



ENGLISH

OWNER'S MANUAL MONITOR TV

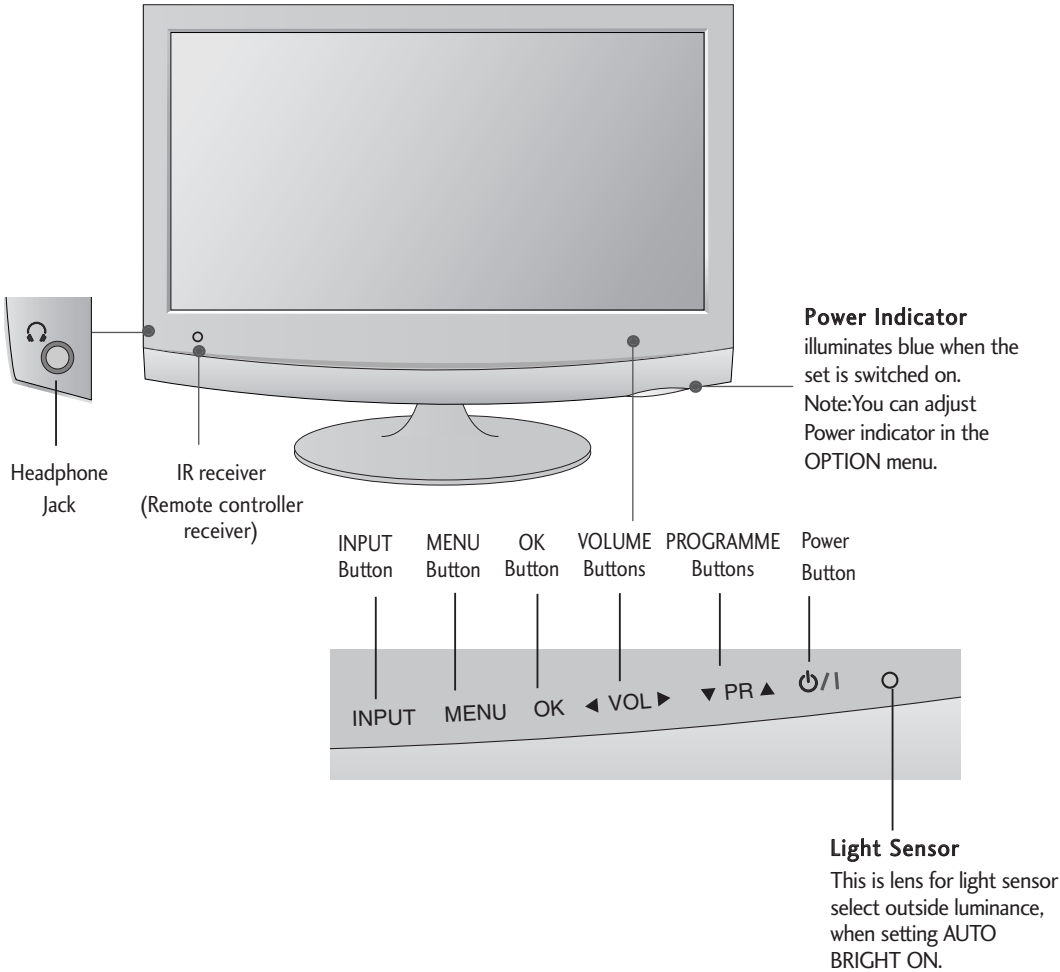
Please read this manual carefully before operating your set and retain it for future reference.

MONITOR TV MODELS
M2362D

PREPARATION

FRONT PANEL CONTROLS

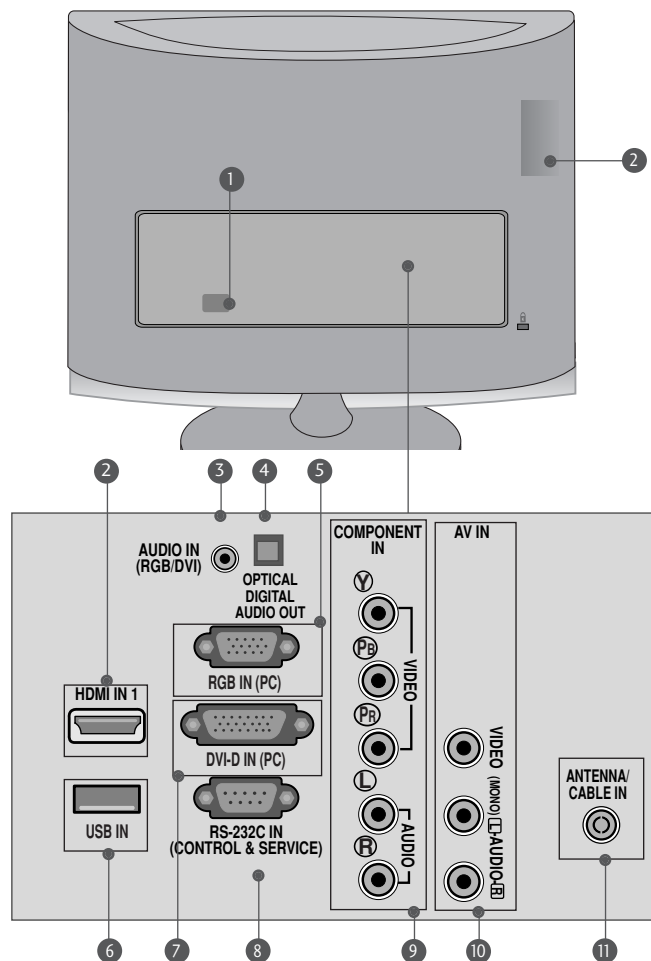
■ This is a simplified representation of the front panel. The image shown may be somewhat different from your set.



PREPARATION

BACK PANEL INFORMATION

■ This is a simplified representation of the back panel. The image shown may be somewhat different from your set.



1 Power Cord Socket

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

2 HDMI Input (Not Support PC)

Connect a HDMI signal to HDMI IN.
Or DVI (VIDEO) signal to HDMI IN with DVI to HDMI cable.

3 RGB/DVI Audio Input

Connect the audio from a PC.

4 Optical Digital Audio Out

Connect digital audio from various types of equipment

5 RGB INPUT (PC)

Connect the output from a PC.

6 USB IN

7 DVI-D Input

Connect the output from a PC.

8 RS-232C IN (CONTROL & SERVICE) PORT

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

9 Component Input

Connect a component video/audio device to these jacks.

10 Audio/Video Input

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

11 Antenna Input

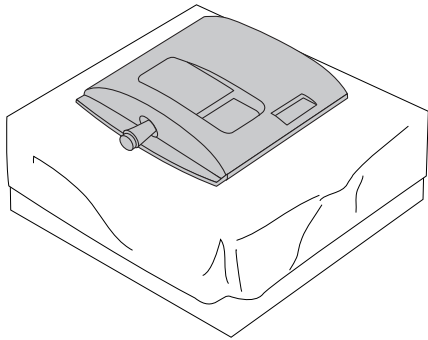
Connect over-the-air signals to this jack.

PREPARATION

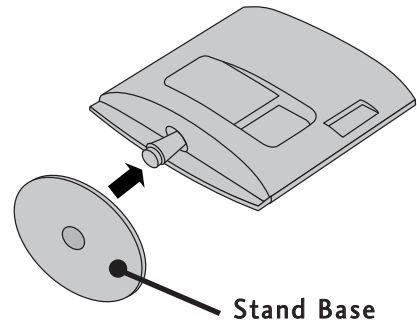
STAND INSTALLATION

■ The image shown may be somewhat different from your set.

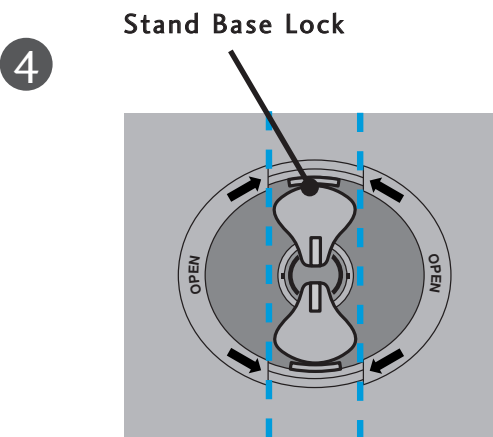
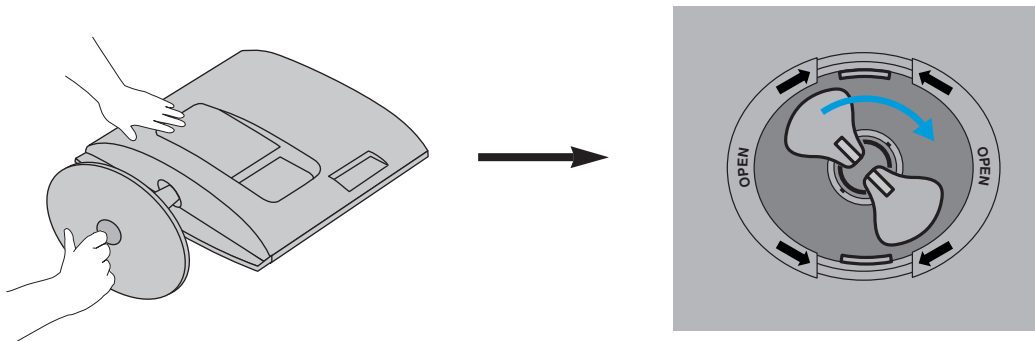
- 1 Carefully place the product screen side down on a cushioned surface that will protect product and screen from damage.



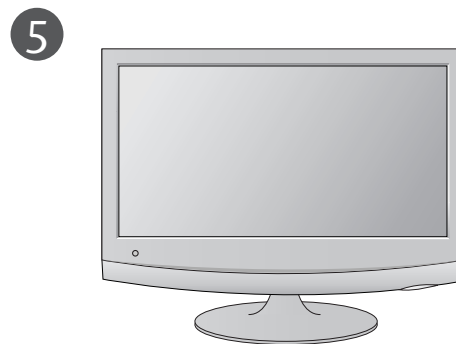
- 2 Insert the **Stand Base** into the product



- 3 Turn the **Stand Base Lock** through 90° to fix the stand base to the stand body.



<Locked>

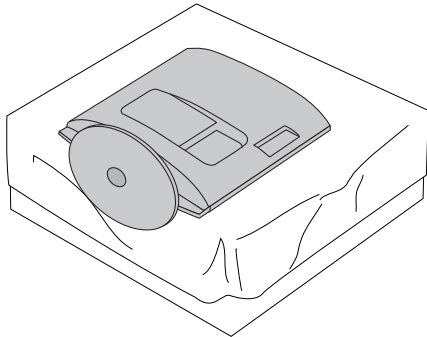


PREPARATION

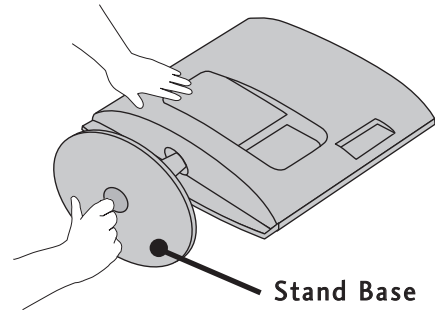
DETACHING STAND

▪ The image shown may be somewhat different from your set.

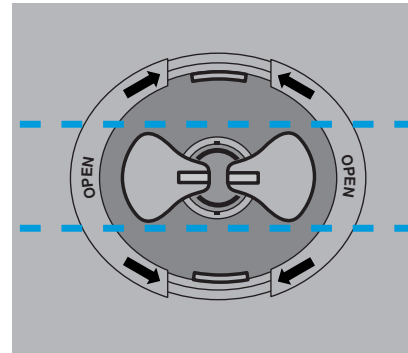
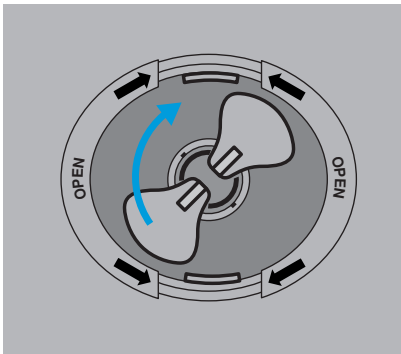
1 Place the set screen side down on a cushion or soft cloth.



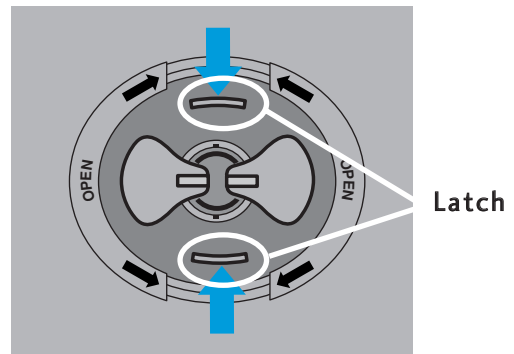
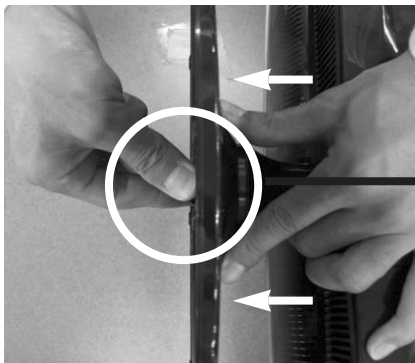
2 Detach the monitor to the **Stand Base** by turning the screw to the left.



3 Turn the **Stand Base Lock** through 90° to separate the Stand Base from the Stand Body.



4 Pushing **Latch** inside, Take the stand base from stand body.

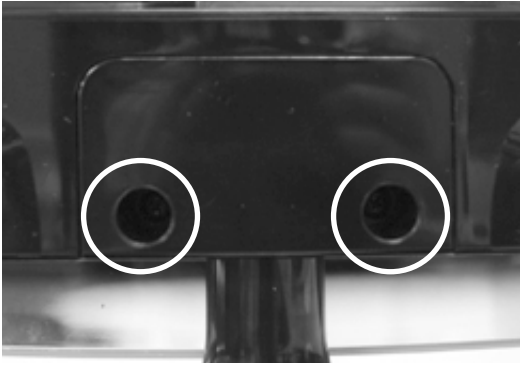


PREPARATION

DETACHING STAND BODY

- The image shown may be somewhat different from your set.
- Remove the Stand Body in the same way as the following when using it as a Wall Hook.

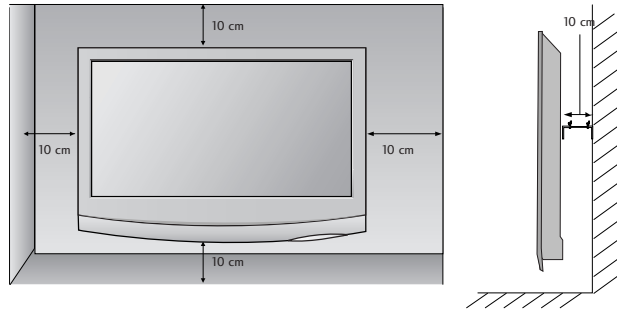
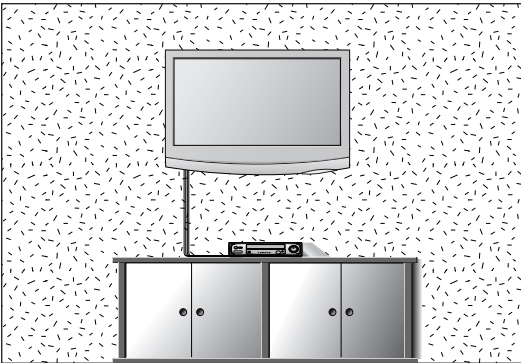
1. Remove the screw 2 point.
2. Pull the stand body.



PREPARATION

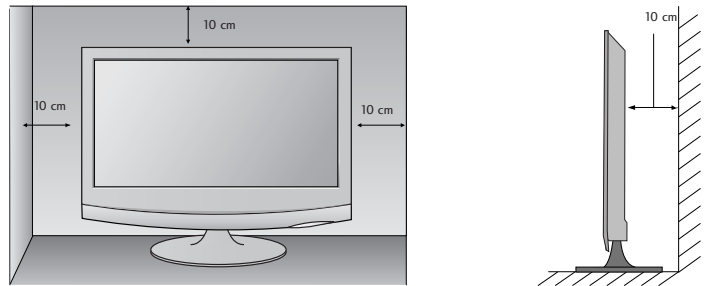
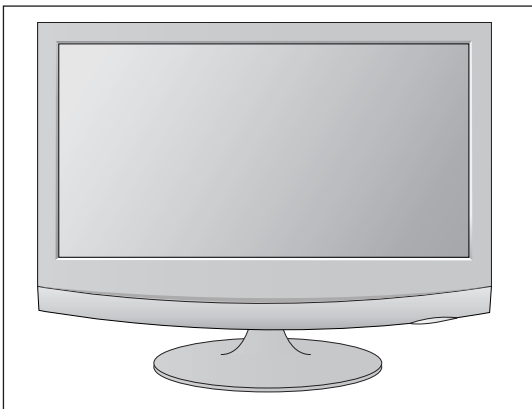
WALL MOUNT: HORIZONTAL INSTALLATION

For proper ventilation, allow a clearance of 10 cm on each side and from the wall. Detailed installation instructions are available from your dealer, see the optional Tilt Wall Mounting Bracket Installation and Setup Guide.



DESKTOP PEDESTAL INSTALLATION

For proper ventilation, allow a clearance of 10 cm on each side and from the wall.



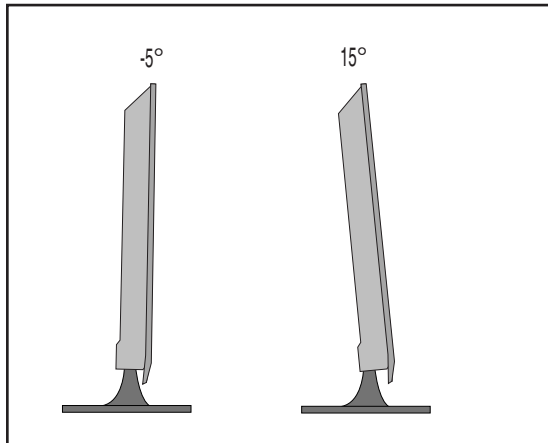
PREPARATION

POSITIONING YOUR DISPLAY

■ The image shown may be somewhat different from your set.

Adjust the position of the panel in various ways for maximum comfort.

- **Tilt range**



LOCATION

Position your set so that no bright light or sunlight falls directly onto the screen. Care should be taken not to expose the set to any unnecessary vibration, moisture, dust or heat. Also, ensure that the set is placed in a position to allow a free flow of air. Do not cover the ventilation openings on the back cover.

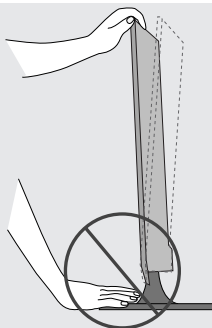
If you intend to mount the set to a wall, attach Wall mounting interface (optional parts) to the back of the set.

When you install the set using the wall mounting interface (optional parts), attach it carefully so it will not drop.

- Be sure to use screws and a wall mount that meet VESA standards.
- Using screws longer than those recommended might damage the product.
- Using screws that do not meet VESA standards might either damage the product or result in it coming away from the wall. We will not be held responsible for any damage resulting from failure to follow these instructions.

< Screw Mounting Interface Dimension >

100mm x 100mm hole spacing



Warning:

When adjusting the angle of the screen, do not put your finger(s) in between the head of the monitor and the stand body. You can hurt your finger(s).

PREPARATION

KENSINGTON SECURITY SYSTEM

- The product is equipped with a Kensington Security System connector on the back panel. Connect the Kensington Security System cable as shown below.
- For detailed installation and use of the Kensington Security System, refer to the user's guide provided with the Kensington Security System.

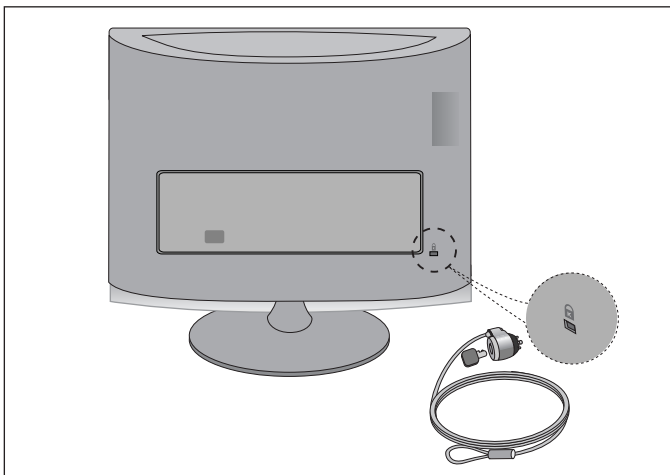
For further information, contact <http://www.kensington.com>, the internet homepage of the Kensington company. Kensington sells security systems for expensive electronic equipment such as notebook PCs and LCD projectors.

NOTE

- The Kensington Security System is an optional accessory.

NOTES

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

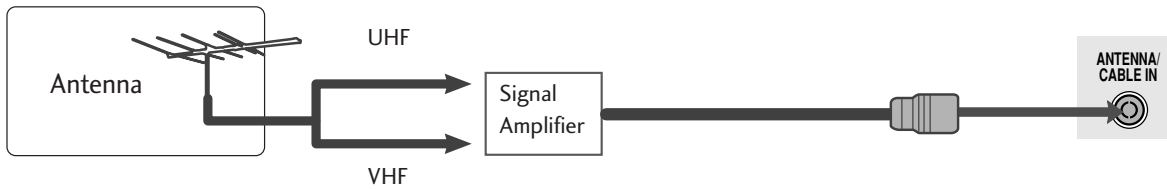
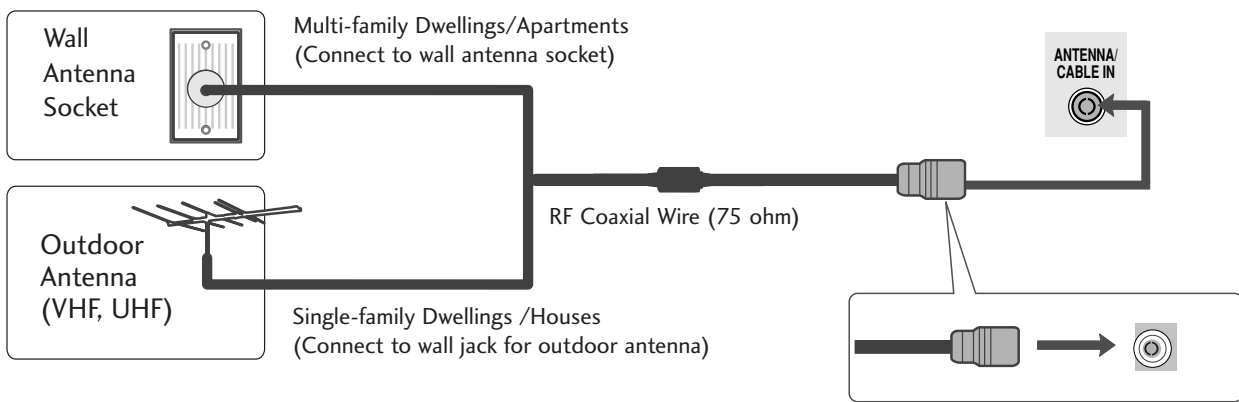


EXTERNAL EQUIPMENT SETUP

- To prevent 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.



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

EXTERNAL EQUIPMENT SETUP

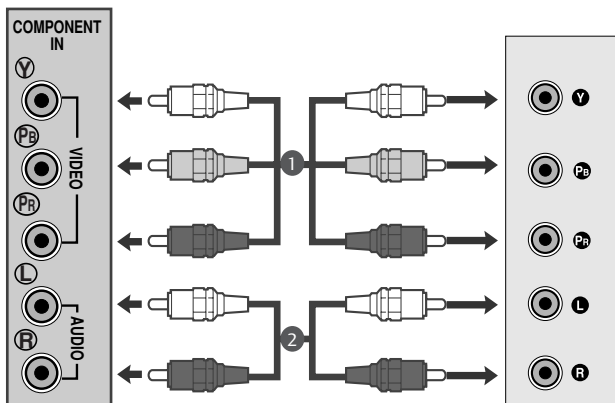
- To prevent the equipment damage, never plug in any power cords until you have finished connecting all equipment.
- The image shown may be somewhat different from your set.

HD RECEIVER SETUP

When connecting with a component cable

- 1 Connect the SET-TOP outputs to the **COMPONENT IN VIDEO** sockets (Y P_B P_R) on the set.
.....
- 2 Connect the audio cable from the SET-TOP to **COMPONENT IN AUDIO** sockets of the set.
.....
- 3 Press the **INPUT** button to select **Component**.

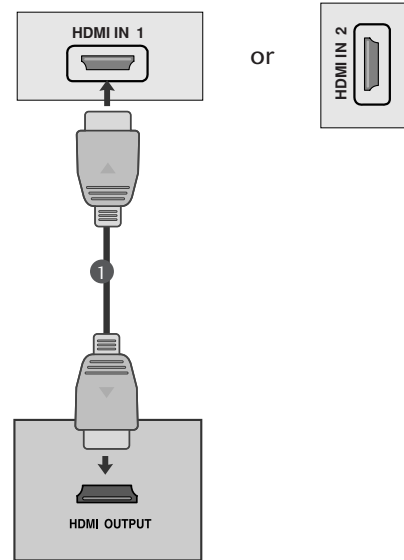
Signal	Component	HDMI
480i/576i	Yes	No
480p/576p	Yes	Yes
720p/1080i	Yes	Yes
1080p	Yes	Yes



EXTERNAL EQUIPMENT SETUP

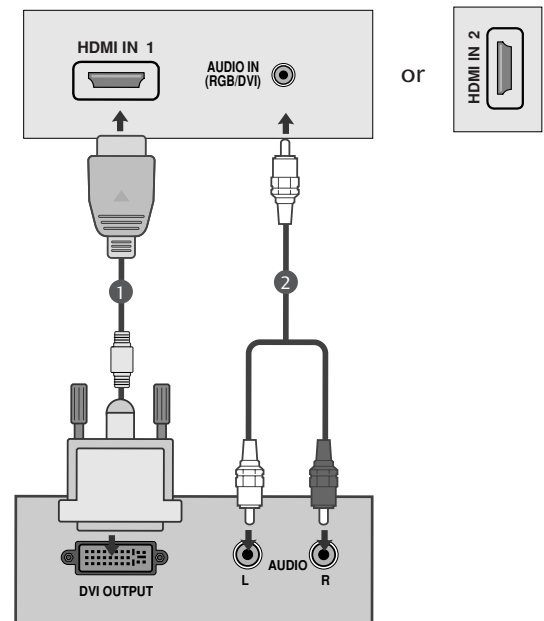
When connecting with a HDMI

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



When connecting with a HDMI to DVI cable

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



! NOTE

▶ HDMI Input does not support PC mode. If it is connected PC, the screen may not be displayed properly.

EXTERNAL EQUIPMENT SETUP

DVD SETUP

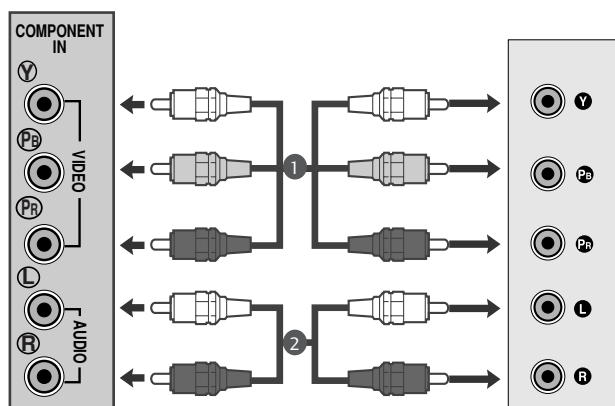
When connecting with a component cable

- 1 Connect the video output sockets (Y P_B P_R) of the DVD to the **COMPONENT IN VIDEO** sockets (Y P_B P_R) of the set.
- 2 Connect the audio cable from the DVD to **COMPONENT IN AUDIO** sockets of the set.
- 3 Press the **INPUT** button to select **Component**.
- 4 Press the **PLAY** button on the DVD.
The DVD playback picture appears on the screen.

Component Input ports

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

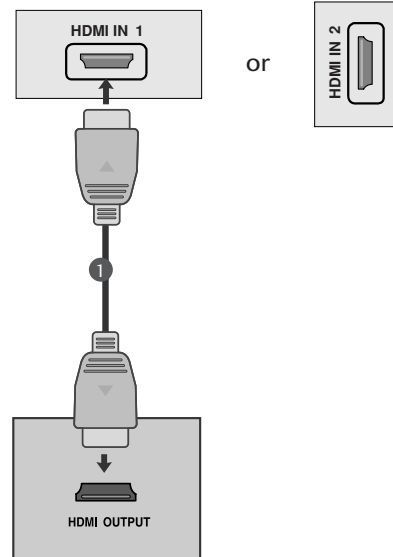
Component ports on the set	Y	P _B	P _R
Video output ports on DVD player	Y	P _B	P _R
	Y	B-Y	R-Y
	Y	Cb	Cr
	Y	Pb	Pr



EXTERNAL EQUIPMENT SETUP

When connecting HDMI cable

- 1 Connect the HDMI output of the DVD to the **HDMI IN** jack on the set.



! NOTE

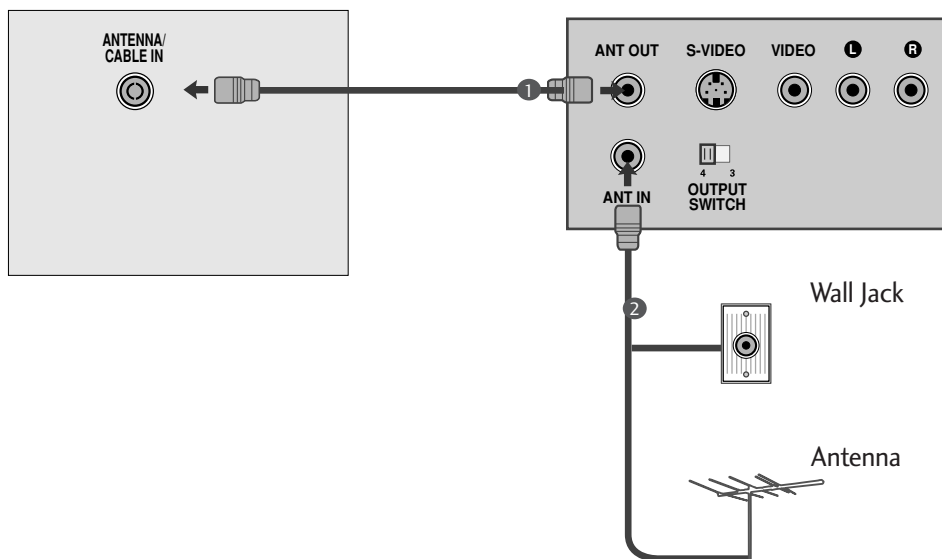
- ▶ Set can receive the video and audio signal simultaneously by using a HDMI cable.
- ▶ If the DVD player does not support Auto HDMI, you need to set the DVD output resolution appropriately.

EXTERNAL EQUIPMENT SETUP

VCR SETUP

- To avoid picture noise (interference), leave an adequate distance between the VCR and set.
- Typically a still picture is shown on the VCR. If a user uses 4:3 picture format for a long time, an afterimage may remain on the sides of the screen.

When connecting with an antenna

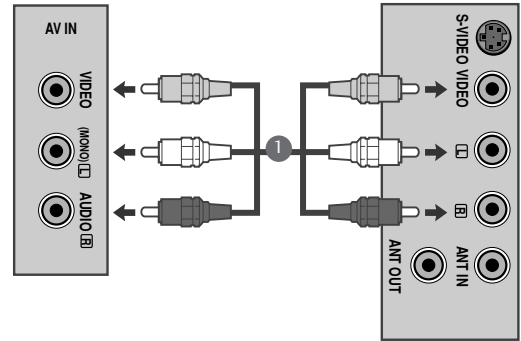


-
- 1 Connect the RF out socket of the VCR to the aerial socket of the set.
.....
 - 2 Connect the aerial cable to the RF aerial in socket of the VCR.
.....
 - 3 Store the VCR channel on a desired programme number using the 'Manual programme tuning' section.
.....
 - 4 Select the programme number where the VCR channel is stored.
.....
 - 5 Press the **PLAY** button on the VCR.
-

EXTERNAL EQUIPMENT SETUP

When connecting with a RCA cable

- 1 Connect the audio/video out sockets of the VCR to AUDIO/VIDEO in sockets of the set.
- 2 Press the INPUT button to select AV.
- 3 Press the PLAY button on the VCR.
The VCR playback picture appears on the screen.

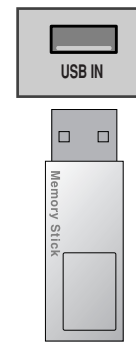


! NOTE

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

USB SETUP

- 1 Connect the USB device to the **USB IN** jacks on the side of set.
- 2 After connecting the **USB IN** jacks, you use the **USB** function. (▶ p.80)

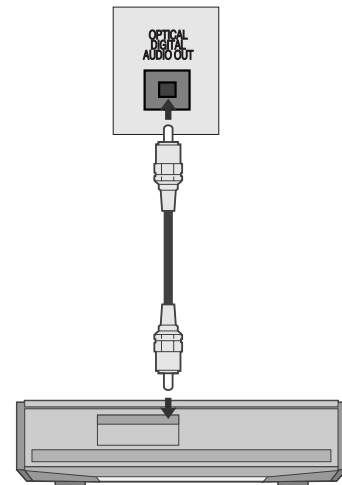


DIGITAL AUDIO OUT SETUP

Sending the TV's audio signal to external audio equipment via the Digital Audio Output (Optical) port. If you want to enjoy digital broadcasting through 5.1-channel speakers, connect the OPTICAL DIGITAL AUDIO OUT terminal on the back of TV to a DVD Home Theater (or amp).

- 1 Connect one end of an optical cable to the TV Digital Audio (Optical) Output port.
- 2 Connect the other end of the optical cable to the digital audio (Optical) input on the audio equipment.

Set the "TV Speaker option - Off" in the AUDIO menu. (▶ p.63). Refer to the external audio equipment instruction manual for operation.



! CAUTION

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

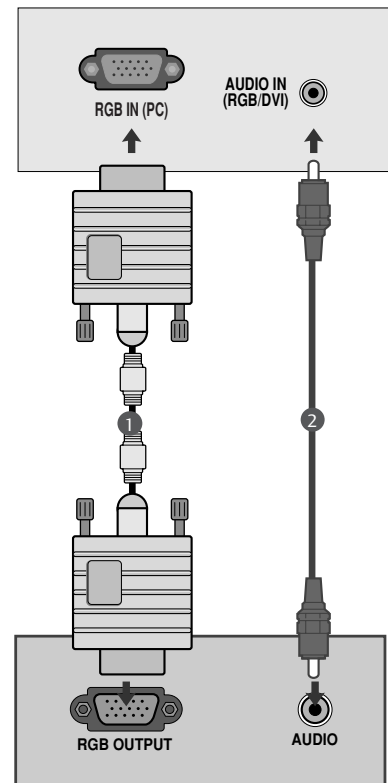
EXTERNAL EQUIPMENT SETUP

PC SETUP

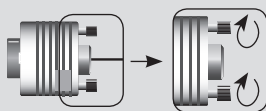
This product provides Plug and Play capability, meaning that the PC adjusts automatically to the set's settings.

When connecting with a D-sub 15 pin cable

- 1 Connect the signal cable from the monitor output socket of the PERSONAL COMPUTER to the PC input socket of the set.
- 2 Connect the audio cable from the PC to the **AUDIO IN (RGB/DVI)** sockets of the set.
- 3 Press the INPUT button to select **RGB**.
- 4 Switch on the PC, and the PC screen appears on the set. The set can be operated as a PC monitor.



NOTE



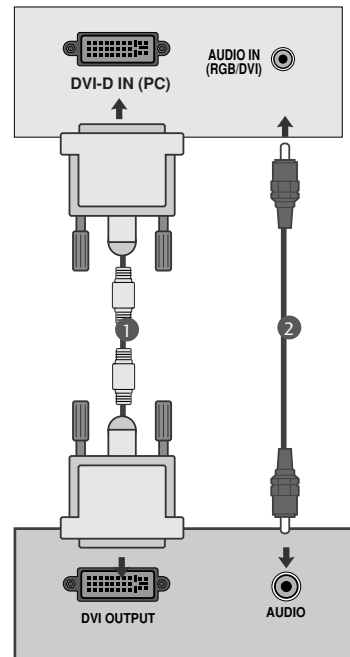
▶ Connect the signal input cable and tighten the screws by turning them clockwise.

▶ You must use shielded signal interface cables (D sub 15 pin cable, DVI cable) with ferrite cores to maintain standard compliance for the product.

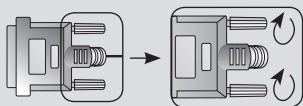
EXTERNAL EQUIPMENT SETUP

When connecting with a DVI cable

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



NOTE



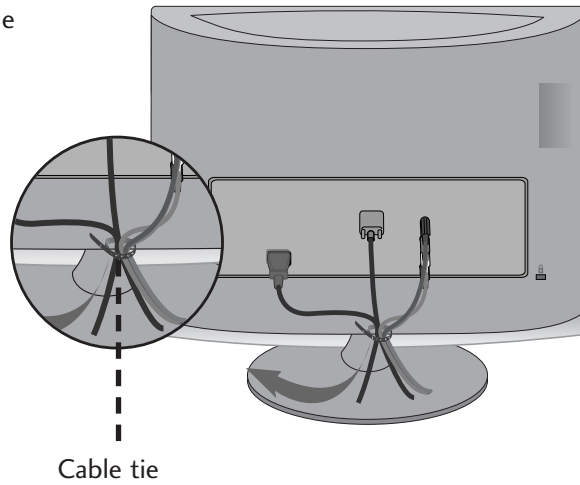
- ▶ Connect the signal input cable and tighten the screws by turning them clockwise.

- ▶ If the set is cold, there may be a small “flicker” when the set is switched on. This is normal, there is nothing wrong with the set.
- ▶ If possible, use the 1920x1080 @ 60 Hz video mode to obtain the best image quality for your LCD monitor. If used with other resolutions, some scaled or processed pictures may appear on the screen. The set has been preadjusted to the mode 1920x1080 @ 60 Hz.
- ▶ Some dot defects may appear on the screen, like Red, Green or Blue spots. However, this will have no impact or effect on the monitor performance.
- ▶ Do not press the LCD screen with your finger for a long time as this may produce some temporary distortion effects on the screen.
- ▶ Avoid keeping a fixed image on the set's screen for prolonged periods of time. The fixed image may become permanently imprinted on the screen; use a screen saver when possible.

EXTERNAL EQUIPMENT SETUP

BACK COVER FOR WIRE ARRANGEMENT

Tie cables together with a cable tie as shown in the illustration.



EXTERNAL EQUIPMENT SETUP

SUPPORTED DISPLAY RESOLUTION

RGB/DVI[PC]

Resolution	Horizontal Frequency(kHz)	Vertical Frequency(Hz)
720x400	31.468	70
640x480	31.469	60
	37.500	75
800x600	37.879	60
	46.875	75
1024x768	48.363	60
	60.123	75
1152x864	67.500	75
	63.981	60
1280x1024	79.976	75
	64.674	60
1680x1050	65.290	60
	75.000	60
1600x1200	75.000	60
1920x1080	66.587	60

HDMI[DTV] (Not Support PC)

Resolution	Horizontal Frequency(kHz)	Vertical Frequency(Hz)
720x480/60p	31.469	60
	31.5	60
720x576/50p	31.25	50
1280x720/50p	37.5	50
1280x720/60p	44.96	60
	45	60
1920x1080/60i	33.72	60
	33.75	60
1920x1080/50i	28.125	50
1920x1080/24p	27	24
1920x1080/30p	33.75	30
1920x1080/50p	56.25	50
1920x1080/60p	67.43	60
	67.5	60

WATCHING TV /PROGRAMME CONTROL

REMOTE CONTROL KEY FUNCTIONS

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



- 1** POWER Switches the set on or off.
TV/PC Selects TV or PC mode.
INPUT External input mode rotates in regular sequence.

- 2** TV/RADIO Selects Radio or TV channel.
I/II Selects the sound output.(Refer to the p.64)
MUTE Switches the sound on or off.

- 3** 0 to 9 Selects a programme.
number button Selects numbered items in a menu.
LIST Displays the programme table.(Refer to the p.35)
Q.VIEW Returns to the previously viewed programme.

- 4** MENU Selects a menu. (Refer to the p.25)
EXIT Clears all on-screen displays.
INFO ⓘ Shows the present screen information.
GUIDE Shows programme schedule.(Refer to the p.36 to 38)
THUMBSTICK Allows you to navigate the on-screen menus and adjust the system settings to your preference.
(Up/Down/Left/Right)
OK Accepts your selection or displays the current mode.

- 5** VOLUME UP Adjusts the volume.
/DOWN
RETURN Allows the user to move back one step in an interactive application, EPG or other user interaction function.
LIGHTING Press the Lighting button to turn the decoration lighting on/off.
FAV Displays the selected favourite programme.(Refer to the p.35)
Programme Selects a programme.
UP/DOWN

WATCHING TV /PROGRAMME CONTROL



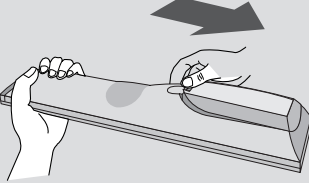
1 TELETEXT BUTTONS These buttons are used for teletext. For further details, see the 'Teletext' section. (Refer to the p.88 to 89)

2 USB Menu control buttons Controls USB menu (Photo List and Music List) (Refer to the p.80)

3 Q.MENU Select the desired quick menu source. (Refer to the p.24)

MARK Check and un-check programmes in the recorded set menu.

Installing Batteries



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

WATCHING TV /PROGRAMME CONTROL

TURNING ON THE TV

- When your TV is turned on, you will be able to use its features.

1 Firstly, connect the power cord correctly and check the main power (⏻ / I) on the TV.

2 **Set ID : Off**

In standby mode to turn TV on, press the INPUT or PR ▲ / ▼ button on the TV or press the POWER button on the remote control and the TV will switch on.

Set ID : On

In standby mode to turn TV on, press the INPUT or PR ▲ / ▼ button on the TV or press the POWER, INPUT, PR ▲ / ▼ or NUMBER button on the remote control and the TV will switch on.

Initializing setup

If the OSD (On Screen Display) is displayed on the screen after turning on the TV, you can adjust the **Mode Setting, Auto tuning**.

Note:

- a. If you close without completing the initial setting, the Initial Setting menu can be displayed again.
- b. Press the RETURN button to change the current OSD to the previous OSD.
- c. "Home Use" mode is the optimal setting for home environments, and is the TV's default mode.
- d. "Store Demo" mode is the optimal setting for store environments. If a user modifies image quality data, "Store Demo" mode initializes the product to the image quality set by us after a certain period of time.
- e. The mode (**Home Use, Store Demo**) can be changed by executing **Mode Setting** in the **OPTION** menu.

WATCHING TV /PROGRAMME CONTROL

PROGRAMME SELECTION

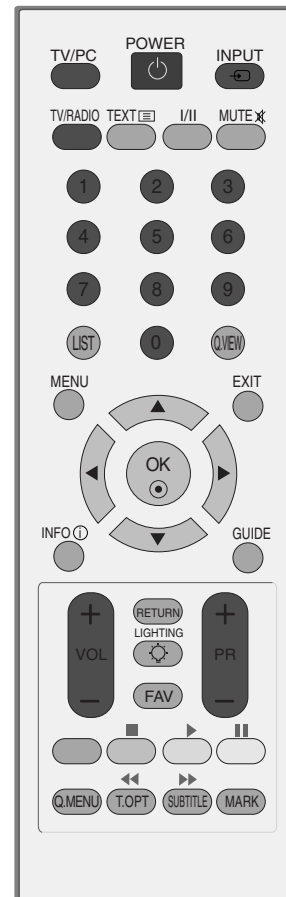
- 1 Press the **PR +** or **-** or **NUMBER** buttons to select a programme number.
-

VOLUME ADJUSTMENT

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

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

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



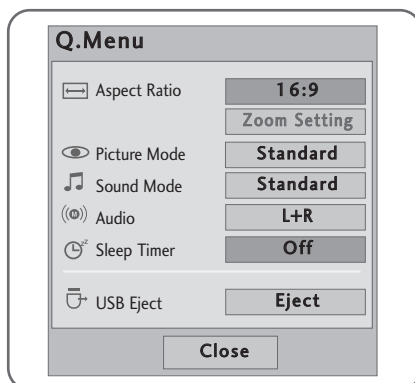
WATCHING TV /PROGRAMME CONTROL

QUICK MENU

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

Q.Menu (Quick Menu) is a menu of features which users might use frequently.

- **Aspect Ratio**: Selects your desired picture format.
For Zoom Setting, select 14:9, Zoom and Cinema Zoom in Ratio Menu. After completing Zoom Setting, the display goes back to Q.Menu.
- **Picture Mode** : Selects your desired Picture Mode.
- **Sound Mode** : It is a feature to automatically set the sound combination which it deems the best for the images being watched. Selects your desired Sound Mode.
- **Audio** : Selects the sound output.
- **Sleep Timer** : Sets the sleep timer.
- **USB Eject** : Selects "USB Eject" in order to eject USB device.



1   Display each menu.

2   or  Select your desired Source.

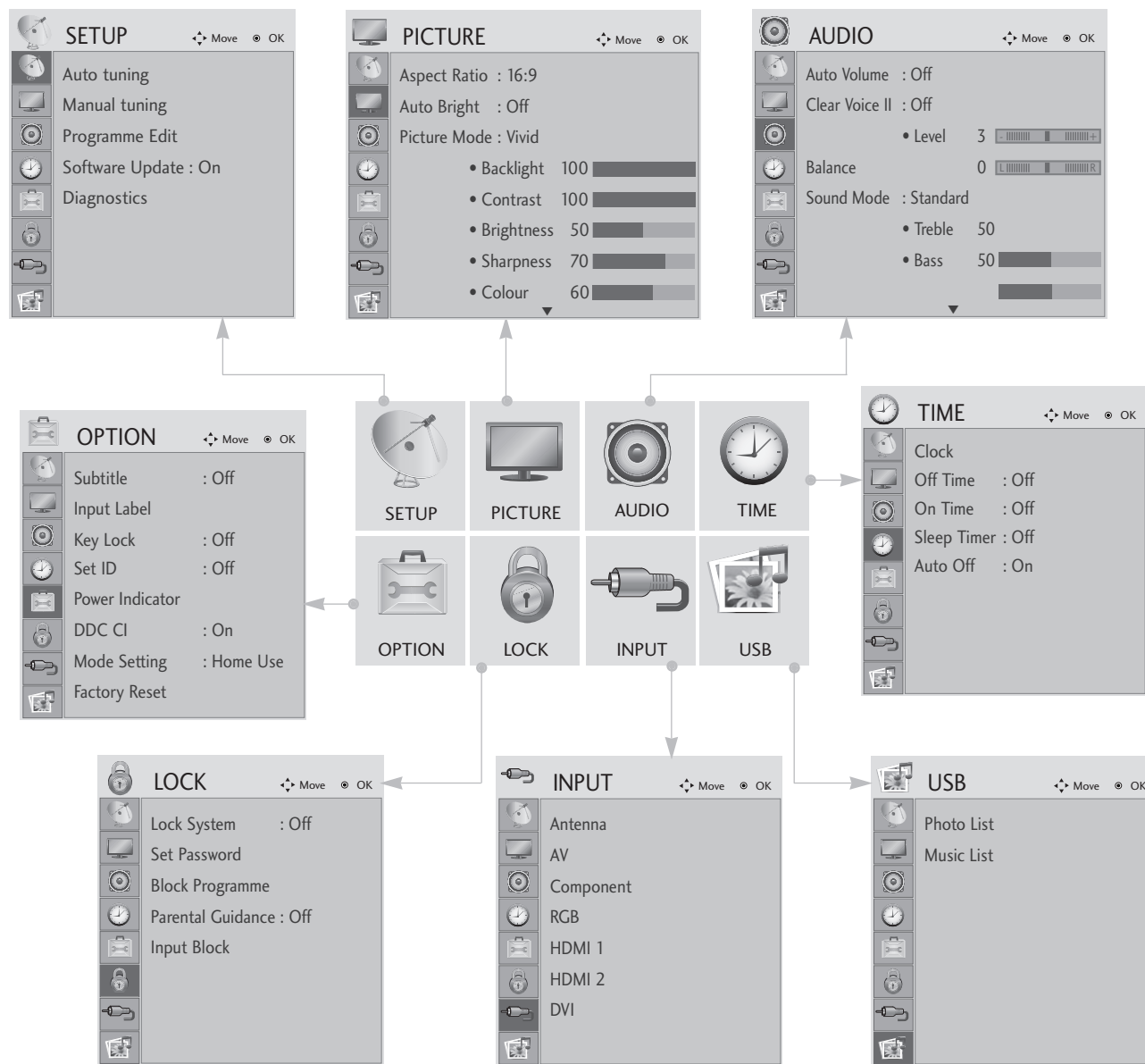
3 






- Press the RETURN button to move to the previous menu screen.

WATCHING TV /PROGRAMME CONTROL

ON SCREEN MENUS SELECTION AND ADJUSTMENT

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



- 1   Display each menu.
- 2   Select a menu item.
- 3  Move to the pop up menu.

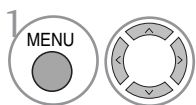
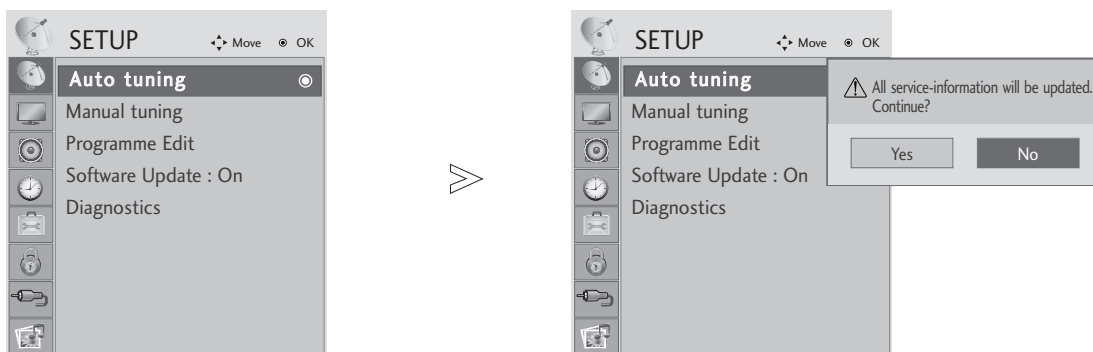
- Press the MENU or EXIT button to close the menu window.
- Press the RETURN button to move to the previous menu screen.

WATCHING TV /PROGRAMME CONTROL

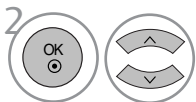
AUTO PROGRAMME TUNING

Use this to automatically find and store all available programmes.

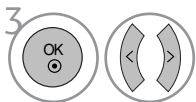
When you start auto programming in digital mode, all previously stored service information will be deleted.



Select **SETUP**.



Select **Auto Tuning**.



Select **Yes**.



Run Auto tuning.

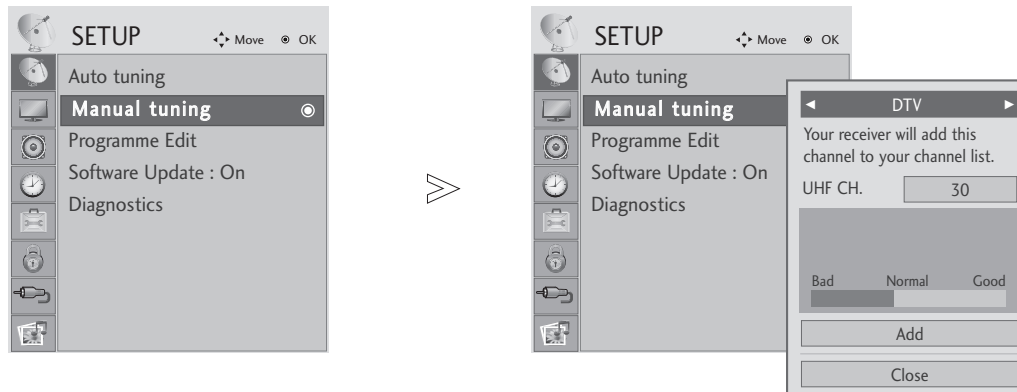
- Use NUMBER buttons to input a 4-digit password in Lock System 'On'.
- If you wish to keep on auto tuning, select YES using the ◀ ▶ button. Then, press the OK button. Otherwise, select NO.









- Press the MENU or EXIT button to close the menu window.
- Press the RETURN button to move to the previous menu screen.

WATCHING TV /PROGRAMME CONTROL

MANUAL PROGRAMME TUNING (IN DIGITAL MODE)

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



- 1   Select **SETUP**.
- 2   Select **Manual Tuning**.
- 3   Select **DTV**.
- 4   Select the desired channel number.

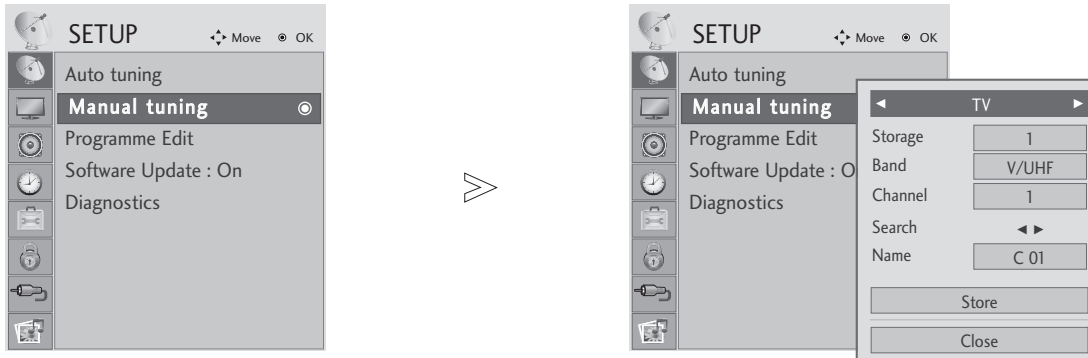
- Use NUMBER buttons to input a 4-digit password in Lock System 'On'.


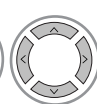





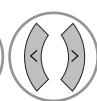
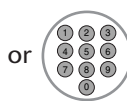
- Press the MENU or EXIT button to close the menu window.
- Press the RETURN button to move to the previous menu screen.


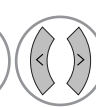

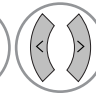
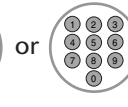




WATCHING TV /PROGRAMME CONTROL

MANUAL PROGRAMME TUNING (IN ANALOGUE MODE)

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



- 1   Select **SETUP**.
- 2   Select **Manual Tuning**.
- 3   Select **TV**.
- 4   or  Select the desired programme number on.

- 5   Select **V/UHF** or **Cable**.
- 6   or  Select the desired channel number.
- 7   Start searching.
- 8   Select **Store**.

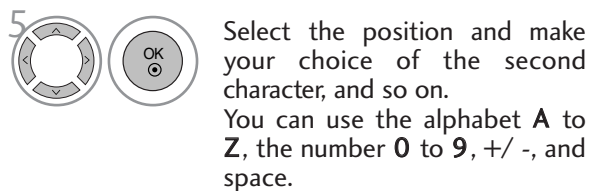
- Press the MENU or EXIT button to close the menu window.
- Press the RETURN button to move to the previous menu screen.

- Use NUMBER buttons to input a 4-digit password in Lock System 'On'.
- To store another channel, repeat steps 4 to 9.

WATCHING TV / PROGRAMME CONTROL

■ Assigning a station name

You can assign a station name with five characters to each programme number.



- Press the MENU or EXIT button to close the menu window.
- Press the RETURN button to move to the previous menu screen.

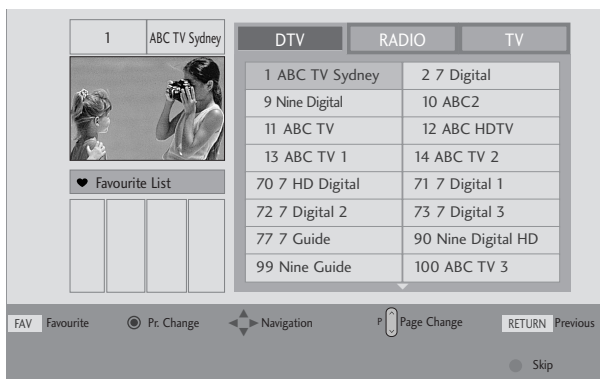
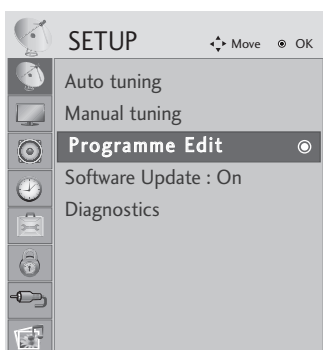
WATCHING TV /PROGRAMME CONTROL

PROGRAMME EDIT

When a programme number is skipped, it means that you will be unable to select it using PR + / - button during TV viewing.

If you wish to select the skipped programme, directly enter the programme number with the NUMBER buttons or select it in the Programme edit menu

This function enables you to skip the stored programmes.



Select **SETUP**.



Select **Programme Edit**.



Enter the Programme Edit.



Select a programme to be stored or skipped.

- Use NUMBER buttons to input a 4-digit password in Lock System 'On'.

- Press the MENU or EXIT button to close the menu window.
- Press the RETURN button to move to the previous menu screen.

WATCHING TV /PROGRAMME CONTROL

IN DTV/RADIO MODE

■ Skipping a programme number



Select a programme number to be skipped.



Turn the skipped programme number to blue.



Release the skipped programme.

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

■ Selecting favourite programme



Select your favourite programme number.

- It will automatically include the selected programme into your favourite programme list.

WATCHING TV /PROGRAMME CONTROL

IN TV MODE

This function enables you to delete or skip the stored programmes. You can also move some channels to other programme numbers.

■ Deleting a programme



Select a programme number to be deleted.

- The selected programme is deleted, all the following programmes are shifted up one



Turn the deleted programme number to red.



Release the deleted programme.

■ Moving a programme



Select a programme number to be moved.



Turn the moved programme number to YELLOW.



Release the moved programme.

■ Skipping a programme number



Select a programme number to be skipped.



Turn the skipped programme number to blue.



Release the skipped programme.

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

■ Selecting a Favourite Programme



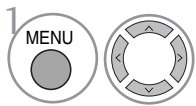
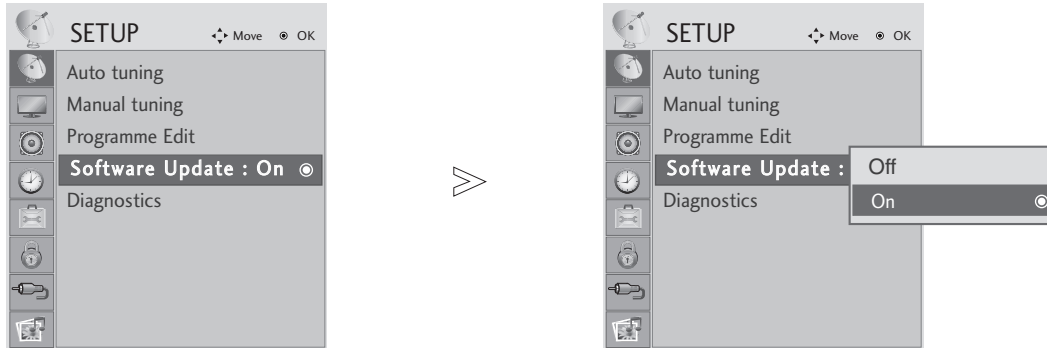
Select your favourite programme number.

- The selected programme will be added to the favourite programme list.

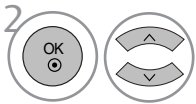
WATCHING TV /PROGRAMME CONTROL

SOFTWARE UPDATE

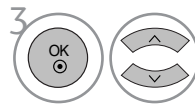
Software Update means software can be downloaded through the digital terrestrial broadcasting system.



Select **SETUP**.



Select **Software Update**.



After Software Update is completed, the System takes about one minute to restart.



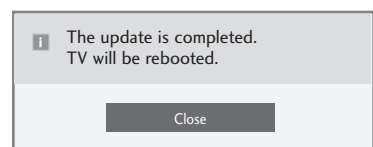
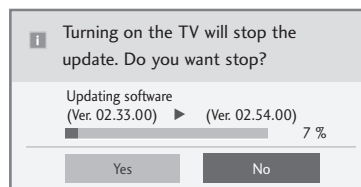
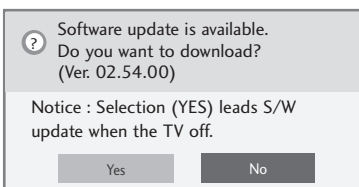
Save.

* When setting "Software Update"

Occasionally, a transmission of updated digital software information will result in the following menu on the TV screen.

Select the **YES** using the ◀▶ button and you will see the following picture.

After the Software Update is complete, the System restart.



When the Software Update menu is "Off", the message to change it to "On" appears.

When the power is turned off, downloading starts. When the power is turned on while updating, the progress status is displayed.

- During Progress of a Software Update, please note the following:

- Power to the set must not be interrupted.
- The set must not be switched off.
- The antenna must not be disconnected.
- After Software Update, you can confirm the updated software version in Diagnostics menu.
- It may take an hour to download the software, so make sure that the power stays on during the download.

WATCHING TV /PROGRAMME CONTROL

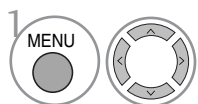
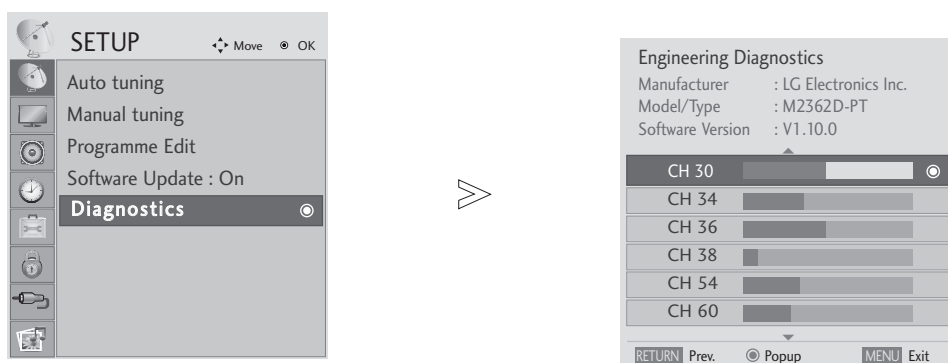
DIAGNOSTICS (IN DIGITAL MODE ONLY)

This function enables you to view information on the Manufacturer, Model/Type and Software Version.

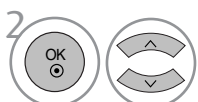
This displays the information and signal strength of the tuned MUX.

This displays the signal information and service name of the selected MUX.

(*MUX:A higher directory of channels in digital broadcasting (a single MUX contains multiple channels.))



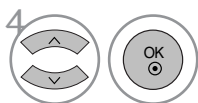
Select **SETUP**.



Select **Diagnostics**.



Display Manufacturer, Model/Type and Software Version.



Display the Channel information.

- Press the MENU or EXIT button to close the menu window.
- Press the RETURN button to move to the previous menu screen.

WATCHING TV /PROGRAMME CONTROL

SELECTING THE PROGRAMME TABLE

You can check which programmes are stored in the memory by displaying the programme table.

 Displayed in the Locked Programme.



■ Displaying programme LIST



Display the PROGRAMME LIST.

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

■ Selecting a programme in the programme list



Select a programme.



Switch to the chosen programme number.



From the programme you are currently watching, the mode will change from TV to DTV to Radio.

■ Paging through a programme list



Turns the pages.



Returns to normal TV viewing.

■ Displaying the favourite programme table



Display the Favourite Programme table.

EPG (ELECTRONIC PROGRAMME GUIDE) (IN DIGITAL MODE)

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

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

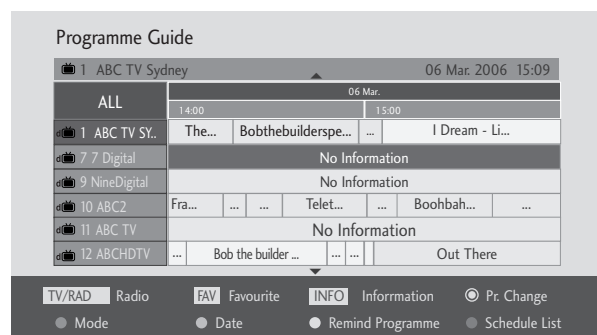
This function can be used only when the EPG information is broadcasted by broadcasting companies.

The EPG displays the programme description for the next seven days.

Switch on/off EPG



Switch on or off EPG.



Select a programme



or



Select desired programme.



Display the selected programme.

EPG (ELECTRONIC PROGRAMME GUIDE) (IN DIGITAL MODE)

Button Function in NOW/NEXT Guide Mode



Change EPG mode.



Enter Timer Record/Remind setting mode.



Enter Timer Record/Remind list mode.



Change to the selected programme.



Select NOW or NEXT Programme.



Select the Broadcast Programme.



Page Up/Down.



or  Switch off EPG.



Select TV or RADIO Programme.



The detail information on or off.

Button Function in 7 Day Guide Mode



Change EPG mode.



Enter Date setting mode.



Enter Timer Record/Remind setting mode.



Enter Timer Record/Remind list mode.



Change to the selected programme.



Select NOW or NEXT Programme.



Select the Broadcast Programme.



Page Up/Down.



or  Switch off EPG.



Select TV or RADIO Programme.



The detailed information on or off.

Button Function in Date Change Mode



Switch off Date setting mode.



Change to the selected date.



Select a date.



Switch off Date setting mode.



or  Switch off EPG.

EPG (ELECTRONIC PROGRAMME GUIDE) (IN DIGITAL MODE)

Button Function in Extended Description Box



Text Up/Down.



Enter Timer Record/Remind setting mode.



The detailed information on or off.



or



Switch off EPG.

Button Function in Remind Setting Mode



Change to Guide or Timer list mode.



Save Timer Remind.



Select Service, Date or Start time.



Function setting.

Button Function in Schedule List Mode

If you've created a schedule list, a scheduled program is displayed at the scheduled time even when you are watching a different program at the time.



Add new Manual Timer setting mode.



Enter Schedule list editing mode.



Delete the selected item.



Change to Guide mode.



Select Schedule list.

PICTURE CONTROL





PICTURE SIZE (ASPECT RATIO) CONTROL

You can watch the screen in various picture formats; 16:9, Just Scan, Original, 4:3, 14:9. Zoom and Cinema Zoom.

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.

You can adjust the enlarge proportion using ▲ ▼ button.

This function works in the following signal.

-   Select **Aspect Ratio**.
-   Select the desired picture format.

- You can also adjust **Aspect Ratio** in the **PICTURE** menu.
- For Zoom Setting, select **14:9**, Zoom and Cinema Zoom in Ratio Menu. After completing Zoom Setting, the display goes back to Q.Menu.

• 16:9

The following selection will allow you to adjust the picture horizontally, in linear proportion, to fill the entire screen (useful for viewing 4:3 formatted DVDs).



• 4:3

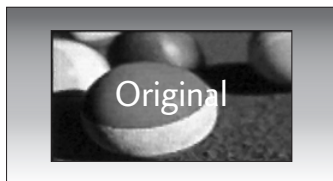
The following selection will allow you to view a picture with an original 4:3 aspect ratio, grey bars will appear on both the left and right of the screen.



PICTURE CONTROL

- **Original**

When your TV receives a wide screen signal, it will automatically change to the picture format broadcast.



- **14:9**

You can view a picture format of 14:9 or a general TV programme in the 14:9 mode. The 14:9 screen is viewed in the same way as in 4:3, but is magnified to the left and right.



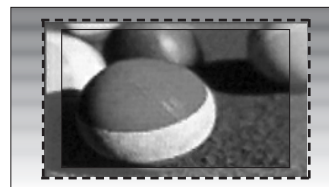
- **Zoom**

The following selection will allow you to view the picture without any alteration, while filling the entire screen. However, the top and bottom of the picture will be cropped.



- **Cinema Zoom**

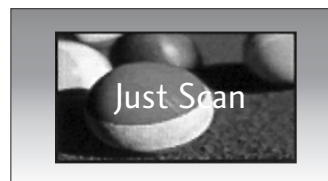
Choose Cinema Zoom when you wish the picture to be altered, both horizontally extended and vertically cropped. The picture adopting a compromise between alteration and screen coverage.



- **Just Scan**

The following Selection allows you to view the picture in the best quality without loss of original picture in high resolution image.

Note: If there is interference in original picture, you can view interference at the edge.



! NOTE

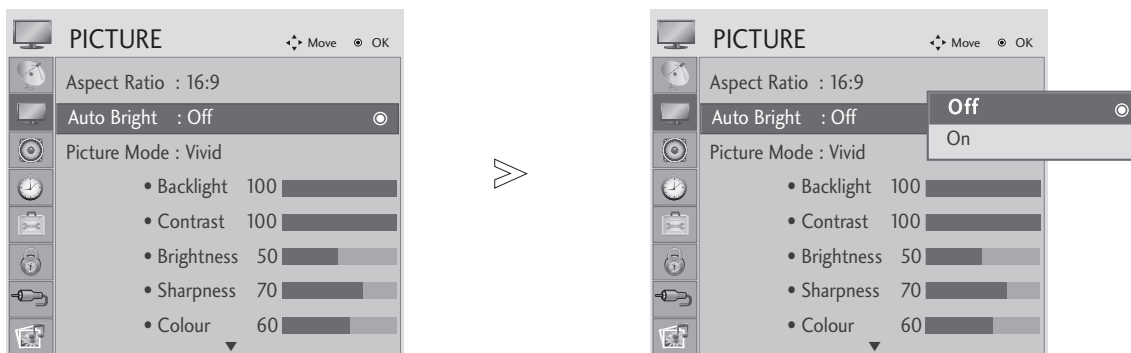
- ▶ You can only select 16:9 (Wide), 4:3, 14:9, Zoom, Cinema Zoom in Component (under 720p) mode.
- ▶ You can only select 4:3, 16:9 (Wide) in RGB/DVI mode only.
- ▶ In HDMI/Component (over 720p) or DTV (over 576p) mode, Just Scan is available.







PICTURE CONTROL

AUTO BRIGHT

When ON is selected, this function adjusts the screen brightness automatically, depending on the surrounding environment, to provide optimal viewing conditions.

When OFF is selected, this function is turned off.



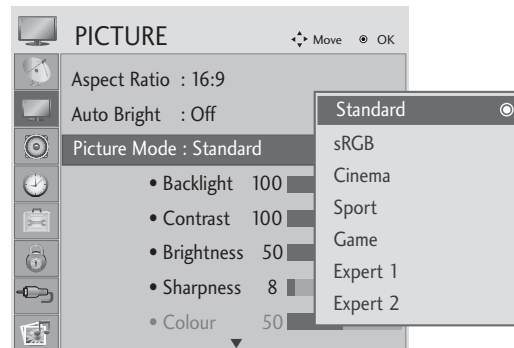
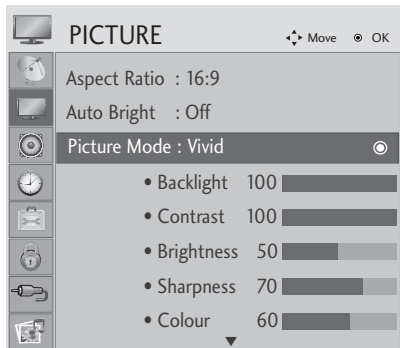
- 1   Select **PICTURE**.
- 2   Select **Auto Bright**.
- 3   Select **On** or **Off**.

- Press the MENU or EXIT button to close the menu window.
- Press the RETURN button to move to the previous menu screen.

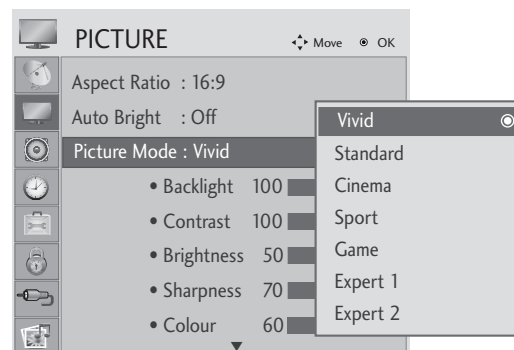
PICTURE CONTROL

PRESET PICTURE SETTINGS

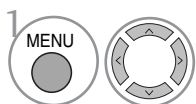
Picture Mode-Preset



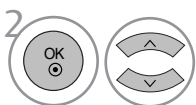
<RGB,DVI Mode>



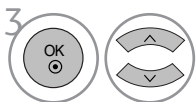
<Other mode>



Select **PICTURE**.



Select **Picture Mode**.



Select desired picture value.

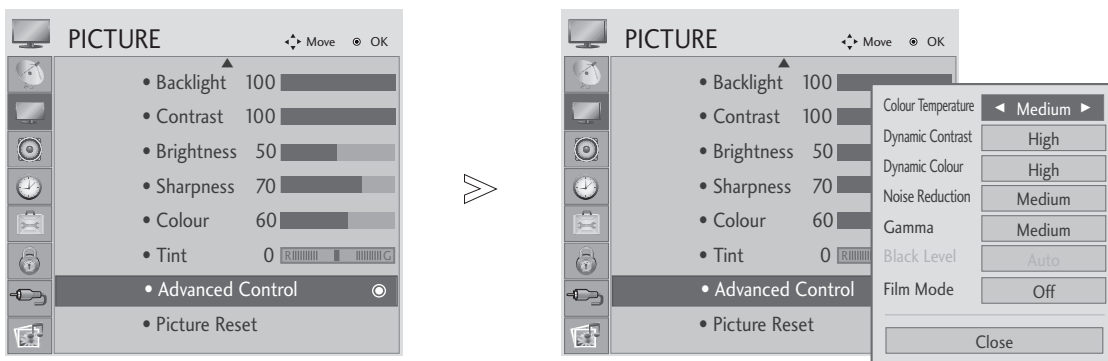
• Picture Mode adjusts the set for the best picture appearance. Select the preset value in the Picture Mode menu based on the programme category.








- Press the MENU or EXIT button to close the menu window.
- Press the RETURN button to move to the previous menu screen.

PICTURE CONTROL

Auto Colour Tone Control (Warm/Medium/Cool)

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



- 1   Select **PICTURE**.
- 2   Select **Advanced Control**.
- 3   Select **Colour Temperature**.
- 4  Select either **Cool, Medium or Warm**.

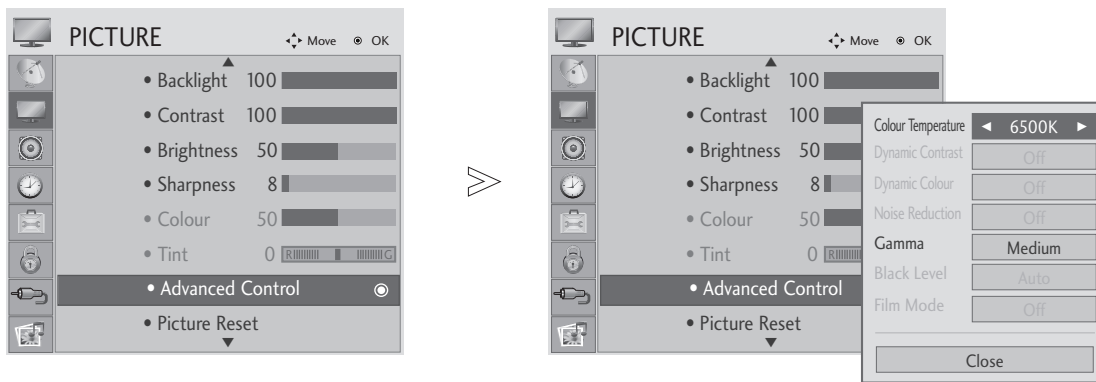
- Press the MENU or EXIT button to close the menu window.
- Press the RETURN button to move to the previous menu screen.








PICTURE CONTROL

Auto Colour Tone Control (6500K/9300K) (RGB,DVI mode only)

Advanced control menu is inactivated when picture mode is sRGB.

Choose one of two automatic colour adjustments.



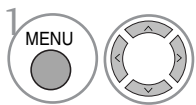
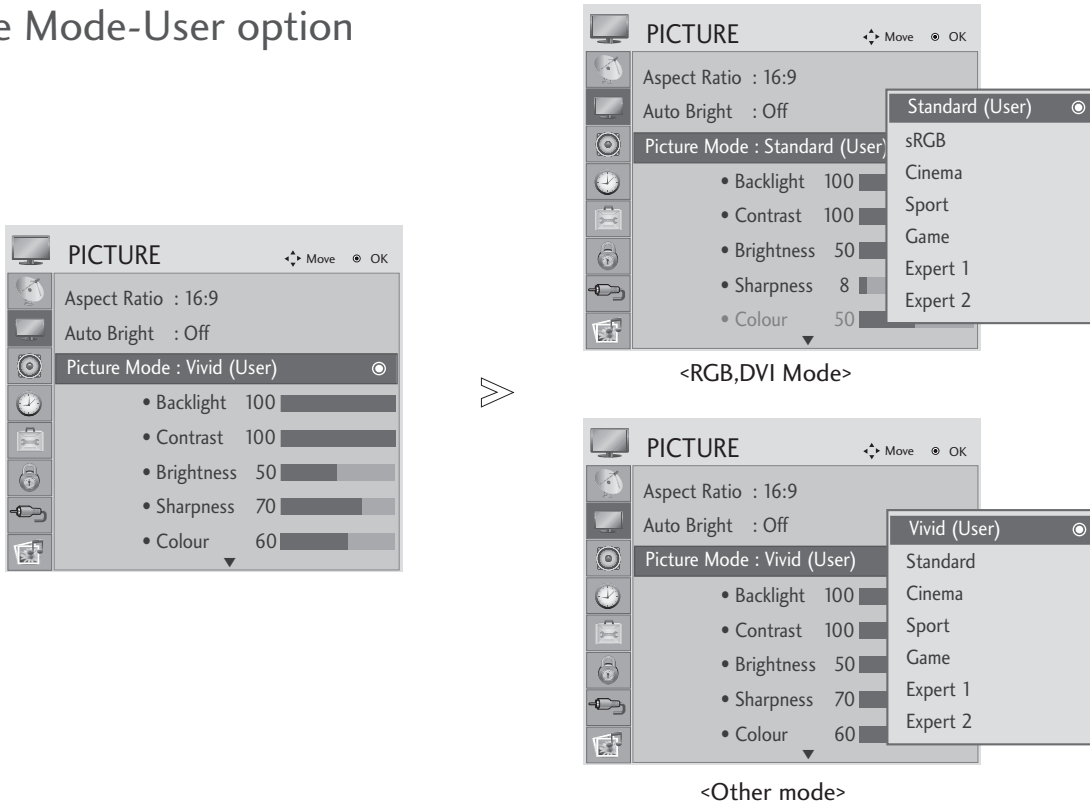
- 1   Select **PICTURE**.
- 2   Select **Advanced Control**.
- 3   Select **Colour Temperature**.
- 4  Select either **6500K, 9300K**.

- Press the MENU or EXIT button to close the menu window.
- Press the RETURN button to move to the previous menu screen.

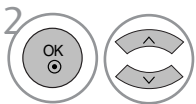
PICTURE CONTROL

MANUAL PICTURE ADJUSTMENT

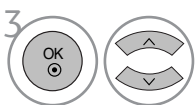
Picture Mode-User option



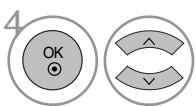
Select **PICTURE**.



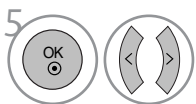
Select **Picture Mode**.



Select desired picture value.



Select **Contrast, Brightness, Sharpness, Colour or Tint**.



Make appropriate adjustments.

- Press the MENU or EXIT button to close the menu window.
- Press the RETURN button to move to the previous menu screen.

NOTE

- ▶ You cannot adjust colour and tint in the RGB, DVI mode.

PICTURE CONTROL

PICTURE IMPROVEMENT TECHNOLOGY

Dynamic Contrast

Optimizes the contrast automatically according to the brightness of the reflection.

Dynamic Colour

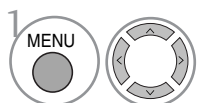
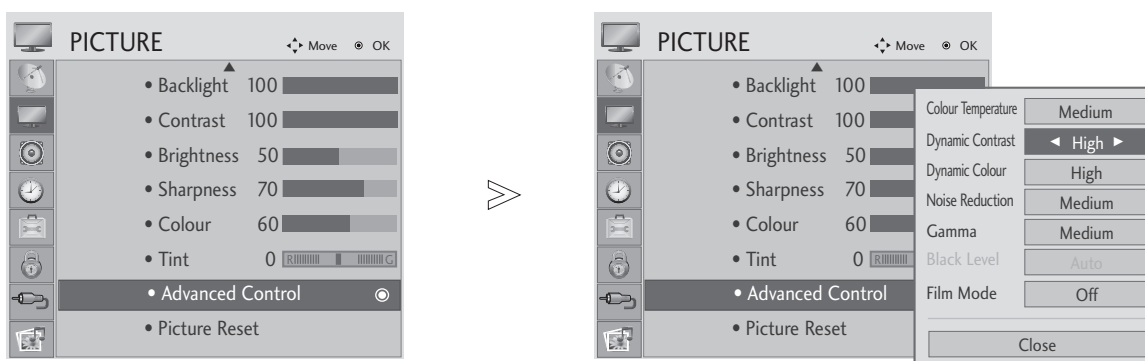
Adjusts the colour of the reflection automatically to reproduce natural colours as close as possible.

Noise Reduction

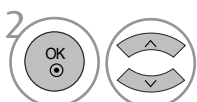
Removes interference up to the point where it does not damage the original picture.

Gamma

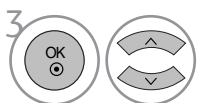
High gamma values display whitish images and low gamma values display high contrast images.



Select **PICTURE**.



Select **Advanced Control**.



Select **Dynamic Contrast**, **Dynamic Colour**, **Noise Reduction** or **Gamma**.



Select your desired Source.

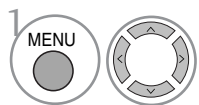
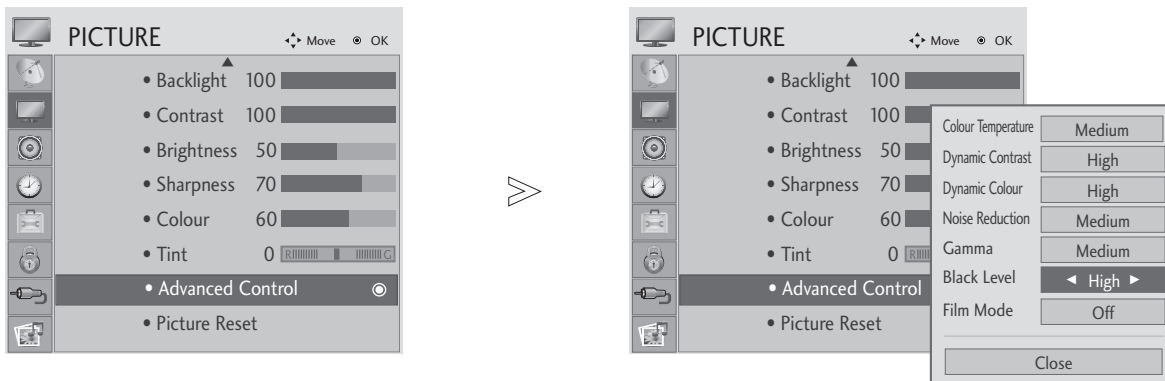
- Press the MENU or EXIT button to close the menu window.
- Press the RETURN button to move to the previous menu screen.

PICTURE CONTROL

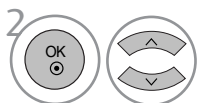
ADVANCED - BLACK (DARKNESS) LEVEL

When you view a film, this function adjusts the set to the best picture quality.

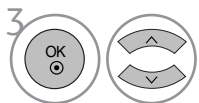
This function works in the following mode: AV (NTSC-M), HDMI or Component.



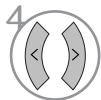
Select **PICTURE**.



Select **Advanced Control**.



Select **Black Level**.



Select **Low** or **High**.

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

- Press the MENU or EXIT button to close the menu window.
- Press the RETURN button to move to the previous menu screen.

! NOTE

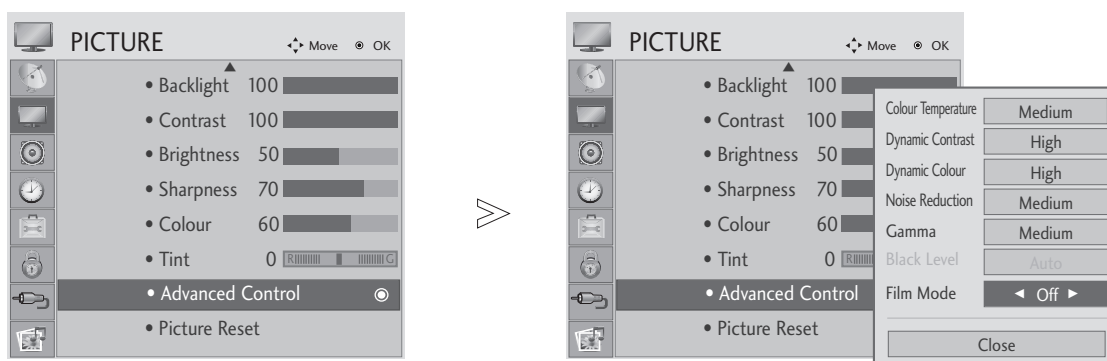
- ▶ If input is not AV(NTSC-M), HDMI or component, this function set to auto.
- ▶ In case of auto, user can't adjust it directly.
- ▶ Auto: Realizing the black level of the screen and set it to High or Low automatically.









PICTURE CONTROL

ADVANCED - FILM MODE

To set the product up for the best picture quality for viewing films.

This feature operates only in TV, AV and Component 480i/576i/1080i mode.



- 1   Select **PICTURE**.
- 2   Select **Advanced Control**.
- 3   Select **Film Mode**.
- 4   Select **On** or **Off**.

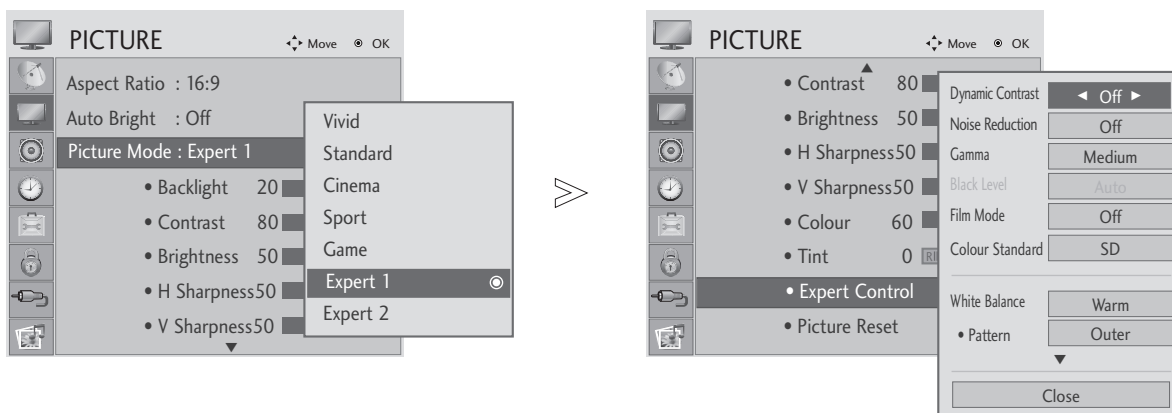
- Press the MENU or EXIT button to close the menu window.
- Press the RETURN button to move to the previous menu screen.












PICTURE CONTROL

Expert Picture Control

By segmenting categories, **Expert1** and **Expert2** provide more categories which users can set as they see fit, offering the optimal picture quality for users.

As the detail item for video quality experts to fine tune the video using specific videos, this may not be effective for general videos.



- 1   Select **PICTURE**.
- 2   Select **Picture Mode**.
- 3   Select **Expert1** or **Expert2**.
- 4   Select **Expert Control**.
- 5   Select your desired Source.
- 6  Make appropriate adjustments.

- Press the MENU or EXIT button to close the menu window.
- Press the RETURN button to move to the previous menu screen.

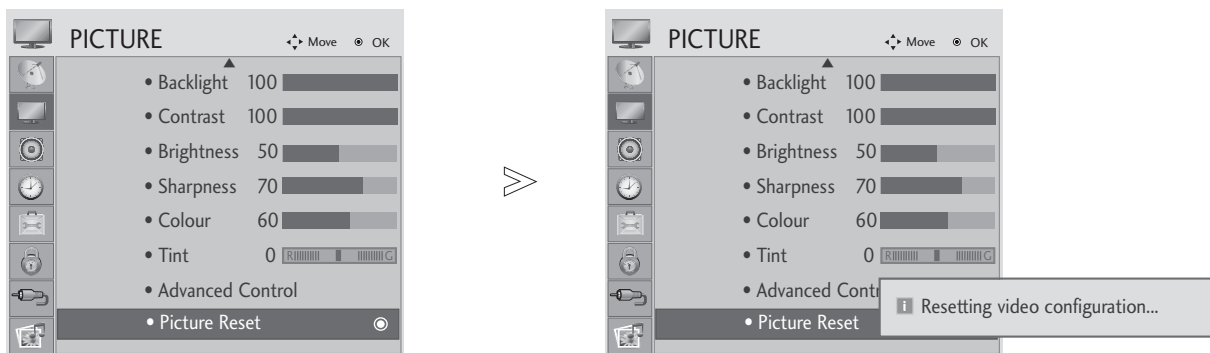
PICTURE CONTROL






<p>Dynamic Contrast (Off/Low/High)</p>	<ul style="list-style-type: none"> ■ Adjusts the contrast to keep it at the best level according to the brightness of the screen. The resolution of gradation is improved by making bright parts brighter and dark parts darker. This feature refers to dynamic contrast, and enhances the feeling of presence that contrast controls are intended to give by using dimming and other input signals.
<p>Noise Reduction (Off/Low/Medium/High)</p>	<ul style="list-style-type: none"> ■ Reduces screen noise without compromising video quality. This feature is also used to reduce recursive noise and MPEG noise (Mosquito/Block).
<p>Gamma (Low/Medium/High)</p>	<ul style="list-style-type: none"> ■ You can adjust brightness of dark area and middle gray level area of the picture. <ul style="list-style-type: none"> • Low : Make dark and middle gray level area of the picture brighter. • Medium: Express original picture gradation. • High: Make dark and middle gray level area of the picture darken.
<p>Black Level (Low/High)</p>	<ul style="list-style-type: none"> • Low :The reflection of the screen gets darker. • High: The reflection of the screen gets brighter. • Auto : Realizing the black level of the screen and set it to High or Low automatically. ■ Makes dark parts on the screen look darker. Set black level of the screen to proper level. This function works in the following mode: AV (NTSC-M), HDMI or Component . This function enables to select “Low” or “High” in the following mode : AV(NTSC-M), HDMI or Component. Otherwise, “Black level” is set to “Auto”.
<p>Film Mode (On/Off)</p>	<ul style="list-style-type: none"> ■ Makes video clips recorded in film look more natural. This feature operates only in TV, AV and Component 480i/576i/1080i mode.
<p>Colour Standard (SD/HD)</p>	<ul style="list-style-type: none"> ■ Select the international standard for the colour gamut that will be applied when the colour gamut is set to Standard. • SD: Increase colour accuracy by adjusting the output image to meet the EBU (European Broadcasting Union) Colour Coordinate Standard. • HD: Increase colour accuracy by adjusting the output image to meet ITU.BT-709 (High Definition Signal International Colour Coordinate Standard).
<p>White Balance (Medium/Warm/Cool)</p>	<ul style="list-style-type: none"> ■ White Balance (Medium/Warm/Cool) <ul style="list-style-type: none"> • Adjust white balance. ■ Pattern (Inner/Outer) <ul style="list-style-type: none"> • Decide whether to use the Inner Pattern or External Pattern when adjusting white balance. ■ Red Gain/Green Gain/Blue Gain <ul style="list-style-type: none"> • Adjust high-level white balance. ■ Red Offset/Green Offset/Blue Offset <ul style="list-style-type: none"> • Adjust low-level white balance.
<p>Colour Management System</p>	<ul style="list-style-type: none"> ■ Colour (Red/Green/Blue/Yellow/Cyan/Magenta) <ul style="list-style-type: none"> • Adjust colour saturation by area. ■ Tint (Red/Green/Blue/Yellow/Cyan/Magenta) <ul style="list-style-type: none"> • Adjust colour tint by area.

PICTURE CONTROL

PICTURE RESET

Settings of the selected picture modes return to the default factory settings.



- 1   Select **PICTURE**.
- 2   Select **Picture Reset**.
- 3  Initialize the adjusted value.

- Press the MENU or EXIT button to close the menu window.
- Press the RETURN button to move to the previous menu screen.

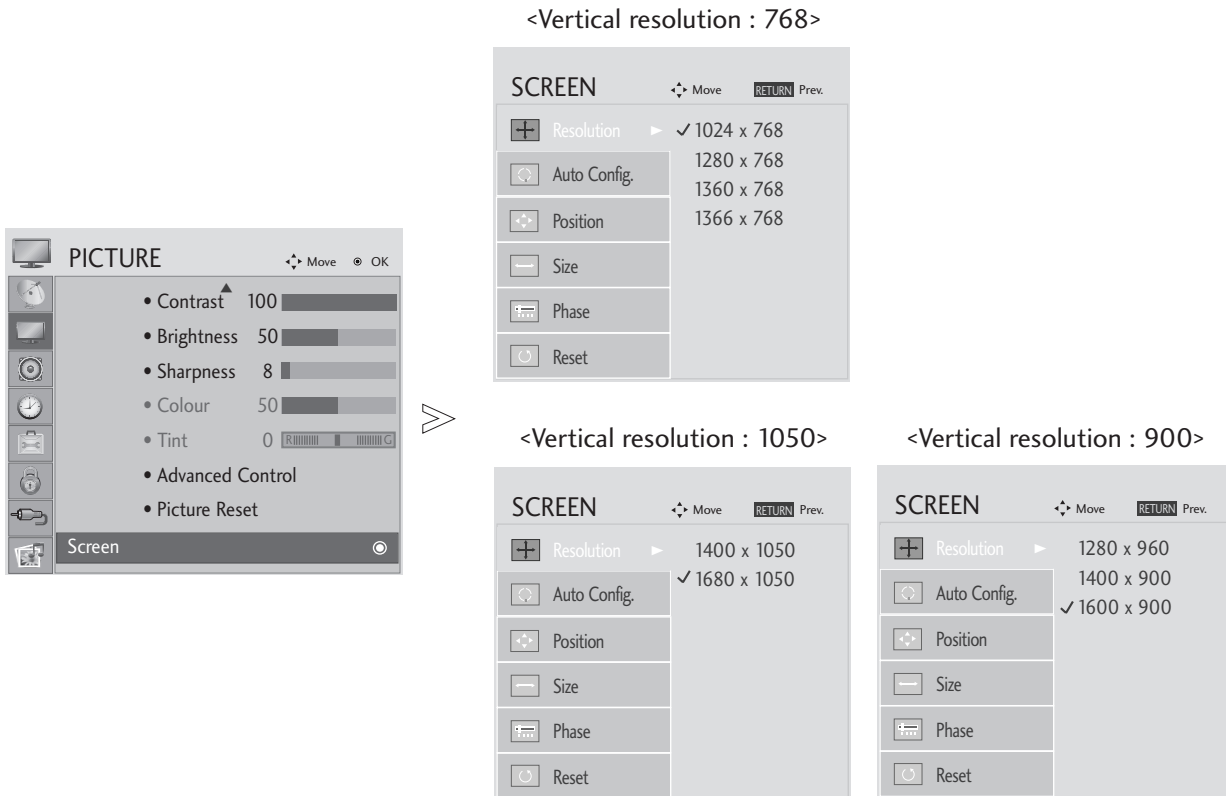
PICTURE CONTROL

SCREEN SETUP FOR PC MODE

Selecting Resolution

To view a normal picture, match the resolution of RGB mode and selection of PC mode.

This function works in the following mode: RGB[PC] mode.



- 1 MENU Select **PICTURE**.
- 2 OK Select **SCREEN**.
- 3 OK Select **Resolution**.
- 4 Select the desired resolution.

- Press the MENU or EXIT button to close the menu window.
- Press the RETURN button to move to the previous menu screen.

PICTURE CONTROL

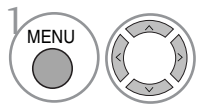
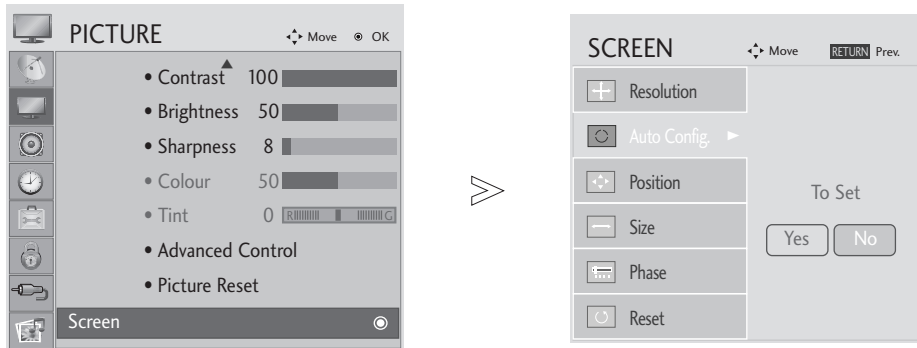
Auto Configure (RGB [PC] mode only)

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

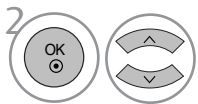
Auto configure

This function is for automatic adjustment of the screen position, clock, and phase. The displayed image will be unstable for a few seconds while the auto configuration is in progress.

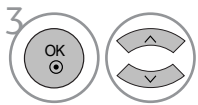
1. Using OSD



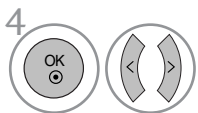
Select **PICTURE**.



Select **SCREEN**.



Select **Auto Config**.



Select **Yes**.



Run **Auto Config**.

- If the position of the image is still not correct, try Auto adjustment again.
- If picture needs to be adjusted again after Auto adjustment in RGB (PC), you can adjust the **Position, Size or Phase**.

2. Using OK (Remocon or control key)

This function is available for RGB signals only.



Press **OK**.

Auto Config. ▶ ● (OK)

- If you don't want Auto Configure, do not press ● OK



Press **OK**.

Auto in progress
<1920 x 1080 Resolution>

! Auto in progress
For optimal display
change resolution 1920 x 1080

<Others Resolution>

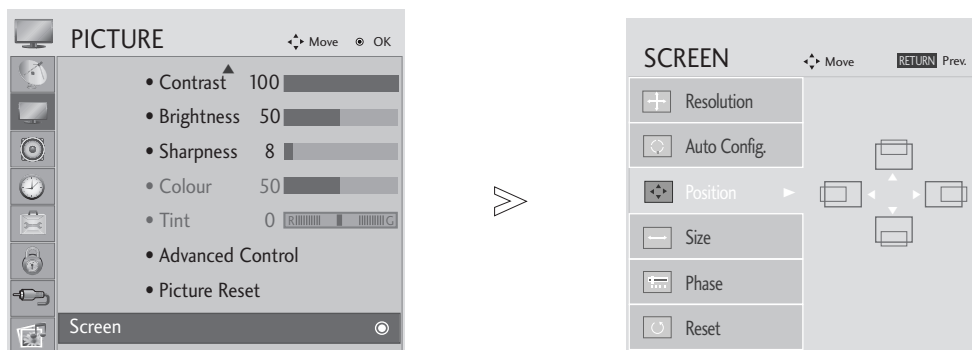
- Press the MENU or EXIT button to close the menu window.
- Press the RETURN button to move to the previous menu screen.










PICTURE CONTROL

Adjustment for screen Position, Size, Phase

If the picture is not clear after auto adjustment and especially if characters are still shaky, adjust the picture phase manually.

This function works in the following mode: RGB[PC].



- 1   Select **PICTURE**.
- 2   Select **SCREEN**.
- 3   Select **Position, Size or Phase**.
- 4    Make appropriate adjustments.

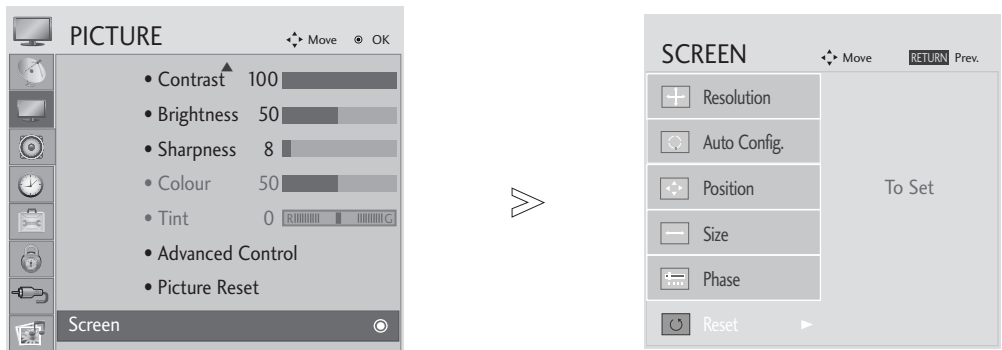
- Press the MENU or EXIT button to close the menu window.
- Press the RETURN button to move to the previous menu screen.










PICTURE CONTROL

Screen Reset

Returns Position, Size and Phase to the default factory settings.

This function works in the following mode: RGB[PC].



- 1   Select **PICTURE**.
- 2   Select **SCREEN**.
- 3   Select **Reset**.
- 4   Select **Yes**.
- 5  Run Reset.

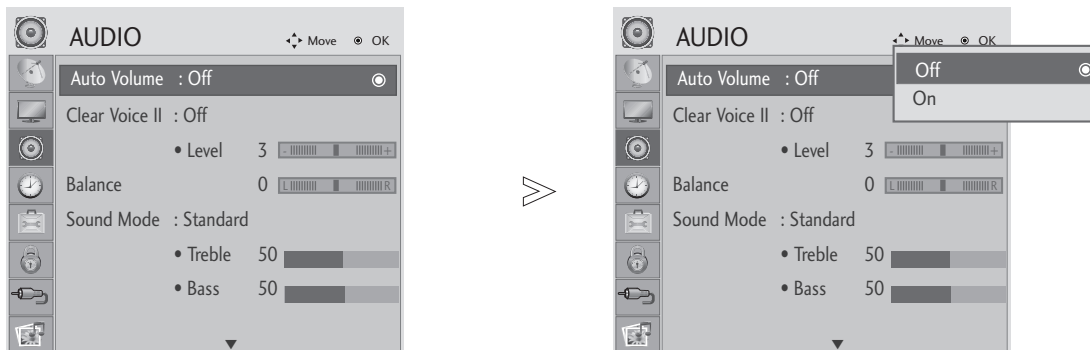
- Press the MENU or EXIT button to close the menu window.
- Press the RETURN button to move to the previous menu screen.

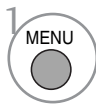
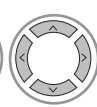

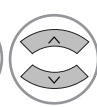


SOUND CONTROL

AUTO VOLUME LEVELER

AVL automatically remains on the same volume level if you change programmes.

Because each broadcasting station has its own signal conditions, volume adjustment may be needed very time the channel is changed. This feature allows users to enjoy stable volume levels by making automatic adjustments for each programme.



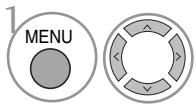
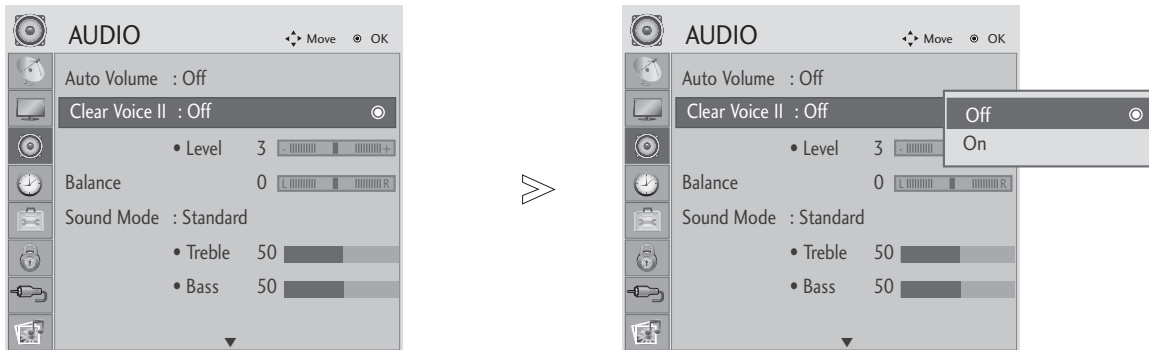
-   Select **AUDIO**.
-   Select **Auto Volume**.
-   Select **On** or **Off**.

- Press the MENU or EXIT button to close the menu window.
- Press the RETURN button to move to the previous menu screen.

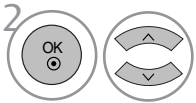
SOUND CONTROL

CLEAR VOICE II

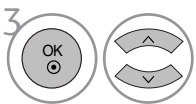
By differentiating the human sound range from others, it helps users listen to human voices better.



Select **AUDIO**.



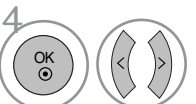
Select **Clear Voice II**



Select **On** or **Off**.

• Select levels from '-6' to '+6'.

When the **Clear Voice II** is selected **On**,



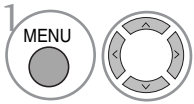
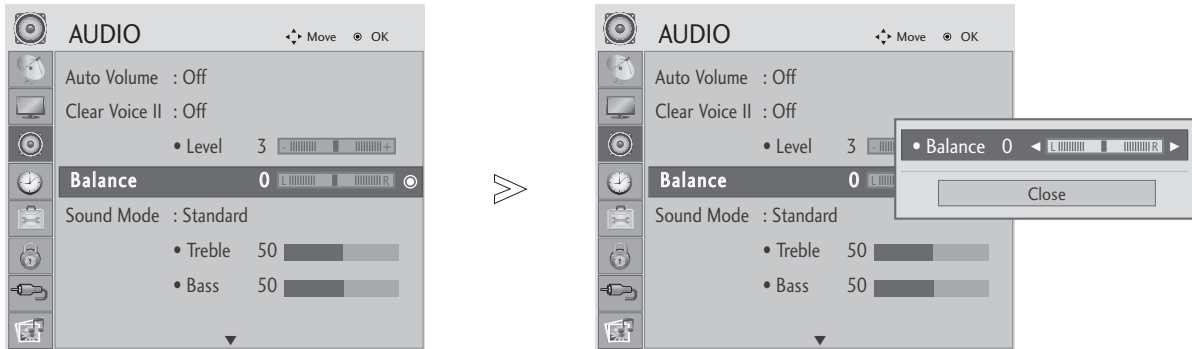
Select the desired **Level**.

- Press the MENU or EXIT button to close the menu window.
- Press the RETURN button to move to the previous menu screen.

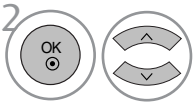
SOUND CONTROL

BALANCE

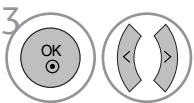
You can adjust the sound balance of the speakers to preferred levels.



Select **AUDIO**.



Select **Balance**.



Make desired adjustment.

- Press the MENU or EXIT button to close the menu window.
- Press the RETURN button to move to the previous menu screen.

SOUND CONTROL

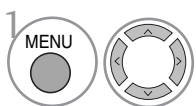
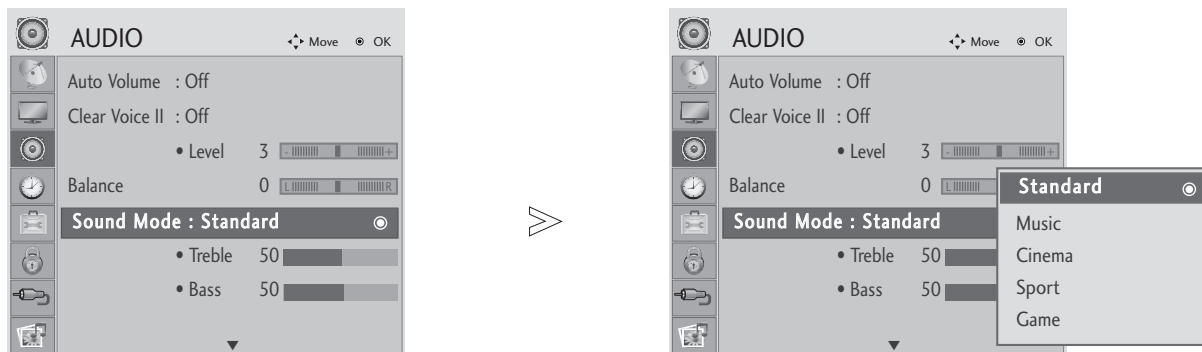
PRESET SOUND SETTINGS - SOUND MODE

You can select your preferred sound setting; Standard, Music, Cinema, Sport and Game and you can also adjust Treble, Bass.

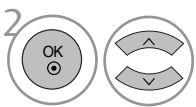
Sound Mode lets you enjoy the best sound without any Special adjustment as the set the appropriate sound options based on the programme content.

Standard, Music, Cinema, Sport and Game are preset for optimum sound quality at the factory.

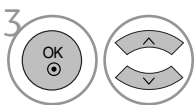
- | | |
|-----------------|--|
| Standard | Offers standard-quality sound. |
| Music | Optimizes sound for listening to music. |
| Cinema | Optimizes sound for watching movies. |
| Sport | Optimizes sound for watching sports vents. |
| Game | Optimizes sound for playing games. |



Select **AUDIO**.



Select **Sound Mode**.



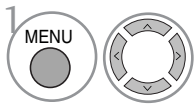
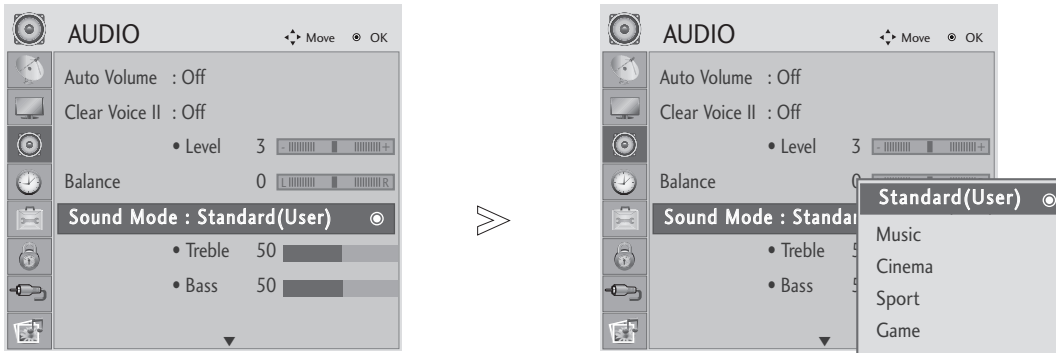
Select **Standard, Music, Cinema, Sport or Game**.

- Press the MENU or EXIT button to close the menu window.
- Press the RETURN button to move to the previous menu screen.

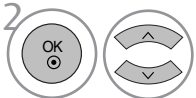
SOUND CONTROL

SOUND SETTING ADJUSTMENT - USER MODE

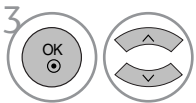
Adjusting the audio Treble and Bass.



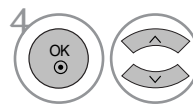
Select **AUDIO**.



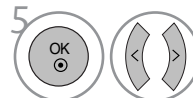
Select **Sound Mode**.



Select **Standard, Music, Cinema, Sport** or **Game**.



Select a **Treble, Bass**.

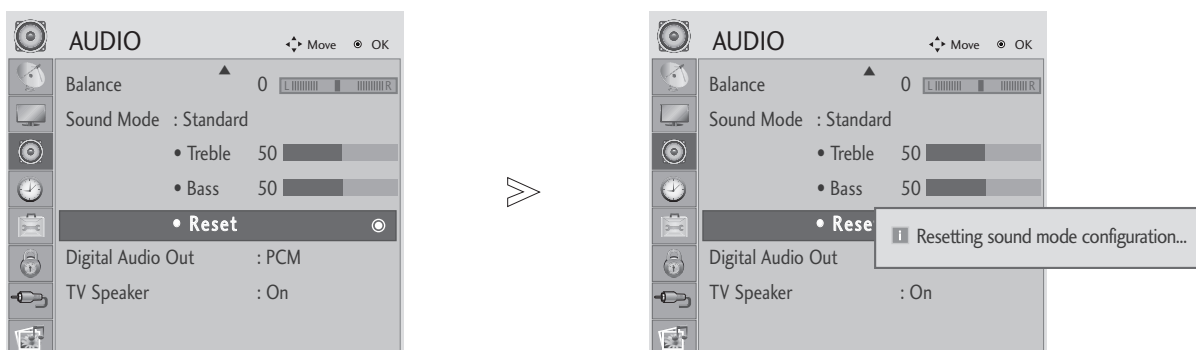







Set the desired sound level.

SOUND CONTROL

AUDIO RESET

Settings of the selected Sound Mode return to the default factory settings.



-   Select **AUDIO**.
-   Select **Reset**.
-  Initialize the adjusted value.

- Press the MENU or EXIT button to close the menu window.
- Press the RETURN button to move to the previous menu screen.

SOUND CONTROL

SELECTING DIGITAL AUDIO OUT

This function allows you to select your preferred Digital Audio Output.

Auto -allows original output DOLBY Digital if a channel is broadcast with Dolby Digital audio.

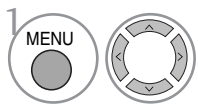
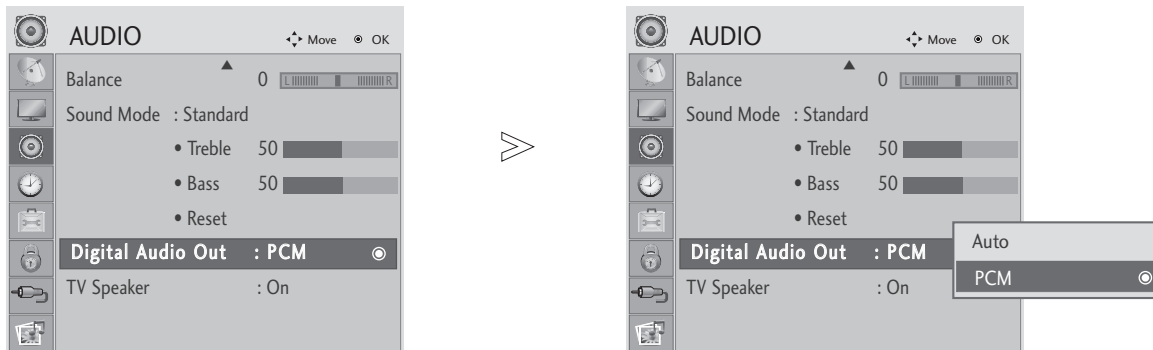
PCM -forces stereo PCM output.

When Dolby digital is available,selecting Auto in the Digital Audio Out menu will set SPDIF(Sony Philips Digital InterFace)output to Dolby Digital.

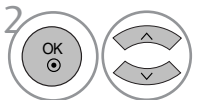
If Auto is selected in the digital audio out menu when dolby digital is not available,SPDIF output will be PCM(Pulse-code Modulation).

Even if both Auto and Audio language hav been set in a channel which broadcast Dolby Digital Audio,only Dolby Digital will be played.

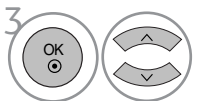
The product includes the capability to conv rt HE-AAC audio to Dolby Digital.This allows b st quality audio and surround sound support for any high definition broadcast format.Select "Auto "and mut TV speakers to enable this at digital output.



Select **AUDIO**.



Select **Digital Audio Out**.



Select **Auto** or **PCM**.



Manufactured under license from Dolby Laboratories. "Dolby" and the double-D symbol are trademarks of Dolby Laboratories.

- There is a possibility that when HDMI mode, some DVD players do not make SPDIF sound. At that time, set the output of the digital audio of the DVD player to PCM.

- Press the MENU or EXIT button to close the menu window.
- Press the RETURN button to move to the previous menu screen.

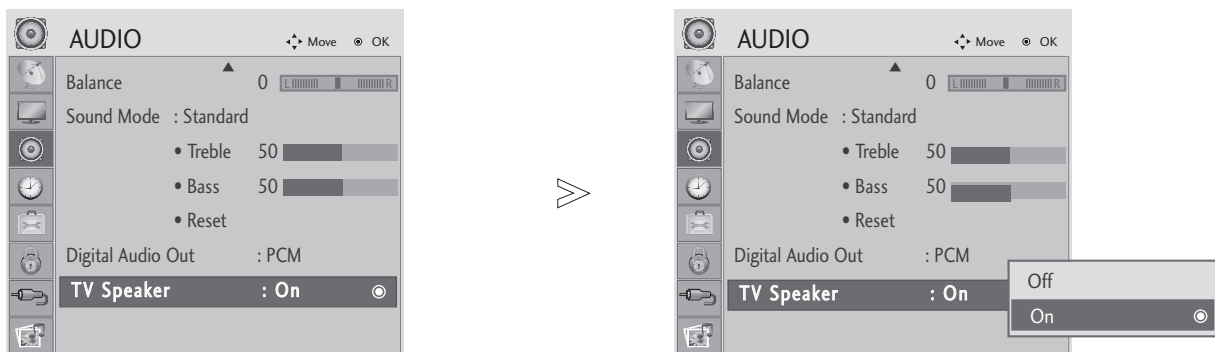
SOUND CONTROL

TV SPEAKERS ON/ OFF SETUP

You can adjust the internal speaker status.

In AV, COMPONENT, HDMI, RGB, DVI mode the TV speaker can be operational even though when there is no video signal.

If you wish to use an external Hi-Fi system, turn off the TV internal speakers.



1   Select **AUDIO**.

2   Select **TV Speaker**.

3   Select **On** or **Off**.

- Press the MENU or EXIT button to close the menu window.
- Press the RETURN button to move to the previous menu screen.

SOUND CONTROL

I/II

Stereo Reception (In Analogue Mode Only)

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



Select the sound output.

Broadcast	On Screen Display
Mono	MONO
Stereo	MONO / STEREO

■ Mono sound selection

If the stereo signal is weak in stereo reception, you can switch to mono. In mono reception, the clarity of sound is improved.

Speaker Sound Output Selection

In AV, Component, RGB, HDMI and DVI mode, you can select output sound for the left and right loudspeakers.

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

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

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

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

TIME SETTING

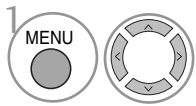
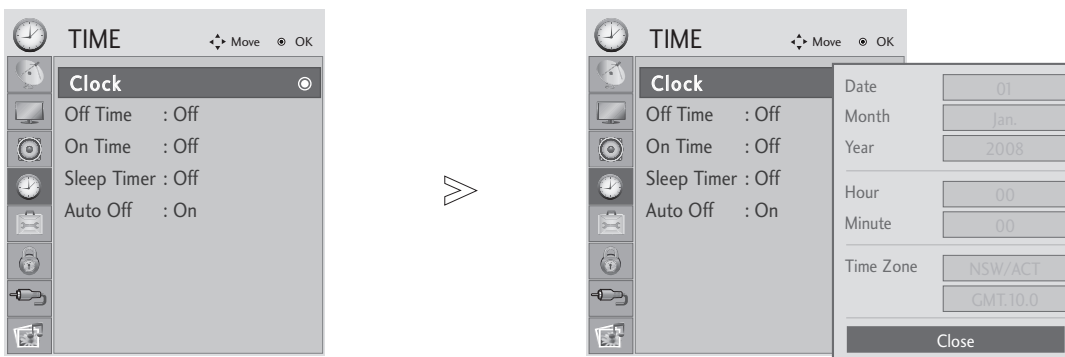
CLOCK SETUP

The clock is set automatically when receiving a digital signal. (You can set the clock manually only if the set has no DTV signal.)

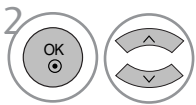
You must set the time correctly before using on/off timer function.

When you select a Time Zone city, the TV time is set by the time offset information based on Time Zone and GMT (Greenwich Mean Time) which is received with the broadcast signal and the time is set automatically by a digital signal.

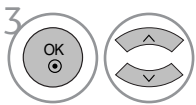
Once Clock is set in DTV mode, you cannot change time.



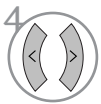
Select **TIME**.



Select **Clock**.



Select either the year, month, date, time or Time Zone option.



Set the year, month, date, time and Time Zone options.

- Press the MENU or EXIT button to close the menu window.
- Press the RETURN button to move to the previous menu screen.

TIME SETTING

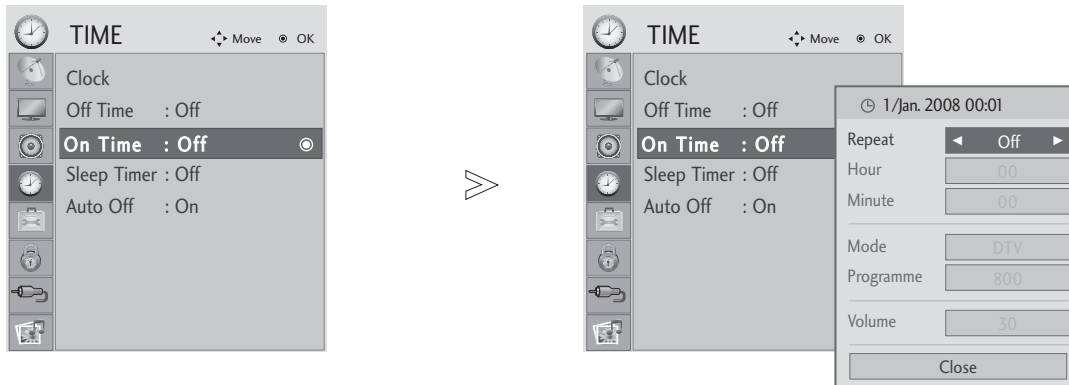
AUTO ON/OFF TIMER SETTING

The Off time function automatically switches the set to standby at a 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.

The Off time function overrides the On timer function if both are set to the same time.

The set must be in standby mode for the On timer to work.



- 1 Select **TIME**.
- 2 Select **Off time** or **On time**.
- 3 Select **Repeat**.
- 4 Select **Off, Once, Daily, Mon to Fri, Mon to Sat, Sat to Sun** or **Sun**.
- 5 Set the **hour**.
- 6 Set the **minutes**.

- To cancel On/Off Time function, select Off.
- For On Time function only

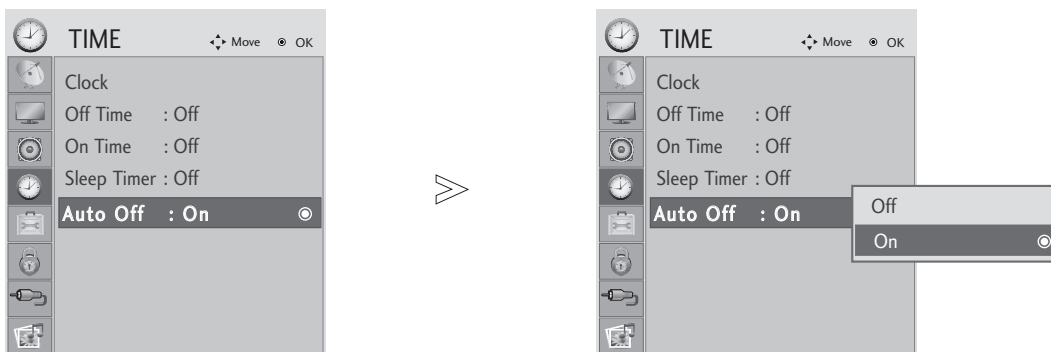
- 1 Select **Mode**.
- 2 Select **DTV, RADIO, TV, AV, Component, RGB, HDMI 1 to 2 or DVI**.
- 3 Set the programme.
- 4 Adjust volume level at switch-on.







- Press the MENU or EXIT button to close the menu window.
- Press the RETURN button to move to the previous menu screen.

TIME SETTING

AUTO SHUT-OFF SETTING

If the set is switched on and there is no input signal, it will switch off automatically after 10 minutes.










- 1   Select **TIME**.
- 2   Select **Auto Off**.
- 3   Select **Off** or **On**.

- Press the MENU or EXIT button to close the menu window.
- Press the RETURN button to move to the previous menu screen.

TIME SETTING

SLEEP TIMER SETTING

You do not have to remember to switch the set off before you go to sleep.
The sleep timer automatically switches the set off after the preset time has elapsed.

- 1   Select **TIME**.
- 2   Select **Sleep Timer**.
- 3   Select **Off, 10, 20, 30, 60, 90, 120, 180 or 240 Min.**
- 4  Confirm it.

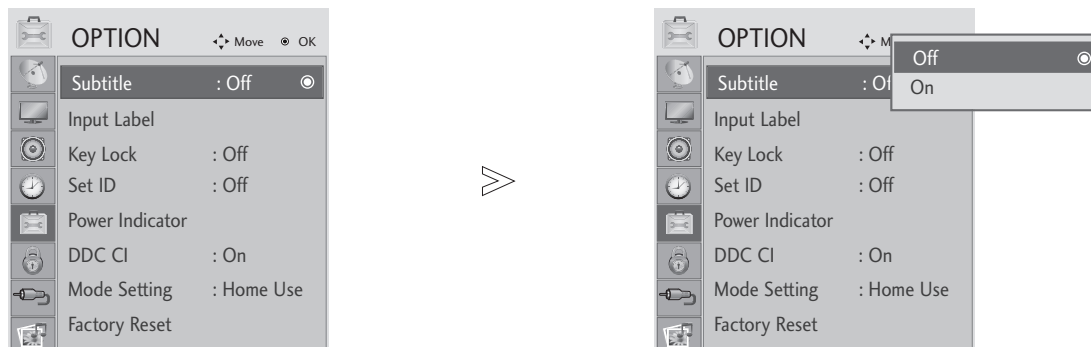
- When you switch the set off, the preset sleep time is cancelled.
- You can also adjust Sleep Timer in the Q.Menu.
- When entering DPM (Sleep mode), the value of sleep time setting will be canceled.








OPTION SETTING

Subtitle

(This menu is enabled only in DTV mode)

This function allow users to see subtitle at Digital TV mode.



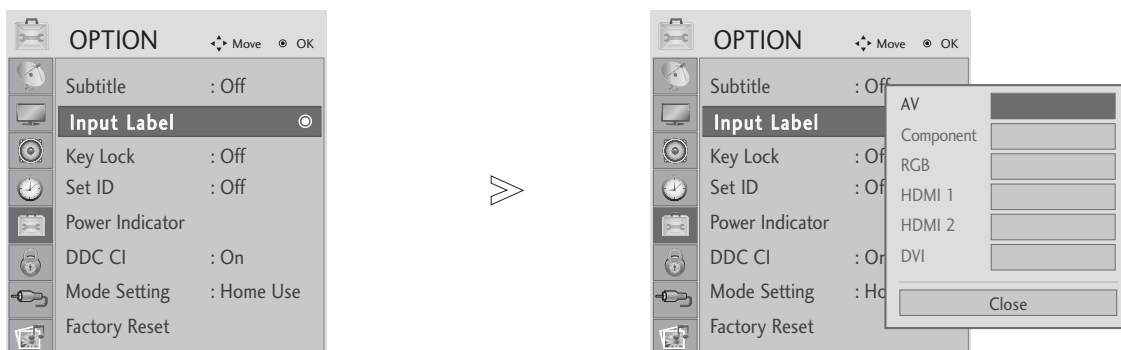
-   Select **OPTION**.
-   Select **Subtitle**.
-   Select **On** or **Off**.
-  Save.









- Press the MENU or EXIT button to close the menu window.
- Press the RETURN button to move to the previous menu screen.

OPTION SETTING

INPUT LABEL

Selects a label for each input source.



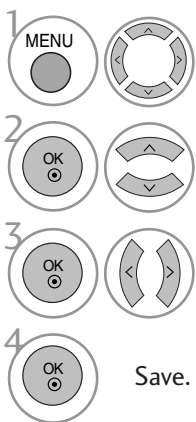
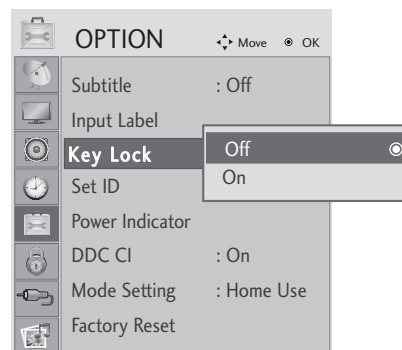
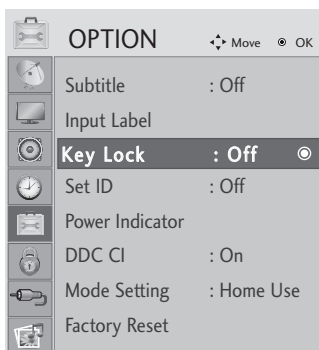
- 1   Select **OPTION**.
- 2    Select **Input Label**.
- 3   Select the source.
- 4  Select the label.

- Press the MENU or EXIT button to close the menu window.
- Press the RETURN button to move to the previous menu screen.

OPTION SETTING

KEY LOCK

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



1 Select **OPTION**.

2 Select **Key Lock**.

3 Select **On** or **Off**.

4 Save.

- Set ID : Off
In Key Lock 'On', if the set is turned off, press the INPUT, PR ▲ ▼ button on the TV or POWER buttons on the remot control then the set will be turned on.
- Set ID : On
In Key Lock 'On', if the set is turned off, press the INPUT, PR ▲ ▼ button on the TV or POWER, INPUT, PR ▲ ▼ or NUMBER buttons on the remot 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 pr ssed while viewing the TV. (Except for ⏻ / I button)

- Press the MENU or EXIT button to close the menu window.
- Press the RETURN button to move to the previous menu screen.

OPTION SETTING

POWER INDICATOR

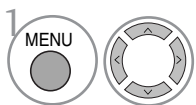
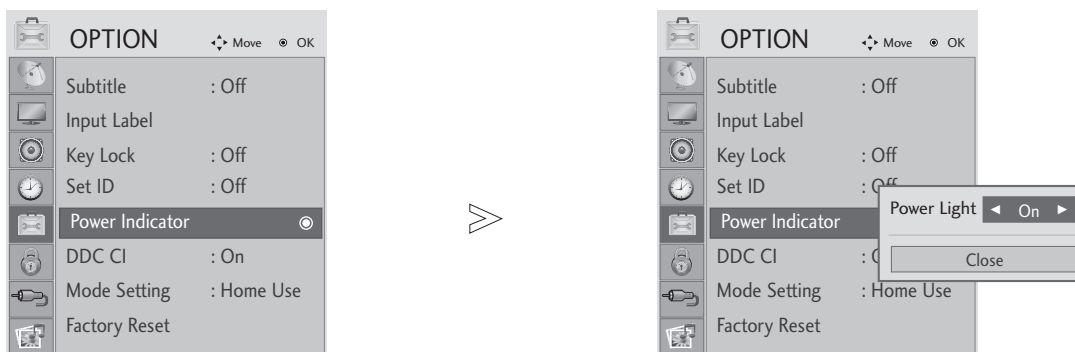
Select the power indicator on or off.

Power indicator On

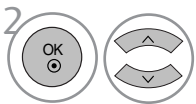
- Normal Mode : Blue LED On.
- Off Mode : LED Off
- DPM Mode : LED Amber blinking

Power indicator Off

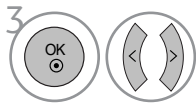
- LED always Off.



Select **OPTION**.



Select **Power Indicator**.



Select **On** or **Off**.

- Press the MENU or EXIT button to close the menu window.
- Press the RETURN button to move to the previous menu screen.

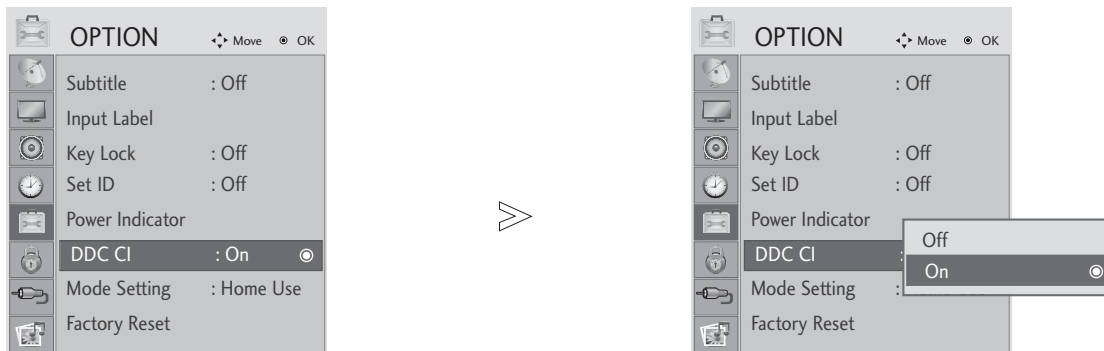
OPTION SETTING







DDC CI(Only RGB, DVI mode)

DDC/CI (Display Data Channel Command Interface) is a communication protocol for communications between PC and set.

DDC/CI makes it possible to adjust and setup detailed functions on PC instead of the set OSD

Set can be adjusted with PC by connecting communication between PC and set when DDC/CI is ON, and set cannot be adjusted with PC because communication between PC and set is disconnected when DDC/CI is OFF.



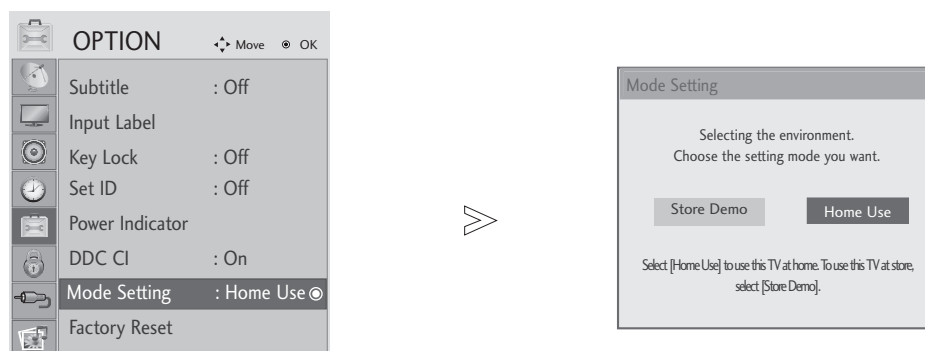
- 1   Select **OPTION**.
- 2   Select **DDC CI**.
- 3   Select **On** or **Off**.






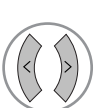
- Press the MENU or EXIT button to close the menu window.
- Press the RETURN button to move to the previous menu screen.

OPTION SETTING

MODE SETTING

We recommend setting the set to “Home Use” mode for the best picture in your home environment. “Store Demo” mode is an optimal setting for displaying at stores.



-   Select **OPTION**.
-   Select **Mode Setting**.
-   Select **Store Demo** or **Home Use**.

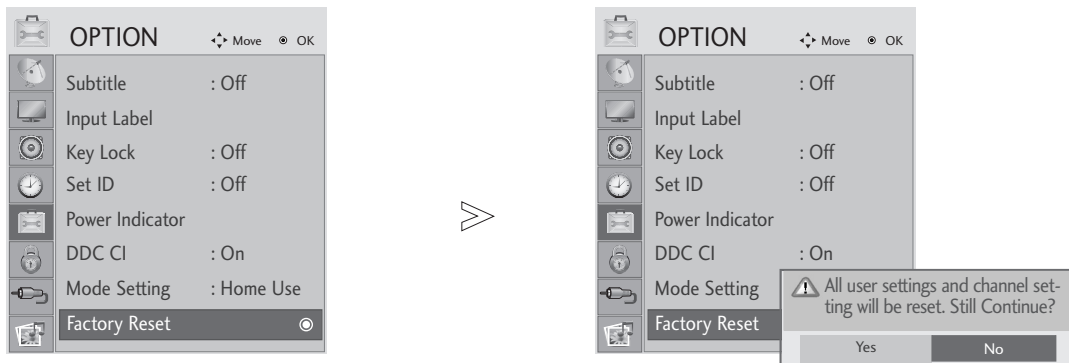
- Press the MENU or EXIT button to close the menu window.
- Press the RETURN button to move to the previous menu screen.






OPTION SETTING

Initializing (Reset to original factory settings)

This function operates in current mode.
To initialize the adjusted value.

When the Lock System menu is “On”, the message to enter the password appears.



- 1   Select **OPTION**.
- 2   Select **Factory Reset**.
- 3 

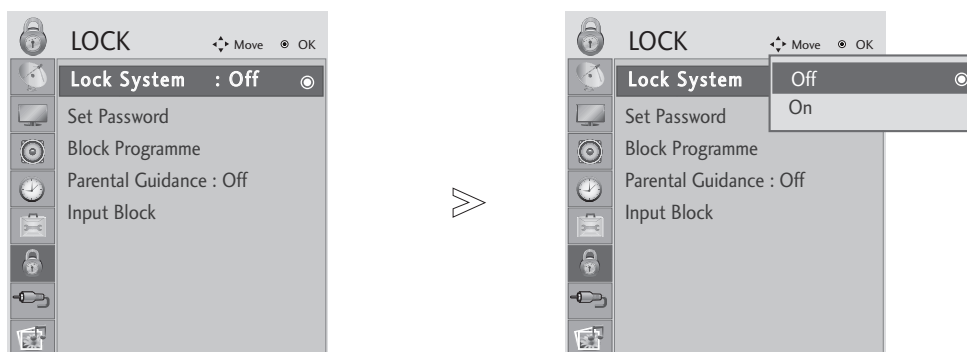
- Press the MENU or EXIT button to close the menu window.
- Press the RETURN button to move to the previous menu screen.











PARENTAL CONTROL / RATINGS

SET PASSWORD & LOCK SYSTEM

Enter the password, press '0', '0', '0', '0' on the remote control handset.

Revitalize Block Programme, Parental Guidance and Input Block function.



- 1   Select **LOCK**.
- 2   Select **Lock System**.
- 3   Select **On**.
- 4    Set the password.
- 5  Input a 4-digit password.
Be sure to remember this number!
Re-enter new password to confirm.

- If you forget your password, press '7', '7', '7', '7' on the remote control handset.
- If selecting On, Block Programme, Parental Guidance and Input Block operates.

- Press the MENU or EXIT button to close the menu window.
- Press the RETURN button to move to the previous menu screen.

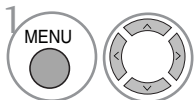
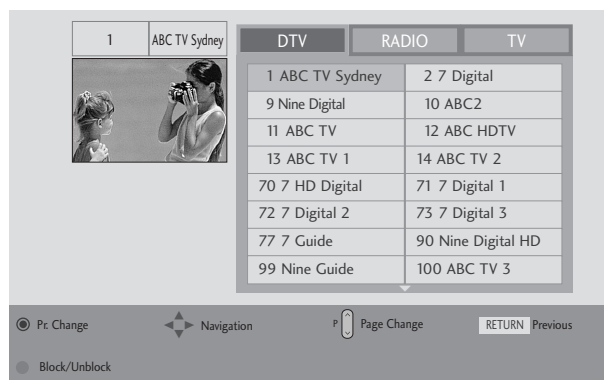
PARENTAL CONTROL / RATINGS

BLOCK PROGRAMME

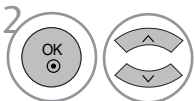
Blocks any programmes that you do not want to watch or that you do not want your children to watch.

This function is available in Lock System “On”.

Enter a password to watch a blocked programme.



Select **LOCK**.



Select **Block Programme**.



Enter the Block Programme.



Select a programme to be locked.

- Press the MENU or EXIT button to close the menu window.
- Press the RETURN button to move to the previous menu screen.

PARENTAL CONTROL / RATINGS

PARENTAL CONTROL (IN DIGITAL MODE ONLY)

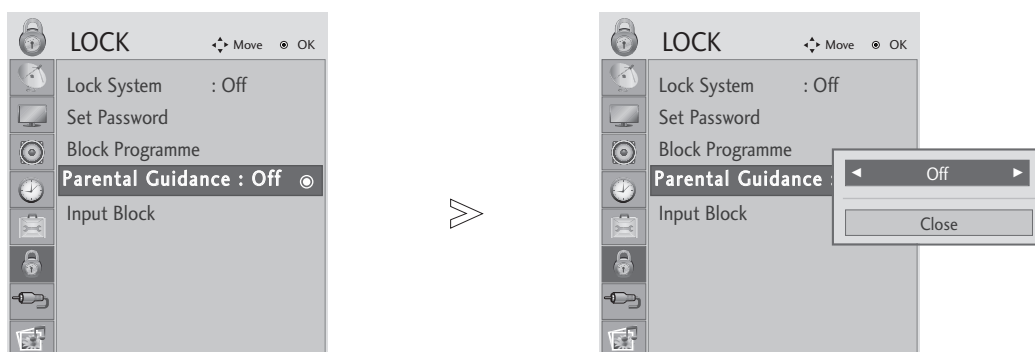
This function operates according to information from the broadcasting station. Therefore if the signal has incorrect information, this function does not operate.








A password is required to gain access to this menu.

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

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

Enter a password to watch a rated programme.



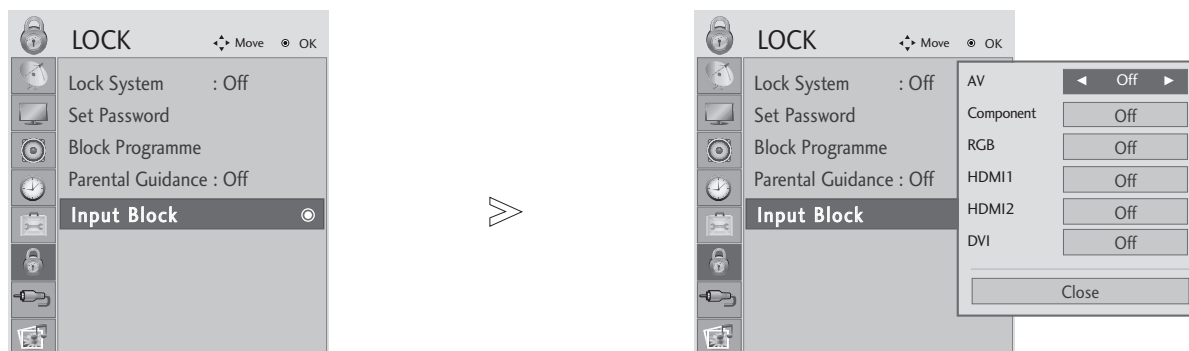
- 1   Select **LOCK**.
- 2   Select **Parental Guidance**.
- 3   Make appropriate adjustments.
- 4  Save.









- Press the MENU or EXIT button to close the menu window.
- Press the RETURN button to move to the previous menu screen.

PARENTAL CONTROL / RATINGS

INPUT BLOCK

Enables you to block an input.



- 1   Select **LOCK**.
- 2   Select **Input Block**
- 3   Select the source.
- 4   Select **Off** or **On**.

- Press the MENU or EXIT button to close the menu window.
- Press the RETURN button to move to the previous menu screen.

TO USE A USB DEVICE

When connecting a USB device

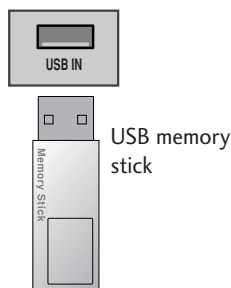
When you connect a USB device, this pop up menu is displayed, automatically.

If the Pop Up menu does not appear, you can select Music List or Photo List in the USB menu.

“POP UP MENU” will not be displayed while the OSD including Menu, EPG or Schedule list is activated.

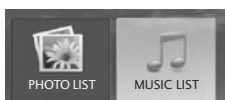
In USB device, you can not add a new folder or delete the existing folder.

- 1 Connect the USB device to the **USB IN** jack on the rear of TV.



- This TV Supports on JPEG and MP3.


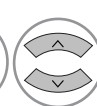

- 2  Select **PHOTO LIST** or **MUSIC LIST**.



- 3 

When removing the USB device

Select the USB Eject menu before removing the USB device.

- 1   Select **Eject**
- 2 

Precautions when using the USB device

- ▶ Only a USB storage device is recognizable.
- ▶ If the USB storage device is connected through a USB hub, the device is not recognizable. Some USB device has an internal hub, they may not be recognized.
- ▶ A USB storage device using an automatic recognition programme may not be recognized.
- ▶ A USB storage device which uses its own driver may not be recognized.
- ▶ The recognition speed of a USB storage device may depend on each device.
- ▶ Please do not turn off the TV or unplug the USB device when the connected USB storage device is working. When such device is suddenly separated or unplugged, the stored files or the USB storage device may be damaged.
- ▶ Please do not connect the USB storage device which was artificially maneuvered on the PC. The device may cause the product to malfunction or fail to be played. Never forget to use only a USB storage device which has normal music files or image files.
- ▶ Please use only a USB storage device which was formatted as a FAT16, FAT32, NTFS file system provided with the Windows operating system. In case of a storage device formatted as a different utility programme which is not supported by Windows, it may not be recognized.
Data in a USB storage device cannot be deleted in the NTFS file system.
- ▶ Please connect power to a USB storage device which requires an external power supply. If not, the device may not be recognized.
- ▶ Some storage device requires external power, please insert USB device to the monitor after connect external power. If not, it cause the product to malfunction or fail to be played.
- ▶ Please connect a USB storage device with cable is offered by USB maker. If connected with cable is not offered by USB maker or an excessively long cable, the device may not be recognized.
- ▶ Some USB storage devices may not be supported or operated smoothly.
- ▶ Maximum of 999 files and folders can be recognized.
- ▶ Data in a USB storage device cannot be aligned.
Up to 128 English characters can be recognized as a file name.
- ▶ Please back up the important file because a data of USB device may be damaged. Data management is consumer's responsibility and in consequence the manufactures does not cover the product bearing data damage.

TO USE A USB DEVICE

PHOTO LIST

The On Screen Display may be different from your TV. Images are an example to assist with the TV operation.

PHOTO(*.JPEG) supporting file



Baseline: 15360 × 8640

Progressive format : 1024 × 768





- You can play JPEG files only.
- Only baseline scan is supported among JPEG (SOF0, SOF1 only).
- Non-supported files are displayed in the form of bitmap.

Screen Components

1




2



Select **USB**. Select **Photo List**.

- 1 Moves to upper level folder
- 2 Current page/Total pages
- 3 Total number of marked photos
- 4 Usable USB memory
- 5 Corresponding buttons on the remote control

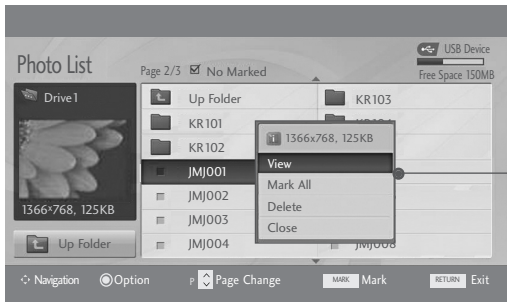
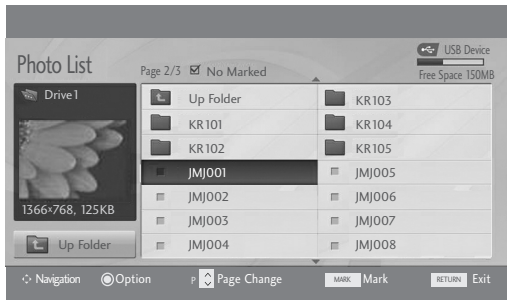
* **MARK** and **FAV** have same function in USB mode (**FAV** key operate like **MARK** key)









- Press the RETURN button to close the menu window.

TO USE A USB DEVICE

Photo Selection and PopUp Menu



- ▶ **View**: Display the selected item.
- ▶ **Mark All**: Mark all photos on the screen.
- ▶ **Unmark All**: Deselect all marked photos.
- ▶ **Delete**: Delete the selected photo item.
- ▶ **Close**: Close the pop-up menu.

- 1  Select the target folder or drive.
- 2   Select the desired photos.
- 3  Show the PopUp menu.
- 4   Select the desired PopUp menu.

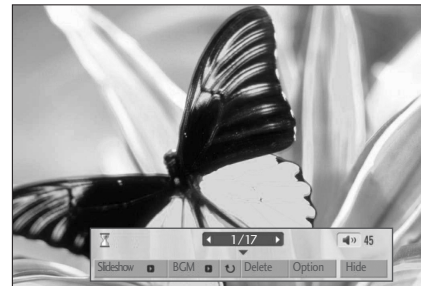
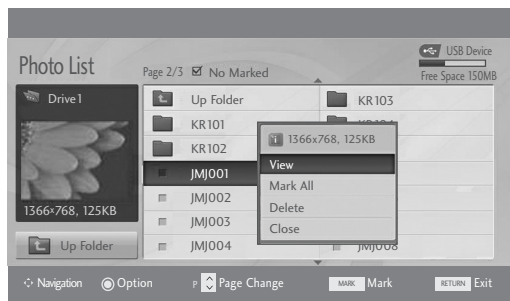
- Use the **P** ^ v button to navigation in the photo page.
- Use the **MARK** button to mark or unmark a photo. When one or more photos are marked, you can view individual photos or a slide show of the marked photos. If no photos are marked, you can view all photos individually or all photos in the folder in a slide show.

- Press the RETURN button to close the menu window.







TO USE A USB DEVICE

Set up the menu in Full-Sized Screen

You can change the settings to display photos stored on a USB device, on a full-sized screen. Detailed operations are available on full-sized photo view screen.



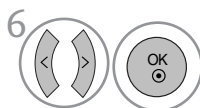
The aspect ratio of a photo may change the size of the photo displayed on the screen in full size. Press the **RETURN** button to move to the previous menu screen.

-  Select the target folder or drive.
-   Select the desired photos.
-  Show the PopUp menu.
-  Select **View**.
-  The selected photo is displayed in full size.

- Use the **P** ^ v button to navigation in the photo page.

- Press the **RETURN** button to close the menu window.

TO USE A USB DEVICE



Select the **Slideshow** , **BGM**, **⤵ (Rotate)**, **Delete** , **Option** or **Hide**.

- Use < > button to select the previous or next photo.
- Use < > button to select and control the menu on the full-sized screen.

▶ **Slideshow** : When no picture is selected, all photos in the current folder are displayed during slide show. When selected, the selected photos are displayed during slide show.

- Set the time interval of the slide show in **Option**.

▶ **BGM** : Listen to music while viewing photos in full size.

- Set the BGM device and album in **Option**.

▶ **⤵ (Rotate)** : Rotate photos.

- Rotates the photo 90°, 180°, 270°, 360° clockwise.

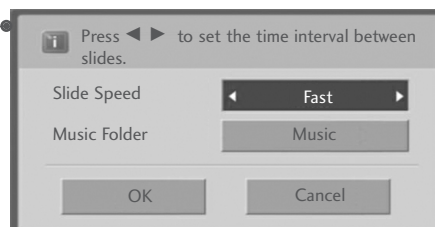
▶ **Delete** : Delete photos.

▶ **OPTION** : Set values for **Slide Speed** and **Music Folder**.

- Use < > ^ v button and **OK** button to set values. Then go to **OK** and press **OK** to save the settings.
- You cannot change **Music Folder** while BGM is playing.

▶ **Hide** : Hide the menu on the full-sized screen.

- To see the menu again on the full-sized screen, press **OK** button to display.



- Press the RETURN button to close the menu window.

TO USE A USB DEVICE

MUSIC LIST

Purchased music files(*.MP3) may contain copyright restrictions. Playback of these files may not be supported by this model.

Music file on your USB device can be played by this unit.

The On Screen Display may be different from your TV. Images are an example to assist with the TV operation.

- MUSIC (*.MP3) supporting file
- Bit rate 32 to 320kbps
- Sampling rate MPEG1 layer 3: 32 kHz, 44.1 kHz, 48 kHz.

Screen Components

1 MENU Select **USB**.

2 OK Select **Music List**.

1 Moves to upper level folder

2 Current page/Total pages

3 Total number of marked music title

4 Usable USB memory

5 Corresponding buttons on the remote control

* **MARK** and **FAV** have same function in **USB** mode (**FAV** key operate like **MARK** key)

Music List Page 2/3 No Marked

USB Device Free Space 150MB

Title	Duration
Up Folder	
Favorite Music	
Favorite Music No.2	
Velvet Goldmine (OST vers2)	1:34
Good Bye (Original Ver.)	1:15
Urban Nite (Feat.Amin.J)	1:20

Up Folder

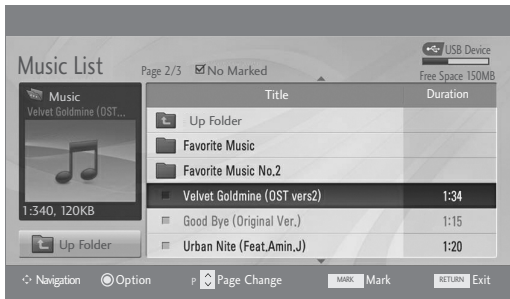
Navigation Option Page Change MARK Mark RETURN Exit

- Press the RETURN button to close the menu window.







TO USE A USB DEVICE

Music Selection and PopUp Menu

As shown , up to 6 music titles are listed per page.



- ▶ **Play (During stop)** : Play the selected music titles. Once a music finishes playing, the next selected one will be played. When there are no selected music titles to play, the next one in the current folder will be played. If you go to a different folder and press the **OK** button, the current music in playback will stop.
- ▶ **Play Marked** : Play the selected music titles. Once a music finishes playing, the next selected one will be played automatically.
- ▶ **Stop Play (During playback)** : Stop the playing music titles.
- ▶ **Play with Photo** : Start playing the selected music titles and then move to the Photo List.
- ▶ **Mark All** : Mark all music titles in the folder.
- ▶ **Unmark All** : Deselect all marked music titles.
- ▶ **Delete** : Delete the selected music titles.
- ▶ **Close** : Close the pop-up menu.

- 1  Select the target folder or drive.
- 2   Select the desired music title
- 3  Show the PopUp menu.
- 4   Select the desired PopUp menu.

- Use the **P** ^ v button to navigation in the music page.
- Use **MARK** button to mark or unmark a music. When one or more music files are marked, the marked music title will be played in sequence. For example, if you want to listen to only one music repeatedly, just mark the music only and play it. If no music is marked, all the music in the folder will be played in sequence.

- Press the **RETURN** button to close the menu window.

TO USE A USB DEVICE

- If you don't press any button for a while during the playing, the play information box (as shown in the below) will float as a screen saver.
- The 'Screen Saver'?
Screen saver is to prevent screen pixel damage due to an fixed image remaining on the screen for a extended period of time.



! NOTE

- ▶ When music is playing, is displayed in back of the music title.
- ▶ A damaged or corrupted music does not play but displays 00:00 in playtime.
- ▶ A music downloaded from a paid service with copyright protection does not start but displays inappropriate information in playtime.
- ▶ If you press **OK**, **■** buttons, screen saver is stopped.
- ▶ The **PLAY(▶)**, **Pause(II)**, **■**, **▶▶**, **◀◀** buttons on the remote control are also available in this mode.
- ▶ You can use the **▶▶** button to select the next music and the **◀◀** button to select the previous music.

Using the remote control

◀◀ / ▶▶	<p>When playing, repeatedly, press the REW(◀◀) button to speed up ◀◀ -> ◀◀◀ -> ◀◀◀◀ -> ◀◀◀◀◀ -> ◀◀◀◀◀◀ . repeatedly, press the FF(▶▶) button to speed up ▶▶-> ▶▶▶ -> ▶▶▶▶ -> ▶▶▶▶▶ -> ▶▶▶▶▶▶ .</p> <ul style="list-style-type: none"> ■ Pressing these buttons repeatedly increases the fast forward/reverse speed.
II	<p>During playback, press the Pause(II) button.</p> <ul style="list-style-type: none"> ■ Still screen is displayed.
< >	<ul style="list-style-type: none"> ■ When using the < or > button during playback a cursor indicating the position can be viewed on the screen.
PLAY(▶)	<p>Press the PLAY(▶) button to return to normal playback.</p>

TELETEXT

(IN DIGITAL MODE ONLY)

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 set 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

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

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

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

TELETEXT

FASTEXT

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

■ Page selection

- 1 Press the **T.OPT** button and then use $\wedge \vee$ button to select  menu. Display the index page.
- 2 You can select the pages which are colour coded along the bottom line with the same coloured buttons.
- 3 Corresponding to the SIMPLE teletext mode, you can select a page by entering its three digit page number with the NUMBER buttons in FASTEXT mode.
- 4 The PR + or - button can be used to select the previous or next page.

SPECIAL TELETEXT FUNCTIONS



■ Index

Select the each index page.



■ Time

When viewing a TV programme, select this menu to display the time at the top right hand corner of the screen.

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, $\lt \gt$ or NUMBER buttons.



■ 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 menu is selected the stop symbol is displayed at the top left-hand corner of the screen and the automatic page change is inactive.



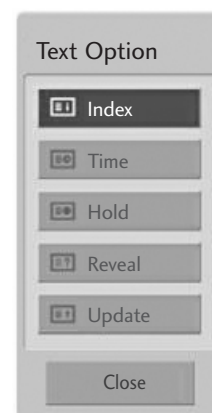
■ Reveal

Select this menu to display concealed information, such as solutions to riddles or puzzles.



■ Update

Displays the TV picture on the screen while waiting for a 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. Select this menu again to view the updated teletext page.



APPENDIX

TROUBLESHOOTING

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

The video function does not work.	
No picture & No sound	<ul style="list-style-type: none">■ 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	<ul style="list-style-type: none">■ This is normal, the image is muted during the product startup process. Please contact your service centre, if the picture has not appeared after five minutes.
No color, poor colour, or poor picture	<ul style="list-style-type: none">■ 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	<ul style="list-style-type: none">■ Check for local interference such as an electrical appliance or power tool.
Poor reception on some channels	<ul style="list-style-type: none">■ 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	<ul style="list-style-type: none">■ Check antenna (Change the direction of the antenna).

APPENDIX

The audio function does not work.

Picture OK & No sound	<ul style="list-style-type: none">■ Press the VOL + or - 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	<ul style="list-style-type: none">■ Adjust Balance in menu option.
Unusual sound from inside the product	<ul style="list-style-type: none">■ 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 problem with the product.

Only RGB/DVI mode applied

No image is displayed.

Power is on, power indicator is blue but the screen appears extremely dark.	<ul style="list-style-type: none">■ Adjust brightness and contrast again.
Does the power indicator look blinking amber?	<ul style="list-style-type: none">■ If the product is in power saving mode, move the mouse or press any key.
Does the 'Out of range' message appear?	<ul style="list-style-type: none">■ The signal from the PC (Video card) is out of the vertical or horizontal frequency range of the product. Adjust the frequency range by referring to the Specifications in this user's guide.
Does the 'Check signal cable' message appear?	<ul style="list-style-type: none">■ The signal cable between PC and product is not connected. Check the signal cable.■ Press the 'INPUT' button in the remote control to check the input signal.

APPENDIX

'Unknown Product' message appears when the product is connected.

Did you install the driver?	<ul style="list-style-type: none">■ Install the product driver, which is provided with the product, or download it from the web site. (http://www.lg.com)■ See if the plug_&_play function is supported by referring to the video card user's guide.
-----------------------------	---

After-image appears on the product.

After-image appears when the product is turned off.	<ul style="list-style-type: none">■ If you use a fixed image for a long time, the pixels may be damaged quickly. Use the screen saver function.
---	---

Screen color is abnormal.

Screen has poor color resolution (16_colors).	<ul style="list-style-type: none">■ Set screen color resolution to more than 24 bits (true color) Select control Panel-Display-Settings-Color Table menu in Windows.
Screen color is unstable or mono color.	<ul style="list-style-type: none">■ Check the connection status of the signal cable.
Do back spots appear on the screen?	<ul style="list-style-type: none">■ Several pixels (red, green, white or black color) may appear on the screen, which can be attributable to the unique characteristics of the LCD panel. It is not a malfunction of the LCD.

Only RGB mode applied

The screen image looks abnormal.

Is the screen position wrong?	<ul style="list-style-type: none">■ Adjust the Position menu in OSD.■ See if the video card resolution and frequency are supported by the product. If the frequency is out of range, set to the recommended resolution in the Control Panel-Display-Setting menu.
Do thin lines appear on the background screen?	<ul style="list-style-type: none">■ Adjust the Clock menu in OSD.
Horizontal noise appears or the characters look blurred.	<ul style="list-style-type: none">■ Adjust the Phase menu in OSD.

APPENDIX

MAINTENANCE

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

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

Cleaning the Screen

- 1 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 dishwashing 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 set.

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 set 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.

APPENDIX

PRODUCT SPECIFICATIONS

LCD Panel	Screen Type	584.2 mm Wide (23 inch) TFT (Thin Film Transistor) LCD (Liquid Crystal Display) Panel Visible diagonal size : 584.2 mm
	Pixel Pitch	0.265 mm (H) x 0.265 mm (V)
Video Signal	Max. Resolution	1920 X 1080 @60 Hz
	Recommended Resolution	1920 X 1080 @60 Hz
	Horizontal Frequency	30 kHz to 83 kHz
	Vertical Frequency	56 Hz to 75 Hz
	Synchronization Type	Separate Sync, Digital
Input Connector		TV, D-Sub Analog, PC Audio In, component, DVI-D, HDMI*2, CVBS
Power	Rated Voltage	AC 100-240V ~ 50/60 Hz 1.0A
	Power Consumption	On Mode : 55W (typ.) Sleep Mode ≤ 1W Off Mode ≤ 0.5W
Tilt	Tilt Range	-5° to 15°
Dimensions (Width x Height x Depth) Weight		551.8 mm x 419.5 mm x 221.6 mm (21.72 inch x 16.52 inch x 8.72 inch) 5.2 kg (11.46 lb)
Environmental conditions	Operating Temperature	10 °C to 35 °C
	Operating Humidity	20 % to 80 %
	Storage Temperature	-10 °C to 60 °C
	Storage Humidity	5 % to 90 %

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

APPENDIX

IR CODES

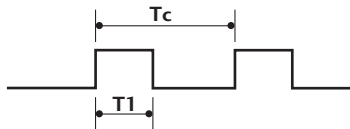
1. How to Connect

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

2. Remote Control IR Codes

- Output waveform

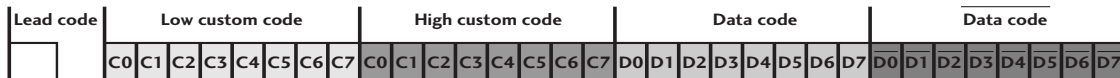
Single pulse, modulated with 37.917 KHz signal at 455 KHz



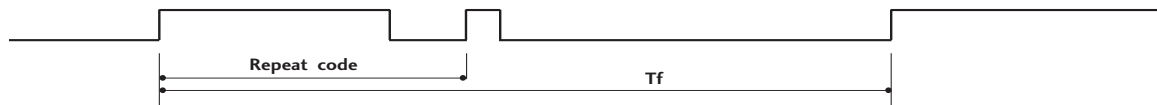
Carrier frequency
 $FCAR = 1/T_C = f_{OSC}/12$
 Duty ratio = $T_1/T_C = 1/3$

- Configuration of frame

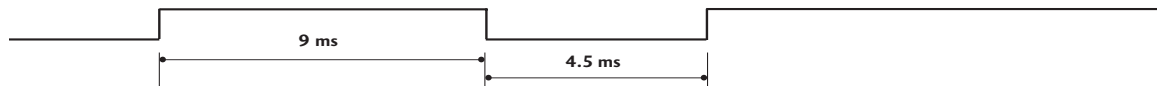
1st frame



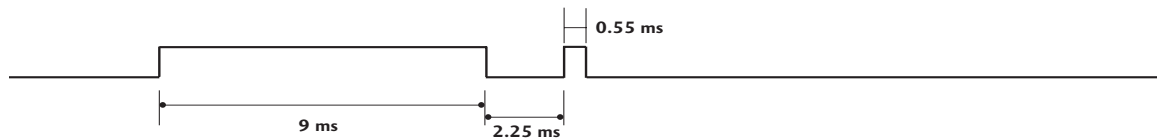
Repeat frame



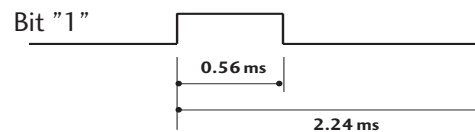
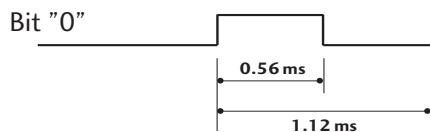
- Lead code



- Repeat code

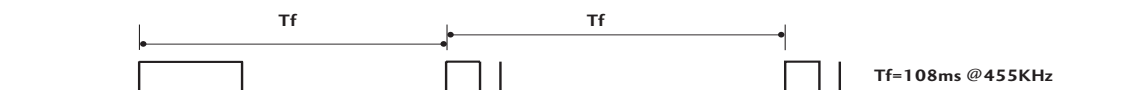


- Bit description



- Frame interval: T_f

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



APPENDIX

Code (Hexa)	Function	Note
00	PR +	R/C BUTTON
01	PR -	R/C BUTTON
02	VOL +	R/C BUTTON
03	VOL -	R/C BUTTON
40	Up (▲)	R/C BUTTON
41	Down (▼)	R/C BUTTON
06	Right (▶)	R/C BUTTON
07	Left (◀)	R/C BUTTON
08	POWER	R/C BUTTON (POWER ON/OFF)
09	MUTE	R/C BUTTON
0B	INPUT	R/C BUTTON
10	Number Key 0	R/C BUTTON
11	Number Key 1	R/C BUTTON
12	Number Key 2	R/C BUTTON
13	Number Key 3	R/C BUTTON
14	Number Key 4	R/C BUTTON
15	Number Key 5	R/C BUTTON
16	Number Key 6	R/C BUTTON
17	Number Key 7	R/C BUTTON
18	Number Key 8	R/C BUTTON
19	Number Key 9	R/C BUTTON
1A	Q.VIEW	R/C BUTTON
1E	FAV	R/C BUTTON
20	TEXT	R/C BUTTON
21	T.OPT	R/C BUTTON
28	RETURN	R/C BUTTON
39	SUBTITLE	R/C BUTTON
43	MENU	R/C BUTTON
44	OK(⊙)	R/C BUTTON
45	Q.MENU	R/C BUTTON
50	TV/PC	R/C BUTTON
F0	TV/RADIO	R/C BUTTON
0A	I/II	R/C BUTTON
5B	EXIT	R/C BUTTON
1E	MARK	R/C BUTTON
53	LIST	R/C BUTTON
61	BLUE Key	R/C BUTTON
63	YELLOW Key	R/C BUTTON
71	GREEN Key	R/C BUTTON
72	RED Key	R/C BUTTON
AA	INFO ⓘ	R/C BUTTON
AB	GUIDE	R/C BUTTON

APPENDIX

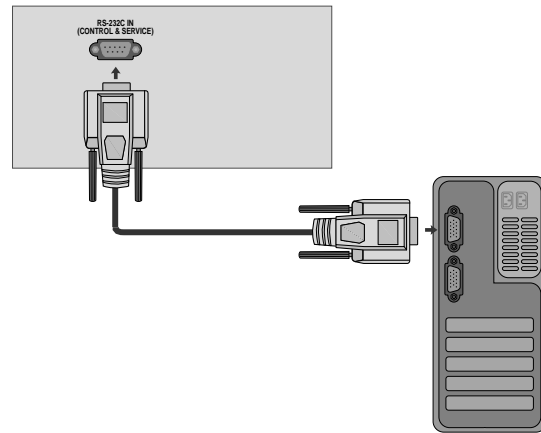
EXTERNAL CONTROL DEVICE SETUP

RS-232C Setup

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

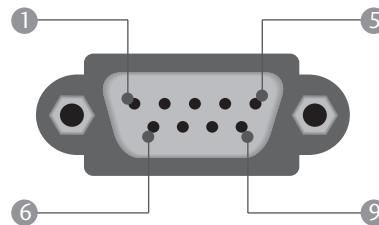
Connect the serial port of the control device to the RS-232C jack on the product back panel.

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



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)

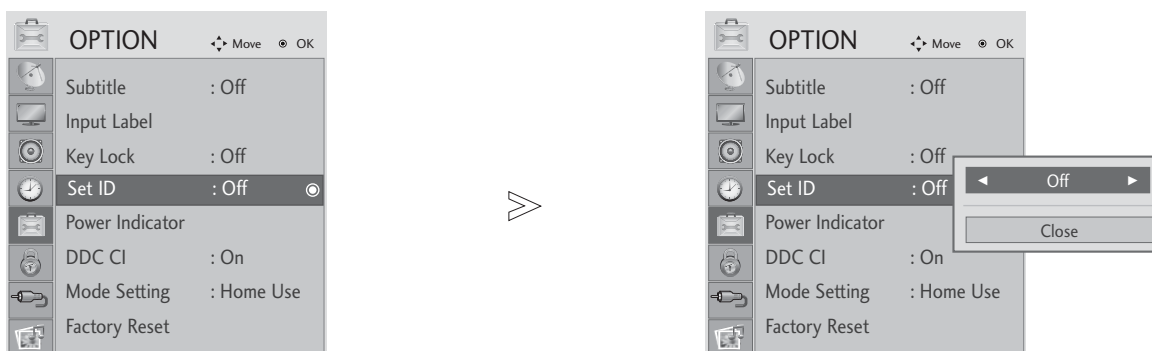
	PC	TV	
RXD	2	3	TXD
TXD	3	2	RXD
GND	5	5	GND
DTR	4	6	DTR
DSR	6	4	DSR
RTS	7	7	RTS
CTS	8	8	CTS
	D-Sub 9	D-Sub 9	

APPENDIX

Set ID



Use this function to specify a set ID number.

Refer to 'Real Data Mapping' ► p. 102



1   Select **OPTION**.

2   Select **Set ID**.

3   Adjust **Set ID** to choose the desired TV ID number.
The adjustment range of SET ID is 1 to 99.

- Press the MENU or EXIT button to close the menu window.
- Press the RETURN button to move to the previous menu screen.

APPENDIX

Communication Parameters

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

Command Reference List

	COMMAND 1	COMMAND 2	DATA (Hexadecimal)
01. Power	k	a	00 to 01
02. Aspect Ratio	k	c	Refer to p. 100
03. Screen Mute	k	d	00 to 01
04. Volume Mute	k	e	00 to 01
05. Volume Control	k	f	00 to 64
06. Contrast	k	g	00 to 64
07. Brightness	k	h	00 to 64
08. Colour	k	i	00 to 64
09. Tint	k	j	00 to 64
10. Sharpness	k	k	00 to 64
11. OSD Select	k	l	00 to 01
12. Remote control lock mode	k	m	00 to 01
13. Treble	k	r	00 to 64
14. Bass	k	s	00 to 64
15. Balance	k	t	00 to 64
16. Colour Temperature	k	u	00 to 06
17. Auto Configure	j	u	01
18. Tune Command	m	a	Refer to p. 102
19. Programme memory/Skip	m	b	00 to 01
20. Key	m	c	Key Code
21. Control Backlight	m	g	00 to 64
22. Input select (Main)	x	b	Refer to p. 102

* When setting 15 to 22, a menu does not appear on screen.

Transmission / Receiving Protocol

Transmission

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

- * [Command 1] : First command to control the TV.
(j, k, m or x)
- * [Command 2] : Second command to control the TV.
- * [Set ID] : You can adjust the set ID to choose desired monitor ID number in option menu. Adjustment range is 1 to 99. When selecting Set ID '0', every connected set is controlled. Set ID is indicated as decimal (1 to 99) on menu and as Hexa decimal (0x0 to 0x63) on transmission/receiving protocol.
- * [DATA] : To transmit command data. Transmit 'FF' data to read status of command.
- * [Cr] : Carriage Return
ASCII code '0x0D'
- * [] : ASCII code 'space (0x20)'

OK Acknowledgement

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

- * The TV transmits ACK (acknowledgement) based on this format when receiving normal data. At this time, if the data is in data read mode, it indicates present status data. If the data is in 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 nonviable functions or communication errors.

APPENDIX

01. Power (Command: k a)

- ▶ To control Power On/Off of the TV.

Transmission

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

Data 00 : Power Off 01 : Power On

Ack

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

02. Aspect Ratio (Command: k c) (Main Picture Size)

- ▶ To adjust the screen format. (Main picture format)
You can also adjust the screen format using the **Aspect Ratio** in the PICTURE menu.

- (1) ATV, AV Input mode
 - 16:9 / Original / 4:3 / 14:9 / Cinema Zoom / Zoom
- (2) DTV
 - 16:9 / Just Scan / Original / 4:3 / 14:9 / Cinema Zoom / Zoom
- (3) RGB, DVI, HDMI Input (HDMI-PC) mode
 - 4:3 / 16:9
- (4) Component, HDMI input (not HDMI-PC) mode
 - 16:9 / 4:3 / 14:9 / Cinema Zoom / Zoom
(Just Scan : Only 720p over)

Transmission

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

Data 01 : Normal screen (4:3) 07 : 14:9
02 : Wide screen (16:9) 09 : Just Scan
04 : Zoom 10 to 1F : Cinema Zom 1 to 16
06 : Original

Ack

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

03. Screen Mute (Command: k d)

- ▶ To select screen mute on/off.

Transmission

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

Data 00 : Screen mute off (Picture on)
01 : Screen mute on (Picture off)

Ack

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

04. Volume Mute (Command: k 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 00 : Volume mute on (Volume off)
01 : Volume mute off (Volume on)

Ack

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

05. Volume Control (Command: k 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 : 00 to Max : 64
* Refer to 'Real data mapping'. See page 102.

Ack

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

06. Contrast (Command: k g)

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

Transmission

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

Data Min : 00 to Max : 64
* Refer to 'Real data mapping'. See page 102.

Ack

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

07. Brightness (Command: k h)

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

Transmission

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

Data Min : 00 to Max : 64
* Refer to 'Real data mapping'. See page 102.

Ack

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

08. Colour (Command: k i)

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

Transmission

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

Data Min : 00 to Max : 64
* Refer to 'Real data mapping'. See page 102.

Ack

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

APPENDIX

09. Tint (Command: k j)

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

Transmission

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

Data Min : 00 to Max : 64
* Refer to 'Real data mapping'. See page 102.

Ack

```
[j][ ][Set ID][ ][OK/NG][Data][x]
```

10. Sharpness (Command: k k)

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

Transmission

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

Data Min : 00 to Max : 64
* Refer to 'Real data mapping'. See page 102.

Ack

```
[k][ ][Set ID][ ][OK/NG][Data][x]
```

11. OSD Select (Command: k l)

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

Transmission

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

Data 00 : OSD off 01 : OSD on

Ack

```
[l][ ][Set ID][ ][OK/NG][Data][x]
```

12. Remote control lock mode (Command: k m)

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

Transmission

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

Data 00 : Lock off 01 : Lock on

Ack

```
[m][ ][Set ID][ ][OK/NG][Data][x]
```

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

13. Treble (Command: k r)

- ▶ To adjust treble.
You can also adjust treble in the AUDIO menu.
No operation at USB input

Transmission

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

Data Min : 00 to Max : 64
* Refer to 'Real data mapping'. See page 102.

Ack

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

14. Bass (Command: k s)

- ▶ To adjust Bass.
You can also adjust bass in the AUDIO menu.
No operation at USB input

Transmission

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

Data Min : 00 to Max : 64
* Refer to 'Real data mapping'. See page 102.

Ack

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

15. Balance (Command: k t)

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

Transmission

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

Data Min : 00 to Max : 64
* Refer to 'Real data mapping'. See page 102.

Ack

```
[t][ ][Set ID][ ][OK/NG][Data][x]
```

16. Colour Temperature (Command: k u)

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

Transmission

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

Data 00: Medium 01: Cool 02: Warm(not RGB DVI mode)
05:9300K 06:6500K(Only RGB DVI mode)

Ack

```
[u][ ][Set ID][ ][OK/NG][Data][x]
```

APPENDIX

17. Auto Configure (Command: j u)

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

Transmission

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

Data 01: To set

Ack

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

* Real data mapping

```

00 : 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
    
```

18. Tune Command (Command: m a)

- ▶ Select channel to following physical number.

Transmission

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

Data 00 : High channel data

Data 01 : Low channel data

ex. No. 47 -> 00 2F (2FH)
 No. 394 -> 01 88 (188H),
 DTV No. 0 -> Don't care

Data 02 : 0x00 : ATV, 0x10 : DTV, 0x20 : Radio

Channel data range

Analogue - Min: 00 to Max: 63 (0 to 99)

Digital - Min: 00 to Max: 3E7 (0 to 999)

Ack

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

Data Min: 00 to Max: 7DH

19. Programme memory/Skip (Command: m b)

- ▶ To set skip status for the current Programme.

Transmission

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

Data 00 : Skip

01 : Memory

Ack

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

20. Key (Command : m c)

- ▶ To send IR remote key code.

Transmission

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

Data Key code - Refer to page 96.

Ack

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

21. Control Backlight (Command: m g)

- ▶ To Control the backlight. (Only Auto Bright Off)

Transmission

[m][g][][Set ID][][Data][Cr]

Data : Min: 00 to Max: 64 (*transmit by hexadecimal code)

Ack

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

22. Input select (Command: x b) (Main Picture Input)

- ▶ To select input source for main picture.

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	0	DTV
0	0	0	1	Analogue
0	0	1	0	AV
0	1	0	0	Component
0	1	1	0	RGB
1	0	0	0	DVI
1	0	0	1	HDMI

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

Ack

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



Make sure to read the Safety Precautions before using the product.
Keep the Owner's Manual(CD) in an accessible place for future reference.
The model and serial number of the SET is located on the back and one side of the SET.
Record it below should you ever need service.

MODEL _____

SERIAL _____