

LG Electronics Inc.

PLASMA TV | OWNER'S MANUAL



PLASMA TV OWNER'S MANUAL

PLASMA TV MODEL
50PC3D

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.



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Printed in Korea



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LG's own special digital image generator. It consists of full digital image processor, APM mode & 6 different main picture quality factors.

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INTRODUCTION

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.

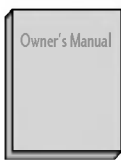
Cooling Fan Noise

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.

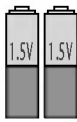
The fan noise doesn't have any negative effect on the Plasma TV's efficiency or reliability. The noise from these fans is normal during the operation of this product. We hope you understand that a certain level of noise from the cooling fans is acceptable and is not sufficient cause for the Plasma TV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

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.



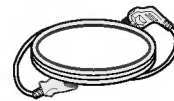
Owner's Manual



Batteries



Remote Control



Power Cord



2-Wall brackets



2-eye-bolts

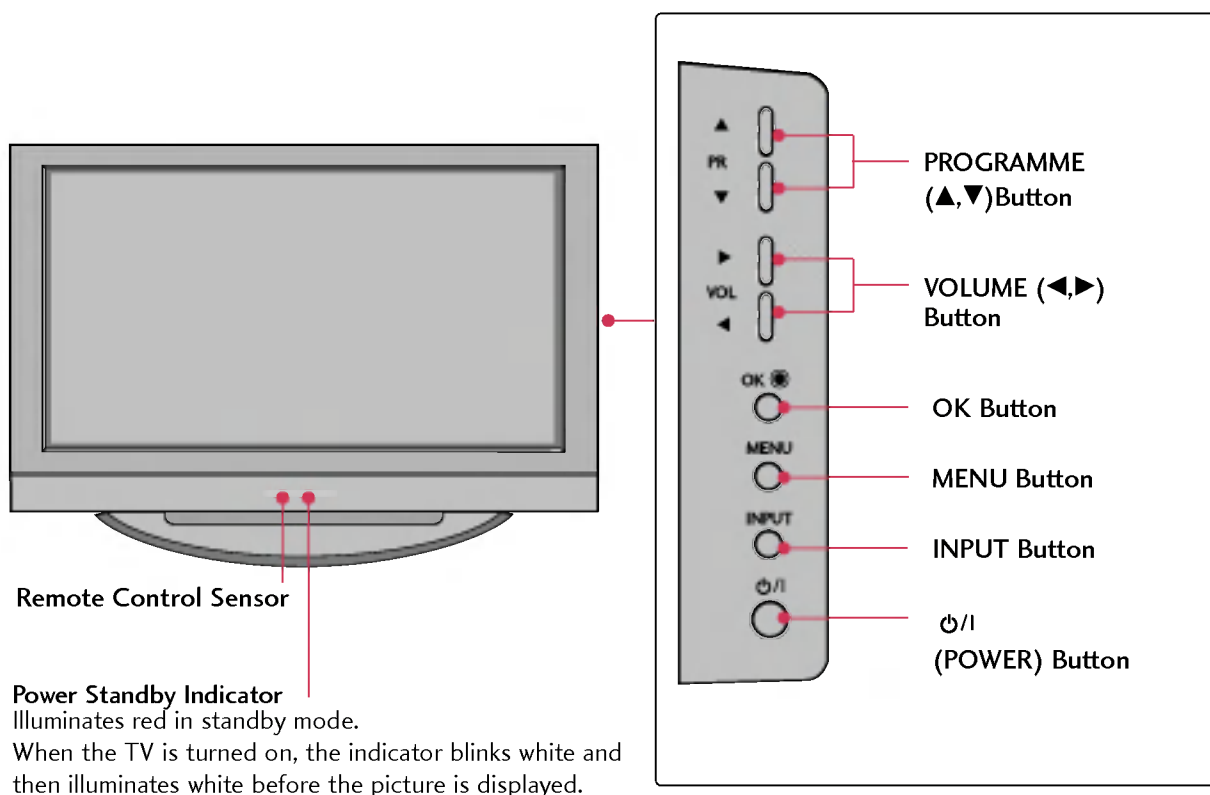
INTRODUCTION

CONTROLS

- Here shown may be somewhat different from your TV.

Front Panel Controls

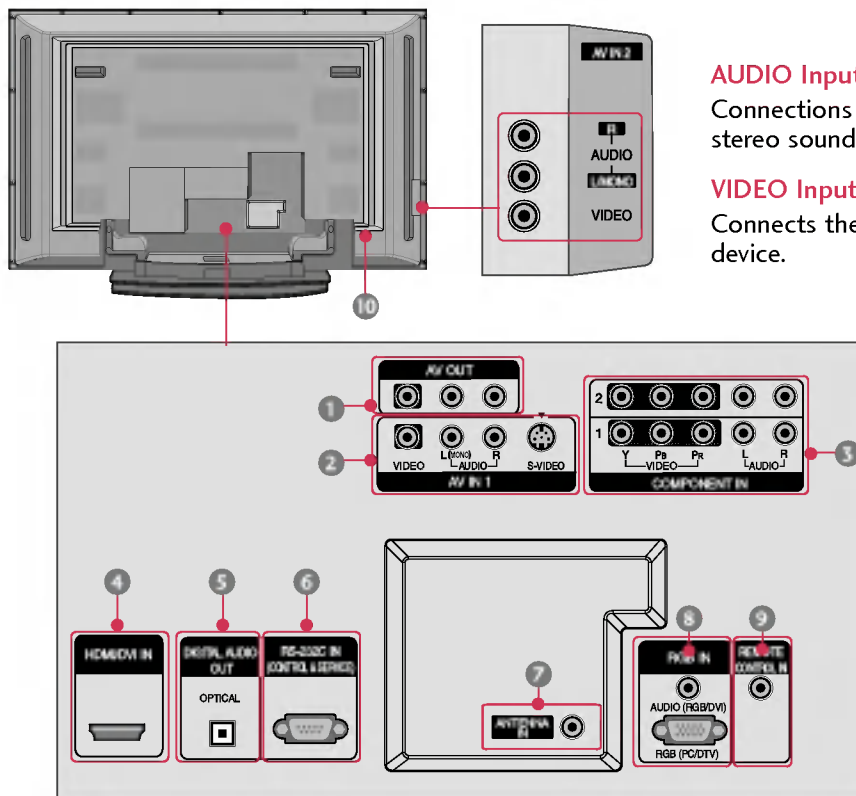
INTRODUCTION



CONNECTION OPTIONS

- Here 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/DVI 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 settop 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.

INTRODUCTION

REMOTE CONTROL KEY FUNCTIONS

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

D/A INPUT (Digital TV / Analogue TV) Selects digital or analogue mode.

INPUT External input modes rotate in regular sequence: Digital, Analogue, AV1-2, Component 1-2, RGB-DTV (or RGB-PC), HDMI/DVI.

POWER Switches the set between ON and STANDBY.

ARC Selects your desired picture format. ► **p.66**

- ✱ **+/-**
 - Adjusts brightness on screen. ► **p.43**
 - It returns to the default settings brightness by changing mode source.

VCR/DVD control buttons Control some video cassette recorders or DVD players ("RECORD" button is not available for DVD player).

OK Accepts your selection or displays the current mode.

THUMBSTICK (Up/Down/Left Right)

- Adjusts menu settings.
- Selects menu item.

VOLUME +/- Increase/decrease the sound level.

Q.VIEW Returns to the previously viewed programme.

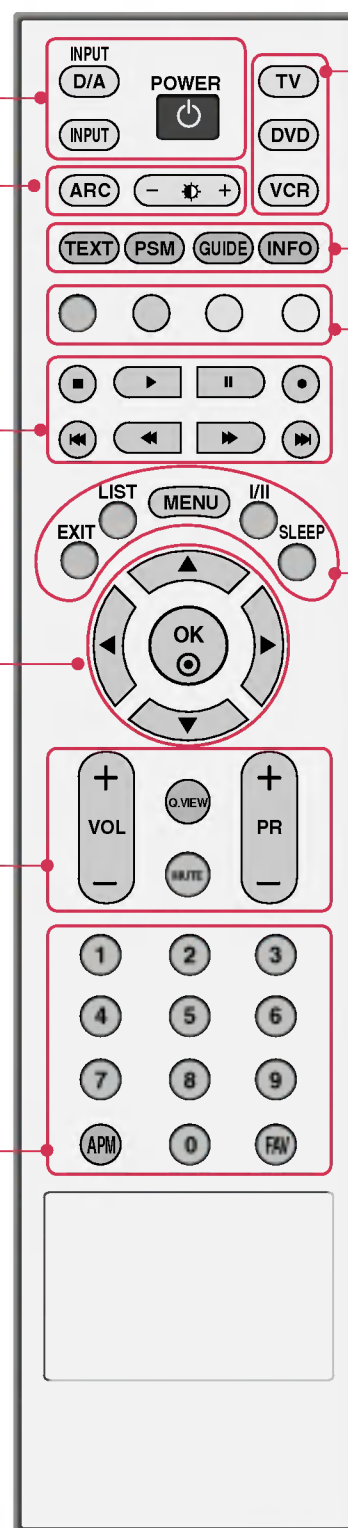
MUTE Switches the sound on or off.

Programme +/- Selects a programme.

NUMBER button

APM Concurrently, compare with the Dynamic, Standard, Mild, User1 (or User2) on the screen. ► **p.43**

FAV (FAVOURITE) Displays the selected favourite programmes.



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

TEXT Select the subtitle on/off. ► **p.64**

PSM Adjust the factory preset picture according to the room. ► **p.42**

GUIDE Shows a programme schedule. (In Digital mode only) ► **p.30**

INFO Shows the present screen information. (In Digital mode only)

COLOURE Button They are used as per the indications or functions displayed on the TV screen in the case of EPG and programme edit.

EXIT Returns to TV viewing from any menu.

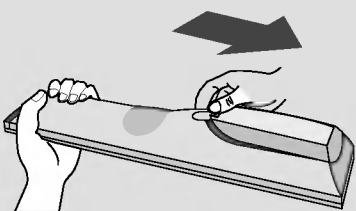
LIST Displays the programme table. ► **p.39**

MENU Selects a menu.

I/II Selects the sound output or the audio mode. ► **p.57**

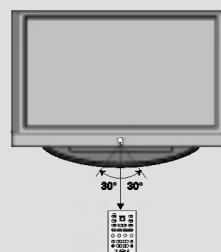
SLEEP Sets the sleep timer. ► **p.61**

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

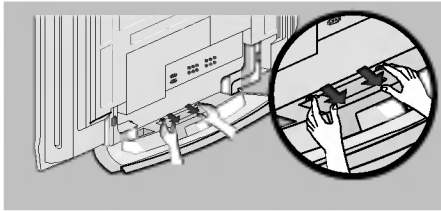


- Use a remote control up to 7 meters distance and 30 degree (left/right) within the receiving unit scope.
- Dispose of used batteries in a recycle bin to preserve environment.

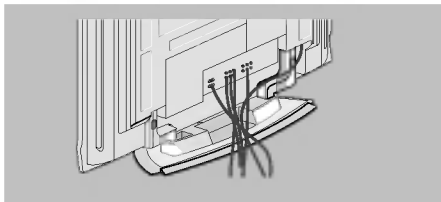
INSTALLATION

WIRE ARRANGEMENT

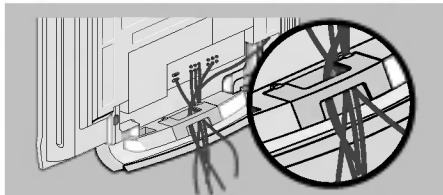
- 1 Hold the **CABLE MANAGEMENT** with both hands and pull it backward as shown.



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



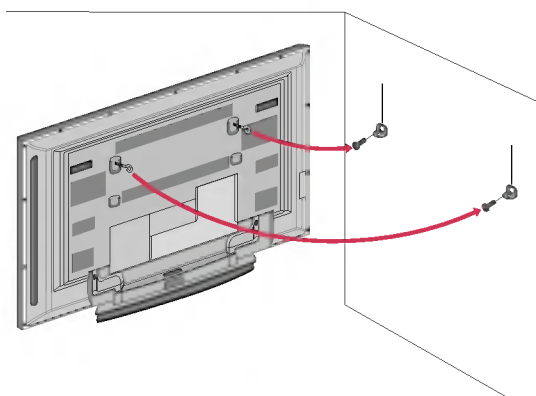
- 3 Install the **CABLE MANAGEMENT** as shown.



ATTACHING THE TV TO A WALL

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.



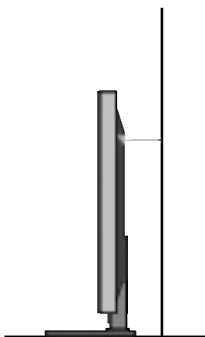
- Insert the eye-bolts (or TV brackets and bolts) to tighten the product to the wall as shown in the picture.

* 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.



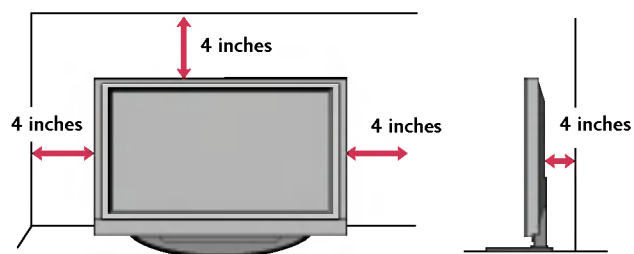
- Use a sturdy rope (must be purchased separately) to secure the TV. It is safer to tie the rope so it runs horizontally between the wall and the TV.

INSTALLATION

DESKTOP PEDESTAL INSTALLATION

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

INSTALLATION



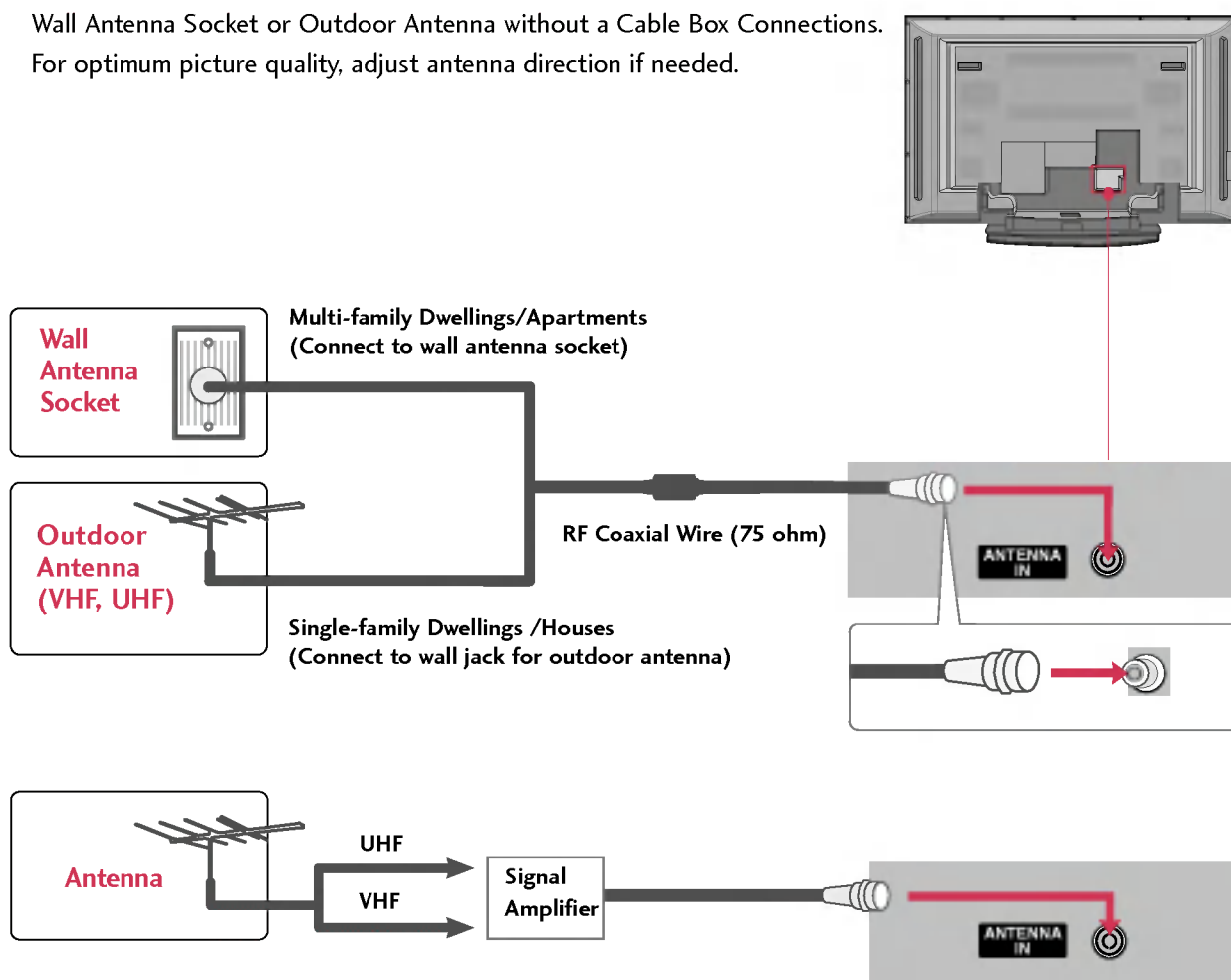
⚠ CAUTION

- Ensure adequate ventilation by following the clearance recommendations.

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, cable, and digital programme scans are complete.

CONNECTIONS & SETUP

HDSTB SETUP

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

This TV supports HDCP (High-bandwidth Digital Contents Protection) protocol for Digital Contents (480p,720p,1080i).

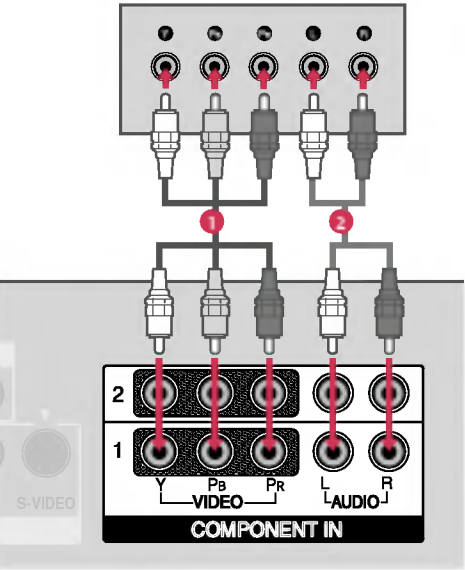
When connecting Component cable

1. How to connect

- 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)
- 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 manu-al for the digital set-top box.)
- Select **Component 1** input source with 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
480p	Yes	Yes
576i	Yes	No
576p	Yes	Yes
720p	Yes	Yes
1080i	Yes	Yes

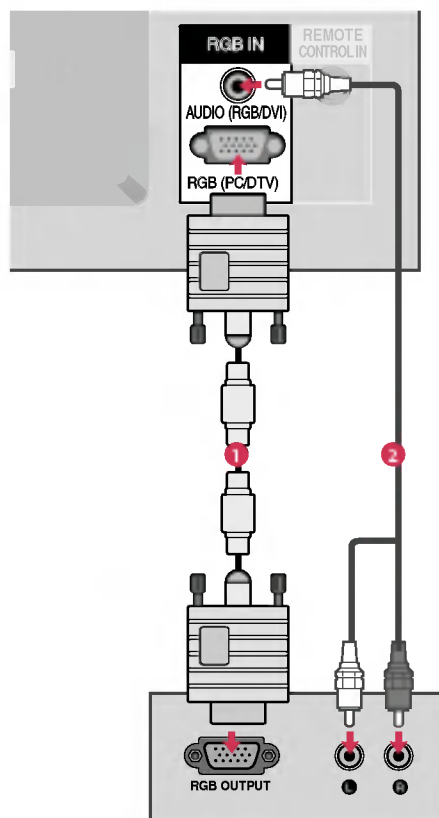
When connecting D-sub 15pin cable

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 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 with using the **INPUT** button on the remote control.



When connecting HDMI cable

1. How to connect

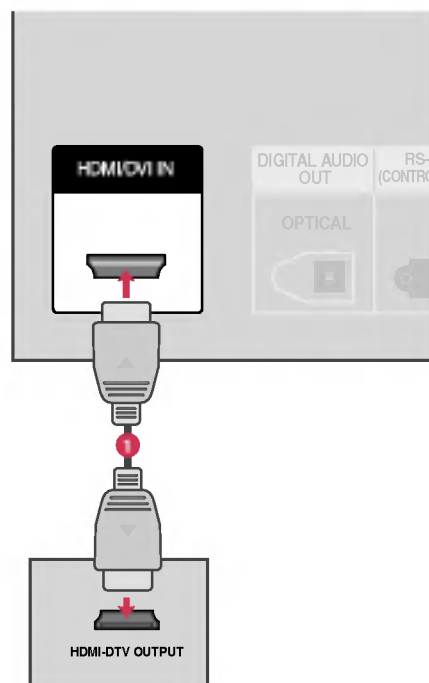
- 1 Connect the digital set-top box to **HDMI/DVI IN** jack on the set.
- 2 No separated audio connection is necessary.

2. How to use

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

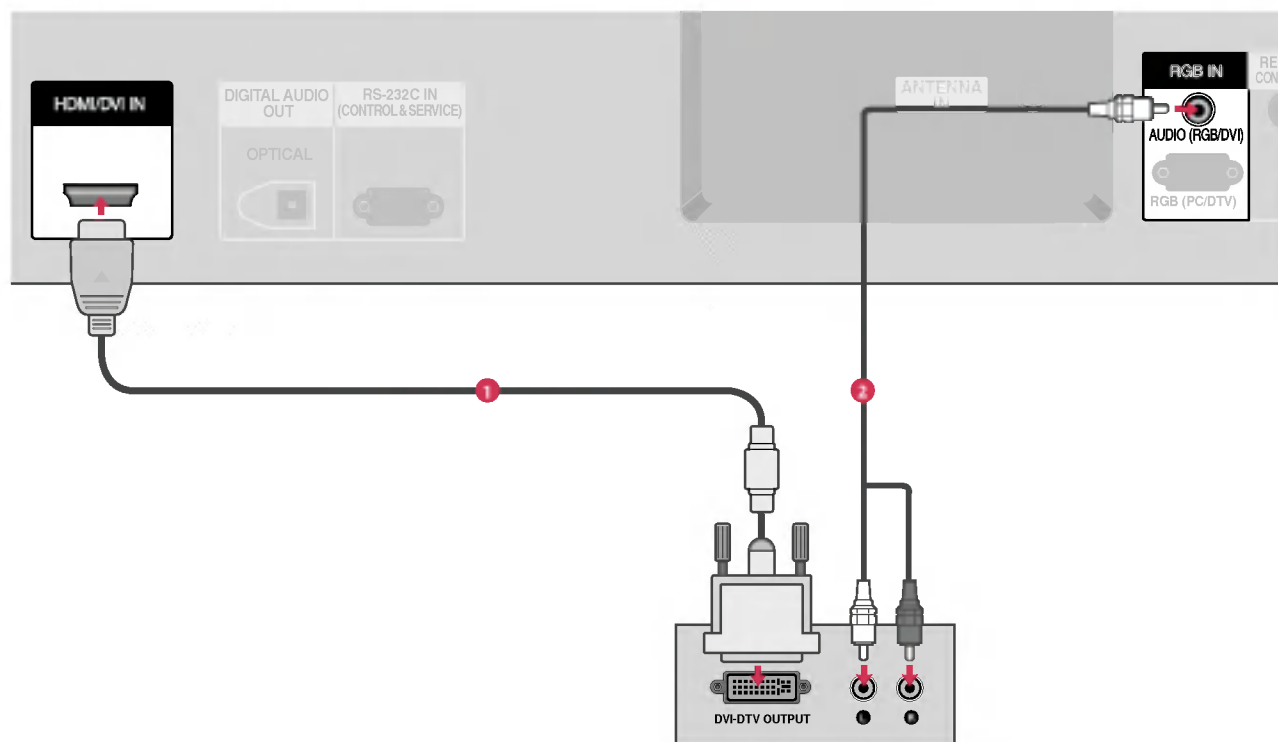
! NOTE

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

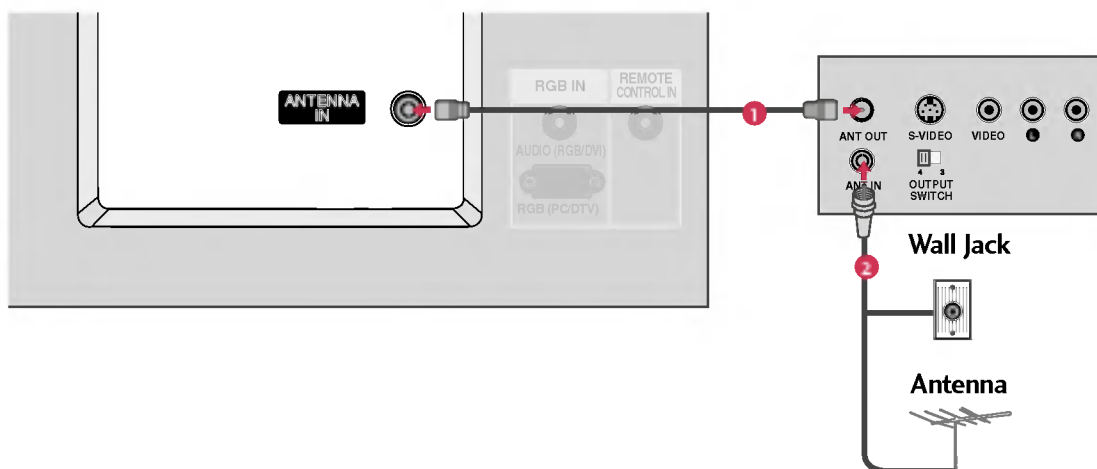
2. How to use

- Turn on the digital set-top box. (Refer to the owner's manual for the digital set-top box.)
- Select **HDMI/DVI** input source with 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

- Set VCR output switch to 3 or 4 and then tune TV to the same programme number.
- Insert a video tape into the VCR and press PLAY on the VCR. (Refer to the VCR owner's manual.)

CONNECTIONS & SETUP

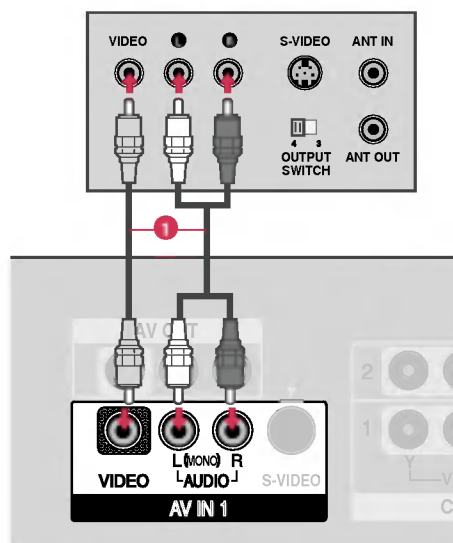
When connecting with a RCA cable

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 with 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

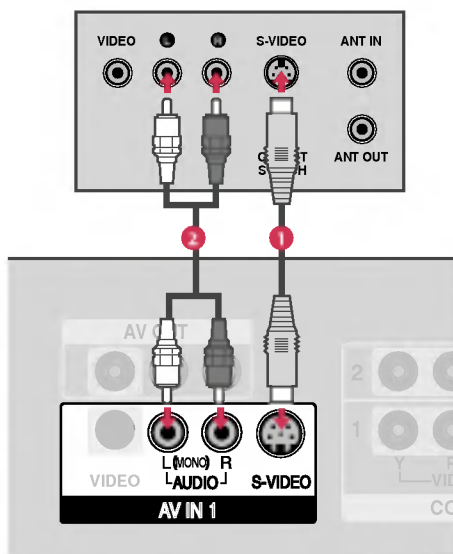
- 1 Connect the S-VIDEO output of the VCR to the **S-VIDEO** input on the set. The picture quality is improved; compared to normal composite (RCA cable) input.
- 2 Connect the audio outputs of the VCR to the **AUDIO** input jacks on the set.

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 with 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.

AV OUT SETUP

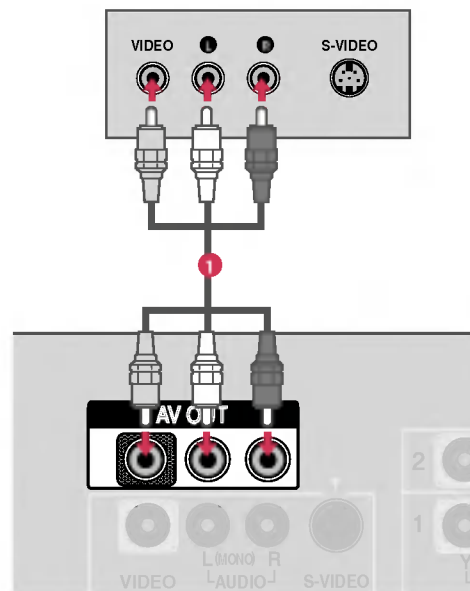
The TV has a special signal output capability which allows you to hook up the second TV or monitor.

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

- ▶ Digital, Component1-2, RGB-PC/RGB-DTV, HDMI/DVI 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

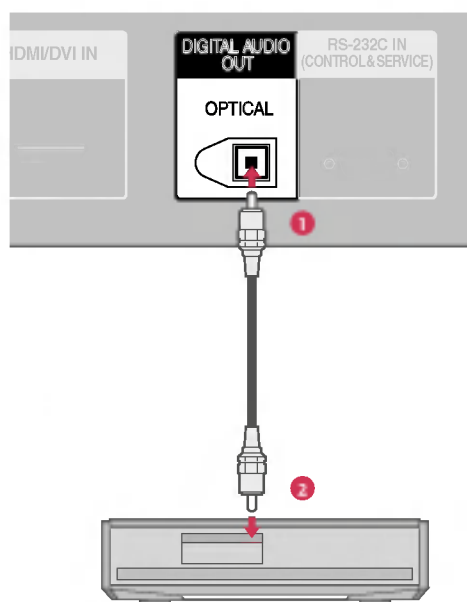
- 1 Connect one end of an optical cable to the TV Digital Audio (Optical) Output port.
- 2 Connect the other end of the optical cable to the digital audio (optical) input on the audio equipment.
- 3 Set the "TV Speaker option - Off" in the AUDIO menu. (► p.56). See the external audio equipment instruction manual for operation.

NOTE

- When connecting with external audio equipments, such as amplifiers or speakers, please turn the TV speakers off. (► p.56)

CAUTION

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



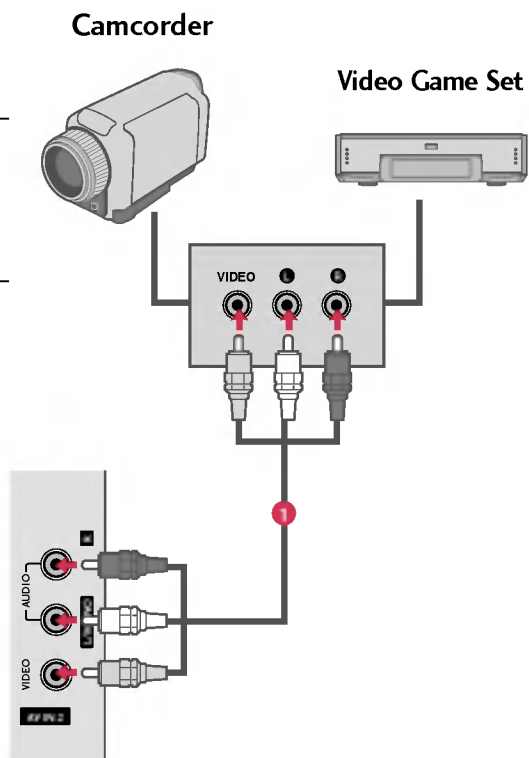
EXTERNAL A/V SOURCE SETUP

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



CONNECTIONS & SETUP

DVD SETUP

When connecting Component cable

1. How to connect

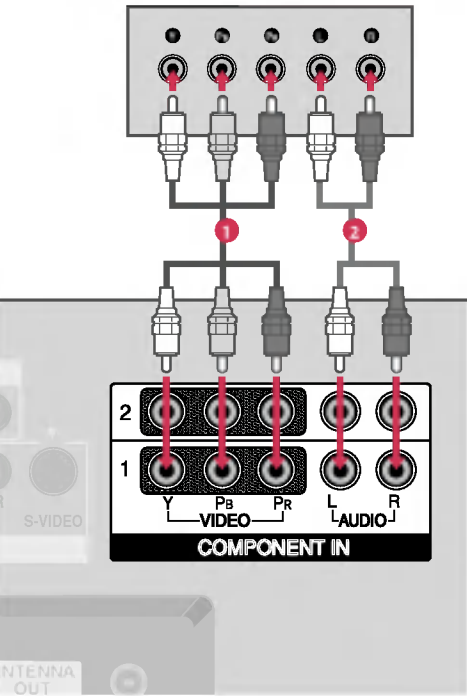
- 1

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 with 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

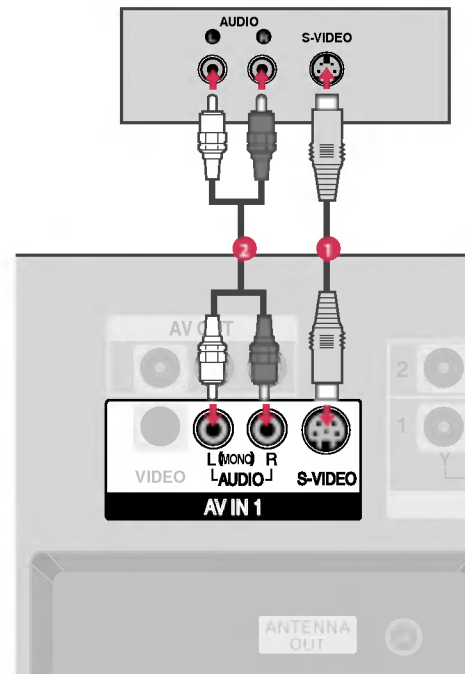
When connecting with an S-Video cable

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 with 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

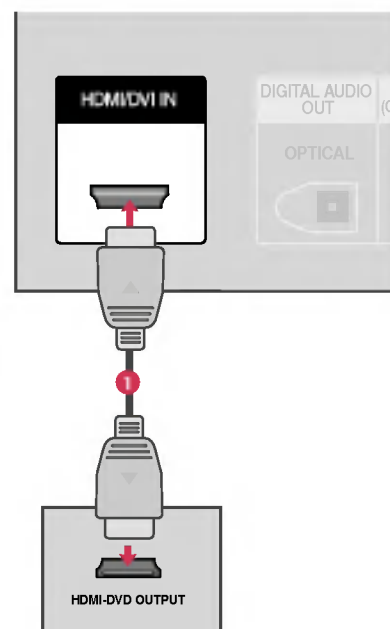
- 1 Connect the HDMI output of the DVD to the **HDMI/DVI IN** jack on the set.
- 2 No separated audio connection is necessary.

2. How to use

- Select **HDMI/DVI** 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

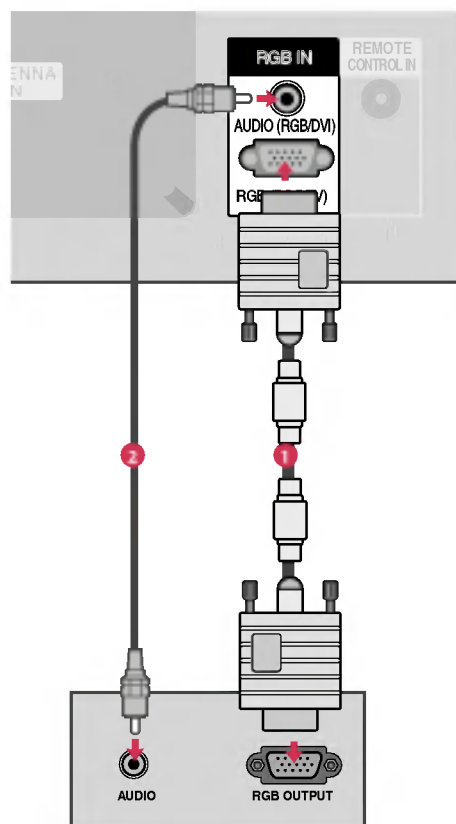
- 1 Connect the RGB output of the PC to the **RGB (PC/DTV)** jack on the set.
- 2 Connect the PC audio output to the **AUDIO (RGB/DVI)** jack on the set.

2. How to use

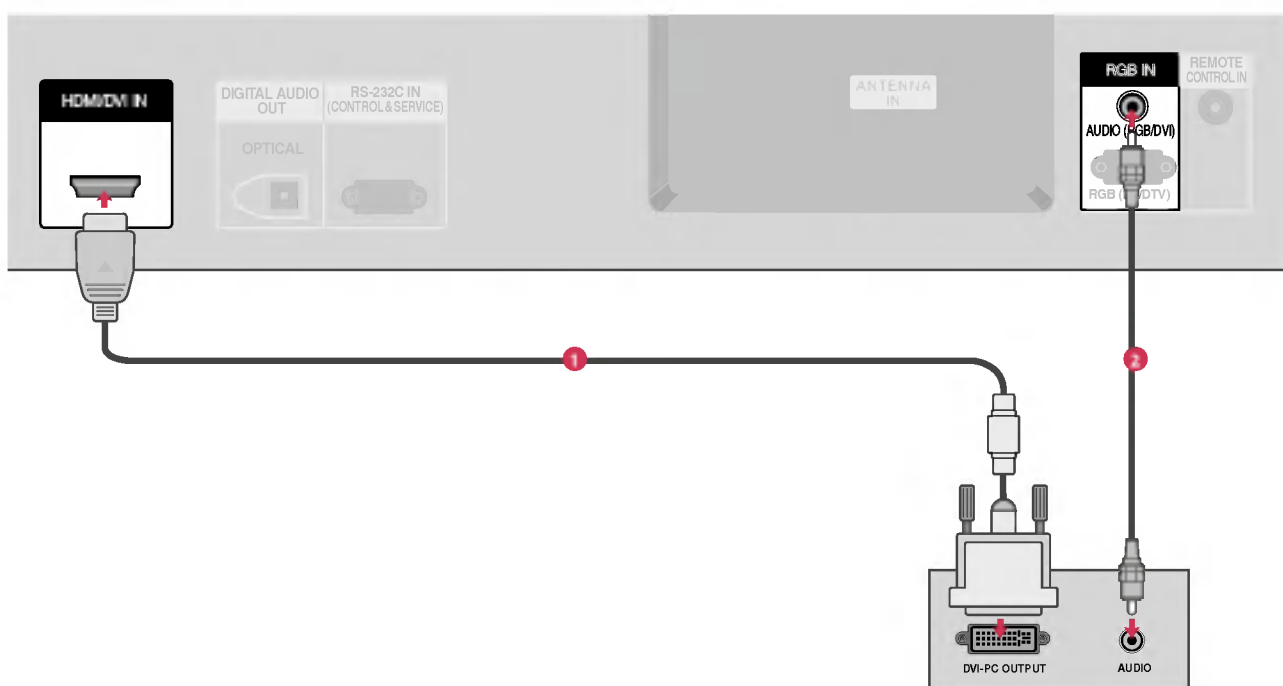
- Turn on the PC and the set.
- Select **RGB-PC** input source in main input option of Special menu. (► p.63)
- Once you select **RGB-PC** in main input option of Special menu, **INPUT** button is also available for this purpose.

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 /DVI IN** 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 **HDMI/DVI** input source with 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.
- ▶ If the PC does not support Auto DVI, you need to set the output resolution appropriately. To get the best picture quality, adjust the output resolution of PC graphics card's output resolution to 1024x768, 60Hz.

CONNECTIONS & SETUP

NOTES

- ▶ 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, 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.

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
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

* RGB-PC mode only: 640x350

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
1920x1080	28.125	50.00
	33.72	59.94
	33.75	60.00

Screen Setup for PC mode

Overview

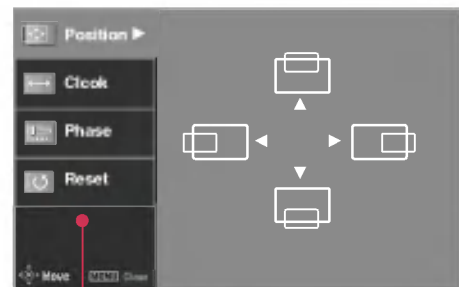
This function works in the following mode:

Component1, Component2, RGB-PC, RGB-DTV, or HDMI/DVI.

Note: Some signal from some graphics boards may not function properly. If the results are unsatisfactory, adjust your monitor's position, size and phase manually.

Adjustment for screen Position, Clock, Phase

- 1 Press the **OK** button and then use **▲** or **▼** button to select **Position**, **Clock**, or **Phase**.
- 2 Press the **▶** button and then use **▲ ▼ ◀ ▶** button to make appropriate adjustments.
 - The **Phase** adjustment range is **-32 ~ +32**.
The **Phase** only works in Component 1-2, RGB-PC and RGB-DTV mode.
 - The **Clock** adjustment range is **-50 ~ +50**.
The **Clock** only works in RGB-PC mode.
- 3 Press the **OK** button.



1 2 3

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.

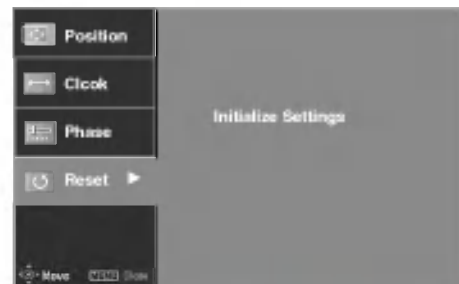
Phase This function allows you to remove any horizontal noise and clear or sharpen the image of characters. In HDMI/DVI-PC mode, PHASE is not available.

Initializing (Reset to original factory values)

To initialize the adjusted values

This function allows you to return to the good picture reproduction programmed at the factory and cannot be change.

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



1 2 3

BASIC OPERATION

TURNING THE TV ON

If your TV will be turned on, you will be able to use its features.

- 1 Ensure the power cord is connected correctly.
When connected to power the TV switches to standby mode.
 - In standby mode, press the **⏻**, **INPUT**, **PR + / -** button on the TV or press the **POWER**, **INPUT**, **D/A INPUT**, **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.

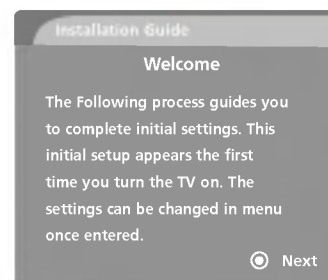
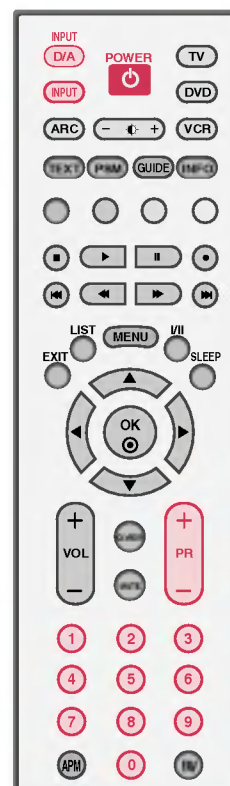
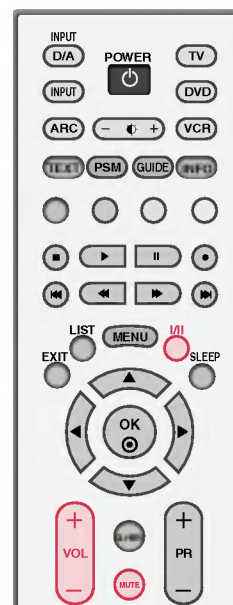


Figure 1.

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.



BASIC OPERATION

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.



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.

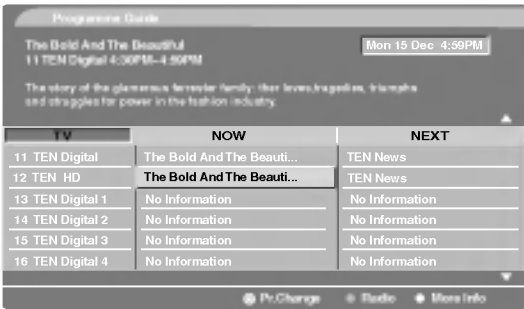
The EPG supplies information such as programme listings, start and end times for all available services. In addition, detailed information about the programme is often available in the EPG (the availability and amount of these programme details will vary, depending on the particular broadcaster).

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



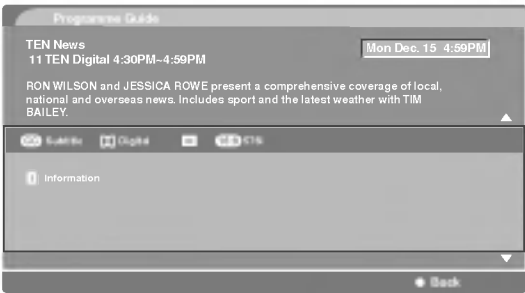
Switch on/off EPG

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 **▲ ▼ ◀ ▶** button 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 the each menu.
- 2

Press the **►** button and then use **▲ ▼ ◀ ▶** button to display the available menus.

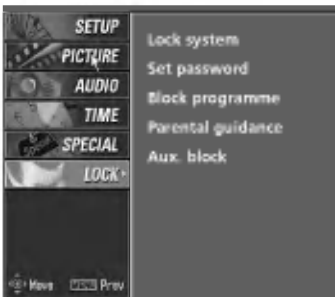
SETUP



PICTURE



LOCK



AUDIO



SPECIAL



TIME



TV MENU | SETUP(Programme)

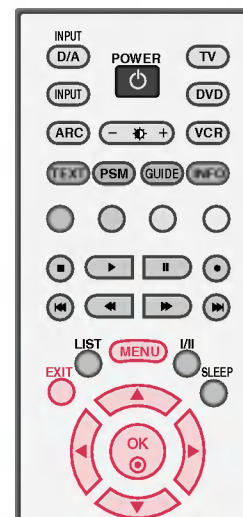
AUTO PROGRAMME TUNING

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**.

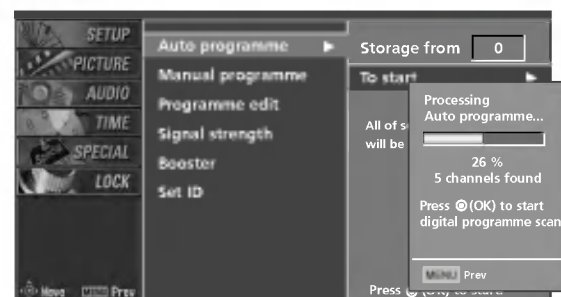
3 Press the **▶** button to select **Storage from**.
Select the beginning programme number with the **▲ ▼** button or **NUMBER** buttons.

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.

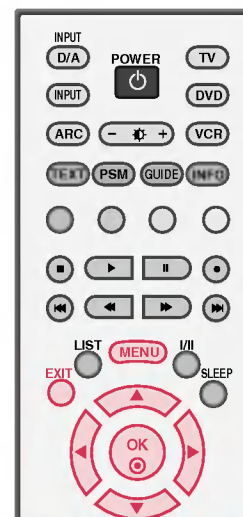


4 5

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**.

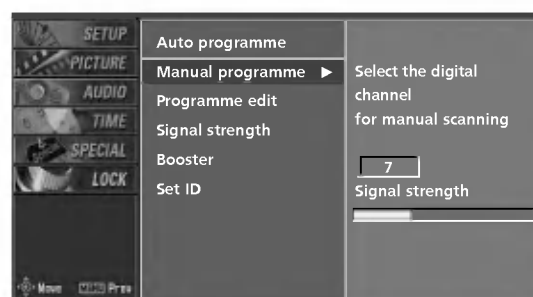
3 Press the ► button and then use ▲ or ▼ button to select the programme number you want to add.

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.

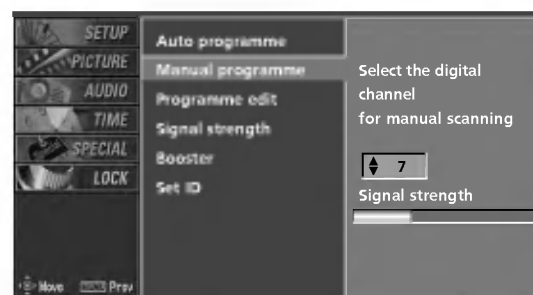
5 Press **EXIT** button to return to normal TV viewing.



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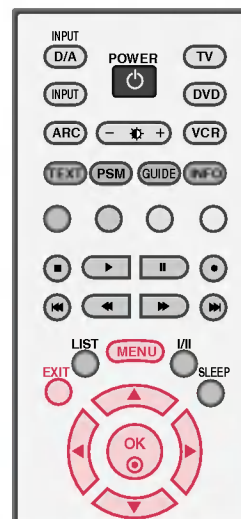
3 4

MANUAL PROGRAMME TUNING Continued

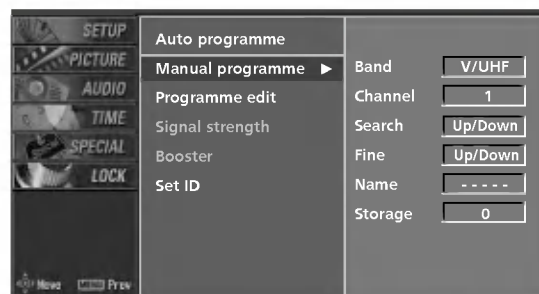
In Analogue Mode

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.



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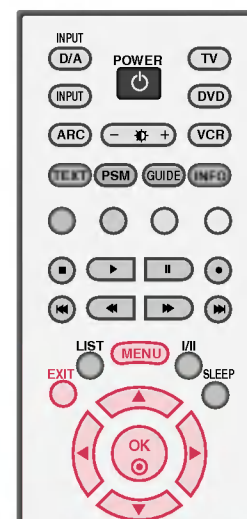
2



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 select **Manual programme**.

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

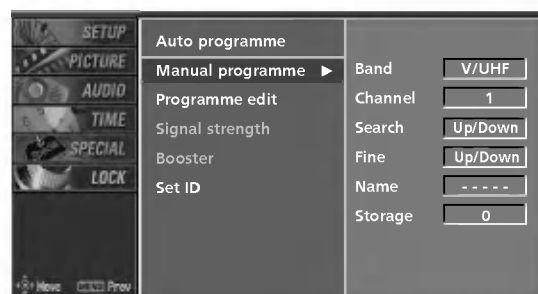
4 Press the ▲ or ▼ button to fine tune for the best picture and sound.

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

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



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3 4 5

ASSIGNING A STATION NAME - In Analogue Mode only

You can assign a station name with the 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 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.

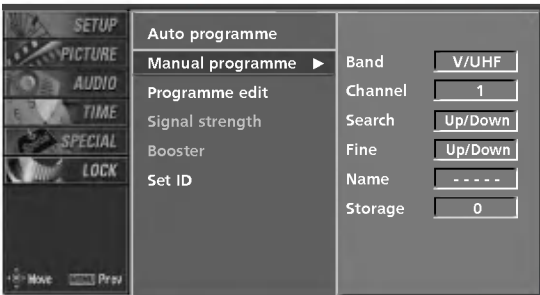
5 Press the ◀ or ▶ button to select the position and make your choice of the second character, and so on.

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

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



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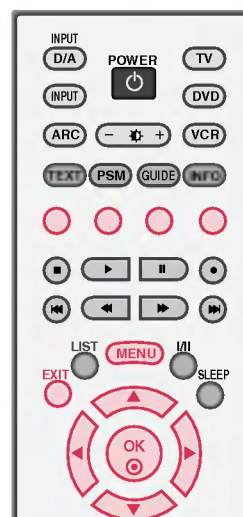
2



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.

■ Deleting a programme (In Analogue Mode Only)

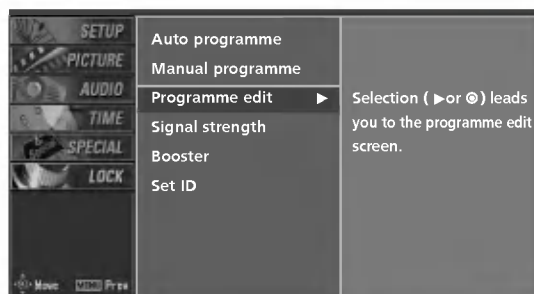
- Select a programme to be deleted with the ▲ ▼ ◀ ▶ button.
- Press the **RED** button twice. The selected programme is deleted, all the following programmes are shifted up one position.

■ Copying a programme (In Analogue Mode Only)

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

■ Skipping a programme number

- Select a programme number to be skipped with ▲ ▼ ◀ ▶ button.
- 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 ▲ ▼ ◀ ▶ button and then press the **FAV** button. It will automatically include the selected programme into your favourite programmes list and a heartmark will appear in front of that programme number. You can store up to 10 programmes.

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



CALLING UP THE PROGRAMME TABLE

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

Displaying programme list

- Press the **LIST** button to display the Programme table menu.
The programme table appears on the screen.

NOTE

- ▶ You may find some blue programmes. They have been set up to be skipped by auto programming or in the programme edit mode.
- ▶ Some programmes with the channel number shown in the programme LIST indicate there is no station name assigned.

Selecting a programme in the programme table

- 1 Select a programme with the **▲ ▼ ◀ ▶** button.
- 2 The set switches to the chosen programme number.

Paging through a programme table

- 1 Press the **PR+ / -** button to changes current page into previous/next page.
- 2 Press the **LIST** button to return to normal TV viewing.



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.



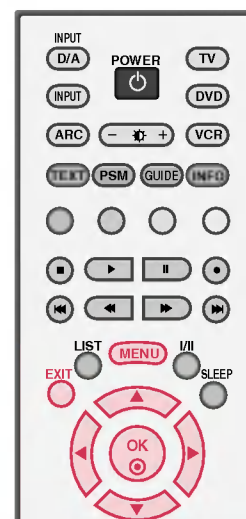
1



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BOOSTER - *In Digital Mode only*

If the reception is poor at the fringed area of TV signal, select **Booster** to **On**. When the picture condition is good, do not select **Booster** to **On**.

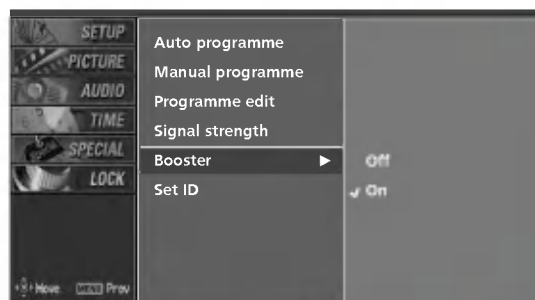
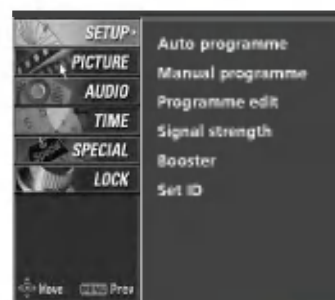


1 Press the **MENU** button and then use ▲ or ▼ button to select the **SETUP** menu.

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.

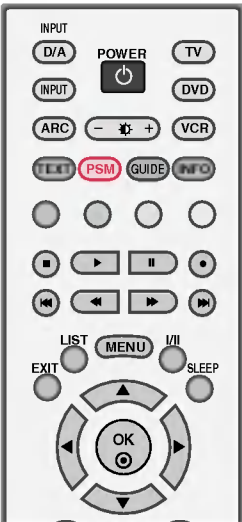


TV MENU / SETUP(PROGRAMME)

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 **PSM** button repeatedly to select the picture appearance setup option: **Dynamic**, **Standard**, **Mild**, **User1**, or **User2**.

2 Press the **EXIT** button to save and return to TV viewing.

■ You can also use the **PICTURE** menu to adjust **PSM**.



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 at once. The screen is divided to 4-split.
- 2

Use the **▲ ▼ ◀ ▶** button to navigate 4 screen.
By pressing the **OK** button, you can select the desired mode.

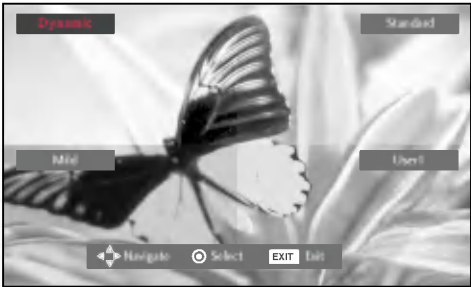
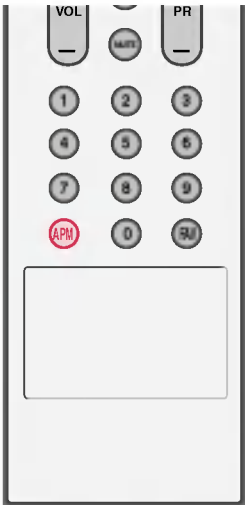
!

NOTE

- ▶

While operating the 4-split, any button except **POWER, APM, OK, EXIT, ▲ ▼ ◀ ▶, VOLUME ▲ ▼, MUTE** button on the remote control are not usable.
- ▶

APM screen will automatically disappear after approx. 40 seconds unless a button is pressed.



1

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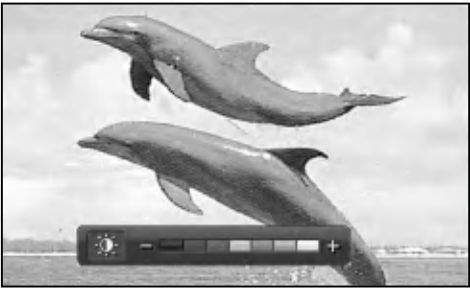
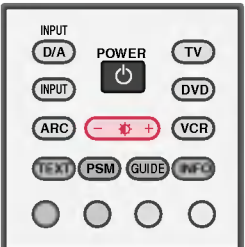
BRIGHTNESS ADJUSTMENT

Adjust the brightness with using this button on the remote control.

- 1

Press the **◀ * +** button.
- 2

Adjust the desired screen brightness.



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



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

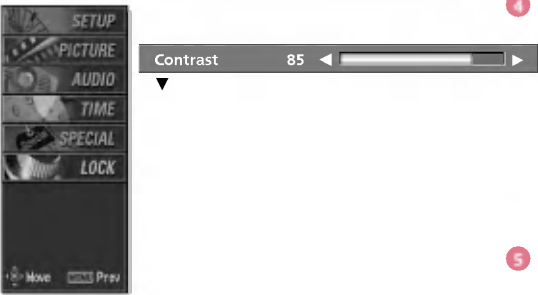
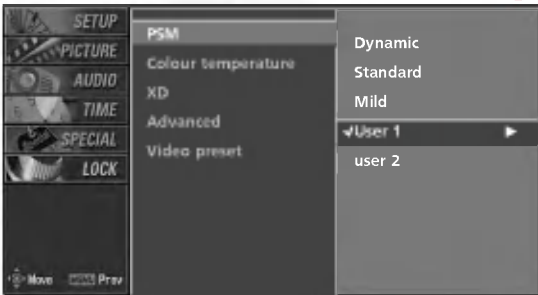
2 Press the ► button and then use ▲ or ▼ button to select **PSM**.

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.



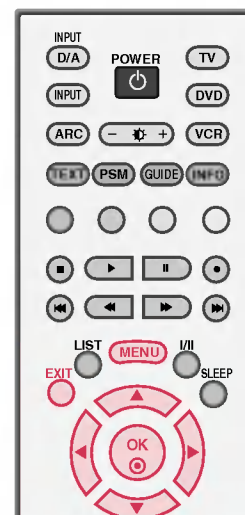
XD

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 change 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**.



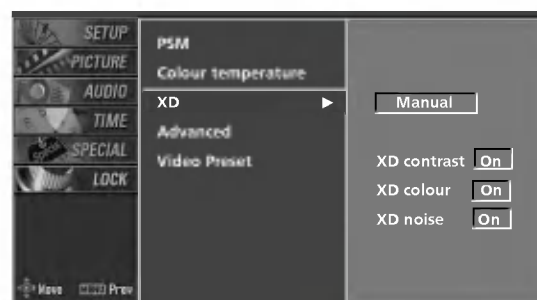
1

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 the 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**.



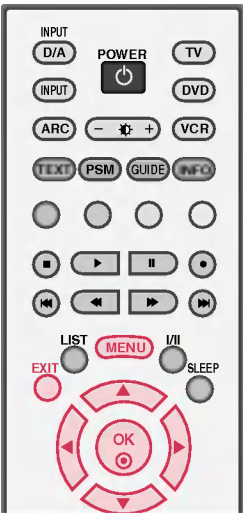
2 3

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.

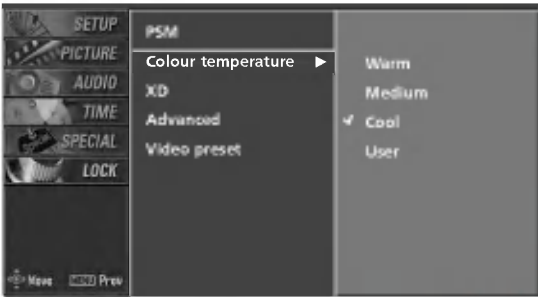
2 Press the ► button and then use ▲ or ▼ button to select **Colour temperature**.

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.



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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

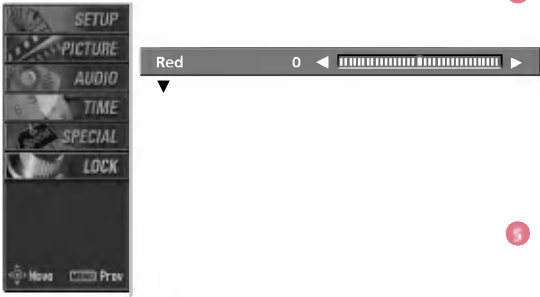
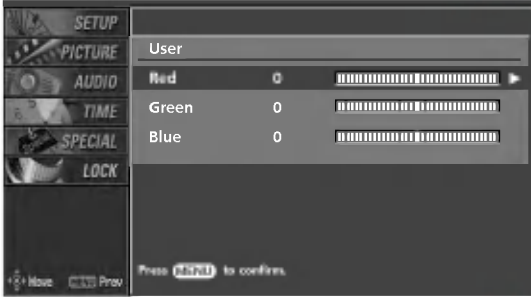
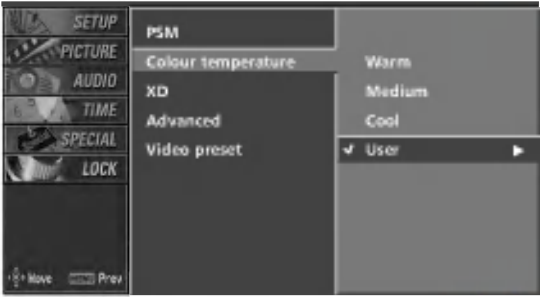
Press the ► button and then use ▲ or ▼ button to select **User**.
- 4

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.



ADVANCED-CINEMA

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

This feature operates only in AV1-2 60Hz and Component480i mode.



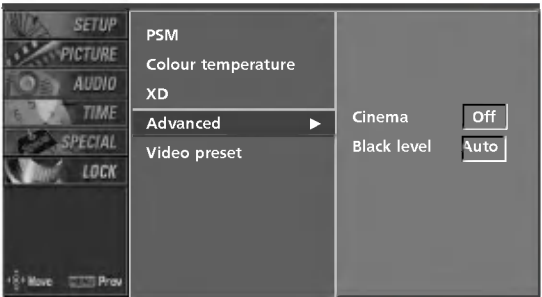
1 Press the **MENU** button and then use ▲ or ▼ button to select the **PICTURE** menu.

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.

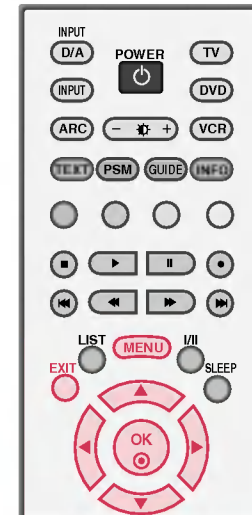


3 4

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, or HDMI/DVI 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 reflection of the screen gets darker.

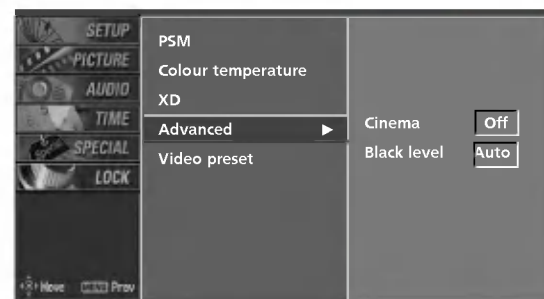
■ High

The reflection of the screen gets brighter.

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



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2 3 4

VIDEO PRESET

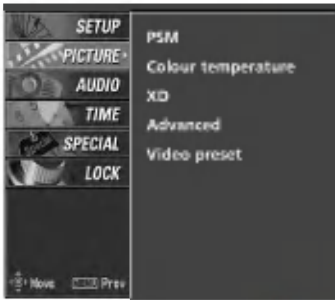
Use to quickly reset all the Picture menu options to their original factory preset values.



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.



TV MENU | AUDIO ADJUSTMENT

SOUND STATUS MEMORY (SSM)

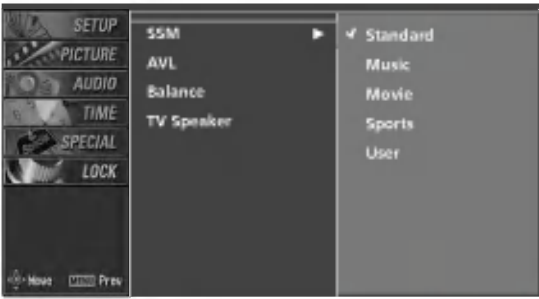
SSM lets you enjoy the best sound without any special adjustment because the TV sets the appropriate sound options based on the programme content. When adjusting sound options (treble and bass) manually, SSM is automatically changed to User. Standard, Music, Movie, and Sports are preset for good sound 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.



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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**.

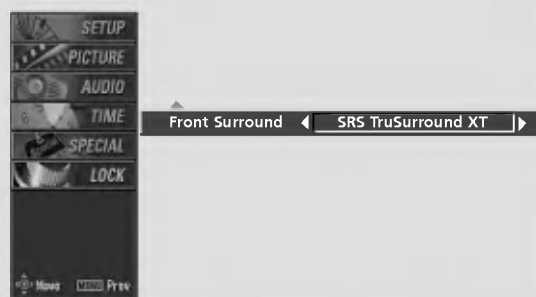
4 Press the ► button and then use ▲ or ▼ button to select the desired sound option (**Treble**, **Bass**, or **Front surround**).



- 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** 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.

AUTO VOLUME LEVELLER (AVL)

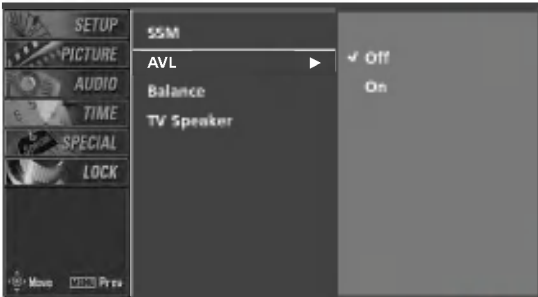
AVL automatically keeps on an equal volume level even if you change programmes.



- 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.



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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

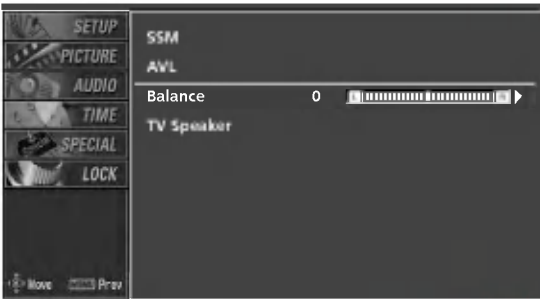
Press the ► button and then use ▲ or ▼ button to select **Balance**.
- 3

Press the ► button and then use ◀ or ▶ button to make appropriate adjustments.
- 4

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



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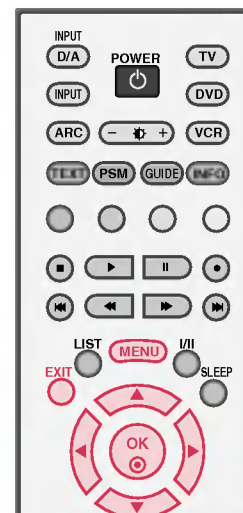
2



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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.



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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 depth 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 or HDMI/DVI 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

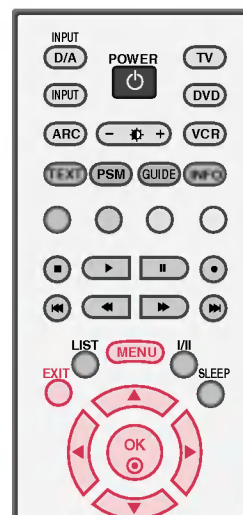
- ▶ In digital mode, repeatedly press the **I/II** button to change the audio mode (MPEG or DOLBY DIGITAL).



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.



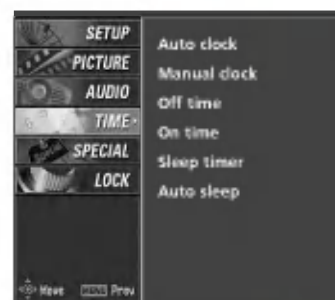
1 Press the **MENU** button and then use ▲ or ▼ button to select the **TIME** menu.

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

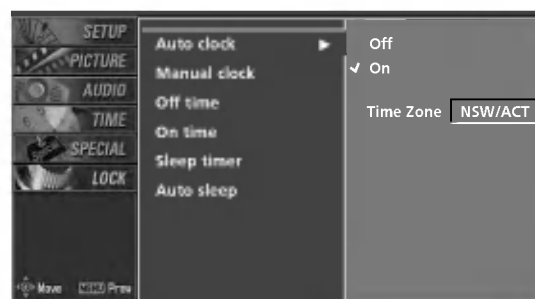
3 Press the ► button and then use ▲ or ▼ button to select **On**.

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.

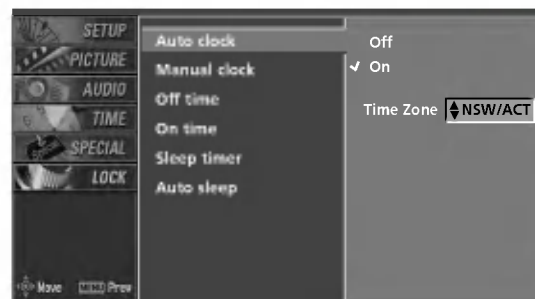
5 Press **EXIT** button to return to normal TV viewing.



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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.

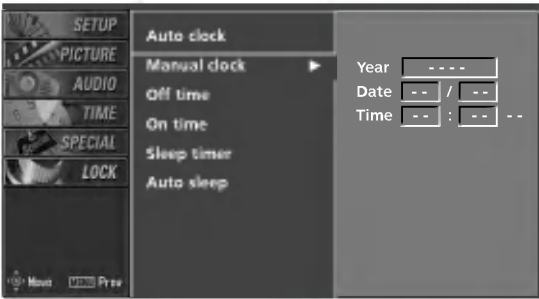
2 Press the ► button and then use ▲ or ▼ button to select **Manual clock**

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.



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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 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**.

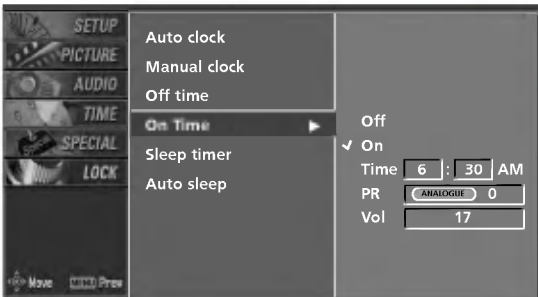
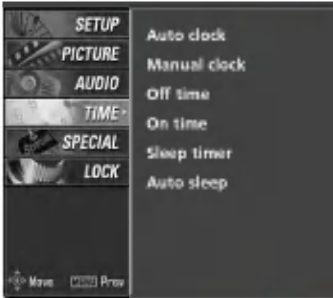
- 4 Press the ► button and then use ▲ or ▼ button to set the hour.

- 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

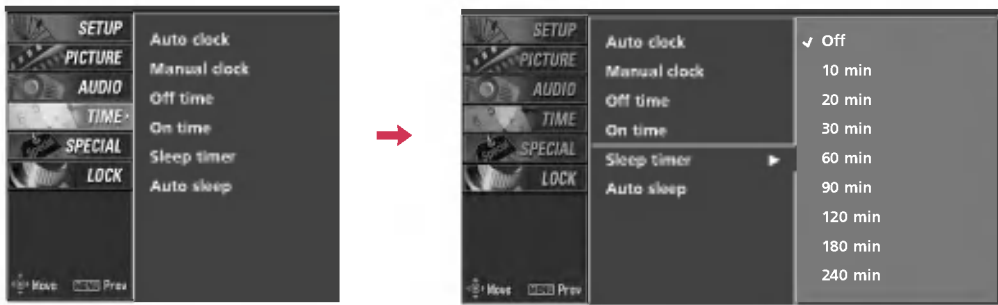
You don't have to remember to switch the set off before you go to sleep.

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 release the preset sleep time.

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



AUTO SLEEP

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



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

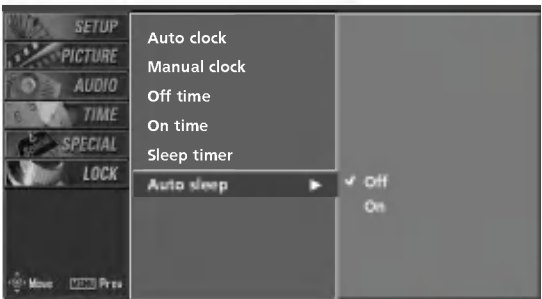
2 Press the ► button and then use ▲ or ▼ button to select **Auto sleep**.

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

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



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TV MENU | OPTIONAL FEATURES

INPUT SOURCE SELECTION

Alternatively you can select the Digital, Analogue, AV1-2, Component 1-2, RGB-PC (or RGB-DTV) or HDMI/DVI 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 **SPECIAL** menu.

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

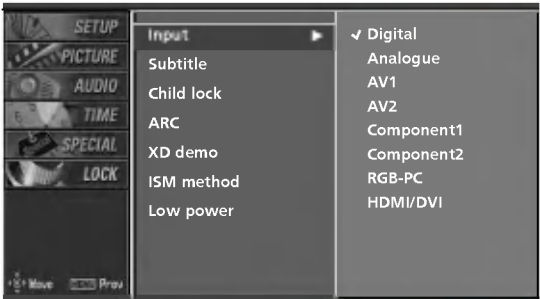
3 Press the ► button and then use ▲ or ▼ to select Digital, Analogue, AV 1 , AV 2 , Component 1, Component 2, RGB-PC, RGB-DTV, or HDMI/DVI.

- To toggle RGB-DTV and RGB-PC, select RGB-DTV(or RGB-PC) and press ► button.

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



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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.

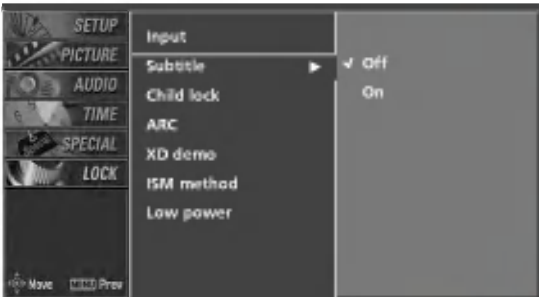
2 Press the ► button and then use ▲ or ▼ button to select **Subtitle**.

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

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



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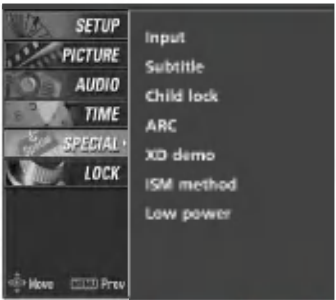
2 3

CHILD LOCK

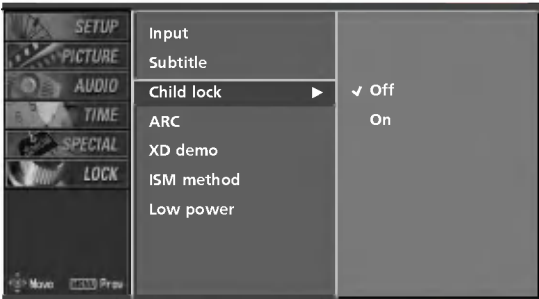
The TV can be set so that the remote control is needed to control it. This feature can be used to prevent unauthorized viewing.



- 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 and Cinema zoom.

!

NOTE

▶

If a fixed image is displayed on the screen for a long time, it image 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.

!

NOTE

▶

In HDMI/DVI-PC and RGB-PC mode, 4:3 and 16:9 is available.

▶

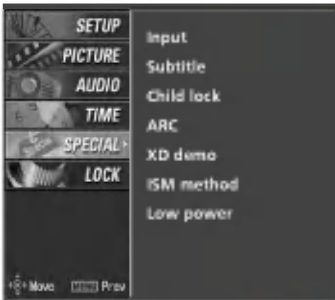
Auto: When your TV receives the wide screen signal, it will be automatically changed to the picture format to be sent. (Not available in all countries)

XD DEMO

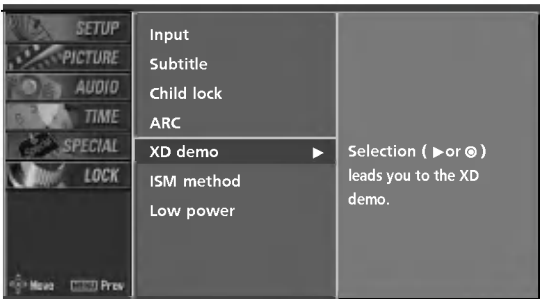
Allows you to select your preferred picture mode after comparing the four different picture (Dynamic, Standard, Mild, and User1 (or User2)) settings.



- 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

A frozen still picture from a PC/video game displayed on the screen for prolonged periods will result in a 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.

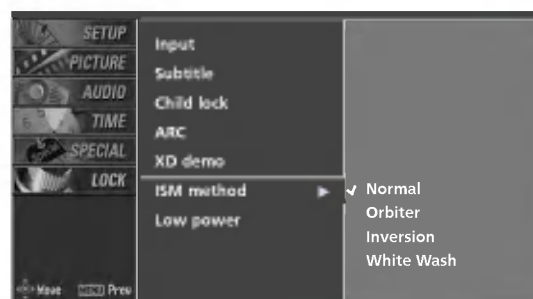
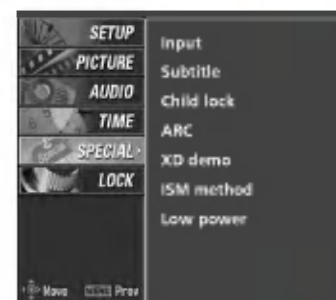
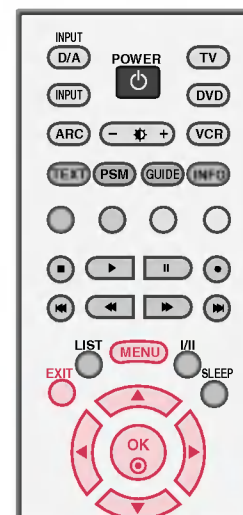
■ White wash

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.



LOW POWER

Low power reduces the plasma display power consumption.



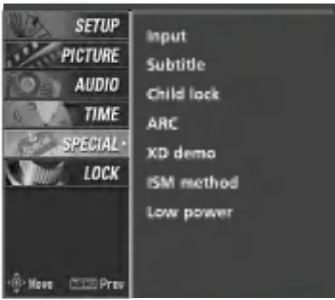
1 Press the **MENU** button and then use ▲ or ▼ button to select the **SPECIAL** menu.

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

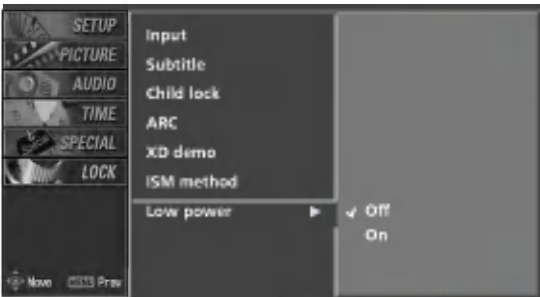
3 Press the ► button and then use ▲ or ▼ button to select **Off** or **On**.

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

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



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2 3

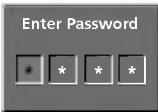
SETTING UP YOUR PASSWORD

Set up blocking schemes to block specific channels, ratings, and external viewing sources.

A password is required to gain access to this menu.

- 1 Press the **MENU** button and then use 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

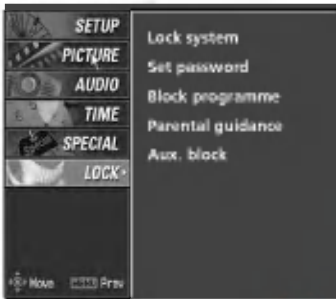
Enables or disables the blocking scheme you set up previously.

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

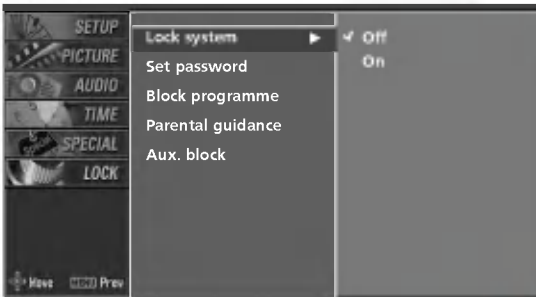
- 2 Press the ► button and then use the ▲ or ▼ button to select **On** or **Off**.

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

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



1



2

SET PASSWORD

Change the password by inputting a new password twice.

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

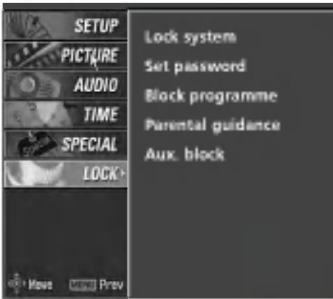
2 Press the ► button and then choose any 4 digits for your new password next to New.

As soon as the 4 digits are entered, re-enter the same 4 digits on the **Confirm**.
The new password is memorized.

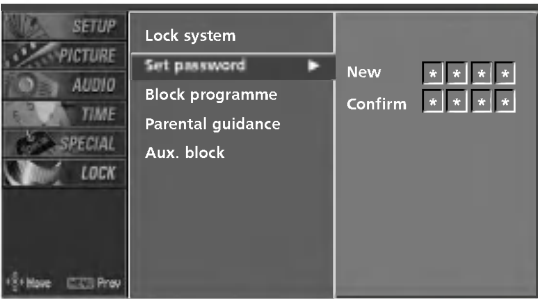
3 Press **EXIT** button to return to normal TV viewing.

NOTE

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



1



2

BLOCK PROGRAMME

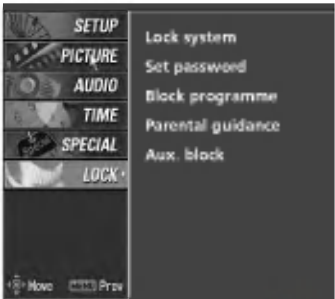
Select a channel number that you wish to block.

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

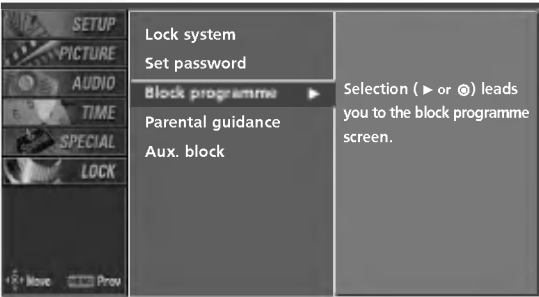
2 Press the ► button. You will now see a screen filled with channel numbers and a preview picture.

3 Use ▲ ▼ ◀ ▶ button to select a channel 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.



1



2



3

PARENTAL GUIDANCE - In Digital Mode only

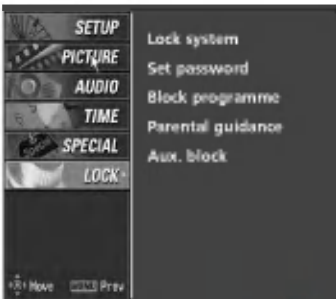
Prevents children from watching certain children’s TV programs, according to the ratings limit set.

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

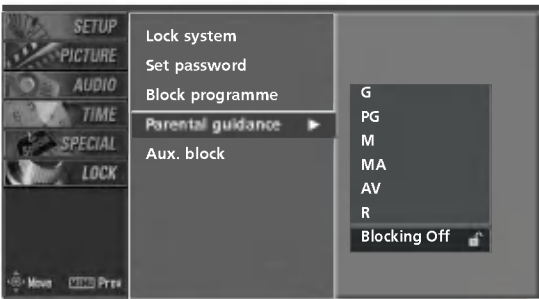
2 Press the ► button and then use the ▲ or ▼ to select **G, PG, M, MA, AV** or **R**.

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

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



1



2

AUX. BLOCK

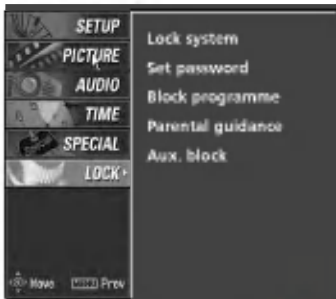
Enables you to select a source to block from the external source devices you have hooked up.

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

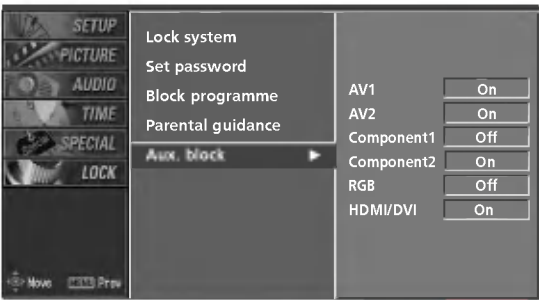
2 Press the ► button and then use the ◀ or ▶ button to select a source.

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.



1



2 3

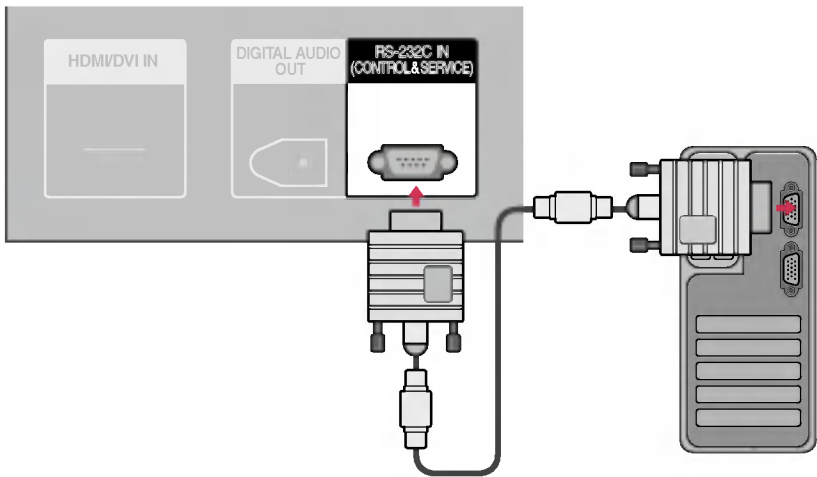
APPENDIX

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.

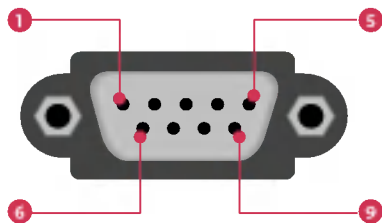
Note: RS-232C connection cables are not supplied with the TV.

RS-232C Setup

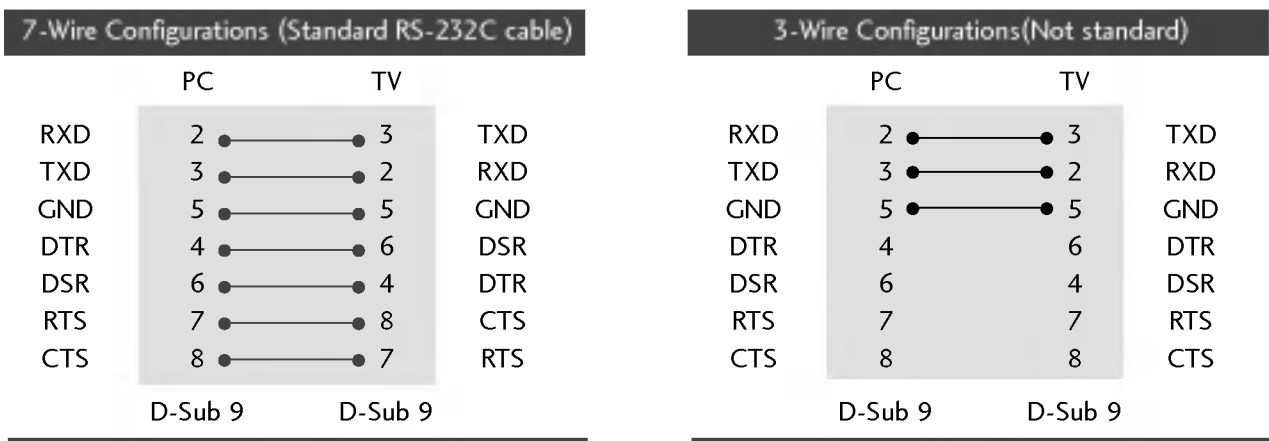


Type of Connector; D-Sub 9-Pin Male

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



RS-232C Configurations



Set ID

Use this function to specify a TV ID number.
Refer to ‘Real Data Mapping1’. See page 77.

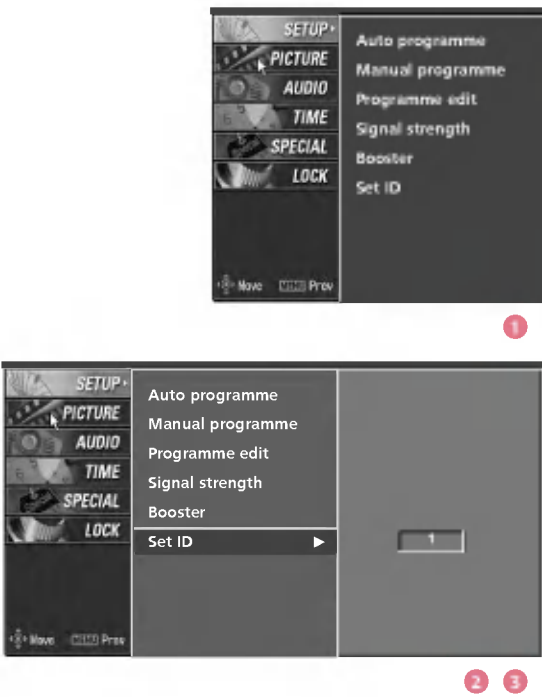
- 1

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.



Communication Parameters

- Baud rate : 9600 bps (UART)

■ Data length : 8 bits

■ Parity : None
- Stop bit : 1 bit

■ Communication code : ASCII code

■ Use a crossed (reverse) cable.

Command Reference List

COMMAND1 COMMAND2 DATA (Hexadecimal)				COMMAND1 COMMAND2 DATA (Hexadecimal)			
01. Power	k	a	0 ~ 1	15. Bass	k	s	0 ~ 64
02. Input Select	k	b	0 ~ 8	16. Balance	k	t	0 ~ 64
03. Aspect Ratio	k	c	See p.77	17. Colour Temperature	k	u	0 ~ 2
04. Screen Mute	k	d	0 ~ 1	18. Red Adjustment	k	v	0 ~ C8
05. Volume Mute	k	e	0 ~ 1	19. Green Adjustment	k	w	0 ~ C8
06. Volume Control	k	f	0 ~ 64	20. Blue Adjustment	k	\$	0 ~ C8
07. Contrast	k	g	0 ~ 64	21. ISM Method	j	p	0 ~ 3
08. Brightness	k	h	0 ~ 64	22. Low Power	j	q	0 ~ 1
09. Colour	k	i	0 ~ 64	23. Orbiter Time Setting	j	r	1 ~ FE
10. Tint	k	j	0 ~ 64	24. Orbiter Pixel Setting	j	s	1 ~ 3
11. Sharpness	k	k	0 ~ 64	25. Channel Tuning	m	a	See p.79
12. OSD Select	k	l	0 ~ 1	26. Send IR Code	m	c	See p.79
13. Remote Control/Key Lock	k	m	0 ~ 1	27. Input Select	x	b	See p.79
14. Treble	k	r	0 ~ 64				

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 selDtochoosedesired 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)

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: HDMI/DVI

Data 4: Component 1

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

03. Aspect Ratio (Command2:c) (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)

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

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

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 77.
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 77.
Acknowledgement [k][ ][Set ID][ ][OK/NG][Data][x]
```

12. OSD Select (Command2:l)

To select OSD (On Screen Display) on/off.
Data 0: OSD off Data 1: OSD on
* When setting "OSD - Off", every OSD doesn't display on screen.

```
Transmission [k][l][ ][Set ID][ ][Data][Cr]
Acknowledgement [l][ ][Set ID][ ][OK/NG][Data][x]
```

13. Remote Control Lock Mode (Command2:m)

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

```
Transmission [k][m][ ][Set ID][ ][Data][Cr]
Data 0: Lock off                      Data 1: Lock on
Acknowledgement [m][ ][Set ID][ ][OK/NG][Data][x]
```

15. Treble (Command2:r)

To adjust treble.
You can also adjust treble in the Audio menu.
Data Min: 0 ~ Max: 64(*transmit by Hexadecimal code)
*Refer to 'Real data mapping1'. See page 77.

```
Transmission [k][r][ ][Set ID][ ][Data][Cr]
Acknowledgement [r][ ][Set ID][ ][OK/NG][Data][x]
```

16. Bass (Command2:s)

To adjust bass.
You can also adjust bass in the Audio menu.
Data Min: 0 ~ Max: 64(*transmit by Hexadecimal code)
*Refer to 'Real data mapping1'. See page 77.

```
Transmission [k][s][ ][Set ID][ ][Data][Cr]
Acknowledgement [s][ ][Set ID][ ][OK/NG][Data][x]
```

17. Balance (Command2:t)

To adjust balance.
You can also adjust balance in the Audio menu.
Data Min: 0 ~ Max: 64(*transmit by Hexadecimal code)
*Refer to 'Real data mapping1'. See page 77.

```
Transmission [k][t][ ][Set ID][ ][Data][Cr]
Acknowledgement [t][ ][Set ID][ ][OK/NG][Data][x]
```

18. Colour Temperature (Command2:u)

To adjust colour temperature.
You can also adjust colour temperature in the Picture menu.
Data 0: Medium 1: Cool 2: Warm 3: User

```
Transmission [k][u][ ][Set ID][ ][Data][Cr]
Acknowledgement [u][ ][Set ID][ ][OK/NG][Data][x]
```

19. Red Adjustment(Command:v)

To adjust red in color temperature
Data Min:0 ~ Max:C8
*Refer to "Real data mapping 2" as shown below

```
Transmission [k][v][ ][Set ID][ ][Data][Cr]
Acknowledgement [v][ ][Set ID][ ][OK/NG][Data][x]
```

20. Green Adjustment(Command:w)

To adjust green in colour temperature.
Data Min:0 ~ Max:C8
*Refer to "Real data mapping 2" as shown below

```
Transmission [k][w][ ][Set ID][ ][Data][Cr]
Acknowledgement [w][ ][Set ID][ ][OK/NG][Data][x]
```

21. Blue Adjustment(Command:\$)

To adjust blue in colour temperature.
Data Min:0 ~ Max:C8
*Refer to "Real data mapping 2" as shown below

```
Transmission [k][$][ ][Set ID][ ][Data][Cr]
Acknowledgement [$][ ][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

22. ISM Method (Command2:p)

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]

23. Low Power (Command2:q)

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]

24. Orbiter Time Setting (Command2:r)

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 77.

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

25. Orbiter Pixel Setting (Command2:s)

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 77.

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

26. 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

10: Digital Main

ex) Analogue TV Main: ma 0 00 01 00

Digital TV Main: ma 0 00 0A 10

* Channel Data Range:

Analogue TV: 0 ~ 63

Digital TV: 0 ~ 3E7

27. 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 81.

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)".

28. Input Select (Command: x b)

To select input source.

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

Data 00 : Digital

Data 41 : Component2

Data 10 : Analogue

Data 50 : RGB-DTV

Data 20 : AV1

Data 60 : RGB-PC

Data 21 : AV2

Data 90 : HDMI/DVI

Data 40 : Component1

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

APPENDIX

IR CODES

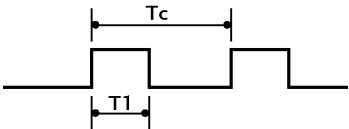
1. How to Connect

- 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

$$FCAR = 1/TC = fOSC/12$$

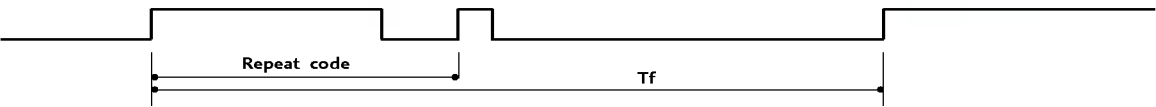
$$\text{Duty ratio} = T1/TC = 1/3$$

- **Configuration of frame**

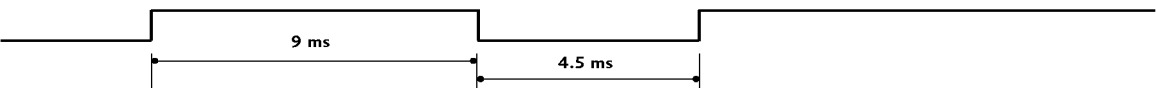
1 st frame



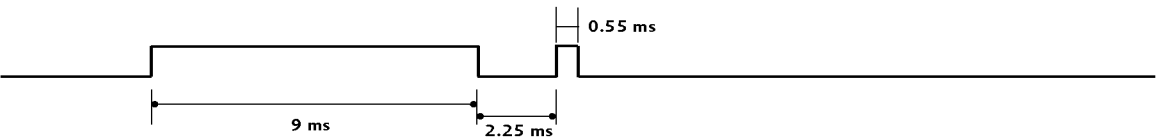
Repeat frame



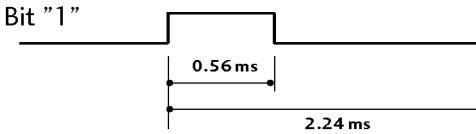
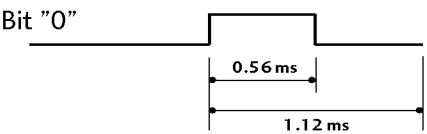
- **Lead code**



- **Repeat code**

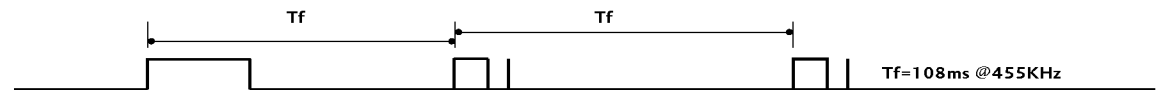


- **Bit description**



- **Frame interval: Tf**

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



Code (Hexa)	Function	Note	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	HDMI/DVI	Discrete IR Code
07	◀	Remote control Button			(HDMI/DVI Input Selection)
06	▶	Remote control Button	76	Ratio 4:3	Discrete IR Code
44	OK	Remote control Button			(Only 4:3 Mode)
43	MENU	Remote control Button	77	Ratio 16:9	Discrete IR Code
5B	EXIT	Remote control Button			(Only 16:9 Mode)
92	APM	Remote control Button	AF	Ratio Zoom	Discrete IR Code
A9	GUIDE	Remote control Button			(Only Zoom Mode)
20	TEXT	Remote control Button	C4	POWER ON	Discrete IR Code
72	RED	Remote control Button			(Only Power On)
71	GREEN	Remote control Button	C5	POWER OFF	Discrete IR Code
63	YELLOW	Remote control Button			(Only Power Off)
61	BLUE	Remote control Button			
53	LIST	Remote control Button			
0A	I/II	Remote control Button			
AA	INFO	Remote control Button			
E1	— ✱	Remote control Button			
E0	✱ +	Remote control Button			
4D	PSM	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 at a time. If the device turned off, the programming is successful.
- 4** Press the **MENU** button to store the code. After blinking twice, this code is stored.
- 5** Test the remote functions to see if the device responds properly. If not, repeat from step 2.

PROGRAMMING CODES

VCRs

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

APPENDIX

VCRs

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

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	■ 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. ■ Ensure that the batteries are installed with correct polarity (+ to +, - to -). ■ Ensure that the correct remote operating mode is set: TV, VCR etc. ■ Install new batteries.
Power is suddenly turned off	■ Is the sleep timer set? ■ Check the power control settings. Power interrupted ■ No broadcast on station tuned with Auto off activated.

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

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

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

PRODUCT SPECIFICATIONS

MODELS		50PC3D (50PC3D-AA)
Dimensions (Width x Height x Depth)	Including stand	51.3 x 34.3 x 14.0 inches 1302.6 x 872.0 x 355.8 mm
	Excluding stand	51.3 x 31.9 x 4.2 inches 1302.6 x 810.0 x 107.7 mm
Weight	including stand	114.4 pounds / 51.9 kg
	excluding stand	95.0 pounds / 43.1 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.

