct page selection

Corresponding to the SIMPLE teletext mode, you can select a page by entering it as a three digit number using the NUMBER buttons in TOP mode.

## FASTEXT

- The teletext pages are colour coded along the bottom of the screen and are selected by pressing the corresponding coloured button.

### ■ Page selection

1. Press the  button to select the index page.
2. You can select the pages which are colour coded along the bottom line with the same coloured buttons.
3. Corresponding to the SIMPLE teletext mode, you can select a page by entering its three digit page number with the NUMBER buttons in FASTEXT mode.
4. The **PR +/-** button can be used to select the preceding or following page.

## Special Teletext Functions



### REVEAL

Press this button to display concealed information, such as solutions of riddles or puzzles. Press this button again to remove the information from the display.



### SIZE

Selects double height text.  
Press this button to enlarge the top half of the page.  
Press this button again to enlarge the bottom half of the page.  
Press this button again to return to the normal display.



### TIME

- a. When viewing a TV programme, press this button to display the time at the top right hand corner of the screen. Press this button again to remove the display.
- b. In the teletext mode, press this button to select a sub page number. The sub page number is displayed at the bottom of the screen. To hold or change the sub page, press the **RED**, **GREEN**, or **PR +/-** buttons.  
Press this function again to exit.

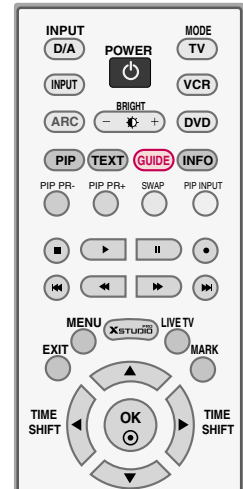
# SPECIAL FUNCTIONS | EPG(ELECTRONIC PROGRAMME GUIDE)

- In Digital Mode Only

This system has an Electronic Programme Guide (EPG) to help your navigation through all the possible viewing options.

The EPG supplies information such as programme listings, start and end times for all available services. In addition, detailed information about the programme is often available in the EPG (the availability and amount of these programme details will vary, depending on the particular broadcaster).

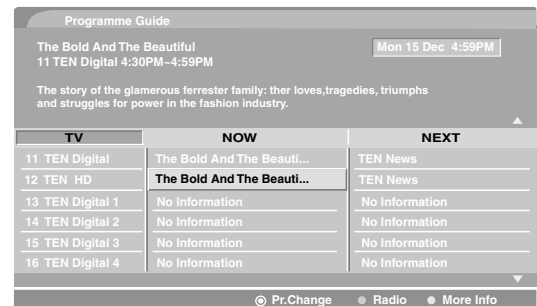
This function can be used only when the EPG information is broadcast by broadcasting companies.



## Switch on/off EPG

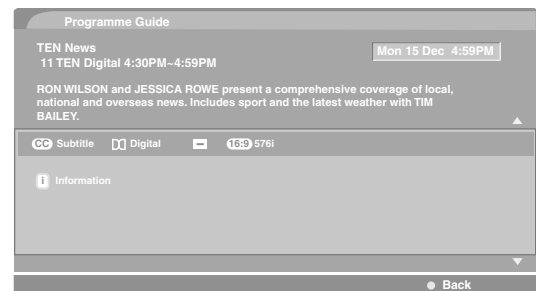
Press the **GUIDE** button to switch on EPG.

Press the **GUIDE** or **EXIT** button again to switch off EPG and return to TV viewing.



## Select a programme

Press the **▲ ▼ ◀ ▶** buttons to select desired programme, then press the **OK** button to display the selected programme.



Remote Control Buttons	Function
RED	Shows the TV or Radio programmes
GREEN	The detail information on or off

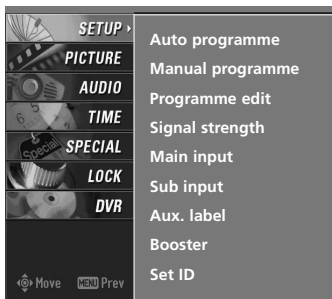
# TV MENU

## ON SCREEN MENUS SELECTION AND ADJUSTMENT

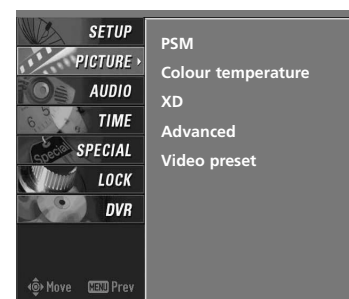
Your TV's OSD (On Screen Display) may differ slightly from what is shown in this manual.

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

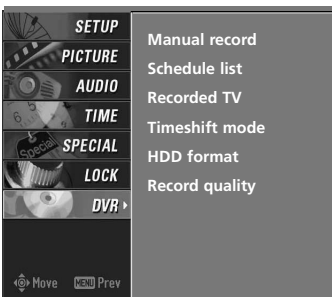
### SETUP



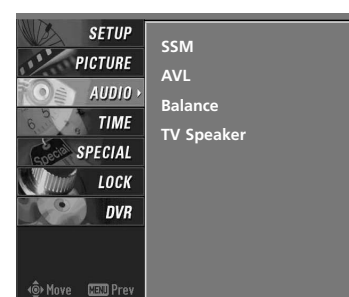
### PICTURE



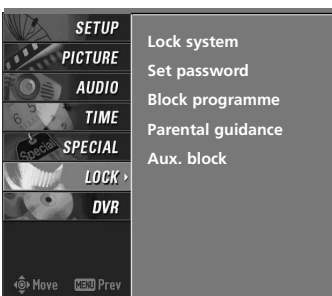
### DVR



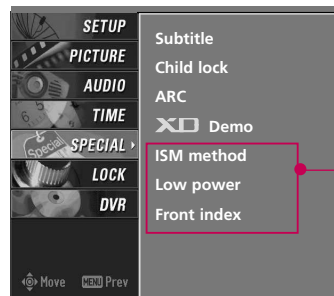
### AUDIO



### LOCK



### SPECIAL



### TIME



Only 50PB2DR

# TV MENU | SETUP(PROGRAMME)

## AUTO PROGRAMME TUNING

**In Digital Mode:** It depends on the each digital programme.

**In Analogue Mode:** Up to 100 TV stations can be stored in this set by programme numbers (0 to 99).

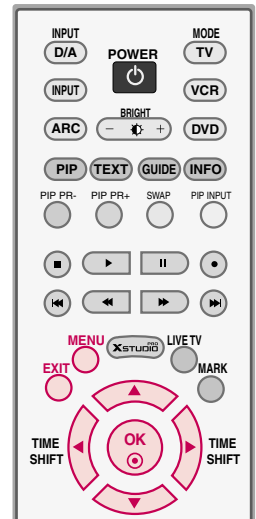
Once you have preset the stations, you will be able to use the **PR + / -** or **NUMBER** buttons to scan the stations you programmed.

Stations can be tuned using automatic or manual modes.

A password is required to gain access to Auto programme or Manual programme menu if the Lock system is turned on.

If you forgot your password, press '7', '7', '7', '7' on the remote control.

In Australia, if no station name can be assigned to a station, the programme number is assigned and stored as ----- followed by a number see 'Assigning a station name' section to assign the station name.



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

**2** Press the **▶** button and then **▲** or **▼** button to select **Auto programme**.

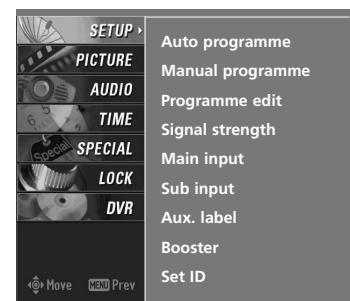
**3** Press the **▶** button to select **Storage from**.  
Select the beginning programme number with the **▲** or **▼** button or **NUMBER** buttons.

**4** Press the **▶** button to select **To start**.

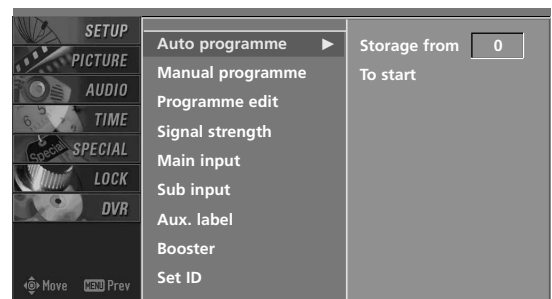
**5** Press the **OK** button to begin auto programming.  
All receivable stations are stored.

To stop auto programming, press the **OK** button.  
When auto programming is completed, the **Programme edit** menu appears on the screen. See the 'Programme Edit' section to edit the stored programme.

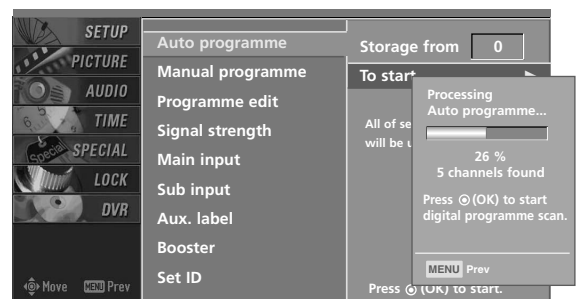
**6** Press **EXIT** button to return to normal TV viewing.



**1**



**2 3**



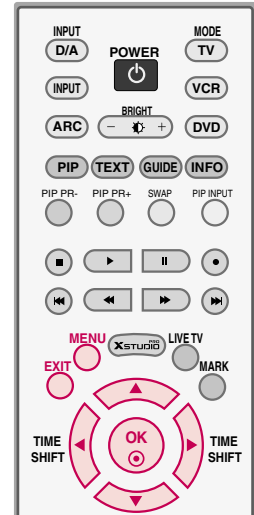
**4 5**



# MANUAL PROGRAMME TUNING

## In Digital Mode

Manual programme lets you manually add a programme to your programme list.



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

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

3 Press the ► button and then use ▲ or ▼ button to select the programme number you want to add.

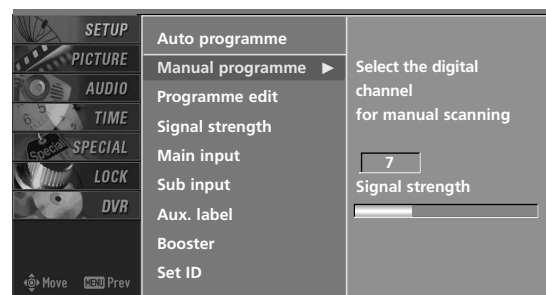
4 Press the **OK** button to store the programme. When the programme number you want to add is already added in programme list, the message **“Already programmed channel. Do you want to update?”** will appear. If you want to keep on manual programming, select YES with using ◀ / ▶ button . Then, press the **OK** button. Otherwise select **NO**.

When the programme is stored, the Programme edit menu appears on the screen. See the ‘Programme Edit’ section to edit the stored programme.

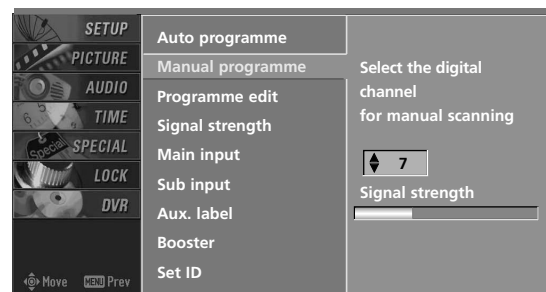
5 Press **EXIT** button to return to normal TV viewing.



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2



3 4

## MANUAL PROGRAMME TUNING *Continued*

### In Analogue Mode

Manual programme lets you manually tune and arrange the stations in whatever order you desire. Also you can assign a station name with five characters to each programme number.



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

**2** Press the **▶** button and then use **▲** or **▼** button to select **Manual programme**.

**3** Press the **▶** button to select **Band**. Press the **▲** or **▼** button to select **V/UHF** or **Cable** as required.

**4** Press the **▶** button to select **Channel**. Press the **▲** or **▼** button to select the desired channel number.

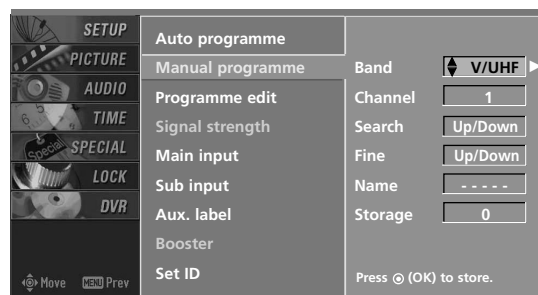
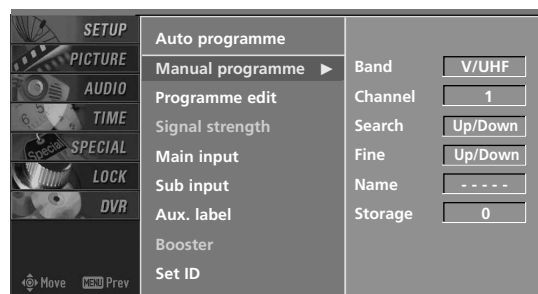
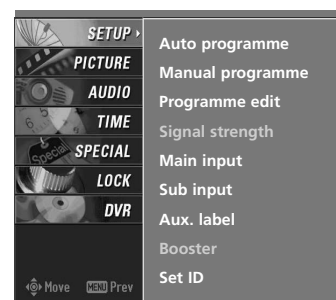
**5** Press the **▶** button to select **Search**. Press the **▲** or **▼** button to commence searching. If a station is found the search will stop.

**6** If this station is the one required, press the **◀** or **▶** button to select **Storage**. Select the desired programme number with the **▲** or **▼** button.

**7** Press the **OK** button to store it.

**8** To store another station, repeat steps 3 to 7.

**9** Press **EXIT** button to return to normal TV viewing.



**3 4 5 6 7**

## FINE TUNING - In Analogue Mode only

Normally fine tuning is only necessary if reception is poor. The finely tuned programme will be indicated by a yellow number during programme selection.



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

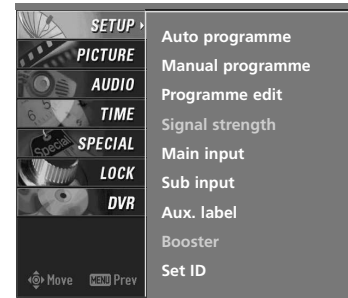
2 Press the ► button and then use ▲ or ▼ button to select **Manual programme**.

3 Press the ► button and then ◀ or ▶ button to select **Fine**.

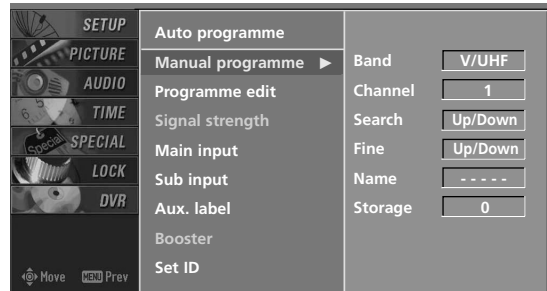
4 Press the ▲ or ▼ button to fine tune for the best picture and sound.

5 Press the **OK** button to store.

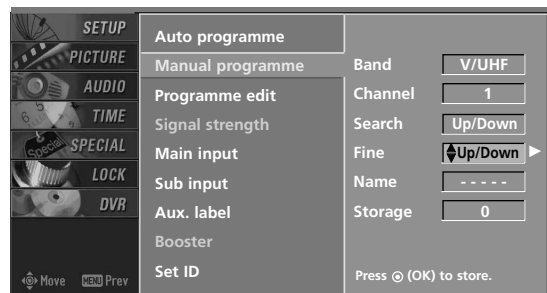
6 Press **EXIT** button to return to normal TV viewing.



1



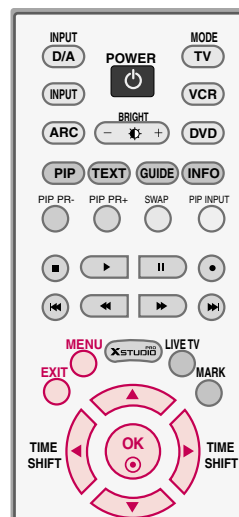
2



3 4 5

## ASSIGNING A STATION NAME - *In Analogue Mode only*

You can assign a station name to each programme number.



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

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

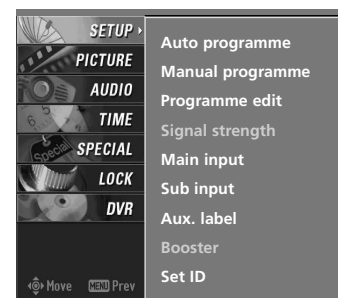
3 Press the ► button and then use ◀ or ▶ button to select **Name**.

4 Press the ▲ or ▼ button. You can use the numeric 0 to 9, the alphabet A to Z +, -, and blank.

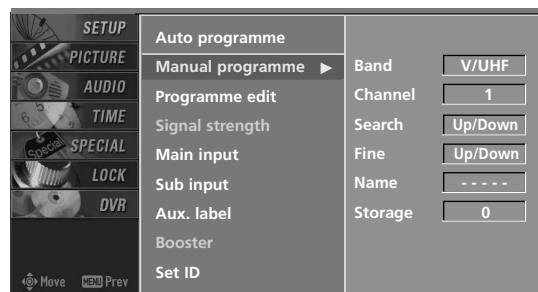
5 Press the ◀ or ▶ button to select the position and make your choice of the second character, and so on.

6 Press the **OK** button to store.

7 Press **EXIT** button to return to normal TV viewing.



1



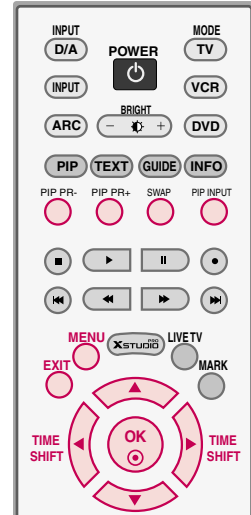
2



3 4 5

# PROGRAMME EDIT

This function enables you to delete or skip the stored programmes. Also you can move some stations to other programme numbers or copy blank station data into the selected programme number.



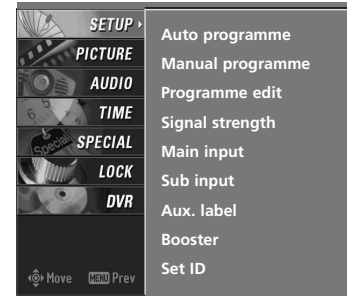
1 Press the **MENU** button and then use ▲ or ▼ button to select the **SETUP** menu.

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

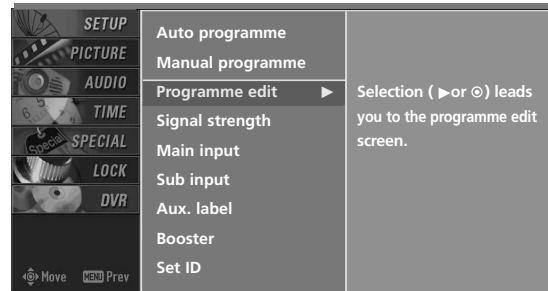
3 Press the ► button.

- 4 ■ **Deleting a programme (In Analogue Mode Only)**
- Select a programme to be deleted with the ▲ ▼ ◀ ▶ buttons.
  - Press the **RED** button twice. The selected programme is deleted, all the following programmes are shifted up one position.

- **Copying a programme (In Analogue Mode Only)**
- Select a programme to be copied with the ▲ ▼ ◀ ▶ buttons.
  - Press the **GREEN** button.
  - Move the programme to the desired programme number with the ▲ ▼ ◀ ▶ buttons.
  - Press the **GREEN** button again to copy the programme. All the following programmes are shifted down one position.



1



2



3 4 5

## ■ Moving a programme (In Analogue Mode Only)

- Select a programme to be moved with ▲ ▼ ◀ ▶ buttons.
- Press the **YELLOW** button.
- Move the programme to the desired programme number with the ▲ ▼ ◀ ▶ buttons.
- Press the **YELLOW** button again to release this function.

## ■ Skipping a programme number

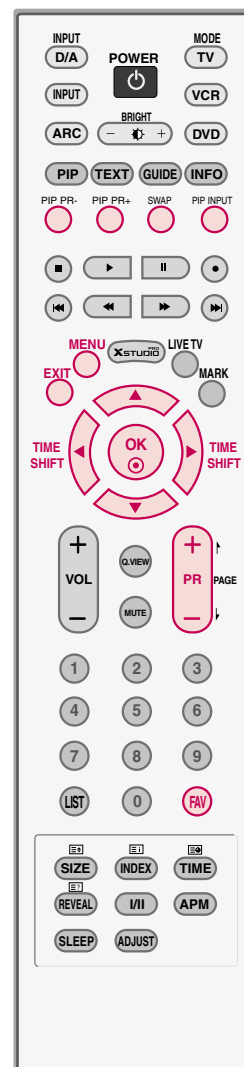
- Select a programme number to be skipped with ▲ ▼ ◀ ▶ buttons.
- Press the **BLUE** button. The skipped programme number turns to blue.
- Press the **BLUE** button again to release the skipped programme.

When a programme number is skipped it means that you will be unable to select it using the **PR+ / -** button during normal TV viewing. If you want to select the skipped programme, directly enter the programme number with the NUMBER buttons or select it in the programme edit or table menu.

## ■ Selecting Favourite Programme

- Select your favourite programme number with ▲ ▼ ◀ ▶ buttons and then press the **FAV** button. It will automatically include the selected programme into your favourite programmes list and a heart-mark will appear in front of that programme number. You can store up to 20 programmes.

- Repeatedly press the **FAV** button to select stored favourite programmes in normal TV viewing.



# CALLING UP THE CHANNEL LIST

You can check the programmes stored in the memory by displaying the channel list.

In digital mode, the programmes shown belong to the current channel.

In analogue mode, all memorized channels are shown.

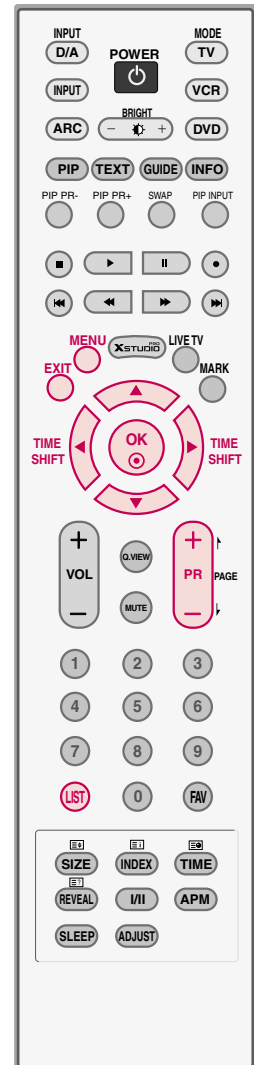
## Displaying programme list

- Press the **LIST** button to display the channel list. The channel list appears on the screen.



## Selecting a programme in the programme list

- 1 Select a programme with the ▲ ▼ button in the channel list.
- 2 The set switches to the chosen programme number.

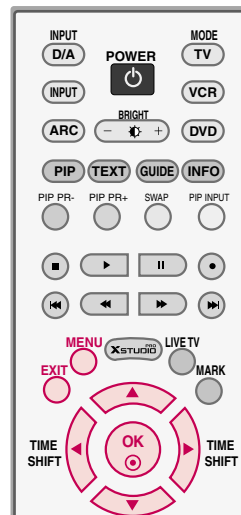


## DIGITAL SIGNAL STRENGTH - *In Digital Mode only*

Reveals how strong your DTV signal is and whether you need to adjust your antenna.

The higher the signal strength, the less likely you are to experience picture degradation.

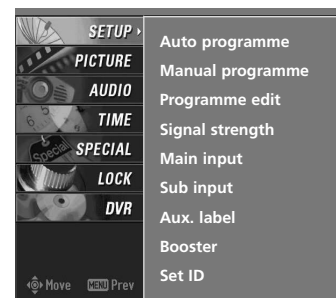
Digital TV Signals; May not be available in all areas, nor broadcast all programmes.



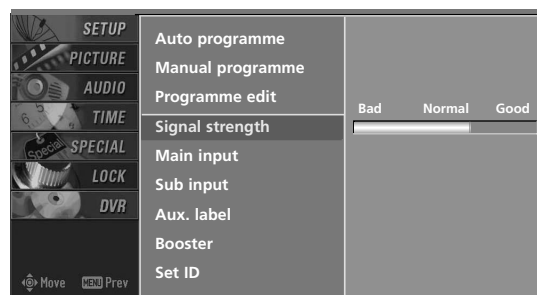
1 Press the **MENU** button and then use ▲ or ▼ button to select the **SETUP** menu.

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

3 View the on-screen signal strength monitor to see the strength of the signal being received.



1



2



# MAIN PICTURE SOURCE SELECTION

Alternatively you can select the Digital, Analogue, AV1-2, Component 1-2, RGB-PC (or RGB-DTV), HDMI1/DVI, or HDMI2 mode by pressing the **INPUT** button.

Press the **D/A INPUT** button to select digital or analogue mode.

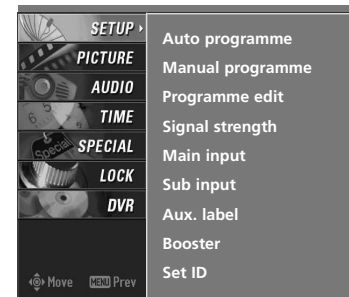


1 Press the **MENU** button and then use ▲ or ▼ button to select the **SETUP** menu.

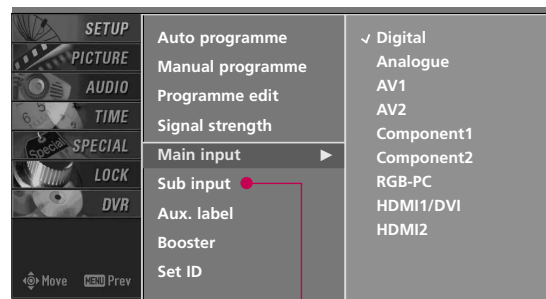
2 Press the ► button and then use ▲ or ▼ button to select **Main input**

3 Press the ► button and then use ▲ or ▼ to select Digital, Analogue, AV 1 , AV 2 , Component 1 , Component 2, RGB-PC, RGB-DTV, HDMI1/DVI, or HDMI2.  
 ■ To toggle between RGB-DTV and RGB-PC, select RGB-DTV(or RGB-PC) and press ► button.

4 Press **EXIT** button to return to normal TV viewing.



1



2 3

## Sub Picture Source Selection

Select sources for the **Sub Input** in the **Setup** menu.

See Page 53 for selecting the input source for the sub picture by pressing the **PIP INPUT** button.

## AUX. LABEL

Sets a label for each input source which is in use when you press **INPUT** button.

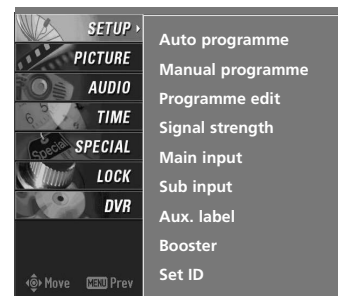
1 Press the **MENU** button and then use ▲ or ▼ button to select the **SETUP** menu.

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

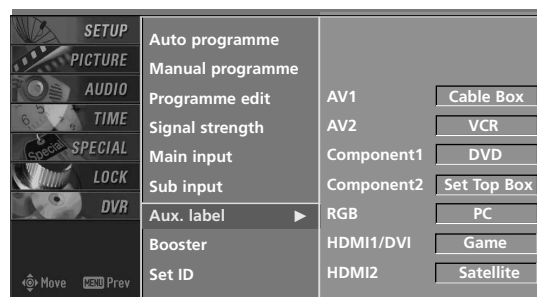
3 Press the ► button and then use ▲ or ▼ button to select the source: AV1, AV2, Component1, Component2, RGB, HDMI1/DVI or HDMI2.

4 Press the ◀ or ▶ button to select the label.

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

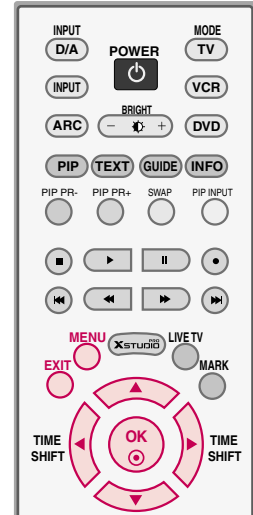


1

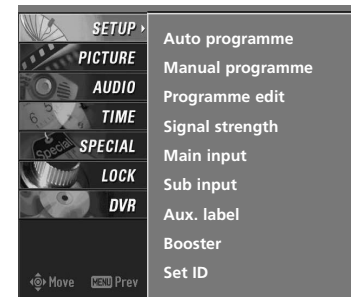


## BOOSTER - In Digital Mode only

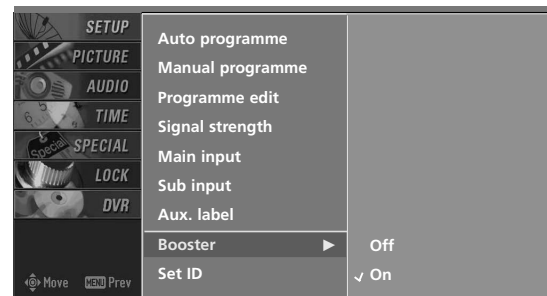
If the reception is poor in the fringe areas, set **Booster** to **On**. When the picture condition is good, do not set **Booster** to **On**.



- 1 Press the **MENU** button and then use ▲ or ▼ button to select the **SETUP** menu.
- 2 Press the ► button and then use ▲ or ▼ button to select **Booster**.
- 3 Press the ► button and then use ▲ or ▼ button to select **Off** or **On**.
- 4 Press **EXIT** button to return to normal TV viewing.



1



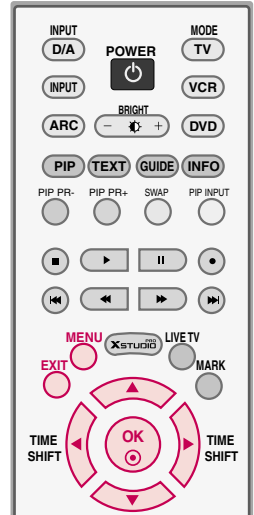
2 3

# TV MENU | PICTURE ADJUSTMENT

## PICTURE STATUS MEMORY (PSM)

This function adjusts the set to the best picture appearance. When adjusting picture options (contrast, brightness, colour, sharpness and tint) manually, PSM is automatically changed to User.

Picture options Dynamic, Standard, and Mild are preset and programmed for good picture quality at the factory and cannot be changed.

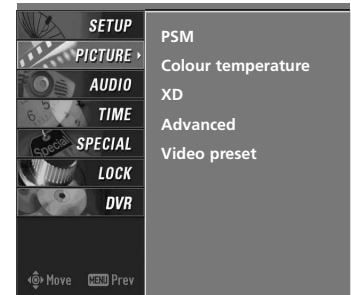


1 Press the **MENU** button and then use ▲ or ▼ button to select the **PICTURE** menu.

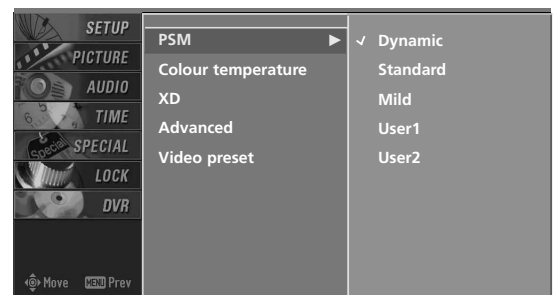
2 Press the ► button and then use ▲ or ▼ button to select **PSM**.

3 Press the ► button and then use ▲ or ▼ button to select **Dynamic, Standard, Mild, User1, or User2**.

4 Press **EXIT** button to return to normal TV viewing.



1

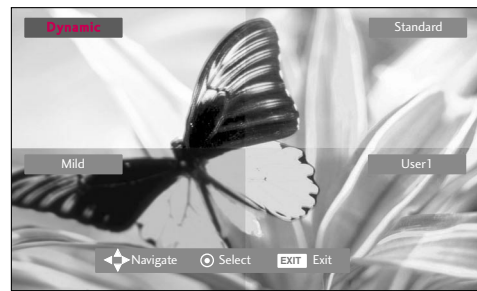
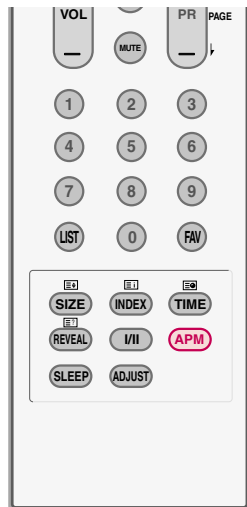


2 3

## ADAPTIVE PICTURE MODE (APM)

Allows you to select your preferred picture mode after comparing the four different picture (Dynamic, Standard, Mild, and User1 (or User2)) settings.

- 1 Press the **APM** button once. The screen is divided into 4 sections.
- 2 Use the **▲ ▼ ◀ ▶** buttons to navigate between the 4 screen sections.  
By pressing the **OK** button, you can select the desired mode.



1 2

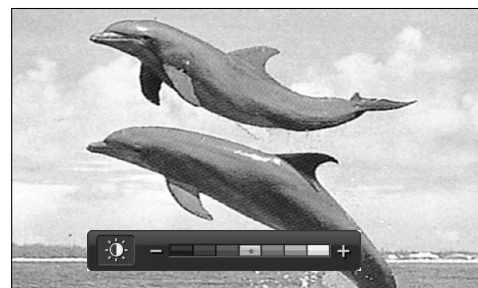
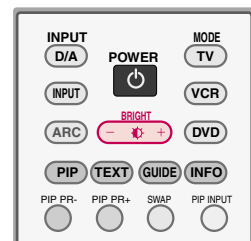
### ! NOTE

- ▶ While in the APM mode, only the **POWER, APM, OK, EXIT, ▲ ▼ ◀ ▶, VOLUME ▲ ▼, MUTE** buttons on the remote control are usable.
- ▶ APM screen will automatically disappear after approx. 40 seconds unless a button is pressed.

## BRIGHTNESS ADJUSTMENT

Adjust the brightness using this button on the remote control.

- 1 Press the **BRIGHT** button.
- 2 Adjust the desired screen brightness.



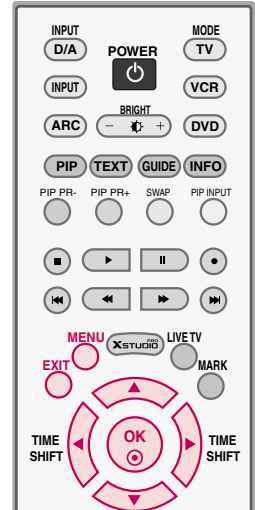
1 2

## MANUAL PICTURE CONTROL (PSM-User option)

You can adjust picture Contrast, Brightness, Colour, Sharpness, and Tint options to the levels you prefer.

In NTSC AV, Component 60Hz, RGB-DTV 60Hz, HDMI/DVI-DTV 60Hz, RGB-PC, HDMI/DVI-PC mode, Tint is also available.

The adjustment for PICTURE menu (Contrast, Brightness, Colour, Sharpness, and Tint) affect both the main and sub picture in PIP, Twin Picture, or POP mode.



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

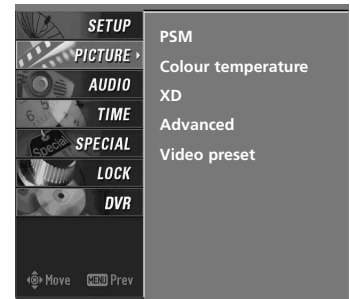
**2** Press the ► button and then use ▲ or ▼ button to select **PSM**.

**3** Press the ► button and then use ▲ or ▼ button to select **User 1** or **User 2**.

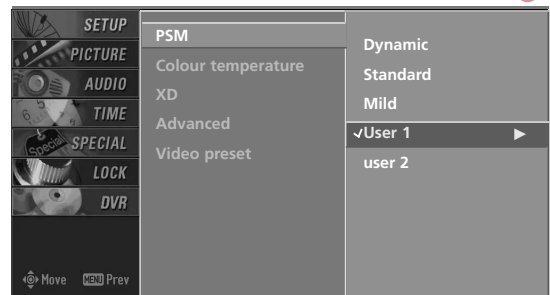
**4** Press the ► button and then use ▲ or ▼ button to select the desired picture option (**Contrast, Brightness, Colour, Sharpness, or Tint**).

**5** Press the ► button and then use ◀ or ▶ button to make appropriate adjustments.

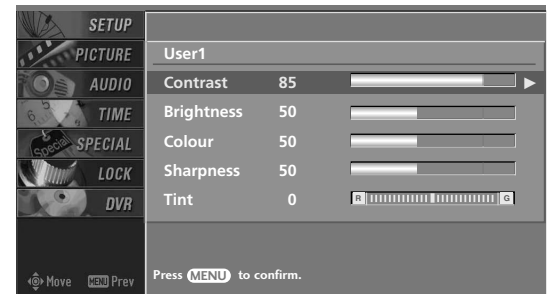
**6** Press **EXIT** button to return to normal TV viewing.



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**2 3**



**4**



**5**

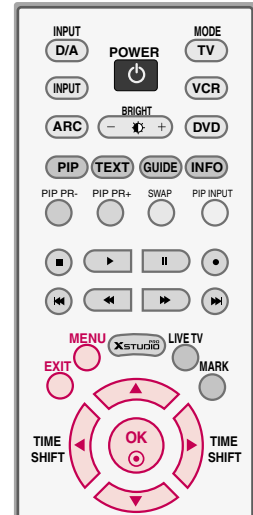
# XD

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

When selecting PSM options (Dynamic, Standard and Mild), XD is automatically changed to Auto.

But when selecting PSM options (User 1 and User 2), you can choose the Auto / Manual.

When selecting the Manual, you can adjust the XD contrast, XD colour and XD noise.



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

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

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

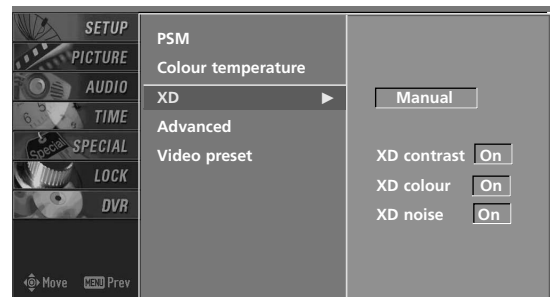


## Selecting the Manual

1. Press the ► button and then use ◀ or ▶ button to select **XD contrast**, **XD colour** or **XD noise**.

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

2. Use the ▲ or ▼ button to select **On** or **Off**.

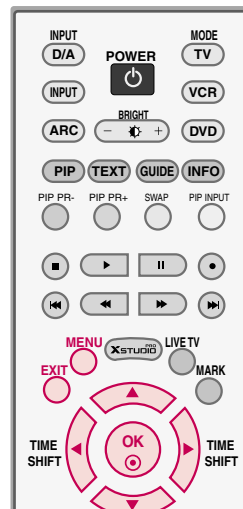


4 Press **EXIT** button to return to normal TV viewing.

## COLOUR TEMPERATURE CONTROL

### Auto Colour Temperature Control

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

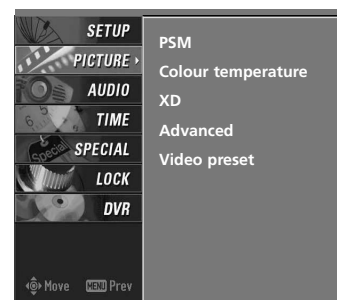


**1** Press the **MENU** button and then use ▲ or ▼ button to select the **PICTURE** menu.

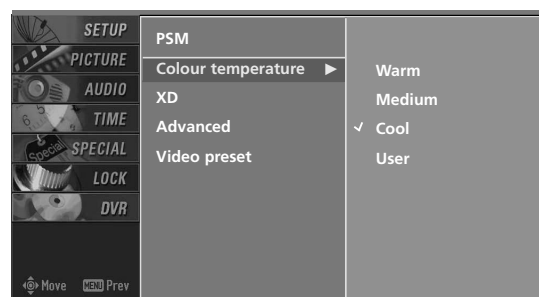
**2** Press the ► button and then use ▲ or ▼ button to select **Colour temperature**.

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

**4** Press **EXIT** button to return to normal TV viewing.



**1**



**2** **3**



## Manual Colour Temperature Control

You can also adjust the detailed settings (Red, Green, Blue) by selecting the **User** menu.

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

**2** Press the **▶** button and then use **▲** or **▼** button to select **Colour temperature**.

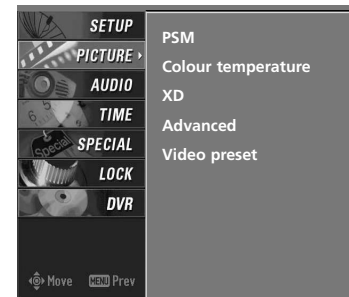
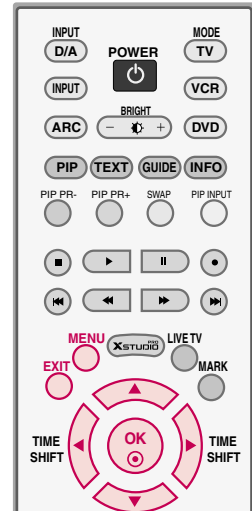
**3** Press the **▶** button and then use **▲** or **▼** button to select **User**.

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

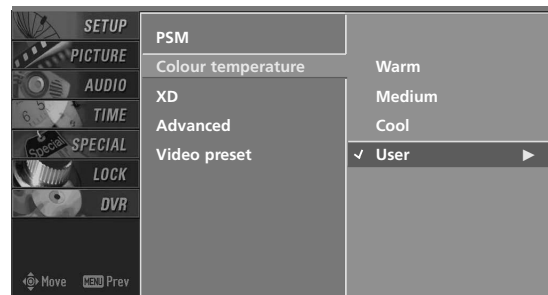
**5** Press the **▶** button and then use **◀** or **▶** button to make appropriate adjustments.

- The adjustment range of **Red, Green, or Blue** is -20~ +20.

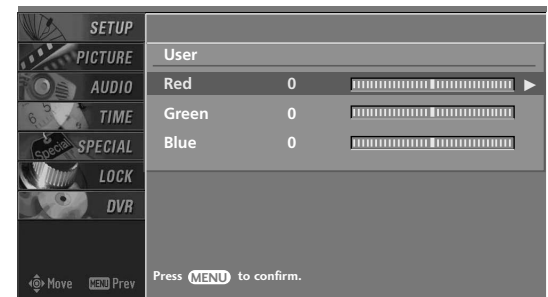
**6** Press **EXIT** button to return to normal TV viewing.



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**4**



**5**

## ADVANCED-CINEMA

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

This feature operates only in AV1-2 (480i, 576i) and Component (480i, 576i) mode.



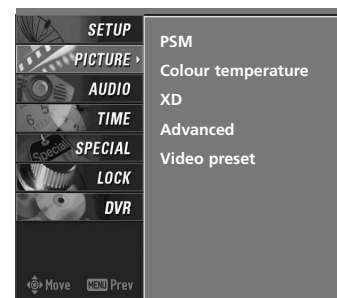
1 Press the **MENU** button and then use ▲ or ▼ button to select the **PICTURE** menu.

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

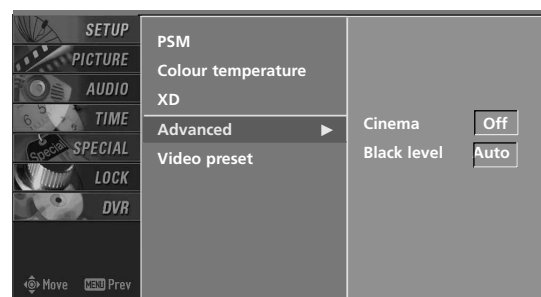
3 Press the ► button and then use ▲ or ▼ button to select **Cinema**.

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

5 Press **EXIT** button to return to normal TV viewing.



1

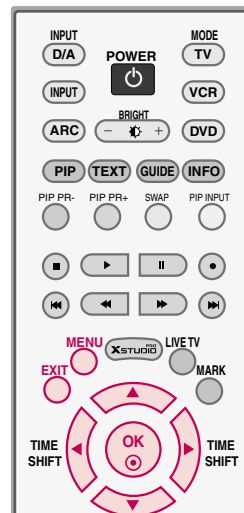


2 3 4

## ADVANCED-BLACK LEVEL

Adjusting the contrast and the brightness of the screen using the black level of the screen.

This feature operates only in AV1, AV2, HDMI1/DVI or HDMI2 mode.



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

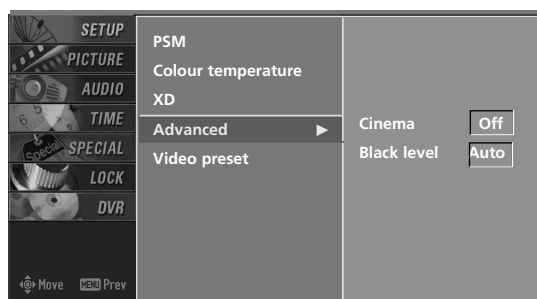
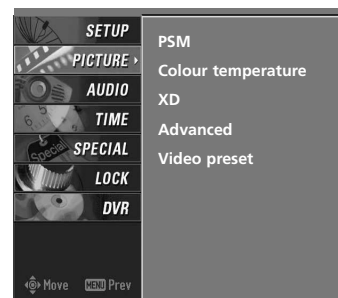
2 Press the ► button and then use ▲ or ▼ button to select **Advanced**.

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

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

- **Auto**  
Realizing the black level of the screen and set it to High or Low automatically.
- **Low**  
The **Black Level** of the screen gets darker.
- **High**  
The **Black Level** of the screen gets brighter.

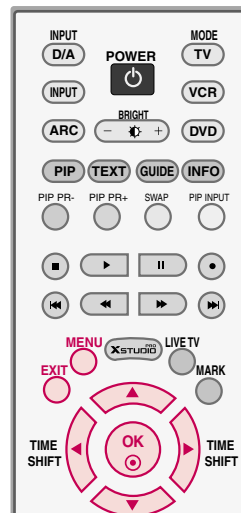
5 Press **EXIT** button to return to normal TV viewing.



2 3 4

## VIDEO PRESET

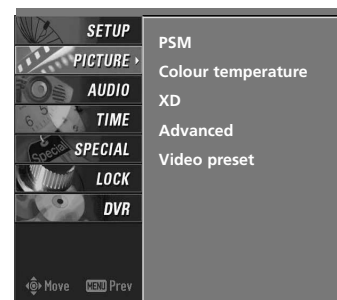
Use to quickly reset all the Picture menu options to their original factory preset values.



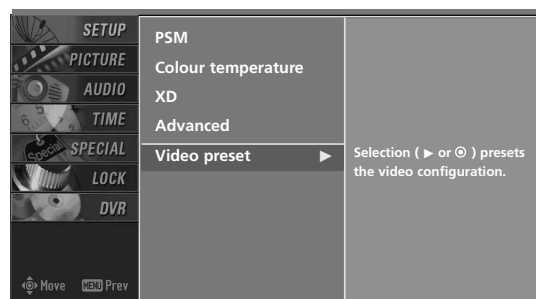
1 Press the **MENU** button and then use ▲ or ▼ button to select the **PICTURE** menu.

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

3 Press the ► button to reset the picture menu options to original values.



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2 3

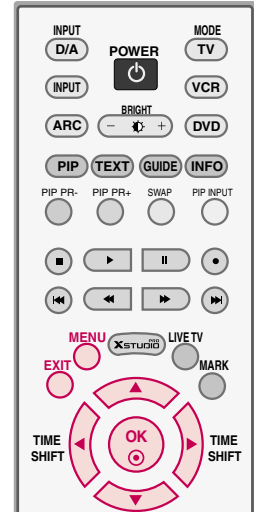
# TV MENU | AUDIO ADJUSTMENT

## SOUND STATUS MEMORY (SSM)

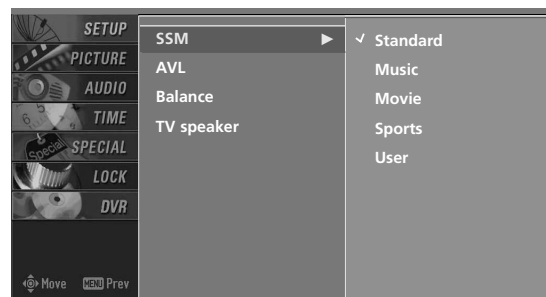
SSM lets you enjoy the best sound without any special adjustment because the TV sets the appropriate sound options based on the programme content.

When adjusting sound options (treble and bass) manually, SSM is automatically changed to User.

Standard, Music, Movie, and Sports are preset for good sound quality at the factory and are not adjustable.



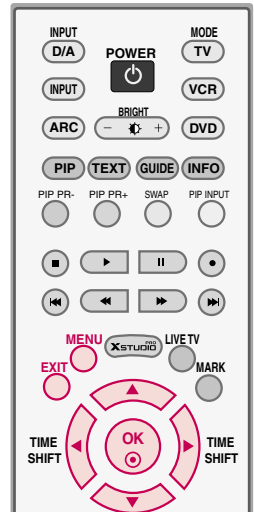
- 1 Press the **MENU** button and then use ▲ or ▼ button to select the **AUDIO** menu.
- 2 Press the ► button and then use ▲ or ▼ button to select **SSM**.
- 3 Press the ► button and then use ▲ or ▼ button to select **Standard, Music, Movie, Sports, or User**.
- 4 Press **EXIT** button to return to normal TV viewing.



2 3

# MANUAL SOUND CONTROL (SSM-User option)

Adjust the sound to suit your taste and room situations.

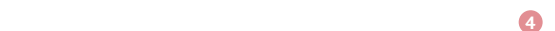
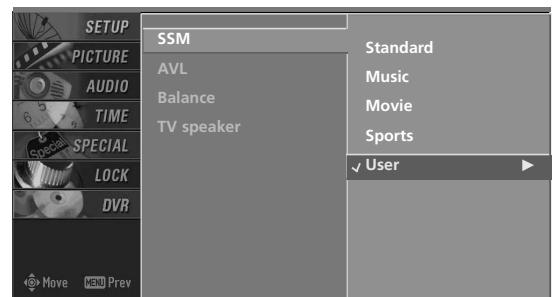
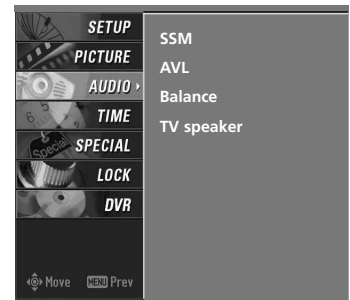


**1** Press the **MENU** button and then use ▲ or ▼ button to select the **AUDIO** menu.

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

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

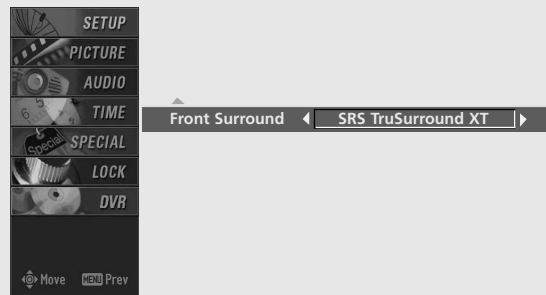
**4** Press the ► button and then use ▲ or ▼ button to select the desired sound option (**Treble**, **Bass**, or **Front Surround**).



- 5 Press the ► button and then use ◀ or ▶ button to make appropriate adjustments.

#### Selecting the Front surround

Press the ► button and then use ◀ or ▶ button to select **Off**, **3D Echo sound system** or **SRS(Sound Retrieval System)TruSurround XT** .



- 6 Press **EXIT** button to return to normal TV viewing.

#### SRS TruSurround XT

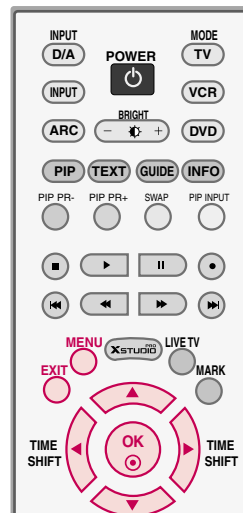
Takes advantage of any multi-channel format without needing to add extra speakers or equipment. Dialog clarity, bass enrichment, and the addition of stereo audio enhancement produces an immersive sound experience from standard stereo material.

#### 3D Echo sound system

Creates a stunning simulated stereo effect from any mono sound and a realistic three-dimensional sound with a very wide and deep sound stage.

## AUTO VOLUME LEVeller (AVL)

AVL automatically keeps on an equal volume level even if you change programmes.

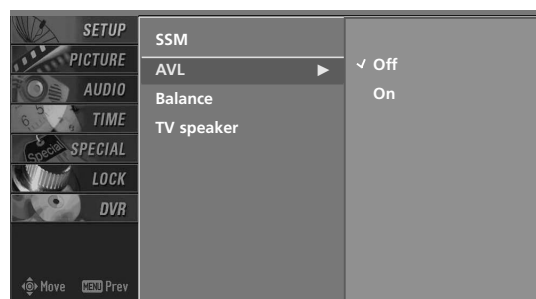
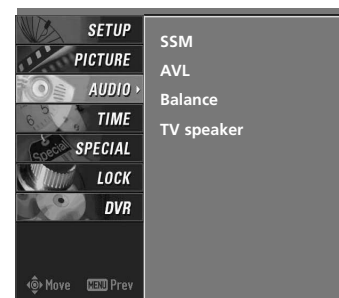


1 Press the **MENU** button and then use ▲ or ▼ button to select the **AUDIO** menu.

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

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

4 Press **EXIT** button to return to normal TV viewing.

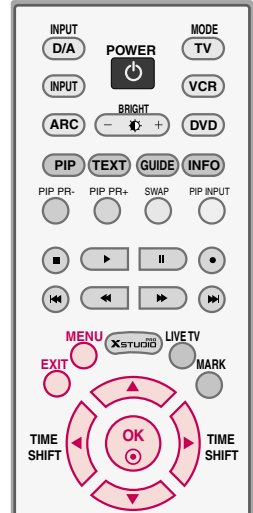


3

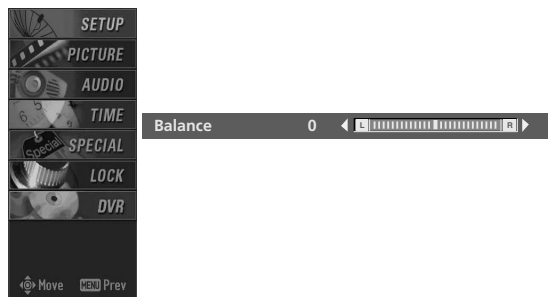
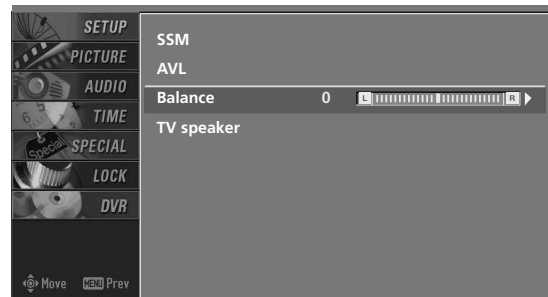
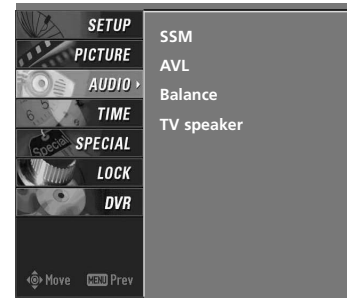


# BALANCE

Adjust the left/right sound of speaker to suit your taste and room situations.

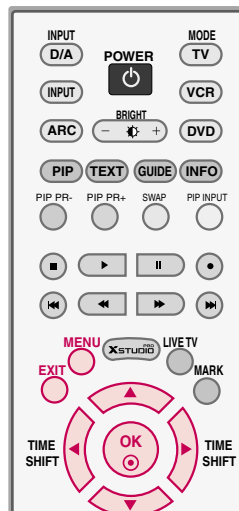


- 1 Press the **MENU** button and then use ▲ or ▼ button to select the **AUDIO** menu.
- 2 Press the ► button and then use ▲ or ▼ button to select **Balance**.
- 3 Press the ► button and then use ◀ or ▶ button to make appropriate adjustments.
- 4 Press **EXIT** button to return to normal TV viewing.

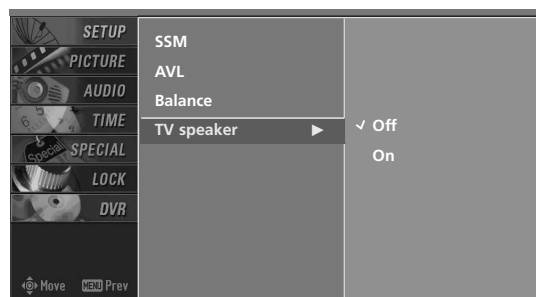
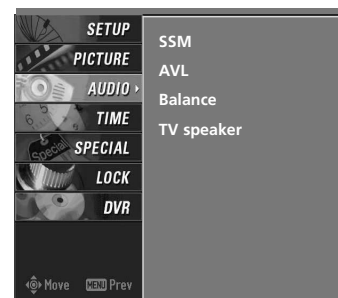


## TV SPEAKERS ON/OFF SETUP

Turn the TV speakers off if using external audio equipment. In AV1-2, Component1-2, RGB PC/DTV and HDMI/DVI mode, the audio signal can be outputted even though there is no video signal.



- 1 Press the **MENU** button and then use ▲ or ▼ button to select the **AUDIO** menu.
- 2 Press the ► button and then use ▲ or ▼ button to select **TV speaker**.
- 3 Press the ► button and then use ▲ or ▼ button to select **Off** or **On**.
- 4 Press **EXIT** button to return to normal TV viewing.



3

## STEREO RECEPTION - *In Analogue Mode only*

### ■ Mono sound selection

If the stereo signal is weak in stereo reception, you can switch to mono by pressing the **I/II** button twice. In mono reception, the clarity of sound is improved. To switch back to stereo, press the **I/II** button twice again.

Broadcast	On Screen Display
Mono	MONO
Stereo	MONO / STEREO

## SOUND OUTPUT SELECTION

In AV 1-2, Component 1-2, RGB-PC/DTV, HDMI1/DVI or HDMI2 mode, you can select output sound for the left and right loudspeakers.

Repeatedly press the **I/II** button to select the sound output.

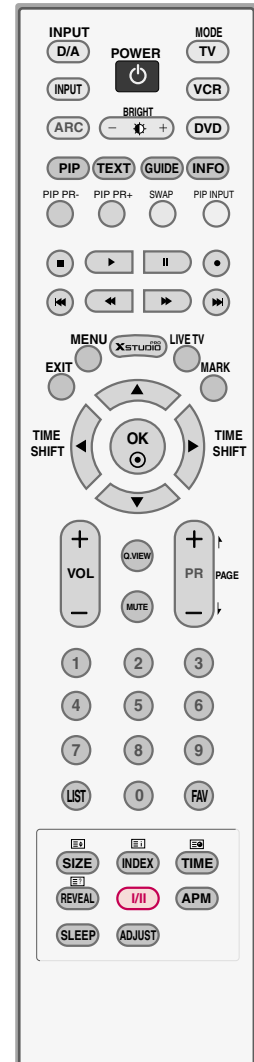
L+R: Audio signal from audio L input is sent to the left loud speaker and audio signal from audio R input is sent to the right loud speaker.

L+L: Audio signal from audio L input is sent to left and right loud speakers.

R+R: Audio signal from audio R input is sent to left and right loud speakers.

### ! NOTE

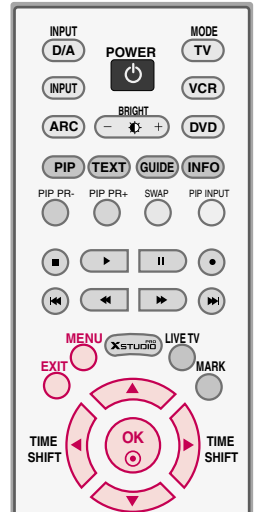
- ▶ In digital mode, repeatedly press the **I/II** button to change the audio mode (MPEG or DOLBY DIGITAL).



# TV MENU | TIME SETTING

## AUTO CLOCK SETUP

The time is automatically set from a digital channel signal. The digital channel signal includes information for the current time provided by the broadcasting station. Set the clock manually, if the current time is set incorrectly by the auto clock function.



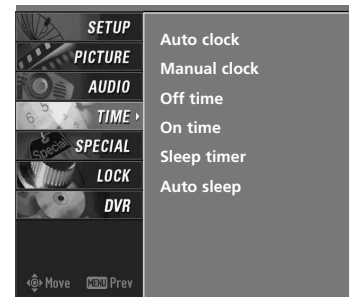
1 Press the **MENU** button and then use ▲ or ▼ button to select the **TIME** menu.

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

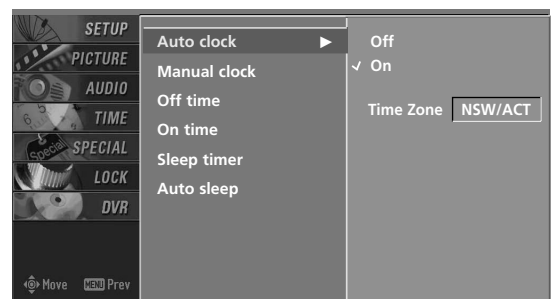
3 Press the ► button and then use ▲ or ▼ button to select **On**.

4 Press the ► button and then use ▲ or ▼ button to select your viewing area time zone: **NSW/ACT, NT, TAS, WA, SA, QLD, or VIC**.

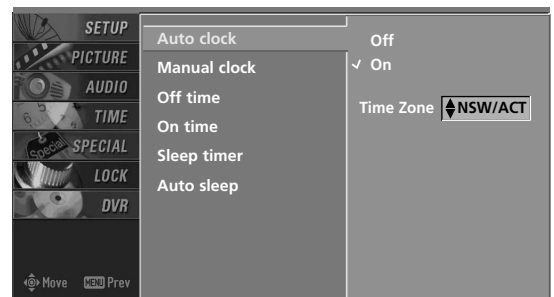
5 Press **EXIT** button to return to normal TV viewing.



1



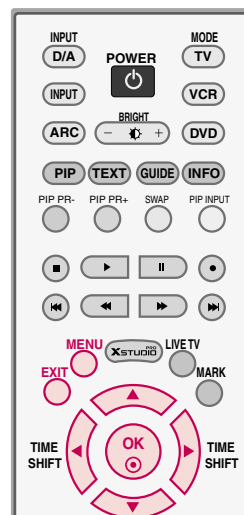
2



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# MANUAL CLOCK SETUP

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

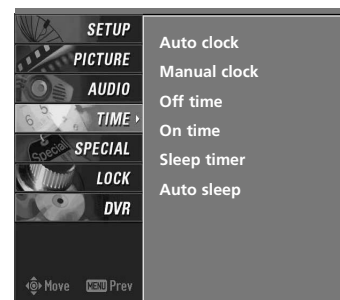


1 Press the **MENU** button and then use ▲ or ▼ button to select the **TIME** menu.

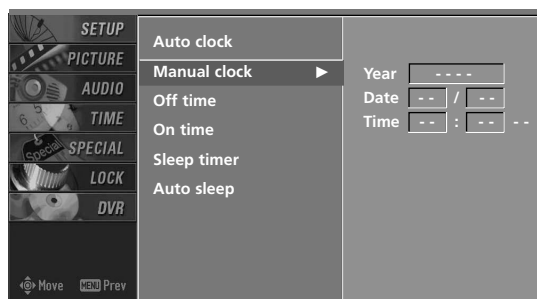
2 Press the ► button and then use ▲ or ▼ button to select **Manual clock**

3 Press the ► button and then use ◀ or ▶ to select either the year, date, or time option. Once selected, use the ▲ or ▼ button to set the year, date, and time options.

4 Press **EXIT** button to return to normal TV viewing.



1



2 3

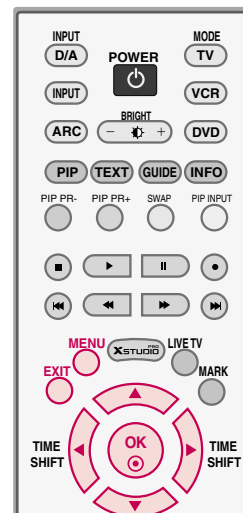
## ON/OFF TIME SETUP

The time function operates only if the current time has been set.

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

The TV must be in standby mode for the On-Time function to work.

If you do not press any button within 2 hours after the TV turns on with the On Time function, the TV will automatically revert to standby mode.



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

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

**3** Press the ► button and then use ▲ or ▼ button to select **On**.  
 ■ To cancel the **On/Off time** function, select **Off**.

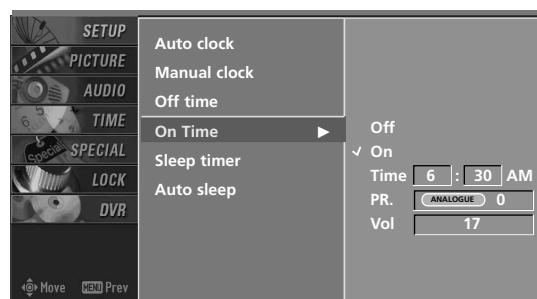
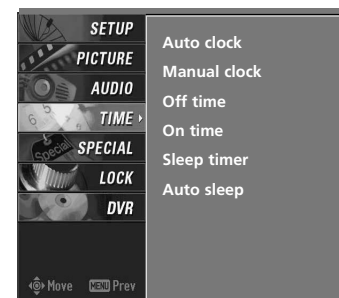
**4** Press the ► button and then use ▲ or ▼ button to set the hour.

**5** Press the ► button and then use ▲ or ▼ button to set the minutes.

**6** **Only On time**  
 Press the ► button and then use ▲ or ▼ to select the programme at turn-on.

Press the ► button and then use ▲ or ▼ to set the sound level at turn-on.

**7** Press **EXIT** button to return to normal TV viewing.

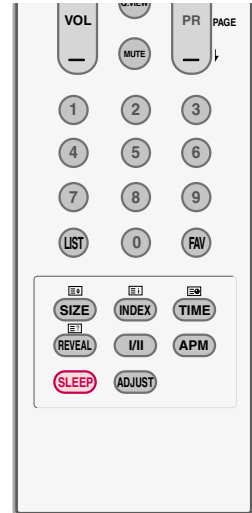


**2 3 4 5 6**

# SLEEP TIMER

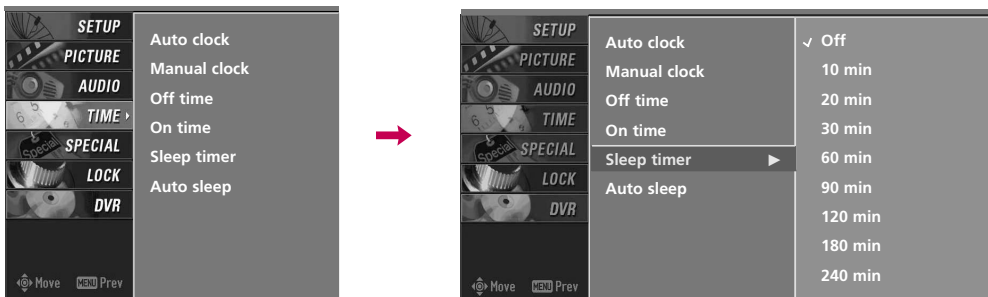
You don't have to remember to switch the set off before you go to sleep.

The sleep timer automatically switches the set to standby after the preset time has elapsed.



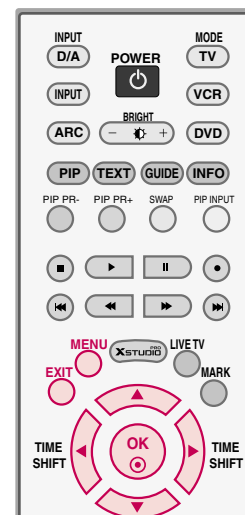
- 1 Press the **SLEEP** button repeatedly to select the number of minutes. First the **Off** option appears on the screen, followed by the following sleep timer options : 10, 20, 30, 60, 90, 120, 180, and 240 minutes.
- 2 When the number of minutes you want is displayed on the screen, press the **SLEEP**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

■ You can also set up the Sleep timer in the TIME menu.



## AUTO SLEEP

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

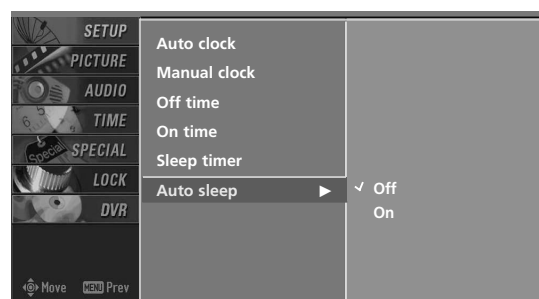


1 Press the **MENU** button and then use ▲ or ▼ button to select the **TIME** menu.

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

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

4 Press **EXIT** button to return to normal TV viewing.



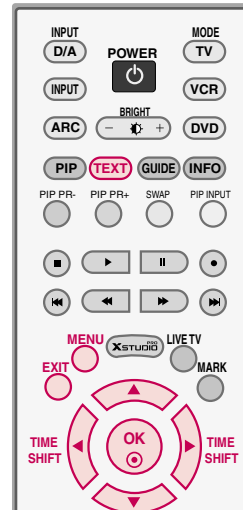
3



# TV MENU | OPTIONAL FEATURES

## SUBTITLE - *In Digital Mode only*

You can select Subtitle on or off with the **TEXT** button in DTV mode.

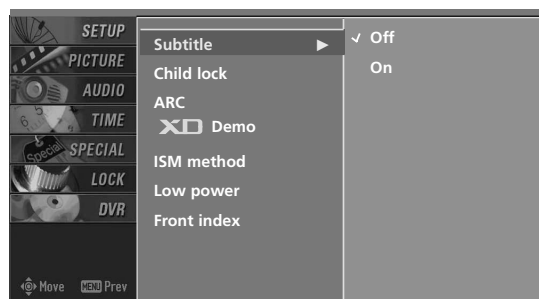
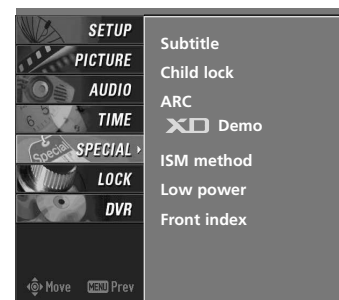


1 Press the **MENU** button and then use ▲ or ▼ button to select the **SPECIAL** menu.

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

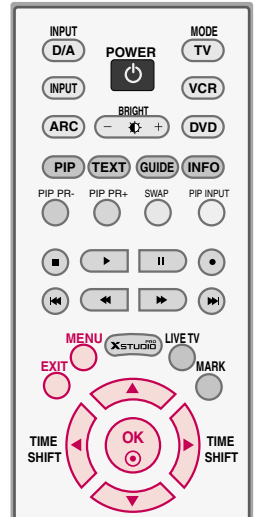
3 Press the ► button and then use ▲ or ▼ button to select **Off** or **On**.

4 Press **EXIT** button to return to normal TV viewing.

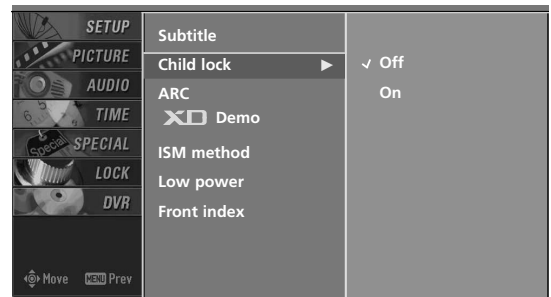
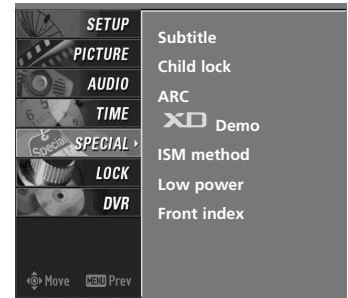


## CHILD LOCK

The TV can be set so that the remote control is needed to control it. This feature can be used to prevent unauthorized viewing.



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



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### NOTE

- ▶ With the lock on, the display 'Child lock : On' appears on the screen if any button on the front panel is pressed while viewing the TV.
- ▶ The display 'Child lock : On' will not appear on the screen if any button on the front panel is pressed while displaying the menus.

# PICTURE FORMAT

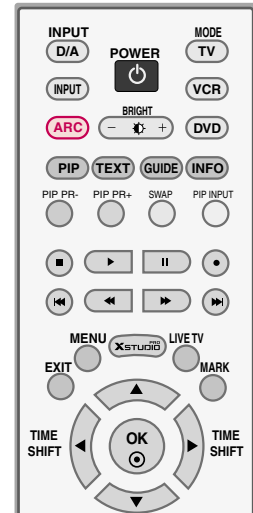
You can watch TV in various picture formats; Auto, 4:3, 16:9 (Wide), 14:9, Zoom, Cinema zoom and 1:1 Pixel.

## ! NOTE

- ▶ If a fixed image is displayed on the screen for a long time, it may become imprinted on the screen and remain visible. This phenomenon is common to all manufactures and in consequence the manufactures warranty does not cover the product bearing this phenomenon.

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

- You can also adjust **ARC** in the **SPECIAL** menu.



### Auto

Selects the proper picture proportion to match the source's image. (4:3 → 4:3, 16:9 → 16:9)

### 4:3

Choose 4:3 when you want to view a picture with an original 4:3 aspect ratio.

### 16:9

Adjust the picture horizontally, in a linear proportion to fill the entire screen.

### 14:9

The screen size is, more enlarged at both sides, to create a spectacular view.

You can move the 14:9 screen using ▲ or ▼ button. The adjustment range is -10 - +10.

### 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.

You can move the Zoom screen using ▲ or ▼ button. The adjustment range is -16 - +16.

### Cinema Zoom

Choose Cinema Zoom when you want to enlarge the picture in correct proportion. Note: When enlarging or reducing the picture, the image may become distorted.

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

The adjustment range is 1-16.

### 1:1 Pixel

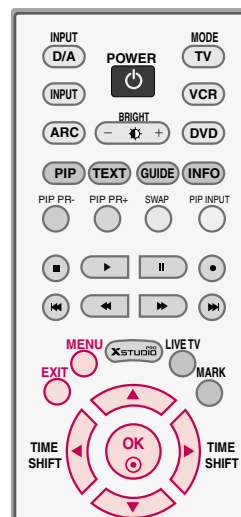
Displays the picture for 1080i or 1080p source in the original size when parts of the picture are cut off.

## ! NOTE

- ▶ In HDMI/DVI-PC and RGB-PC mode, 4:3 and 16:9 is available.
- ▶ Auto: When your TV receives the wide screen signal, it will be automatically changed to the picture format sent. (Not available in all countries)
- ▶ In HDMI/DVI(1080i, 50/60Hz or 1080p, 50/60Hz)mode, 1:1 Pixel is available.

## XD DEMO

Allows you to select your preferred picture mode after comparing the four different picture (Dynamic, Standard, Mild, and User1 (or User2)) settings.

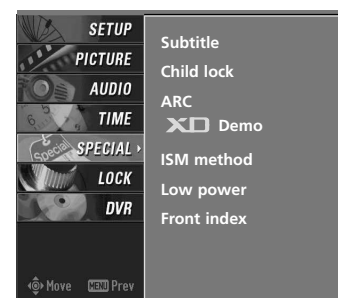


1 Press the **MENU** button and then use ▲ or ▼ button to select the **SPECIAL** menu.

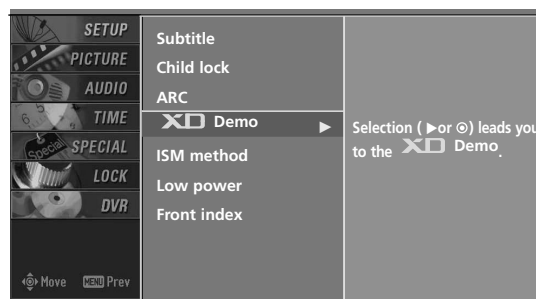
2 Press the ► button and then use ▲ or ▼ button to select **XD Demo**.

3 Press the ► button to start **XD Demo**.

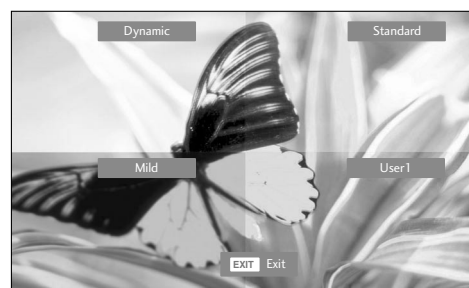
4 Press **EXIT** button to stop **XD** demo.



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# ISM (Image Sticking Minimization) METHOD

- 50PB2DR only

A frozen still picture from a PC/video game displayed on the screen for prolonged periods will result in a fixed ghost image. Use our unique method to minimize any fixed image on the screen.

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

**2** Press the **▶** button and then use **▲** or **▼** button to select **ISM method**.

**3** Press the **▶** button and then use **▲** or **▼** 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.

■ **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 once per 2 minutes.

■ **Inversion**

Inversion will automatically invert the plasma display panel color every 30 minutes.

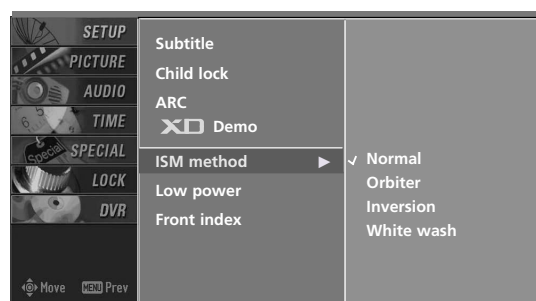
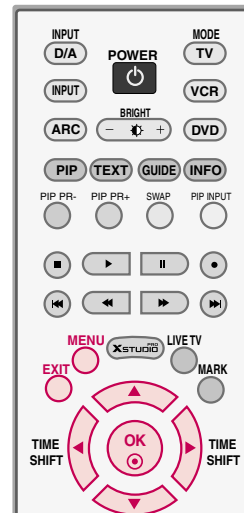
■ **White wash**

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.

**4** Press **EXIT** button to return to normal TV viewing.



**3**

## LOW POWER - 50PB2DR only

Low power reduces the plasma display power consumption.



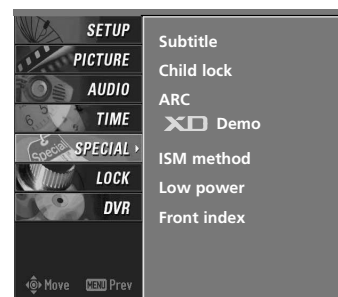
1 Press the **MENU** button and then use ▲ or ▼ button to select the **SPECIAL** menu.

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

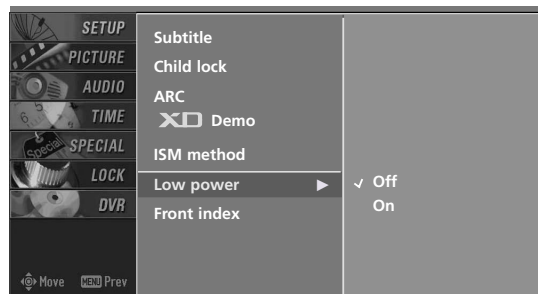
3 Press the ► button and then use ▲ or ▼ button to select **Off** or **On**.

- When you select **On**, the screen darkens.

4 Press **EXIT** button to return to normal TV viewing.



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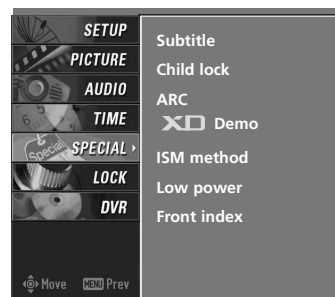
## FRONT INDEX - 50PB2DR only

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

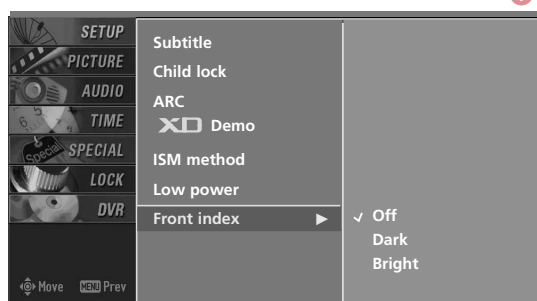
2 Press the ► button and then use ▲ or ▼ button to select **Front index**.

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

4 Press **EXIT** button to return to normal TV viewing.



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# TV MENU | LOCK ADJUSTMENT

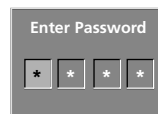
## SETTING UP YOUR PASSWORD

Set up is used to block specific programmes, ratings, and external viewing sources.

A password is required to gain access to this menu.

- 1 Press the **MENU** button and then use the **▲** or **▼** button to select the **LOCK** menu. Then, press the **▶** button.

- Enter the password as requested.
- The TV is set up with the initial password "0-0-0-0".



## LOCK SYSTEM

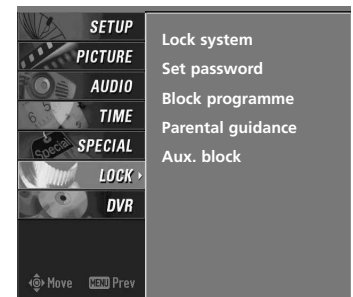
Enables or disables the blocking scheme you set up previously.

- 1 After inputting the current password, use the **▲** or **▼** button to choose **Lock system**.

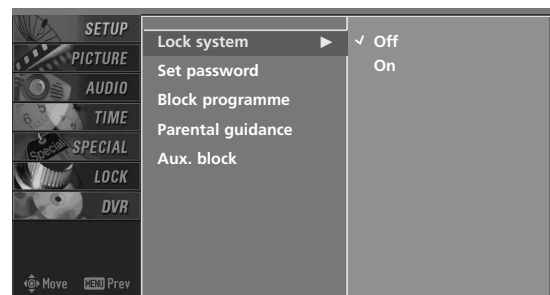
- 2 Press the **▶** button and then use the **▲** or **▼** button to select **On** or **Off**.

- When you select **On**, the Lock System is enabled.

- 3 Press **EXIT** button to return to normal TV viewing.



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# SET PASSWORD

Change the password by inputting a new password twice.

**1** After inputting the password, use the ▲ or ▼ button to choose **Set password**.

**2** Press the ► button and then choose any 4 digits for your new password next to **New**.

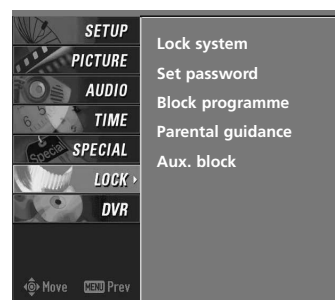
As soon as the 4 digits are entered, re-enter the same 4 digits on the **Confirm**.

The new password is memorized.

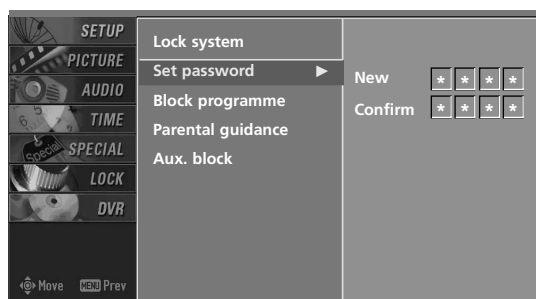
**3** Press **EXIT** button to return to normal TV viewing.

## ! NOTE

- ▶ If you ever forget your password, key in '7', '7', '7', '7' on the remote control.



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## BLOCK PROGRAMME

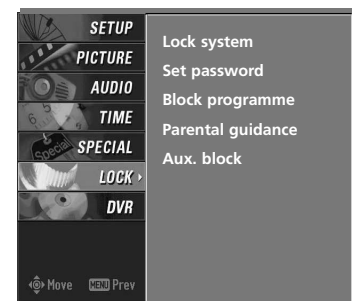
Select a programme number that you wish to block.

1 After inputting the password, use the ▲ or ▼ button to choose **Block programme**.

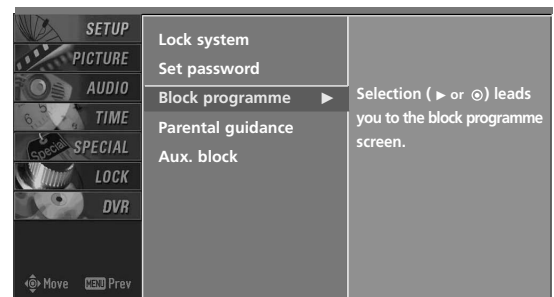
2 Press the ► button. You will now see a screen filled with programme numbers and a preview picture.

3 Use ▲ ▼ ◀ ▶ buttons to select a programme and then use the **OK** button to block or unblock it.

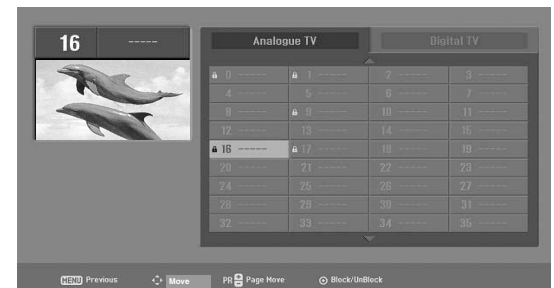
4 Press **EXIT** button to return to TV viewing or press **MENU** button to return to the previous menu.



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## PARENTAL GUIDANCE - In Digital Mode only

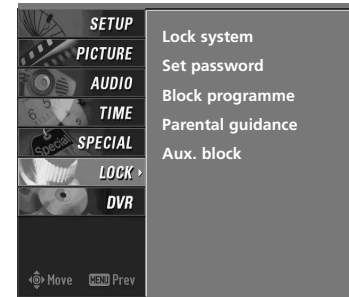
Prevents children from watching certain children's TV programs, according to the ratings limit set.

**1** After inputting the password, use the ▲ or ▼ button to choose **Parental guidance**.

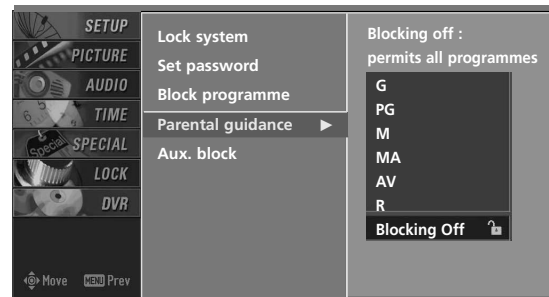
**2** Press the ► button and then use the ▲ or ▼ to select **G, PG, M, MA, AV** or **R**.

- G (General audiences)
- PG (Parental guidance suggested)
- M (Mature audiences)
- MA (Mature adult audiences)
- AV (Adult audiences)
- R (Restricted)
- Blocking Off (Permits all programmes)

**3** Press **EXIT** button to return to normal TV viewing.



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## AUX. BLOCK

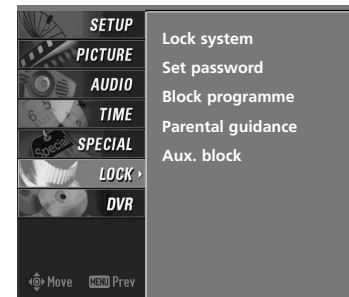
Enables you to select a source to block from the external source devices you have hooked up.

**1** After inputting the password, use the ▲ or ▼ button to choose **Aux. block**

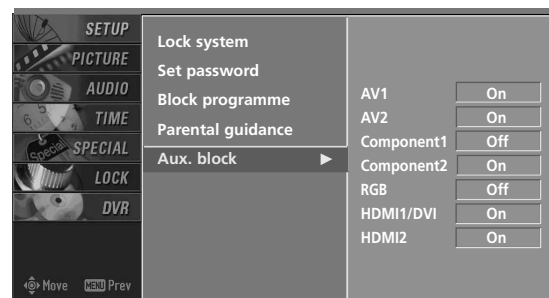
**2** Press the ► button and then use the ◀ or ▶ button to select a source.

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

**4** Press **EXIT** button to return to normal TV viewing.



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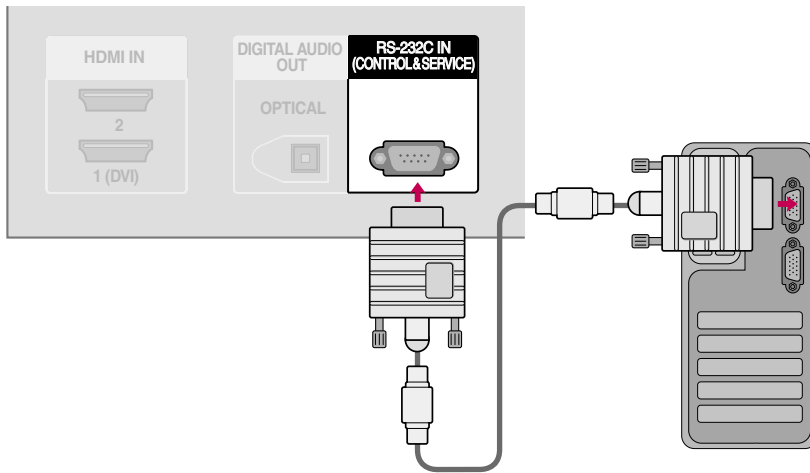
# APPENDIX

## EXTERNAL CONTROL DEVICE SETUP

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

Note: RS-232C connection cables are not supplied with the TV.

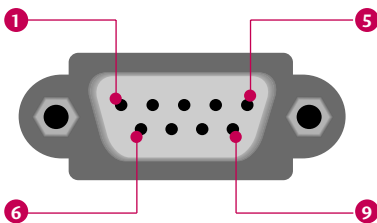
### RS-232C Setup



### Type of Connector; D-Sub 9-Pin Male

APPENDIX

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



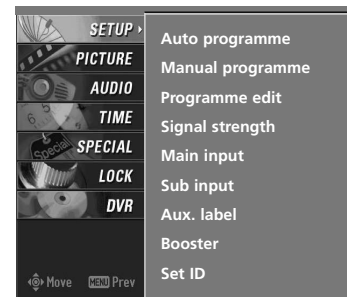
## RS-232C Configurations

7-Wire Configurations (Standard RS-232C cable)				3-Wire Configurations (Not standard)				
	PC		TV		PC		TV	
RXD	2	●	3	TXD	2	●	3	
TXD	3	●	2	RXD	3	●	2	
GND	5	●	5	GND	5	●	5	
DTR	4	●	6	DTR	4		6	
DSR	6	●	4	DSR	6		4	
RTS	7	●	8	RTS	7		7	
CTS	8	●	7	CTS	8		8	
	D-Sub 9		D-Sub 9		D-Sub 9		D-Sub 9	

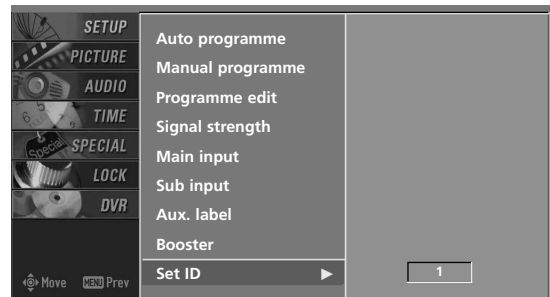
## Set ID

Use this function to specify a TV ID number.  
Refer to 'Real Data Mapping1'. See page 107.

- 1 Press the **MENU** button and then use ▲ or ▼ button to select the **SETUP** menu.
- 2 Press the ► button and then use ▲ or ▼ button to select **Set ID**.
- 3 Press the ► button and then use ▲ or ▼ button to adjust **Set ID** to choose the desired TV ID number. The adjustment range of Set ID is 1~99.
- 4 Press **EXIT** button to return to TV viewing or press **MENU** button to return to the previous menu.



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## Communication Parameters

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

## Command Reference List

	COMMAND1	COMMAND2	DATA (Hexadecimal)		COMMAND1	COMMAND2	DATA (Hexadecimal)
01. Power	k	a	0 ~ 1	17. Bass	k	s	0 ~ 64
02. Input Select	k	b	0 ~ 9	18. Balance	k	t	0 ~ 64
03. Aspect Ratio	k	c	See p.107	19. Colour Temperature	k	u	0 ~ 3
04. Screen Mute	k	d	0 ~ 1	20. Red Adjustment	k	v	0 ~ C8
05. Volume Mute	k	e	0 ~ 1	21. Green Adjustment	k	w	0 ~ C8
06. Volume Control	k	f	0 ~ 64	22. Blue Adjustment	k	\$	0 ~ C8
07. Contrast	k	g	0 ~ 64	23. PIP Input Source	k	y	0 ~ 3
08. Brightness	k	h	0 ~ 64	24. ISM Method	j	p	0 ~ 3
09. Colour	k	i	0 ~ 64	25. Low Power	j	q	0 ~ 1
10. Tint	k	j	0 ~ 64	26. Orbiter Time Setting	j	r	1 ~ FE
11. Sharpness	k	k	0 ~ 64	27. Orbiter Pixel Setting	j	s	1 ~ 3
12. OSD Select	k	l	0 ~ 1	28. Channel Tuning	m	a	See p.109
13. Remote Control/ Key Lock	k	m	0 ~ 1	29. Send IR Code	m	c	See p.110
14. PIP/POP/Twin	k	n	0 ~ 3				
15. PIP Position	k	q	0 ~ 3				
16. Treble	k	r	0 ~ 64				

Only 50PB2DR model

## Transmission / Receiving Protocol

### Transmission

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

[Command 1] : First command to control the set.(j, k, m or x)

[Command 2] : Second command to control the set.

[Set ID] : You can adjust the Set ID to choose desired TV ID number in Setup menu. Adjustment range is 1 ~ 99. When selecting Set ID '0', every connected the TV is controlled. Set ID is indicated as decimal (1 ~ 99) on menu and as Hexa decimal (0x0 ~ 0x63) on transmission/receiving protocol.

[DATA] : To transmit command data.

Transmit 'FF' data to read status of comand.

[Cr] : Carriage Return

ASCII code '0x0D'

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

### OK Acknowledgement

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

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

### Error Acknowledgement

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

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

Data1: Illegal Code

Data2: Not supported function

Data3: Wait more time

**01. Power (Command2:a)**

To control Power On/Off of the TV.

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

Data 0 : Power Off                      Data 1 : Power On

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

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

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

To select input source for the TV.

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

Data 0: Digital                      Data 5: Component 2

Data 1: Analogue                      Data 6: RGB-DTV

Data 2: AV1                      Data 7: RGB-PC

Data 3: AV2                      Data 8: HDMI1/DVI

Data 4: Component 1                      Data 9: HDMI2

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

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

To adjust the screen format.

You can also adjust the screen format using the ARC button on remote control or in the Special menu.

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

Date 0: Auto

1: 4:3

2: 16:9

3: 14:9 (-10) ~ D: 14:9 (0) ~ 17: 14:9 (10)

18: Zoom (-16) ~ 28: Zoom (0) ~ 38: Zoom (16)

39: Cinema Zoom (1) ~ 48: Cinema Zoom (16)

49: 1:1 Pixel

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

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

\* In HDMI/DVI(1080i, 50/60 or 1080p, 50/60)mode, 1:1 Pixel is available.

**04. Screen Mute (Command2:d)**

To select screen mute on/off.

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

Data 0 : Screen mute off (Picture on)

Data 1 : Screen mute on (Picture off)

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

**05. Volume Mute (Command2:e)**

To control volume mute on/off.

You can also adjust mute using the MUTE button on remote control.

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

Data 0 : Volume mute off (Volume on)

Data 1 : Volume mute on (Volume off)

*Acknowledgement* [e][ ][Set ID][ ][OK/NG][Data][x]

**06. Volume Control (Command2:f)**

To adjust volume.

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

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

Data Min : 0 ~ Max : 64

Refer to 'Real data mapping1' as shown below.

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

**07. Contrast (Command2: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 mapping1' as shown below.

*Acknowledgement* [g][ ][Set ID][ ][OK/NG][Data][x]

**08. Brightness (Command2: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(\*transmit by Hexadecimal code)

Refer to 'Real data mapping1' as shown below.

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

**09. Colour (Command2:i)**

To adjust the screen colour.

You can also adjust colour in the Picture menu.

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

Data Min : 0 ~ Max : 64

Refer to 'Real data mapping1' as shown below.

*Acknowledgement* [i][ ][Set ID][ ][OK/NG][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)

⋮

63 : Step 99 (SET ID 99)

64 : Step 100

Tint: R50 ~ G50, Balance: L50 ~ R50

## 10. Tint (Command2:j)

To adjust the screen tint (only 60Hz).

You can also adjust tint in the Picture menu.

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

Data Red : 0 ~ Green : 64

\*Refer to 'Real data mapping1'. See page 107.

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

## 11. Sharpness (Command2:k)

To adjust the screen sharpness.

You can also adjust sharpness in the Picture menu.

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

Data Min: 0 ~ Max: 64

\*Refer to 'Real data mapping1'. See page 107.

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

## 12. OSD Select (Command2:l)

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

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

Data 0: OSD off                      Data 1: OSD on

*Acknowledgement* [l][ ][Set ID][ ][OK/NG][Data][x]

\* When setting "OSD - Off", every OSD doesn't display on screen.

## 13. Remote Control Lock Mode (Command2:m)

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

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

Data 0: Lock off                      Data 1: Lock on

*Acknowledgement* [m][ ][Set ID][ ][OK/NG][Data][x]

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

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

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

Data 0: PIP off                      2: POP  
1: PIP                                      3: Twin picture

*Acknowledgement* [n][ ][Set ID][ ][OK/NG][Data][x]

## 15. PIP Position (Command2:q)

To select sub picture position for PIP.

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

Data 0: Right down on screen

Data 1: Right up on screen

Data 2: Left up on screen

Data 3: Left down on screen

*Acknowledgement* [q][ ][Set ID][ ][OK/NG][Data][x]

## 16. Treble (Command2:r)

To adjust treble.

You can also adjust treble in the Audio menu.

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

Data Min: 0 ~ Max: 64(\*transmit by Hexadecimal code)

\*Refer to 'Real data mapping1'. See page 107.

*Acknowledgement* [r][ ][Set ID][ ][OK/NG][Data][x]

## 17. Bass (Command2:s)

To adjust bass.

You can also adjust bass in the Audio menu.

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

Data Min: 0 ~ Max: 64(\*transmit by Hexadecimal code)

\*Refer to 'Real data mapping1'. See page 107.

*Acknowledgement* [s][ ][Set ID][ ][OK/NG][Data][x]

## 18. Balance (Command2:t)

To adjust balance.

You can also adjust balance in the Audio menu.

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

Data Min: 0 ~ Max: 64(\*transmit by Hexadecimal code)

\*Refer to 'Real data mapping1'. See page 107.

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

## 19. Colour Temperature (Command2:u)

To adjust colour temperature.

You can also adjust colour temperature in the Picture menu.

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

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

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

## 20. Red Adjustment(Command2:v)

To adjust red in colour temperature

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

Data Min:0 ~ Max:C8

\*Refer to "Real data mapping 2". See page 109.

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



**21. Green Adjustment (Command:w)**

To adjust green in colour temperature.

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

Data Min:0 ~ Max:C8

\*Refer to "Real data mapping 2" as shown below

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

**22. Blue Adjustment (Command:\$)**

To adjust blue in colour temperature.

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

Data Min:0 ~ Max:C8

\*Refer to "Real data mapping 2" as shown below

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

\*Real data mapping 2

0 : -20

5 : -19

A : -18

⋮

5F: -1

64: 0

69: +1

⋮

C3 : +19

C8 : +20

**23. PIP Input Select (Command2:y)**

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

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

Data 0: Digital                      Data 2: AV1

Data 1: Analogue                    Data 3: AV2

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

**24. ISM Method (Command2:p)**

(Only 50PB2DR model)

To control the ISM method. You can also adjust ISM method in Special menu.

*Transmission* [j][p][ ][Set ID][ ][Data][Cr]

Data 0: Normal                      Data 1: Orbiter

Data 2: Inversion                  Data 3: White Wash

*Acknowledgement* [p][ ][Set ID][ ][OK/NG][Data][x]

**25. Low Power (Command2:q)**

(Only 50PB2DR model)

To reduce the power consumption of the set. You can also adjust Low power in Special menu.

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

Data 0: low power off

1: low power on

*Acknowledgement* [q][ ][Set ID][ ][OK/NG][Data][x]

**26. Orbiter Time Setting (Command2:r)**

(Only 50PB2DR model)

To adjust orbiter operation time term.

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

Data Min: 1 ~ Max: FE(\*transmit by Hexadecimal code),

Unit: Second

\*Refer to 'Real data mapping1'. See page 107.

*Acknowledgement* [r][ ][Set ID][ ][OK/NG][Data][x]

**27. Orbiter Pixel Setting (Command2:s)**

(Only 50PB2DR model)

To adjust pixel number in orbiter function.

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

Data Min: 1 ~ Max: 3

\*Refer to 'Real data mapping1'. See page 107.

*Acknowledgement* [s][ ][Set ID][ ][OK/NG][Data][x]

**28. Channel Tuning (Command: m a)**

To tune channel to following programme number

*Transmission* [m][a][ ][Set ID][ ][Data0][ ][Data1][ ][Data2][Cr]

Data 0: High channel data

Data 1: Low channel data

Data 2: 00: Analogue TV Main

          : 01: Analogue TV Sub

          : 10: Digital Main

          : 11: Digital Sub

ex) Analogue TV Main: ma 0 00 01 00

      Digital Sub: ma 0 00 0A 11

\* Channel Data Range:

Analogue TV: 0 ~ 63

Digital TV: 0 ~ 3E7

## 29. Send IR Code (Command: m c)

To send IR remote key code

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

Data Key code: Refer to page 112.

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

\* In this function, It's unavailable to use the IR Code "08 (Power)" and C4 (Power On)".

# IR CODES

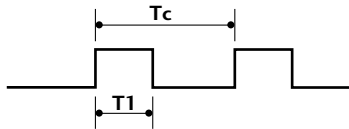
## 1. How to Connect

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

## 2. Remote Control IR Codes

### ■ Output waveform

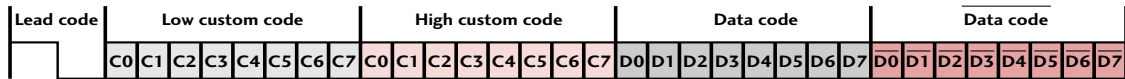
Single pulse, modulated with 37.917KHz signal at 455KHz



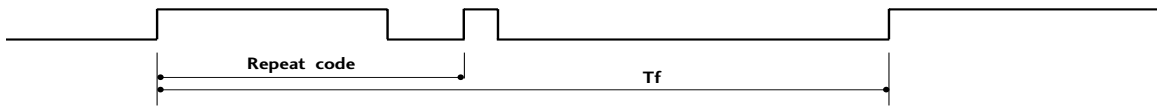
Carrier frequency  
 $FCAR = 1/TC = fOSC/12$   
 Duty ratio =  $T1/TC = 1/3$

### ■ Configuration of frame

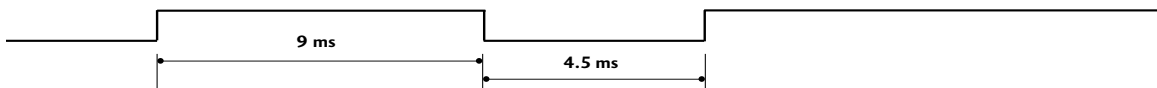
1st frame



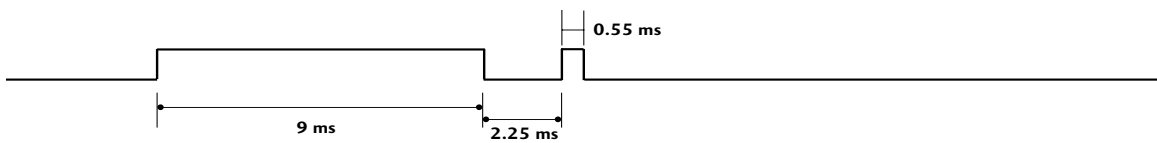
Repeat frame



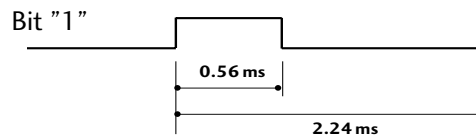
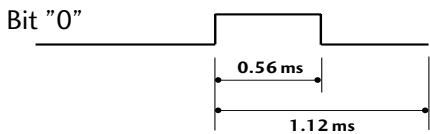
### ■ Lead code



### ■ Repeat code

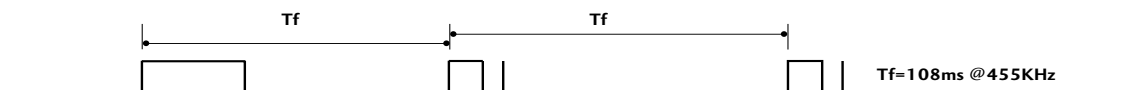


### ■ Bit description





### ■ Frame interval: Tf

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



# APPENDIX

Code (Hexa)	Function	Note	Code (Hexa)	Function	Note
50	D/A INPUT	Remote control Button	D6	TV	Discrete IR Code
0B	INPUT	Remote control Button			(TV Input Selection)
08	POWER	Remote control Button (Power On/Off)	5A	AV1	Discrete IR Code
79	ARC	Remote control Button			(AV1 Input Selection)
0E	SLEEP	Remote control Button	D0	AV2	Discrete IR Code
10-19	Number Key 0-9	Remote control Button			(AV2 Input Selection)
1A	Q.VIEW	Remote control Button	BF	COMPONENT1	Discrete IR Code
09	MUTE	Remote control Button			(Component1 Input Selection)
02	VOL +	Remote control Button	D4	COMPONENT2	Discrete IR Code
03	VOL -	Remote control Button			(Component2 Input Selection)
00	PR +	Remote control Button	D5	RGB-PC	Discrete IR Code
01	PR -	Remote control Button			(RGB-PC Input Selection)
1E	FAV	Remote control Button	D7	RGB-DTV	Discrete IR Code
40	▲	Remote control Button			(RGB-DTV Input Selection)
41	▼	Remote control Button	C6	HDMI1/DVI	Discrete IR Code
07	◀	Remote control Button			(HDMI/DVI Input Selection)
06	▶	Remote control Button	CC	HDMI2	Discrete IR Code
44	OK	Remote control Button			(HDMI2 Input Selection)
43	MENU	Remote control Button	76	Ratio 4:3	Discrete IR Code
5B	EXIT	Remote control Button			(Only 4:3 Mode)
60	PIP	Remote control Button	77	Ratio 16:9	Discrete IR Code
72	PIP PR -	Remote control Button			(Only 16:9 Mode)
71	PIP PR +	Remote control Button	AF	Ratio Zoom	Discrete IR Code
63	SWAP	Remote control Button			(Only Zoom Mode)
61	PIP INPUT	Remote control Button	C4	POWER ON	Discrete IR Code
92	APM	Remote control Button			(Only Power On)
A9	GUIDE	Remote control Button	C5	POWER OFF	Discrete IR Code
64	SIZE	Remote control Button			(Only Power Off)
70	INDEX	Remote control Button	CB	ADJUST	Remote control Button
26	TIME	Remote control Button	BO	PLAY	Remote control Button
2A	REVEAL	Remote control Button	BA	PAUSE	Remote control Button
20	TEXT	Remote control Button	B1	STOP	Remote control Button
72	RED	Remote control Button	BD	REC	Remote control Button
71	GREEN	Remote control Button	8F	REW	Remote control Button
63	YELLOW	Remote control Button	8E	FF	Remote control Button
61	BLUE	Remote control Button	7D	MARK	Remote control Button
0A	I/II	Remote control Button	7C	X-STUDIO	Remote control Button
AA	INFO	Remote control Button	9E	LIVE TV	Remote control Button
E1	- 	Remote control Button	B2	GO TO PREV	Remote control Button
E0	 +	Remote control Button	B3	GO TO NEXT	Remote control Button
53	LIST	Remote control Button			

# PROGRAMMING THE REMOTE CONTROL

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

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

## Programming a code into a remote mode

- 1** To find out whether your remote can operate the device without programming, turn on the device such as a VCR and press the corresponding mode button on the remote.  
After that, press the **POWER** button. If the device is turned off then it responds properly and the remote need not to be programmed. If not, the remote should be programmed to operate the device. The programming procedures are explained below.
- 2** Press the **MENU** and **MUTE** button continuously at the same time for 2 seconds, the current selected device button will be illuminated.  
If you don't press any button for 20 seconds, the light on the mode button will be turned off. In that case, you have to repeat from step 2.
- 3** Enter code numbers using the number button on the remote by referring the code table on the following pages. When pressing the button, the light blinks. If the device turned off, the programming is successful.
- 4** Press the **MENU** button to store the code. After blinking twice, this code is stored.
- 5** Test the remote functions to see if the device responds properly. If not, repeat from step 2.

## PROGRAMMING CODES

### VCRs

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

## VCRs

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

## DVD

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

## TROUBLESHOOTING CHECKLIST

The operation does not work normally.	
The remote control doesn't work	<ul style="list-style-type: none"> <li>■ Check to see if there is any object between the product and the remote control causing obstruction. Ensure you are pointing the remote control directly at the TV.</li> <li>■ Ensure that the batteries are installed with correct polarity (+ to +, - to -).</li> <li>■ Ensure that the correct remote operating mode is set: TV, VCR etc.</li> <li>■ Install new batteries.</li> </ul>
Power is suddenly turned off	<ul style="list-style-type: none"> <li>■ Is the sleep timer set?</li> <li>■ Check the power control settings. Power interrupted</li> <li>■ No broadcast on station tuned with Auto off activated.</li> </ul>

The operation does not work normally.	
No picture & No sound	<ul style="list-style-type: none"> <li>■ Check whether the product is turned on.</li> <li>■ Try another channel. The problem may be with the broadcast.</li> <li>■ Is the power cord inserted into wall power outlet?</li> <li>■ Check your antenna direction and/or location.</li> <li>■ Test the wall power outlet, plug another product's power cord into the outlet where the product's power cord was plugged in.</li> </ul>
Picture appears slowly after switching on	<ul style="list-style-type: none"> <li>■ This is normal, the image is muted during the product startup process. Please contact your service center, if the picture has not appeared after five minutes.</li> </ul>
No or poor color or poor picture	<ul style="list-style-type: none"> <li>■ Adjust Color in menu option.</li> <li>■ Keep a sufficient distance between the product and the VCR.</li> <li>■ Try another channel. The problem may be with the broadcast.</li> <li>■ Are the video cables installed properly?</li> <li>■ Activate any function to restore the brightness of the picture.</li> </ul>
Horizontal/vertical bars or picture shaking	<ul style="list-style-type: none"> <li>■ Check for local interference such as an electrical appliance or power tool.</li> </ul>
Poor reception on some channels	<ul style="list-style-type: none"> <li>■ Station or cable product experiencing problems, tune to another station.</li> </ul>
Lines or streaks in pictures	<ul style="list-style-type: none"> <li>■ Station signal is weak, reorient antenna to receive weaker station.</li> <li>■ Check for sources of possible interference.</li> <li>■ Check antenna (Change the direction of the antenna).</li> </ul>



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

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

## MAINTENANCE

Early malfunctions can be prevented. Careful and regular cleaning can extend the amount of time you can enjoy your new TV.

**Caution:** Be sure to turn the power off and unplug the power cord before you begin any cleaning.

### Cleaning the Screen

- 1 Here's a great way to keep the dust off your screen for a while. Wet a soft cloth in a mixture of lukewarm water and a little fabric softener or dish washing detergent. Wring the cloth until it's almost dry, and then use it to wipe the screen.
- 2 Make sure the excess water is off the screen, and then let it air-dry before you turn on your TV.

### Cleaning the Cabinet

- To remove dirt or dust, wipe the cabinet with a soft, dry, lint-free cloth.
- Please be sure not to use a wet cloth.

### Extended Absence

#### CAUTION

- ▶ If you expect to leave your TV dormant for a long time (such as a vacation), it's a good idea to unplug the power cord to protect against possible damage from lightning or power surges.

# PRODUCT SPECIFICATIONS

MODELS		50PB2DR (50PB2DR-AC)	42LC2DR (42LC2DR-AC)
Dimensions (Width x Height x Depth)	Including stand	54.4 x 35.9x 14.8 inches 1382.0 x 913.0 x 377.0mm	41.5 x 32.0 x 11.9 inches 1054.0 x 813.0 x 302.0 mm
	Excluding stand	54.4 x 33.4 x 4.9 inches 1382.0 x 848.5 x 125.0 mm	41.5 x 29.4x 5.4 inches 1054.0 x 746.0 x 136.8 mm
Weight	including stand	134.59 pounds / 61.05kg	90.95 pounds / 41.2 kg
	excluding stand	105.93 pounds / 48.05 kg	76.4 pounds / 34.6 kg
Power requirement Television System Program Coverage External Antenna Impedance		AC100-240V ~ 50/60Hz PAL B/G, DVB-T VHF 0-12, UHF 20-75, CATV 02-44, DTV 06-12, 27-69 75 ohm	
Environment condition	Operating Temperature Operating Humidity	32 ~ 104°F (0 ~ 40°C) Less than 80%	
	Storage Temperature Storage Humidity	-4 ~ 140°F (-20 ~ 60°C) Less than 85%	

MODELS		42LB2DE (42LB2DE-AA)	47LB2DE (47LB2DE-AA)
Dimensions (Width x Height x Depth)	Including stand	46.3 x 30.2x 11.8 inches 1175.0 x 768.0 x 300.0mm	50.0 x 32.6 x 12.4 inches 1280.0 x 828.0 x 315.0 mm
	Excluding stand	46.3 x 26.4 x 5.7 inches 1175.0 x 670.0 x 143.8 mm	50.0 x 28.3x 5.3 inches 1280.0 x 718.0 x 135.0 mm
Weight	including stand	96.3 pounds / 43.7kg	129.9 pounds / 58.9 kg
	excluding stand	76.9 pounds / 34.9 kg	104.5 pounds / 47.4 kg
Power requirement Television System Program Coverage External Antenna Impedance		AC100-240V ~ 50/60Hz PAL B/G, DVB-T VHF 0-12, UHF 20-75, CATV 02-44, DTV 06-12, 27-69 75 ohm	
Environment condition	Operating Temperature Operating Humidity	32 ~ 104°F (0 ~ 40°C) Less than 80%	
	Storage Temperature Storage Humidity	-4 ~ 140°F (-20 ~ 60°C) Less than 85%	

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



