LG

Life's Good

PLASMA TV
# OWNER'S MANUAL

PLASMA TV MODELS
60PT1RF*

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.

1080P
FULLHD

ACCESSORIES

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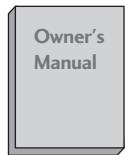
Owner's
Manual

Owner's Manual
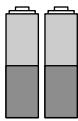
Batteries

Power Cord
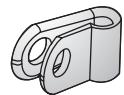
Holder
(Refer to p.7)
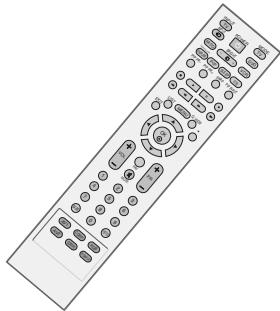
Remote Control

Polishing Cloth
Polish the screen with the cloth

*Slightly wipe stained spot on the exterior only with the cleansing cloths for the product exterior if there is stain or fingerprint on surface of the exterior.

Do not wipe roughly when removing stain. Please be cautious of that excessive power may cause scratch or discoloration.

Option Extras

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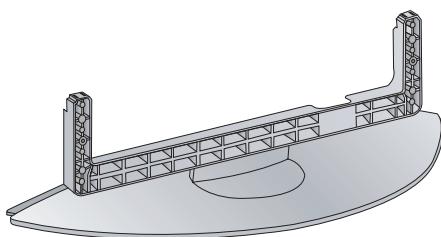
Desktop stand

Tilt wall mounting bracket

CONTENTS

SOUND & LANGUAGE CONTROL

TIME SETTING

TELETEXT

APPENDIX

PREPARATION

FRONT PANEL CONTROLS

■ This is a simplified representation of the front panel. Here shown may be somewhat different from your TV.
■ The external appearance of the set has an inherent character(annual ring, wood grain, knar) of wood.
■ If your product has a protection film attached, remove the film and then wipe the product with a polishing cloth.

PR ▲▼

VOL ▶◀

OK ⊙

MENU

INPUT

⏻/I

PROGRAMME Buttons

VOLUME Buttons

OK Button

MENU Button

INPUT Button

POWER Button

Power/Standby Indicator
• illuminates red in standby mode.
• illuminates green when the set is switched on.

Remote Control Sensor

4
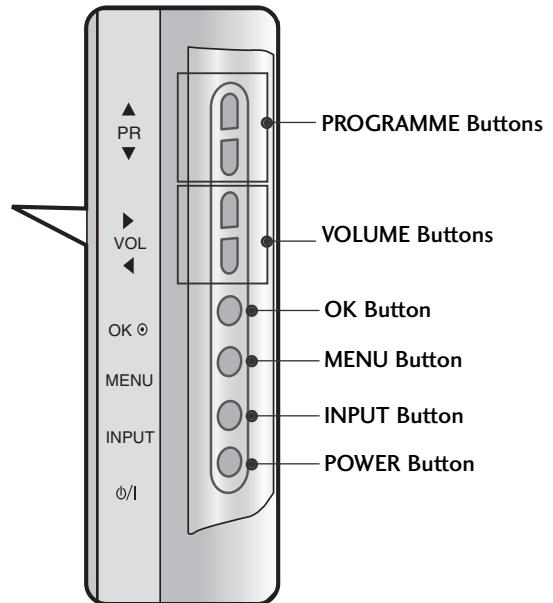
BACK PANEL INFORMATION

■ This is a simplified representation of the back panel. Here shown may be somewhat different from your TV.

AV IN 2

S-VIDEO

S-Video Input
Connect S-Video out from an S-VIDEO device.

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

RGB IN

RGB (PC)   AUDIO (RGB/DVI)

HDMI/DVI IN 1   **HDMI IN 2**

AV IN 1   **AV OUT**

ANTENNA IN

COMPONENT IN

VIDEO
Y   P_B   P_R   L AUDIO R   L   R

RS-232C IN (CONTROL&SERVICE)

VARIABLE AUDIO OUT
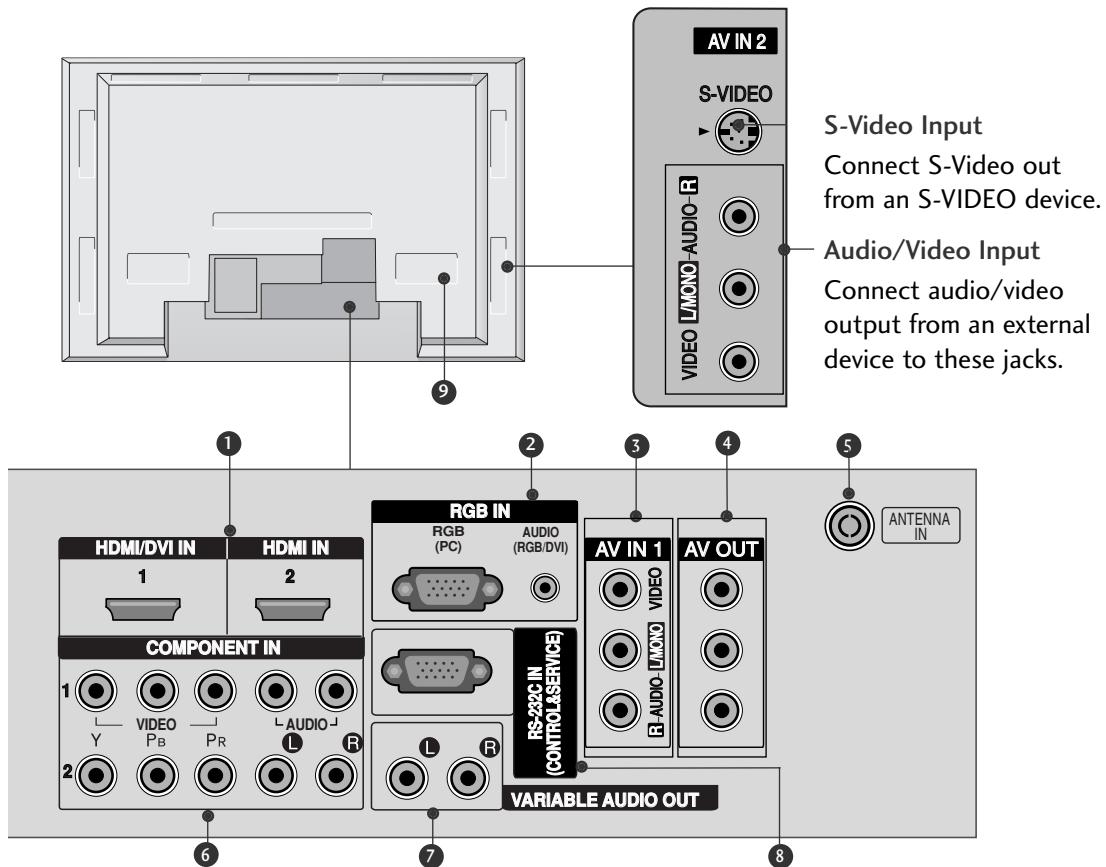
❶ **HDMI/DVI1, HDMI2 Input**
Connect a HDMI signal to HDMI IN.
Or DVI(VIDEO)signal to HDMI/DVI port with DVI to HDMI cable.

❷ **RGB/Audio Input**
Connect the monitor output from a PC to the appropriate input port.

❸ **Audio/Video Input (AV IN 1)**
Connect audio/video output from an external device to these jacks.

❹ **AV Output**
Connect second TV or monitor to the AV OUT socket on the set.

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

❻ **Component Input 1/2**
Connect a component video/audio device to these jacks.

❼ **Variable Audio Output**
Connect an external amplifier or add a subwoofer to your surround sound system.

❽ **RS-232C Input(CONTROL&SERVICE)Port**
Connect the serial port of the control devices to the RS-232C jack.

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

PREPARATION

- ■ **The TV can be installed in various ways such as on a wall, or on a desktop etc.**
- ■ **The TV is designed to be mounted horizontally.**

GROUNDING

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

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

Power Supply

Short-circuit
Breaker
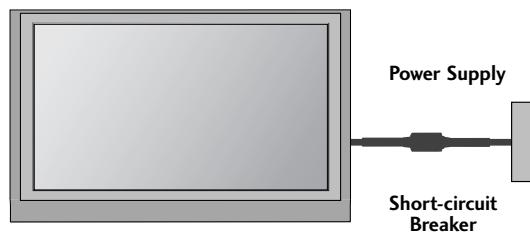
DESKTOP PEDESTAL INSTALLATION

For proper ventilation, allow a clearance of 4" on each side and the top and 4" from the wall. Detailed installation instructions are included in the optional Desktop Stand Installation and Setup Guide available from your dealer.

4 inches

4 inches

4 inches

4 inches

4 inches
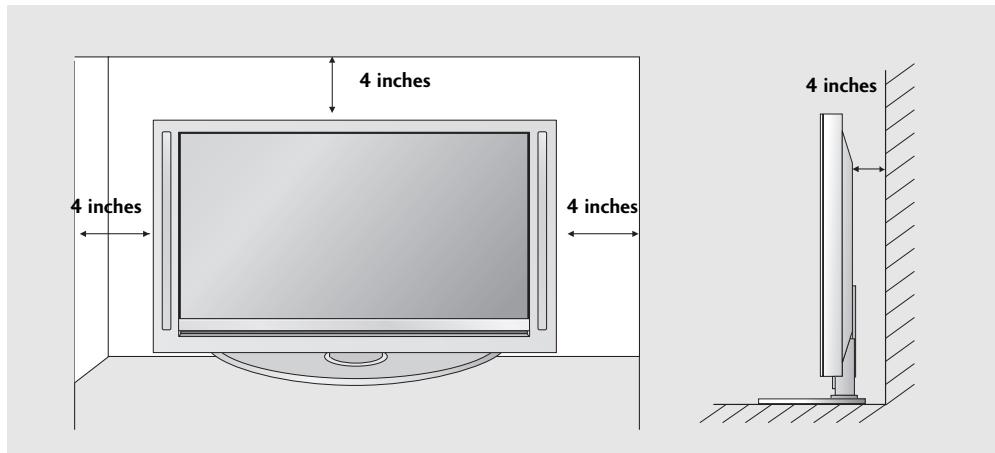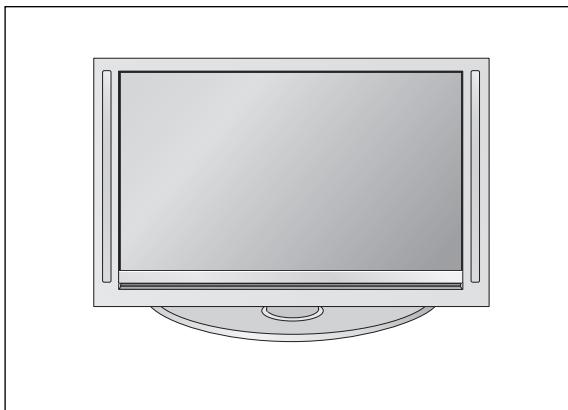
WALL MOUNT: HORIZONTAL INSTALLATION

For proper ventilation, allow a clearance of 4″ on each side and from the wall. Detailed installation instruc-tions are available from your dealer, see the optional Tilt Wall Mounting Bracket Installation and Setup Guide.
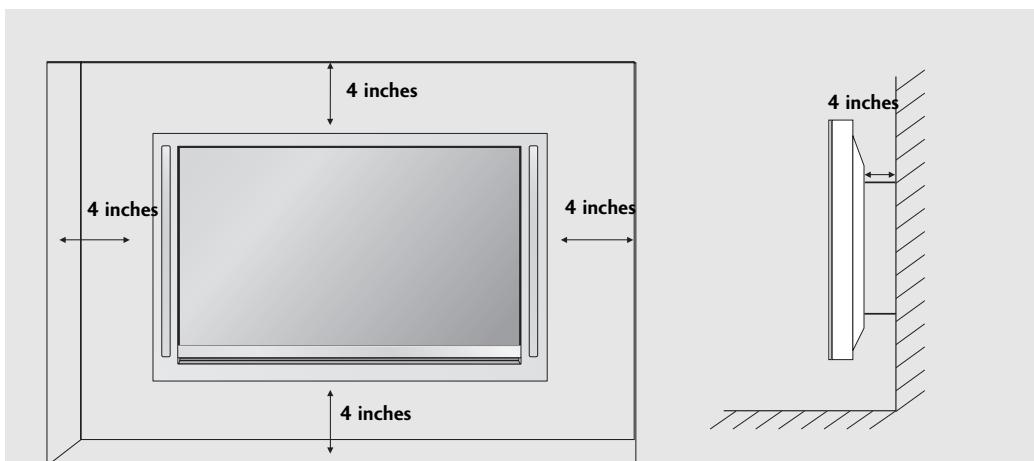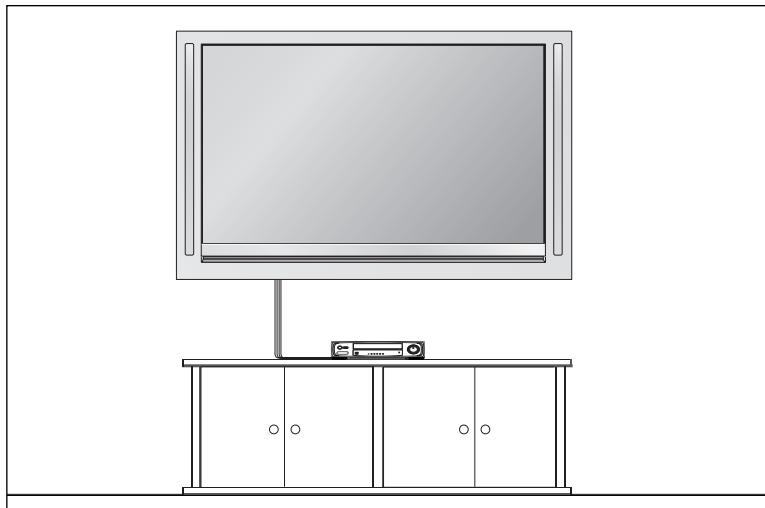
POWER CORD ARRANGEMENT

After connecting the power cord to the AC input terminal, remove the bolt at the hole on the back cover and fix the power cord at the rear side of the TV by using the bracket for fixing the power cord.
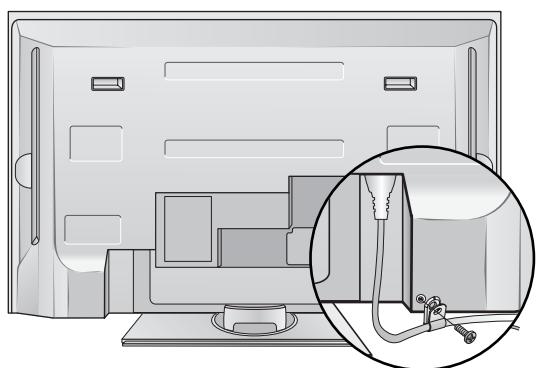
PREPARATION

■ To prevent the equipment damage, never plug in any power cords until you have finished connecting all equipment.

ANTENNA CONNECTION

■ For optimum picture quality, adjust antenna direction.
■ An antenna cable and converter are not supplied.

**Multi-family Dwellings/Apartments
(Connect to wall antenna socket)**

**Wall
Antenna
Socket**

**Outdoor
Antenna**

RF Coaxial Wire (75 ohm)

ANTENNA
IN

**Single-family Dwellings /Houses
(Connect to wall jack for outdoor antenna)**

Antenna

UHF

VHF

**Signal
Amplifier**
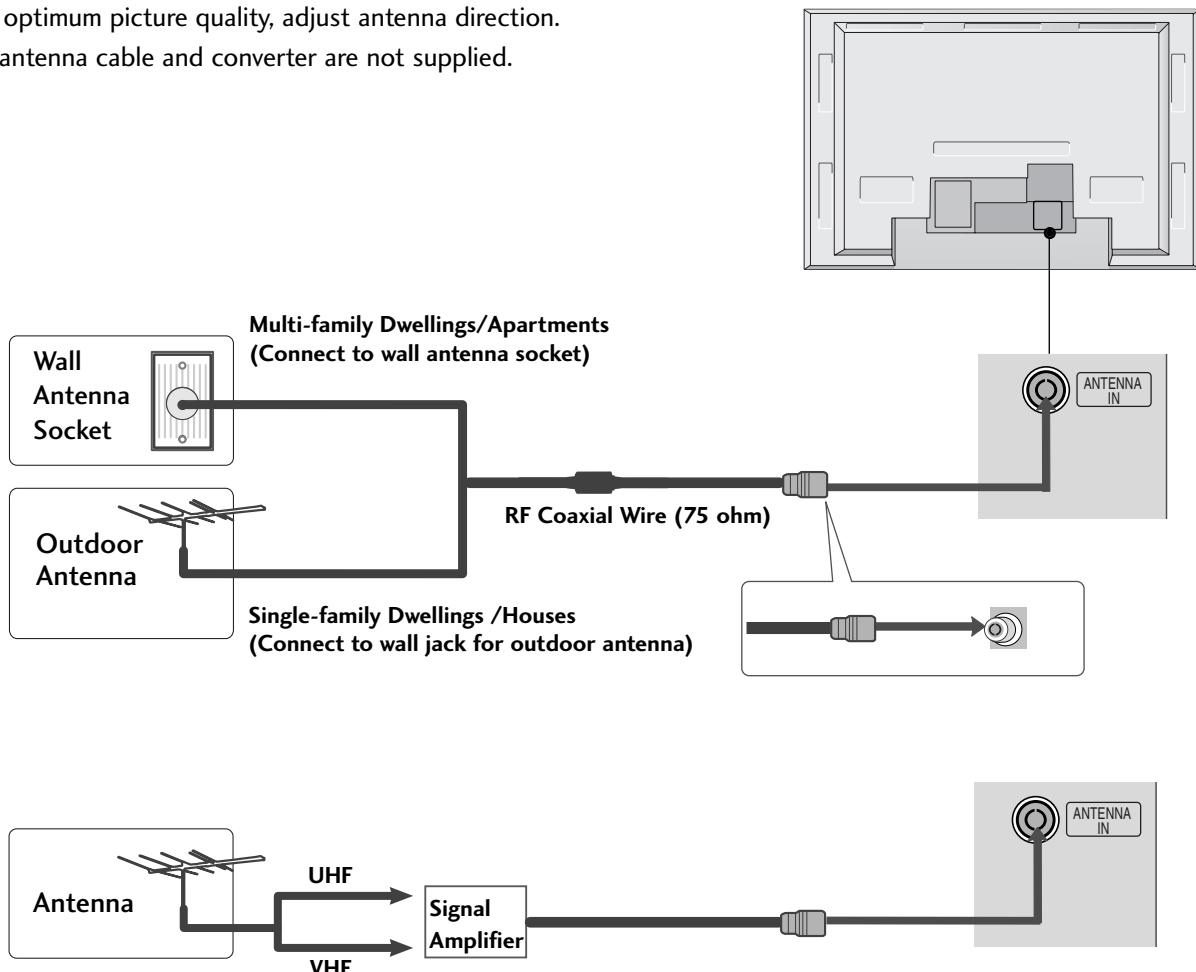
ANTENNA
IN

■ In poor signal areas,to get better picture quality, install a signal amplifier to the antenna as shown to the right.
■ If signal needs to be split for two TVs,use an antenna signal splitter for connection.

EXTERNAL EQUIPMENT SETUP

■ To prevent the equipment damage, never plug in any power cords until you have finished connecting all equipment.

HD RECEIVER SETUP

When connecting with a component cable

① Connect the video outputs (Y, PB, PR) of the digital set top box to the **COMPONENT IN VIDEO** jacks on the set.

② Connect the audio output of the digital set-top box to the **COMPONENT IN AUDIO** jacks on the set.

③ Turn on the digital set-top box.
(Refer to the owner's manual for the digital set-top box.)

④ Select **Component1** input source with using the **INPUT** button on the remote control.
If connected to **COMPONENT IN2**, select **Component2** input source.
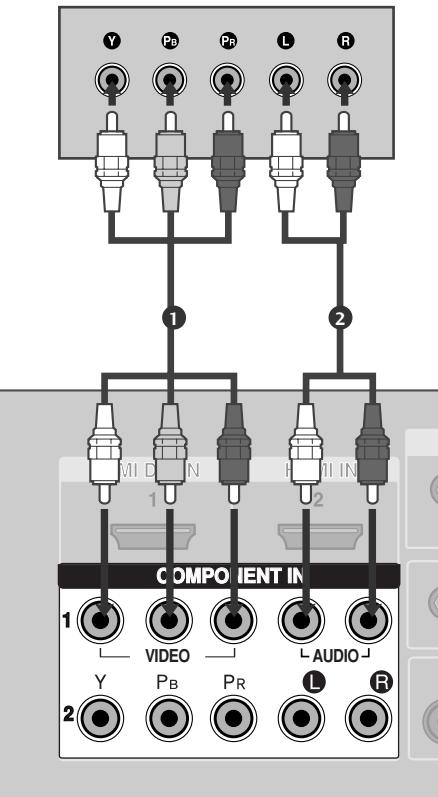
Signal	Component 1/2	HDMI1/DVI, HDMI2
480i/576i	Yes	No
480p/576p	Yes	Yes
720p	Yes	Yes
1080i	Yes	Yes
1080p(50Hz/60Hz)	Yes	Yes

EXTERNAL EQUIPMENT SETUP

When connecting with a HDMI cable

1 Connect the HDMI output of the digital set-top box to the **HDMI/DVI IN 1** or **HDMI IN 2** jack on the set.

2 Select **HDMI1/DVI** or **HDMI2** input source with using the **INPUT** button on the remote control.

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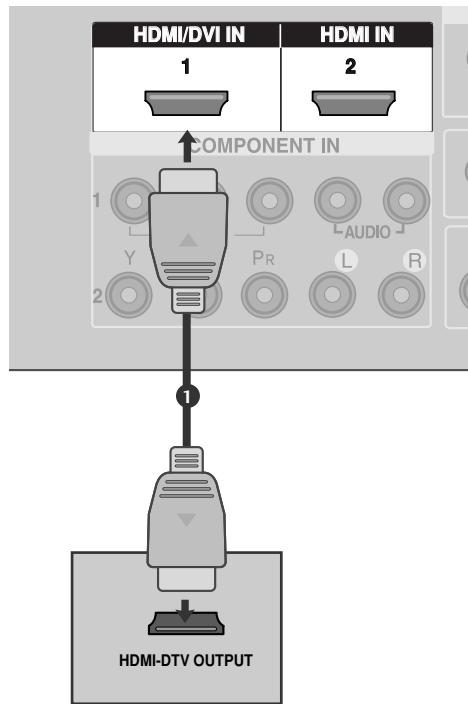
❶ NOTE

► 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 1920x1080i/1080p.

When connecting with a HDMI to DVI cable
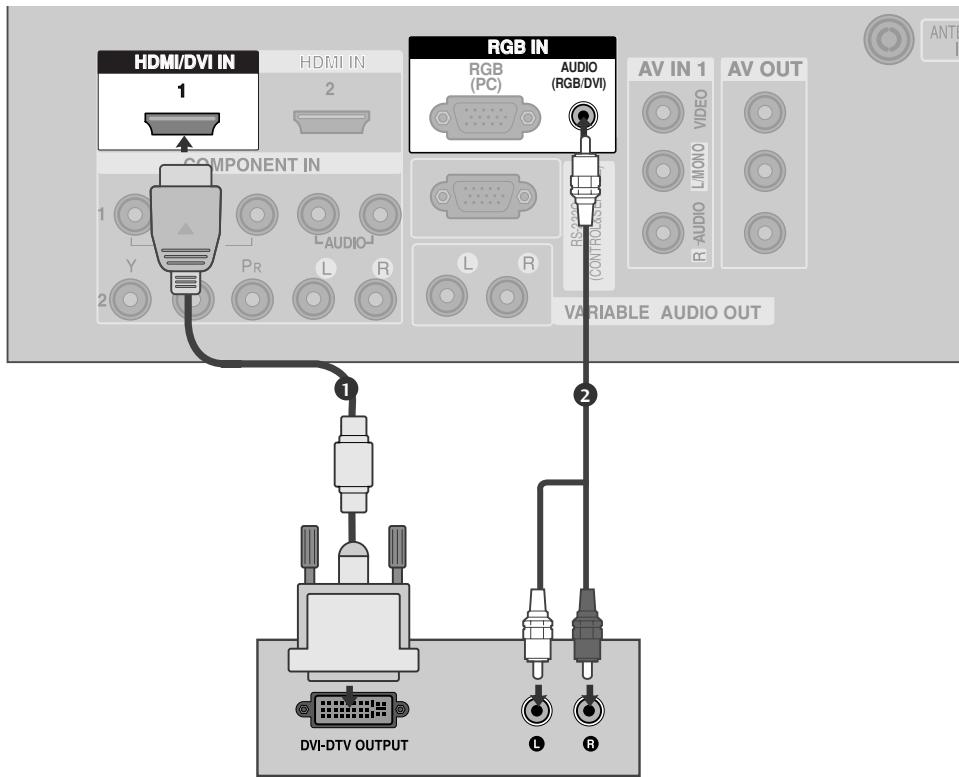
1 Connect the DVI output of the digital set-top box to the **HDMI/DVI IN 1** jack on the set.

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

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

4 Select **HDMI1/DVI** input source with using the **INPUT** button on the remote control.

EXTERNAL EQUIPMENT SETUP

DVD SETUP

When connecting with a component cable

1 Connect the video outputs (Y, PB, PR) of the DVD to the **COMPONENT IN VIDEO** jacks on the set.

2 Connect the audio outputs of the DVD to the **COMPO-NENT IN AUDIO** jacks on the set.

3 Turn on the DVD player, insert a DVD.

4 Select **Component1** input source with using the **INPUT** button on the remote control.
If connected to **COMPONENT IN2**, select **Component2** input source.

5 Refer to the DVD player's manual for operating instructions.
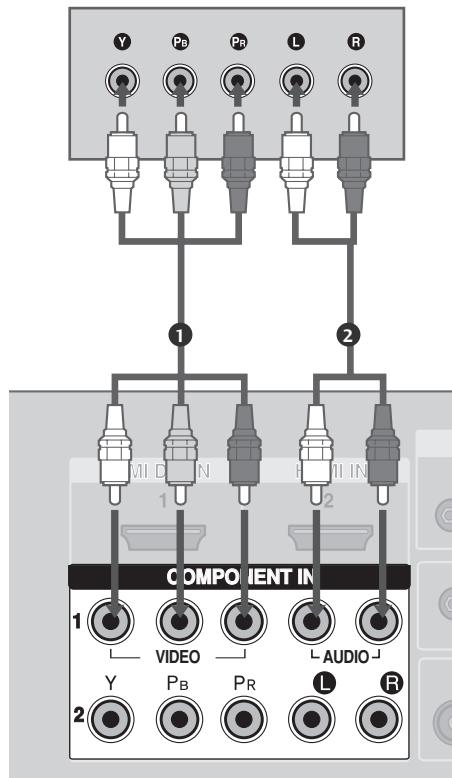
Component Input ports
To get better picture quality, connect a DVD player to the component input ports as shown below.

Component ports on the TV	Y	PB	PR

	Y	PB	PR
Video output ports on DVD player	Y	B-Y	R-Y
	Y	Cb	Cr
	Y	Pb	Pr

When connecting with an S-Video cable

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.

3 Turn on the DVD player, insert a DVD.

4 Select **AV2** input source with using the **INPUT** button on the remote control.

5 Refer to the DVD player's manual for operating instructions.
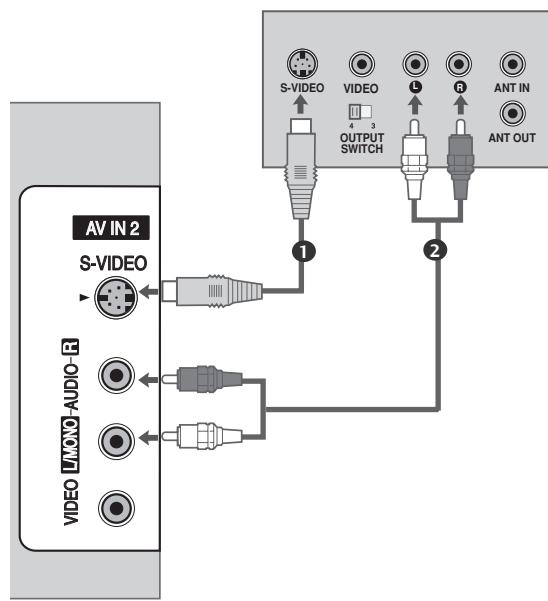
EXTERNAL EQUIPMENT SETUP

When connecting HDMI cable

1 Connect the HDMI output of the DVD to the **HDMI/DVI IN 1** or **HDMI IN 2** jack on the set.

2 Select **HDMI1/DVI** or **HDMI2** input source with using the **INPUT** button on the remote control.

3 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 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 DVD to 1920x1080i/1080p.
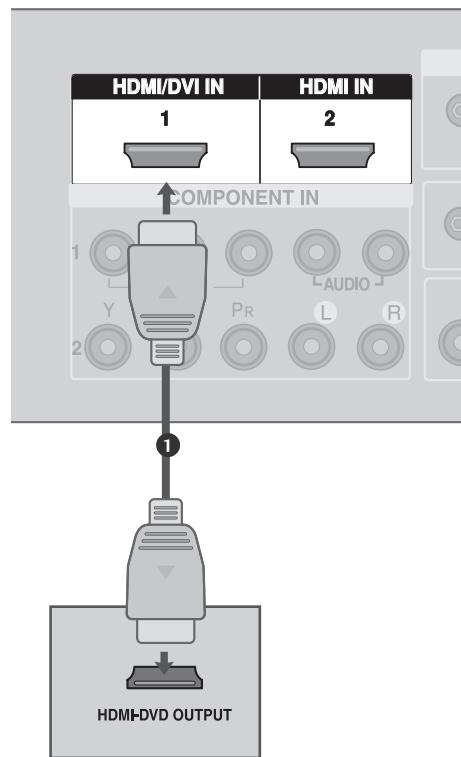
VCR SETUP

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

When connecting with an antenna
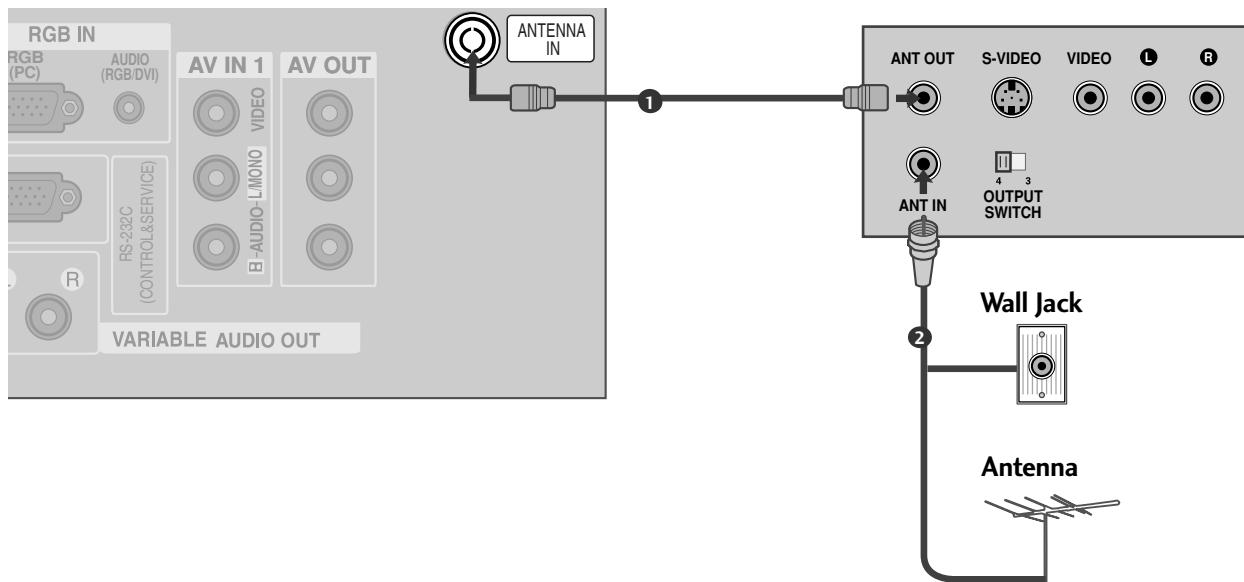
1 Connect the **ANT OUT** socket of the VCR to the **ANTENNA IN** socket on the set.

2 Connect the antenna cable to the **ANT IN** socket of the VCR.

3 Press the **PLAY** button on the VCR and match the appropriate programme between the TV and VCR for viewing.

EXTERNAL EQUIPMENT SETUP

When connecting with a RCA cable
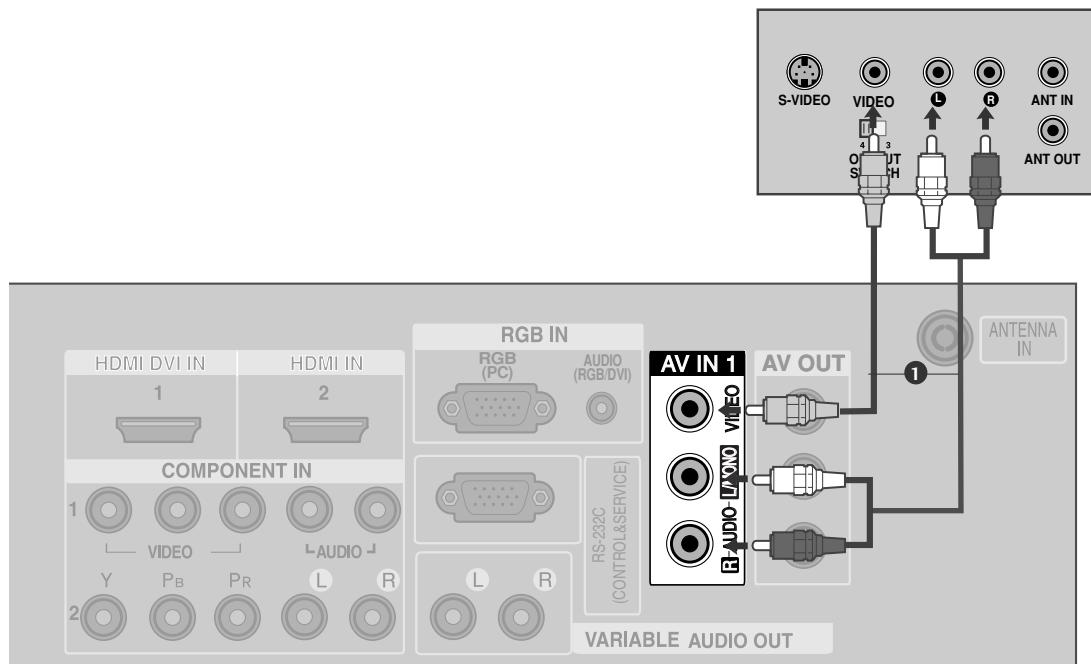
1 Connect the **AUDIO/VIDEO** jacks between TV and VCR. Match the jack colours (Video = yellow, Audio Left = white, and Audio Right = red)

2 Insert a video tape into the VCR and press PLAY on the VCR. (Refer to the VCR owner's manual.)

3 Select **AV1** input source using the **INPUT** button on the remote control.
If connected to **AV IN2**, select **AV2** input source.

❗ NOTE

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

16

When connecting with an S-Video cable

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.

3 Insert a video tape into the VCR and press PLAY on the VCR. (Refer to the VCR owner's manual.)

4 Select **AV2** input source with using the **INPUT** button on the remote control.
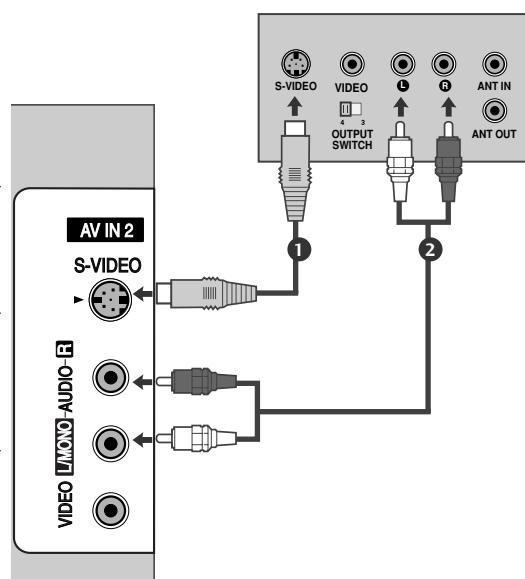
❶ NOTE

► If both S-VIDEO and VIDEO sockets have been connected to the S-VHS VCR simultaneously, only the S-VIDEO can be received.

EXTERNAL EQUIPMENT SETUP

OTHER A/V SOURCE SETUP

Camcorder

Video Game Set

AV IN 2
S-VIDEO

VIDEO L R

①

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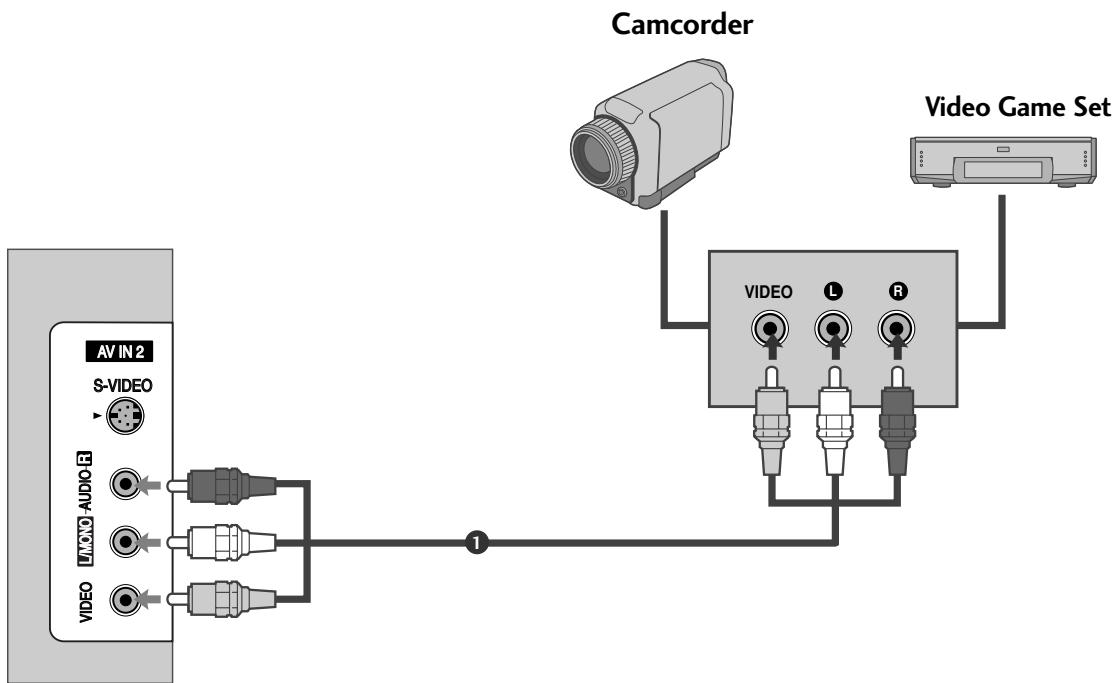
① Connect the **AUDIO/VIDEO** jacks between TV and external equipment. Match the jack colours.
(Video = yellow, Audio Left = white, and Audio Right = red)

---

② Select **AV2** input source with using the **INPUT** button on the remote control.
If connected to **AV IN1**, select **AV1** input source.

---

③ Operate the corresponding external equipment.
Refer to external equipment operating guide.

PC SETUP

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

When connecting with a D-sub 15 pin cable
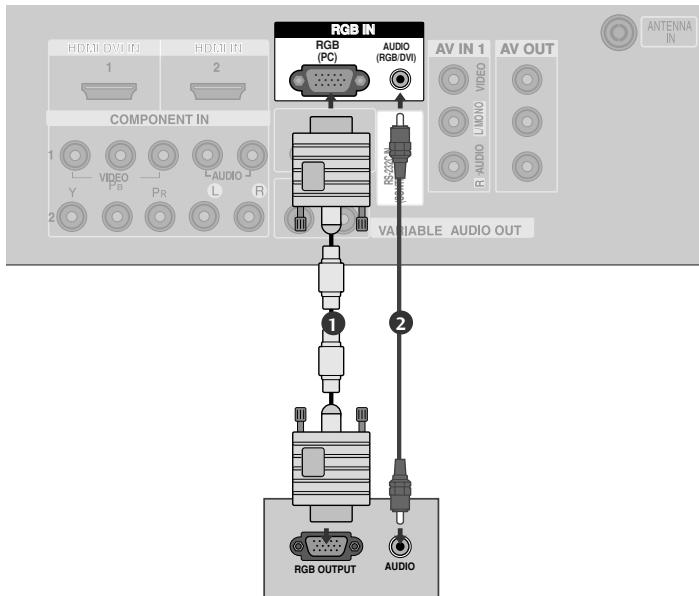
1 Connect the RGB output of the PC to the **RGB (PC)** jack on the set.

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

3 Turn on the PC and the set.

4 Select **RGB PC** input source with using the **INPUT** button on the remote control.

❶ 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 with a HDMI to DVI cable
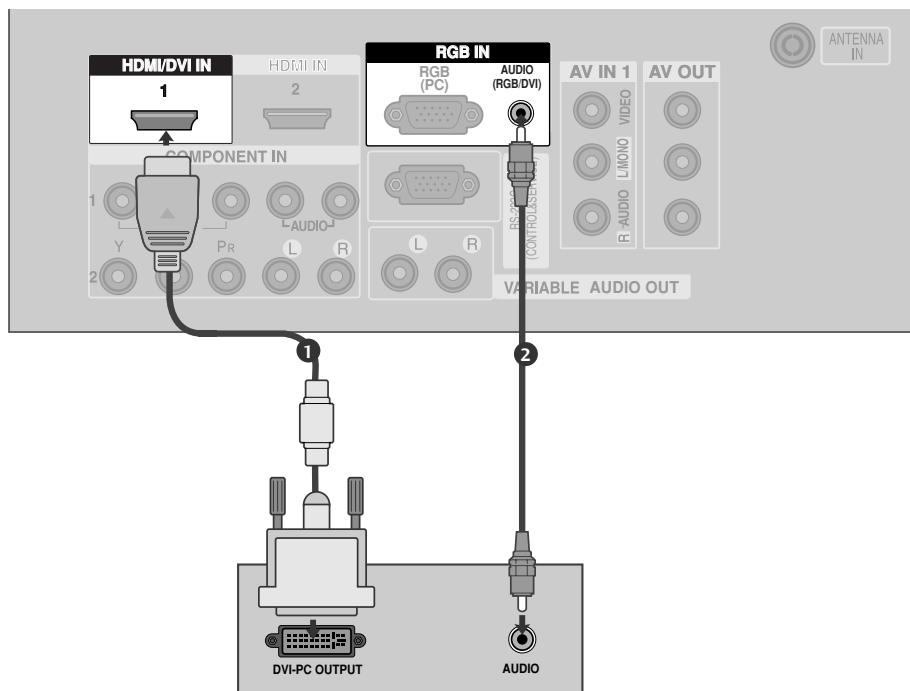
1 Connect the DVI output of the PC to the **HDMI/DVI IN 1** jack on the set.

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

3 Turn on the PC and the set.

4 Select **HDMI1/DVI** input source with using the **INPUT** button on the remote control.

! NOTE

► HDMI2 source does not support DVI source.
► 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.

Supported Display Resolution (RGB[PC]/HDMI[PC]mode)

Resolution	Horizontal Frequency(kHz)	Vertical Frequency(Hz)
720x400	31.469	70.08
640x480	31.469	59.94
800x600	37.879	60.31
1024x768	48.363	60.00
1280x768	47.776	59.870
1280x960 (HDMI[PC]only)	59.699	59.939
1360x768	47.720	59.799
1366x768	47.13	59.65
1280x1024	63.981	60.02
1400x1050 (RGB[PC]only)	65.317	59.978
1600x1200	75.0	60.0
1920x1080	66.587	59.934
1920x1200	74.038	59.950

❶ NOTE

▶ To get the best picture quality, adjust the PC graphics card to 1920x1080, 60Hz.

▶ Depending on the graphics card, DOS mode may not work if a HDMI to DVI Cable is in use.

▶ When Source Devices connected with HDMI 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 Source Devices or contact your service center.

▶ If the HDMI Source Device is not connected to the Cable or if there is a poor cable connection, "No signal" is displayed in the HDMI Input. In this case, that Video Resolution is not supported.

▶ 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.

▶ When you use too long RGB-PC cable, there might be a noise on the screen. We recommend using under 5m of the cable. It provides the best picture quality.

Screen Setup for PC mode

Auto Configure (RGB [PC] mode only)

Automatically adjusts picture position and minimizes image shaking.After adjustment, if the image is still not correct, your set is functioning properly but needs further adjustment.

Auto configure

This function is for the automatic adjustment of the screen position, clock, and phase. The displayed image will unstable for a few seconds while the auto configuration is in progress.
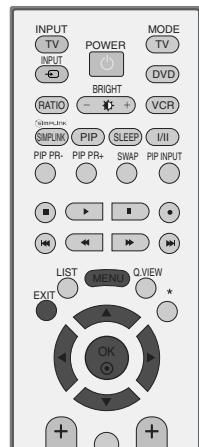
1 Press the **MENU** button and then use ▲ / ▼ button to select the **PICTURE** menu.
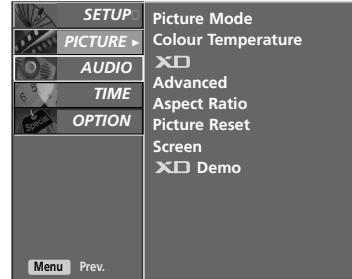
2 Press the ▶ button and then use ▲ / ▼ button to select **Screen**.
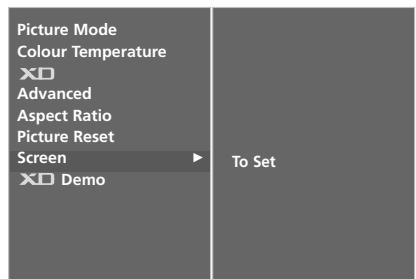
3 Press the ▶ button and then use ▲ / ▼ button to select **Auto Config.**.

4 Press the ▶ button to start **Auto Config.**.

• When **Auto config.** has finished, OK will be shown on screen.
• If the position of the image is still not correct, try Auto adjustment again.

• If picture needs to be adjusted more after Auto adjustment in RGB (PC), you can adjust the **Manual Config.**.

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

SETUP
PICTURE ▶
AUDIO
TIME
OPTION

Picture Mode
Colour Temperature
XD
Advanced
Aspect Ratio
Picture Reset
Screen
XD Demo

Menu   Prev.

❶

Picture Mode
Colour Temperature
XD
Advanced
Aspect Ratio
Picture Reset
Screen   ▶   To Set
XD Demo

❷

Screen

Auto Config.   ▶   To Set
Manual Config.
XGA Mode
Reset

❸❹

Adjustment for screen Phase, Clock, Position

If the picture isn't clear after auto adjustment and especially if characters are still trembling, adjust the picture phase manually.

It's not available to use this function in 1:1 Pixel mode.

To correct the screen size, adjust **Clock**.

This function works in the following mode : RGB[PC], COMPONENT (480i/480p/576i/576p/720p/1080i/1080p), HDMI (480p/576p/720p/1080i/1080p).

It's not available to use Phase, Clock function in COMPONENT (480i/480p/576i/576p/720p/1080i/1080p), HDMI (480p/576p/720p/1080i/1080p).

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.

---

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

2 Press the ► button and then use ▲ / ▼ button to select **Screen**.

3 Press the ► button and then use ▲ / ▼ button to select **Manual Config.**.

4 Press the ► button and then use ▲ / ▼ button to select **Phase**, **Clock**, **H-Position** or **V-Position**.

5 Press the ◄ / ► button to make appropriate adjustments.

6 Press the **EXIT** button to return to TV viewing.
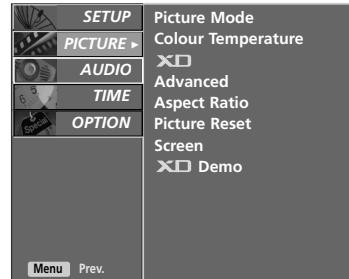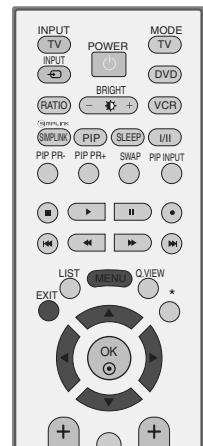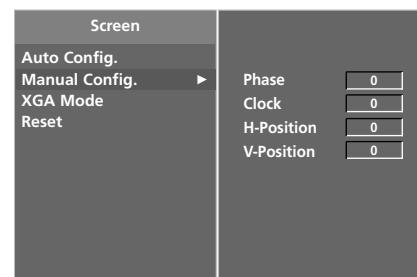
❗ NOTE

► In HDMI or COMPONENT mode, 1080p works at 50Hz/60Hz only.

❶

SETUP	Picture Mode
PICTURE ►	Colour Temperature
AUDIO	XD
TIME	Advanced
OPTION	Aspect Ratio
	Picture Reset
	Screen
	XD Demo

Menu Prev.

Picture Mode
Colour Temperature
XD
Advanced
Aspect Ratio
Picture Reset
Screen ►   To Set
XD Demo

❷

Screen
Auto Config.
Manual Config. ►   Phase   0
XGA Mode   Clock   0
Reset   H-Position 0
                     V-Position 0

❸ ❹ ❺

Selecting Wide XGA/UXGA mode

To see a normal picture, match the resolution of RGB mode and selection of XGA/UXGA mode.

This function works in the following mode: RGB[PC] mode.
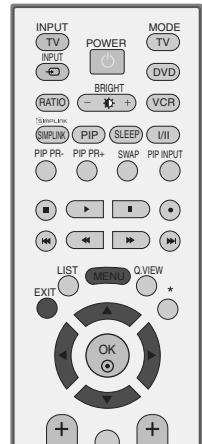
1 Press the **MENU** button and then use ▲ / ▼ button to select the **PICTURE** menu.
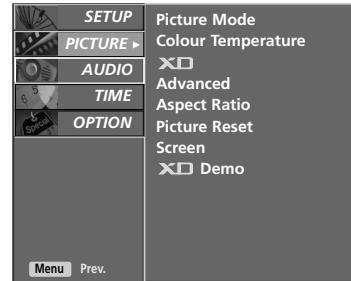
2 Press the ▶ button and then use ▲ / ▼ button to select **Screen**.

3 Press the ▶ button and then use ▲ / ▼ button to select **XGA Mode** (or **UXGA Mode**).
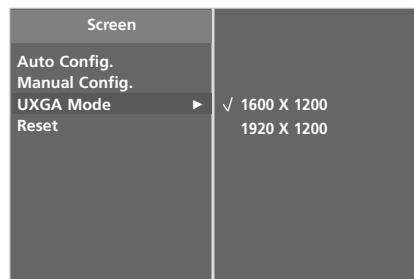
4 Press the ▶ button and then use ▲ / ▼ button to select the desired XGA/UXGA resolution.

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

SETUP
PICTURE ▶
AUDIO
TIME
OPTION

Picture Mode
Colour Temperature
XD
Advanced
Aspect Ratio
Picture Reset
Screen
XD Demo

Menu Prev.

❶

Picture Mode
Colour Temperature
XD
Advanced
Aspect Ratio
Picture Reset
Screen   ▶   To Set
XD Demo

❷

Screen

Auto Config.
Manual Config.
UXGA Mode   ▶   √ 1600 X 1200
Reset   1920 X 1200

❸ ❹

Initializing
(Reset to original factory settings)

This function operates in current mode.
To initialize the adjusted value
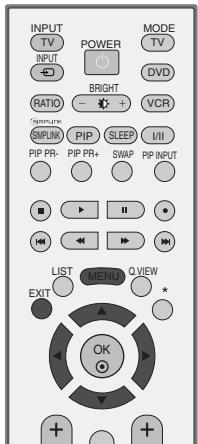
1 Press the MENU button and then use ▲ / ▼ button to select the **PICTURE** menu.

2 Press the ► button and then use ▲ / ▼ button to select **Screen**.

3 Press the ► button and then use ▲ / ▼ button to select **Reset**.

4 Press the ► button.
• You can initialize Position.

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

SETUP	Picture Mode
PICTURE ►	Colour Temperature
AUDIO	X□
TIME	Advanced
OPTION	Aspect Ratio
	Picture Reset
	Screen
	X□ Demo

Menu   Prev.
1

Picture Mode
Colour Temperature
X□
Advanced
Aspect Ratio
Picture Reset
Screen   ►   To Set
X□ Demo

2

Screen

Auto Config.
Manual Config.
XGA Mode
Reset   ►   To Set
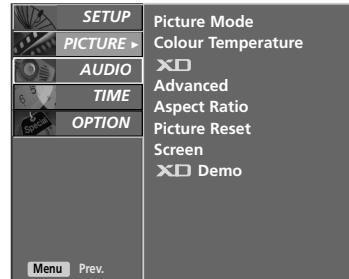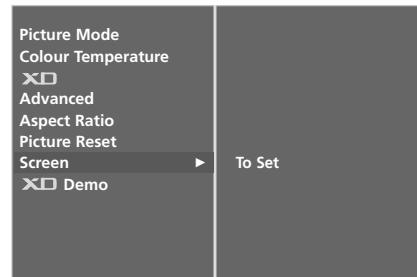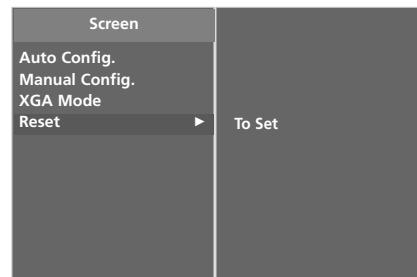
3 4

AV OUTPUT SETUP

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

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.

VIDEO   L   R   S-VIDEO

AV OUT

ANTENNA
IN
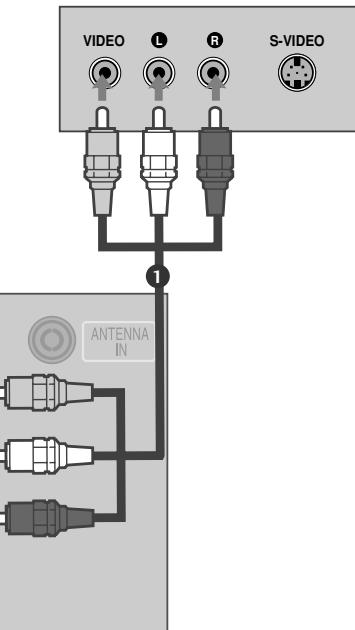
🅞 NOTE

► Component, RGB, HDMI input sources cannot be used for AV out.

► We recommend to use the AV OUT jacks for VCR recording.

EXTERNAL STEREO SETUP

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

① Connect the input jack of the stereo amplifier to the **VARIABLE AUDIO OUT** jacks on the set.

② Set up your speakers through your analog stereo amplifier, according to the instructions provided with the amplifier.
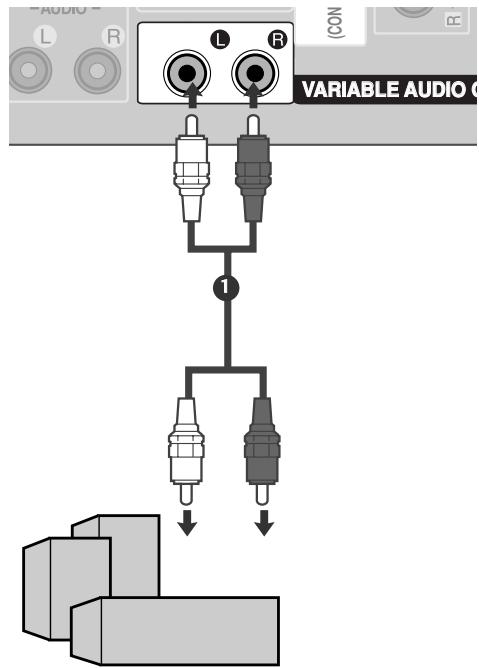
🛈 NOTE

▶ When connecting with external audio equipments, such as amplifiers or speakers, please turn the TV speakers off. (▶ **p.63**)

REMOTE CONTROL KEY FUNCTIONS

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

POWER	Switches the set on from standby or off to standby.
TV INPUT	Returns to the TV viewing from any mode. Switches the set on from standby.
2 INPUT	If you press the button once, the input source OSD will appear on screen as shown. Press the ▲ / ▼ button and then OK button to select the desired input source (AV1, AV2, Component1, Component2, RGB, HDMI1/DVI or HDMI2).

RATIO	Selects your desired picture format.
Brightness adjustment	Adjusts screen brightness. It returns to the default settings brightness by changing mode source.

1 PIP	Switches the sub picture PIP, DW mode.
PIP PR - /+	Selects a programme for the sub picture.
SWAP	Alternates between main and sub picture in PIP/Twin picture mode.
PIP INPUT	Selects the input source for the sub picture in PIP/Twin picture mode.
SIZE	Adjusts the sub picture size.
POSITION	Moves the sub picture.

VCR/DVD control buttons	Controls some video cassette recorders or DVD players when you have already selected DVD or VCR mode button. Control connected AV devices by pressing the ▲ / ▼ / ◀ / ▶, **OK** buttons and buttons for play, stop, pause, fast reverse, fast forward, chapter skip. (The ⊙ button does not provide such functions.)

EXIT	Clears all on-screen displays and returns to TV viewing from any menu.
LIST	Displays the programme table.
MENU	Selects a menu.
Q.VIEW	Returns to the previously viewed programme.
∗	No function

MODE	Selects the remote operating modes.	

SIMPLINK	See a list of AV devices connected to TV. When you toggle this button, the Simplink menu appears at the screen.(▶ p.41)	
SLEEP	Sets the sleep timer.	
I/II	Selects the sound output.	
Coloured buttons	These buttons are used for **Programme edit**.	

THUMBSTICK (Up/Down/Left Right)	Allows you to navigate the on-screen menus and adjust the system settings to your preference.	
OK	Accepts your selection or displays the current mode.	

VOLUME UP/DOWN	Adjusts the volume.	
FAV	Displays the selected favourite programme.	
MUTE	Switches the sound on or off.	
Programme UP/DOWN	Selects a programme.	
0~9 number button	Selects a programme. Selects numbered items in a menu.	

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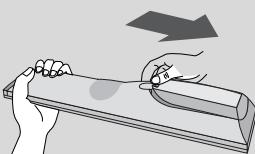
- Open the battery compartment cover on the back side and install the batteries matching correct polarity (+with +,-with -).
- Install two 1.5V AA batteries. Don't mix old or used batteries with new ones.
- Close cover.

TURNING ON THE TV

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

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

■ In standby mode to turn TV on, press the ⏻/Ι , **INPUT**, **PR ▲ / ▼** button on the TV or press the **POWER**, **TV**, **INPUT**, **PR + / -**, **Number(0~9)** button on the remote control and then the TV will switch on.
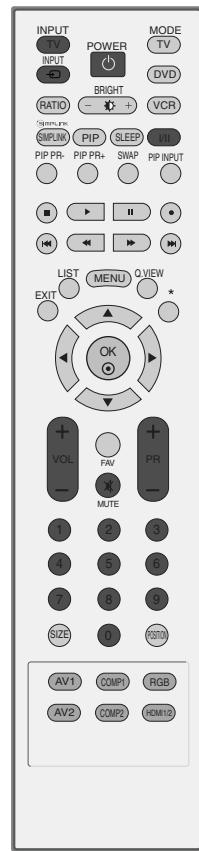
PROGRAMME SELECTION

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

VOLUME ADJUSTMENT

1 Press the **VOL + / -** button to adjust the volume.

2 If you want to switch the sound off, press the **MUTE** button.

3 You can cancel the Mute function by pressing the **MUTE**, **VOL + / -** or **I/II** button.

ON SCREEN MENUS SELECTION AND ADJUSTMENT

Your TV's OSD (On Screen Display) may differ slightly from what is shown in this manual.
The OSD mainly use pictures for the Plasma TV models.

1 Press the **MENU** button and then ▲ / ▼ button to display each menu.

2 Press the ▶ button and then ▲ / ▼ button to select a menu item.

3 Change the setting of an item in the sub or pull-down menu with ◀ / ▶ button.
You can move to the higher level menu by pressing the **OK** or **MENU** button.

SETUP ▶	Auto Tuning
PICTURE	Manual Tuning
AUDIO	Programme Edit
TIME	Favourite Prog.
OPTION	

Menu Prev.

SETUP MENU

⇄

SETUP	Picture Mode
PICTURE ▶	Colour Temperature
AUDIO	XD
TIME	Advanced
OPTION	Aspect Ratio
	Picture Reset
	Screen
	XD Demo

Menu Prev.

PICTURE MENU

⇄

SETUP	Sound Mode	
PICTURE	Auto Volume	
AUDIO ▶	Balance	0
TIME	TV Speaker	
OPTION		

Menu Prev.

AUDIO MENU

⇕

SETUP	Language
PICTURE	Input Label
AUDIO	SIMPLINK
TIME	Key Lock
OPTION ▶	ISM Method
	Low Power
	Set ID

Menu Prev.

OPTION MENU

⇄

SETUP	Clock
PICTURE	Off Time
AUDIO	On Time
TIME ▶	Sleep Time
OPTION	Auto Sleep

Menu Prev.

TIME MENU

ⓘ NOTE

a. The OSD (On Screen Display) function enables you to adjust the screen status conveniently since it provides graphical presentation.

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

c. In the teletext mode, menus are not displayed

AUTO PROGRAMME TUNING

Up to 200, TV stations can be stored by programme numbers (0 to 199). Once you have preset the stations, you will be able to use the PR + / - or NUMBER buttons to scan the stations you have programmed.

Stations can be tuned using automatic or manual modes.

All stations that can be received are stored by this method. It is recommended that you use auto programme during installation of this set.

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

2 Press the ▶ button and then ▲ / ▼ button to select **Auto Tuning**.

3 Press the ▶ button and then ▲ / ▼ button to select **System**.

4 Press the ◀ / ▶ button to select a TV system menu;

BG: PAL B/G, SECAM B/G (Europe / East Europe / Asia / New/Zealand / M.East / Africa / Australia)

I : PAL I/II (U.K. / Ireland / Hong Kong / South Africa)

DK: PAL D/K, SECAM D/K (East Europe / China / Africa / CIS)

M : (USA / Korea / Philippines)

5 Press the ▲ / ▼ button to select **Storage From**.

6 Press the ◀ / ▶ button or NUMBER buttons to select the beginning programme number. If you use NUMBER buttons, any number under 10 is entered with a numeric '0' in front of it, i.e.'0 5' for 5.

7 Press the ▲ / ▼ button to select **Start**.

8 Press the ▶ button to begin auto tuning.
All receivable stations are stored.

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

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

SETUP ▶	Auto Tuning
PICTURE	Manual Tuning
AUDIO	Programme Edit
TIME	Favourite Prog.
OPTION	

Menu   Prev.

❶

Auto Tuning ▶	System	BG
Manual Tuning		
Programme Edit	Storage From	5
Favourite Prog.		
	Start	

❷❸❹❺❻❼

Auto Tuning

Name	C 04
System	M
Storage	1

0 %

MENU Stop

❽
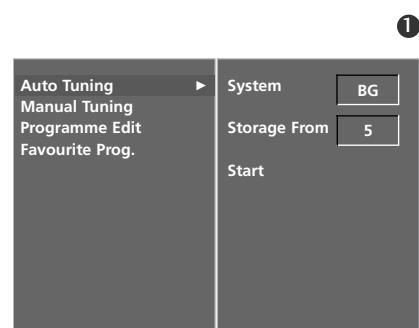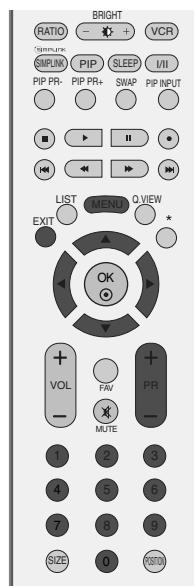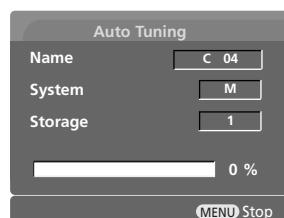
MANUAL PROGRAMME TUNING

Manual programme lets you manually tune and arrange the stations in whatever order you desire.

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

2 Press the ▶ button and then ▲ / ▼ button to select **Manual Tuning**.

3 Press the ▶ button and then ▲ / ▼ button to select **Storage**.

4 Press the ◀ / ▶ button or NUMBER buttons to select the desired programme number (0 to 199). If you use NUMBER buttons, any number under 10 is entered with a numeric '0' in front of it, i.e. '**0 5**' for 5.

5 Press the ▲ / ▼ button to select **System**.

6 Press the ◀ / ▶ button to select a TV system menu;
BG : PAL B/G, SECAM B/G (Europe / East Europe / Asia / NewZealand / M.East / Africa / Australia)
I   : PAL I/II (U.K. / Ireland / Hong Kong / South Africa)
DK : PAL D/K, SECAM D/K (East Europe / China / Africa / CIS)
M : (USA / Korea / Philippines)

7 Press the ▲ / ▼ button to select **Band**.

8 Press the ◀ / ▶ button to select **V/UHF** or **Cable**.

9 Press the ▲ / ▼ button to select **Channel**.

10 You can select the desired programme number with the ◀ / ▶ button or number buttons. If possible, select the programme number directly with the number buttons. Any number under 10 is entered with a numeric '0' in front of it, i.e. '**0 5**' for 5.

11 Press the ▲ / ▼ button to select **Search**.

12 Press the ◀ / ▶ button to commence searching. If a station is found the search will stop.

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

14 To store another station, repeat steps **3** to **13**.

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

SETUP ▶	Auto Tuning
PICTURE	Manual Tuning
AUDIO	Programme Edit
TIME	Favourite Prog.
OPTION	

Menu Prev.

❶

Auto Tuning		Storage	◀▶5
Manual Tuning	▶	System	BG
Programme Edit		Band	V/UHF
Favourite Prog.		Channel	5
		Fine	
		Search	
		Name	
			C 05
		Booster	Off

◎ Store

❷ ❸ ❹ ❺ ❻ ❼
❽ ❾ ❿ ⓫ ⓬
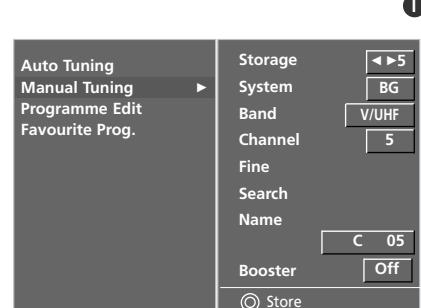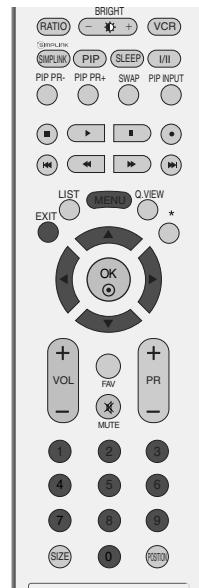
FINE TUNING

Normally fine tuning is only necessary if reception is poor.
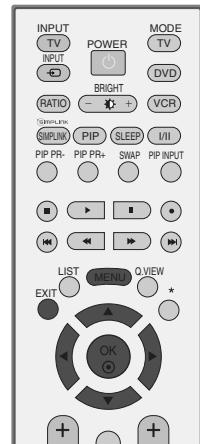
1 Press the **MENU** button and then ▲ / ▼ button to select the **SETUP** menu.

2 Press the ► button and then ▲ / ▼ button to select **Manual Tuning**.
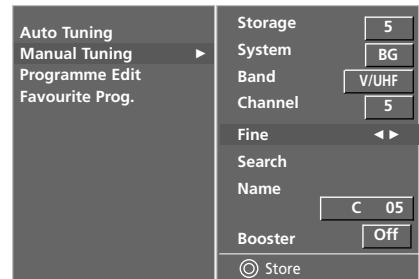
3 Press the ► button and then ▲ / ▼ button to select **Fine**.

4 Press the ◄ / ► button to fine tune for the best picture and sound.

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

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

SETUP ►	Auto Tuning
PICTURE	Manual Tuning
AUDIO	Programme Edit
TIME	Favourite Prog.
OPTION	

Menu   Prev.

❶

Auto Tuning		Storage	5
Manual Tuning	►	System	BG
Programme Edit		Band	V/UHF
Favourite Prog.		Channel	5
		Fine	◄ ►
		Search	
		Name	
			C 05
		Booster	Off
		◎ Store	

❷ ❸ ❹ ❺

ASSIGNING A STATION NAME

You can assign a station name with five characters to each pro-
gramme number.

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

2 Press the ▶ button and then ▲ / ▼ button to select
  Manual Tuning.
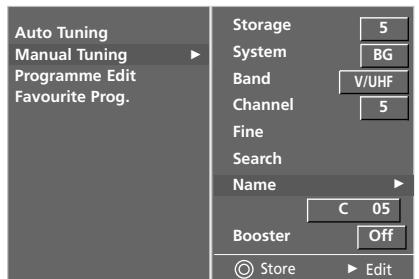
3 Press the ▶ button and then ▲ / ▼ button to select
  Name.

4 Press the ▶ button and then ▲ / ▼ button. You can use a
  blank, **+**, **-**, the number **0** to **9** and the alphabet **A** to **Z**.

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

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

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

SETUP ▶ Auto Tuning
PICTURE   Manual Tuning
AUDIO   Programme Edit
TIME   Favourite Prog.
OPTION

Menu   Prev.

❶

Auto Tuning   Storage   5
Manual Tuning   ▶   System   BG
Programme Edit   Band   V/UHF
Favourite Prog.   Channel   5
                     Fine
                     Search
                     Name   ▶
                                  C   05
                     Booster   Off
                  ◎ Store   ▶ Edit

❷❸❹❺❻

35

WATCHING TV / PROGRAMME CONTROL

BOOSTER

In some models, **Booster** is an optional function. Only a set with **Booster** can perform this function.

If the reception is poor at the fringe area of TV signal, select **Booster** to **On**.
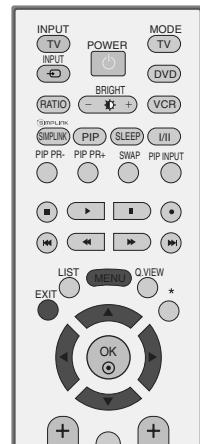
① Press the **MENU** button and then ▲ / ▼ button to select the **SETUP** menu.

② Press the ► button and then use ▲ / ▼ button to select **Manual Tuning**.
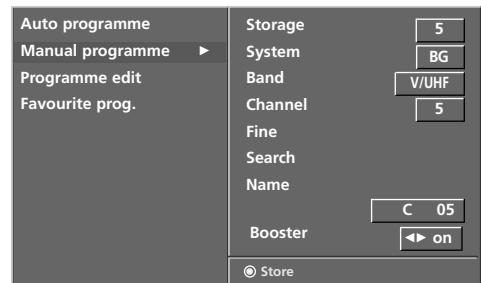
③ Press the ► button and then use ▲ / ▼ button to select **Booster**.

④ Press the ► button and then use ◄ / ► button to select **On** or **Off**.

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

SETUP ►	Auto Tuning
PICTURE	Manual Tuning
AUDIO	Programme Edit
TIME	Favourite Prog.
OPTION	

Menu   Prev.

❶

Auto programme	Storage	5
Manual programme ►	System	BG
Programme edit	Band	V/UHF
Favourite prog.	Channel	5
	Fine	
	Search	
	Name	
		C 05
	Booster	◄► on

◉ Store

❷ ❸

WATCHING TV / PROGRAMME CONTROL

36

PROGRAMME EDIT

This function enables you to delete or skip the stored pro-
grammes. Also you can move some stations to other programme
numbers or copy a blank station data into the selected pro-
gramme number.
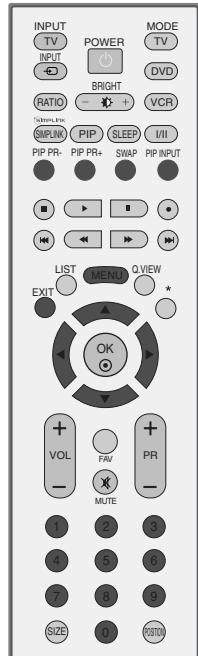
1 Press the **MENU** button and then ▲ / ▼ button to select
the **SETUP** menu.

**2** Press the ► button and then ▲ / ▼ button to select
Programme Edit.

3 Press the ► button to display the Programme edit menu.

■ **Deleting a programme**
1.Select a programme to be deleted with the ▲ / ▼ / ◄ / ►
button.
2.Press the RED button twice.
The selected programme is deleted, all the following
programmes are shifted up one position.

■ **Copying a programme**
1.Select a programme to be copied with the ▲ / ▼ / ◄ / ►
button.
2.Press the GREEN button.
All the following programmes are shifted down one position.

■ **Moving a programme**
1.Select a programme to be moved with the ▲ / ▼ / ◄ / ►
button.
2.Press the YELLOW button.
3.Move the programme to the desired programme number with
the ▲ / ▼ / ◄ / ► button.
4.Press the YELLOW button again to release this function.

■ **Skipping a programme number**
1.Select a programme number to be skipped with the ▲ / ▼ /
◄ / ► button.
2.Press the BLUE button. The skipped programme turns to blue.
3.Press the BLUE button again to release the skipped pro-
gramme.
When a programme number is skipped it means that you will
be unable to select it using the ▲ / ▼ button during normal
TV viewing. If you want to select the skipped programme,
directly enter the programme number with the NUMBER but-
tons or select it in the programme edit or table menu.

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

SETUP ►	Auto Tuning
PICTURE	Manual Tuning
AUDIO	Programme Edit
TIME	Favourite Prog.
OPTION	

Menu Prev.

❶

Auto Tuning	
Manual Tuning	
Programme Edit ►	To Set
Favourite Prog.	

❷

Programme Edit

0	C 01	5	S 16
1	C 05	6	S 17
2	C 06	7	C 04
3	S 95	8	BLN 2
4	S 15	9	S 22

● Delete   ● Copy
● Move   ● Skip
Menu Prev.   ◇ ◉

❸
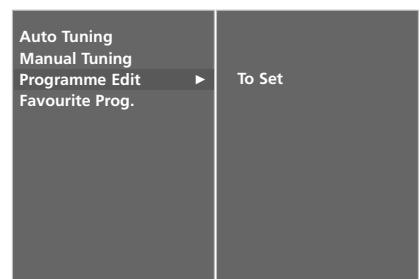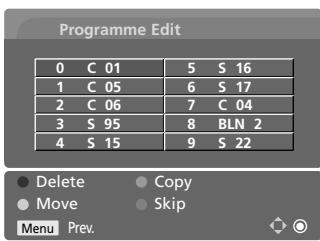
FAVOURITE PROGRAMME

This function lets you select your favourite programmes directly.

Repeatedly press the **FAV** button to select stored favourite pro-
grammes.
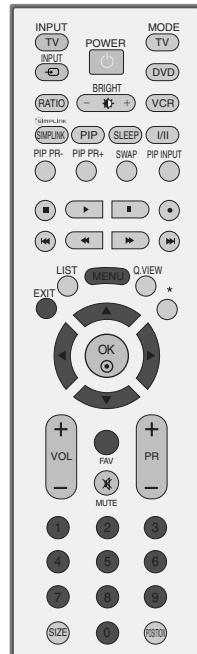
1 Press the **MENU** button and then ▲ / ▼ button to select the
SETUP menu.

**2** Press the ► button and then ▲ / ▼ button to select
Favourite Prog..

3 Press the ► button.

4 Press the ▲ / ▼ button to select - - - - - - -.

5 Select a desired programme with the ◄ / ► button or NUM-
BER buttons. Any number under 10 is entered with a numeric
'0'in front of it, i.e.'*0 5*' for 5.

6 To store another programme, repeat steps **4** to **5**.
You can store up to 8 programmes.

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

SETUP ►	Auto Tuning
PICTURE	Manual Tuning
AUDIO	Programme Edit
TIME	Favourite Prog.
OPTION	

Menu   Prev.

❶

Auto Tuning
Manual Tuning
Programme Edit
Favourite Prog.   ►

-- ------
-- ------
-- ------
-- ------
-- ------
-- ------
-- ------
-- ------

❷❸❹❺

CALLING THE PROGRAMME LIST

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 list menu.

The programme list appears on the screen.

One programme list contains ten programmes as shown.

> ❗ **NOTE**
>
> a. You may find some blue programmes. They have been set up to be skipped by auto programming or in the programme edit mode.
> b. Some programmes with the channel number shown in the programme list indicate there is no station name assigned.

■ **Selecting a programme in the programme list**

Select a programme with the ▲ / ▼ / ◄ / ► button.

Then press the **OK** button. The set switches to the chosen programme number.

■ **Paging through a programme list**

There are 10 programme list pages in which contain 100 programmes. Pressing the ▲ / ▼ / ◄ / ► button repeatedly turns the pages.

Press the **LIST** button to return to normal TV viewing.
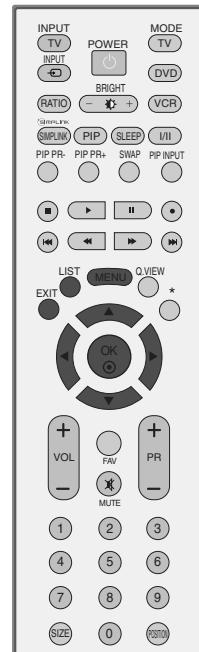
Programme List			
0	-----	5	S 02
1	C 01	6	S 04
2	C 04	7	C 08
3	C 05	8	S 11
4	BLN 2	9	S 28

INPUT SOURCE SELECTION

Sets a label to each input source which is not in use when you press **INPUT** button.
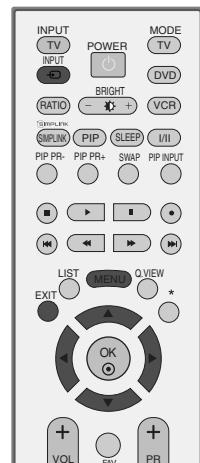
1 Press the **MENU** button and then use ▲ or ▼ button to select the **OPTION** menu.
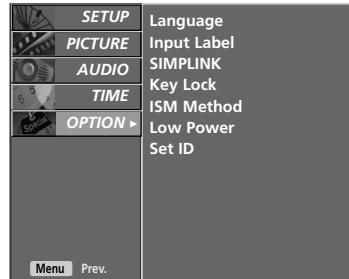
2 Press the ► button and then use ▲ or ▼ button to select **Input Label**.
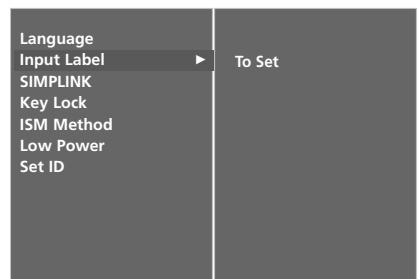
3 Press the ► button and then use ▲ or ▼ button to select the source: AV1, AV2, Component1/2, RGB, HDMI1/DVI or HDMI2.
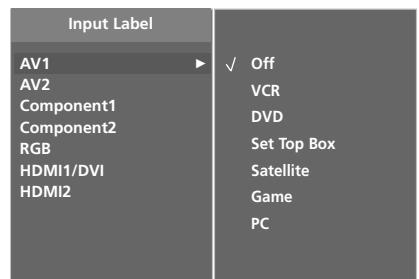
4 Press the ► button and then use ▲ or ▼ button to select the label.

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

SETUP	Language
PICTURE	**Input Label**
AUDIO	SIMPLINK
TIME	Key Lock
OPTION ►	ISM Method
	Low Power
	Set ID

Menu   Prev.

❶

Language	
Input Label ►	To Set
SIMPLINK	
Key Lock	
ISM Method	
Low Power	
Set ID	

❷

Input Label	
AV1 ►	√ Off
AV2	VCR
Component1	DVD
Component2	Set Top Box
RGB	Satellite
HDMI1/DVI	Game
HDMI2	PC

❸

SIMPLINK

This operates only for the devices with the SIMPLINK logo.
Please check the SIMPLINK logo.

This allows you to control and play other AV devices connected
to the display through HDMI cable without additional cables
and settings.

If you do not want SIMPLINK menu, select "OFF".
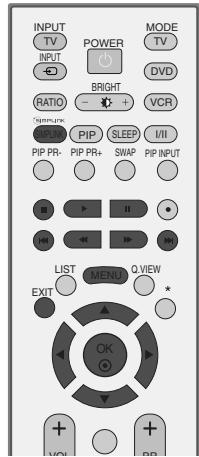
① Press the **MENU** button and then ▲ / ▼ button to select the
OPTION menu.

② Press the ▶ button and then ▲ / ▼ button to select **SIM-PLINK**.
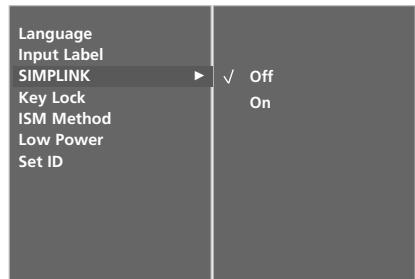
③ Press the ▶ button and then ▲ / ▼ button to select **On** or
Off.

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

SETUP	Language
PICTURE	Input Label
AUDIO	SIMPLINK
TIME	Key Lock
	ISM Method
OPTION ▶	Low Power
	Set ID

Menu Prev.

❶

Language		
Input Label		
SIMPLINK	▶	√ Off
Key Lock		On
ISM Method		
Low Power		
Set ID		

❷ ❸

SIMPLINK Functions

Disc playback

Control connected AV devices by pressing the ▲ / ▼ / ◄ / ►, **OK** buttons and buttons for play, stop, pause, fast reverse, fast forward, chapter skip.(The ⊙ button does not provide such functions)

Direct Play

After connecting AV devices to TV, you can directly control the devices and play media without additional settings.

Select AV device

Enables you to select one of AV devices connected to TV and play it.

Power off all devices

When you power off TV, all connected devices are turned off.

Switch audio-out

Offers an easy way to switch audio-out.

* A device, which is connected to TV through HDMI cable but does not support Simplink, does not provide this function.

SIMPLINK Menu

Press the ▲ / ▼ / ◄ / ► button and then OK button to select the desired SIMPLINK source.

❶ **TV viewing :** Switch to the previous TV programme regardless of the current mode.

❷ **DISC playback :** Select and play discs. When multiple discs are available, the titles of the discs are conveniently displayed at the bottom of the screen.

❸ **VCR playback :** Play and control the connected VCR.

❹ **HDD Recordings playback :** Play and control recordings stored in HDD.

❺ **Audio Out to Home theater/Audio Out to TV :** Select Home theater or TV speaker for Audio Out.

► Selected Device

► When no device is connected (displayed in gray)

► When a device is connected (displayed in bright colour)

ⓘ NOTE

► Connect the HDMI/DVI IN or HDMI IN terminal of the TV to the rear terminal (HDMI terminal) of the SIMPLINK device with the HDMI cable.
► After connecting the HDMI terminal for the home theater with SIMPLINK function in the above method, connect the VARIABLE AUDIO OUT terminal on the back of the TV to the VARIABLE AUDIO IN terminal on the back of the SIMPLINK device with the VARIABLE AUDIO OUT cable.
► When operating the external device with SIMPLINK, press the TV button among the MODE button on the remote controller.
► When you switch the Input source with the INPUT button on the remote controller, you can stop the operation of device controlled by SIMPLINK.
► When you select or operate the media device with home theater function, the speaker automatically switches to home theater speaker (HT speaker).

KEY 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.

This set is programmed to remember which option it was last set to even if you turn the set off.

①   Press the **MENU** button and then ▲ / ▼ button to select the **OPTION** menu.
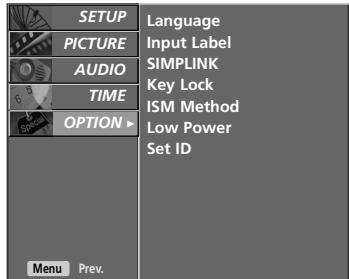
②   Press the ▶ button and then ▲ / ▼ button to select **Key Lock**.
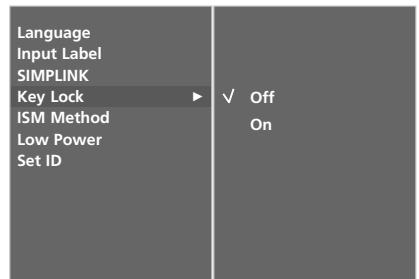
③   Press the ▶ button and then ▲ / ▼ button to select **On** or **Off**.

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

SETUP	Language
PICTURE	Input Label
AUDIO	SIMPLINK
TIME	Key Lock
OPTION ▶	ISM Method
	Low Power
	Set ID

Menu Prev.

❶

Language	
Input Label	
SIMPLINK	
Key Lock ▶	√ Off
ISM Method	On
Low Power	
Set ID	

❷❸

🛈 NOTE

► In **Key Lock 'On'**, if the set is turned off, press the ⏻ / I, **INPUT**, **PR** ▲ / ▼ button on the set or **POWER, INPUT, TV, PR +/-** or NUMBER buttons on the remote control then the set will be turned on.

► With the **Key Lock On**, the display 'Key Lock on' appears on the screen if any button on the front panel is pressed while viewing the set.

PICTURE CONTROL

WATCHING PIP(PICTURE-IN-PICTURE)

PIP lets you view 2 different inputs (sources) on your TV screen at the same time. One source will be large, and the other source will show a smaller inset image.
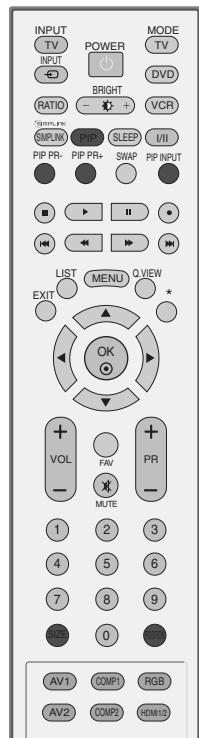
Watching PIP/Double Window

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

PIP Mode   **DW1 Mode**   **DW2 Mode**

PIP Off
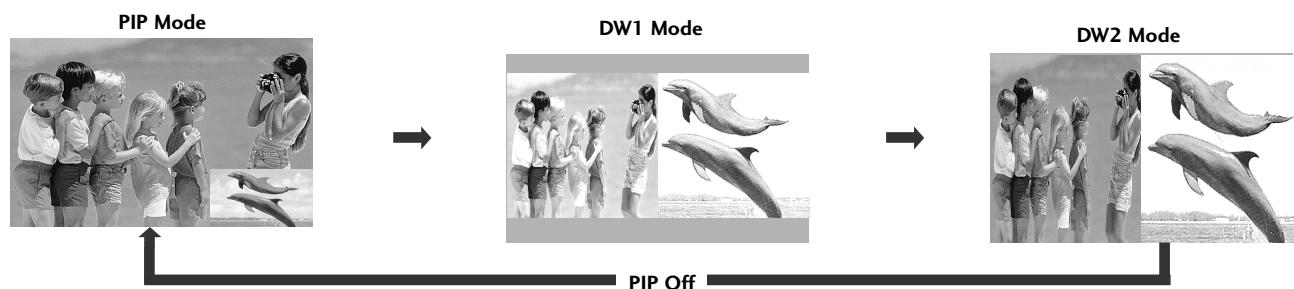
Programme Selection for Sub Picture

Press the **PIP PR +/-** button to select a programme for the sub picture.

The selected programme number is displayed just below the programme number of main picture.

Input Source Selection for Sub Picture

Press the **PIP INPUT** button to select the input source for the sub picture.
Each press of **PIP INPUT** button is pressed, each input source for the sub picture is displayed.

Sub Picture Size Adjustment (PIP mode only)

Press the **SIZE** button to adjust the sub picture size.
With **SIZE** button in PIP mode, sub picture is adjusted.

Moving the Sub Picture (PIP mode only)

Press the **POSITION** button.
Repeatedly press the **POSITION** button then sub picture moves.
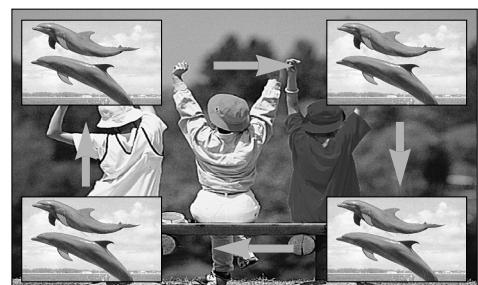
PICTURE CONTROL

PICTURE SIZE (ASPECT RATIO)CONTROL

You can watch the screen in various picture formats; **Spectacle**, **Original**, **4:3**, **16:9**, **14:9**, **Zoom1/2** and **1:1 Pixel**.

If a fixed image is displayed on the screen for a long time, that fixed image may become imprinted on the screen and remain visible.

There might be uncomfortable in full mode. Then change into other mode.

You can adjust the enlarge proportion using ▲ / ▼ button.

This function works in the following signal.
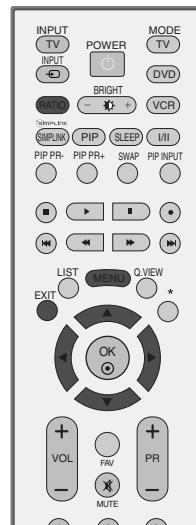
1 Press the **RATIO** button repeatedly to select the desired picture format.
You can also adjust **Aspect Ratio** in the **PICTURE** menu.

• **Spectacle**
When your TV receives the wide screen signal, when selected it will adjust the picture horizontally, in non-linear proportion, to fill the entire screen.

Spectacle ▲▼

• **Original**
When your TV receives the wide screen signal, it will be automatically changed to the picture format to be sent.
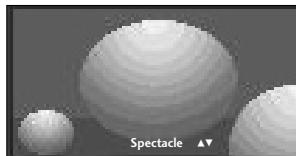
Original

• **4:3**
Following selection will lead you to view a picture with an original 4:3 aspect ratio, with gray bars appearing at both the left and right sides.

4:3

• **16:9**
Following selection will lead you to adjust the picture horizontally, in a linear proportion, to fill the entire screen (useful for viewing 4:3 formatted DVDs).

16:9
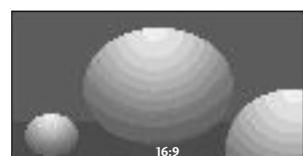
• **14:9**

You can enjoy the picture format of 14:9 or general TV programme through the 14:9 mode. The screen 14:9 is viewed just like that the screen 4:3 is magnified to the left / right.

• **Zoom1**

Following selection will lead you to view the picture without any alternation, while filling the entire screen. However, the top and bottom portions of the picture will be cropped.
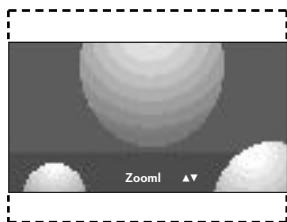
• **Zoom2**

Choose Zoom2 when you want the picture to be altered, both horizontally extended and vertically cropped. The picture taking a halfway trade off between alteration and screen coverage.
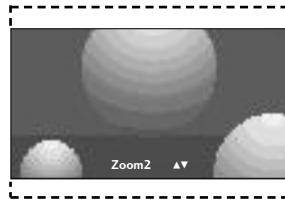
• **1:1Pixel**

Following Selection will lead to you view the picture of best quality without loss of original picture in high resolution image.

PICTURE CONTROL

47

PICTURE CONTROL

PRESET PICTURE SETTINGS

Picture Mode-Preset

Dynamic   Select this option to display with a sharp image.
Standard   The most general and natural screen display status.
Mild   Select this option to display with a mild image.
User 1/2   Select this option to use the user-defined setting.
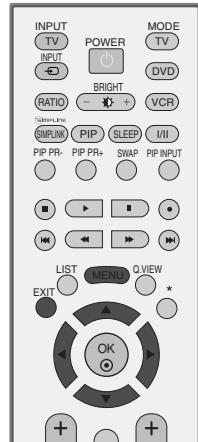
① Press the **MENU** button and then ▲ / ▼ button to select the **PICTURE** menu.
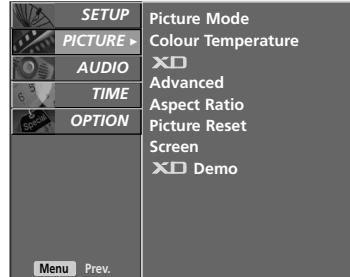
② Press the ▶ button and then ▲ / ▼ button to select **Picture Mode**.
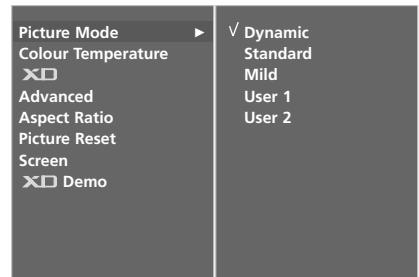
③ Press the ▶ button and then ▲ / ▼ button to select **Dynamic, Standard, Mild, User 1** or **User 2**.

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

• Picture Mode adjusts the TV for the best picture appearance. Select the preset value in the **Picture Mode** menu based on the programme category.

• Dynamic, Standard and Mild are programmed for optimum picture reproduction at the factory and cannot be changed.

SETUP
PICTURE ▶
AUDIO
TIME
OPTION

Picture Mode
Colour Temperature
XD
Advanced
Aspect Ratio
Picture Reset
Screen
XD Demo

Menu   Prev.

❶

Picture Mode   ▶
Colour Temperature
XD
Advanced
Aspect Ratio
Picture Reset
Screen
XD Demo

√ Dynamic
  Standard
  Mild
  User 1
  User 2

❷ ❸
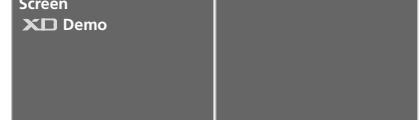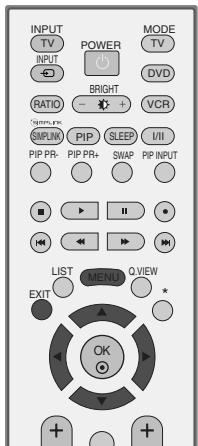
Auto Colour Tone Control(Warm/Medium/Cool)

To initialize values (reset to default settings), select the Cool option.

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

It's available to use this function in "User1/2" of **Picture mode** only.

1 Press the **MENU** button and then ▲ / ▼ button to select the **PICTURE** menu.
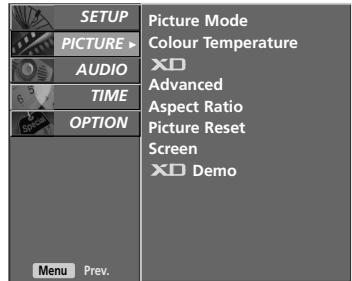
2 Press the ▶ button and then ▲ / ▼ button to select **Colour Temperature**.
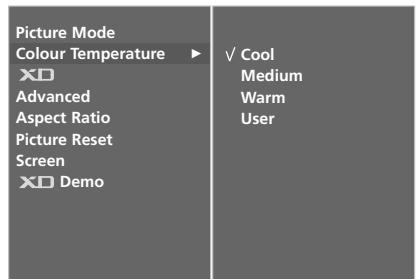
3 Press the ▶ button and then ▲ / ▼ button to select either **Cool**, **Medium**, **Warm** or **User**.

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

MANUAL PICTURE ADJUSTMENT

Picture Mode-User option

Contrast	Adjusts the difference between the light and dark levels in the picture.
Brightness	Increases or decreases amount of white in the your picture.
Colour	Adjusts intensity of all colours.
Sharpness	Adjusts the level of crispness in the edges between the light and dark areas of the picture. The lower the level, the softer the image.
Tint	Adjusts the balance between red and green levels.
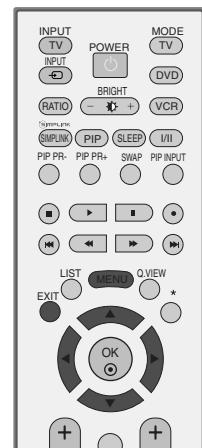
1 Press the **MENU** button and then ▲ / ▼ button to select the **PICTURE** menu.
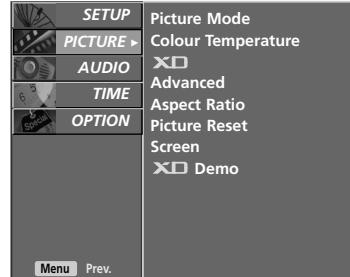
2 Press the ► button and then ▲ / ▼ button to select **Picture Mode**.
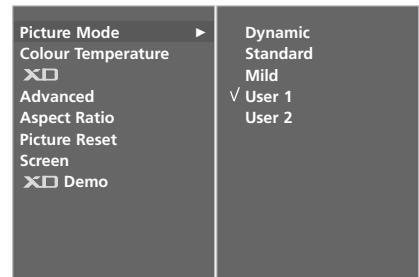
3 Press the ► button and then ▲ / ▼ button to select **User 1** or **User 2**.

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

5 Press the ◄ / ► button to make appropriate adjustments.

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

❗ NOTE

► You can't adjust colour, sharpness and tint in the RGB mode to the levels you prefer.

SETUP
PICTURE ►
AUDIO
TIME
OPTION

Picture Mode
Colour Temperature
XD
Advanced
Aspect Ratio
Picture Reset
Screen
XD Demo

Menu   Prev.

❶

Picture Mode   ►
Colour Temperature
XD
Advanced
Aspect Ratio
Picture Reset
Screen
XD Demo

Dynamic
Standard
Mild
√ User 1
User 2

❷ ❸

User 1

Contrast	100
Brightness	50
Colour	50
Sharpness	50
Tint	0

❹ ❺

Colour Tone - User option

To adjust red, green, blue to any colour temperature you prefer.

It's available to use this function in "User1/2" of **Picture mode** only.
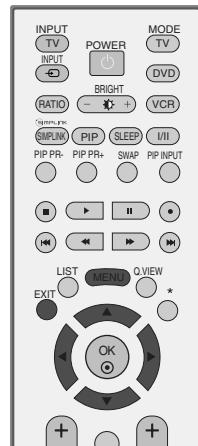
1 Press the **MENU** button and then ▲ / ▼ button to select the **PICTURE** menu.
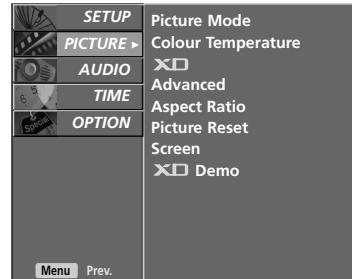
2 Press the ▶ button and then ▲ / ▼ button to select **Colour Temperature**.
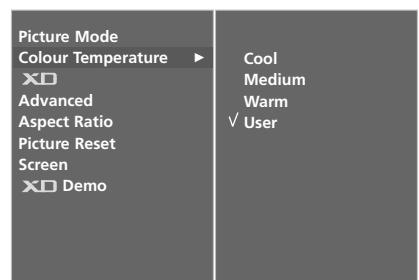
3 Press the ▶ button and then ▲ / ▼ button to select **User**.

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

5 Press the ◀ / ▶ button to make appropriate adjustments.

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

SETUP	Picture Mode
PICTURE ▶	Colour Temperature
AUDIO	XD
TIME	Advanced
OPTION	Aspect Ratio
	Picture Reset
	Screen
	XD Demo

Menu   Prev.

❶

Picture Mode	
Colour Temperature ▶	Cool
XD	Medium
Advanced	Warm
Aspect Ratio	√ User
Picture Reset	
Screen	
XD Demo	

❷ ❸

User		
Red	0	▶
Green	0	
Blue	0	

❹ ❺

PICTURE CONTROL

51

XD - PICTURE IMPROVEMENT TECHNOLOGY

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

It's not available to use this function in RGB/HDMI-PC mode.

---

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

---

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

---

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

---

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

---

* Selecting the Manual

This menu is activated after selecting the **User1** or **User2** of **Picture Mode**.

---

1 Press the ► button and then ▲ / ▼ button to select **XD Contrast, XD Colour, XD NR** or **MPEG NR**.

---

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

---

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

■ **XD Contrast :** Optimizing the contrast automatically according to the brightness of the reflection.

■ **XD Colour :** Adjusting the colours of the reflection automatically to reproduce as closely as possible to the natural colours.

■ **XD NR** : Removing the noise up to the point where it does not damage the original picture.

■ **MPEG NR :** To reduce the picture noise which may appear on the screen during watching the TV.

PICTURE CONTROL

SETUP
PICTURE ►
AUDIO
TIME
OPTION

Picture Mode
Colour Temperature
XD
Advanced
Aspect Ratio
Picture Reset
Screen
XD Demo

Menu   Prev.

➊

Picture Mode
Colour Temperature
XD   ►
Advanced
Aspect Ratio
Picture Reset
Screen
XD Demo

√ Auto
   Manual
XD Contrast
                    On
XD Colour   On
XD NR
              Off
MPEG NR   0

➋ ➌
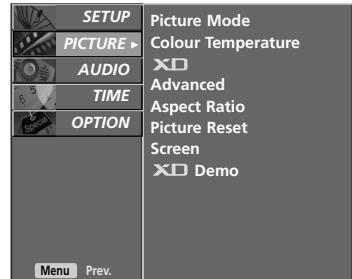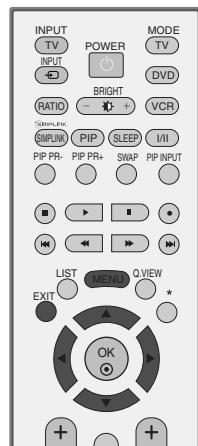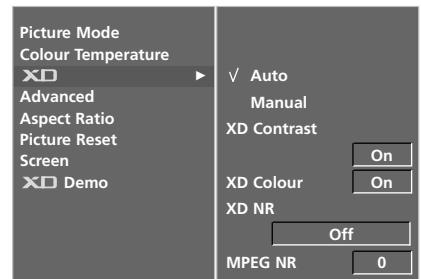
ADVANCED - CINEMA

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

This feature operates only in Analog TV, AV and Component 480i/576i mode.

**1** Press the **MENU** button and then ▲ / ▼ button to select the **PICTURE** menu.
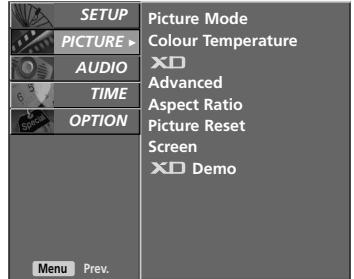
2 Press the ▶ button and then ▲ / ▼ button to select **Advanced**.
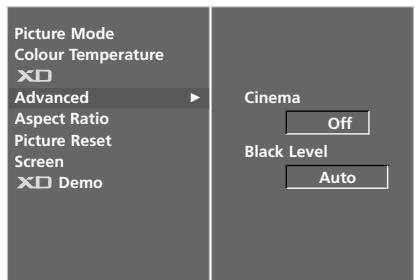
3 Press the ▶ button and then ▲ / ▼ button to select **Cinema**.
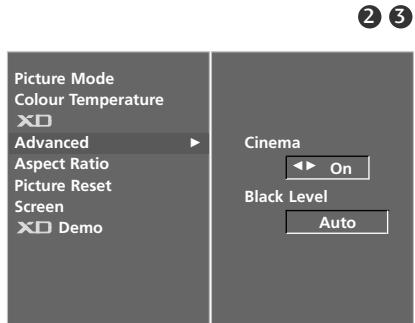
4 Press the ▶ button and then ▲ / ▼ button to select **On** or **Off**.

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

PICTURE CONTROL

ADVANCED - BLACK(DARKNESS) LEVEL

When you watch the movie, this function adjusts the set to the best picture appearance. Adjusting the contrast and the brightness of the screen using the black level of the screen.

This function works in the following mode: AV (NTSC-M) or HDMI.
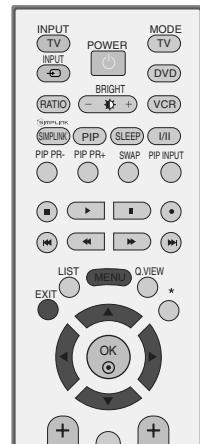
1 Press the **MENU** button and then ▲ / ▼ button to select the **PICTURE** menu.

2 Press the ▶ button and then ▲ / ▼ button to select **Advanced**.

3 Press the ▶ button and then ▲ / ▼ button to select **Black Level**.

4 Press the ▶ button and then ▲ / ▼ button to select **Low** or **high**.

■ **Low** *:* The reflection of the screen gets darker.
■ **High** *:* The reflection of the screen gets brighter.

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

❗ NOTE

■ **Auto**

Realizing the black level of the screen and set it to High or Low automatically.

Menu panel 1

SETUP	Picture Mode
PICTURE ▶	Colour Temperature
AUDIO	**XD**
TIME	Advanced
OPTION	Aspect Ratio
	Picture Reset
	Screen
	XD Demo

Menu   Prev.

❶

Menu panel 2/3

Picture Mode
Colour Temperature
XD
Advanced   ▶   Cinema
Aspect Ratio   Off
Picture Reset
Screen   Black Level
XD Demo   High

❷ ❸

Menu panel 4

Picture Mode
Colour Temperature
XD
Advanced   ▶   Cinema
Aspect Ratio   Off
Picture Reset
Screen   Black Level
XD Demo   ◀▶ High

❹

54

PICTURE RESET

Returns to the default settings Picture Mode, Colour Temperature, XD, Advanced, Aspect Ratio at the factory.
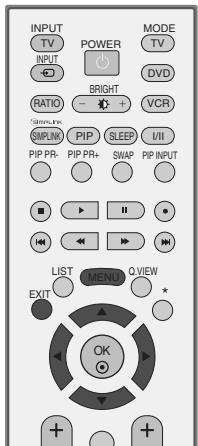
1 Press the **MENU** button and then ▲ / ▼ button to select the **PICTURE** menu.
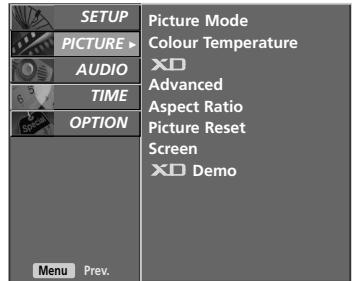
2 Press the ▶ button and then ▲ / ▼ button to select **Picture Reset**.

3 Press the ▶ button to initialize the adjusted value.

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

SETUP	Picture Mode
PICTURE ▶	Colour Temperature
AUDIO	XD
TIME	Advanced
OPTION	Aspect Ratio
	Picture Reset
	Screen
	XD Demo

Menu   Prev.

❶

Picture Mode	
Colour Temperature	
XD	
Advanced	
Aspect Ratio	
Picture Reset ▶	To Set
Screen	
XD Demo	

❷ ❸

PICTURE CONTROL

PICTURE CONTROL

![XD] DEMO

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

**It's not available to use this function in RGB/HDMI-PC mode.**
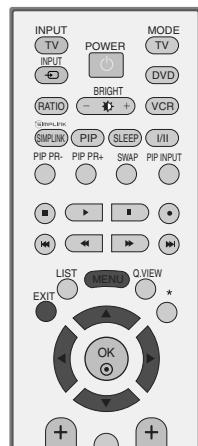
❶ Press the MENU button and then ▲ / ▼ button to select the **PICTURE** menu.

❷ Press the ► button and then ▲ / ▼ button to select **XD Demo**.

❸ Press the ► button to begin **XD Demo**.

❹ To stop **XD Demo**, press the **MENU** button.

SETUP	Picture Mode
PICTURE ►	Colour Temperature
AUDIO	XD
TIME	Advanced
OPTION	Aspect Ratio
	Picture Reset
	Screen
	XD Demo

Menu   Prev.

❶

Picture Mode	
Colour Temperature	
XD	
Advanced	
Aspect Ratio	
Picture Reset	
Screen	
XD Demo ►	To Start

❷ ❸

• XD Demo

XD™ Off   XD™ On

Menu Exit
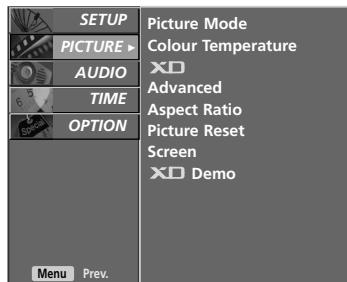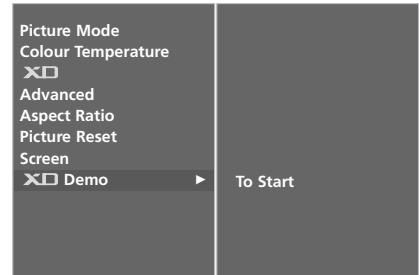
IMAGE STICKING MINIMIZATION(ISM)METHOD

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

White wash

White wash removes permanent images from the screen.

Note: An excessive permanent image may be impossible to clear entirely with White Wash.

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 screen will move every 2 minutes.

Inversion

This is the function to invert the panel colour of the screen. The panel colour is automatically inverted every 30 minutes.

❶ Press the **MENU** button and then ▲ / ▼ button to select the **OPTION** menu.
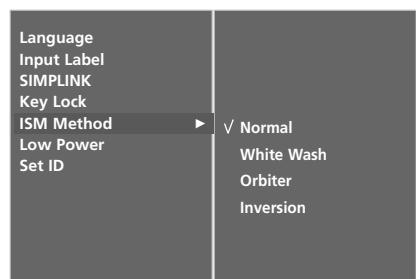
❷ Press the ▶ button and then ▲ / ▼ button to select **ISM Method**.

❸ Press the ▶ button and then ▲ / ▼ button to select either **Normal**, **White Wash**, **Orbiter** or **Inversion**. If you unnecessary to set this function, set **Normal**.

❹ Press the **EXIT** button to return to TV viewing.

57

PICTURE CONTROL

LOW-POWER PICTURE MODE

This is the function to reduce the power consumption of the set.
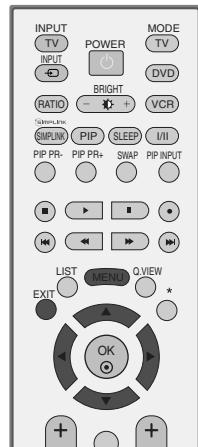
1. Press the **MENU** button and then ▲ / ▼ button to select the **OPTION** menu.

2. Press the ▶ button and then ▲ / ▼ button to select **Low Power**.

3. Press the ▶ button and then ▲ / ▼ button to select **On** or **Off**.

4. Press the **EXIT** button to return to TV viewing.
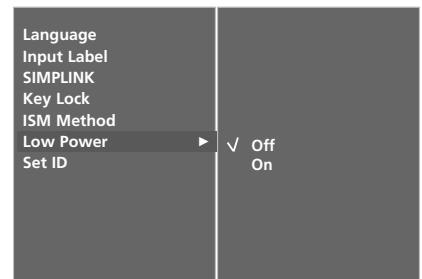
SOUND & LANGUAGE CONTROL

PRESET SOUND SETTINGS-SOUND MODE

You can select your preferred sound setting; SRS TSXT, Standard, Music, Movie or Sports and you can also adjust the sound frequency of the equalizer.

Sound Mode lets you enjoy the best sound without any Special adjustment because the TV sets the appropriate sound options based on the programme content.

SRS TSXT, **Standard**, **Music**, **Movie**, and **Sports** are preset for good sound quality at the factory and are not adjustable.
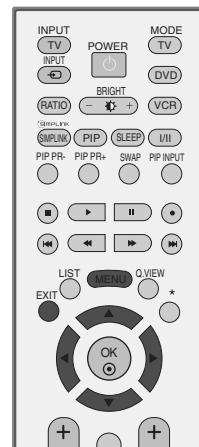
SRS TSXT Select this option to sound realistic.
Standard The most commanding and natural audio.
Music Select this option to enjoy the original sound when listening to the music.
Movie Select this option to enjoy sublime sound.
Sports Select this option to watch sports broadcasting.
User Select this option to use the user-defined audio settings.

❶ Press the **MENU** button and then ▲ / ▼ button to select the **AUDIO** menu.

❷ Press the ▶ button and then ▲ / ▼ button to select **Sound Mode**.

❸ Press the ▶ button and then ▲ / ▼ button to select **SRS TSXT**, **Standard**, **Music**, **Movie**, **Sports** or **User**.

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

▶ **SRS⊙** **TruSurround XT DIGITAL** is a trademark of SRS Labs, Inc.
▶ TruSurround XT technology is incorporated under license from SRS Labs, Inc.

SETUP
PICTURE
AUDIO ▶
TIME
OPTION

Sound Mode
Auto Volume
Balance   0
TV Speaker

Menu   Prev.

❶

Sound Mode   ▶   √ SRS TSXT
Auto Volume   Standard
Balance   0   Music
TV Speaker   Movie
                               Sports
                               User

❷ ❸

SOUND & LANGUAGE CONTROL

SOUND SETTING ADJUSTMENT -USER MODE

Adjust the sound equalizer.
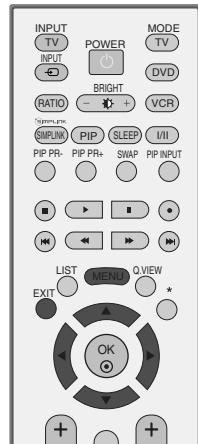
1 Press the **MENU** button and then ▲ / ▼ button to select the **AUDIO** menu.
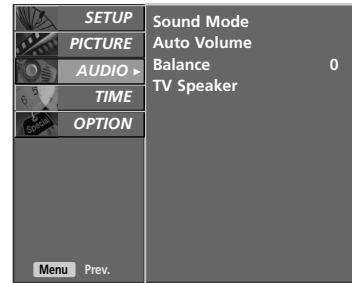
2 Press the ► button and then ▲ / ▼ button to select **Sound Mode**.
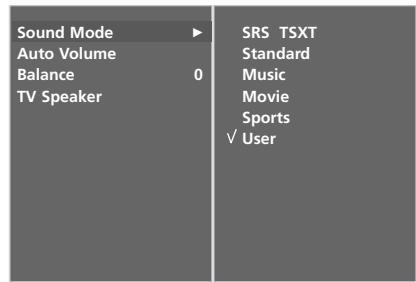
3 Press the ► button and then ▲ / ▼ button to select **User**.

4 Press the ► button.

5 Select a sound band by pressing the ◄ / ► button. Make appropriate sound level with the ▲ / ▼ button.

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

SETUP	Sound Mode
PICTURE	Auto Volume
AUDIO ►	Balance 0
TIME	TV Speaker
OPTION	

Menu   Prev.

①

Sound Mode ►	SRS TSXT
Auto Volume	Standard
Balance 0	Music
TV Speaker	Movie
	Sports
	√ User

② ③ ④

User	
120Hz	◄ ⬛ ►
200Hz	⬛
500Hz	⬛
1. 2KHz	⬛
3KHz	⬛
7. 5KHz	⬛
12KHz	⬛
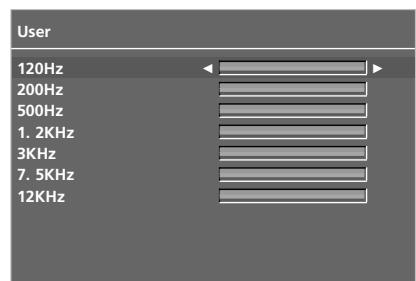
⑤

AUTO VOLUME LEVELER

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

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

2 Press the ▶ button and then ▲ / ▼ button to select **Auto
Volume**.

3 Press the ▶ button and then ▲ / ▼ button to select **On** or
Off.

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

SETUP	Sound Mode
PICTURE	Auto Volume
AUDIO ▶	Balance 0
TIME	TV Speaker
OPTION	

Menu   Prev.

❶

Sound Mode	
Auto Volume ▶	√ Off
Balance 0	On
TV Speaker	

❷ ❸
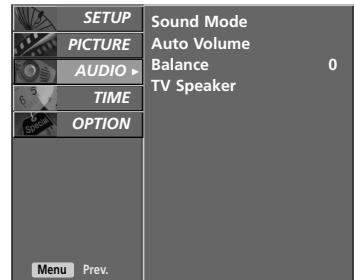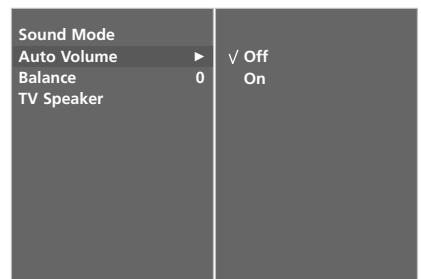
SOUND & LANGUAGE CONTROL

BALANCE

You can adjust the sound balance of speaker to the levels you prefer.
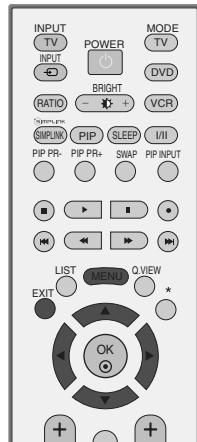
1 Press the **MENU** button and then ▲ / ▼ button to select-the **AUDIO** menu.
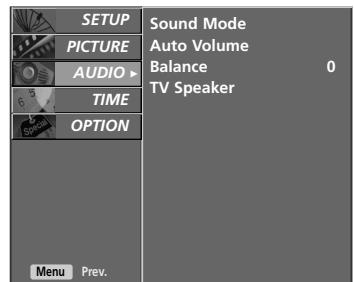
2 Press the ► button and then ▲ / ▼ button to select **Balance**.
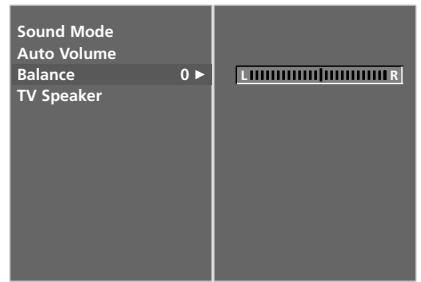
3 Press the ► button and then ◄ / ► button to make desired adjustment.

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

TV SPEAKERS ON/OFF SETUP

You can adjust the internal speaker status.

In AV, COMPONENT, RGB and HDMI mode, internal speaker audio can be outputted even though there is no video signal.

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

1 Press the **MENU** button and then ▲ / ▼ button to select the **AUDIO** menu.
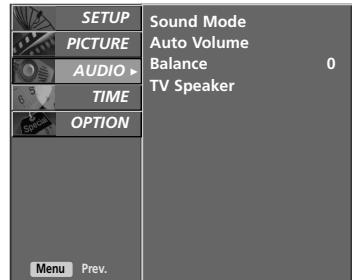
2 Press the ▶ button and then ▲ / ▼ button to select **TV Speaker**.
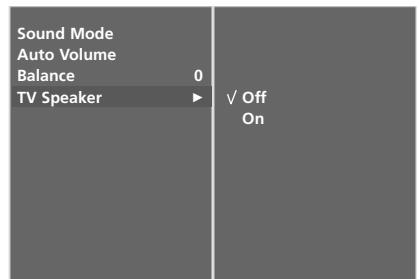
3 Press the ▶ button and then ▲ / ▼ button to select **On** or **Off**.

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

SETUP	Sound Mode
PICTURE	Auto Volume
AUDIO ▶	Balance 0
TIME	TV Speaker
OPTION	

Menu Prev.

❶

Sound Mode	
Auto Volume	
Balance 0	
TV Speaker ▶	√ Off
	On

❷ ❸

SOUND & LANGUAGE CONTROL

I/II

Stereo/Dual Reception

When a programme is selected, the sound information for the station appears after the programme number and station name disappear.

Broadcast	On Screen Display
Mono	MONO
Stereo	STEREO
Dual	DUAL I
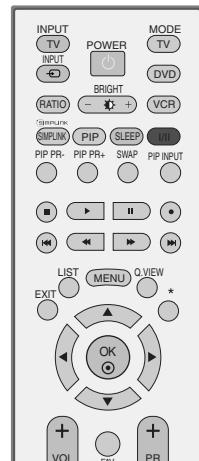
■ **Mono sound selection**
If the stereo signal is weak in stereo reception, you can switch to mono by pressing the **I/II** button twice. In mono reception, the depth of sound is improved. To switch back to stereo, press the **I/II** button twice again.

■ **Language selection for dual language broadcast**
If a programme received two languages (dual language), you can switch to **DUAL I**, **DUAL II** or **DUAL I+II** by pressing the **I/II** button repeatedly.

DUAL I   Sends the primary broadcast language to the loudspeakers.
DUAL II   Sends the secondary broadcast language to the loudspeakers.
DUAL I+II   Sends a separate language to each loudspeaker.

NICAM Reception

If the set is equipped with the receiver for NICAM reception, the high quality NICAM (Near Instantaneous Companding Audio Multiplex) digital sound can be received.

Sound output can be selected according to the type of received broadcast as follows by pressing the I/II button repeatedly.

1 When **NICAM mono** is received, you can select **NICAM MONO** or **FM MONO**.

2 When **NICAM** stereo is received, you can select **NICAM STEREO** or **FM MONO**.
If the stereo signal is weak, switch to **FM MONO**.

3 When NICAM dual is received, you can select **NICAM DUAL I**, **NICAM DUAL II** or **NICAM DUAL I+II** or **MONO**.

Speaker Sound Output Selection

In AV, S-Video, Component, RGB and HDMI 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 loudspeaker and audio signal from audio R input is sent to the right loudspeaker.
L+L: Audio signal from audio L input is sent to left and right loudspeakers.
R+R: Audio signal from audio R input is sent to left and right loudspeakers.

SOUND & LANGUAGE CONTROL

ON-SCREEN MENU LANGUAGE SELECTION

The menus can be shown on the screen in the selected language. First select your language.
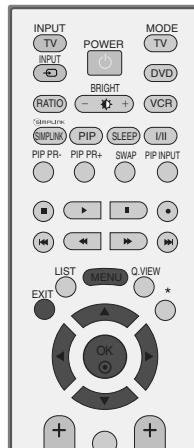
1 Press the **MENU** button and then use ▲ / ▼ button to select the **OPTION** menu.

2 Press the ▶ button and then use ▲ / ▼ button to select **Language**.

3 Press the ▶ button and then use ▲ / ▼ button to select your desired language.

4 Press the **OK** button.

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

SETUP	Language
PICTURE	Input Label
AUDIO	SIMPLINK
	Key Lock
TIME	ISM Method
OPTION ▶	Low Power
	Set ID

Menu   Prev.
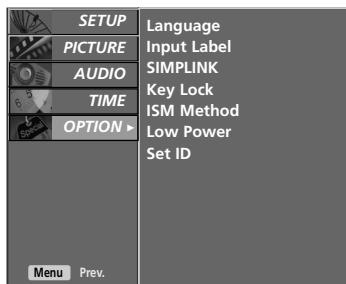
TIME SETTING

CLOCK SETTING

You must set the time correctly before using on/off time function.

If current time setting is erased by a power failure or the set is unplugged, reset the clock.

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

2 Press the ► button and then ▲ / ▼ button to select **Clock**.
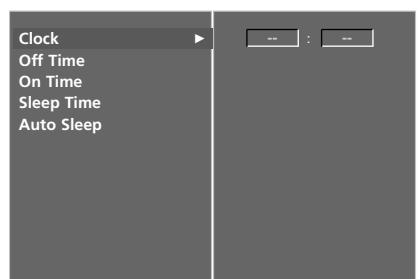
3 Press the ► button and then ▲ / ▼ button to set the hour.

4 Press the ► button and then ▲ / ▼ button to set the minutes.

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

TIME SETTING

TIME SETTING

AUTO ON/OFF TIMER SETTING

The Off Time automatically switches the set to standby at the preset time.

Two hours after the set is switched on by the on time function it will automatically switch back to standby mode unless a button has been pressed.

Once the on time/off time is set, these functions operate daily at the preset time.

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

The set must be in standby mode for the On Timer to work.
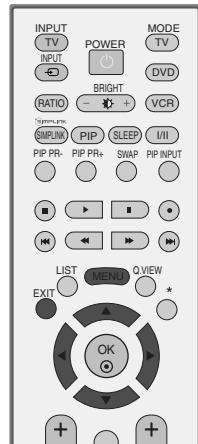
1 Press the **MENU** button and then ▲ / ▼ button to select the **TIME** menu.

2 Press the ▶ button and then ▲ / ▼ button to select **On/Off Time**.

3 Press the ▶ button and then ▲ / ▼ button to select **On.**
• To cancel **On/Off Time** function, select **Off.**

4 Press the ▶ button and then ▲ / ▼ button to set the hour.

5 Press the ▶ button and then ▲ / ▼ button to set the minutes.

6 **For only On Timer function**
• **Programme**: Press the ▶ button and then ▲ / ▼ button to select the programme.
• **Volume**: Press the ▶ button and then ▲ / ▼ button to adjust volume level at turn-on.
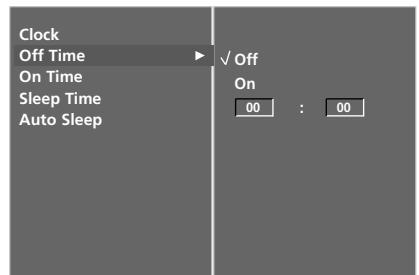
7 Press the **EXIT** button to return to normal TV viewing.

SLEEP TIMER SETTING

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.
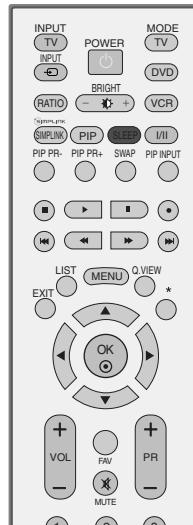
1 Press the **SLEEP** button repeatedly to select the number of minutes. The display ' $\mathcal{C}^{z^Z}$ - - -Min ' will appear on the screen, followed by 10, 20, 30, 60, 90, 120, 180 and 240.

2 When the number of minutes you want is displayed on the screen, the timer begins to count down from the number of minutes selected.

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

SETUP	Clock
PICTURE	Off Time
AUDIO	On Time
TIME ►	Sleep Time
OPTION	Auto Sleep

Clock	
Off Time	√ Off
On Time	10 Min
Sleep Time ►	20 Min
Auto Sleep	30 Min
	60 Min
	90 Min
	120 Min
	180 Min
	240 Min

`Menu` Prev.
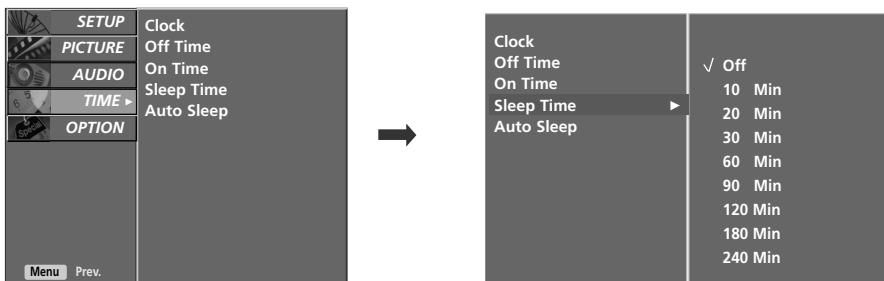
🛈 NOTE

▶ To view the remaining sleep time, press the **SLEEP** button once.

▶ To cancel the sleep time, repeatedly press the **SLEEP** button until the display ' $\mathcal{C}^{z^Z}$ - - -Min ' appears.

▶ When you switch the set off, the set releases the preset sleep time.

TIME SETTING

AUTO SHUT-OFF SETTING

If set to on and there is no input signal, the TV turns off automatically after 10 minutes.
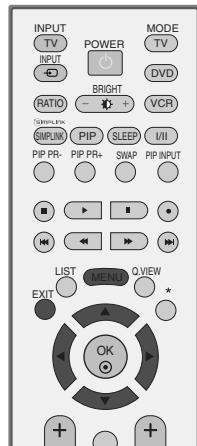
1 Press the **MENU** button and then ▲ / ▼ button to select the **TIME** menu.

2 Press the ▶ button and then ▲ / ▼ button to select **Auto Sleep**.

3 Press the ▶ button and then ▲ / ▼ button to select **On** or **Off**.

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

SETUP   Clock
PICTURE   Off Time
AUDIO   On Time
TIME ►   Sleep Time
OPTION   Auto Sleep

Menu   Prev.

1

Clock
Off Time
On Time
Sleep Time
Auto Sleep   ►   √ Off
                          On

2 **3**
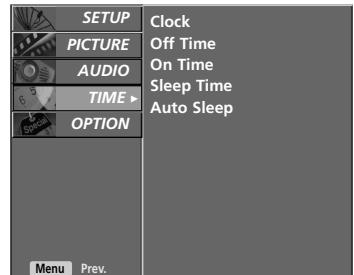
TELETEXT

This feature is not available in all countries.

Teletext is a free service broadcast by most TV stations which gives up-to-the-minute information on news, weather, television programmes, share prices and many other topics.

The teletext decoder of this TV can support the SIMPLE, TOP and FASTEXT systems. SIMPLE (standard teletext) consists of a number of pages which are selected by directly entering the corresponding page number. TOP and FASTEXT are more modern methods allowing quick and easy selection of teletext information.

SWITCH ON/OFF

Press the **TEXT** button to switch to teletext. The initial page or last page appears on the screen.
Two page numbers, TV station name, date and time are displayed on the screen headline. The first page number indicates your selection, while the second shows the current page displayed.
Press the **TEXT** or **EXIT** button to switch off teletext. The previous mode reappears.

SIMPLE TEXT

■ Page selection

❶ Enter the desired page number as a three digit number with the NUMBER buttons. If during selection you press a wrong number, you must complete the three digit number and then re-enter the correct page number.

❷ The **PR** +/- button can be used to select the preceding or following page.

TELETEXT

TOP TEXT

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

■ **Block / group / page selection**

❶ With the blue button you can progress from block to block.
❷ Use the yellow button to proceed to the next group with automatic overflow to the next block.
❸ With the green button you can proceed to the next existing page with automatic overflow to the next group.
   Alternatively the **PR** + button can be used.
❹ The red button permits to return to previous selection. Alternatively the **PR** - button can be used.

■ **Direct page selection**

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

FASTEXT

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

■ **Page selection**

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

SPECIAL TELETEXT FUNCTIONS

■ REVEAL

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

Press this button again to remove the information from the display.

■ SIZE

Selects double height text.

Press this button to enlarge the top half of the page.

Press this button again to enlarge the bottom half of the page.

Press this button again to return to the normal display.

■ UPDATE

Displays the TV picture on the screen while waiting for the new teletext page. The display will appear at the top left hand corner of the screen. When the updated page is available then display will change to the page number. Press this button to view the updated teletext page.

■ TIME

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

Press again to exit this function.

■ HOLD

Stops the automatic page change which will occur if a teletext page consists of 2 or more sub pages. The number of sub pages and the sub page displayed is, usually, shown on the screen below the time. When this button is pressed the stop symbol is displayed at the top left-hand corner of the screen and the automatic page change is inhibited. To continue press this button again.

APPENDIX

TROUBLESHOOTING

The operation does not work normally.

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

The video function does not work.

No picture & No sound	■ Check whether the product is turned on. ■ Try another channel. The problem may be with the broadcast. ■ Is the power cord inserted into wall power outlet? ■ Check your antenna direction and/or location. ■ Test the wall power outlet, plug another product's power cord into the outlet where the product's power cord was plugged in.
Picture appears slowly after switching on	■ This is normal, the image is muted during the product startup process. Please contact your service center, if the picture has not appeared after five minutes.
No or poor colour or poor picture	■ Adjust Colour 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. ■ Station signal is weak, reorient antenna to receive weaker station. ■ Check for sources of possible interference.
Lines or streaks in pictures	■ Check antenna (Change the direction of the antenna).

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

There is a problem in PC mode. (Only PC mode applied)	
The signal is out of range.	■ Adjust resolution, horizontal frequency, or vertical frequency. ■ Check 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.
Screen colour is unstable or single colour	■ Check the signal cable. ■ Reinstall the PC video card.

MAINTENANCE

Early malfunctions can be prevented. Careful and regular cleaning can extend the amount of time you will have your new TV. Be sure to turn the power off and unplug the power cord before you begin any cleaning.

Cleaning the Screen

1 Here's a great way to keep the dust off your screen for a while. Wet a soft cloth in a mixture of lukewarm water and a little fabric softener or dish washing detergent. Wring the cloth until it's almost dry, and then use it to wipe the screen.

2 Make sure the excess water is off the screen, and then let it air-dry before you turn on your TV.

Cleaning the Cabinet

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

Extended Absence

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

PRODUCT SPECIFICATIONS

MODELS			60PT1RF*
60PT1RF* 60PT1RF-TA	Dimensions (Width x Height x Depth)		1609 x 1003 x 127 mm 63.3 x 39.5 x 5 inches
	Weight		72.5 kg / 159.8 lbs
	Power requirement		AC100-240V~ 50/60Hz 6.5A
Television System External Antenna Impedance			PAL/SECAM B/G/D/K, PAL I/II, NTSC-M 75 ohm
Environment condition	Operating Temperature Operating Humidity		0 ~ 40°C / 32 ~ 104°F Less than 80%
	Storage Temperature Storage Humidity		-20 ~ 60°C / -4 ~ 140°F Less than 85%

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

APPENDIX

PROGRAMMING THE REMOTE CONTROL

The remote is a multi-brand or a universal remote. It can be programmed to operate most remote-controllable devices of other manufacturers.
Note that the remote may not control all models of other brands.

Programming a code into a remote mode

1 Test your remote control.
To find out whether your remote control can operate the component without programming, turn on the component such as a VCR and press the corresponding mode button (such as a **DVD** or **VCR**) on the remote control, while pointing at the component. Test the **POWER** and **PR + / -** buttons to see if the component responds properly. If not, the remote requires programming to operate the device.

2 Turn on the component to be programmed, then press the corresponding mode button (such as a **DVD** or **VCR**) on the remote control. The remote control button of desired device is lighted.

3 Press the **MENU** and **MUTE** buttons simultaneously, the remote control is ready to be programmed for the code.

4 Enter a code number using the number buttons on the remote control. Programming code numbers for the corresponding component can be found on the following pages. Again, if the code is correct, the device will turn off.

5 Press the **MENU** button to store the code.

6 Test the remote control functions to see if the component responds properly. If not, repeat from step 2.

■ VCRs

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

■ DVD

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

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
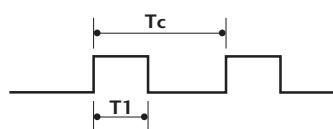
Carrier frequency

$FCAR = 1/TC = fOSC/12$

Duty ratio = $T1/TC = 1/3$

■ Configuration of frame

1st frame

Lead code	Low custom code	High custom code	Data code	Data code
	C0 C1 C2 C3 C4 C5 C6 C7	C0 C1 C2 C3 C4 C5 C6 C7	D0 D1 D2 D3 D4 D5 D6 D7	D0 D1 D2 D3 D4 D5 D6 D7

Repeat frame

Repeat code

Tf

■ Lead code

9 ms

4.5 ms

■ Repeat code

0.55 ms

9 ms

2.25 ms

■ Bit description

Bit "0"

0.56 ms

1.12 ms

Bit "1"

0.56 ms

2.24 ms
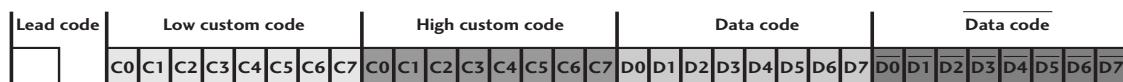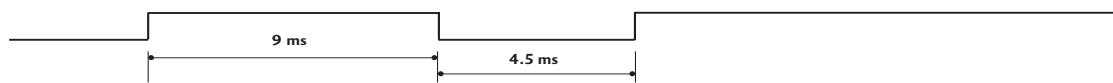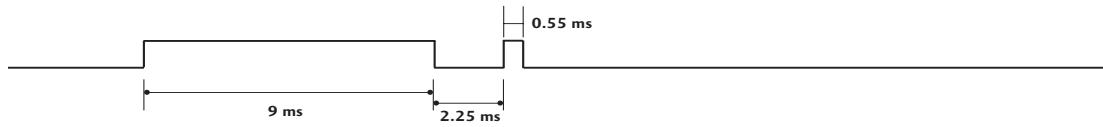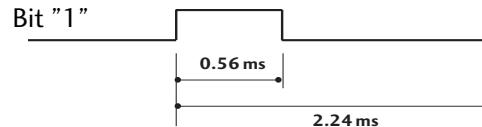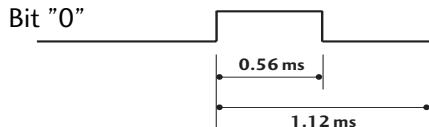
■ Frame interval: Tf

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

Tf

Tf

Tf=108ms @455KHz
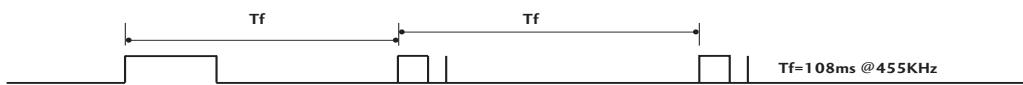
REMOTE CONTROL IR CODES

Code (Hexa)	Function	Note	Code (Hexa)	Function	Note
0F	TV	R/C Button	72	RED	R/C Button
0B	INPUT	R/C Button	71	GREEN	R/C Button
08	POWER	R/C Button (Power On/Off)	63	YELLOW	R/C Button
60	PIP	R/C Button	61	BLUE	R/C Button
0E	SLEEP	R/C Button	02	VOL +	R/C Button
63	SWAP	R/C Button	03	VOL -	R/C Button
0A	I/II	R/C Button	00	PR +	R/C Button
43	MENU	R/C Button	01	PR -	R/C Button
79	RATIO	R/C Button	09	MUTE	R/C Button
5B	EXIT	R/C Button	53	LIST	R/C Button
07	◄	R/C Button	10 ~ 19	Number Key 0 ~ 9	R/C Button
06	►	R/C Button	1E	FAV	R/C Button
40	▲	R/C Button	1A	Q.VIEW	R/C Button
41	▼	R/C Button	64	SIZE	R/C Button
44	OK	R/C Button	62	POSITION	R/C Button
72	PIP PR-	R/C Button	E0	☼ +	R/C Button
71	PIP PR+	R/C Button	E1	☼ -	R/C Button
7E	SIMPLINK	R/C Button			
61	PIP INPUT	R/C Button			

EXTERNAL CONTROL THROUGH RS-232C

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

RS-232C Setup
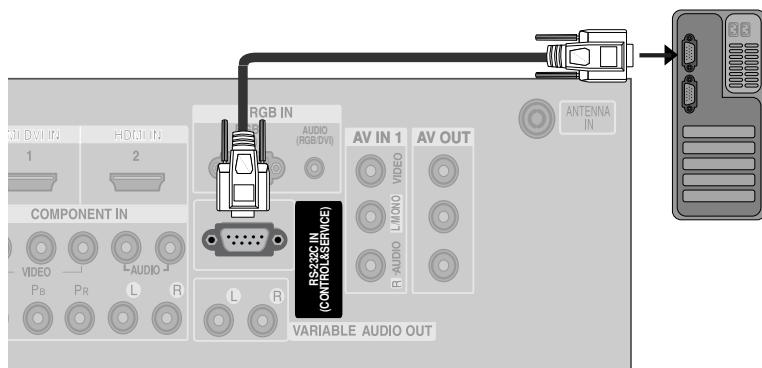
Type of Connector; D-Sub 9-Pin Male

No.	Pin Name
1	No connection
2	RXD (Receive data)
3	TXD (Transmit data)
4	DTR (DTE side ready)
5	GND
6	DSR (DCE side ready)
7	RTS (Ready to send)
8	CTS (Clear to send)
9	No Connection
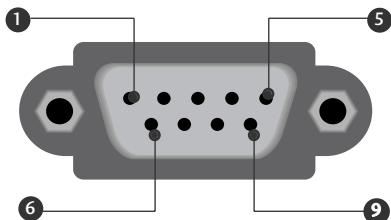
RS-232C Configurations

7-Wire Configurations (Standard RS-232C cable)			
	PC	TV	
RXD	2 ●———● 3		TXD
TXD	3 ●———● 2		RXD
GND	5 ●———● 5		GND
DTR	4 ●———● 6		DSR
DSR	6 ●———● 4		DTR
RTS	7 ●———● 8		CTS
CTS	8 ●———● 7		RTS
	D-Sub 9	D-Sub 9	

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

Set ID

Use this function to specify a set ID number.
Refer to 'Real Data Mapping'1. See page **p.87**
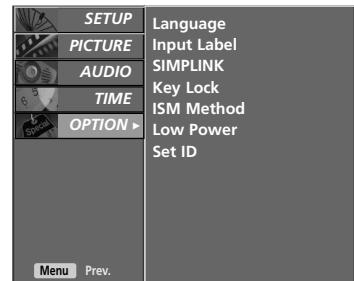
SETUP	Language
PICTURE	Input Label
AUDIO	SIMPLINK
TIME	Key Lock
	ISM Method
OPTION ►	Low Power
	Set ID

Menu Prev.

❶

1 Press the **MENU** button and then use ▲ / ▼ button to select the **OPTION** menu.

2 Press the ► button and then use ▲ / ▼ button to select **Set ID**.

Language	
Input Label	
SIMPLINK	
Key Lock	
ISM Method	
Low Power	
Set ID ►	◄► 1
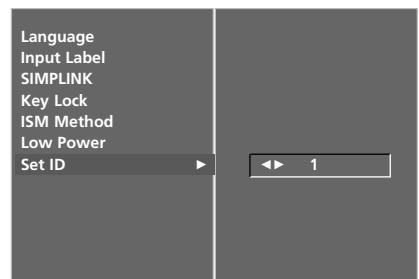
3 Press the ► button and then use ◄ / ► button to adjust **Set ID** to choose the desired TV ID number.
• The adjustment range of SET ID is 1~99.

❷ ❸

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

Communication Parameters

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

Command Reference List

	COMMAND1	COMMAND2	DATA (Hexadecimal)		COMMAND1	COMMAND2	DATA (Hexadecimal)
01. Power	k	a	0 ~ 1	15. Balance	k	t	0 ~ 64
02. Aspect Ratio	k	c	*	16. Colour Temperature	k	u	0 ~ 3
03. Screen Mute	k	d	0 ~ 1	17. Red Adjustment	k	v	0 ~ 3C (or 50)
04. Volume Mute	k	e	0 ~ 1	18. Green Adjustment	k	w	0 ~ 3C (or 50)
05. Volume Control	k	f	0 ~ 64	19. Blue Adjustment	k	$	0 ~ 3C (or 50)
06. Contrast	k	g	0 ~ 64	20. Abnormal Status	k	z	FF
07. Brightness	k	h	0 ~ 64	21. ISM Method	j	p	0 ~ 3
08. Colour	k	i	0 ~ 64	22. Low Power	j	q	0 ~ 1
09. Tint	k	j	0 ~ 64	23. Orbiter Time Setting	j	r	1 ~ FE
10. Sharpness	k	k	0 ~ 64	24. Orbiter Pixel Setting	j	s	1 ~ 3
11. OSD Select	k	l	0 ~ 1	25. Auto Configure	j	u	1
12. Remote Control lock mode	k	m	0 ~ 1	26. Tune Command	m	a	*
				27. Key	m	c	Key Code
13. PIP/DW	k	n	*	28. Input select (Main)	x	b	*
14. PIP Position	k	q	0 ~ 3	29. Input select (PIP)	x	y	*

Transmission / Receiving Protocol

Transmission

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

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

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

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

[DATA] : To transmit command data.
Transmit 'FF' data to read status of comand.

[Cr] : Carriage Return
ASCII code '0x0D'

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

OK Acknowledgement

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

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

Error Acknowledgement

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

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

Data1: Illegal Code

Data2: Not supported function

Data3: Wait more time

01. Power (Command2:a)

To control Power On/Off of the TV.

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

Data 0 : Power Off   Data 1 : Power On

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

To show Power On/Off.

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

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

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

02. Aspect Ratio (Command2:c) (Main picture size)

To adjust the screen format. (Main picture format)

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

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

Date 1: Normal screen (4:3)
Date 2: Wide screen (16:9)
Date 3: Spectacle
Date 4: Full screen (Zoom1)
Date 5: Full screen (Zoom2)

Date 6: Original
Date 7: Wide screen (14:9)
Date 8: Full (Option)
Date 9: 1:1 Pixel

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

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

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

03. 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] [Data] [x]

04. 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 on (Volume off)

Data 1 : Volume mute off (Volume on)

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

05. Volume Control (Command2:f)

To adjust volume.

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

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

Data Min : 0 ~ Max : 64

Refer to 'Real data mapping 1'. See page 87

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

06. 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 mapping 1'. See page 87

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

07. 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

Refer to 'Real data mapping 1'. See page 87

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

08. 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 mapping 1'. See page 87

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

09. Tint (Command2:j)

To adjust the screen tint.

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 mapping 1'. See page 87

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

10. 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 mapping 1'. See page 87

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

11. OSD Select (Command2:l)

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

Transmission [k] [l] [ ] [Set ID] [ ] [Data] [Cr]
Data 0: OSD off
Data 1: OSD on

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

12. 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] [Data] [x]

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

13. PIP / DW (Command2:n)

To control the PIP (Picture In picture)/DW.

You can also control the PIP/DW using the PIP button on the remote control or in the PIP/DW menu.

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

Data 0:PIP/DW off   Data 1: PIP
Data2: DW1   Data3: DW2

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

14. PIP Position (Command2:q)

To select sub picture position for PIP.

You can also adjust the sub picture position using POSI-TION button on the remote control or in the PIP/DW menu.

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

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

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

15. Balance (Command2:t)

To adjust balance.
You can also adjust balance in the AUDIO menu.

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

Data Min: 0 ~ Max: 64

Refer to 'Real data mapping 1'. See page 87

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

16. Colour Temperature (Command2:u)

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

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

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

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

17. Red Adjustment (Command2:v)

To adjust red in colour temperature.

Transmission [k] [v] [ ] [Set ID] [ ] [Data] [Cr]
Data Min: 0 ~ Max: 3C(or 50)

Refer to 'Real data mapping 2'. See page 87

Acknowledgement [v] [ ] [Set ID] [ ] [OK] [Data] [x]

18. Green Adjustment (Command2:w)

To adjust green in colour temperature.

Transmission [k] [w] [ ] [Set ID] [ ] [Data] [Cr]
Data Min: 0 ~ Max: 3C(or 50)

Refer to 'Real data mapping 2'. See page 87

Acknowledgement [w] [ ] [Set ID] [ ] [OK] [Data] [x]

19. Blue Adjustment (Command2:$)

To adjust blue in colour temperature.

Transmission [k] [$] [ ] [Set ID] [ ] [Data] [Cr]
Data Min: 0 ~ Max: 3C(or 50)

Refer to 'Real data mapping 2'. See page 87

Acknowledgement [$] [ ] [Set ID] [ ] [OK] [Data] [x]

20. Abnormal State (Command2:z)

To recognize an abnormal state.
This feature is not available for all models.

Transmission [k][z][ ][Set ID][ ][FF][ ][Cr]

Data FF: Read

Acknowledgement [z][ ][Set ID][ ][OK][Data][x]

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

21. ISM Method (Command1:j, Command2:p)(Option)

To control the ISM method. You can also adjust ISM Method in OPTION menu.
This feature is not available for all models.

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

Data 0: Normal Mode   Data 1: White Wash
Data2: Orbiter   Data3: Inversion

Acknowledgement [p][ ][Set ID][ ][OK][Data][x]

22. Low Power (Command1:j, Command2:q)(Option)

To reduce the power consumption of the monitor. You can also adjust Low Power in OPTION menu.
This feature is not available for all models.

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

Data 0: Off   Data 1: On

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

23. Orbiter Time Setting (Command1:j, Command2:r)(Option)

To adjust orbiter operation time term.
This feature is not available for all models.

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

Data Min: 1 ~ Max: FE

Refer to 'Real data mapping 1'.

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

24 . Orbiter Pixel Setting (Command1:j, Command2:s)(Option)

To adjust pixel number in orbiter function.
This feature is not available for all models.

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

Data Min: 1 ~ Max: 3

Refer to 'Real data mapping 1'.

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

25 . Auto Configure (Command1:j, Command2:u)

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

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

Data 1: To set

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

26 . Programme selection (Command1:m, Command2:a)

To select a programme for the main picture.

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

Data 0: Min: 0 ~ Max: 63 (0~C7, 200 Pr is on)
Refer to 'Real data mapping 1'.
Data 1: Don't care
Data 2: 0 : Main
         1 : Sub

Acknowledgement [a][ ][Set ID][ ][OK][Data0][x]

---

* Real data mapping 1

0 : Step 0
⋮
A : Step 10 (Set ID 10)
⋮
F : Step 15 (Set ID 15)
10 : Step 16 (Set ID 16)
⋮
64 : Step 100
⋮
6E : Step 110
⋮
73 : Step 115
74 : Step 116
⋮
C7 : Step 199
⋮
FE : Step 254
FF : Step 255

* Real data mapping 2

0 : -40
1 : -39
2 : -38
⋮
28 : 0
⋮
4E : +38
4F : +39
50 : +40

APPENDIX

27. Send IR Code (Command1:m, Command2: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][Data][x]

28. Input select (Command1:x, Command2:b) (Main Picture Input)

To select input source for TV

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

Data: Structure

MSB   LSB

0	0	0	0	0	0	0	0

└─ External Input ─┘   └─ Input Number ─┘

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

Input Number				Data
0	0	0	0	Input1
0	0	0	1	Input2
0	0	1	0	Input3
0	0	1	1	Input4

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

29. PIP Input select (Command1:x, Command2:y)

To adjust input source for sub picture in PIP mode

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

Data: Structure

MSB   LSB

0	0	0	0	0	0	0	0

└─ External Input ─┘   └─ Input Number ─┘

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

Input Number				Data
0	0	0	0	Input1
0	0	0	1	Input2
0	0	1	0	Input3
0	0	1	1	Input4

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

LG Electronics Inc.