



**LG**

Life's Good

# PLASMA TV OWNER'S MANUAL

## PLASMA TV MODELS

50PS8\*\*\*

60PS8\*\*\*

Please read this manual carefully before operating your TV.

Retain it for future reference.

Record model number and serial number of the TV. Refer to the label on the back cover and quote this information.

To your dealer when requiring service.

**DVB**<sup>®</sup>

Digital Video  
Broadcasting

DVB is a registered trademark  
of the DVB Project

ID Number(s): 6248: 50PS80ED-AA



This product qualifies for ENERGY STAR in the "factory default (Home Use mode)" setting and this is the setting in which power savings will be achieved. Changing the factory default picture setting or enabling other features will increase power consumption that could exceed the limits necessary to qualify for Energy Star rating.

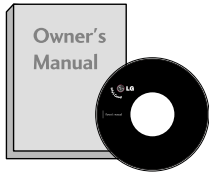


HDMI, the HDMI logo and High-Definition Multimedia Interface are trademarks or registered trademarks of HDMI Licensing LLC.

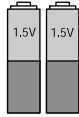
# ACCESSORIES

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

■ Image shown may differ from your TV.



Owner's Manual



Batteries



Remote Control

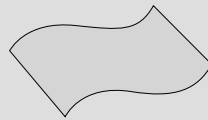


Power Cord



Ferrite Core  
(This item is not included for all models.)

This item is not included for all models.



Polishing Cloth  
Polishing cloth for use on the screen.

\* Lightly wipe any stains or fingerprints on the surface of the TV with the polishing cloth.

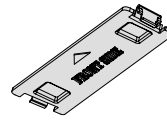
Do not use excessive force. This may cause scratching or discolouration.



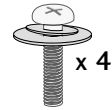
Cable management clip  
(Refer to p.8)



Cable Holder  
(Refer to p.8)

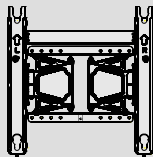


Protection cover  
(Refer to p.9)



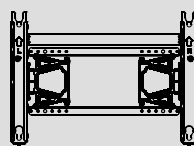
Bolts for stand assembly  
(Refer to P. 6)

Wall Mounting Bracket  
(Separate purchase)



AW-50PG60MS

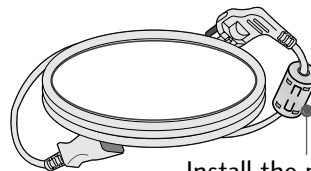
(Only 60PS8\*\*\*)



AW-60PG60MS

**Use of ferrite core (This feature is not available for all models.)**

Ferrite core can be used to reduce the electromagnetic wave when connecting the power cord. The closer the location of the ferrite core to the power plug, the better it is.



Install the power plug closely.

# CONTENTS

## ACCESSORIES ..... 1

### PREPARATION

|   |    |
|---|----|
| Front Panel Controls.....                 | 4  |
| Back Panel Information .....              | 5  |
| Stand installation .....                  | 6  |
| Careful installation advice .....         | 7  |
| Back Cover for Wire Arrangement.....      | 8  |
| Swivel Stand.....                         | 9  |
| Not using the desk-type stand .....       | 9  |
| Desktop Pedestal Installation .....       | 10 |
| Wall Mount: Horizontal installation ..... | 10 |
| ANTENNA CONNECTION .....                  | 11 |

### EXTERNAL EQUIPMENT SETUP

|                                |    |
|--------------------------------|----|
| Hd receiver setup.....         | 12 |
| DVD SETUP .....                | 14 |
| VCR SETUP.....                 | 16 |
| AV output setup .....          | 18 |
| Other A/V Source Setup .....   | 18 |
| Digital audio out SETUP.....   | 19 |
| USB in setup .....             | 19 |
| PC Setup.....                  | 20 |
| Screen Setup for PC mode ..... | 22 |

### WATCHING TV / PROGRAMME CONTROL

|   |    |
|---|----|
| REMOTE CONTROL KEY FUNCTIONS .....                  | 26 |
| Turning on the TV .....                             | 28 |
| Programme Selection.....                            | 28 |
| Volume Adjustment.....                              | 28 |
| Quick Menu.....                                     | 29 |
| On-Screen Menus Selection and adjustment.....       | 30 |
| Auto programme Tuning .....                         | 32 |
| Manual programme Tuning<br>(In Digital Mode) .....  | 33 |
| Manual programme Tuning<br>(In Analogue Mode) ..... | 34 |
| Programme Edit .....                                | 36 |

|  |    |
|--|----|
| Booster.....   | 39 |
| Software Update .....                                  | 40 |
| Diagnostics.....                                       | 42 |
| Selecting the programme table .....                    | 43 |
| Favourite programme setup .....                        | 44 |
| Brief Information.....                                 | 45 |
| Input List.....  | 46 |
| SIMPLINK.....  | 47 |
| Input Label .....                                      | 50 |
| AV Mode .....  | 51 |
| Simple Manual .....                                    | 51 |
| Initialising (Reset to original factory settings)..... | 52 |

### EPG (ELECTRONIC PROGRAMME GUIDE)(IN DIGITAL MODE)

|   |    |
|---|----|
| EPG (Electronic Programme Guide)<br>(in digital mode) ..... | 53 |
| Button Function in NOW/NEXT Guide Mode...54                 |    |
| Button Function in 8Day Guide Mode .....                    | 54 |
| Button Function in Date Change Mode.....                    | 55 |
| Button Function in Detailed Information Menu.55             |    |
| Button Function in Schedule List Mode .....                 | 55 |

### DVR

|  |    |
|--|----|
| Time MACHINE (Pause & Replay of Live TV) ..... | 56 |
| RECORDING.....                                 | 59 |
| SCHEDULE list .....                            | 63 |
| Recording Quality.....                         | 64 |
| Time machine initialisation.....               | 65 |
| To use the internal hard disk.....             | 66 |
| USB.....                                       | 67 |
| Recorded list .....                            | 70 |
| Photo list.....                                | 73 |
| Music list.....                                | 77 |
| MOVIE list .....                               | 80 |
| Divx Resgistration Code .....                  | 85 |
| Deactivation.....                              | 86 |

**PICTURE CONTROL**

|   |     |
|---|-----|
| Picture Size (Aspect Ratio) Control.....      | 87  |
| Picture Wizard .....                          | 89  |
| Energy Saving .....                           | 91  |
| Preset picture settings                       |     |
| Picture Mode-Preset .....                     | 92  |
| Manual Picture Adjustment                     |     |
| Picture Mode-User option .....                | 93  |
| Picture Improvement Technology .....          | 94  |
| Expert Picture control .....                  | 95  |
| Picture Reset.....                            | 98  |
| Image Sticking Minimization (ISM) Method..... | 99  |
| Demo Mode.....                                | 100 |
| Mode Setting .....                            | 101 |

**SOUND & LANGUAGE CONTROL**

|   |     |
|---|-----|
| Auto volume leveller (auto volume) .....        | 102 |
| Clear Voice II.....                             | 103 |
| Preset Sound Settings (Sound mode).....         | 104 |
| Sound Setting Adjustment - User Mode .....      | 105 |
| SRS TruSurround XT .....                        | 105 |
| Balance .....                                   | 106 |
| TV Speakers On/Off Setup .....                  | 107 |
| Selecting digital audio out.....                | 108 |
| Audio Reset.....                                | 109 |
| Stereo Reception (In Analogue Mode Only) .....  | 110 |
| Speaker Sound Output Selection.....             | 110 |
| Language Selection (In digital mode only) ..... | 111 |

**TIME SETTING**

|                               |     |
|-------------------------------|-----|
| Clock Setup .....             | 112 |
| Auto On/Off Time Setting..... | 113 |
| Sleep Timer setting.....      | 113 |

**PARENTAL CONTROL / RATINGS**

|                               |     |
|-------------------------------|-----|
| Set Password & Lock System    |     |
| Setting up Your Password..... | 114 |
| Lock System .....             | 115 |
| Set Password.....             | 116 |
| Block Programme.....          | 117 |
| Parental Guidance .....       | 118 |
| Input Block.....              | 119 |
| key Lock .....                | 120 |

**TELETEXT**

|                                 |     |
|---------------------------------|-----|
| Switch on/off .....             | 121 |
| SIMPLE Text.....                | 121 |
| TOP Text.....                   | 121 |
| FASTEXT .....                   | 122 |
| Special Teletext Functions..... | 122 |

**APPENDIX**

|  |     |
|--|-----|
| Troubleshooting .....                  | 123 |
| Maintenance.....                       | 125 |
| Product Specifications .....           | 126 |
| Programming the Remote control.....    | 127 |
| IR Codes.....                          | 128 |
| External Control Through rs-232c ..... | 130 |

# PREPARATION

## FRONT PANEL CONTROLS

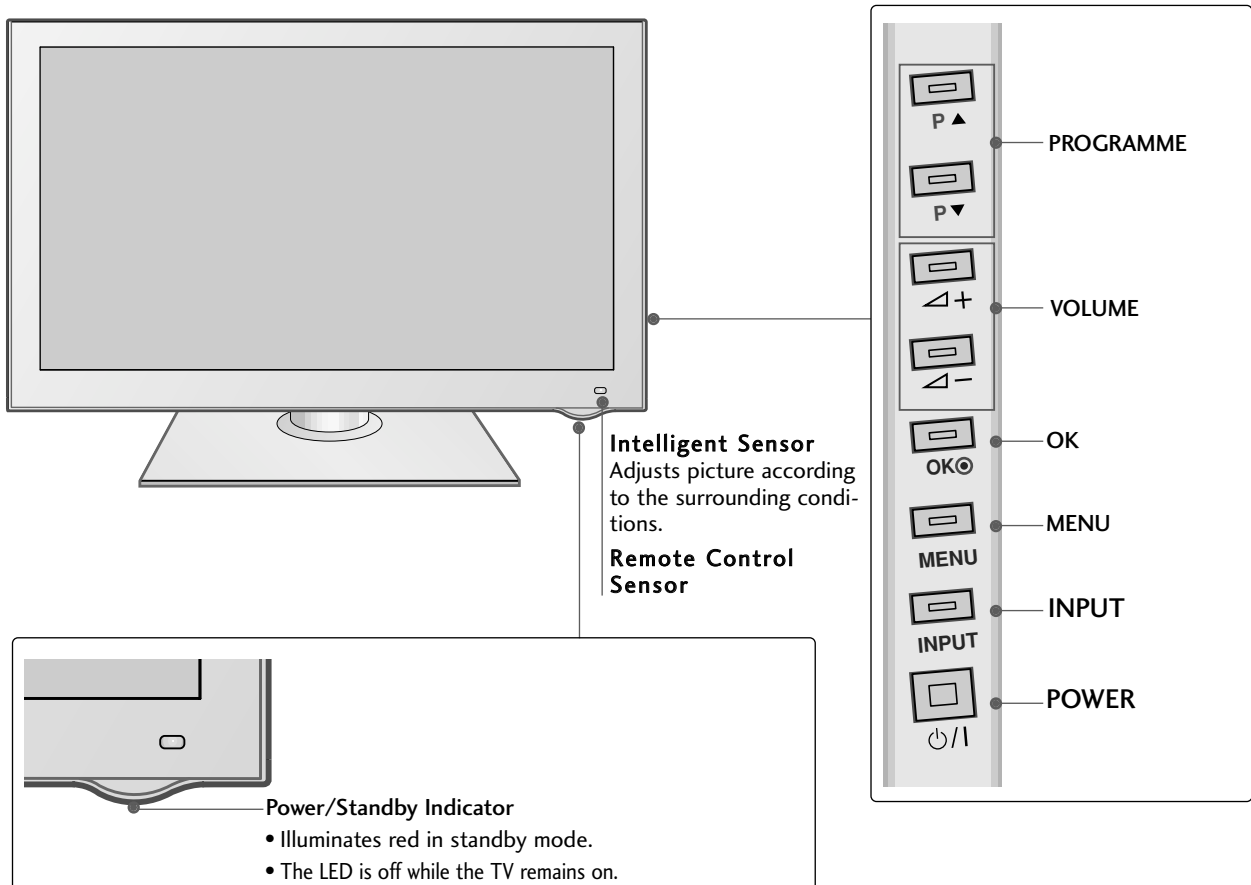
### NOTE

- ▶ TV can be placed in standby mode in order to reduce the power consumption. And the TV should be switched off using the power switch on the TV if it will not be watched for some time, as this will reduce energy consumption.  
The energy consumed during use can be significantly reduced if the level of brightness of the picture is reduced, and this will also reduce the overall running cost.

- Image shown may differ from your TV.

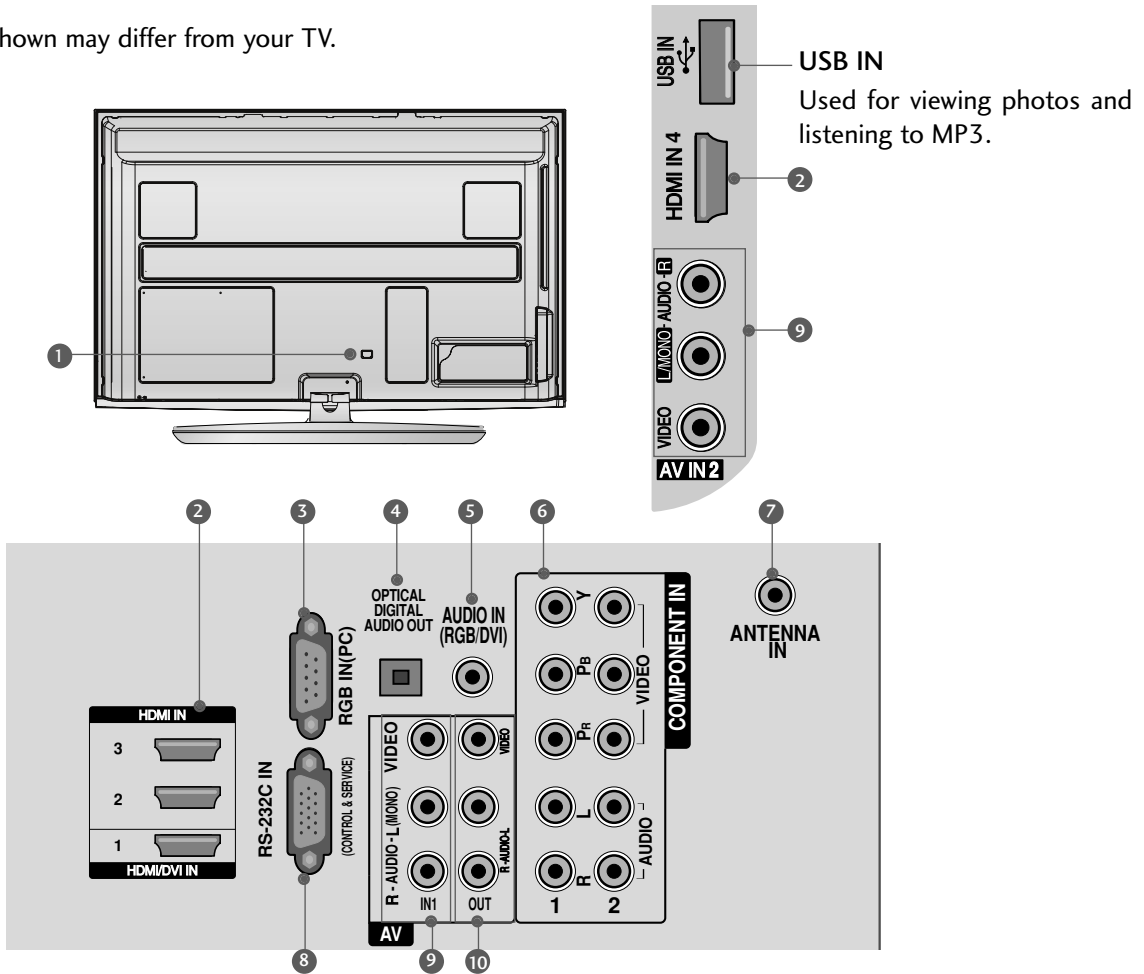
### CAUTION

- ▶ When the TV cannot be turned on with the remote control, press the main power button on the TV. (When the power is turned off with the main power button on the TV, it will not be turned on with the remote control).
- ▶ Do not step on the glass stand or subject it to any impact. It may break, causing possible injury from fragments of glass, or the TV may fall.
- ▶ Do not drag the TV. The floor or the product may be damaged.



# BACK PANEL INFORMATION

■ Image shown may differ from your TV.



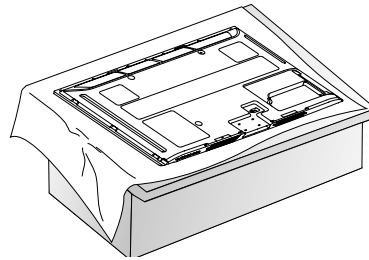
- 1 Power Cord Socket**  
This TV operates on an AC power. The voltage is indicated on the Specifications page. Never attempt to operate the TV on DC power.
- 2 HDMI Input**  
Connect an HDMI signal to HDMI IN. Or DVI(VIDEO)signal to HDMI/DVI port with DVI to HDMI cable.
- 3 RGB Input**  
Connect the output from a PC.
- 4 OPTICAL DIGITAL AUDIO OUT**  
Connect digital audio from various types of equipment.  
Note: In standby mode, these ports do not work.
- 5 RGB/DVI Audio Input**  
Connect the audio from a PC.
- 6 Component Input**  
Connect a component video/audio device to these jacks.
- 7 Antenna Input**  
Connect RF antenna to this jack.
- 8 RS-232C Input (CONTROL&SERVICE) Port**  
Connect to the RS-232C port on a PC. This port is used for Service or Hotel mode.
- 9 Audio/Video Input (AV IN1/2)**  
Connect audio/video output from an external device to these jacks.
- 10 AV Output**  
Connect second TV or monitor to the AV OUT socket on the TV.

# PREPARATION

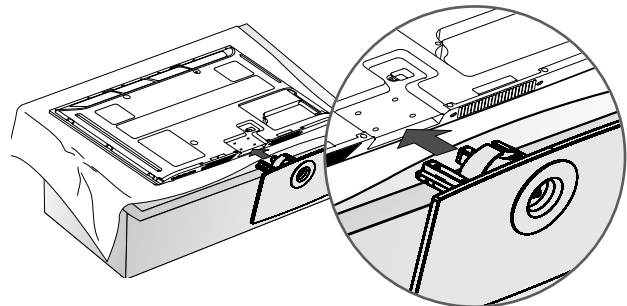
## STAND INSTALLATION

- Image shown may differ from your TV  
When assembling the desk type stand, check whether the bolt is fully tightened. (If not tightened fully, the product can tilt forward after the product installation.) If you tighten the bolt with excessive force, the bolt can deviate from abrasion of the tightening part of the bolt.

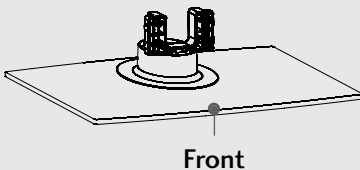
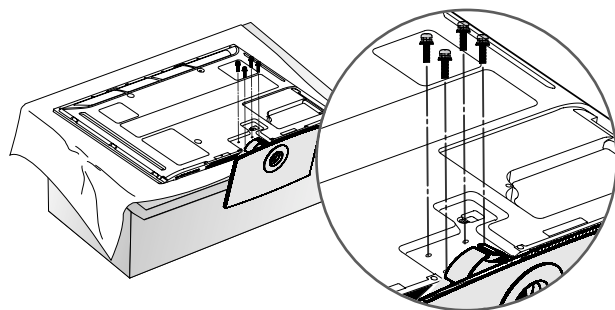
- 1 Carefully place the TV screen side down on a cushioned surface to protect the screen from damage.



- 2 Assemble the TV as shown.



- 3 Fix the 4 bolts securely using the holes in the back of the TV.

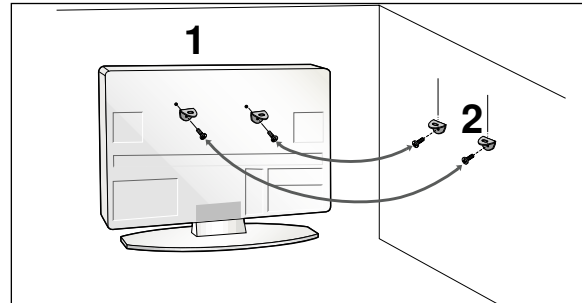
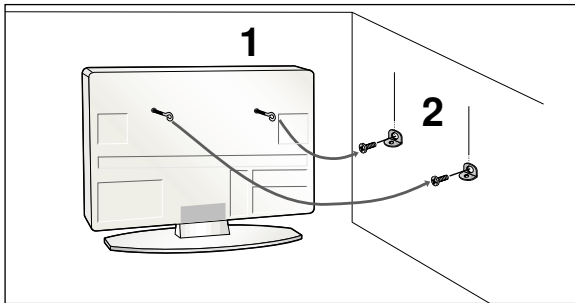


When assembling the stand, make sure to distinguish and assemble the front and rear side of the stand correctly.

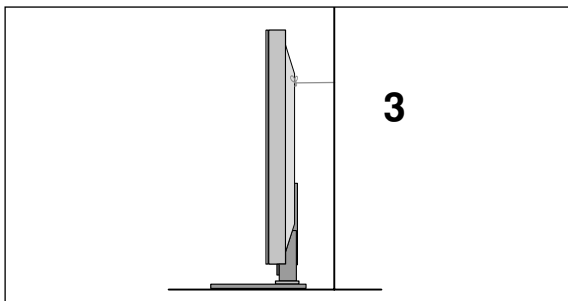


## CAREFUL INSTALLATION ADVICE

- You should purchase necessary components to fix the TV safely and secure to the wall from the market.
- Position the TV close to the wall to avoid the possibility of it falling when pushed.
- The instructions shown below are a safer way to set up the TV, by fixing it to the wall, avoiding the possibility of it falling forwards if pulled. This will prevent the TV from falling forward and causing injury. This will also prevent the TV from damage. Ensure that children do not climb or hang from the TV.



- 1 Use the eye-bolts or TV brackets/bolts to fix the product to the wall as shown in the picture. (If your TV has bolts in the eyebolts, loosen then bolts.)  
\* Insert the eye-bolts or TV brackets/bolts and tighten them securely in the upper holes.
- 2 Secure the wall brackets with the bolts on the wall. Match the height of the bracket that is mounted on the wall.



- 3 Use a sturdy rope to tie the product for alignment. It is safer to tie the rope so it becomes horizontal between the wall and the product.

### ! NOTE

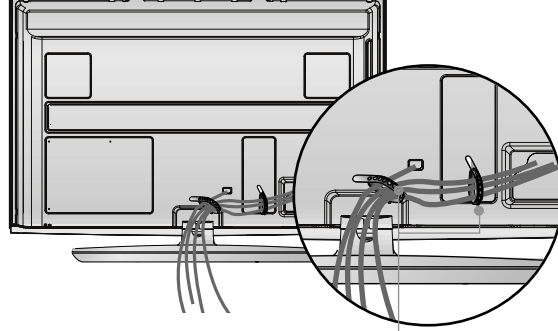
- ▶ When moving the TV undo the cords first.
- ▶ Use a platform or cabinet strong and large enough to support the size and weight of the TV.
- ▶ To use the TV safely make sure that the height of the bracket on the wall and on the TV is the same.

# PREPARATION

## BACK COVER FOR WIRE ARRANGEMENT

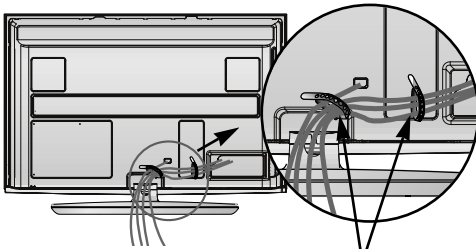
- Image shown may differ from your TV.

After Connecting the cables as necessary, install **CABLE HOLDER** as shown and bundle the cables.



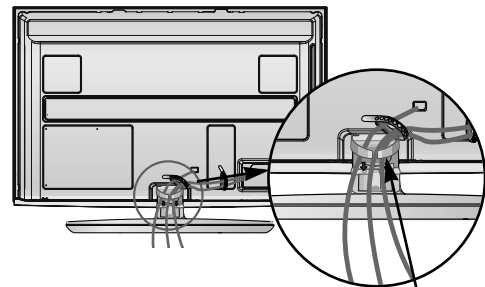
CABLE HOLDER

- 1 After Connecting the cables as necessary, install **CABLE HOLDER** as shown and bundle the cables. To connect additional equipment, see the **External equipment Setup** section.



CABLE HOLDER

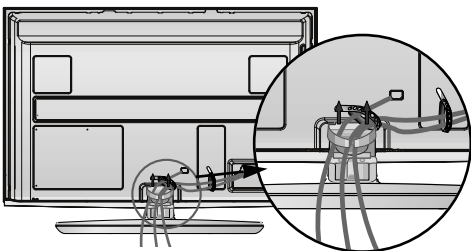
- 2 Install the **CABLE MANAGEMENT CLIP** as shown.



CABLE MANAGEMENT CLIP

## How to remove the cable management clip

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



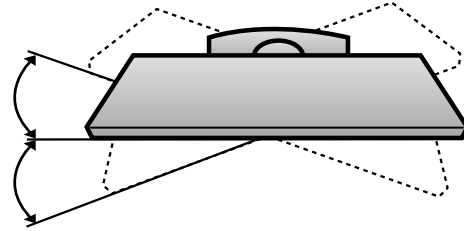
### ! NOTE

- ▶ Do not use the **CABLE MANAGEMENT CLIP** to lift the TV.
- If the TV is dropped, you may be injured or the TV may be damaged.

## SWIVEL STAND

This feature is not available for all models.

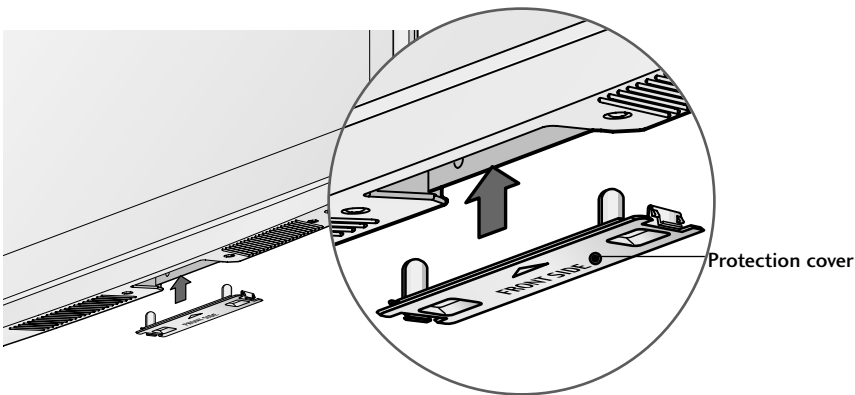
After installing the TV, you can adjust the TV set manually to the left or right direction by 20 degrees to suit your viewing position.



## NOT USING THE DESK-TYPE STAND

■ Here shown may differ from your TV.

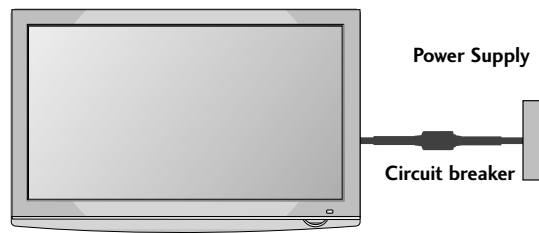
When installing the wall-mounted unit, use the protection cover. Insert the **PROTECTION COVER** into the TV until clicking sound.



## EARTHING

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

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



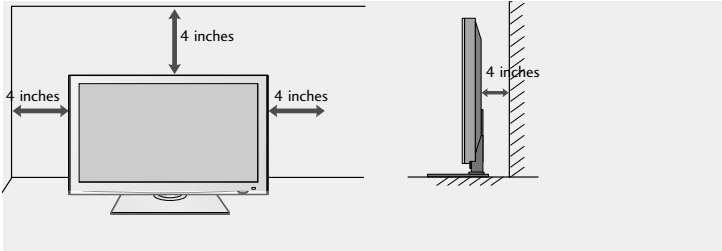
# PREPARATION

PREPARATION

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

## DESKTOP PEDESTAL INSTALLATION

For adequate ventilation allow a clearance of 4" (10cm) all around the TV.

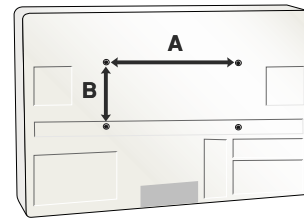
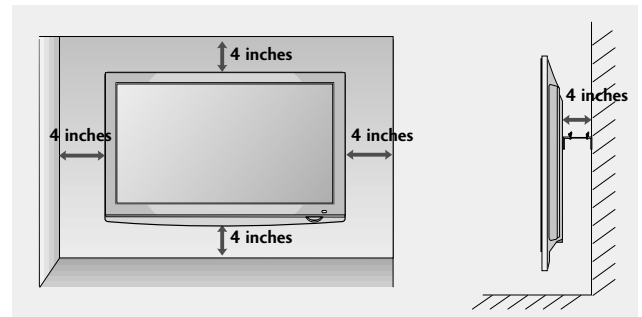


## WALL MOUNT: HORIZONTAL INSTALLATION

- We recommend the use of a LG Brand wall mounting bracket when mounting the TV to a wall.
- We recommend that you purchase a wall mounting bracket which supports VESA standard.
- LG recommends that wall mounting be performed by a qualified professional installer.

### NOTE

- ▶ Should Install wall mount on a solid wall perpendicular to the floor.
- ▶ Should use a special wall mount, if you want to install it to ceiling or slanted wall.
- ▶ The surface that wall mount is to be mounted on should be of sufficient strength to support the weight of TV set; e.g. concrete, natural rock, brick and hollow block.
- ▶ Installing screw type and length depends on the wall mount used. Further information, refer to the instructions included with the mount.
- ▶ LG is not liable for any accidents or damage to property or TV due to incorrect installation:
  - Where a non-compliant VESA wall mount is used.
  - Incorrect fastening of screws to surface which may cause TV to fall and cause personal injury.
  - Not following the recommended Installation method.

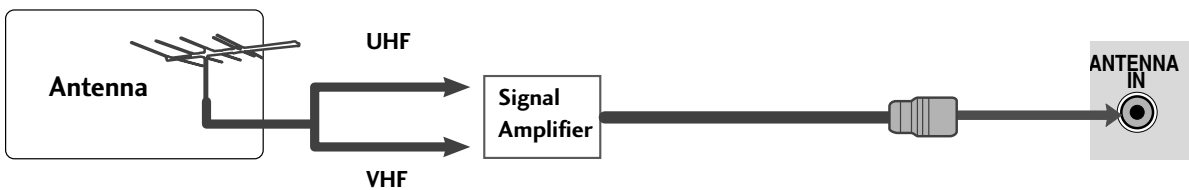
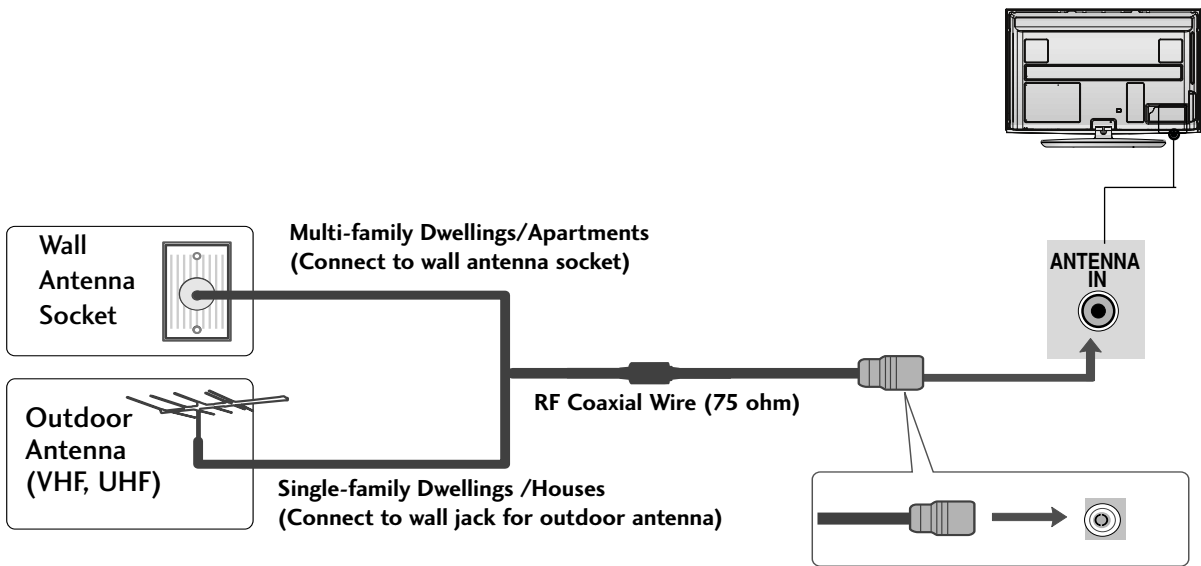


| Model    | VESA (A * B) | Standard Screw | Quantity |
|----------|--------------|----------------|----------|
| 50PS8*** | 400 * 400    | M6             | 4        |
| 60PS8*** | 600 * 400    | M8             | 4        |

- To prevent damage do not connect to the mains outlet until all connections are made between the devices.

## ANTENNA CONNECTION

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



- In poor signal areas, to achieve better picture quality it may be necessary to 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

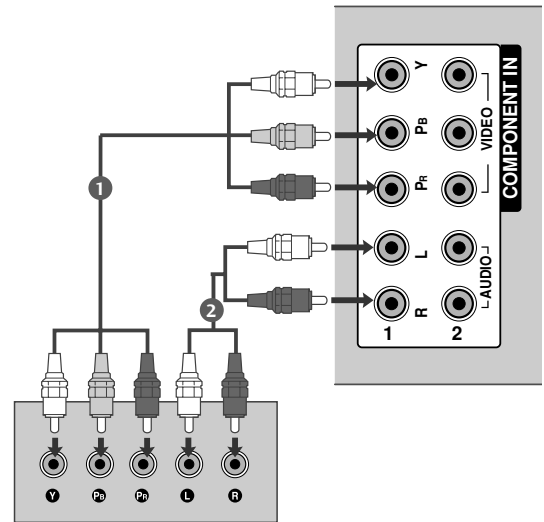
- To avoid damaging any equipment, never plug in any power cords until you have finished connecting all equipment.
- Image shown may differ from your TV.

## HD RECEIVER SETUP

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

### Connecting with a component cables

- 1 Connect the video outputs (Y, PB, PR) of the digital set top box to the **COMPONENT IN VIDEO** jacks on the TV.
- 2 Connect the audio output of the digital set-top box to the **COMPONENT IN AUDIO** jacks on the TV.
- 3 Turn on the digital set-top box.  
(Refer to the owner's manual for the digital set-top box.)
- 4 Select **Component 1** input source using the **INPUT** button on the remote control.  
If connected to **COMPONENT IN 2** input, select **Component 2** input source.



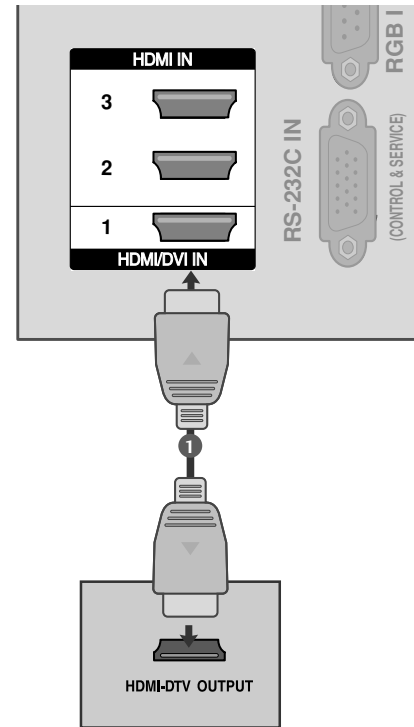
| Signal     | Component           | HDMI                       |
|------------|---------------------|----------------------------|
| 480i/576i  | ○                   | X                          |
| 480p/576p  | ○                   | ○                          |
| 720p/1080i | ○                   | ○                          |
| 1080p      | ○<br>(50/60Hz only) | ○<br>(24Hz/30Hz/50Hz/60Hz) |

## Connecting a set-top box with an HDMI cable

- 1 Connect the digital set-top box to **HDMI/DVI IN 1**, **HDMI IN 2**, **HDMI IN 3** or **HDMI IN 4** jack on the TV.
- 2 Turn on the digital set-top box.  
(Refer to the owner's manual for the digital set-top box.)
- 3 Select **HDMI1**, **HDMI2**, **HDMI3** or **HDMI4** input source using the **INPUT** button on the remote control.

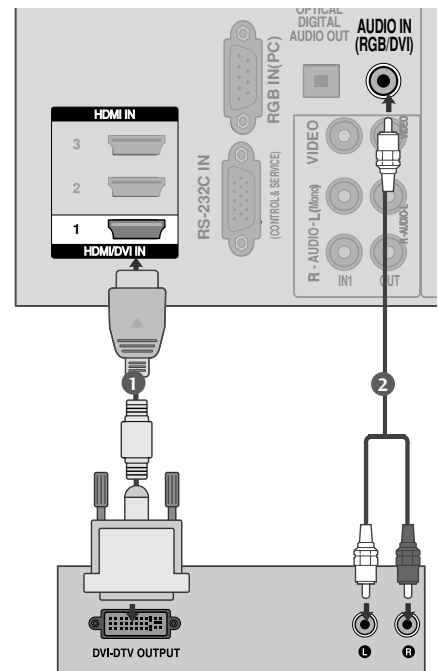
### ! NOTE

- ▶ Check that your HDMI cable is version 1.3 or higher. If the HDMI cables don't support HDMI version 1.3, flickering or no screen display can result. Please use the latest cables that support at least HDMI version 1.3.



## Connecting with an HDMI to DVI cable

- 1 Connect the digital set-top box to **HDMI/DVI IN 1** jack on the TV.
- 2 Connect the audio output of the digital set-top box to the **AUDIO IN (RGB/DVI)** jack on the TV.
- 3 Turn on the digital set-top box. (Refer to the owner's manual for the digital set-top box.)
- 4 Select **HDMI1** input source using the **INPUT** button on the remote control.

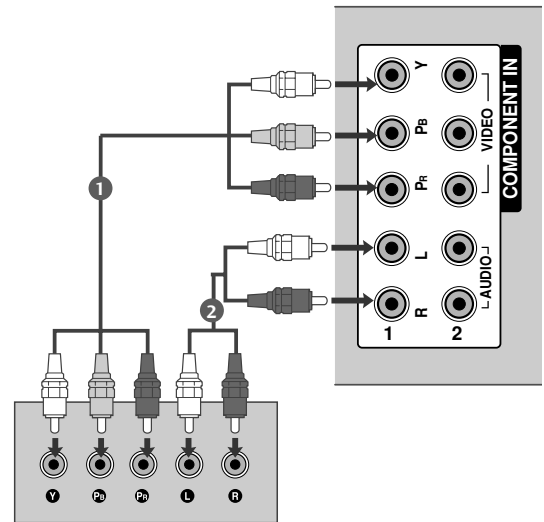


# EXTERNAL EQUIPMENT SETUP

## DVD SETUP

### Connecting with a component cables

- 1 Connect the video outputs (Y, Pb, Pr) of the DVD to the **COMPONENT IN VIDEO** jacks on the TV.
- 2 Connect the audio outputs of the DVD to the **COMPONENT IN AUDIO** jacks on the TV.
- 3 Turn on the DVD player, insert a DVD.
- 4 Select **Component 1** input source using the **INPUT** button on the remote control.  
If connected to **COMPONENT IN 2** input, select **Component 2** input source.
- 5 Refer to the DVD player's manual for operating instructions.



### Component Input ports

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

| Component ports on the TV           | Y | P <sub>B</sub> | P <sub>R</sub> |
|-------------------------------------|---|----------------|----------------|
| Video output ports<br>on DVD player | Y | P <sub>B</sub> | P <sub>R</sub> |
|                                     | Y | B-Y            | R-Y            |
|                                     | Y | Cb             | Cr             |
|                                     | Y | Pb             | Pr             |

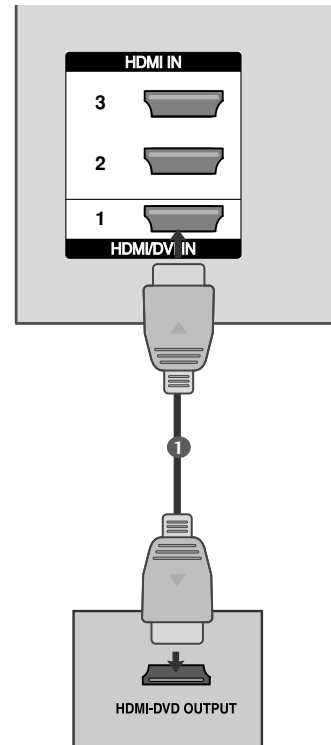


## Connecting the HDMI cable

- 1 Connect the HDMI output of the DVD to the **HDMI/DVI IN 1**, **HDMI IN 2**, **HDMI IN 3** or **HDMI IN 4** jack on the TV.
- 2 Select **HDMI1**, **HDMI2**, **HDMI3** or **HDMI4** input source using the **INPUT** button on the remote control.
- 3 Refer to the DVD player's manual for operating instructions.

### ! NOTE

- ▶ The TV can receive video and audio signals simultaneously when using a HDMI cable.
- ▶ If the DVD does not support Auto HDMI, you must set the output resolution appropriately.
- ▶ Check that your HDMI cable is version 1.3 or higher.  
If the HDMI cables don't support HDMI version 1.3, flickering or no screen display can result. Please use the latest cables that support at least HDMI version 1.3.

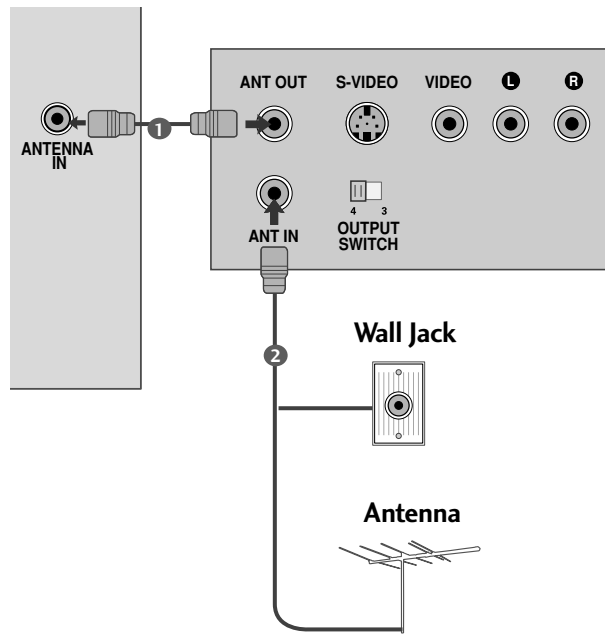


# EXTERNAL EQUIPMENT SETUP

## VCR SETUP

- To avoid picture noise (interference), allow adequate distance between the VCR and TV.

### Connecting with a RF Cable



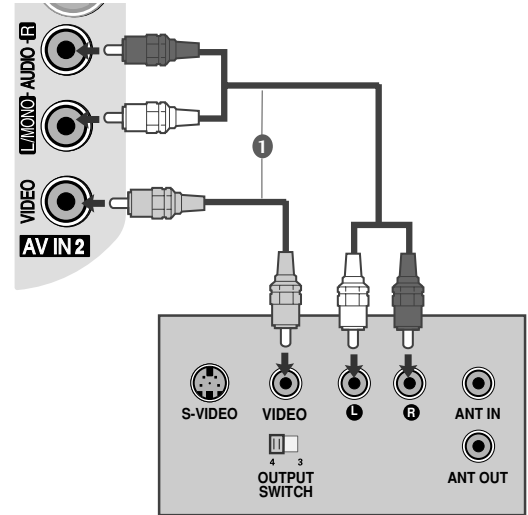
- 1 Connect the **ANT OUT** socket of the VCR to the **ANTENNA IN** socket on the TV.  
.....
- 2 Connect the antenna cable to the **ANT IN** socket of the VCR.  
.....
- 3 Press the **PLAY** button on the VCR and match the appropriate channel between the TV and VCR for viewing.  
.....

## Connecting with an RCA cable

- 1 Connect the **AUDIO/VIDEO** jacks between TV and VCR. Match the jack colours (Video = yellow, Audio Left = white, and Audio Right = red)
- 2 Insert a video tape into the VCR and press **PLAY** on the VCR. (Refer to the VCR owner's manual.)
- 3 Select **AV2** input source using the **INPUT** button on the remote control.  
If connected to **AV IN 1** input, select **AV1** input source.

### ! NOTE

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



# EXTERNAL EQUIPMENT SETUP

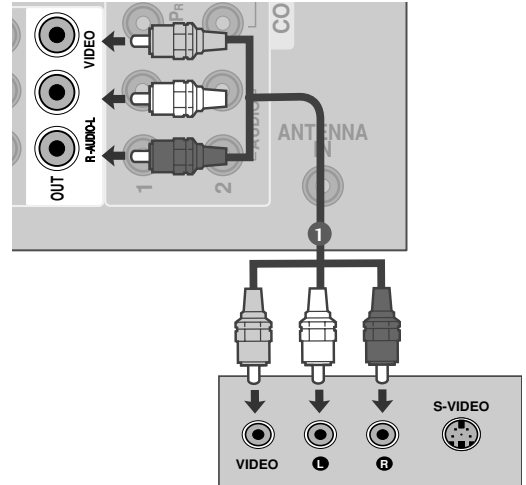
## AV OUTPUT SETUP (Only Analogue Mode)

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

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

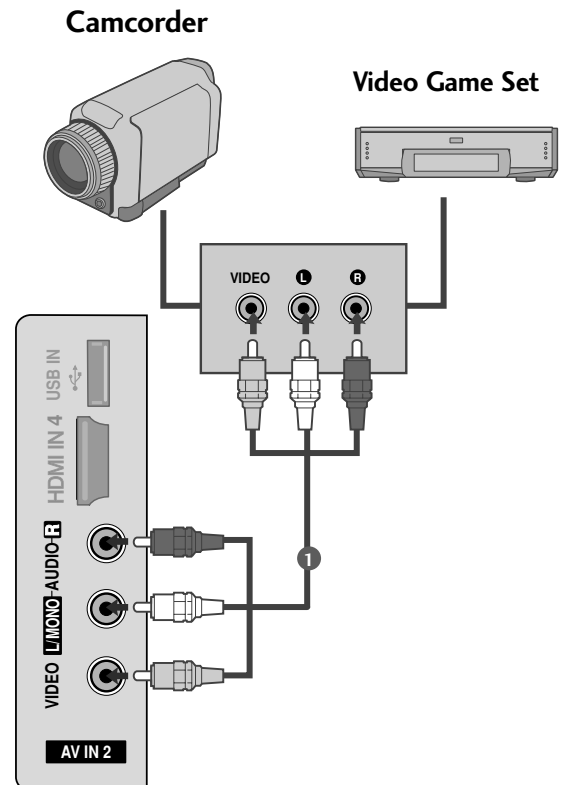
### NOTE

- ▶ Only Analog Channel and AV can be used for AV out. Component, RGB, HDMI input sources cannot be used for AV out.
- ▶ We recommend to use the AV OUT jacks for VCR recording.



## OTHER A/V SOURCE SETUP

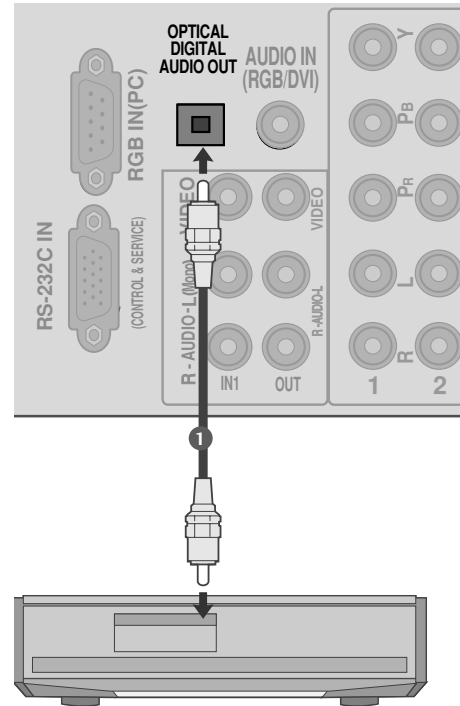
- 1 Connect the **AUDIO/VIDEO** jacks between TV and external equipment. Match the jack colours. (Video = yellow, Audio Left = white, and Audio Right = red)
- 2 Select **AV2** input source using the **INPUT** button on the remote control. If connected to **AV IN1**, select **AV1** input source.
- 3 Operate the corresponding external equipment. Refer to external equipment operating guide.



## 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 Theatre (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.
- 3 Set the "TV Speaker option - Off" in the AUDIO menu. (▶ p. 106). Refer to the external audio equipment instruction manual for operation.



### ⚠ CAUTION

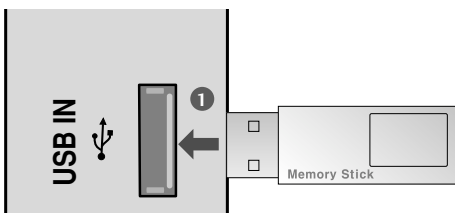
- ▶ Do not look into the optical output port. Looking at the laser beam may damage your vision.

### ! NOTE

- ▶ When connecting with external audio equipments, such as amplifiers or speakers, please turn the TV speakers off.

## USB IN SETUP

- Here shown may differ from your TV.



- 1 Connect the USB device to the **USB IN** jacks on the side of TV.
- 2 After connecting the **USB IN** jacks, you can use the **USB** function. (▶ p.67)

### ⚠ CAUTION

- ▶ Before removing the USB device, please use the Remove USB Device in Quick Menu to prevent software, data loss or damage to USB HDD.

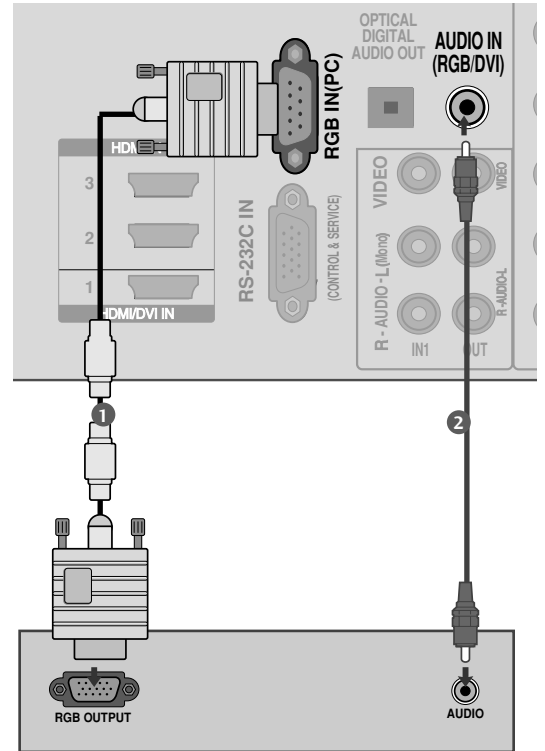
# EXTERNAL EQUIPMENT SETUP

## PC SETUP

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

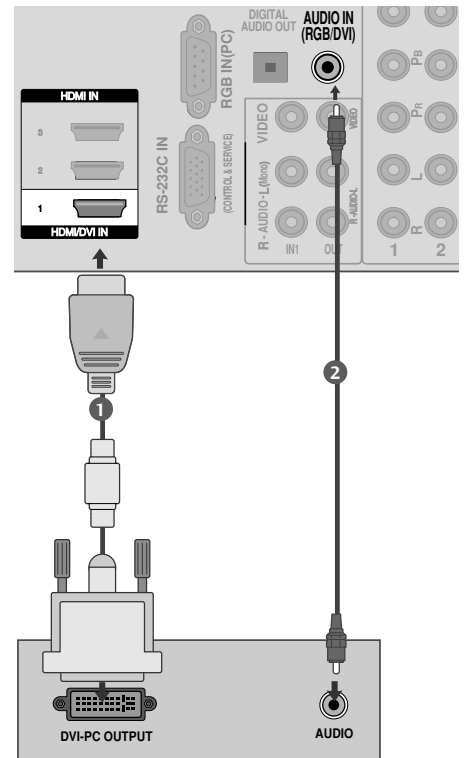
### Connecting with a D-sub 15 pin cable

- 1 Connect the RGB output of the PC to the **RGB IN (PC)** jack on the TV.
- 2 Connect the PC audio output to the **AUDIO IN (RGB/DVI)** jack on the TV.
- 3 Turn on the PC and the TV
- 4 Select **RGB** input source using the INPUT button on the remote control.



### Connecting with a HDMI to DVI cable

- 1 Connect the DVI output of the PC to the **HDMI/DVI IN1** jack on the TV.
- 2 Connect the PC audio output to the **AUDIO IN (RGB/DVI)** jack on the TV.
- 3 Turn on the PC and the TV.
- 4 Select **HDMI1** input source using the INPUT button on the remote control.



## Supported Display Resolution

### RGB-PC, HDMI/DVI-PC mode

| Resolution | Horizontal Frequency(kHz) | Vertical Frequency(Hz) |
|------------|---------------------------|------------------------|
| 720x400    | 31.468                    | 70.08                  |
| 640x480    | 31.469                    | 59.94                  |
| 800x600    | 37.879                    | 60.31                  |
| 1024x768   | 48.363                    | 60.00                  |
| 1280x768   | 47.776                    | 59.87                  |
| 1360x768   | 47.712                    | 60.015                 |
| 1280x1024  | 63.98                     | 60.02                  |
| 1400x1050  | 65.317                    | 59.979                 |
| 1920x1080  | 66.587                    | 59.934                 |

### HDMI/DVI-DTV mode

| Resolution | Horizontal Frequency(kHz) | Vertical Frequency(Hz) |
|------------|---------------------------|------------------------|
| 640x480    | 31.649                    | 59.94                  |
|            | 31.469                    | 60                     |
| 720x480    | 31.47                     | 59.94                  |
|            | 31.50                     | 60                     |
| 720x576    | 31.25                     | 50.00                  |
| 1280x720   | 37.50                     | 50.00                  |
|            | 44.96                     | 59.94                  |
| 1920x1080  | 45.00                     | 60                     |
|            | 28.125                    | 50.00                  |
|            | 33.72                     | 59.94                  |
|            | 33.75                     | 60                     |
|            | 27.00                     | 24.00                  |
|            | 33.75                     | 30                     |
|            | 56.25                     | 50.00                  |
|            | 67.433                    | 59.94                  |
|            | 67.50                     | 60                     |

### ! NOTE

- ▶ 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.
- ▶ There may be interference relating to resolution, vertical pattern, contrast or brightness in PC mode. Change the PC mode to another resolution or change the refresh rate to another rate or adjust the brightness and contrast on the menu until the picture is clear.  
If the refresh rate of the PC graphic card can not be changed, change the PC graphic card or consult the manufacturer of the PC graphic card.
- ▶ The synchronization input waveform for Horizontal and Vertical frequencies are separate.
- ▶ We recommend using 1920x1080, 60Hz (50PS8\*\*\*/60PS8\*\*\*) for the PC mode, they provide the best picture quality.
- ▶ Connect the signal cable from the monitor output port of the PC to the RGB (PC) port of the TV or the signal cable from the HDMI output port of the PC to the HDMI IN (or HDMI/DVI IN) port on the TV.
- ▶ Connect the audio cable from the PC to the Audio input on the TV. (Audio cables are not included with the TV).
- ▶ If using a sound card, adjust PC sound as required.
- ▶ If required, adjust the settings for Plug and Play functionality
- ▶ If the graphic card on the PC does not output analogue and digital RGB simultaneously, connect only one of either RGB or HDMI IN (or HDMI/DVI IN) to display the PC output on the TV.
- ▶ If graphic card on the PC does output analogue and digital RGB simultaneously, set the TV to either RGB or HDMI; (the other mode is set to Plug and Play automatically by the TV.)
- ▶ DOS mode may not work depending on the video card if you use a HDMI to DVI cable.
- ▶ If you use too long an RGB-PC cable, there may be interference on the screen. We recommend using under 5m of cable. This provides the best picture quality.

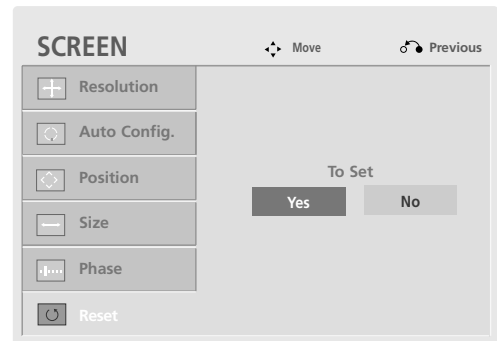
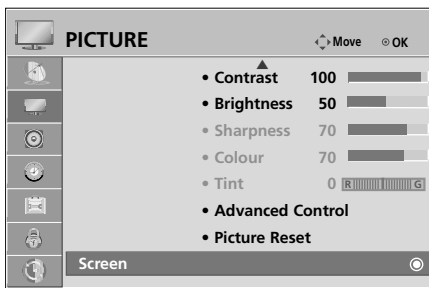
# EXTERNAL EQUIPMENT SETUP












## Screen Setup for PC mode

### Screen Reset

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

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



- 1   Select **TV SETUP**.
- 2   Select **PICTURE**.
- 3   Select **Screen**.
- 4   Select **Reset**.
- 5   Select **Yes**.
- 6  Run **Reset**.

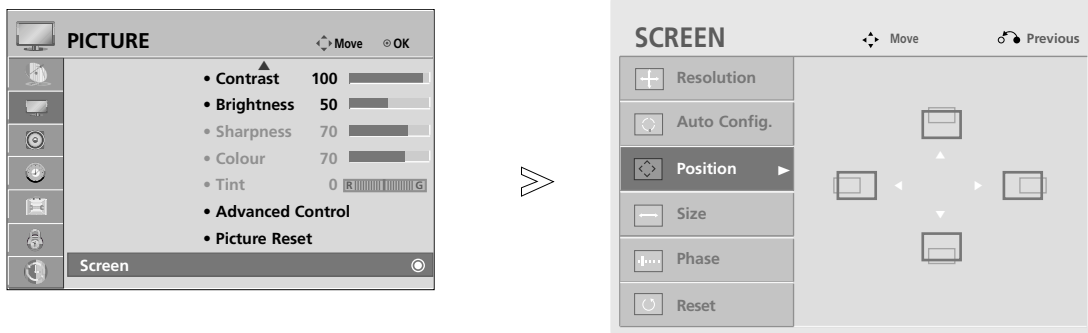
- Press the **MENU** button to return to normal TV viewing.
- Press the **RETURN** button to move to the previous menu screen.














## Adjustment for screen Position, Size, Phase

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

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



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

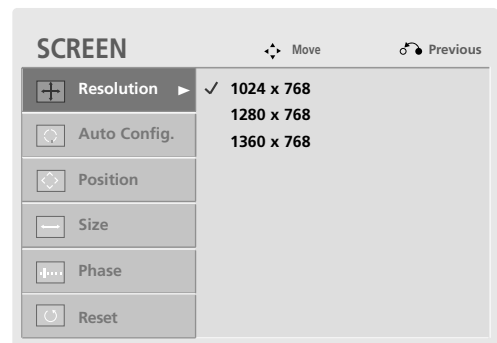
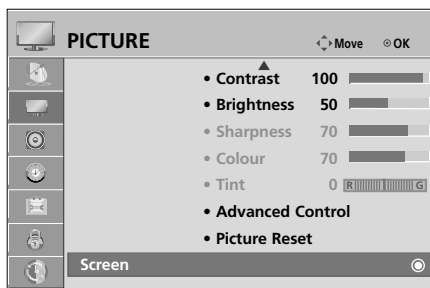
- Press the **MENU** button to return to normal TV viewing.
- Press the **RETURN** button to move to the previous menu screen.











# EXTERNAL EQUIPMENT SETUP

## 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]



- 1   Select **TV SETUP**.
- 2   Select **PICTURE**.
- 3   Select **SCREEN**.
- 4   Select **Resolution**.
- 5   Select the desired resolution.

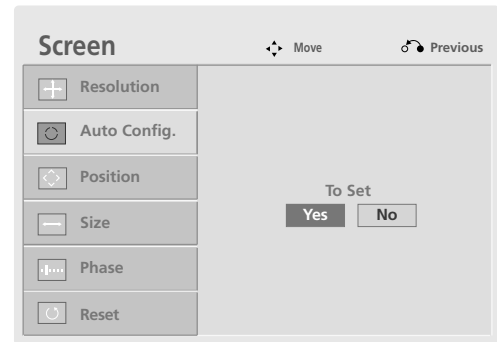
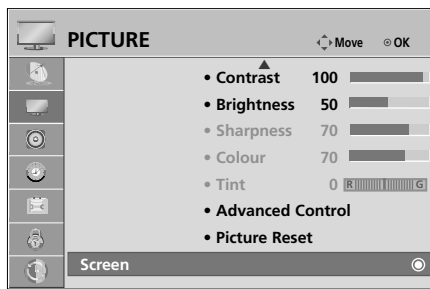
- Press the **MENU** button to return to normal TV viewing.
- Press the **RETURN** button to move to the previous menu screen.

## Auto Configure (RGB [PC] mode only)

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

### Auto configure

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



1   Select **TV SETUP**.

2   Select **PICTURE**.

3   Select **SCREEN**.

4   Select **Auto Config..**

5   Select **Yes**.

6  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**.
- Because the image with the black background may fail the auto adjustment, use the image with the bright background.

- Press the **MENU** button to return to normal TV viewing.
- Press the **RETURN** button to move to the previous menu screen.

# WATCHING TV / PROGRAMME CONTROL

## REMOTE CONTROL KEY FUNCTIONS

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



- 1 MODE** Selects the remote operating modes.
- POWER** Switches the TV on from standby or off to standby.
- INPUT** External input mode rotate in regular sequence. Switches the TV on from standby.(▶ p.46)
- TV/RAD** Selects DTV, Radio and TV programme.
- Q. MENU** Displays the quick menu. (▶ p.29)
- MENU** Displays main menu. Clears all on-screen displays and returns to TV viewing from any menu.(▶ p.30~31)
- GUIDE** Shows programme schedule. (▶ p.53)

- VOLUME UP /DOWN** Adjusts the volume.
- MARK** Check and un-check programmes in the USB menu or Recorded TV menu.
- FAV** Displays the selected favourite programme.(▶ p.44)
- CHAR/NUM DELETE** Used to edit programme title in REC.LIST and schedule list.
- MUTE** Switches the sound on or off.
- Programme UP/DOWN** Selects a programme.
- PAGE UP/DOWN** Move from one full set of screen information to the next one.
- 0~9 number button** Selects a programme. Selects numbered items in a menu. Use for character/number input.
- LIST** Displays the programme table.(▶ p.43)
- Q.VIEW** Returns to the previously viewed programme.



**THUMBSTICK** Allows you to navigate the on-screen menus and adjust (Up/Down/Left the system settings to your preference. Right) Arrow buttons.

**OK** Accepts your selection or displays the current mode.

**Time Machine control buttons** ◀◀ (Rewind), ▶▶ (Fast Forward), ▶ (Playback), || (Pause), < , > (Jump thumbnail) (Freezes the current frame by pressing the || (Pause) button.)

**RETURN(EXIT)** Allows the user to move return one step in an interactive application or other user interaction function.

**RECORD** Selects button to record the watching programme or make recording schedules.

**STOP** Stops processing of time machine function. (Playback, Record, etc)

**LIVE** Return to the live.

**Coloured buttons** These buttons are used for teletext (on **TELETEXT** models only) , **Programme edit, Record list, Multimedia, Guide, Schedule list.**

**REPEAT** Used for playing the Recorded TV function.

**2** **TELETEXT BUTTONS** These buttons are used for teletext. For further details, see the 'Teletext' section.(▶ p.122)

**SUBTITLE** Recalls your preferred subtitle in digital mode.

**INFO** ⓘ Shows the present screen information.

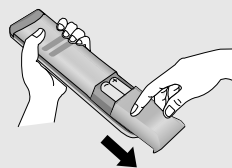
**SIMPLINK** See a list of AV devices connected to TV. When you toggle this button, the Simplink menu appears at the screen.(▶ p.47)

**RATIO** Selects your desired picture format.

**AV MODE** It helps you select and set images and sounds when connecting AV devices.(▶ p.51)

**ENERGY SAVING** Adjust the Energy Saving mode of the TV.(▶ p.91)

## Installing Batteries



- Open the battery compartment cover on the back side 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.  
At this stage, the TV switches to standby mode.
- 2 In standby mode to turn TV on, press the  $\phi$  / I, INPUT or P  $\blacktriangle$   $\blacktriangledown$  button on the TV or press the POWER, INPUT, P  $\wedge$   $\vee$  or NUMBER button on the remote control and the TV will switch on.

### ! NOTE

- ▶ If the TV is unplugged once or turn off with the AC power control switch (or  $\phi$ /I (power) button) on the TV, the time setting is set to **Auto** to set time automatically.

### Initialising setup.

If the OSD (On Screen Display) is displayed on the screen after turning on the TV, you can adjust the **Mode Setting, Time Zone, Time Machine 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. For those countries without confirmed DTV broadcasting standards, some DTV features might not work, depending on the DTV broadcasting environment.
- d. "Home Use" mode is the optimal setting for home environments, and is the TV's default mode.
- e. "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.
- f. The mode (Home Use, Store Demo) can be changed by executing Mode Setting in the OPTION menu.

## PROGRAMME SELECTION

- 1 Press the P  $\wedge$   $\vee$  or NUMBER buttons to select a programme number.

## VOLUME ADJUSTMENT

- 1 Press the  $\blacktriangle$  + or - button to adjust the volume.









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

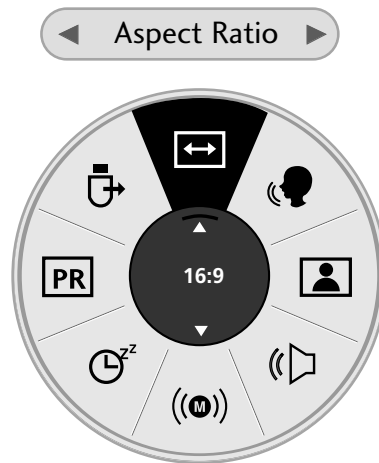
You can cancel this function by pressing the MUTE,  $\blacktriangle$  + or - button.





## 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 or Cinema Zoom in Ratio Menu. After completing Zoom Setting, the display goes back to Q.Menu.
-  **Clear Voice II :** By differentiating the human sound range from others, it helps make human voices sound better.
-  **Picture Mode:** Selects the factory preset picture depend on the viewing environment.
-  **Sound Mode:** Selects the factory preset sound for type of programme.
-  **Multi Audio:** Selects the sound output.
-  **Sleep Timer:** Select the amount of time before your TV turns off automatically.
-  **Favourite :** Selects the favourite programme.
-  **Remove USB device:** Selects the remove USB device menu to detach safely a USB device from the TV.



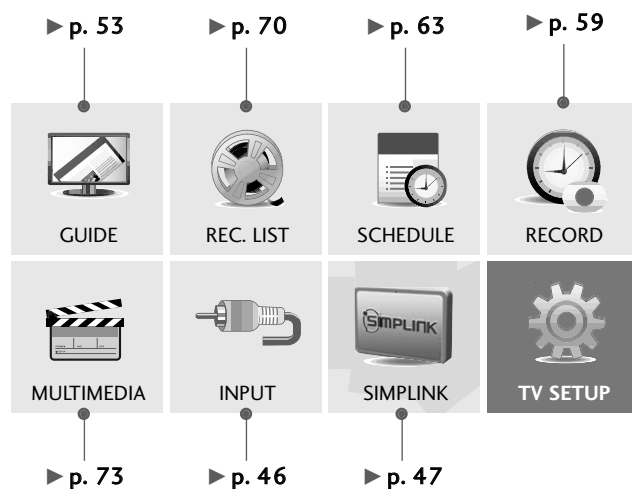
1.   Display each menu.
2.  Select your desired Source.
3. 

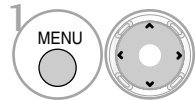
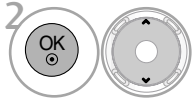


- Press the **Q.MENU** button to return to normal TV viewing.

# WATCHING TV / PROGRAMME CONTROL

## ON-SCREEN MENUS SELECTION AND ADJUSTMENT

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



-  Display each menu.
-  Select a menu item.
-  Accept the current selection.
-  Return to TV viewing.



**SETUP** Move OK

- Auto Tuning
- Manual Tuning
- Programme Edit
- Booster : On
- Software Update : On
- Diagnostics

**PICTURE** Move OK

- Aspect Ratio : 16:9
- Picture Wizard
- Energy Saving : Intelligent Sensor
- Picture Mode : Vivid
  - Contrast 100
  - Brightness 50
  - Sharpness 70
  - Colour 70



**TIME MACHINE** Move OK

- Time Machine Mode : On
- Recording Quality : High
- Time Machine Initialisation
- USB Device Initialisation
- DivX Reg.Code
- Deactivation

**AUDIO** Move OK

- Auto Volume : Off
- Clear Voice II : Off
  - Level 3
- Balance 0 (L R)
- Sound Mode : Standard
  - SRS TruSurround XT: Off
  - Treble 50
  - Bass 50



**LOCK** Move OK

- Lock System : Off
- Set Password
- Block Programme
- Parental Guidance : Blocking Off
- Input Block

**OPTION** Move OK

- Audio Language : English
- Subtitle Language : English
- Hard of Hearing : Off
- Input Label
- SIMPLINK : Off
- Key Lock : Off
- Simple Manual
- ISM Method : Normal



**TIME** Move OK

- Clock
- Off Time : Off
- On Time : Off
- Sleep Timer : Off

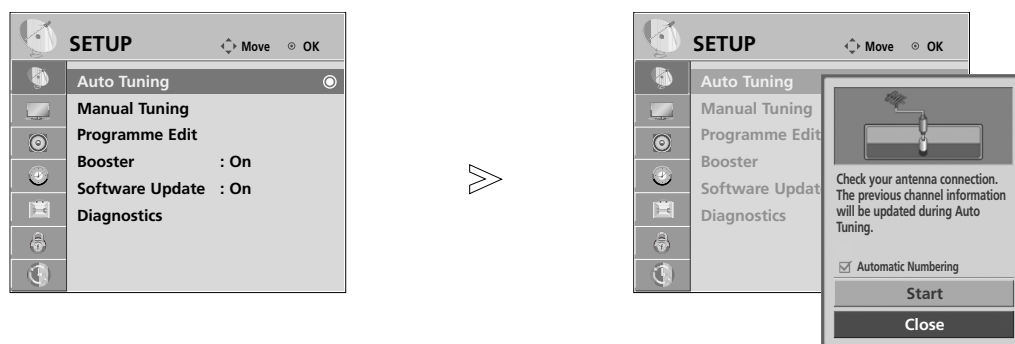
# WATCHING TV / PROGRAMME CONTROL

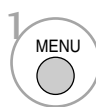
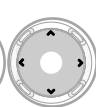


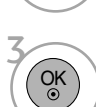
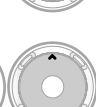



## AUTO PROGRAMME TUNING

Use this to automatically find and store all available programmes.

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

The maximum number of programmes that can be stored is 400. But the number may differ slightly depending on broadcasting signals.



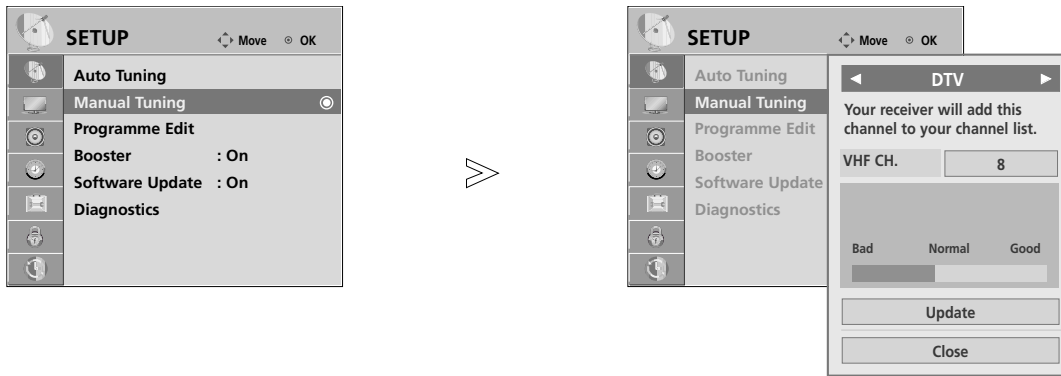
- 1   Select **TV SETUP**.
- 2   Select **SETUP**.
- 3   Select **Auto Tuning**.
- 4   Select **Start**.
- 5  Run **Auto tuning**.













- Press the **MENU** button to return to normal TV viewing.
- Press the **RETURN** button to move to the previous menu screen.

## MANUAL PROGRAMME TUNING (IN DIGITAL MODE)

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

When selecting DTV input signal, you can view the on-screen signal strength monitor to see the quality of the signal being received.



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

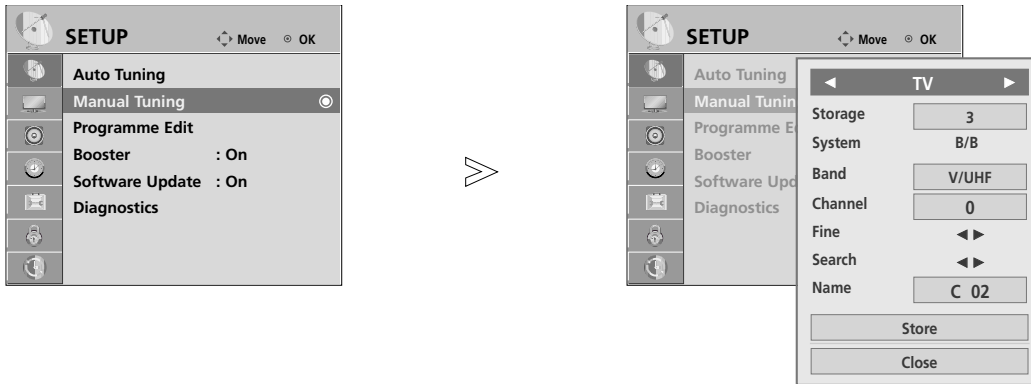
- Use **NUMBER** buttons to input a 4-digit password in **Lock System 'On'**.






















- Press the **MENU** button to return to normal TV viewing.
- 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 **TV SETUP**.
- 2   Select **SETUP**.
- 3   Select **Manual Tuning**.
- 4   Select **TV**.
- 5   or  Select the desired programme number on.
- 6   Select **V/UHF** or **Cable**.
- 7   or  Select the desired channel number.
- 8   Commence searching.
- 9   Select **Store**
- 10 

- Press the **MENU** button to return to normal TV viewing.
- 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.













## ■ Assigning a station name

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

- 1   Select **TV SETUP**.
- 2   Select **SETUP**.
- 3   Select **Manual Tuning**.
- 4   Select **TV**.
- 5   Select **Name**.
- 6   Select the position and make your choice of the second character, and so on. You can use the alphabet **A** to **Z**, the number **0** to **9**, **+/-**, and blank.
- 7   Select **Close**.
- 8   Select **Store**.

## ■ Fine Tuning

Normally fine tuning is only necessary if reception is poor.

- 1   Select **TV SETUP**.
- 2   Select **SETUP**.
- 3   Select **Manual Tuning**.
- 4   Select **TV**.
- 4  Select **Fine**.
- 5  Fine tune for the best picture and sound.
- 6   Select **Store**

- Press the **MENU** button to return to normal TV viewing.
- Press the **RETURN** button to move to the previous menu screen.

# WATCHING TV / PROGRAMME CONTROL

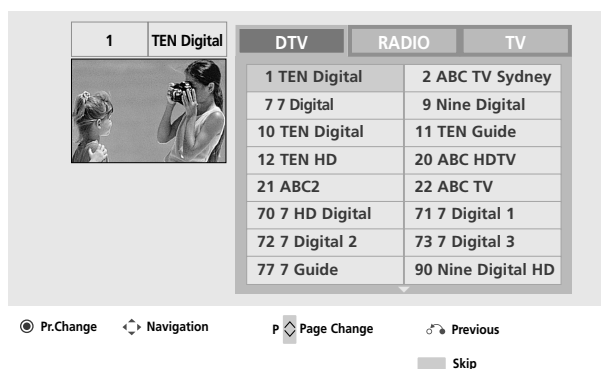
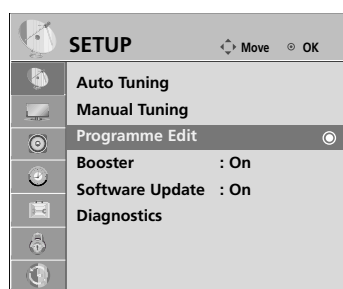
## PROGRAMME EDIT








When a programme number is skipped, it means that you will be unable to select it using **P** ^ v 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.

You can change the programme number using “Move”function, if “Automatic Numbering” is unchecked when you start Auto Tuning.



-   Select **TV SETUP**.
-   Select **SETUP**.
-   Select **Programme Edit**.
-  Enter the **Programme Edit**.

- Press the **MENU** button to return to normal TV viewing.
- Press the **RETURN** button to move to the previous menu screen.

## (IN DTV/RADIO MODE)

### ■ Skipping a programme number



1 Select a programme number to be skipped.



2 Turn the skipped programme number to blue.



3 Release the skipped programme.

- When programmes are to be skipped, skipped programme shows in blue and these programmes will not be selected by the **P** ^ v buttons during 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.

# WATCHING TV / PROGRAMME CONTROL

## (IN TV MODE)

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

### ■ Deleting a programme



Select a programme number to be Deleted.



Turn the deleted programme number to red.



Release the deleted programme.

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

### ■ Moving a programme



Select a programme number to be moved.



Turn the moved programme number to GREEN.



Release the moved programme.

### ■ Skipping a programme number



Select a programme number to be skipped.



Turn the skipped programme number to blue.



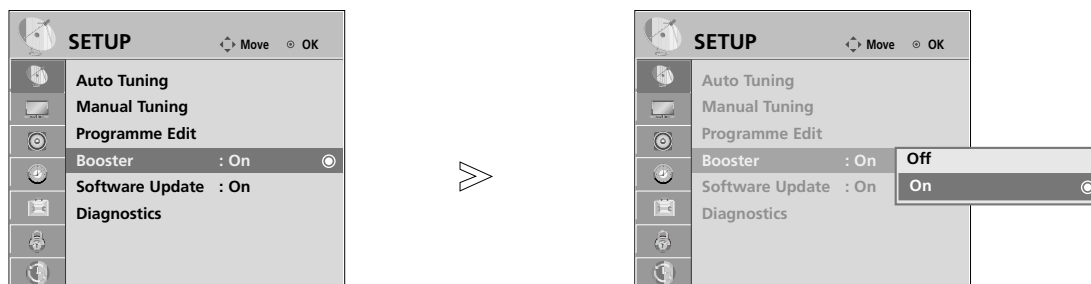
Release the skipped programme.









- When a programme number is skipped it means that you will be unable to select it using the P ^ v 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.



# BOOSTER

If reception is poor select Booster to On.  
When the signal is strong, select “Off”.



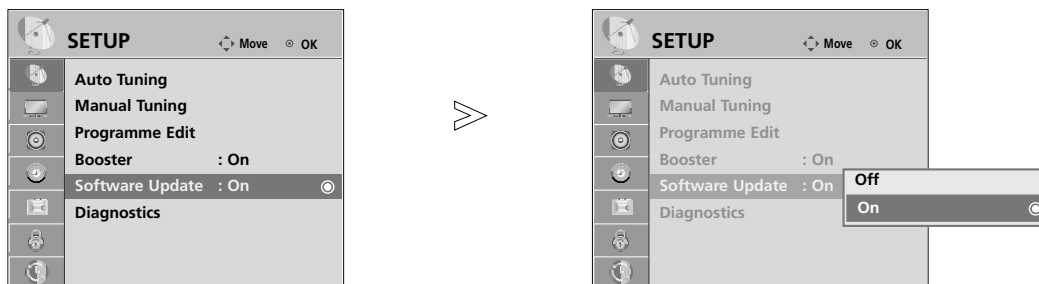
- 1   Select **TV SETUP**.
- 2   Select **SETUP**.
- 3   Select **Booster**.
- 4   Select **On** or **Off**.

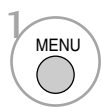








- Press the **MENU** button to return to normal TV viewing.
- Press the **RETURN** button to move to the previous menu screen.

# WATCHING TV / PROGRAMME CONTROL

## SOFTWARE UPDATE

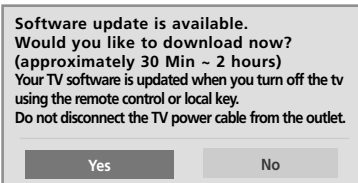
Software Update means software can be downloaded through the digital terrestrial broadcasting system.



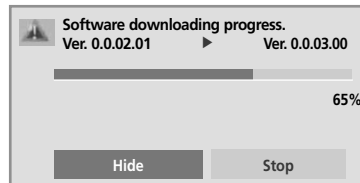
-   Select **TV SETUP**.
-   Select **SETUP**.
-   Select **Software Update**.
-   Select **On** or **Off**.
  - If you select **On**, a user confirm message box will be displayed to notify that new software is found.
-  Save.

## \* When setting “Software Update”

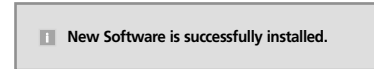
Occasionally, a transmission of updated digital software information will result in the following menu on the TV screen.



Select the **Yes** using the < > button and you will see the following picture.



After the Software Update is complete, the System restarts.



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 TV must not be interrupted.
- The TV 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 hours to download the software, so make sure that the power stays on during the download.

# WATCHING TV / PROGRAMME CONTROL

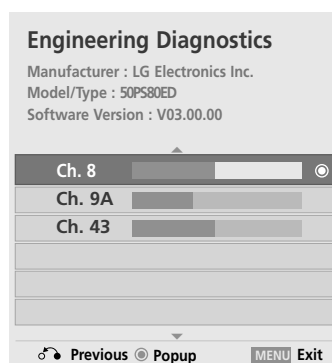
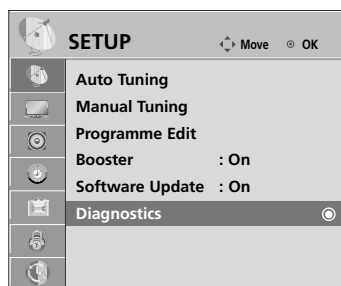
## DIAGNOSTICS










This function enables you to view information on the Manufacturer, Model/Type, Serial Number 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.))

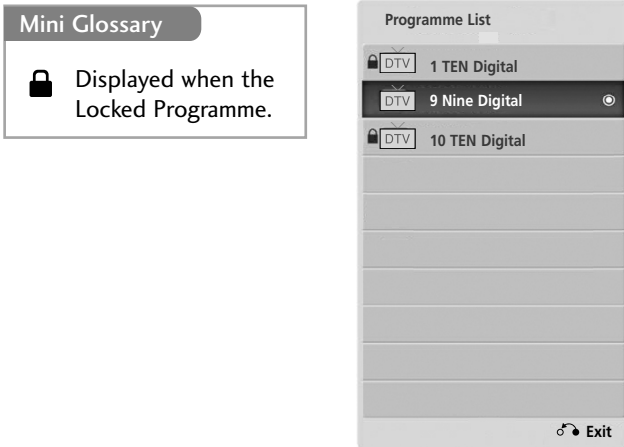


-   Select **TV SETUP**.
-   Select **SETUP**.
-   Select **Diagnostics**.
-  Display Manufacturer, Model/Type and Software Version.
-   Display the information of Channel.

- Press the **MENU** button to return to normal TV viewing.
- Press the **RETURN** button to move to the previous menu screen.

## SELECTING THE PROGRAMME TABLE

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



### Mini Glossary

- Displayed when 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 in the programme edit mode.
- Some programmes with the programme number shown in the programme LIST indicate there is no station name assigned.

### ■ Selecting a programme in the programme list



Select a programme.

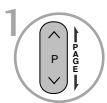


From the programme you are currently watching, the mode will change from DTV to Radio to TV.



Switch to the chosen programme number.

### ■ Paging through a programme list



Turn the pages.



Return to normal TV viewing.

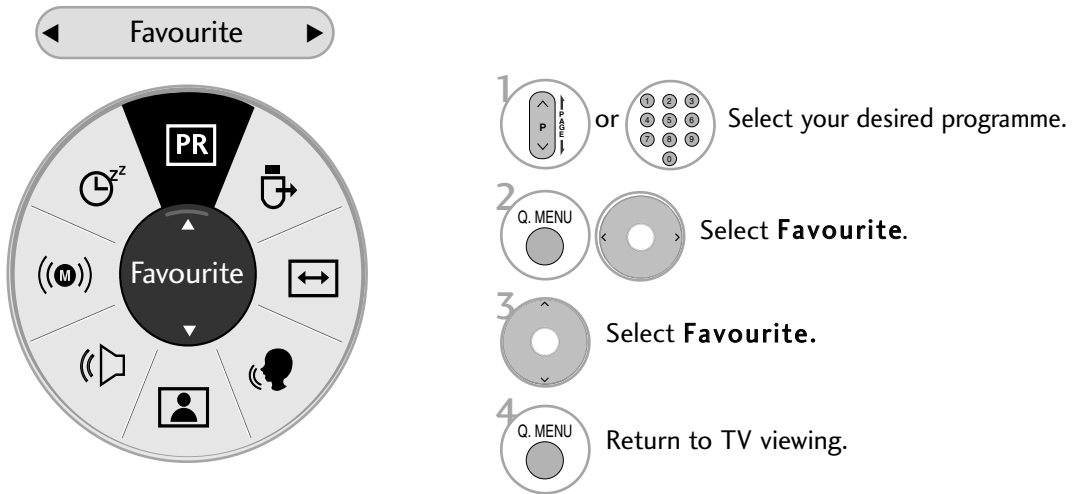
# WATCHING TV / PROGRAMME CONTROL

## FAVOURITE PROGRAMME SETUP

### ■ Selecting favourite programme

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

Favourite programmes is a convenient feature that lets you quickly scan up to programmes of your choice without having to wait for the TV to scan through all the in-between programmes.



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


### ■ Displaying the favourite programme list




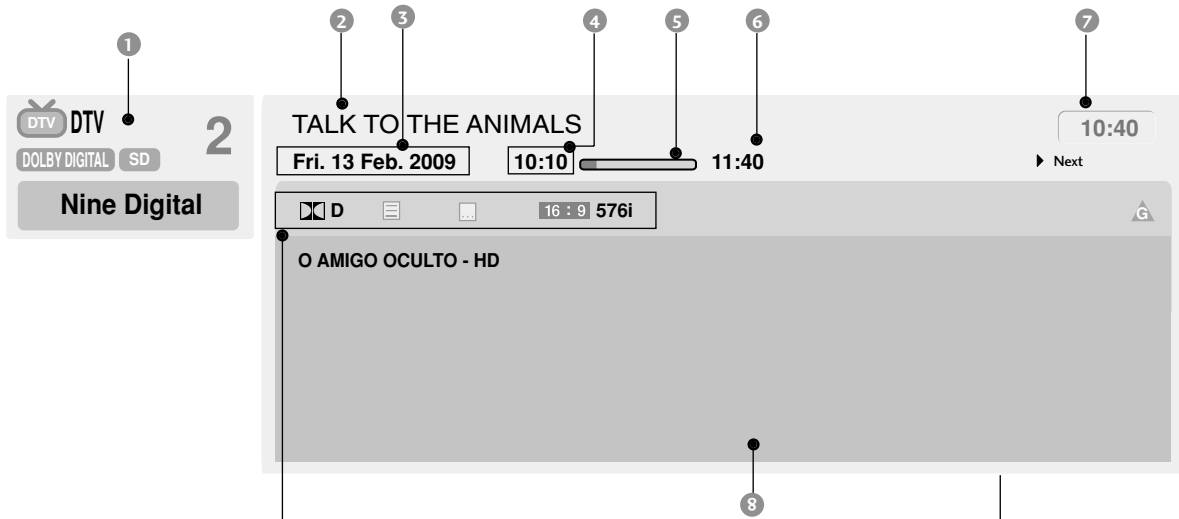
1. Display the Favourite Programme List. (Using the MARK FAV button).



# BRIEF INFORMATION

Brief Info shows the present screen information.

1  Show the Brief Info on the screen.

2  Return to TV viewing



|   |  |
|---|--|
|  | The programme is broadcast with Dolby Digital audio. Use the <b>Q. MENU</b> to select Dolby Digital audio. |
|  | <b>Teletext</b> : Displayed with a Teletext Programme.   |
|  | <b>Subtitle</b>  |
| 4:3   | The original aspect ratio of the video is 4:3  |
| 16:9  | The original aspect ratio of the video is 16:9 (wide)  |
| 576i<br>576p<br>720p<br>1080i   | <b>Video Resolution</b>  |

- 1 Banner information
- 2 Programme title
- 3 Day, Month, Year
- 4 Programme start time
- 5 Programme progress bar
- 6 Programme finish time
- 7 Present time
- 8 Programme information

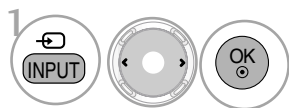
# WATCHING TV / PROGRAMME CONTROL

## INPUT LIST

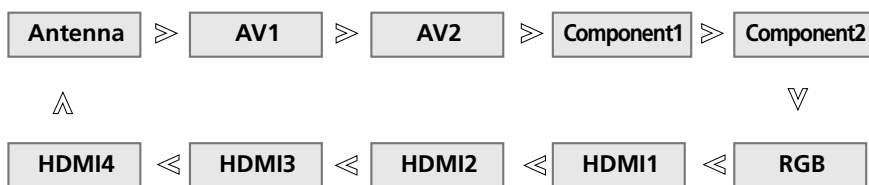
HDMI can be recognized by a detect pin and thus enabled only when an external device approves voltage.

And AV, Component, RGB can be recognized when an external device is connected.

By using **TV/RAD** button, you can move from External Input to RF Input and to the last watched programme in DTV/RADIO/TV mode.



Select the input source.



- **Antenna** : Select it when watching the DTV/TV/Radio.
- **AV** : Select it when watching the VCR or external equipment.
- **Component** : Select it when using the DVD or the Digital set-top box depends on connector.
- **RGB** : Select it when using PC depends on connector.
- **HDMI** : Select it when using DVD, PC or Digital set-top box depend on connector.

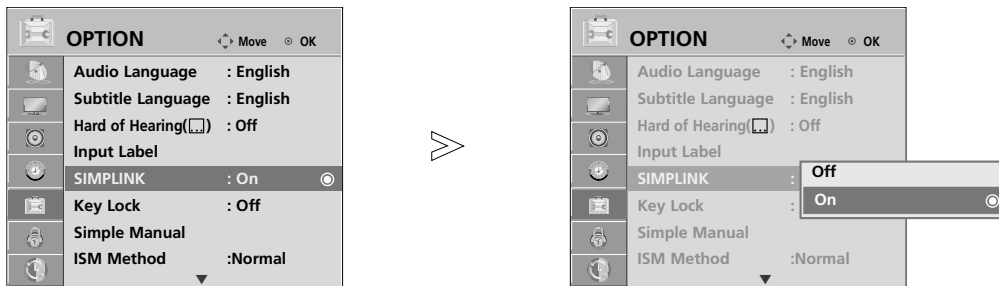




This function operates only with devices with the SIMPLINK logo.  
Please check the SIMPLINK logo.

This TV might not function properly when using it with other products with HDMI-CEC function.  
This allows you to control and play other AV devices connected to the display through HDMI cable without additional cables and settings.

If you do not want SIMPLINK menu, select "Off".



- 1 Select **TV SETUP**.
- 2 Select **SETUP**.
- 3 Select **SIMPLINK**.
- 4 Select **On** or **Off**.
- 5 Save.

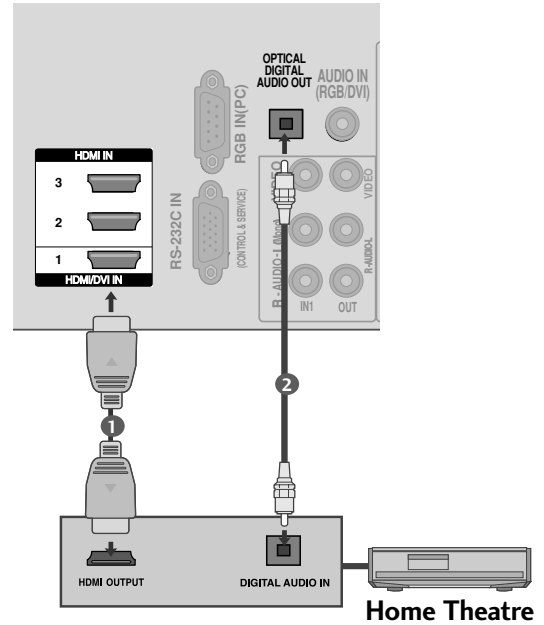
- Press the **MENU** button to return to normal TV viewing.
- Press the **RETURN** button to move to the previous menu screen.

# WATCHING TV / PROGRAMME CONTROL

## Connecting to Home Theatre with the SIMPLINK logo.

- 1 Connect the **HDMI/DVI IN 1, HDMI IN 2, HDMI IN 3** or **HDMI IN 4** terminal on the back of the TV and the HDMI output terminal of the Home Theatre using HDMI cables.
- 2 Connect the Digital Audio output terminal on the back of the TV and the Digital Audio input terminal of the Home Theatre using optical cables.
- 3 Select Home Theatre in the Speaker menu by pushing the **SIMPLINK** button.

▶ When you select or operate a media device with home theatre function, the speaker automatically switches to home theatre speaker (HT speaker).



### ! NOTE

- ▶ Connect the HDMI/DVI IN or HDMI IN terminal of the TV to the rear terminal (HDMI terminal) of the SIMPLINK device with the HDMI cable.
- ▶ When you switch the Input source using the INPUT button on the remote control, you can stop the operation of a device controlled by SIMPLINK

## SIMPLINK Functions

### Disc playback

Control connected AV devices by pressing the  $\wedge$   $\vee$   $\lt$   $\gt$ , OK,  $\blacktriangleright$ ,  $\blacksquare$ ,  $\|\$ ,  $\blacktriangleleft$  and  $\blacktriangleright$  buttons.

### Direct Play

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

### Select AV device

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

### Power off all devices

When you switch off the TV, all connected devices are turned off.

### Switch audio-out

Offers an easy way to switch audio-out.

### Sync Power on

When the equipment with Simplink function connected HDMI terminal starts to play, The TV will change automatically to turn on mode.

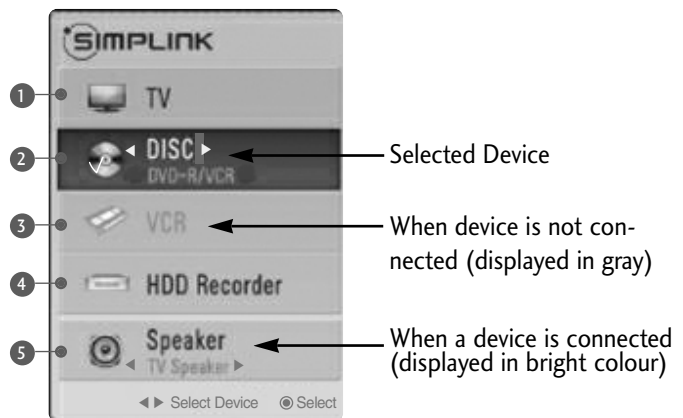
\* A device, which is connected to the TV through an HDMI cable but does not support SIMPLINK, does not provide this function.

Note: To operate SIMPLINK, an HDMI cable over Version 1.3 with \*CEC function should be used. (\*CEC: Consumer Electronics Control).

## SIMPLINK Menu

Press the  $\wedge$   $\vee$   $\lt$   $\gt$  button and then OK button to select the desired SIMPLINK source.

- 1 **TV viewing** : Switch to the previous TV programme regardless of the current mode.
- 2 **DISC playback** : Select and play connected discs.  
When multiple discs are available, the titles of discs are conveniently displayed at the bottom of the screen.
- 3 **VCR playback** : Play and control the connected VCR.
- 4 **HDD Recordings playback** : Play and control recordings stored in HDD.
- 5 **Audio Out to Home theatre/Audio Out to TV:**  
Select Home theatre or TV speaker for Audio Out.



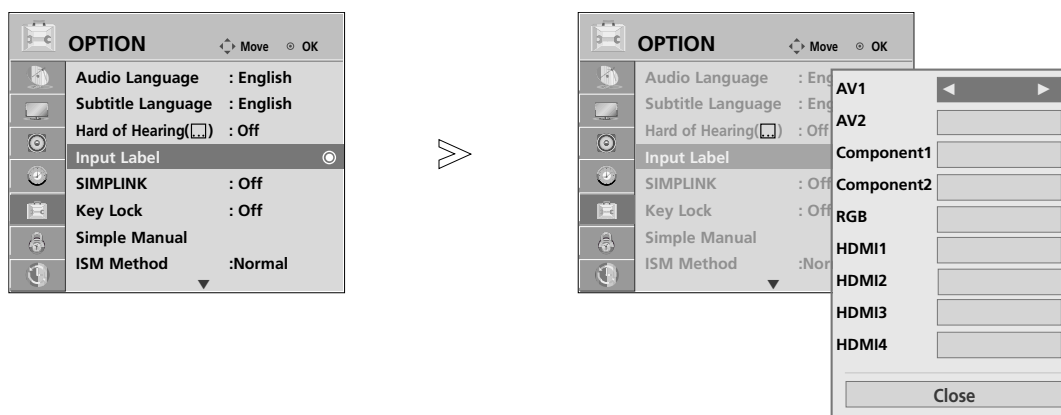
- **Home theatre:** Only one supported at a time
- **DVD, Recorder:** Up to four supported at a time
- **VCR:** Only one supported at a time

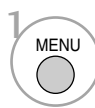
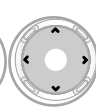

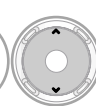

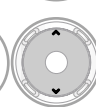

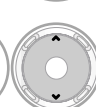

# WATCHING TV / PROGRAMME CONTROL

## INPUT LABEL

You can set a label for each input source when it's not in use.

Available label: VCR -> DVD -> Set Top Box -> Satellite -> Cable Box -> Game -> PC -> HD-DVD -> Blu-ray.

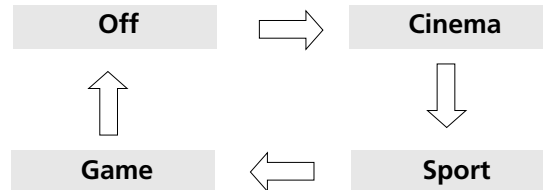


- 1   Select **TV SETUP**.
- 2   Select **OPTION**.
- 3   Select **Input Label**.
- 4   Select the source.
- 5  Select the label.

- Press the **MENU** button to return to normal TV viewing.
- Press the **RETURN** button to move to the previous menu screen.

## AV MODE

You can select the optimal images and sounds when connecting AV devices to external input.



1 Press the **AV MODE** button repeatedly to select the desired source.

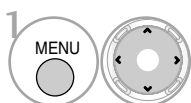
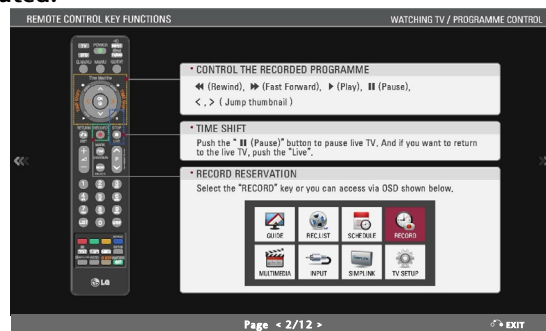


- If you select **Cinema Mode** in **AV mode**, **Cinema** mode will be selected both for **Picture Mode** and **Sound Mode** in **PICTURE** menu and **AUDIO** menu respectively.
- If you select “**Off**” in **AV mode**, the picture and image which you initially set will be selected.

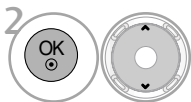
## SIMPLE MANUAL

You can easily and effectively access the TV information by viewing a simple manual on the TV.

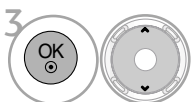
During the Simple Manual operation, audio will be muted.



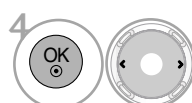
1 Select **TV SETUP**.



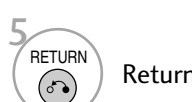
2 Select **OPTION**.



3 Select **Simple Manual**.



4 Select the part of the manual you want to see.



5 Return to TV viewing.

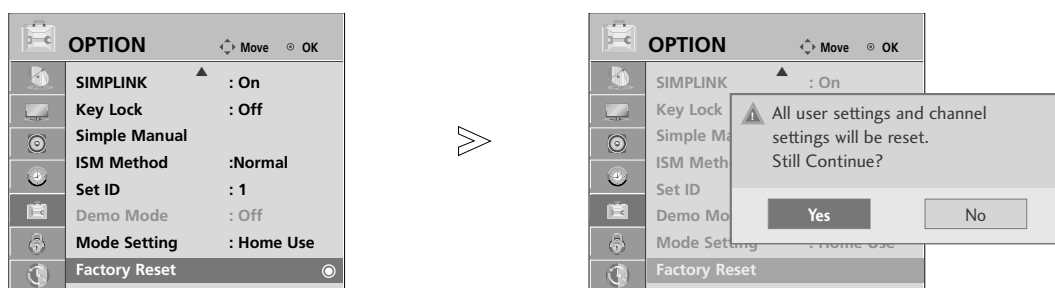
## INITIALISING (RESET TO ORIGINAL FACTORY SETTINGS)


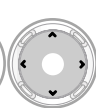

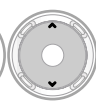

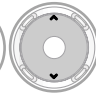

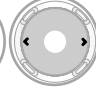

This function initializes all settings.

It is useful to initialize the product or when you move to other city.

When the Factory Reset is completed, you must restart the Initializing setup.

When the **Lock System** menu is "On", the message to enter the password appears.



-   Select **TV SETUP**.
-   Select **OPTION**.
-   Select **Factory Reset**.
-   Select **Yes**.
-  Start **Factory Reset**.

• In **Lock System "On"**, if you forget your password, press '7', '7', '7', '7' on the remote control handset.

- Press the **MENU** button to return to normal TV viewing.
- Press the **RETURN** button to move to the previous menu screen.

# EPG (ELECTRONIC PROGRAMME GUIDE)(IN DIGITAL MODE)

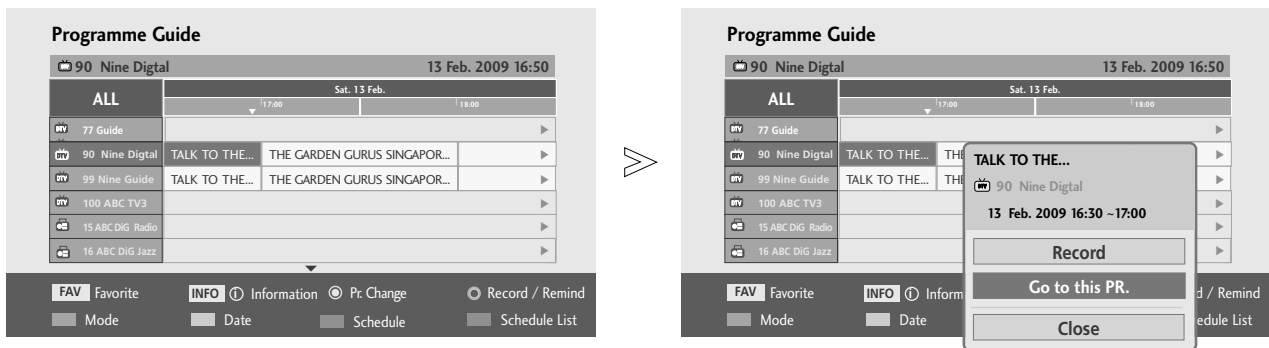
## EPG (ELECTRONIC PROGRAMME GUIDE) (IN DIGITAL MODE)




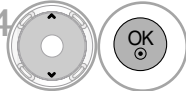
This system has an Electronic Programme Guide (EPG) to help your navigation through all the possible viewing options.

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

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

The EPG displays the programme details for next 8 days.










-  Display the **Programme Guide**.
-  Select desired programme.
-  Show the Popup menu.
-  Select the desired Popup menu.

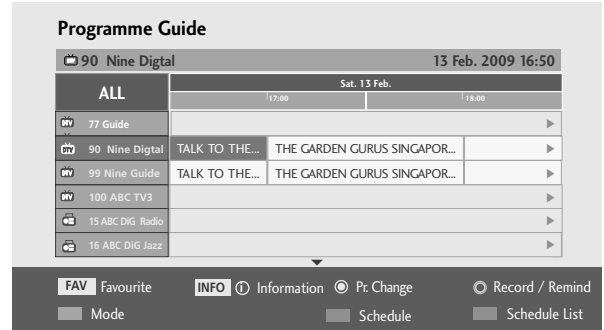
■ If the TV is unplugged once or turn off with the AC power control switch (or  $\phi$ /I (power) button) on the TV, the reserved programme reminding will not work.





- When you press the **YELLOW** button from the currently broadcasting programme, 'Record', 'Go to this PR.', 'Close' will be displayed.
- When you press the **YELLOW** button from the programme after the current time that is not reserved, 'Record', 'Remind', 'Close' will be displayed.
- When you press the **YELLOW** button from the reserved programme reminding, 'Record', 'Cancel Remind', 'Close' will be displayed.
- When you press the **YELLOW** button from the reserved programme recording, 'Cancel Record', 'Remind', 'Close' will be displayed.

# EPG (ELECTRONIC PROGRAMME GUIDE)(IN DIGITAL MODE)









## Button Function in NOW/NEXT Guide Mode

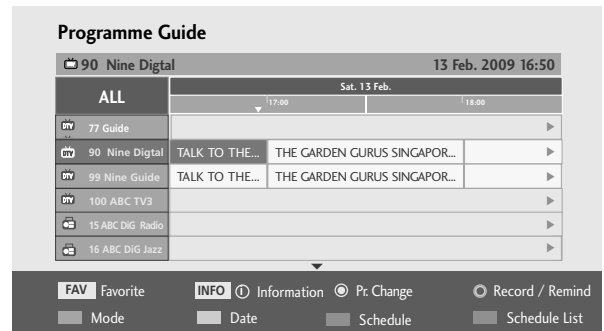
-  Change EPG mode.
-  Move to schedule option popup.
-  Switch the Schedule list On or off.
-  Change Programme (Go to this Programme).
-  Change NOW&NEXT Mode.
-  Set Record/Remind.
-  Select the Broadcast Programme.







-  Page Up/Down.
-  Switch off EPG.
-  The detail information on or off.
-  Change the favourite Programme mode.

## Button Function in 8Day Guide Mode




-  Change EPG mode.
-  Enter Date setting mode.
-  Move to schedule option popup.
-  Switch the Schedule list On or off.
-  Change Programme (Go to this Programme).
-  Select a Programme.
-  Select the Broadcast Programme.
-  Page Up/Down.

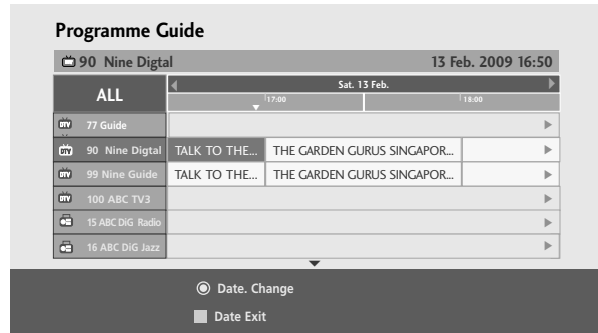


-  Switch off EPG.
-  The detail information on or off.
-  Change the favourite Programme mode.
-  Set Record/Remind.







## Button Function in Date Change Mode

-  Switch off Date setting mode.
-  Select a date and change to the selected date.
-  Switch off EPG.





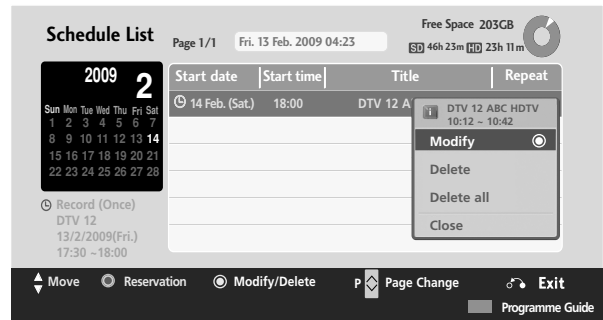
## Button Function in Detailed Information Menu

-  Move to schedule option popup.
-  Text Up/Down.
-  Switch off EPG.
-  The detail information on or off.



## Button Function in Schedule List Mode

-  Change to Guide mode.
-  Select Schedule list.



## TIME MACHINE (PAUSE & REPLAY OF LIVE TV)









This function allows the unit to automatically record live TV and make it available for viewing at any time.

With the Time Machine turned on, you may pause and rewind normal TV viewing at any time without missing any of the live broadcast.

(Time Machine and Recording functions may not work if the signal strength is weak.)

### Time Machine Mode



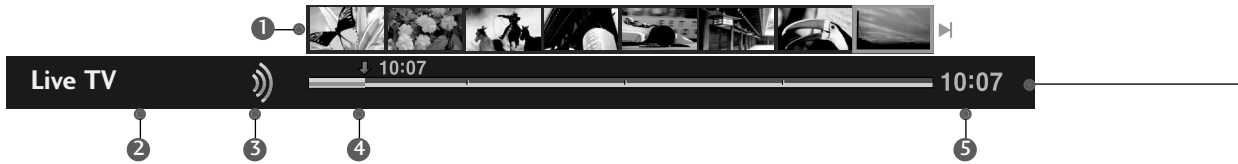
- 1   Select **TV SETUP**.
- 2   Select **TIME MACHINE**.
- 3   Select **Time Machine Mode**.
- 4   Select **On** or **Off**.

- Press the **RETURN** button to return to normal TV viewing.

#### ! NOTE

- ▶ Timeshift does not support the audio only programme, but recording is possible.
- ▶ Time Machine Mode is available in TV, AV1, AV2 mode.

## Time Machine Progress



- 1 After selecting **Time Machine Mode On**, press the **OK** button.
  - As soon as Time Machine starts, a progress bar indicating the current recording status is displayed in the bottom of the screen.
  - Press the **OK** button to display the 'Progress Bar' or press the **RETURN** button to hide the 'Progress Bar'.
  - This function is preserved even change a Programme on progressing the Time Machine.
  
- 2 When finished enter the **Time Machine Mode** menu and then turn **Time Machine Mode Off**.

### The 'Progress Bar'?

This function indicates what Time Machine reviewing is possible, a current on-screen and live broadcasting position.

- 1 Preview
- 2 Current Status while using the Time Machine
- 3 Current operating function while using the Time Machine



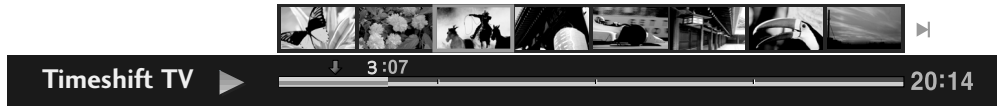
- 4 Current location and progress time in playback
- 5 Total progress time of the Time Machine

### ! NOTE

- ▶ In order to save hard-disk space, nothing is saved when there is no signal.
- ▶ The total storage space of the hard-disk is 250 GB. 20 GB is reserved for Time Machine.
- ▶ Time Machine can be used for maximum of 2 hours.
- ▶ When turning power on, it may take up to a maximum of 3 minutes to initialize the HDD.
- ▶ The Time Machine function will not initiate for a copy-protected Programme.
- ▶ Because an analog broadcast is converted to a digital signal, video that contains rapid movement may show "cross stripes". This happens when the analog signal is compressed and then restored in the digital signal. The unit will attempt to reduce this excessive picture interference.
- ▶ Maximum recording file size is up to 26GB(5Hr).
- ▶ Instant recording time is set to 3 hours and supported maximum time is up to 5 hours.
- ▶ Recording or playing the recorded Programme may not initiate for a copy-protected Programme.
- ▶ Time Machine is not supported in the audio only channel, but recording is possible.





## Playback during the Time Machine

During the Time Machine play, the following options are available.



## Use of remote control

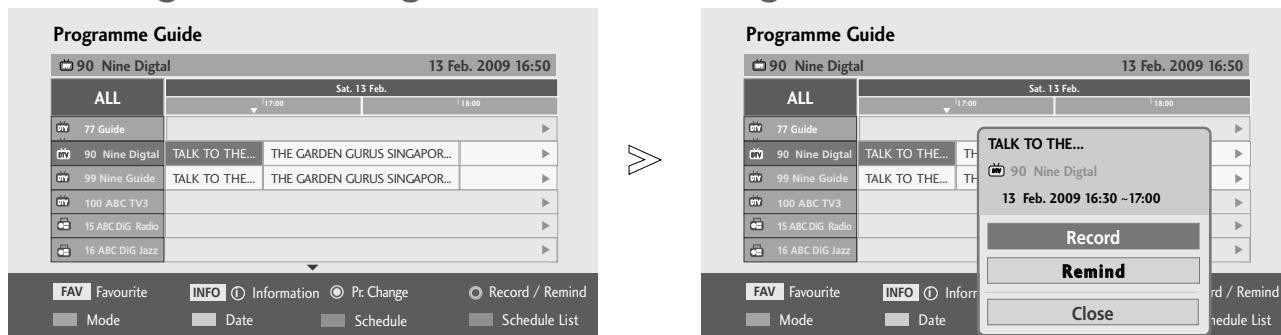
You can playback the temporarily saved part in various methods during the Time Machine.

|   |  |
|---|--|
|   | <p>During playback, repeatedly, press the <b>REW(◀◀)</b> or <b>FF(▶▶)</b> button to speed up.</p> <ul style="list-style-type: none"> <li>■ Every time you press the button, the search speed will increase by stage (up to 5 stages).</li> </ul>   |
|  | <p>During playback, press the <b>Pause(II)</b> button.</p> <ul style="list-style-type: none"> <li>■ Pause screen is displayed.</li> <li>■ Every time you press the <b>Pause(II)</b> button from the pause screen, it will move screen by screen. (II▶)</li> <li>■ Press the <b>Pause(II)</b> button and then use the <b>FF(▶▶)</b> button for slow motion. (I▶)</li> </ul> |
|  | <p>When you move the cursor using the Time Machine (<b>&lt;</b>, <b>&gt;</b>) button during playback, and then press the <b>OK</b> button, the screen will directly play at the applicable screen where the cursor is located. (↻, ↻)</p>  |
|  | <p>To view the current live broadcast, press the <b>LIVE</b> button during playback.</p>   |

# RECORDING

Use this function when you cannot watch the desired programme due to being out.

## Recording or Reminding function in the Programme Guide



- 1 Display the **Programme Guide**.
- 2 Select desired programme.
- 3 Select **Record** or **Remind**.

■ You can also select **Record** or **Remind** by pressing the button repeatedly on the remote control.

Record  
⏻ (red) → 
 Remind  
⏻ (blue) → 
 Off

Record  
⏻ (red) → 
 Remind  
⏻ (blue) → 
 Off → 
 Record  
⏻ (red)

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

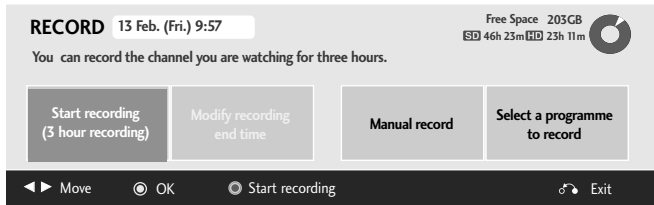
DVR

### ! NOTE


- ▶ If you turn off the AC power control switch (or ⏻/⏻ (power) button) during the recording, the programme being recorded may not be saved. Therefore it is good to press the Stop (■) button and check the reserved/recorded list, and then turn off the power.
- ▶ Recording cannot be reserved for a period less than 10 seconds.
- ▶ Because the title and time of the programme for Record/Remind is based on the information transmitted from the broadcasting station, they may be different than the actual ones depending on the situation of the broadcasting station.
- ▶ When it is time for the reserved recording to start and the power of the TV is turned off, the TV will turn on the power of the part required for the recording and proceed to the reservation.
- ▶ When it is time for the reserved recording to start and the Immediate recording is in progress, the recording of the programme currently being recorded will be stopped and saved, and then proceed to the reserved recording.
- ▶ Broadcast materials are protected by copyright and that recording and playback of certain material would only be permissible by permission of the copyright owner. Audio and video recordings you make using this recorder are for your personal use only. You may not sell, lend or rent them to other people.
- ▶ If the TV is unplugged once or turn off with the AC power control switch (or ⏻/⏻ (power) button) on the TV, the reserved recording will not work.

## Start/Stop record

You can record the channel you are watching for three hours.








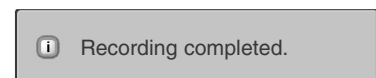
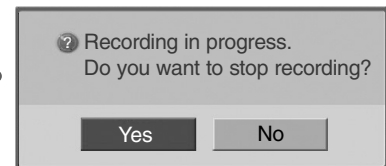
1 When watching the programme, Select it you wish to record.

2  Display the recording setting.  
 ■ You can also select this setting in the **RECORD** menu.

3  or  Start the recording.

■ During recording,  is displayed.  
 Recording will be set up to 3 hours.

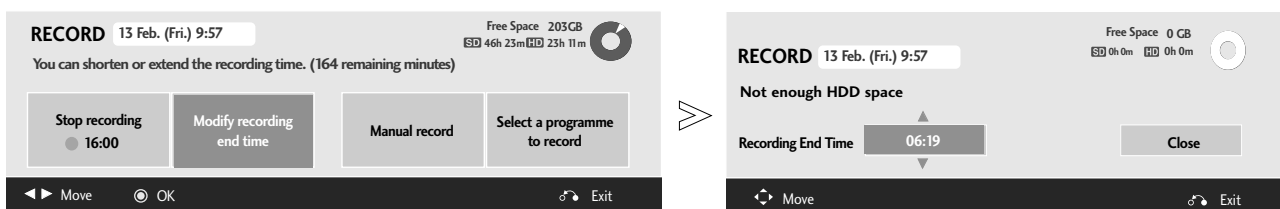
4     Select **Yes** to stop the recording.  
 ■ You can also select **Stop recording** using the  button .

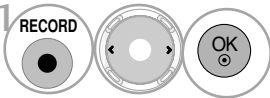

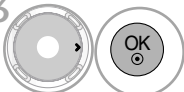


• Press the **RETURN** button to return to normal TV viewing.

## Modify recording end time

You can shorten or extend the recording time.



-  During recording ,  
Select the **Modify recording end time**.
-  Set the Recording End Time.
-  Select the **Close**.

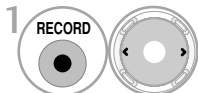
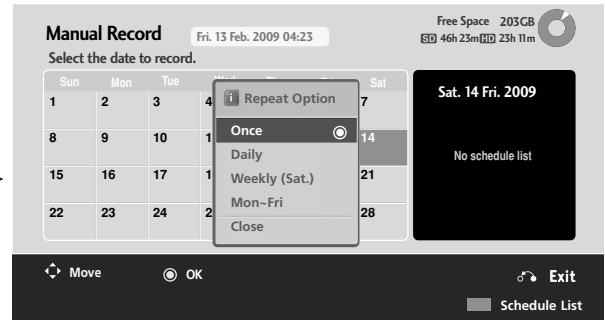
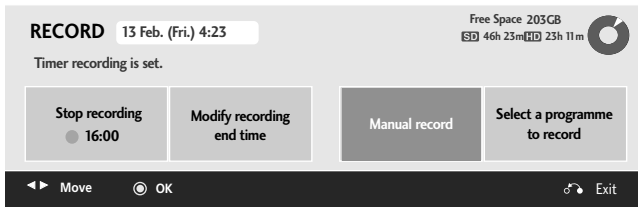
- Press the **MENU** button to return to normal TV viewing.
- Press the **RETURN** button to move to the previous menu screen.

### ! NOTE

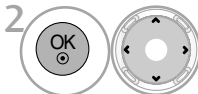
- ▶ When recording, if the available storage space is not sufficient, the recording will automatically Stop.
- ▶ Recordings of less than 10 seconds will not be saved.
- ▶ To save disk space while recording broadcasts, no data will be saved if there is no signal.
- ▶ The recording function will not initiate for a copy-protected programme.
- ▶ The displayed time may differ slightly from the actual time such as no signal.

## Manual record

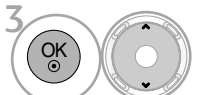
This function is easy to register to reserved recording. Timer recording is set.



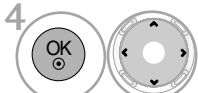
1 Select the **Manual record**.



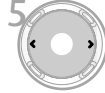
2 Select **Date**.



3 Select the repeat option.



4 Set the desired **Start Time, End Time, Input and Channel**.



5 Select the **Complete**.



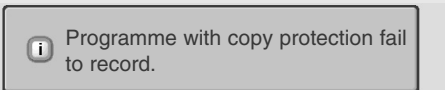
6 Display the Schedule List.



7 Return to TV viewing.

### NOTE

- ▶ Timeshift recording is not possible with copy-protected programmes.



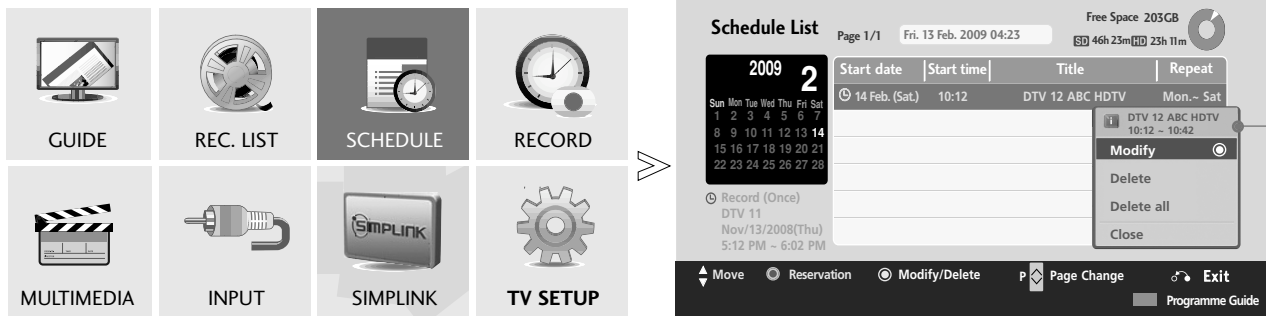
- ▶ When a poor quality external source is recorded (for example old VHS tape) the quality of the recording will not be optimal.
- ▶ Programmes are stored separately according to the colour system used. e.g. PAL/NTSC.
- ▶ Manual Recording available time is maximum 3 hours and minimum 2 minutes.
- ▶ When broadcasting station send the wrong time information, reserved recording may be failed.
- ▶ When reserved recording started while watching DTV, you cannot change to the ATV programme.



# SCHEDULE LIST









This function is used to show scheduled recordings.

You can store up to 30 programmes.



When you select a desired item, this PopUp menu is displayed.

- ▶ **Modify:** Edit the contents of **Start date/Start time/End time/Title/Repeat**.  
You must press the **RETURN** button to save the edited contents.
- ▶ **Delete:** Delete the selected item in the list.
- ▶ **Delete all:** Delete all items in the list.
- ▶ **Close:** Close the pop-up menu.

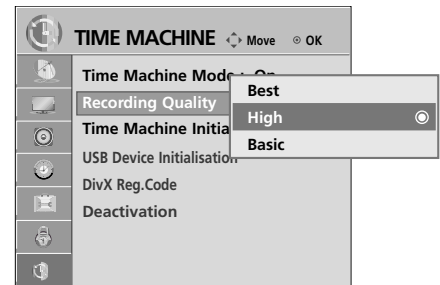
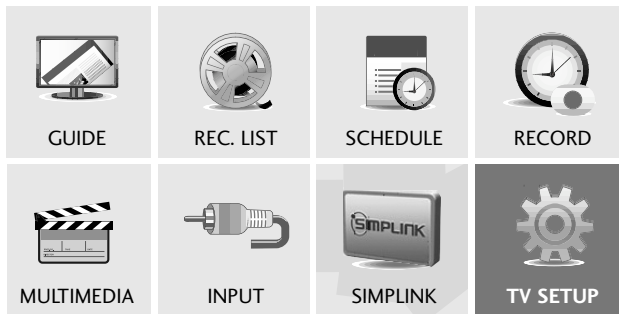
- 1   Select **SCHEDULE**.
- 2   Select a desired item in the schedule list.
- 3  Show the Popup menu.
- 4   Select the desired Popup menu.
- 5  Return to TV viewing.









## RECORDING QUALITY

This function is not available while a recording is taking place.

The higher the quality of the recorded programme, the shorter the time you can record on the hard disk.

The recording quality only applies to the reserved recording for the analog broadcast and external input signal, and the recording quality for Time Machine or Immediate recording is set to High quality.

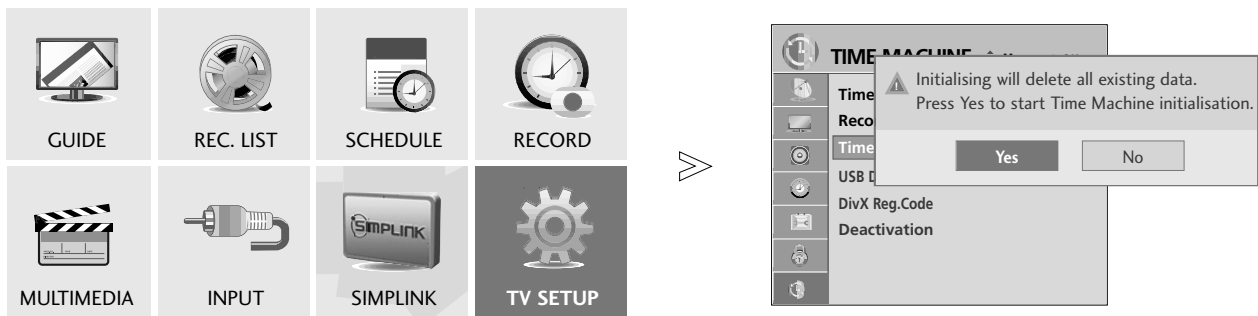


- 1   Select **TV SETUP**.
- 2   Select **TIME MACHINE**.
- 3   Select **Recording Quality**.
- 4   Select **Best, High** or **Basic**.









- Press the **MENU** button to return to normal TV viewing.
- Press the **RETURN** button to move to the previous menu screen.

# TIME MACHINE INITIALISATION

This function is to reset the Recorded TV, Photo list, Music list and Movie List in HDD.



DVR

- 1   Select **TV SETUP**.
- 2   Select **TIME MACHINE**.
- 3   Select **Time Machine Initialisation**.
- 4   Select **Yes**.  
Start the Time Machine Initialization.

- Press the **MENU** button to return to normal TV viewing.
- Press the **RETURN** button to move to the previous menu screen.

## ! NOTE

- ▶ When timeshift is off, Time Machine Initialisation and USB Device Initialisation will be disabled.

## TO USE THE INTERNAL HARD DISK

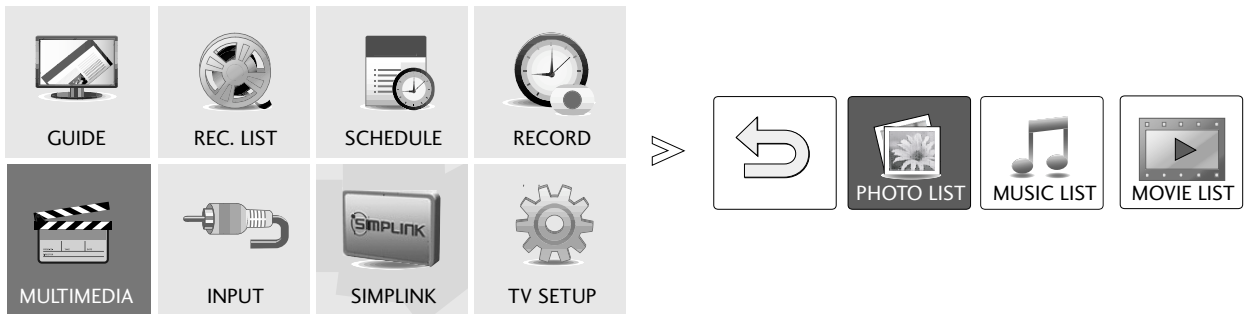
You can play the photo, music and movie saved on the internal hard drive.

### Recorded TV



1 Select **REC.LIST**.

### Photo/Music/Movie List



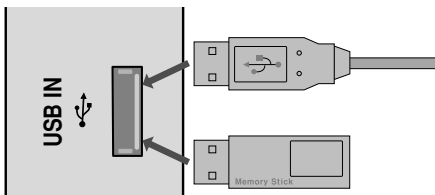
1 Select **MULTIMEDIA**.

# USB

## Entry Modes

When you connect a USB device, this screen is displayed automatically.  
In USB device, you can not add a new folder or delete the existing folder.

- 1 Connect the USB device to the **USB IN** jacks on the side of TV.



- 2 Select **USB PHOTO LIST**, **USB MUSIC LIST** or **USB MOVIE LIST**.



- 3

### When removing the USB device

Select the **USB Device** menu before removing the USB device.

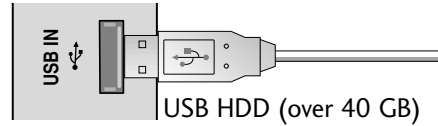
- 1 **Q. MENU** Select **USB Device**.
- 2 **OK** Select **Eject**.

### 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.
- ▶ A USB storage device using an automatic recognition program may not be recognized.
- ▶ A USB storage device which uses its own driver may not be recognized.
- ▶ In case of a card reader, up to four memory cards are concurrently recognizable.
- ▶ The recognition speed of a USB storage device may depend on each device.
- ▶ Please do not unplug the power cord, turn off with the AC power control switch (or  $\phi$ /I (power) button) on the TV or with remote control 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.
- ▶ Only use a USB storage device which has normal music files, image files or movie files.
- ▶ Please use only a USB storage device which was formatted as a FAT16, FAT32 or NTFS file system provided with the Windows operating system. In case of a storage device formatted as a different utility program which is not supported by Windows, it may not be recognized.
- ▶ Please connect power to a USB storage device which requires an external power supply. If not, the device may not be recognized.
- ▶ 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 operate properly.
- ▶ The TV will display up to 128 characters of a files name.
- ▶ Please backup important files because data on USB device may be damaged. Data management is consumer's responsibility and as a result, the manufacturer does not cover data damage.
- ▶ The recommended capacity is 1TB or less for a USB HDD and 40GB or less for USB memory. Any device with more than the recommended capacity may not work properly.
- ▶ Playing a movie via a USB connection that doesn't support high speed may not work properly.
- ▶ USB storage devices below USB 2.0 are supported as well. But they may not work properly in the movie list.
- ▶ If the USB HDD does not have an external power source, the USB device may not be detected. So be sure to connect the external power source. Please use a power adaptor for an external power source. We do not guarantee an USB cable for an external power source.
- ▶ In case of USB HDD Having bad sector, Time Machine may not work.
- ▶ Please use the Remove USB device menu of quick menu to detach safely a USB device from the TV.
- ▶ Before removing the USB device, please use the Remove USB Device in Quick Menu to prevent software, data loss or damage to USB HDD.
- ▶ Please maintain the stability of external HDD by using the HDD benchmarking tool in order to guarantee smooth action of HDD.
- ▶ The HDD benchmarking tools is checking the performance of HDD that is read/write rate, access time, stability. It will be able to search at website and use easily it after download the HDD benchmarking tool.

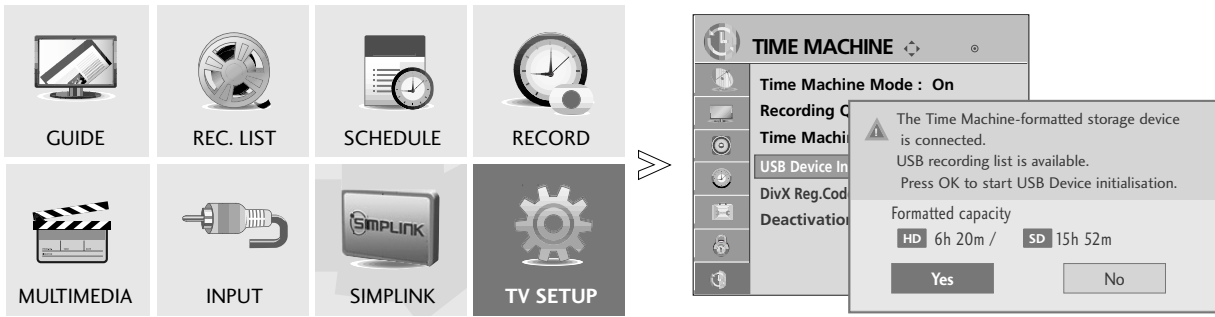
# USB Recorded List

1 Connect the USB device to the **USB IN** jacks on the side of TV.



2 To use the USB device (over 40 GB) for USB Backup, execute **USB Device Initialisation**.

- It initializes the HDD connected to the USB as disk mode for backup.
- It is activated only when the USB HDD available for backup is connected.
- When **USB Device Initialisation** is executed, all the data stored in the USB device is deleted.
- While performing **USB Device Initialisation**, do not remove the USB device. It may cause error on the TV and the storage device.



- 1 Select **TV SETUP**.
- 2 Select **TIME MACHINE**.
- 3 Select **USB Device Initialisation**.
- 4 Select **Yes**.

- When **Yes** is selected, a popup notice appears containing a message to initialize the connected USB HDD.
- When initialization is complete, a popup notice of completion is displayed and the connected USB HDD is available for backup.

### ! NOTE

- ▶ Depending on the capacity of the USB device, the initialization time may vary.
- ▶ The initialized USB device only operates in the **USB Recorded List**.
- ▶ The initialized USB device is not recognized by the PC.
- ▶ When a USB device of less than 40 GB is connected, the USB Device Initialisation is not activated.
- ▶ Supported maximum external HDD size for back-up is up to 1 TB.

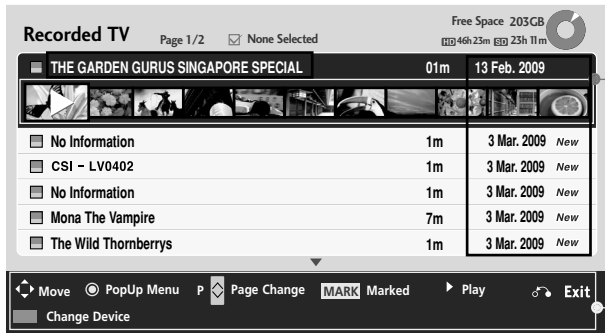
- 3 Select **REC.LIST**.


- 4 Select USB device.

## RECORDED LIST


You can view the recorded programme list at a glance.


The recorded programme stored in the internal HDD or the USB device can be played.





 Move to the desired scene and play the recorded programme.

[Use of remote control]


 Show the popup menu.


 Move to last item in next page. (First, it moves to last item in current page.)

 Move to first item in previous page. (First, it moves to first item in current page.)

 Check and un-check recorded programmes.

1    Select **REC.LIST**.

2  Select internal HDD or USB device.

3  Select a recorded programme.

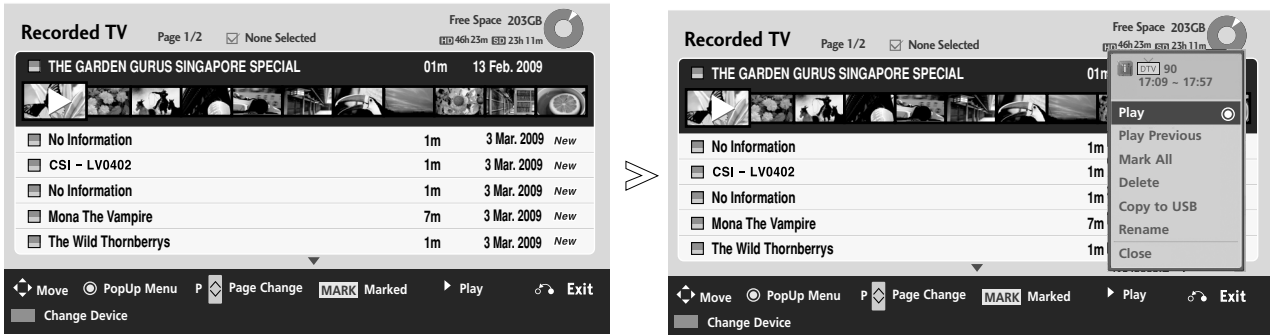
• Press the **RETURN** button to return to normal TV viewing.

### NOTE

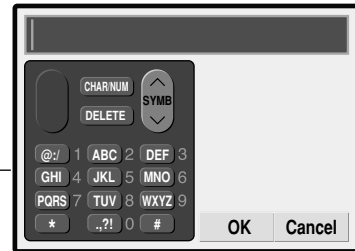
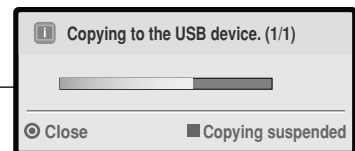
- ▶ If there is a bad sector in the disk, part or all of the items of the **Recording list** can be deleted.
- ▶ Maximum number of recordings within the Recording list is 200. When the number of recordings in the Recording list is 200, you cannot record any more.
- ▶ When the full duration of the recording is played back, the screen will stay in the stopped condition for 10 seconds and then automatically end the playback.
- ▶ The recording can be played back even during the recording/reserved recording.
- ▶ During the playback of the recording, the hard disk can generate a certain level of noise. This noise is irrelevant from the performance and reliability of the product and is normal for a hard drive to have a certain level of noise.
- ▶ The recording time will be different according to the recording quality.
  - HD(High Definition) : Max. 23 hours
  - SD(Standard Definition) : Max. 46 hours when the recording quality is the best, and when it is at the High state. Max. 57 hours. When it is the Basic, Max. 77 hours



## Recorded programme Selection and Popup Menu



- ▶ **Play** : Playback of selected recorded programme.
- ▶ **Play Previous** : Resumes playing at the previously stopped point.
- ▶ **Mark All** : Mark all recorded programmes in the list.
- ▶ **Unmark All** : Change marked recorded programmes to unmarked recorded programmes.
- ▶ **Delete** : Delete the selected recorded programmes.
- ▶ **Copy to USB** (Only in the internal HDD) : Copies the recorded programme in the internal HDD to the USB device. It is activated only when a USB HDD available for backup is connected.
- ▶ **Rename** : Edit recorded programme title.
- ▶ **Close** : Close the pop-up menu.




- 1 Select internal HDD or USB device.
- 2 Select a desired recorded programme.
- 3 Show the Popup menu.
- 4 Select the desired Popup menu.


- Press the **RETURN** button to return to normal TV viewing.

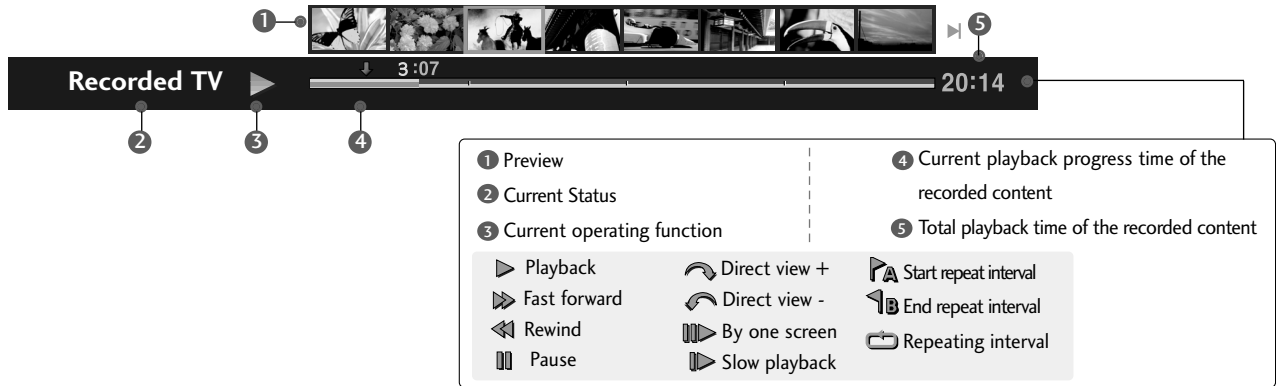
## Playing Recorded programmes

You can play a selected programme from the recorded list.

### 1 Play a recorded programme.







When you press the  button during the playback, the information of the recorded programme you are currently watching will be displayed at the top of the screen and a progress bar showing the current status of the playback at the bottom of the screen. (Playback status is displayed as follows.)

- To remove the progress bar, press the  button.



## Use of remote control

You can adjust various method during the recorded programme play.

|   |   |
|---|---|
|  | <p>During playback, repeatedly, press the <b>REW</b>(◀◀) or <b>FF</b>(▶▶) button to speed up.</p> <ul style="list-style-type: none"> <li>■ Every time you press the button, the search speed will increase by stage. (up to 5 stages)</li> </ul>  |
|  | <p>During playback, press the <b>Pause</b>(II) button.</p> <ul style="list-style-type: none"> <li>■ Pause screen is displayed.</li> <li>■ Every time you press the <b>Pause</b>(II) button from the pause screen, it will move screen by screen. (II▶)</li> <li>■ Press the <b>Pause</b>(II) button and then use the <b>FF</b>(▶▶) button for slow motion. (II▶)</li> <li>■ If you don't press any button 10 minutes after the pause, it will return to the playback.</li> </ul>  |
|  | <p>When you move the cursor using the Time Machine (◀, ▶) button during playback, and then press the <b>OK</b> button, the screen will directly play at the applicable screen where the cursor is located. (↶, ↷)</p>   |
|  | <p>When you press the <b>LIVE</b> button, the playback will end and you can watch the TV.</p>   |
|  | <p>* This function is available only the playback of a recorded programme. Press the <b>REPEAT</b> button at the starting point where you want to set the Interval repeat and press it again at the ending point. To cancel the playback for the interval repeat, press the <b>REPEAT</b> button one more time.</p> <ul style="list-style-type: none"> <li>■ The start of the Interval repeat is displayed as A<sup>1</sup> and end of the Interval repeat as B<sup>2</sup> in the recording progress bar at the bottom of the screen. Start and end of the Interval repeat can be set both in forward and reverse direction.</li> <li>■ Interval shorter than 10 seconds cannot be set.</li> <li>■ When the Interval repeat is cancelled, it will return to normal playback from the end point of the interval.</li> </ul> |
|  | <p>To return to normal playback, press the <b>PLAY</b>(▶) button.</p>   |

**! NOTE**

▶ The screen saver feature runs when the moving, deleting or copying operation of a photo, music or movie file continues for a long time.

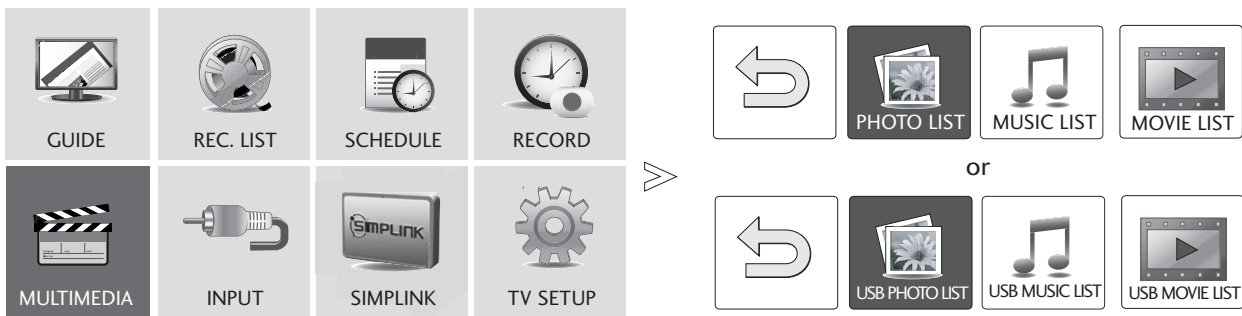
# PHOTO LIST

You can view .JPG files from the internal HDD or USB devices.  
The On Screen Display on your model may be slightly different.

**PHOTO(\*.JPEG) supporting file**

Baseline: 64 x 64 ~ 15360 x 8640

- You can play JPEG files only.
- This TV will not be able to decode some JPG images saved using the progressive option.
- Non-supported files are displayed in the form of bitmap.
- When you are watching the photo by the **Photo List** function, you can not change the picture mode.



DVR

1 Select **MULTIMEDIA**.

2 Select **PHOTO LIST** or **USB PHOTO LIST**.

## Screen Components

1 Moves to upper level folder

2 Preview: Display the thumbnail/folder name of the photo in the selected folder

3 Current page/Total pages

4 Total number of marked photos

5 Available HDD space (Only in the internal HDD)

6 Corresponding buttons on the remote control

**PHOTO LIST**  
Page 1/1  None selected  
HDD storage device Free Space 9GB

My Photo Photo1  
2Folders, 4Files

Photo1

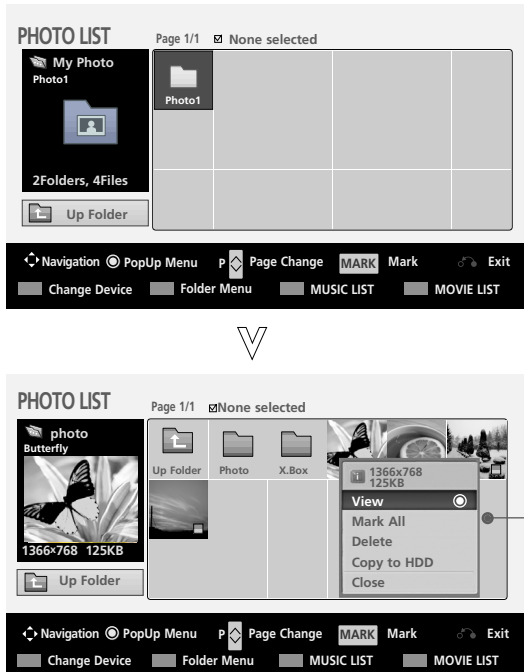
Up Folder

Navigation PopUp Menu P Page Change MARK Mark Exit  
Change Device Folder Menu MUSIC LIST MOVIE LIST

(Only in the internal HDD)


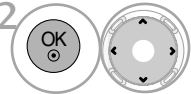

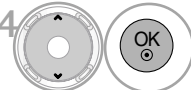
3 Select internal HDD or USB device.

## Photo Selection and PopUp Menu



When you select a file (not folder), this PopUp menu is displayed.

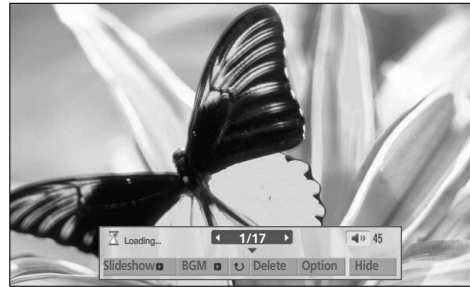
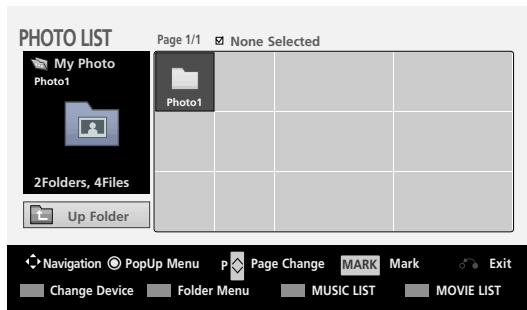
- ▶ **View:** Display the selected item.
- ▶ **Mark All:** Mark all photos on the screen.
- ▶ **Unmark All:** Deselect all marked photos.
- ▶ **Move**(Only in the internal HDD): Move to the desired folder in the internal HDD.
- ▶ **Delete:** Delete the selected photo item (except NTFS file system).
- ▶ **Delete Marked :** Delete the marked photo item(except NTFS file system)
- ▶ **Copy to HDD**(Only in the USB device): Copy the selected photo to the internal HDD.
- ▶ **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.



## Full Screen Menu

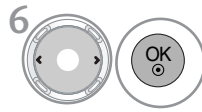
You can change the Photo List view so that it fills the screen. More operations are available in full screen mode.



The aspect ratio of a photo may change the size of the photo displayed on the screen in full size.

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

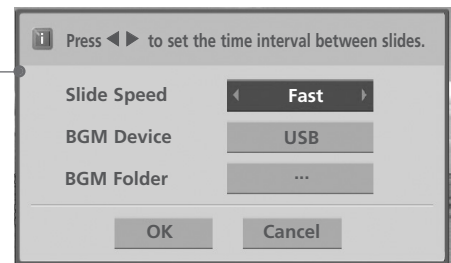
- Use the P   button to navigation in the photo page.



6 Select the **Slideshow**, **BGM**, **Rotate**, **Delete**, **Option**, or **Hide**.

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

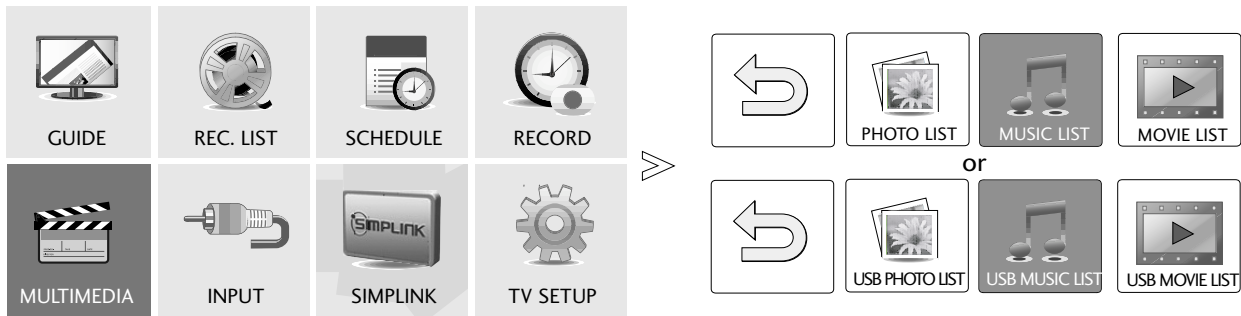
- ▶ **Slideshow:** Selected photos are displayed during the slide show. If no photo is selected, all photos in the current folder are displayed during slide show.
  - Set the time interval of the slide show in **Option**.
- ▶ **BGM:** Listen to music while viewing photos in full size.
  - Set the BGM device and folder in **Option**.
- ▶ **Rotate:** Rotate photos.
  - Rotates the photo 90°, 180°, 270°, 360° clockwise.
- ▶ **Delete:** Delete a photo.
- ▶ **Option:** Set values for **Slide Speed**, **BGM Device** and **BGM Folder**.
  - Use < > button and **OK** button to set values. Then go to **OK** and press **OK** to save the settings.
  - You cannot change **BGM 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.



# MUSIC LIST

You can use the Music List menu to play MP3 files form.  
 This TV cannot play back copy-protected files.  
 The On Screen Display on your model may be slightly different.

|   |   |
|---|---|
| <b>Supported music file: *.MP3</b><br>Bit rate range 40Kbps ~ 320Kbps<br>• Sampling rate (Sampling Frequency) | MPEG1 : 32, 44.1, 48KHz<br>MPEG2 : 16, 24, 22.05KHz |
|---|---|



DVR

- Select **MULTIMEDIA**.
- Select **MUSIC LIST** or **USB MUSIC LIST**.

## Screen Components

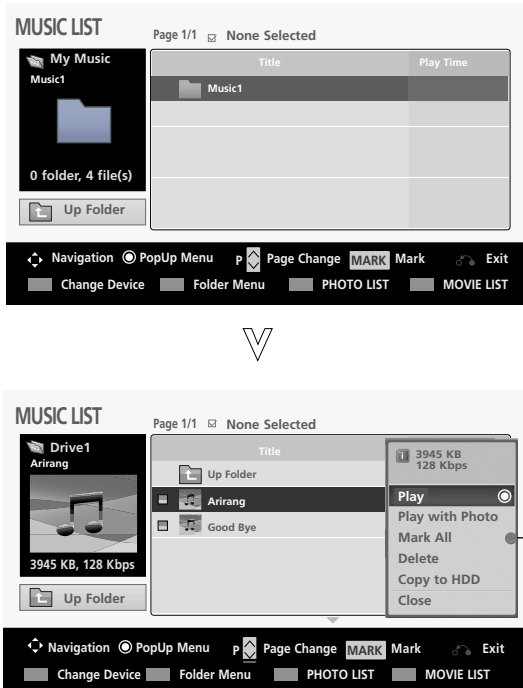
|   |  |
|---|--|
| <ol style="list-style-type: none"> <li>Moves to upper level folder</li> <li>Preview: If any album jacket for the file exists, this jacket is displayed.</li> <li>Current page/Total pages</li> <li>Total number of marked music</li> <li>Available HDD space (Only in the internal HDD)</li> <li>Corresponding buttons on the remote control</li> </ol> |  |
|---|--|

(Only in the internal HDD)








- Select internal HDD or USB device.

## Music Selection and Popup Menu

Up to 6 music titles are listed per page.



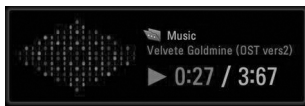
- ▶ **Play** (During stop): Play the selected music.  
Once a song finishes playing, the next selected one will be played. When there is no selected music to play, the next one in the current folder will be played. If you go to a different folder and press the **OK** button, the current music in playback will stop.
- ▶ **Stop Play** (During playback): Stop the playing music.
- ▶ **Play with Photo**: Start playing the selected music and then move to the Photo List.
- ▶ **Mark All**: Mark all music in the folder.
- ▶ **Unmark All**: Deselect all marked music.
- ▶ **Move**(Only in the internal HDD): Move to the desired folder in the internal HDD.
- ▶ **Delete**: Delete the selected music.
- ▶ **Delete Marked** : Delete the marked music item(except NTFS file system)
- ▶ **Copy to HDD**(Only in the USB device): Copies the selected music to the internal HDD.
- ▶ **Close**: Close the pop-up menu.

- 1  Select the target folder or drive.
- 2   Select the desired music.
- 3  Show the Popup menu.
- 4   Select the desired Popup menu.
- 5  Return to TV viewing



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



- The play information box (as shown below) will automatically move across the screen when there is no user input to prevent a fixed image remaining on the screen for an extended period of time.



### ! NOTE

- ▶ When music is playing,  is displayed in front of the music play time.
- ▶ A damaged or corrupted music file that does not play displays 00:00 as the play time.
- ▶ Music files with copy-protection will not play.
- ▶ Press **OK**, , or **RETURN** button to stop the screen saver.
- ▶ This TV can not play music files less than 16 Kbytes.

## MOVIE LIST

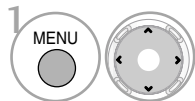
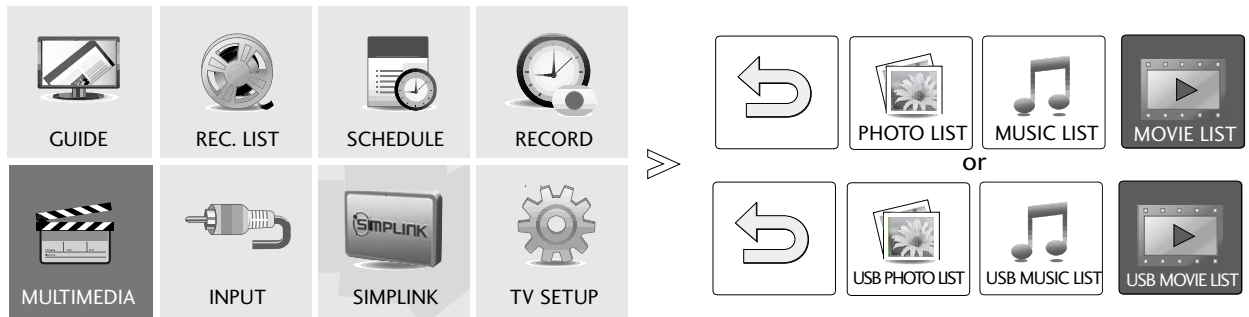
The movie list is activated once HDD or USB devices are detected.

It is used when playing movie files on TV.

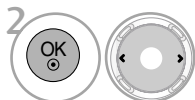
Displays the movies in the HDD or USB devices and supports play.

Allows playback of all movies in the folder and user desired files.

It is a movie list that displays folder information and Divx file.



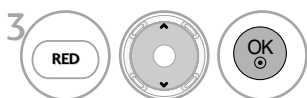
Select **MULTIMEDIA**.



Select **MOVIE LIST** or **USB MOVIE LIST**.

### Screen Components

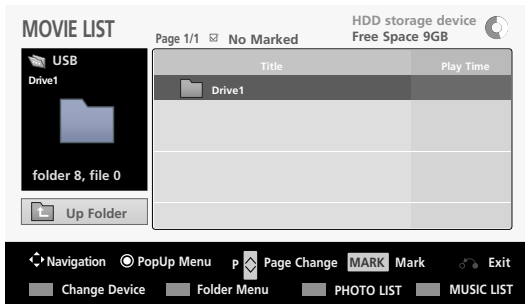
- 1 Moves to upper level folder
- 2 Preview: Selected movies are played at X4 speed. And sound is mute.
- 3 Current page/Total pages
- 4 Total number of marked movies
- 5 Available HDD space (Only in the internal HDD)
- 6 Corresponding buttons on the remote control









Select internal HDD or USB device.

## Movie Selection and Popup Menu

Up to 6 movie titles are listed per page.



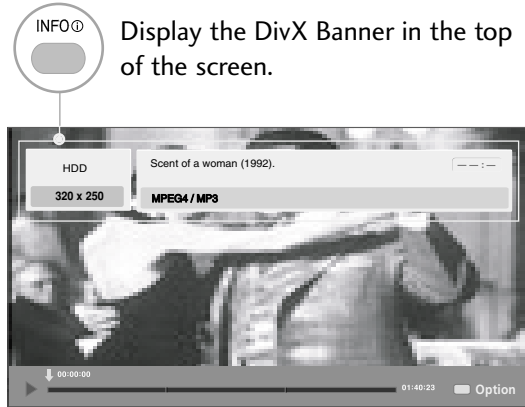
- ▶ **Play** (During stop): Play the selected movie.  
Once a movie finishes playing, the next selected one will be played. When there are no selected movies to play, the next one in the current folder and will be not played. While playing the movie, activating the movie list will stop playing the movie. If you go to a different folder and press the **OK** button, the current movie in playback will stop.
- ▶ **Mark All**: Mark all movies in the folder.
- ▶ **Unmark All**: Deselect all marked movie.
- ▶ **Move**(Only in the internal HDD): Move to the desired folder in the internal HDD.
- ▶ **Delete**: Delete the selected movie.
- ▶ **Copy to HDD**(Only in the USB device): Copy the selected movie to the internal HDD.
- ▶ **Close**: Close the pop-up menu.






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

- Use the **P** ^ v button to navigate in the movie page.
- Use **MARK** button to mark or unmark a movie file. When one or more movie files are marked, the marked movie files will be played in sequence.





## Playing the Movie

You can adjust various method during the movie play.




- 1  Select the target folder or drive.
- 2   Select the desired movies.
- 3  Show the Popup menu.
- 4  Select **Play**.

### [Use of remote control]

- |   |   |
|---|---|
|  | Press the <b>REW</b> (◀◀) button to rewind.<br>Press the <b>FF</b> (▶▶) button to forward fast. |
|  | Press the <b>Pause</b> (II) button to pause the screen.   |
|  | Press the <b>Stop</b> (■) button to stop.   |
|  | Press the <b>Pause</b> (II) button and then use the <b>FF</b> (▶▶) button for slow motion.      |

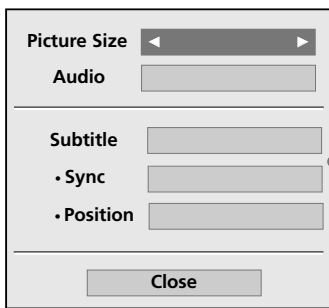
### ! NOTE

- ▶ Some special files are not supported in subtitles.

- 5  Display the current movie status progress bar in the bottom of the screen.

## Option Menu Selection

During the movie play, the following options are available.



▶ **Picture Size:** Select the Full screen or Original size.

▶ **Audio:** Select the language.

But, the file with only one audio can not be selected.

▶ **Subtitle:** The subtitle can be turned on or off.

If there are two or more subtitles, you can select one of them.

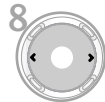
| Subtitle Language | Support Language                 |
|-------------------|----------------------------------|
| Latin1            | English, Spanish, French, German |

• **Sync:** Adjusts the time synchronisation of the subtitle from -10 secs ~ +10 secs by steps of 0.5 secs during movie play.

• **Position:** Changes the position of the subtitle either up or down during movie play. Select position from -2 secs ~ +2 secs by steps of 1 secs during movie play.



6 Display the **Option** menu.



8 Make appropriate adjustments.



7 Select the desired movie option.



9 Select **Close**.

DVR

### Precautions when playing the DivX

Subtitle format : \*.smi/ \*.srt/ \*.sub(MicroDVD, SubViewer 1.0/ 2.0)/ \*.ass/  
\*.ssa/\*.txt(TMPlayer), \*.psb(PowerDivx)

Maximum supported DivX bitrate : 20Mbps(Mega bit per second)

Audio supported bit rate : within 32~320 kbps(MP3)

Maximum supported display resolution : 1920 x1080

- ▶ Specific subtitles created by the user may not be operated normally.
- ▶ Some special characters are not supported in subtitles.
- ▶ HTML tags are not supported in subtitles.
- ▶ Subtitles in languages other than the supported languages are not available.
- ▶ **Time information in an external subtitle file should be arranged in ascending order to be played.**
- ▶ Damaged movie files may not be played, and certain functions could be limited during the playback.
- ▶ Playback for movie file exceeding 30GB (Giga Byte) is not supported.
- ▶ If the video and audio structure of recorded file is not interleaved, either video or audio is outputted.
- ▶ H.264/ AVC codec is supported up to profile level 4.1.
- ▶ Files encoded with GMC(Global Motion Compensation) or quarter pel motion estimation may not be played.
- ▶ The video file and the subtitle file must be located in the same folder.
- ▶ The name of the video file and the subtitle file must be the same to view the subtitles normally.
- ▶ Even the supported codec may not be played depending on the encoded condition.
- ▶ Files had with not index may not be operated normally.
- ▶ Only the files saved in ASCII CODE is supported for the external subtitles of the movie.
- ▶ A subtitle of font , size and position may be not changed.
- ▶ Only 150 alphabets and 150 numbers are supported for each line of the subtitle.
- ▶ Subtitles are displayed up to 5 lines on the screen.
- ▶ An abnormal picture(still, fast) or an audio mute for a while may be occurred in case of change the audio language.
- ▶ Depend on the packet structure of video or audio files, it may support only audio or video.
- ▶ when some frame in a movie file have higher resolution than maximum supporting resolution, it may not guarantee smooth playback.
- ▶ It may not guarantee some playing movie files except for specified format .
- ▶ DTS Audio codec is not supported.
- ▶ Some file format which are \*.ts, \*.trp, \*.tp, \*.mpe, \*.mpeg, \*.mpe doesnot support trick mode except for ►►.
- ▶ Trick play except for ►► is not available when the movie file has not index information.
- ▶ Some movie files having special character may not playback.
- ▶ When you are watching the movie by **Movie List** function, you can adjust an image by **ENERGY SAVING** and **AV MODE** key on the remote control. User setup for each image mode does not operate.

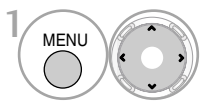
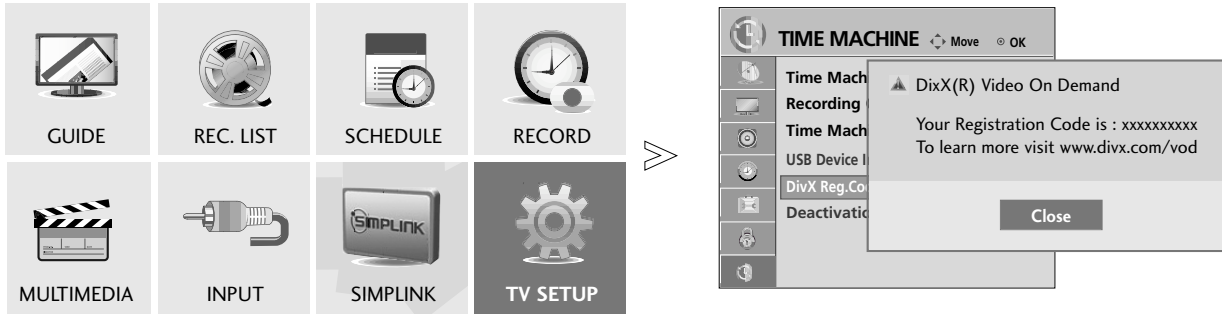
## Supported Movie File

| File Extensions       | A/V   | Codec   | Profile/Level Support   |
|-----------------------|---|---|---|
| .asf<br>.wmv<br>.wma  | Video   | VC-1 Advanced Profile                               | Advanced Profile@Level 3 (e.g. 720p60, 1080i60, 1080p30)<br>Only streams compliant to SMPTE 421M VC-1 standard are supported.                               |
|                       |   | VC-1 Simple and Main Profiles                       | Simple Profile@Medium Level (e.g. CIF, QVGA)<br>Main Profile@High Level (e.g. 1080p30)<br>Only streams compliant to SMPTE 421M VC-1 standard are supported. |
|                       | Audio   | WMA Standard  |   |
|                       |   | WMA 9 Professional                                  |   |
| .divx<br>.avi         | Video   | Divx3.11  | Advanced Simple Profile(720p/1080i)   |
|                       |   | Divx4   |   |
|                       |   | Divx5<br>Divx6                                      |   |
|                       | XViD  |   |   |
| Audio                 | MPEG-1 Layer I, II<br>MPEG-1 Layer III(MP3)<br>AC-3 |   |   |
| .mp4<br>.m4a<br>.m4v  | Video   | H.264 / AVC   | Main Profile@ Level 4.1<br>High Profile@ Level 4.1<br>(e.g. 720p60, 1080i60, 1080p30)   |
|                       |   | MPEG-4 Part 2                                       | Advanced Simple Profile (720p/1080i)  |
|                       | Audio   | AAC   | AAC-LC and AAC-HE   |
| .mkv                  | Video   | H.264 / AVC   | Main Profile@ Level 4.1<br>High Profile@ Level 4.1 (e.g. 720p60, 1080i60, 1080p30)  |
|                       | Audio   | AAC<br>AC-3   | AAC-LC and AAC-HE   |
| .ts<br>.trp<br>.tp    | Video   | H.264 / AVC   | Main Profile@ Level 4.1<br>High Profile@ Level 4.1 (e.g. 720p60, 1080i60, 1080p30)  |
|                       |   | MPEG-2  | Main Profile@High Level(e.g. 720p60, 1080i60)   |
|                       | Audio   | MPEG-1 Layer I, II<br>MPEG-1 Layer III(MP3)<br>AC-3 | AAC-LC and AAC-HE   |
|                       |   | AAC   |   |
| .vob                  | Video   | MPEG-1<br>MPEG-2                                    | Main Profile@High Level (e.g. 720p60, 1080i60)  |
|                       | Audio   | AC-3<br>LPCM<br>MPEG-1 Layer I, II                  |   |
| .mpg<br>.mpeg<br>.mpe | Video   | MPEG-1  | Only streams compliant configured properly for TS, PS or ES   |
|                       | Audio   | MPEG-1 Layer I, II                                  |   |

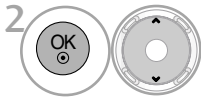
# DIVX REGISTRATION CODE

Confirm the DivX registration code number of the TV.

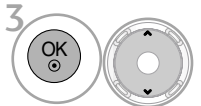
Using the registration number, movies can be rented or purchased at [www.divx.com/vod](http://www.divx.com/vod).



Select **TV SETUP**.



Select **TIME MACHINE**.



Select **DivX Reg.Code**.



- Press the **MENU** button to return to normal TV viewing.
- Press the **RETURN** button to move to the previous menu screen.

*"DivX Certified to play DivX video up to HD 1080p, including premium content"*



**ABOUT DIVX VIDEO:** DivX<sup>®</sup> is a digital video format created by DivX, Inc. This is an official DivX Certified device that plays DivX video. Visit [www.divx.com](http://www.divx.com) for more information and software tools to convert your files into DivX video.

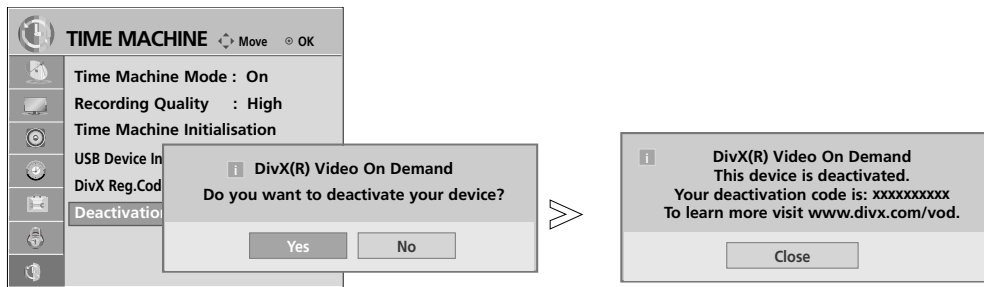
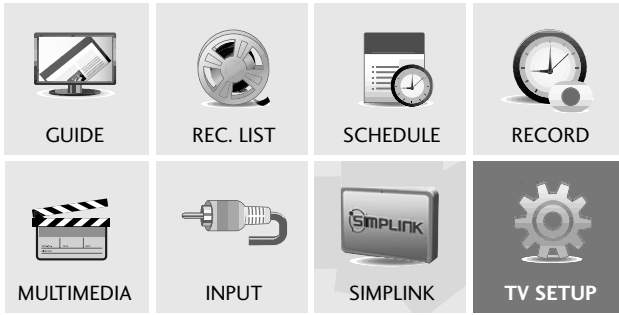
**ABOUT DIVX VIDEO-ON-DEMAND:** This DivX Certified<sup>®</sup> device must be registered in order to play DivX Video-on-Demand (VOD) content. To generate the registration code, locate the DivX VOD section in the device setup menu. Go to [vod.divx.com](http://vod.divx.com) with this code to complete the registration process and learn more about DivX VOD.










## ! NOTE

- ▶ With a DivX registration code from other TV, playback of rented or purchased DivX file is not allowed. (Only DivX files matched with the registration code of the purchased TV are playable.)
- ▶ The video or audio of a file converted based on a standard other than the DivX codec standard may be corrupted or unable to be played.

## DEACTIVATION

The purpose of deactivation is to allow deactivation of devices for users who have activated all the available devices through the web\_server and are blocked from activating more devices. DivX VOD allowed the consumer to activate up to 6 devices under one account, but to replace or deactivate any of those devices, the consumer had to contact DivX Support and request deletion. Now with this added feature, consumers will be able to deactivate the device themselves and hence better manage their DivX VOD devices.



- 1   Select **TV SETUP**.
- 2   Select **TIME MACHINE**.
- 3   Select **Deactivation**.
- 4   Select **Yes**.
- 5  Display **Deactivation**.

- Press the **MENU** button to return to normal TV viewing.
- Press the **RETURN** button to move to the previous menu screen.



# PICTURE CONTROL

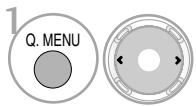
## PICTURE SIZE (ASPECT RATIO) CONTROL

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

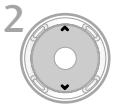
If a fixed image is displayed on the screen for a long time, that fixed image may become imprinted on the screen and remain visible.

You can adjust the enlarge proportion using  $\wedge$   $\vee$  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.

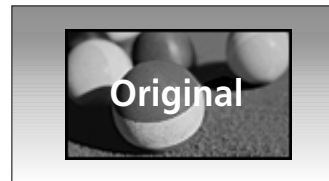
### • 16:9

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)



### • Original

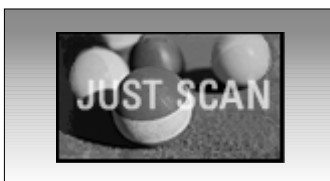
When your TV receives a wide screen signal it will automatically change to the picture format broadcast.



### • Just Scan

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

Note : If there are noise in original Picture, You can see the noise at the edge.



### • 4:3

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



# PICTURE CONTROL

- **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**

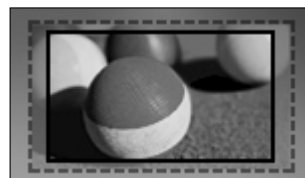
The following selection will allow you to view the picture without any alteration, while filling the entire screen. However, the top and bottom of the picture will be cropped.



- **Cinema Zoom**

Choose Cinema Zoom when you want to enlarge the picture in correct proportion.

Note: When enlarging or reducing the picture, the image may become distorted.



**! NOTE**

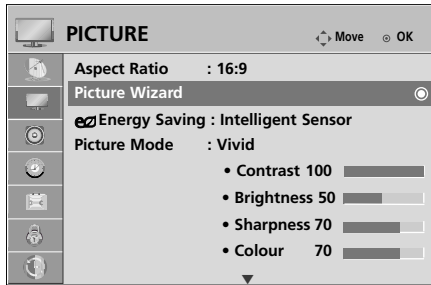
- ▶ You can only select **4:3**, **16:9 (Wide)**, **14:9**, **Zoom/Cinema Zoom** in Component mode.
- ▶ You can only select **4:3**, **Original**, **16:9 (Wide)**, **14:9**, **Zoom/Cinema Zoom** in HDMI mode.
- ▶ You can only select **4:3**, **16:9 (Wide)** in RGB/HDMI PC mode only.
- ▶ In DTV(over 576p)/HDMI/Component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

# PICTURE WIZARD

This feature lets you adjust the picture quality of the original image.

Use this to calibrate the screen quality by adjusting the Black and White Level etc. You can calibrate the screen quality by easily following each step.

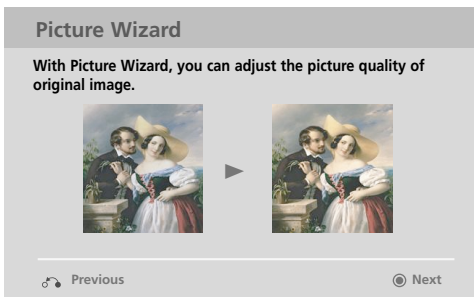
When you adjust the image to **Low**, **Recommended** or **High**, you can see the example of the changes you made. In RGB-PC/HDMI-PC/DVI-PC mode, the changed Colour, Tint and H/V Sharpness values are not applied.



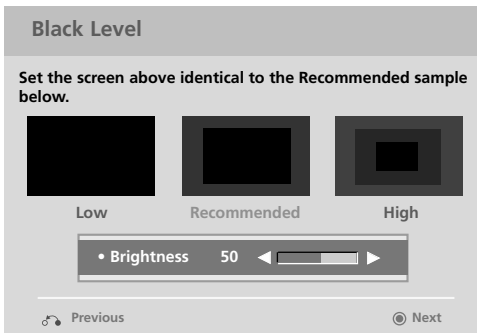
1 MENU Select TV SETUP.

2 OK Select PICTURE.

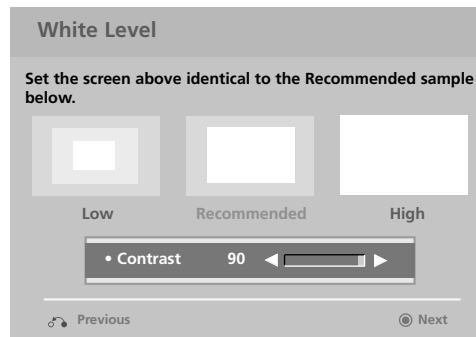
3 OK Select Picture Wizard.



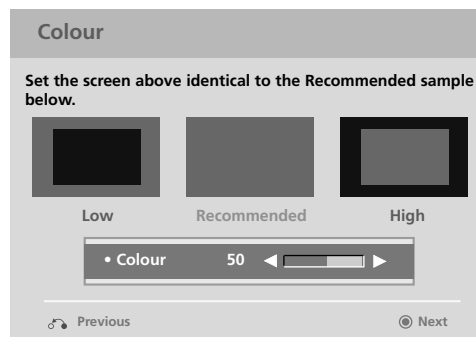
4 OK Adjust Picture Wizard.



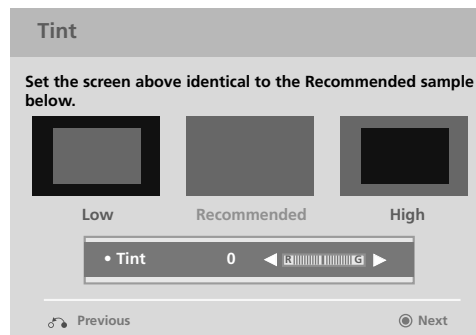
5 OK Adjust Black Level.



6 OK Adjust White Level.

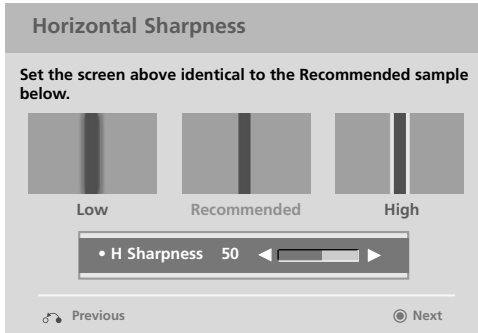


7 OK Adjust Colour.

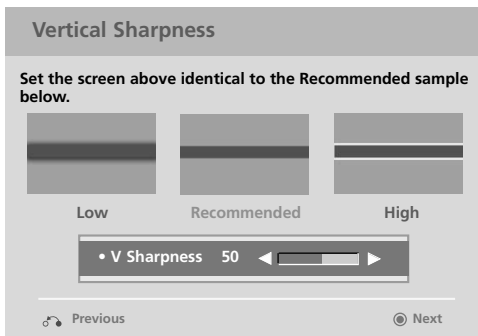


8 OK Adjust Tint.

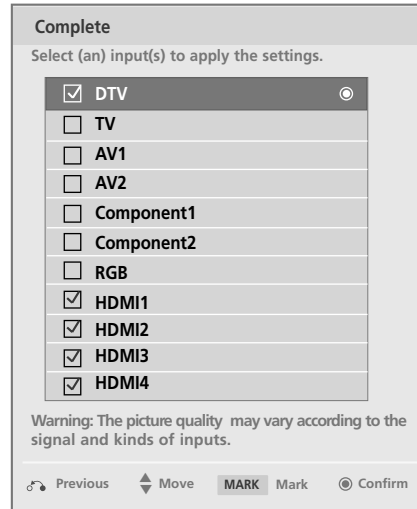
# PICTURE CONTROL

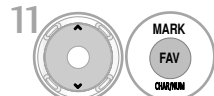



9  **Adjust Horizontal Sharpness.**

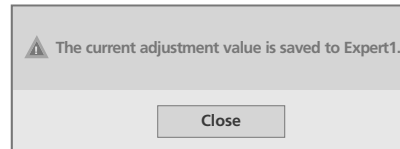



10  **Adjust Vertical Sharpness.**



11  **Select input source to apply the settings.**

12  **Save.**



13  **Finish the Picture Wizard.**

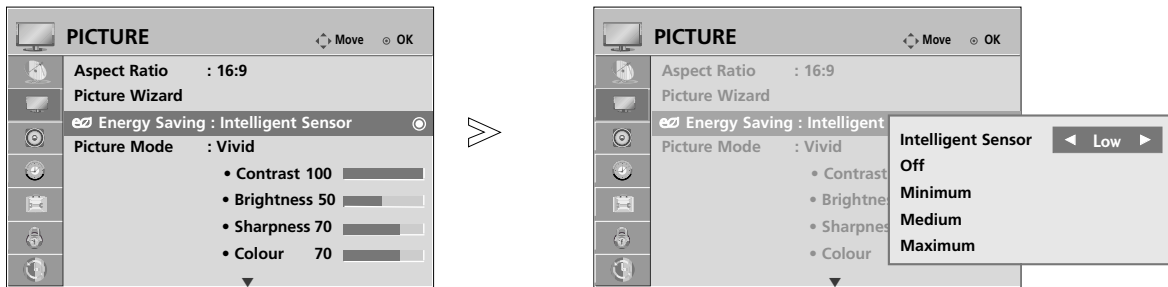
■ If you stop the setting before the final step, the changes will not be saved to the TV.









## ENERGY SAVING

It reduces the TV's power consumption by lowering the backlight level.

The default factory setting complies with the **Energy Star** requirements and is adjusted to the comfortable level to be viewed at home.

You can increase the brightness of your screen by adjusting the **Energy Saving** level or by setting the **Picture Mode**.



- 1   Select **TV SETUP**.
- 2   Select **PICTURE**.
- 3   Select **Energy Saving**.
- 4   Select **Intelligent Sensor, Off, Minimum, Medium or Maximum**.

- When the Intelligent sensor function is on, the most suitable picture is automatically adjusted according to the surrounding conditions.
- **Intelligent Sensor** : Adjusts picture according to the surrounding conditions.

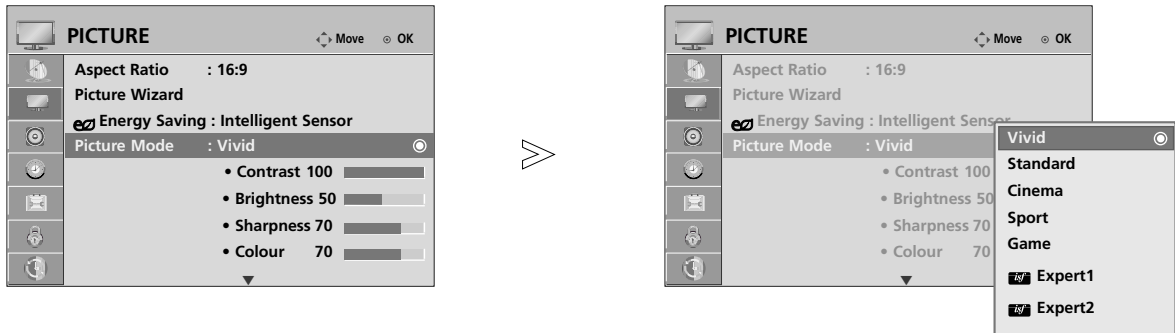
When the **Intelligent Sensor** is selected,









- 5   Select **Low, Middle or High**.

# PICTURE CONTROL

## PRESET PICTURE SETTINGS

### Picture Mode-Preset



- 1   Select **TV SETUP**.
- 2   Select **PICTURE**.
- 3   Select **Picture Mode**.
- 4   Select **Vivid, Standard, Cinema, Sport, Game, Expert1 or Expert2**.

- Press the **MENU** button to return to normal TV viewing.
- Press the **RETURN** button to move to the previous menu screen.

- **Vivid, Standard, Cinema, Sport, and Game** Settings are preset for the optimum picture quality at the factory.
- **Vivid:** This is the mode to maximize the effect of the video in the retail store. Strengthen the contrast, brightness, colour and sharpness for vivid picture.
- **Standard:** This is the mode to realize optimum viewing condition for the general user.
- **Cinema:** This mode optimizes video for watching movies.
- **Sport:** This is the video mode to emphasize dynamic video and primary colour (e.g, white, uniform, grass, sky blue etc.) by realizing the optimal screen for sports.
- **Game:** This is the mode to realize fast response speed in a fast gaming screen.
- **Expert:** This is the mode to adjust the video in detail for video quality expert and general user.
- You can also adjust **Picture Mode** in the **Q.MENU**.
- **Picture Mode** adjusts the TV for the best picture appearance. Select the preset value in the **Picture Mode** menu based on the programme category.

# MANUAL PICTURE ADJUSTMENT

## Picture Mode-User option

### Contrast

Adjusts the signal level between black and white in the picture. You may use Contrast when the bright part of the picture is saturated.

### Brightness

Adjusts the base level of the signal in the picture.

### Sharpness

Adjusts the level of crispness in the edges between the light and dark areas of the picture.

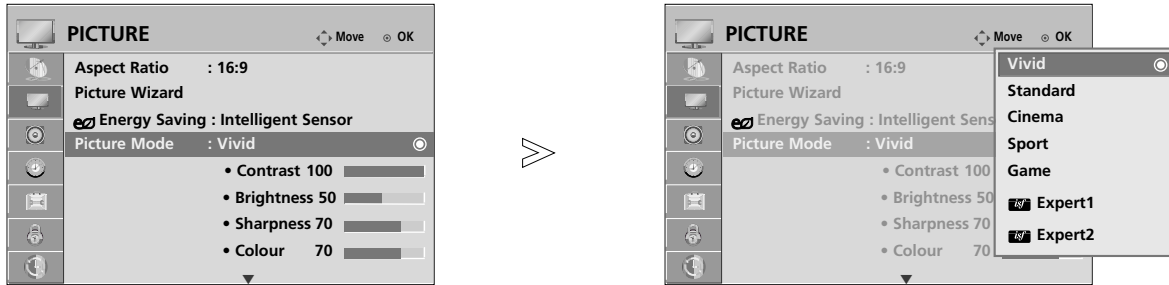
The lower the level, the softer the image.










### Colour

Adjusts intensity of all colours.

### Tint

Adjusts the balance between red and green levels.



- 1   Select **TV SETUP**.
- 2   Select **PICTURE**.
- 3   Select **Picture Mode**.
- 4   Select **Vivid, Standard, Cinema, Sport, Game, Expert1 or Expert2**.
- 5   Select **Contrast, Brightness, Sharpness, Colour or Tint**.
- 6   Make appropriate adjustments.

- Press the **MENU** button to return to normal TV viewing.
- Press the **RETURN** button to move to the previous menu screen.

### NOTE

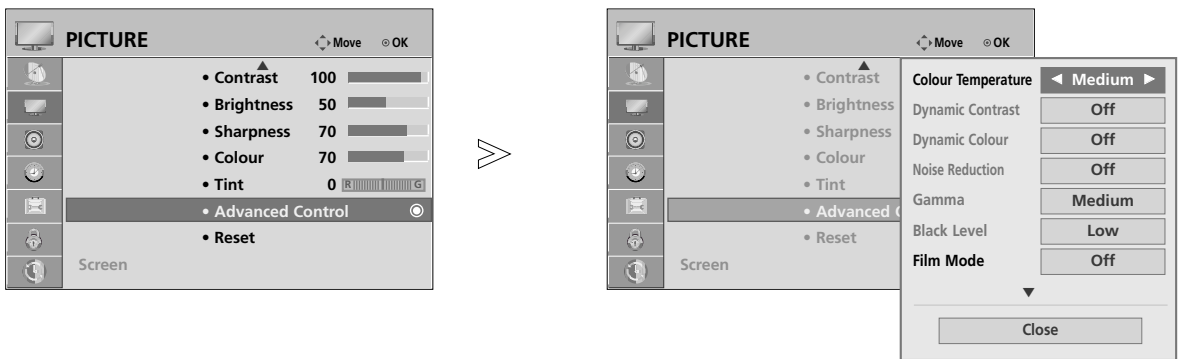
- ▶ You cannot adjust colour, sharpness and tint in the RGB-PC mode.
- ▶ When the **Expert 1/2** is selected, you can select **Contrast, Brightness, H Sharpness, V Sharpness, Colour or Tint**.

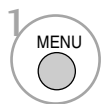





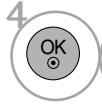
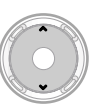

# PICTURE CONTROL

## PICTURE IMPROVEMENT TECHNOLOGY

You can calibrate the screen for each Picture Mode or set the video value according to the special video screen. You can set the video value differently for each input.

To reset to the factory default screen after making adjustments to each video mode, execute the “Picture Reset” function for each Picture Mode.



-   Select **TV SETUP**.
-   Select **PICTURE**.
-   Select **Advanced Control**.
-   Select your desired options.
-  Make appropriate adjustments.

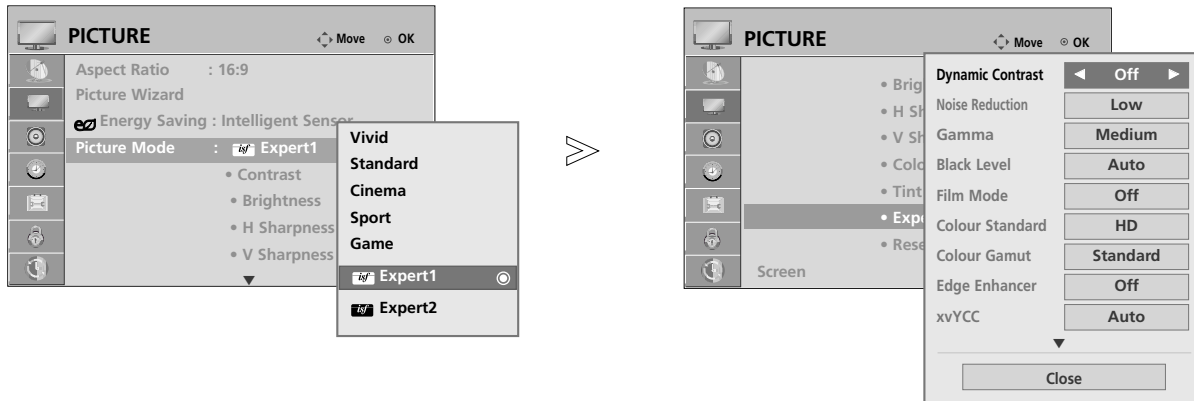
- Press the **MENU** button to return to normal TV viewing.
- Press the **RETURN** button to move to the previous menu screen.

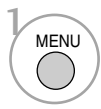


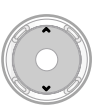











# EXPERT PICTURE CONTROL

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

This may also be used to help a professional optimize the TV performance using specific videos.



- 1   Select **TV SETUP**.
- 2   Select **PICTURE**.
- 3   Select **Picture Mode**.
- 4   Select **tsf Expert1**, or **tsf Expert2**.
- 5   Select **Expert Control**.
- 6   Select your desired menu option.
- 7  Make appropriate adjustments.

- Press the **MENU** button to return to normal TV viewing.
- Press the **RETURN** button to move to the previous menu screen.

# PICTURE CONTROL

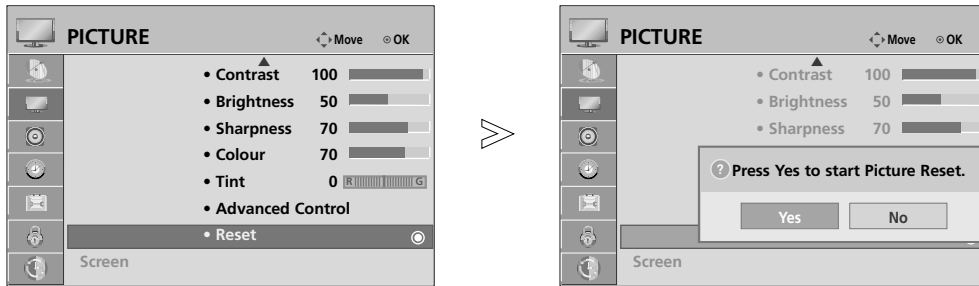
|   |   |
|---|---|
| <p><b>Colour Temperature</b><br/>(Warm/Medium/Cool)</p> | <ul style="list-style-type: none"> <li>■ Choose one of three automatic colour adjustments. Set to warm to enhance hotter colours such as red, or set to cool to make picture bluish.</li> </ul>   |
| <p><b>Dynamic Contrast</b><br/>(Off/Low/High)</p>       | <ul style="list-style-type: none"> <li>■ Adjusts the contrast to keep it at the best level according to the brightness of the screen. The picture is improved by making bright parts brighter and dark parts darker.</li> </ul>   |
| <p><b>Dynamic Colour</b><br/>(Off/Low/High )</p>        | <ul style="list-style-type: none"> <li>■ Adjusts screen colours so that they look livelier, richer and clearer. This feature enhances hue, saturation and luminance so that red, blue, green and white look more vivid.</li> </ul>  |
| <p><b>Noise Reduction</b><br/>(Off/Low/Medium/High)</p> | <ul style="list-style-type: none"> <li>■ Reduces screen noise without compromising video quality.</li> </ul>  |
| <p><b>Gamma</b><br/>(Low/Medium/High)</p>               | <ul style="list-style-type: none"> <li>■ You can adjust brightness of dark area and middle gray level area of the picture.               <ul style="list-style-type: none"> <li>• <b>Low</b> : Make dark and middle gray level area of the picture brighter.</li> <li>• <b>Medium</b>: Express original picture levels.</li> <li>• <b>High</b>: Make dark and middle gray level area of the picture darker.</li> </ul> </li> </ul>  |
| <p><b>Black Level</b><br/>(Low/High)</p>                | <ul style="list-style-type: none"> <li>• <b>Low</b> : The picture of the screen gets darker.</li> <li>• <b>High</b> : The picture of the screen gets brighter.</li> <li>• <b>Auto</b> : Realizing the black level of the screen and set it to High or Low automatically.</li> <li>■ Set black level of the screen to proper level.</li> <li>■ 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'.</li> </ul> |
| <p><b>Film Mode</b><br/>(On/Off)</p>                    | <ul style="list-style-type: none"> <li>■ You can watch a cinema-like video by eliminating judder effect.</li> <li>■ Use this function when you watch movies.</li> </ul>   |










|   |  |
|---|--|
| <p><b>Colour Gamut<br/>(Wide/Standard)</b></p>            | <ul style="list-style-type: none"> <li>• <b>Standard</b> : Mode to reproduce original colour according to the standard of input signal independent of the display characteristics.</li> <li>• <b>Wide</b>: Mode to use and set the rich colour area of the display. <ul style="list-style-type: none"> <li>■ Maximize the utilization for colour area that can be expressed.</li> </ul> </li> </ul>  |
| <p><b>Edge Enhancer<br/>(On/Off)</b></p>                  | <ul style="list-style-type: none"> <li>■ Shows clearer and distinctive yet natural corners of the video.</li> </ul>  |
| <p><b>xvYCC<br/>(Auto/off/on)</b></p>                     | <ul style="list-style-type: none"> <li>■ This is the function to express richer colour.</li> <li>■ This function is enabled in "Picture mode - Cinema, Expert" when xvYCC signal is inputted through HDMI, 1080p.</li> </ul>   |
| <p><b>Colour Standard<br/>(SD/HD)</b></p>                 | <ul style="list-style-type: none"> <li>■ Converts the colour of a different video to HD colour. This function is set for SD video (BT-601) and HD video (BT-709) colour format.</li> </ul>   |
| <p><b>Expert Pattern<br/>(Off/Pattern1 /Pattern2)</b></p> | <ul style="list-style-type: none"> <li>■ This is the pattern necessary for expert adjustment.</li> <li>■ This function is enabled in "Picture Mode - Expert" when you watch DTV.</li> </ul>  |
| <p><b>Colour Filter<br/>(Off/Red/Green/Blue)</b></p>      | <ul style="list-style-type: none"> <li>■ This is the function to filter the specific colours of the video.<br/>You can use the RGB filter to set colour saturation and hue accurately.</li> </ul>  |
| <p><b>White Balance<br/>(Medium/Warm/Cool)</b></p>        | <ul style="list-style-type: none"> <li>■ This is the function to adjust the overall colour of the screen to the feeling you want. <ol style="list-style-type: none"> <li>a. Method : 2 Points <ul style="list-style-type: none"> <li>- Pattern: Inner, Outer</li> <li>- Red/Green/Blue Contrast, Red/Green/Blue Brightness:<br/>The adjustment range is -50 - +50.</li> </ul> </li> <li>b. Method : 20 Point IRE <ul style="list-style-type: none"> <li>- Pattern: Inner, Outer</li> <li>- IRE (Institute of Radio Engineers) is the unit to display the size of the video signal and can be set among 5, 10, 15 ~100. You can adjust Red, Green or Blue according to each setting.</li> <li>- Red/Green/Blue: The adjustment range is -50 - +50.</li> </ul> </li> </ol> </li> </ul> |
| <p><b>Colour Management System</b></p>                    | <ul style="list-style-type: none"> <li>■ As the tool used by the experts to make adjustments by using the test patterns, this does not affect other colours but can be used to selectively adjust the 6 colour areas (Red/Green/Blue/Cyan/Magenta/Yellow).<br/>Colour difference may not be distinctive even when you make the adjustments for the general video.</li> <li>■ Adjusts Red/Green/Blue/Yellow/Cyan/Magenta.</li> <li>• Red/Green/Blue/Yellow/Cyan, Magenta Colour : The adjustment range is -30 ~ +30.</li> <li>• Red/Green/Blue/Yellow/Cyan/Magenta Tint : The adjustment range is -30 ~ +30.</li> <li>■ This feature is disable in RGB-PC and HDMI (PC) mode.</li> </ul>  |

# PICTURE CONTROL

## PICTURE RESET

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



- 1   Select **TV SETUP**.
- 2   Select **PICTURE**.
- 3   Select **Reset**.
- 4   Select **Yes**.
- 5  Initialize the adjusted value.

- Press the **MENU** button to return to normal TV viewing.
- Press the **RETURN** button to move to the previous menu screen.

# IMAGE STICKING MINIMIZATION (ISM) METHOD

A frozen or still picture displayed on the screen for prolonged periods will result in a ghost image remaining even when you change the image. Avoid allowing a fixed image to remain on the screen for prolonged periods.

## White Wash

White wash removes permanent images from the screen.

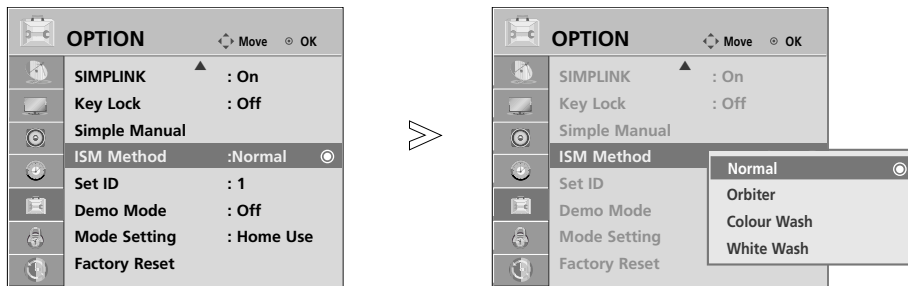
Note: An excessive permanent image may be impossible to clear entirely with White Wash.

## Orbiter

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

## Colour Wash

The colour block with the screen moved a little and the white pattern are alternately displayed. It is difficult to sense the afterimage occurred while the temporary afterimage is removed and the colour pattern is operating.



1 Select **TV SETUP**.

2 Select **OPTION**.

3 Select **ISM Method**.

4 Select **Normal, Orbiter, Colour Wash** or **White Wash**.

5 Save.

• If you do not need this function, set **Normal**.

- Press the **MENU** button to return to normal TV viewing.
- Press the **RETURN** button to move to the previous menu screen.

# PICTURE CONTROL

## DEMO MODE

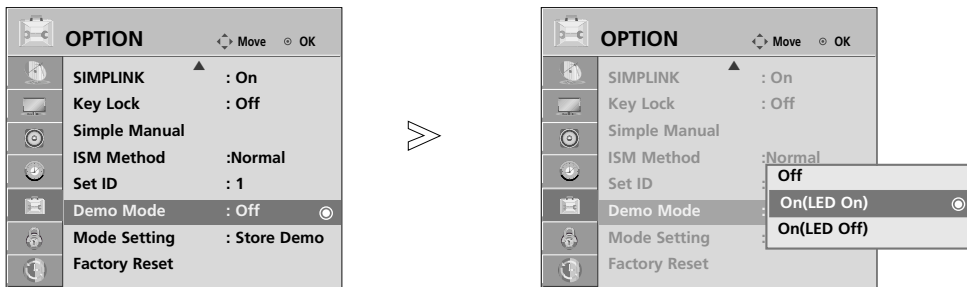
Display the slide show to explain the various logo of this TV.

It is not possible to use **Demo Mode** in **Home Use** mode.

In **Store Demo**, **Demo Mode** is automatically set to **On**.

Once **Demo Mode** is set to **Off** in **Store Demo**, **Demo Mode** does not run and only the screen is reset.

The screen is reset automatically after 5 minutes in **Demo Mode**.



1 MENU Select **TV SETUP**.

2 OK Select **OPTION**.

3 OK Select **Demo Mode**.

4 OK Select **On** to show the various feature of the TV.

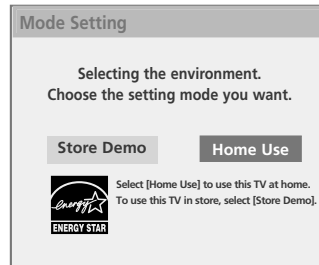
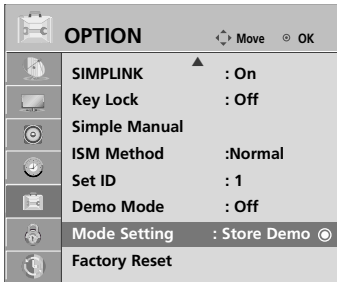
5 MENU Return to TV viewing.  
After a while, **Demo Mode** starts.










If you want to stop the demo, press any button (Except  $\triangle$  + or - and MUTE button).

- **On(LED On)** : The LED at the bottom of TV operates in Store Mode.
- **On(LED Off)** : The LED at the bottom of TV does not operate in Store Mode.

# MODE SETTING

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



- 1   Select **TV SETUP**.
- 2   Select **OPTION**.
- 3   Select **Mode Setting**.
- 4   Select **Store Demo** or **Home Use**.
- 5  Save.

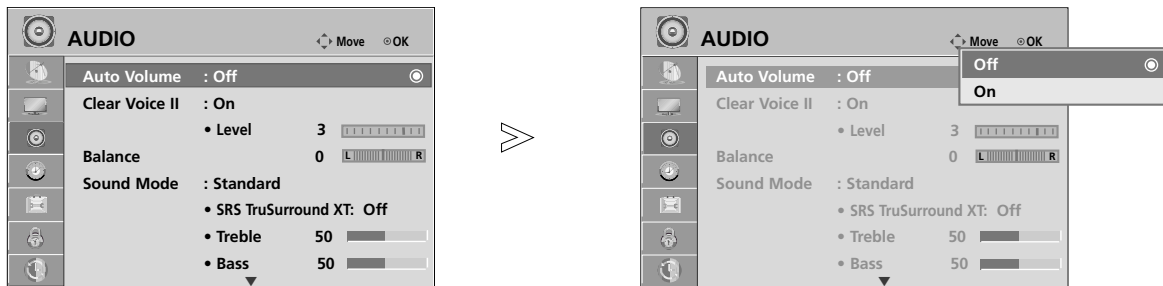
- Press the **RETURN** button to return to normal TV viewing.









# SOUND & LANGUAGE CONTROL

## AUTO VOLUME LEVELLER (AUTO VOLUME)

Auto Volume makes sure that the volume level remains consistent whether you are watching a commercial or a regular TV programme.

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



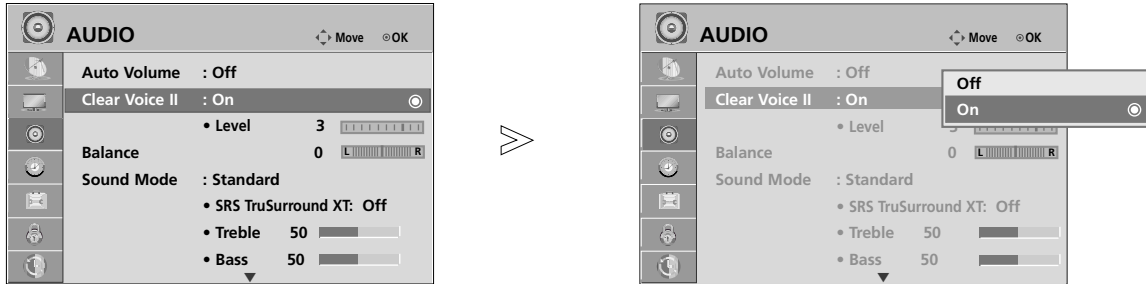
- 1   Select **TV SETUP**.
- 2   Select **AUDIO**.
- 3   Select **Auto Volume**.
- 4   Select **On** or **Off**.

- Press the **MENU** button to return to normal TV viewing.
- Press the **RETURN** button to move to the previous menu screen.



# CLEAR VOICE II

By differentiating the human sound range from others, it improves the sound quality of voices.



1 Select **TV SETUP**.

2 Select **AUDIO**.

3 Select **Clear Voice II**.

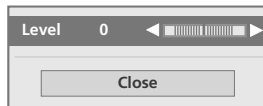
4 Select **On** or **Off**.

• If you select “Clear Voice II-On”, SRS TruSurround XT feature will not work.  
 • Select levels from ‘-6’ to ‘6’.

## Adjustment for Clear Voice II Level With selecting On

5 Select **Level**.

6 Make appropriate adjustments.



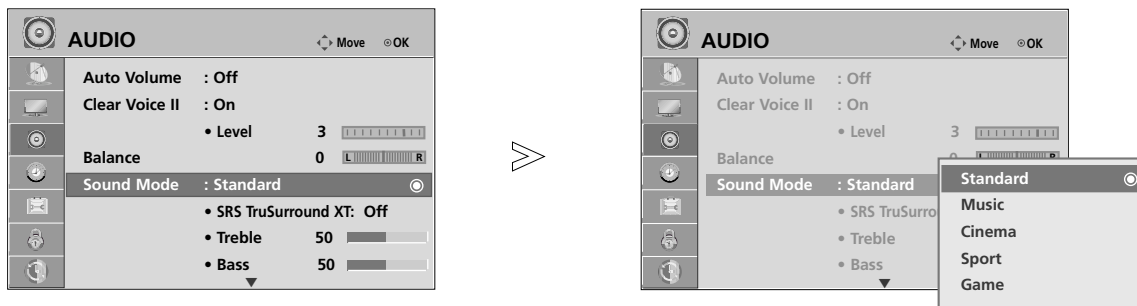
- Press the **MENU** button to return to normal TV viewing.
- Press the **RETURN** button to move to the previous menu screen.









# SOUND & LANGUAGE CONTROL

## PRESET SOUND SETTINGS (SOUND MODE)

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

**Standard, Music, Cinema, Sport, and Game** are preset for optimum sound quality at the factory and are not adjustable.



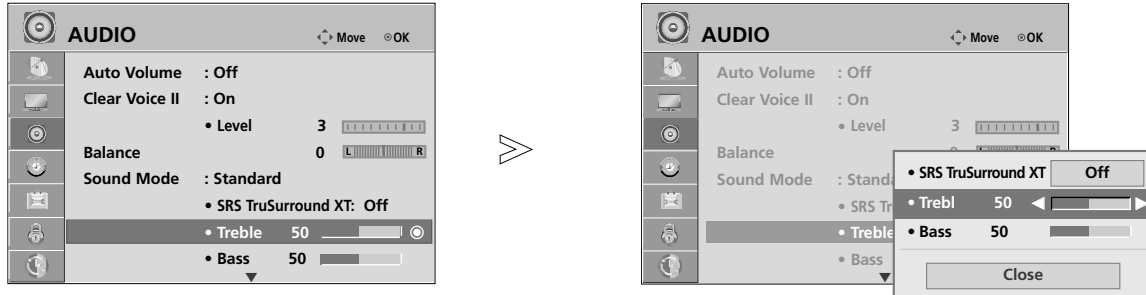
- 1   Select **TV SETUP**.
- 2   Select **AUDIO**.
- 3   Select **Sound Mode**.
- 4   Select **Standard, Music, Cinema, Sport, or Game**.

- **Standard, Music, Cinema, Sport, and Game** are preset for optimum sound quality at the factory.
- You can also adjust **Sound Mode** in the **Q.MENU**.
- **Standard**: Offers standard-quality sound.
- **Music**: Optimizes sound for listening to music.
- **Cinema**: Optimizes sound for watching movies.
- **Sport**: Optimizes sound for watching sports events.
- **Game**: Optimizes sound for playing games.

- Press the **MENU** button to return to normal TV viewing.
- Press the **RETURN** button to move to the previous menu screen.

# SOUND SETTING ADJUSTMENT - USER MODE

Adjust the sound to suit your taste and room situations.



- 1 Select **TV SETUP**.
- 2 Select **AUDIO**.
- 3 Select **Sound Mode**.
- 4 Select **Standard, Music, Cinema, Sport, or Game**.

- 5 Select **Treble** or **Bass**.
- 6 Make appropriate adjustments.

- Press the **MENU** button to return to normal TV viewing.
- Press the **RETURN** button to move to the previous menu screen.

## SRS TRUSURROUND XT

- 1 Select **TV SETUP**.
- 2 Select **AUDIO**.
- 3 Select **SRS TruSurround XT**
- 4 Select **On** or **Off**.

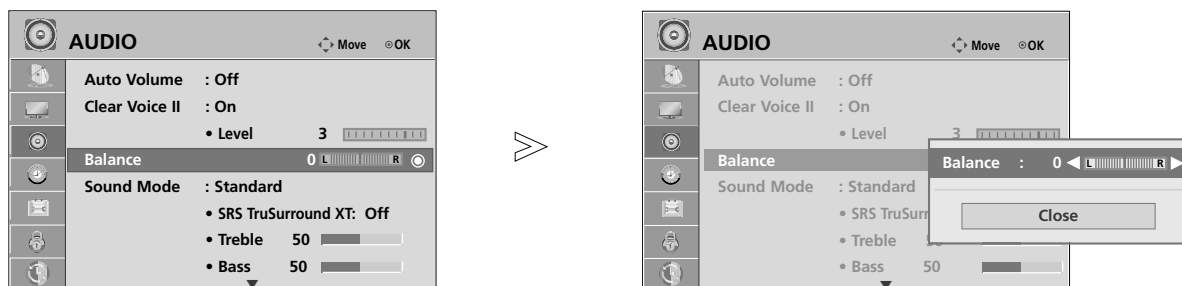
- If you select “**Clear Voice II -On**”, **SRS TruSurround XT** feature will not work.
- **SRS TruSurround XT**: TruSurround XT Takes advantage of any multi-channel format without needing to add extra speakers or equipment. Dialog clarity, bass enrichment, and the addition of stereo audio enhancement produces an immersive sound experience from standard stereo material.
- If sound quality or volume is not at the level you want, it is recommended to use a separate home theatre system or amplifier to cope with different user environments.









- Press the **MENU** button to return to normal TV viewing.
- Press the **RETURN** button to move to the previous menu screen.

# SOUND & LANGUAGE CONTROL

## BALANCE

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



- 1   Select **TV SETUP**.
- 2   Select **AUDIO**.
- 3   Select **Balance**.
- 4   Make appropriate adjustments.

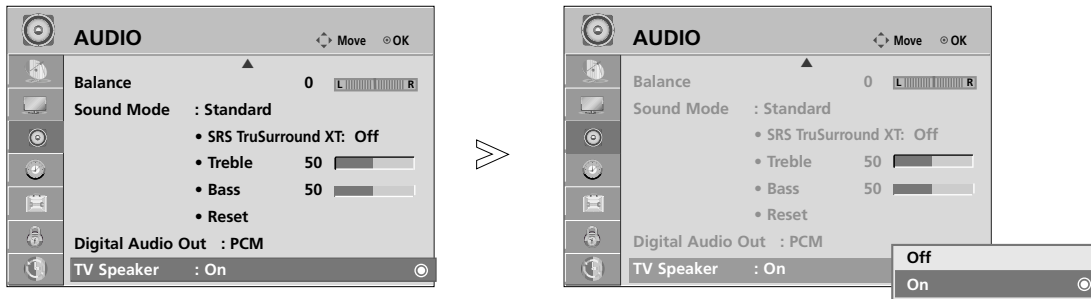
- Press the **MENU** button to return to normal TV viewing.
- Press the **RETURN** button to move to the previous menu screen.









# TV SPEAKERS ON/OFF SETUP

You can adjust the TV internal speaker status.

In **AV1**, **AV2**, **COMPONENT**, **RGB** and **HDMI1** with HDMI to DVI cable, the TV speaker can be operational even when there is no video signal.

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



- 1   Select **TV SETUP**.
- 2   Select **AUDIO**.
- 3   Select **TV Speaker**.
- 4   Select **On** or **Off**.

- Press the **MENU** button to return to normal TV viewing.
- Press the **RETURN** button to move to the previous menu screen.

## ! NOTE

- ▶ When the TV speaker is turned off while the Simplink home theatre is operating, the sound output automatically switches to the Home theatre speaker, but when the TV speaker is turned on, the sound output the TV speaker.
- ▶ Some menus in **AUDIO** are disabled when TV Speaker is set to Off.

# SOUND & LANGUAGE CONTROL

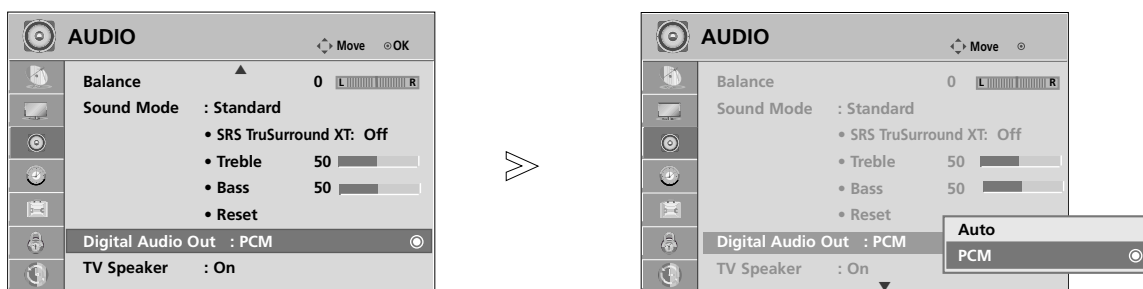
## SELECTING DIGITAL AUDIO OUT

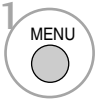







This function allows you to select your preferred Digital Audio Output.

The TV can only output DOLBY Digital if a programme is broadcast with Dolby Digital audio.

When Dolby digital is available, selecting Dolby Digital 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 only PCM is available, SPDIF output will be PCM(Pulse-code modulation).



- 1   Select **TV SETUP**.
- 2   Select **AUDIO**.
- 3   Select **Digital Audio Out**.
- 4   Select **Auto** or **PCM**.



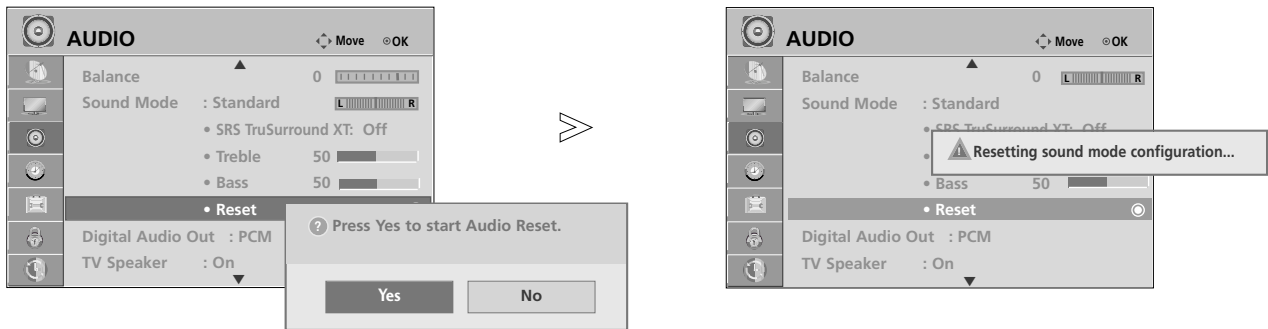
Manufactured under license from Dolby Laboratories. "Dolby" and the double-D symbol are trademarks of Dolby Laboratories.








- There is a possibility that when HDMI mode, some DVD player do not make SPDIF sound, At that time, set the output of the digital audio of the DVD player to PCM.(In HDMI, Dolby Digital Plus is not supported).
- During recording or playback audio only channel, Digital Audio Out is disabled.

- Press the **MENU** button to return to normal TV viewing.
- Press the **RETURN** button to move to the previous menu screen.

# AUDIO RESET

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



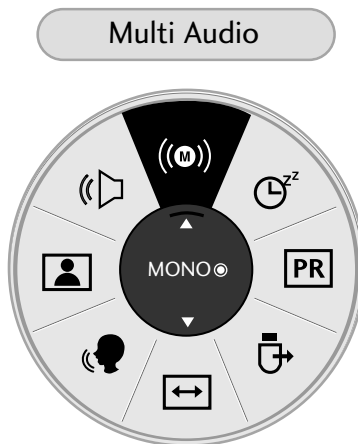
- 1   Select **TV SETUP**.
- 2   Select **AUDIO**.
- 3   Select **Reset**.
- 4  Initialize the adjusted value.

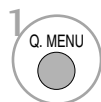
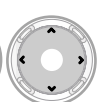

- Press the **MENU** button to return to normal TV viewing.
- Press the **RETURN** button to move to the previous menu screen.

# SOUND & LANGUAGE CONTROL

## STEREO RECEPTION (IN ANALOGUE MODE ONLY)

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



1.   Select **Multi Audio**.
2.  Select **Mono** or **Stereo**.

- Press the **Q.MENU** button to return to normal TV viewing.

## SPEAKER SOUND OUTPUT SELECTION

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

Select the sound output.

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

**L+L:** Audio signal from audio L input is sent to left and right loudspeakers.

**R+R:** Audio signal from audio R input is sent to left and right loudspeakers.



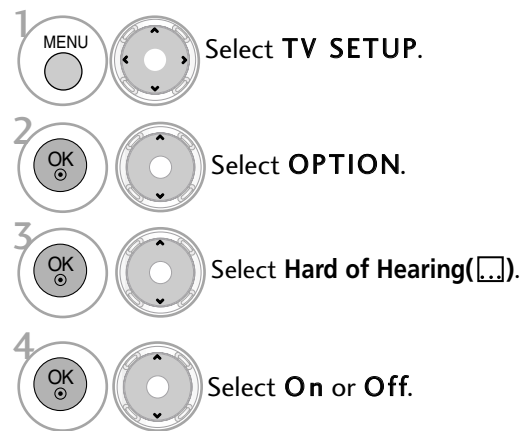
## LANGUAGE SELECTION (IN DIGITAL MODE ONLY)

The Audio function allows selection of a preferred language.

If audio data in a selected language is not broadcast, the default language audio will be played.

Use the Subtitle function when two or more subtitle languages are broadcast. If subtitle data in a selected language is not broadcast, the default language subtitle will be displayed.

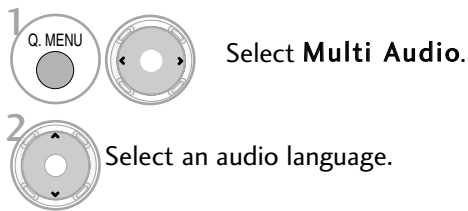
When the languages you selected as the primary for Audio Language and Subtitle Language are not supported, you can select desired language in OPTION Menu.



• Press the **RETURN** button to move to the previous menu screen.

### < Audio Language Selection >

- ▶ When two or more audio languages are broadcast, you can select the audio language.



- ▶ During recording or playback audio only channel, Audio Language Selection is disabled.

### < Subtitle Language Selection >

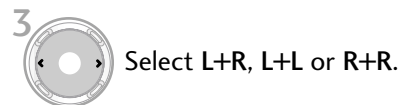
- ▶ When two or more subtitle languages are broadcast, you can select the subtitle language with the **SUBTITLE** button on the remote control.

- ▶ Press the button to select a subtitle language.

- The audio/subtitles can be displayed in a simpler form with 1 to 3 characters broadcast by the service provider.
- When you select supplementary Audio (Audio for "Visual/Hearing Impaired") the TV may output a part of the Main audio.

#### Audio Language OSD Information

| Display | Status                       |
|---------|------------------------------|
| N.A     | Not Available                |
|         | MPEG Audio                   |
|         | Dolby Digital Audio          |
|         | Audio for "Visual Impaired"  |
|         | Audio for "Hearing Impaired" |



#### Subtitle Language OSD Information

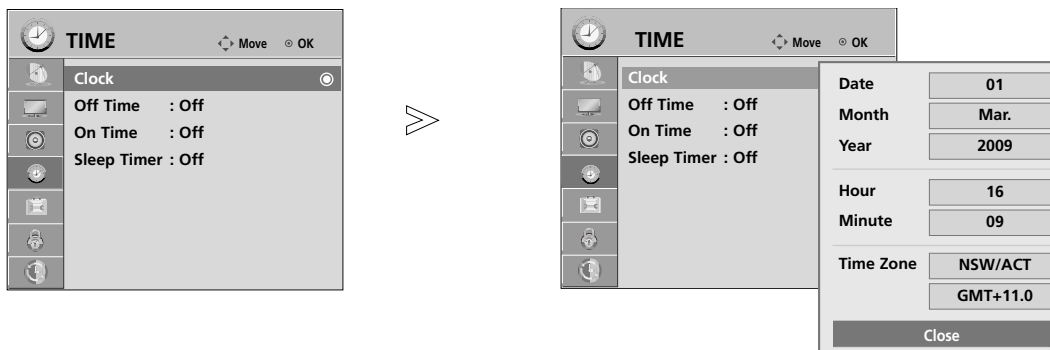
| Display | Status                         |
|---------|--------------------------------|
| N.A     | Not Available                  |
|         | Teletext Subtitle              |
|         | Subtitle for "Hard of Hearing" |

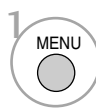
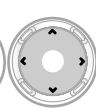

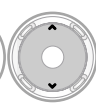

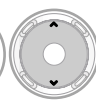



# TIME SETTING

## CLOCK SETUP

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

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



-   Select **TV SETUP**.
-   Select **TIME**.
-   Select **Clock**.
-   Select either the year, date, or time option.
-  Set the year, date, and time options.

- Press the **MENU** button to return to normal TV viewing.
- Press the **RETURN** button to move to the previous menu screen.

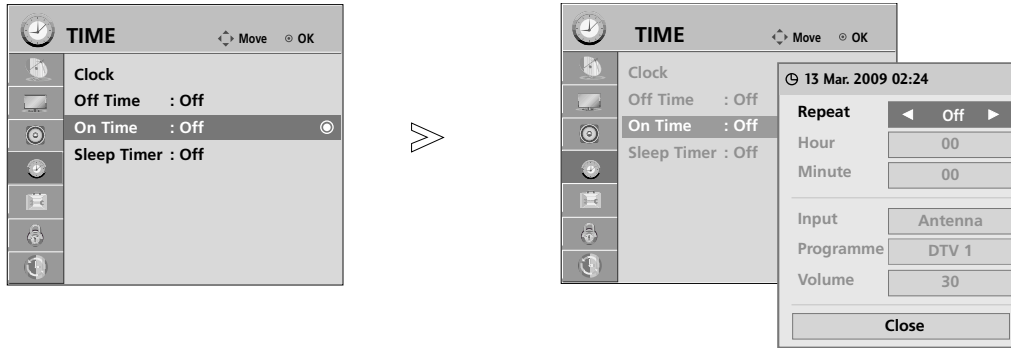
# AUTO ON/OFF TIME SETTING

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

Two hours after the TV 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 TV must be in standby mode for the On timer to work.



- 1 Select **TV SETUP**.
- 2 Select **TIME**.
- 3 Select **Off time** or **On time**.
- 4 Select **Repeat**.
- 5 Select **Off, Once, Daily, Mon.~Fri., Mon.~Sat., Sat.~Sun., or Sunday**.
- 6 Select and set **Hour** or **Minute**.

- To cancel **On/Off Time** function, select **Off**.
- Only for **On Time** function

- 1 Select **Input**.
- 2 Select the desired input source.
- 3 When Selecting **Antenna**: set the programme at turn-on.
- 4 Adjust to sound level at turn-on.

- Press the **MENU** button to return to normal TV viewing.
- Press the **RETURN** button to move to the previous menu screen.

# SLEEP TIMER SETTING

You do not have to remember to switch the TV off before you go to sleep.

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

- 1 Select **Sleep Timer**.
- 2 Select **Off, 10, 20, 30, 60, 90, 120, 180 or 240 min..**

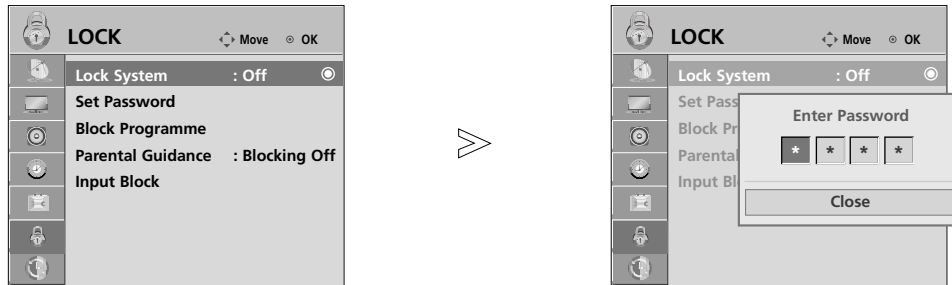
- When you switch the TV off, the preset sleep timer is cancelled.
- You can also adjust **Sleep Timer** in the **TIME** menu.

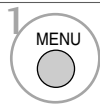


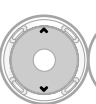


# PARENTAL CONTROL / RATINGS

## SET PASSWORD & LOCK SYSTEM

### Setting up Your Password

Set up blocking schemes to block specific programme, ratings, and external viewing sources. A password is required to gain access to this menu.

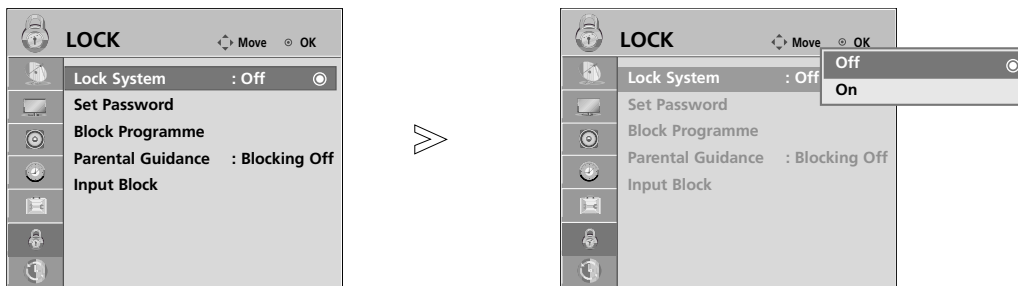











- 1   Select **TV SETUP**.
- 2    Select **LOCK**.
- 3  Input the password.

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

## Lock System

Revitalize **Block Programme**, **Parental Guidance** and **Input Block** function.



- 1   Select **TV SETUP**.
- 2    Select **LOCK**.
- 3  Input the password.
- 4  Select **Lock System**.
- 5   Select **On** or **Off**.

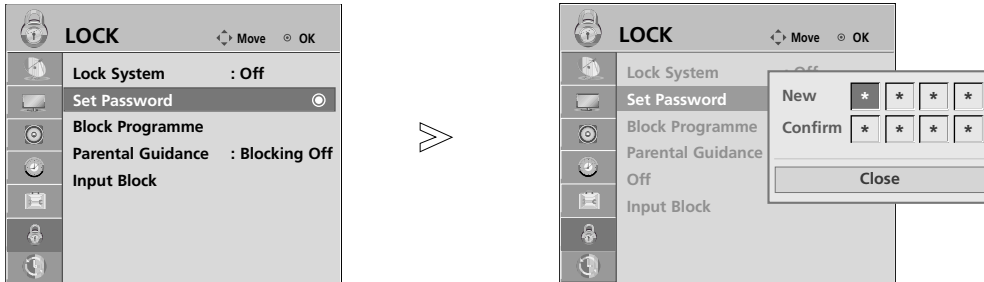
• If selecting **On**, **Block Programme**, **Parental Guidance** and **Input Block** operates.

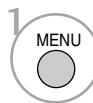




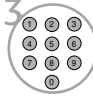


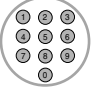
- Press the **MENU** button to return to normal TV viewing.
- Press the **RETURN** button to move to the previous menu screen.

# PARENTAL CONTROL / RATINGS

## Set Password

Change the password by inputting a new password twice.



-   Select **TV SETUP**.
-    Select **LOCK**.
-  Input the password.
-  Select **Set password**.
-   Choose any 4 digits for your new password.  
As soon as the 4 digits are entered, re-enter the same 4 digits on the **Confirm**.

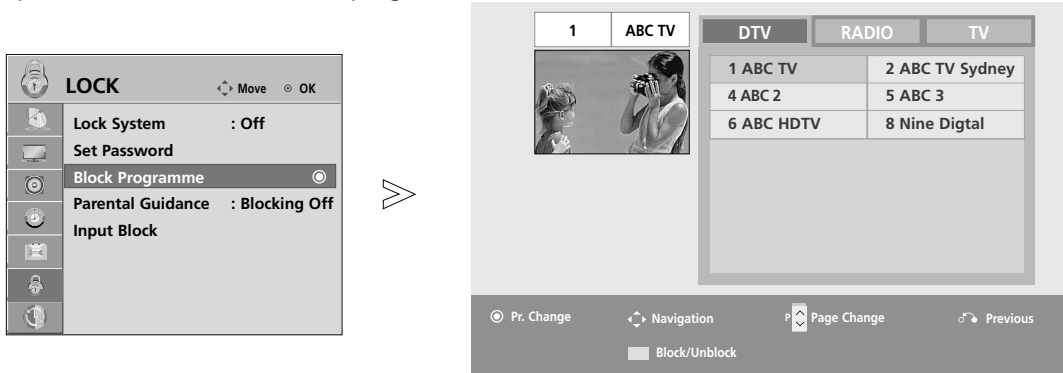
- Press the **MENU** button to return to normal TV viewing.
- Press the **RETURN** button to move to the previous menu screen.











# BLOCK PROGRAMME

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

It is available to use this function in **Lock System "On"**.

Enter the password to watch a blocked programme.



- 1   Select **TV SETUP**.
- 2    Select **LOCK**.
- 3  Input the password.
- 4  Select **Block Programme**.
- 5   Select a programme to block or unblock.
- 6  Block or unblock a programme.

- Press the **MENU** button to return to normal TV viewing.
- Press the **RETURN** button to move to the previous menu screen.

# PARENTAL CONTROL / RATINGS

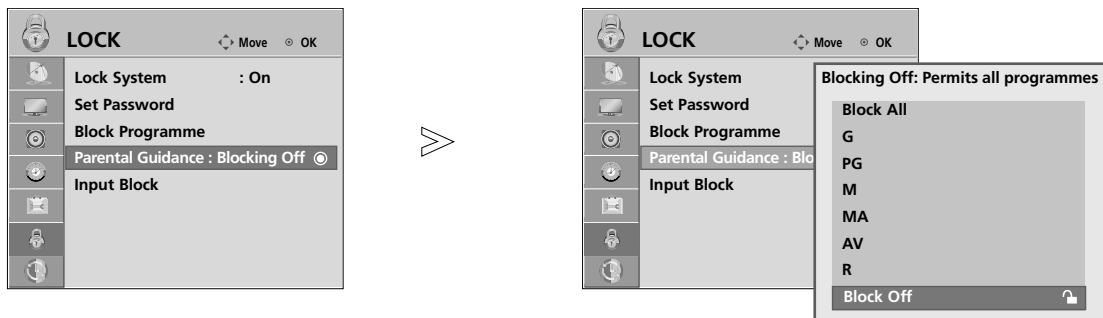
## Parental Guidance

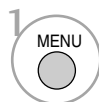
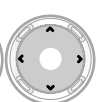




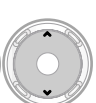
This function operates according to information from the broadcasting station. Therefore if the signal has incorrect information, this function does not operate.

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.



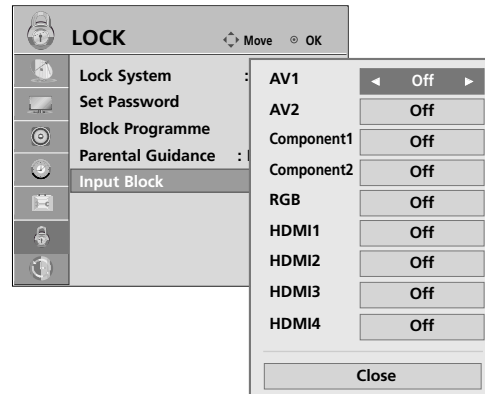
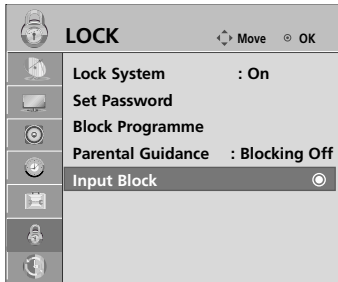
- 1 MENU   Select **TV SETUP**.
- 2 OK   OK  Select **LOCK**.
- 3 OK   Select **Parental Guidance**.

- Press the **MENU** button to return to normal TV viewing.
- Press the **RETURN** button to move to the previous menu screen.



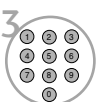
# INPUT BLOCK

Enables you to block an input.



1   Select **TV SETUP**.

2    Select **LOCK**.

3  Input the password.

4  Select **Input Block**.

5   Select input source.

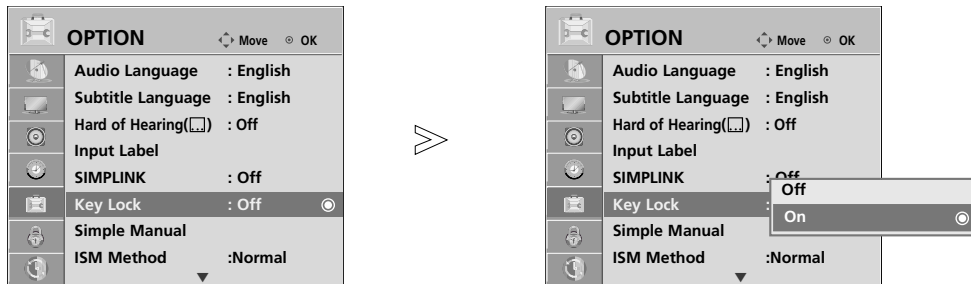
6  Select **On** or **Off**.

- Press the **MENU** button to return to normal TV viewing.
- Press the **RETURN** button to move to the previous menu screen.

# PARENTAL CONTROL / RATINGS

## KEY LOCK

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



- 1 MENU Select TV SETUP.
- 2 OK Select SETUP.
- 3 OK Select Key Lock.
- 4 OK Select On or Off.
- 5 OK

- In **Key Lock 'On'**, if the TV is turned off, press the  $\phi$  / I, INPUT, P  $\blacktriangle$  or  $\blacktriangledown$  button on the TV or POWER, INPUT, P  $\wedge$   $\vee$  or NUMBER buttons on the remote control then the set will be turned on.
- With the **Key Lock On**, the display ' $\blacktriangle$  Key Lock' appears on the screen if any button (Except  $\phi$ /I (power) button) on the front panel is pressed while viewing the TV.

- Press the **MENU** button to return to normal TV viewing.
- Press the **RETURN** button to move to the previous menu screen.

# TELETEXT

## This feature is not available in all countries.

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

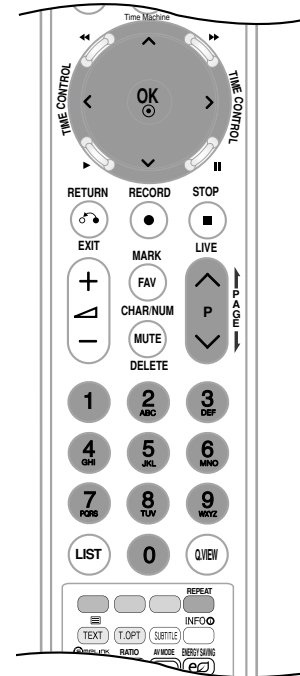
The teletext decoder of this TV can support the SIMPLE, TOP and FASTEXT systems. SIMPLE (standard teletext) consists of a number of pages which are selected by directly entering the corresponding page number. TOP and FASTEXT are more modern methods allowing quick and easy selection of teletext information.

## SWITCH ON/OFF

Press the **TEXT** button to switch to teletext. The initial page or last page viewed 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** 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 **P**  $\wedge$   $\vee$  button can be used to select the preceding or following 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 **P**  $\wedge$  button can be used.
- 4 The red button returns to the previous selection. Alternatively the **P**  $\vee$  button can be used.

### ■ Direct page selection


As with 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 corresponding coloured buttons.
- 3 AS with SIMPLE teletext mode, you can select a page by entering its three digit page number with the NUMBER buttons in FASTEXT mode.
- 4 The **P  $\wedge \vee$**  button can be used to select the preceding or following page.

## SPECIAL TELETEXT FUNCTIONS

- Press the **T. OPT** button and then use  $\wedge \vee$  button to select the **Text Option** menu.



### ■ 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 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.



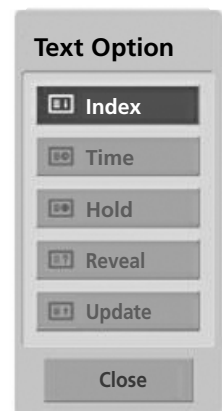
### ■ REVEAL

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 TV does not operate properly.

The remote control does not work

- Check to see if there is any object between the TV and the remote control causing an obstruction. Ensure you are pointing the remote control directly at the TV.
- Ensure that the batteries are installed with correct polarity (+ to +, - to -).
- Ensure that the correct remote operating mode is set : TV, STB etc.
- Install new batteries.

Power is suddenly turned off

- Check the power control settings. Has the Power supply been interrupted.
- The TV goes into Standby mode automatically if no signal is received and no operation is performed for 15 minutes.

### The video function does not work.

No picture & No sound

- Check whether the TV is switched on.
- Try another channel. The problem may be with the broadcast.
- Is the power cord inserted correctly into the mains?
- Check your antenna direction and/or location.
- Test the mains outlet by plugging another product into the same outlet.

Picture appears slowly after switching on

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

No or poor colour or poor picture

- Adjust Colour in menu option.
- Allow a sufficient distance between the product and the VCR.
- Try another channel. The problem may be with the broadcast.
- Are the video cables installed properly?
- Activate any function to restore the brightness of the picture.

Horizontal/vertical bars or picture shaking

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

Poor reception on some channels

- Station or cable channel experiencing problems, tune to another station.
- Station signal is weak, reposition the antenna to receive weaker stations.
- Check for sources of possible interference.


Lines or streaks in pictures

- Check antenna (Change the position of the antenna).

No picture when connecting HDMI

- Check that your HDMI cable is version 1.3 or higher. If the HDMI cables don't support HDMI version 1.3, flickering or no screen display can result. Please use the latest cables that support at least HDMI version 1.3.

# APPENDIX

| The audio function does not work.     |   |
|---------------------------------------|---|
| Picture OK & No sound                 | <ul style="list-style-type: none"> <li>■ Press the  + or - button.</li> <li>■ Sound muted? Press <b>MUTE</b> button.</li> <li>■ Try another channel. The problem may be with the broadcast.</li> <li>■ Are the audio cables installed properly?</li> </ul> |
| No output from one of the speakers    | <ul style="list-style-type: none"> <li>■ Adjust <b>Balance</b> in menu option.</li> </ul>   |
| Unusual sound from inside the product | <ul style="list-style-type: none"> <li>■ A change in ambient humidity or temperature may result in an unusual noise when the product is switched on or off and does not indicate a fault with the product.</li> </ul>   |
| No sound when connecting HDMI or USB  | <ul style="list-style-type: none"> <li>■ Check HDMI cable over version 1.3.</li> <li>■ Check USB cable over version 2.0.</li> </ul>   |

\*This feature is not available for all models.

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

| There is a problem in PICTURE settings.  |   |
|--|---|
| When the user changes the picture settings, the TV automatically converts back to the initial settings after a certain period of time. | <ul style="list-style-type: none"> <li>■ It means that the TV is currently set to <b>Store Demo</b> mode. To switch to <b>Home Use</b> mode you should do the followings:<br/>From the TV Menu, choose <b>OPTION</b> -&gt; Choose <b>Mode Setting</b> -&gt; Choose <b>Home Use</b>.<br/>Now, you have completed switching to the <b>Home Use</b> mode.</li> </ul> |

# MAINTENANCE

Early malfunctions can be prevented. Careful and regular cleaning can prolong the life of your new TV.

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

## Cleaning the Screen

- 1 A good way to keep the dust off your screen for a while is to wet a soft cloth in a mixture of lukewarm water and a little fabric softener or dish washing detergent. Wring the cloth until it is almost dry, and then use it to wipe the screen.
- 2 Ensure there is no excess water on the screen. Allow any water or dampness to evaporate before switching on.

## Cleaning the Cabinet

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

## Extended Absence

### CAUTION

- ▶ If you expect to leave your TV dormant for prolonged periods (such as a holiday), unplug the power cord to protect against possible damage from lightning or power surges.

# APPENDIX

## PRODUCT SPECIFICATIONS

| MODELS                                 |                       | 50PS8***  | 60PS8***   |
|--|-----------------------|---|--|
|  |                       | 50PS80ED-AA   | 60PS80ED-AA  |
| Dimensions<br>(Width x Height x Depth) | with stand            | 48.4 x 32.9x 12.2inches<br>1228.8 x 835.8 x 309 mm  | 57.7 x 38.9 x 14.6 inches<br>1465.4x 986.4 x 371 mm  |
|  | without stand         | 48.4 x 31.3 x 3.1 inches<br>1228.8x 795.1 x 78.9 mm | 57.7 x 36.5 x 3.2 inches<br>1465.4 x 926.7 x 82.1 mm |
| Weight                                 | with stand            | 38.3 kg / 84.4 lbs                                  | 53.06kg / 116.4 lbs                                  |
|  | without stand         | 34.3kg / 75.6 lbs                                   | 47.16kg / 101.4 lbs                                  |
| Power requirement                      |                       | AC100-240V~ 50/60Hz                                 | AC100-240V~ 50/60Hz                                  |
| Television System                      |                       | PAL B/B, DVB-T                                      |  |
| Programme Coverage                     |                       | VHF 0-12, UHF 20-75, CATV 02-44, DTV 06-12, 27-69   |  |
| External Antenna Impedance             |                       | 75 ohm  |  |
| Environment condition                  | Operating Temperature | 32 ~ 104°F (0 ~ 40°C)                               |  |
|  | Operating Humidity    | Less than 80%                                       |  |
|  | Storage Temperature   | -4 ~ 140°F (-20 ~ 60°C)                             |  |
|  | Storage Humidity      | Less than 85%                                       |  |

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



This function is not available for all models.

## PROGRAMMING THE REMOTE CONTROL

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

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

### Programming a code into a remote mode

- 1 Testing your remote control.  
To find out whether your remote control can operate other components without programming, turn on a component such as a STB and press the corresponding mode button (such as **STB**) on the remote control, while pointing at the component. Test the **POWER** and **P** ^ v buttons to see if the component responds correctly. If the component does not operate correctly, the remote control requires programming to operate the device.
- 2 Switch on the component to be programmed, then press the corresponding mode button (such as **STB**) on the remote control. The remote control button of the desired device is illuminated.
- 3 Press the **MENU** and **MUTE** buttons simultaneously, the remote control is ready to be programmed with the code.
- 4 Enter a code number using the number buttons on the remote control. Programming code numbers for the corresponding component can be found on the following pages. If the code is correct, the device will turn off.
- 5 Press the **MENU** button to store the code.
- 6 Test the remote control functions to see if the component responds correctly. If not, repeat from step 2.

### HDSTB

| Brand              | Codes           | Brand              | Codes           | Brand                | Codes           |
|--------------------|-----------------|--------------------|-----------------|----------------------|-----------------|
| ALPHASTAR DSR      | 123             | HOUSTON TRACKER    | 033 037 039 051 | PROSAT               | 072             |
| AMPLICA            | 050             |                    | 057 104         | RCA                  | 066 106         |
| BIRDVIEW           | 051 126 129     | HUGHES             | 068             | REALISTIC            | 043 074         |
| CHANNEL MASTER     | 013 014 015 018 | JANIEL             | 060 147         | SAMSUNG              | 123             |
|                    | 036 055         | JERROLD            | 061             | SATELLITE SERVICE CO | 028 035 047 057 |
| CHAPARRAL          | 008 009 012 077 | KATHREIN           | 108             |                      | 085             |
| CITOH              | 054             | LEGEND             | 057             | SCIENTIFIC ATLANTA   | 032 138         |
| CURTIS MATHES      | 050 145         | LG                 | 001             | SONY                 | 103             |
| DRAKE              | 005 006 007 010 | LUTRON             | 132             | STARCAST             | 041             |
|                    | 011 052 112 116 | LUXOR              | 062 144         | SUPER GUIDE          | 020 124 125     |
|                    | 141             | MACOM              | 010 059 063 064 | TEECOM               | 023 026 075 087 |
| DX ANTENNA         | 024 046 056 076 |                    | 065             |                      | 088 090 107 130 |
| ECHOSTAR           | 038 040 057 058 | MEMOREX            | 057             |                      | 137             |
|                    | 093 094 095 096 | NEXTWAVE           | 028 124 125     | TOSHIBA              | 002 127         |
|                    | 097 098 099 100 | NORSAT             | 069 070         | UNIDEN               | 016 025 042 043 |
|                    | 122             | PACE SKY SATELLITE | 143             |                      | 044 045 048 049 |
| ELECTRO HOME       | 089             | PANASONIC          | 060 142         |                      | 078 079 080 086 |
| EUROPLUS           | 114             | PANSAT             | 121             |                      | 10 135 136      |
| FUJITSU            | 017 021 022 027 | PERSONAL CABLE     | 117             | VIEWSTAR             | 115             |
|                    | 133 134         | PHILIPS            | 071             | WINEGARD             | 128 146         |
| GENERAL INSTRUMENT | 003 004 016 029 | PICO               | 105             | ZENITH               | 081 082 083 084 |
|                    | 031 059 101     | PRESIDENT          | 019 102         |                      | 091 120         |
| HITACHI            | 139 140         | PRIMESTAR          | 030 110 111     |                      |                 |

# APPENDIX

## IR CODES

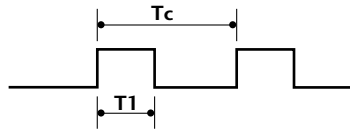
### 1. How to Connect

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

### 2. Remote Control IR Codes

#### ■ Output waveform

Single pulse, modulated with 37.917KHz signal at 455KHz



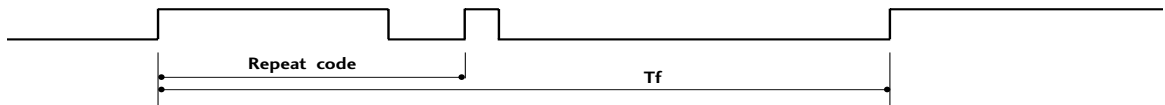
Carrier frequency  
 $FCAR = 1/Tc = fOSC/12$   
 Duty ratio =  $T1/Tc = 1/3$

#### ■ Configuration of frame

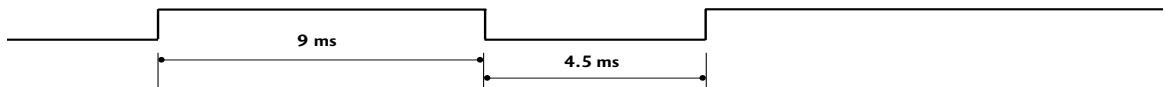
1st frame



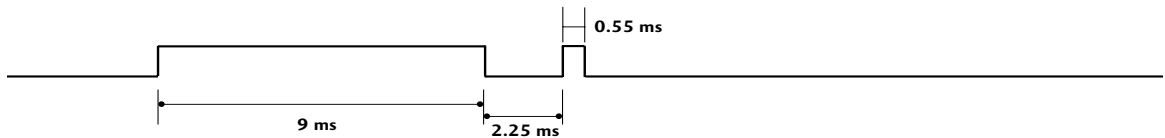
Repeat frame



#### ■ Lead code



#### ■ Repeat code

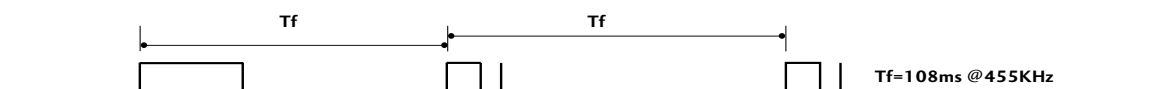


#### ■ Bit description



#### ■ Frame interval: Tf

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



| Code (Hexa) | Function        | Note                     |
|-------------|-----------------|--------------------------|
| 95          | Energy Saving   | R/C BUTTON               |
| 08          | POWER           | R/C BUTTON(POWER ON/OFF) |
| 0B          | INPUT           | R/C BUTTON               |
| 79          | RATIO           | R/C BUTTON               |
| F0          | TV/RAD          | R/C BUTTON               |
| 45          | Q.MENU          | R/C BUTTON               |
| 43          | MENU            | R/C BUTTON               |
| AB          | GUIDE           | R/C BUTTON               |
| 40          | Up (^)          | R/C BUTTON               |
| 41          | Down (v)        | R/C BUTTON               |
| 07          | Left (<)        | R/C BUTTON               |
| 06          | Right (>)       | R/C BUTTON               |
| 44          | OK(⊙)           | R/C BUTTON               |
| 28          | RETURN/EXIT     | R/C BUTTON               |
| AA          | INFO ⓘ          | R/C BUTTON               |
| 30          | AV MODE         | R/C BUTTON               |
| 02          | ↙ ^             | R/C BUTTON               |
| 03          | ↘ v             | R/C BUTTON               |
| 1E          | FAV ( MARK )    | R/C BUTTON               |
| 09          | MUTE            | R/C BUTTON               |
| 00          | P ^             | R/C BUTTON               |
| 01          | P v             | R/C BUTTON               |
| 10~19       | Number Key 0~9  | R/C BUTTON               |
| 53          | LIST            | R/C BUTTON               |
| 1A          | Q.VIEW          | R/C BUTTON               |
| 72          | RED Key         | R/C BUTTON               |
| 71          | GREEN Key       | R/C BUTTON               |
| 63          | YELLOW Key      | R/C BUTTON               |
| 61          | BLUE Key        | R/C BUTTON               |
| 20          | TEXT            | R/C BUTTON               |
| 21          | T.OPT(T.Option) | R/C BUTTON               |
| 39          | SUBTITLE        | R/C BUTTON               |
| 7E          | SIMPLINK        | R/C BUTTON               |
| B1          | Stop/Live       | R/C BUTTON               |
| BD          | Record          | R/C BUTTON               |
| 8F          | ◀◀              | R/C BUTTON               |
| 8E          | ▶▶              | R/C BUTTON               |
| B0          | ▶               | R/C BUTTON               |
| BA          | II              | R/C BUTTON               |

# APPENDIX

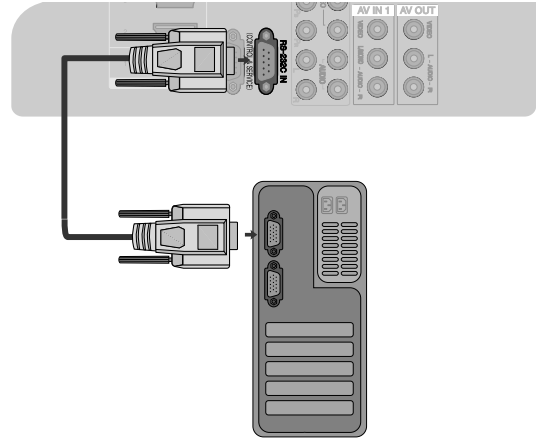
## EXTERNAL CONTROL THROUGH RS-232C

### 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.

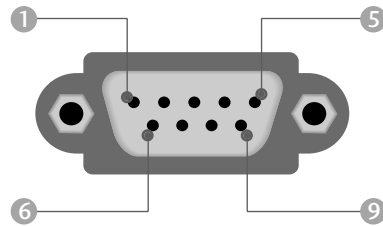
Connect the serial port of the control device to the RS-232C jack on the product back panel.

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        |



APPENDIX

### RS-232C Configurations

#### 7-Wire Configurations (Standard RS-232C cable)

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

D-Sub 9                  D-Sub 9

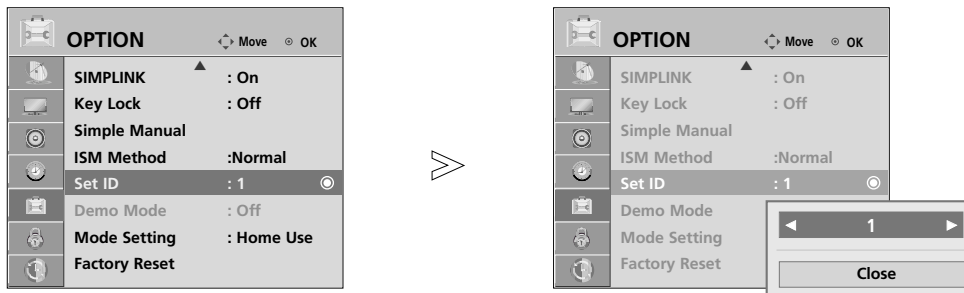
#### 3-Wire Configurations (Not standard)

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

D-Sub 9                  D-Sub 9

## Set ID



Use this function to specify a set ID number.  
Refer to 'Real Data Mapping'. ▶ p.135



1   Select **TV SETUP**.

2   Select **OPTION**.

3   Select **Set ID**.

4   Choose the desired TV ID number.  
The adjustment range of Set ID is 1~99.

- Press **BACK** 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<br>1 | COMMAND<br>2 | DATA<br>(Hexadecimal) |
|-------------------------------|--------------|--------------|-----------------------|
| 01. Power Control             | k            | a            | 00 ~ 01               |
| 02. Aspect Ratio              | k            | c            | Refer to p.133        |
| 03. Screen Mute               | k            | d            | 00 ~ 01               |
| 04. Volume Mute               | k            | e            | 00 ~ 01               |
| 05. Volume Control            | k            | f            | 00 ~ 64               |
| 06. Contrast                  | k            | g            | 00 ~ 64               |
| 07. Brightness                | k            | h            | 00 ~ 64               |
| 08. Colour                    | k            | i            | 00 ~ 64               |
| 09. Tint                      | k            | j            | 00 ~ 64               |
| 10. Sharpness                 | k            | k            | 00 ~ 64               |
| 11. OSD Select                | k            | l            | 00 ~ 01               |
| 12. Remote control lock mode  | k            | m            | 00 ~ 01               |
| 13. Treble                    | k            | r            | 00 ~ 64               |
| 14. Bass                      | k            | s            | 00 ~ 64               |
| 15. Balance                   | k            | t            | 00 ~ 64               |
| 16. Colour Temperature        | k            | u            | 00 ~ 02               |
| 17. ISM Method                | j            | p            | Refer to p.135        |
| 18. Lower Power               | j            | q            | 00 ~ 12               |
| 19. Auto Configure            | j            | u            | 01                    |
| 20. Tune Command              | m            | a            | Refer to p.136        |
| 21. Programme Memory/<br>Skip | m            | b            | 00 ~ 01               |
| 22. Key                       | m            | c            | Key Code              |
| 23. Input select              | x            | b            | Refer to p.136        |

- \* When setting the 17 ~ 23, a menu does not appear on screen.
- \* Note: During USB operations such as Dvix or EMF, all commands except Power (ka) and Key (mc) are not executed and treated as NG.

### 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 ~ 99. When selecting Set ID '0', every connected set is controlled. Set ID is indicated as decimal (1~99) on menu and as Hexa decimal (0x0~0x63) on transmission/receiving protocol.
- \* [DATA] : To transmit command data. Transmit 'FF' data to read status of command.
- \* [Cr] : Carriage Return  
ASCII code '0x0D'
- \* [ ] : ASCII code 'space (0x20)'

#### OK Acknowledgement

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

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

#### Error Acknowledgement

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

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

Data 00: Illegal Code

**01. Power Control (Command: k a)**

To control Power On/Off of the TV.

*Transmission*

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

Data 00: Power Off                      Data 01: Power On

*Ack*

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

**02. Aspect Ratio (Command: k c)**

To adjust the screen format.

*Transmission*

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

|                |                   |
|----------------|-------------------|
| Data 01: 4 : 3 | 07: 14 : 9        |
| 02: 16 : 9     | 09: Just Scan     |
| 04: Zoom       | 10: Cinema Zoom1  |
| 06: Original   | ⋮                 |
|                | 1F: Cinema Zoom16 |

*Ack*

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

**03. Screen Mute (Command: k d)**

To select screen mute on/off.

*Transmission*

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

*Ack*

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

Data 00: Screen Mute off (Picture On)

Data 01: Screen Mute on (Picture Off)

\* In case of screen mute on, TV will not display On Screen Display (OSD).

**04. Volume Mute (Command: ke)**

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)

Data 01: Volume Mute Off (Volume On)

*Ack*

```
[e][ ][Set ID][ ][OK][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: 00H ~ Max: 64H

(\*transmit by Hexadecimal code)

\*Refer to 'Real data mapping' ► p.135.

*Ack*

```
[f][ ][Set ID][ ][OK][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: 00H ~ Max: 64H

(\*transmit by Hexadecimal code)

\*Refer to 'Real data mapping' ► p.135.

*Ack*

```
[g][ ][Set ID][ ][OK][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: 00H ~ Max: 64H

(\*transmit by Hexadecimal code)

\*Refer to 'Real data mapping' ► p.135.

*Ack*

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

# APPENDIX

## 08. Colour (Command: k i)

To adjust screen colour.

You can also adjust colour in the PICTURE Menu.

### *Transmission*

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

Data Min: 00H ~ Max: 64H

(\*transmit by Hexadecimal code)

\*Refer to 'Real data mapping'. ► p.135.

### *Ack*

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

## 09. Tint (Command: k j)

To adjust screen tint.

You can also adjust tint in the PICTURE Menu.

### *Transmission*

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

Data Red: 00H ~ Green: 64H

(\*transmit by Hexadecimal code)

\*Refer to 'Real data mapping'. ► p.135.

### *Ack*

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

## 10. Sharpness (Command: k k)

To adjust screen sharpness.

You can also adjust sharpness in the PICTURE Menu.

### *Transmission*

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

Data Min: 00H ~ Max: 64H

(\*transmit by Hexadecimal code)

\*Refer to 'Real data mapping'. ► p.135.

### *Ack*

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

## 11. OSD Select (Command: k l)

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

### *Transmission*

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

Data 00: OSD Off

Data 01: OSD On

### *Ack*

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

## 12. Remote Control Lock Mode (Command: k m)

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

### *Transmission*

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

Data 00: off

Data 01: on

### *Ack*

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

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

## 13. Treble (Command: k r)

To adjust treble.

You can also adjust treble in the AUDIO menu.

### *Transmission*

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

Data Min: 00H ~ Max: 64H

(\*transmit by Hexadecimal code)

\*Refer to 'Real data mapping'. ► p.135.

### *Ack*

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

## 14. Bass (Command: k s)

To adjust bass.

You can also adjust bass in the AUDIO menu.

### *Transmission*

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

Data Min: 00H ~ Max: 64H

(\*transmit by Hexadecimal code)

\*Refer to 'Real data mapping'. ► p.135.

### *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: 00H ~ Max: 64H  
(\*transmit by Hexadecimal code)

Ack

[t][ ][Set ID][ ][OK][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

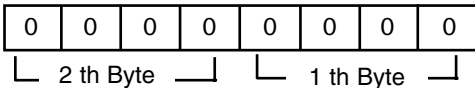
Ack

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

### 17. ISM Method (Command: j p)

To avoid having a fixed image remain on screen.

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



| 7 | 6 | 5 | 4 | 3 | 2 | 1 | 0 | Data | Function    |
|---|---|---|---|---|---|---|---|------|-------------|
| 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 2H   | Orbiter     |
| 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 4H   | White Wash  |
| 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 8H   | Normal      |
| 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 20H  | Colour Wash |
| X | X | X | X |   |   |   |   |      | Reserved    |

Ack

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

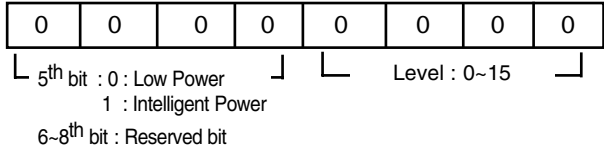
Data : 2H, 4H, 8H, 20H

\* More two kinds of function can not be set at a time.

### 18. Low Power(Energy Saving) (Command: j q)

To control the low power function.

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



| 7 | 6 | 5 | 4 | 3 | 2 | 1 | 0 | Data | Function          |
|---|---|---|---|---|---|---|---|------|-------------------|
| X | x | X | 0 | 0 | 0 | 0 | 0 | 00H  | Off               |
| X | X | x | 0 | 0 | 0 | 0 | 1 | 01H  | Minimum           |
| X | X | x | 0 | 0 | 0 | 1 | 0 | 02H  | Medium            |
| x | x | X | 0 | 0 | 0 | 1 | 1 | 03H  | Maximum           |
| x | x | x | 1 | 0 | 0 | 0 | 0 | 10H  | Intelligent(Low)  |
| x | x | x | 1 | 0 | 0 | 0 | 1 | 11H  | Intelligent(Mid)  |
| x | x | x | 1 | 0 | 0 | 1 | 0 | 12H  | Intelligent(High) |

Ack

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

Data : Low Power : 0H, 1H, 2H, 3H

Intelligent : 10H~12H(\*transmit by Hexadecimal code)

#### \* Real data mapping 1

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

#### \* Real data mapping 2

00 :-40  
01 :-39  
02 :-38  
⋮  
28 :0  
⋮  
4E : +38  
4F : +39  
50 : +40

# APPENDIX

## 19. Auto Configuration (Command: j u)

To adjust picture position and minimize image shaking automatically. Auto configuration only works in RGB-PC mode.

### Transmission

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

Data 1

Ack

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

Data 1H

## 20. Tune Command (Command: m a)

Tune 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 -> 018A (18AH) No. 0 -> Don't care

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

Channel data range

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

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

Ack

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

Data Min : 00H ~ Max : ff

## 21. 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]

## 22. Key (Command: m c)

IR remote key code.

### Transmission

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

Data: Key code - Refer to page 129.

Ack

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

## 23. Input select (Command: x b)

To select input source for TV.

### Transmission

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

Data Structure

|                    |   |   |   |                  |   |   |   |
|--------------------|---|---|---|------------------|---|---|---|
| MSB                |   |   |   | LSB              |   |   |   |
| 0                  | 0 | 0 | 0 | 0                | 0 | 0 | 0 |
| └ External Input ┘ |   |   |   | └ Input Number ┘ |   |   |   |

| External Input |   |   |   | Data      |
|----------------|---|---|---|-----------|
| 0              | 0 | 0 | 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 | 1 | HDMI      |

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

Ack

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

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