LG
Life's Good

ENGLISH

PLASMA TV
OWNER'S MANUAL

PLASMA TV MODELS

50PS70**
60PS70**

Please read this manual carefully before operating your TV.
Retain it for future reference.
Record the 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 any service.

DVB
Digital Video Broadcasting

Trade Mark of the DVB Digital Video Broadcasting Project (1991 to 1996)

ID Number(s): 6250 : 50PS70FD-AA
6249 : 60PS70FD-AA

ENERGY STAR

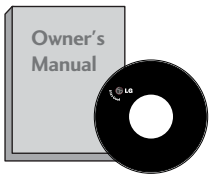
This product qualifies for ENERGY STAR in the "factory default (Home Use mode)" setting and this is the setting in which power savings will be achieved.
Changing the factory default picture setting or enabling other features will increase power consumption that could exceed the limits necessary to qualify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

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

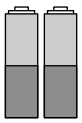
ACCESSORIES

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

- **Image shown may differ from your TV.**

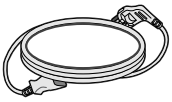


Owner's Manual

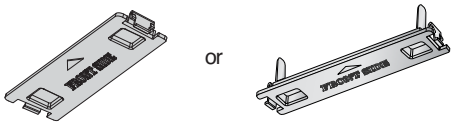


Batteries

Remote Control

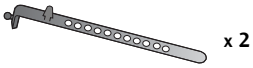


Power Cord



Protection Cover
(Refer to p.8)

Bolts for stand assembly
(Only 50PS70**)
(Refer to p.6)



Cable Holder
(Refer to p.8)

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.

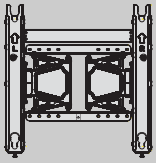
* Lightly wipe any stains or fingerprints on the surface of the TV with the polishing cloth.

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

Cable management clip
(Refer to p.8)

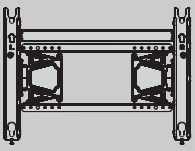
Wall Mounting Bracket
(Separate purchase)

AW-50PG60MS



(50PS70)**

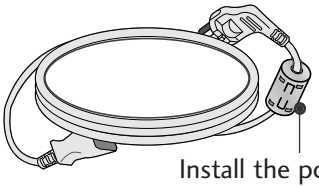
AW-60PG60MS



(60PS70)**

Use of ferrite core (This item is not included 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.

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PREPARATION

FRONT PANEL CONTROLS

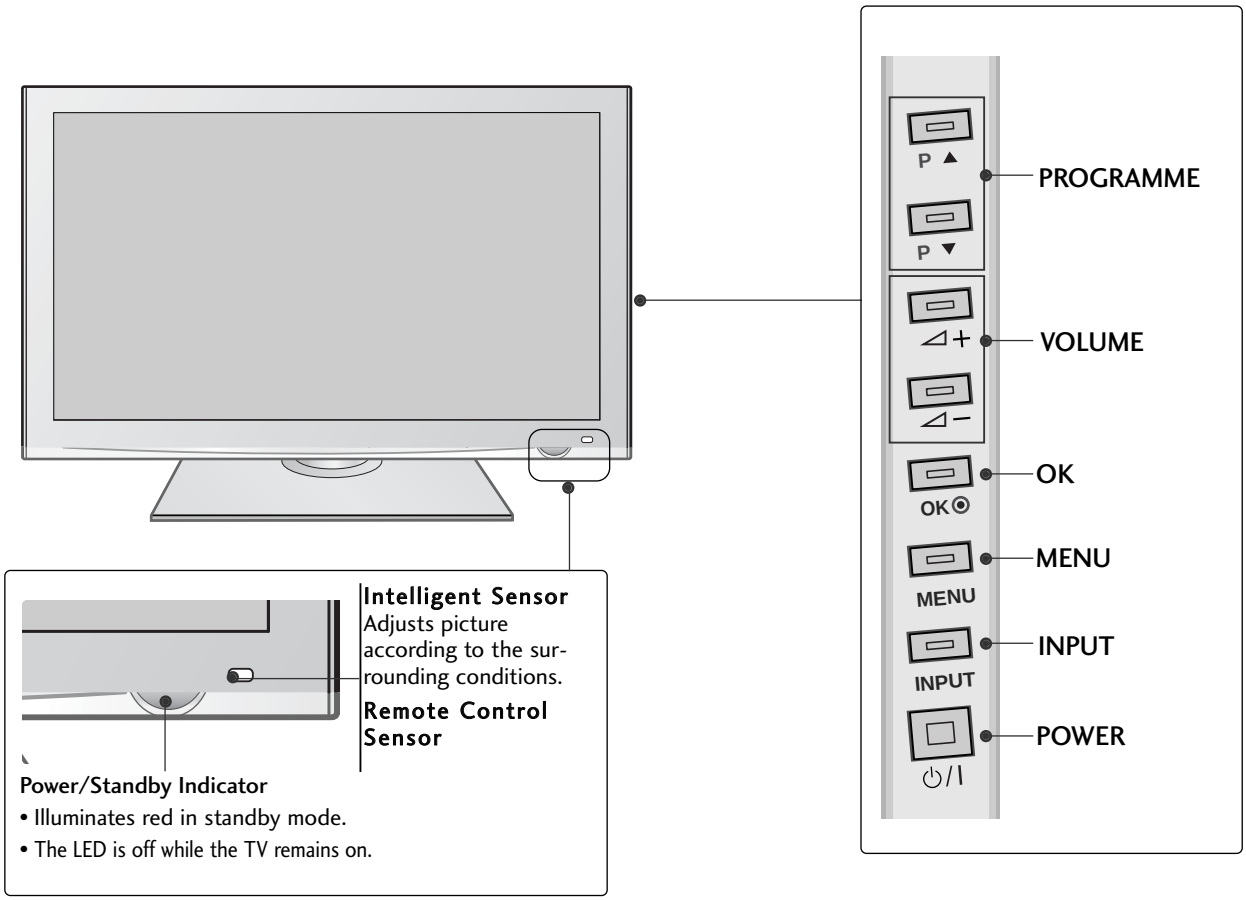
NOTE

▶ 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.

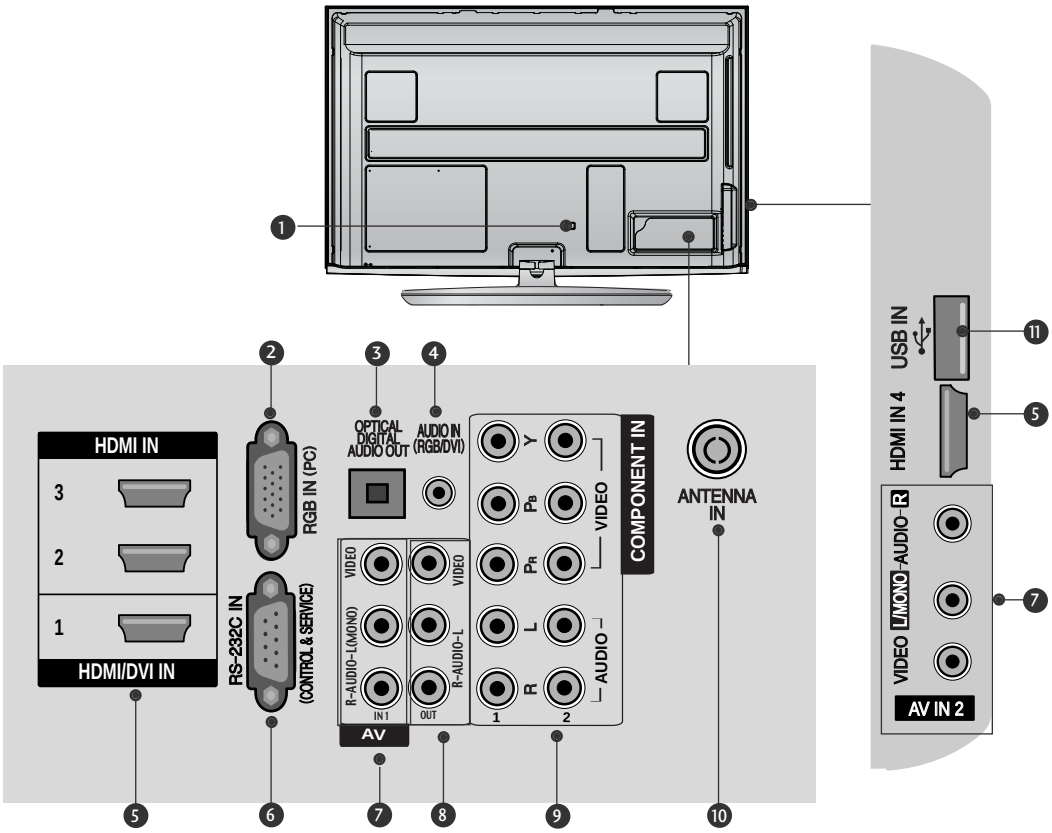
CAUTION

▶ 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.



❶ **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.

❷ **RGB Input**
Connect the output from a PC.

❸ **OPTICAL DIGITAL AUDIO OUT**
Connect digital audio to various types of equipment.
Connect to a Digital Audio Component.
Use an Optical audio cable.

❹ **RGB/DVI Audio Input**
Connect the audio from a PC or DTV.

❺ **HDMI Input**
Connect an HDMI signal to HDMI IN. Or DVI (VIDEO) signal to HDMI/DVI port with DVI to HDMI cable.

❻ **RS-232C IN (CONTROL & SERVICE) PORT**
Connect to the RS-232C port on a PC.
This port is used for Service or Hotel mode.

❼ **Audio/Video Input (AV IN1/2)**
Connect audio/video output from an external device to these jacks.

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

❾ **Component Input**
Connect a component video/audio device to these jacks.

❿ **Antenna Input**
Connect RF antenna to this jack.

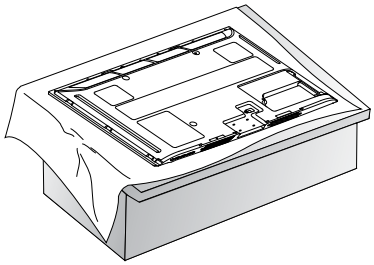
⓫ **USB Input**
Connect USB storage device to this jack.

STAND INSTALLATION

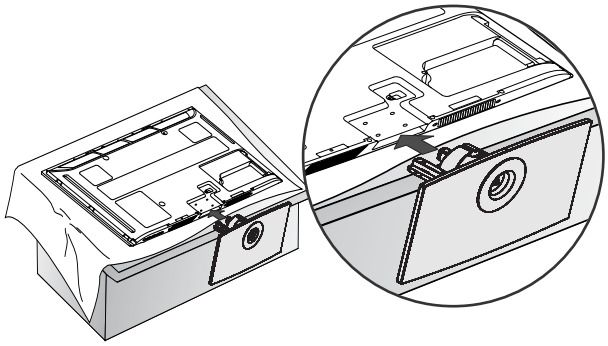
Only 50PS70**

- 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.**

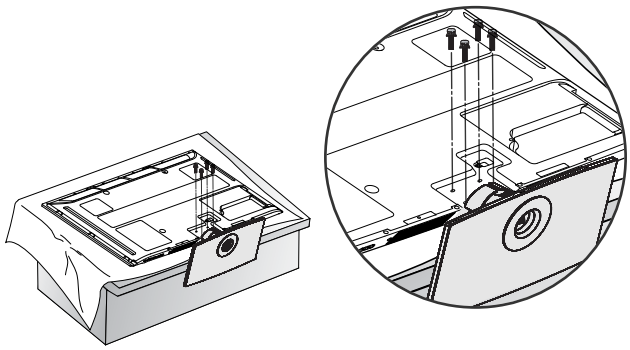
1. Carefully place the TV screen side down on a cushioned surface to protect the screen from damage.

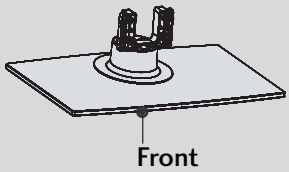


2. Assemble the TV as shown.



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

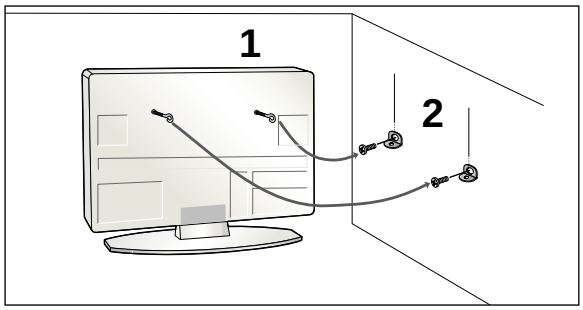


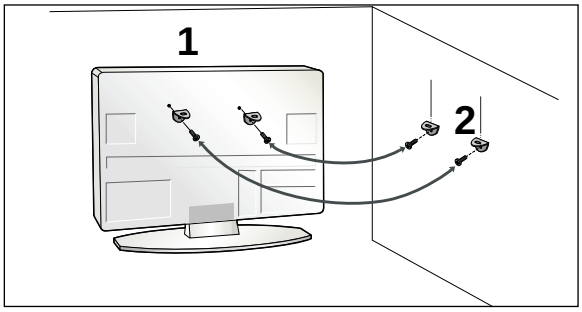


When assembling the stand, make sure to distinguish and assemble the front and rear side of the stand correctly.

CAREFUL INSTALLATION ADVICE

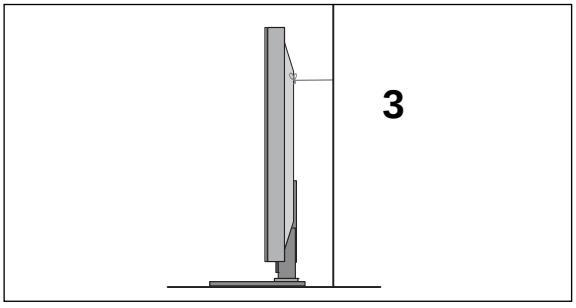
- You should purchase necessary components to fix the TV safety and secure to the wall from the market.
- **Position the TV close to the wall to avoid the possibility of it falling when pushed.**
- **The instructions shown below are a safer way to set up the TV, by fixing it to the wall, avoiding the 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.



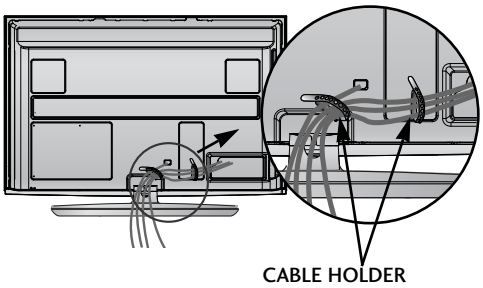
3. Use a sturdy rope to tie the product for alignment. It is safer to tie the rope so it becomes horizontal between the wall and the product.

NOTE

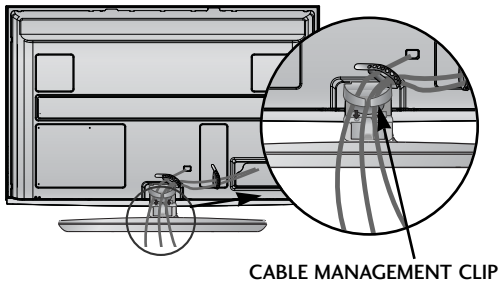
- ► When moving the TV undo the cords first.
- ► Use a platform or cabinet strong and large enough to support the size and weight of the TV.
- ► To use the TV safely make sure that the height of the bracket on the wall and on the TV is the same.

BACK COVER FOR WIRE ARRANGEMENT

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.

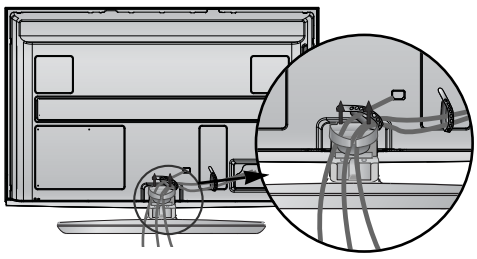


2. Install the **CABLE MANAGEMENT CLIP** as shown.



How to remove the cable management clip

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



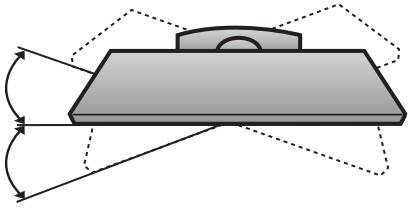
NOTE

▶ 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

■ Image shown may differ from your TV.

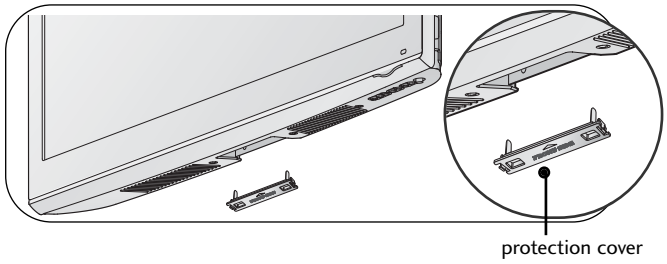
After installing the TV, you can adjust the TV set manually to the left or right direction by 20 degrees to suit your viewing position.



NOT USING THE DESK-TYPE STAND

■ Image shown may differ from your TV.

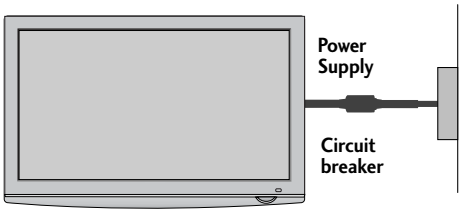
When installing the wall-mounted unit, use the protection cover. Insert the **PROTECTION COVER** into the TV until clicking sound.



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.

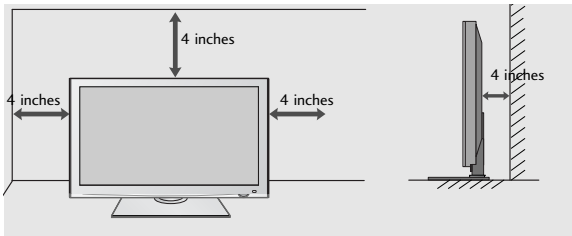
Do not try to earth the TV by connecting it to telephone wires, lightening rods or gas pipes.



- 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.

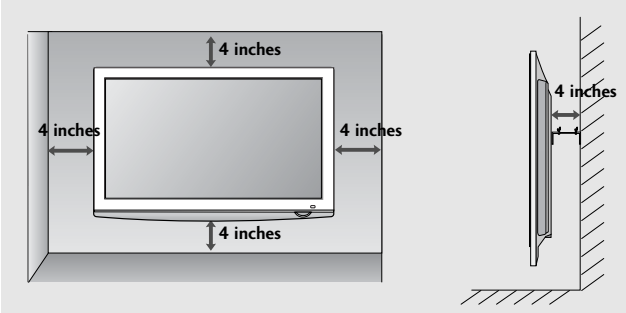


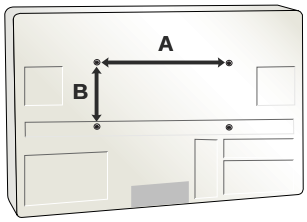
WALL MOUNT: HORIZONTAL INSTALLATION

- 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.





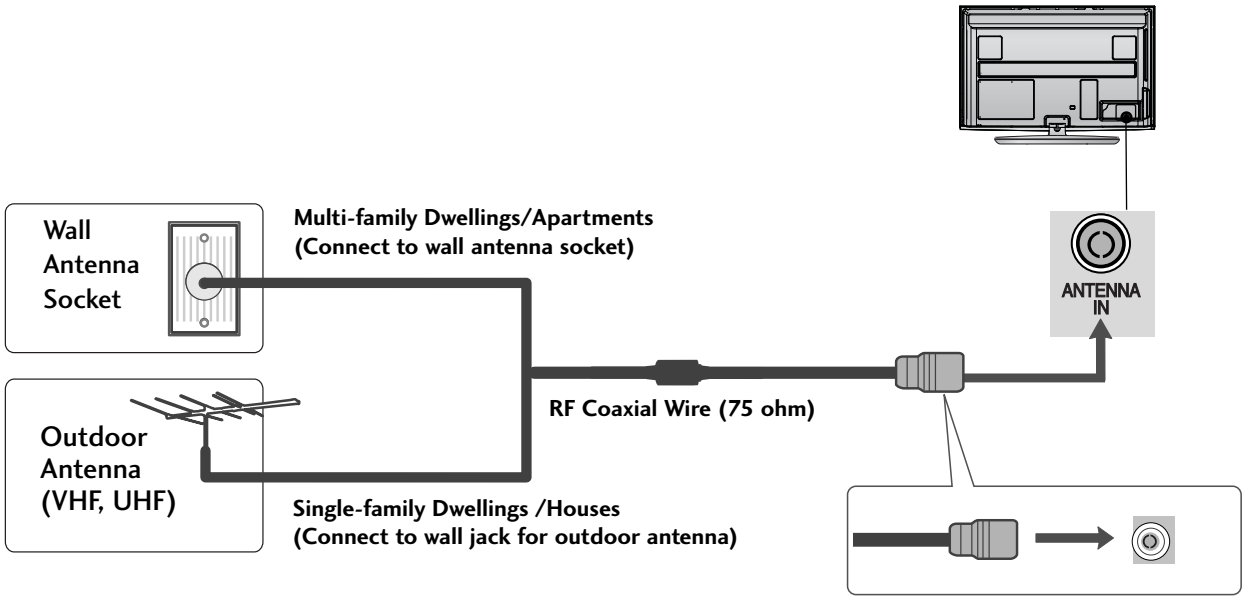
Model	VESA (A * B)	Standard Screw	Quantity
50PS70**	400 * 400	M6	4
60PS70**	600 * 400	M8	4

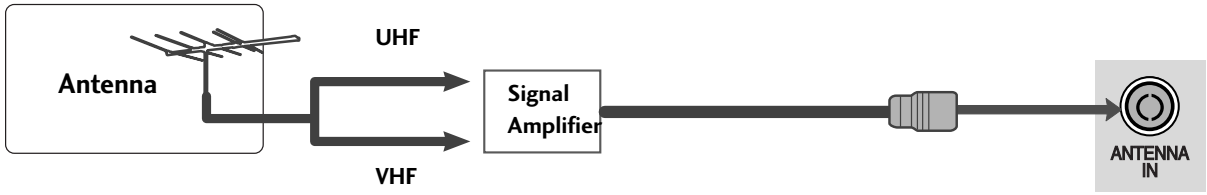
PREPARATION

- 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

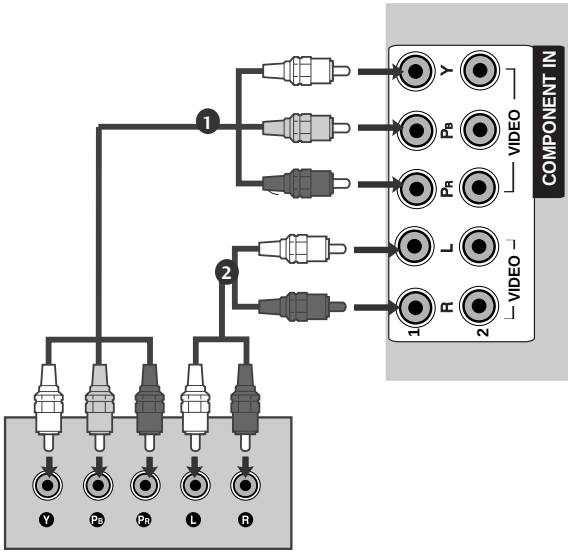
- **To avoid damaging any equipment, never plug in any power cords until you have finished connecting all equipment.**
- Image shown may differ from your TV.

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 cable

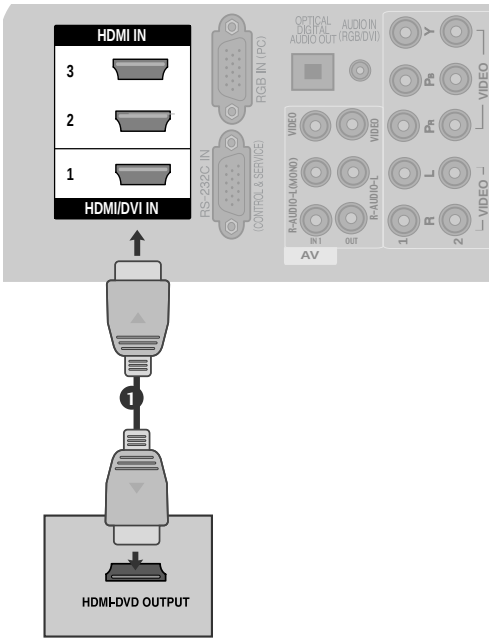
1. Connect the video outputs (Y, PB, PR) of the digital set top box to the **COMPONENT IN VIDEO** jacks on the TV.
2. Connect the audio output of the digital set-top box to the **COMPONENT IN AUDIO** jacks on the TV.
3. Turn on the digital set-top box.
   (Refer to the owner's manual for the digital set-top box.)
4. Select **Component1** 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	O	X
480p/576p	O	O
720p/1080i	O	O
1080p	O (50/60Hz only)	O (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 **HDMI 4** input source using the **INPUT** button on the remote control.

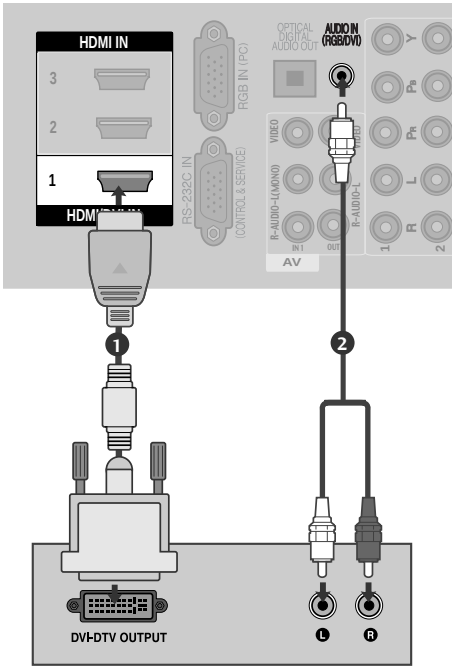


NOTE

▶ 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.

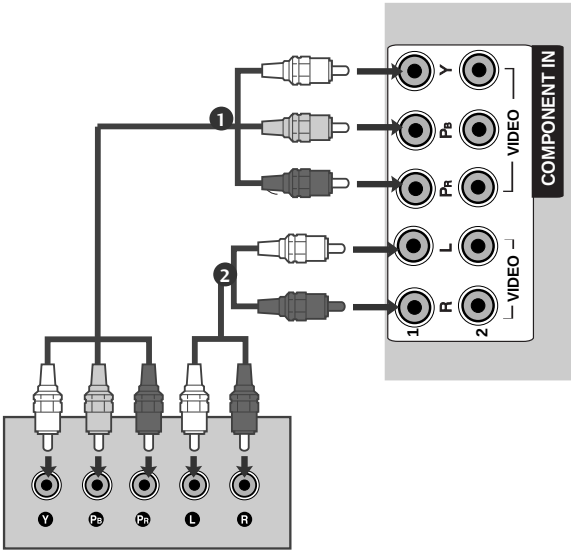
Connecting with an HDMI to DVI cable

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.



DVD SETUP

Connecting with a component cable



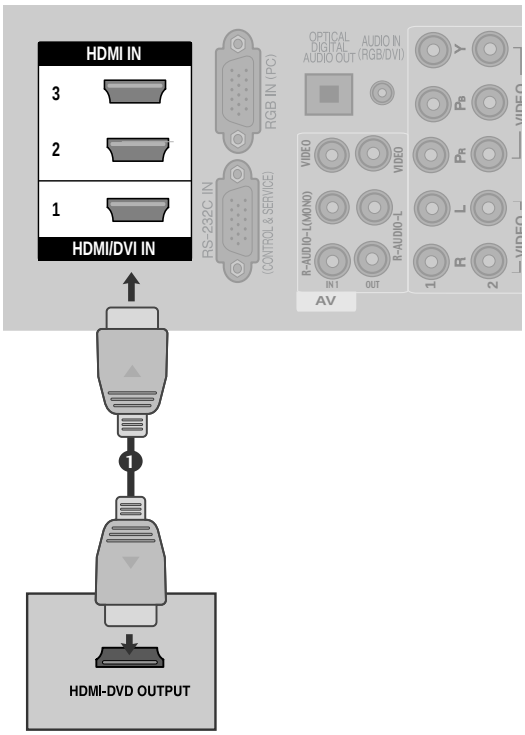
1. Connect the video outputs (Y, PB, PR) of the DVD to the **COMPONENT IN VIDEO** jacks on the TV.
2. Connect the audio outputs of the DVD to the **COMPONENT IN AUDIO** jacks on the TV.
3. Turn on the DVD player, insert a DVD.
4. Select **Component1** input source using the **INPUT** button on the remote 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	PB	PR
Video output ports on DVD player	Y	PB	PR
	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**, **HDMI 3** or **HDMI 4** input source using the **INPUT** button on the remote control.
3. Refer to the DVD player's manual for operating instructions.

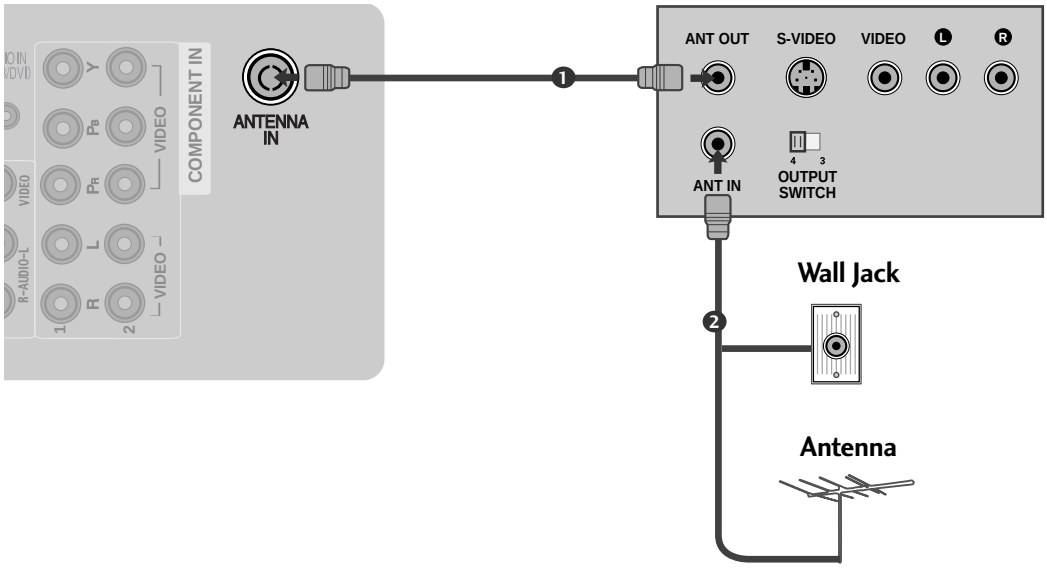
NOTE

- ▶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.

VCR SETUP

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

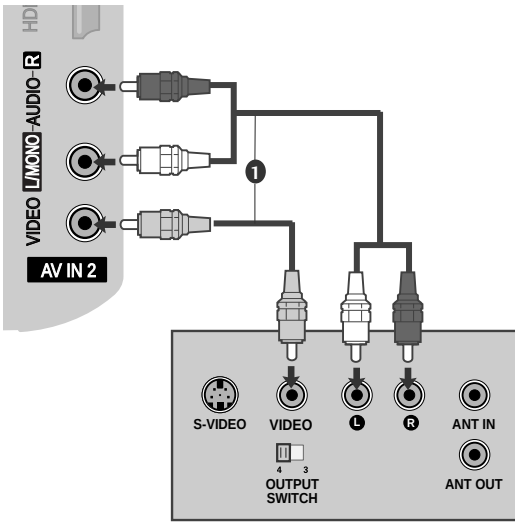
Connecting with a RF Cable



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 a RCA cable

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



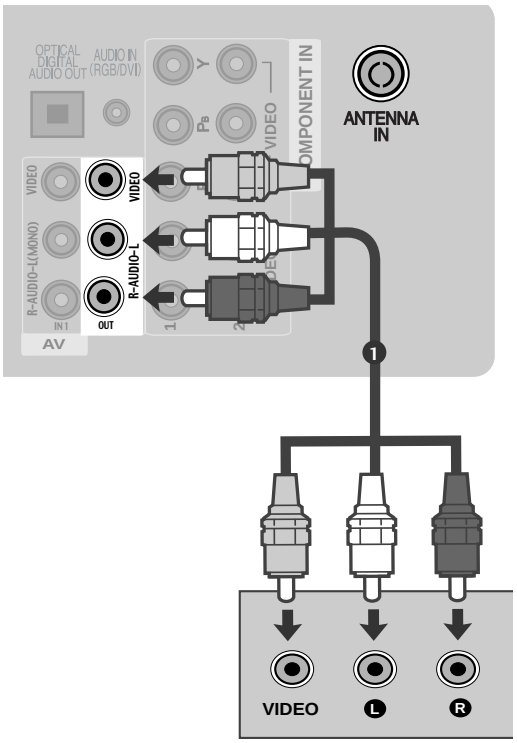
NOTE

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

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.

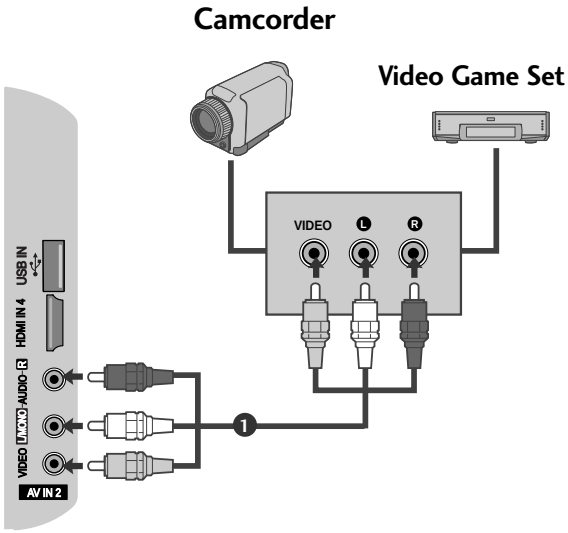
1. Connect the second TV or monitor to the TV's **AV OUT** jacks.
2. See the Operating Manual of the second TV or monitor for further details regarding that device's input settings.



NOTE

- Only Analog Channel and AV mode 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



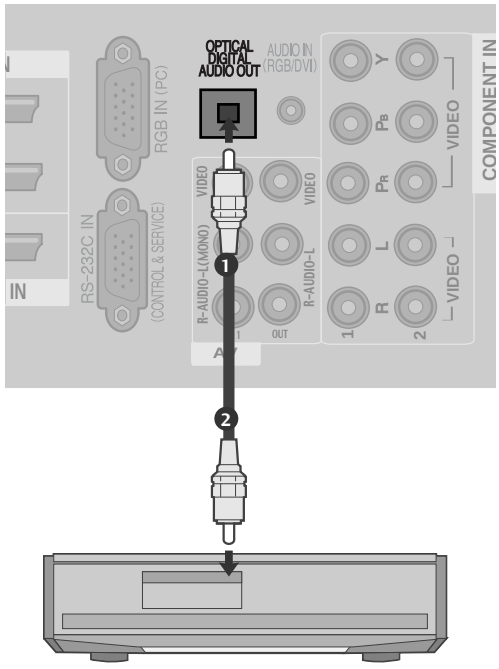
1. Connect the **AUDIO/VIDEO** jacks between TV and external equipment. Match the jack colours. (Video = yellow, Audio Left = white, and Audio Right = red)

2. Select **AV2** input source using the **INPUT** button on the remote control.
   If connected to **AV IN 1** input, 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.101). Refer to the external audio equipment instruction manual for operation.

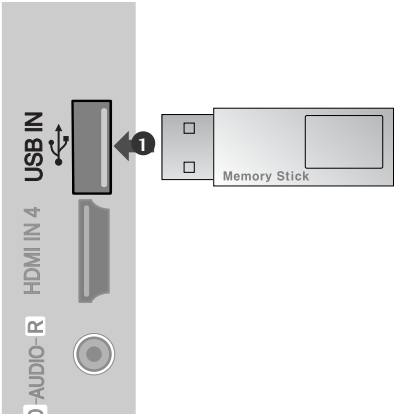
⚠ CAUTION

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

USB SETUP

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

2. After connecting the **USB IN** jacks, you use the **USB** function. (▶ p.66)



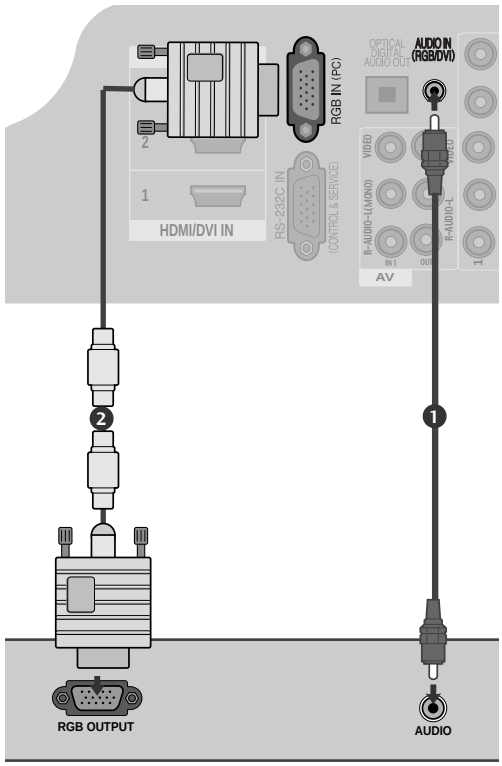
⚠ CAUTION

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

PC SETUP

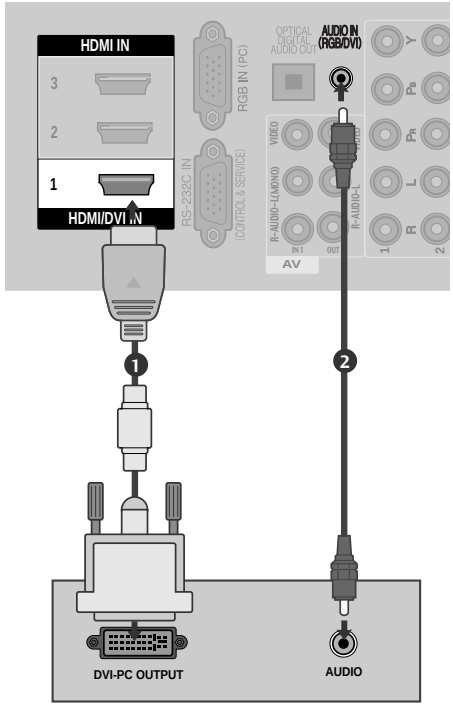
This TV provides Plug and Play capability, meaning that the PC adjusts automatically to the TV's settings.

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
	45.00	60
1920x1080	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(50PS70**, 60PS70**) 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 the 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 an HDMI to DVI cable.
- ► If you use an RGB-PC cable that is too long, there may be interference on the screen. We recommend using under 5m of cable. This provides the best picture quality.

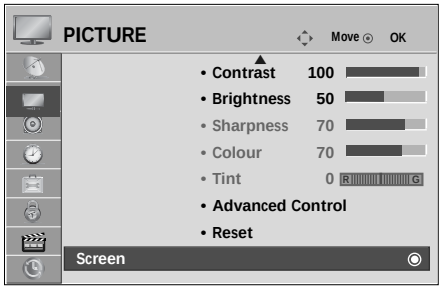
EXTERNAL EQUIPMENT SETUP

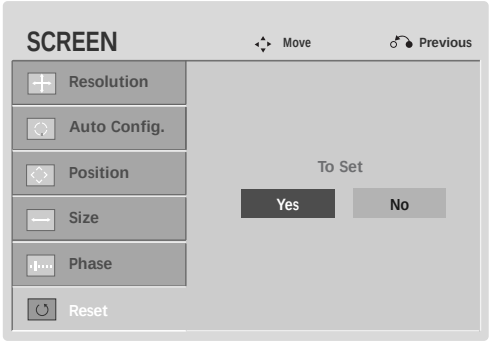
Screen Setup for PC mode

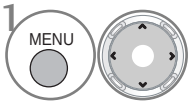
Screen Reset

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

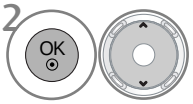
This function works in the following mode : RGB[PC].



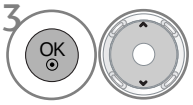


1 

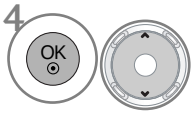
Select **PICTURE**.

2 

Select **Screen**.

3 

Select **Reset**.

4 

Select **Yes**.

5

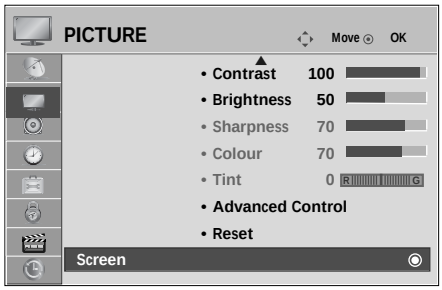
Run **Reset**.

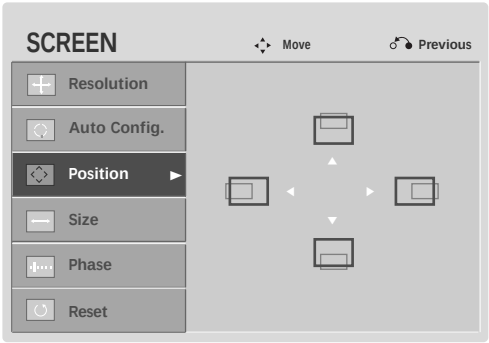
- Press the **MENU** button to return to normal TV viewing.
- Press the **RETURN** button to move to the previous menu screen.

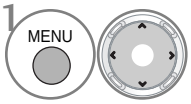
Adjustment for screen Position, Size, Phase

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

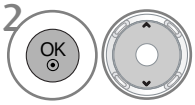
This function works in the following mode : RGB[PC].



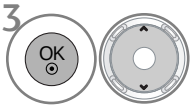


1 

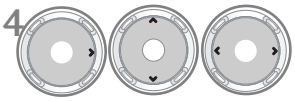
Select **PICTURE**.

2 

Select **Screen**.

3 

Select **Position**, **Size** or **Phase**.

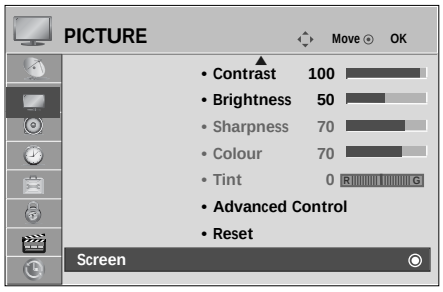
4 
Make appropriate adjustments.

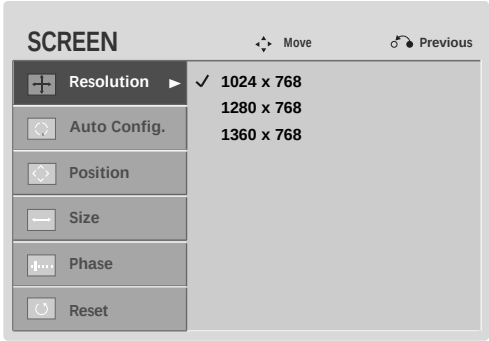
- Press the **MENU** button to return to normal TV viewing.
- Press the **RETURN** button to move to the previous menu screen.

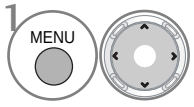
Selecting Resolution

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

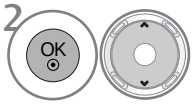
This function works in the following mode: RGB[PC]



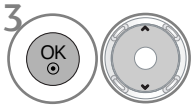




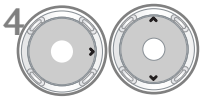
Select **PICTURE**.



Select **Screen**.



Select **Resolution**.



Select the desired resolution.

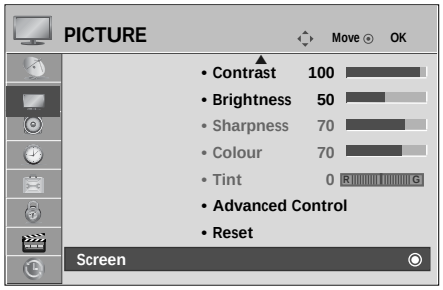
- Press the **MENU** button to return to normal TV viewing.
- Press the **RETURN** button to move to the previous menu screen.

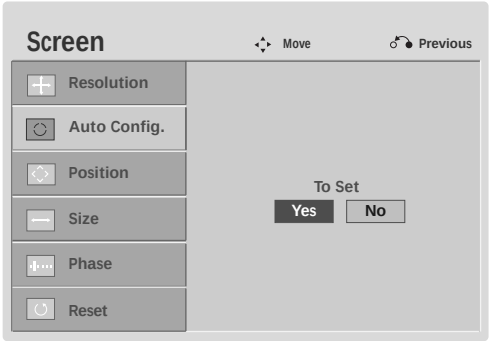
Auto Configure (RGB [PC] mode only)

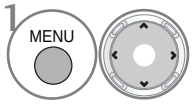
Automatically adjusts picture position and minimizes image instability. After adjustment, if the image is still not correct, your TV is functioning properly but needs further adjustment.

Auto configure

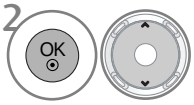
This function is for automatic adjustment of the screen position, size, and phase The displayed image will be unstable for a few seconds while the auto configuration is in progress.



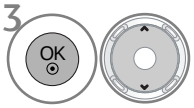


1 

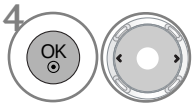
Select **PICTURE**.

2 

Select **Screen**.

3 

Select **Auto Config.**.

4 

Select **Yes**.

5

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.

TV/STB	Select the remote operating mode: TV, or STB.
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.42)
TV/RAD	Selects Radio, TV and DTV channel.

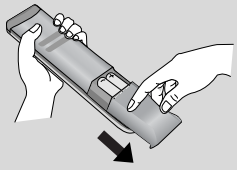
Q. MENU	Select the desired quick menu source. (Aspect Ratio, Clear Voice II, Picture Mode, Sound Mode, Multi Audio, Sleep Timer, Favourite, Remove USB device.)(▶ p.27)
MENU	Selects a menu. Clears all on-screen displays and returns to TV viewing from any menu.(▶ p.28)
GUIDE	Shows programme schedule.(▶ p.49)

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.40)
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.
CHAR/NUM, DELETE	Used to edit programme title in Recorded TV and schedule list.
0~9 number button/	Selects a programme. Selects numbered items in a menu. Use for character/number input.
LIST	Displays the programme table.(▶ p.39)
Q.VIEW	Returns to the previously viewed programme.

THUMBSTICK (Up/Down/Left/Right)	Allows you to navigate the on-screen menus and adjust the system settings to your preference. Arrow buttons.
OK	Accepts your selection or displays the current mode.
Time Machine control buttons	◀◀ (Rewind), ▶▶ (Fast Forward), ▶ (Playback), II (Pause), < , > (Jump thumbnail) (Freezes the current frame by pressing the II (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**, **Multimedia**, **Guide**, **Schedule list**.
REPEAT	Used for playing the Recorded TV function.
1 TELETEXT BUTTONS	These buttons are used for teletext. For further details, see the 'Teletext' section.(▶ **p.115**)
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.43**)
RATIO	Selects your desired picture format.
AV MODE	It helps you select and set images and sounds when connecting AV devices.(▶ **p.46**)
ENERGY SAVING	Adjust the Energy Saving mode of the TV.(▶ **p.85**)

Installing Batteries



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

TURNING ON THE TV

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

1. Firstly, connect the power cord correctly and check the main power on the TV.
   At this stage, the TV switches to standby mode.

2. In standby mode to turn TV on, press the ⏻ **/ I**, **INPUT** or **P ▲ ▼** button on the TV or press the **POWER**, **INPUT**, **P** ∧ ∨ or **NUMBER** button on the remote control and the TV will switch on.

Initializing setup

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

NOTE

▶ If the TV is unplugged once or turn off with the ⏻ / I (power) button on the TV, the time setting is set to **Auto** to set time automatically.

PROGRAMME SELECTION

1. Press the **P** ∧ ∨ or **NUMBER** buttons to select a programme number.

VOLUME ADJUSTMENT

1. Press the ◿ **+** 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**, ◿ **+** , **-** or AV Mode 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.

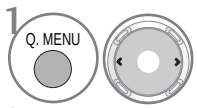
Sound Mode: Selects the factory preset sound for type of programme.

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.



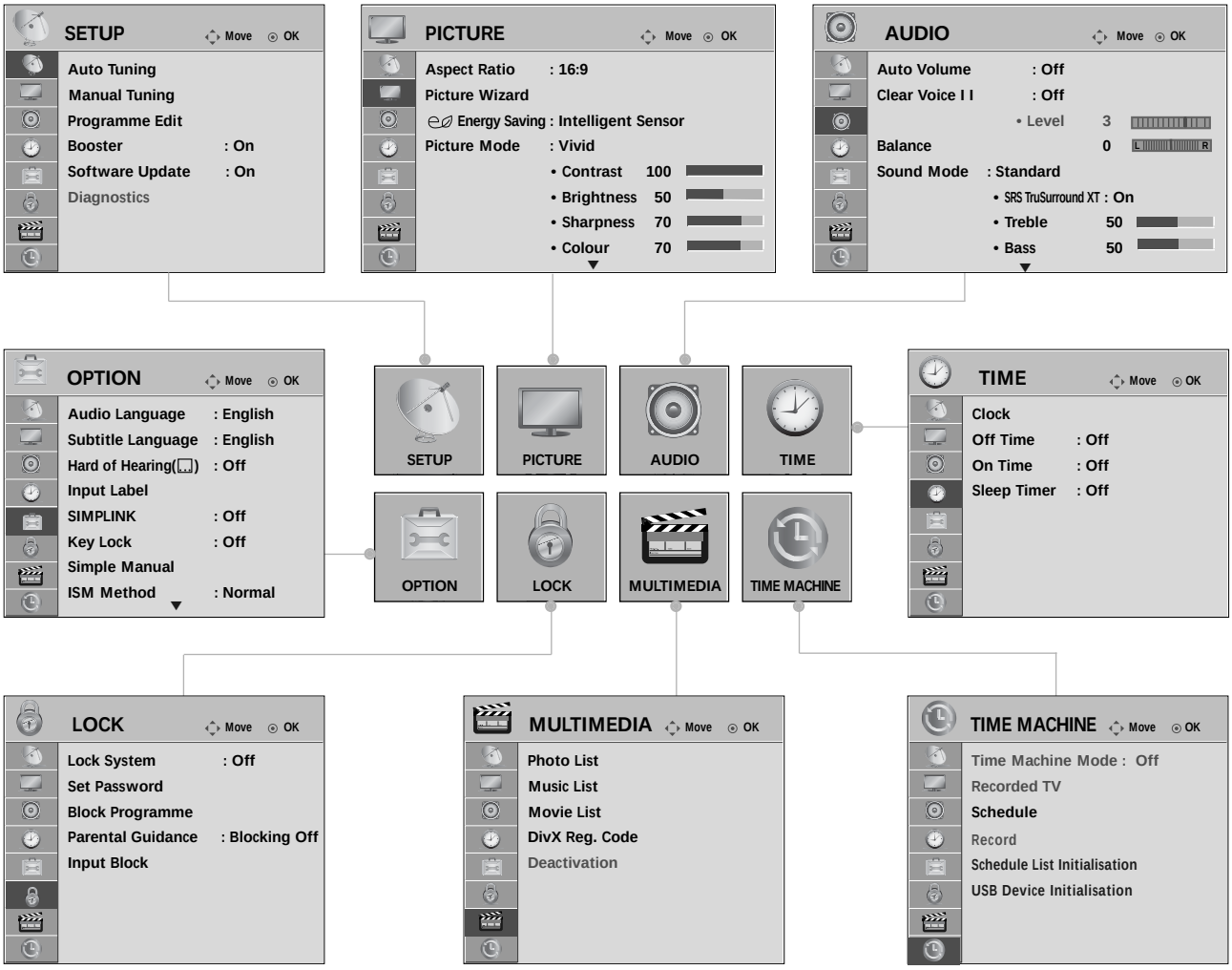
Display each menu.

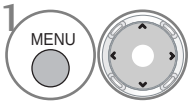
Select your desired Source.

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

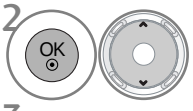
ON-SCREEN MENUS SELECTION AND ADJUSTMENT

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



1 

Display each menu.

2 

Select a menu item.

3

Move to the pop up menu.

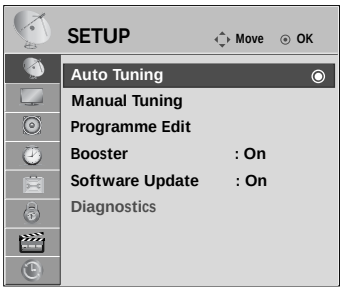
- Press the **INFO** button, you can check the **Simple Manual**.
- Press the **MENU** button to return to normal TV viewing.
- Press the **RETURN** button to move to the previous menu screen.

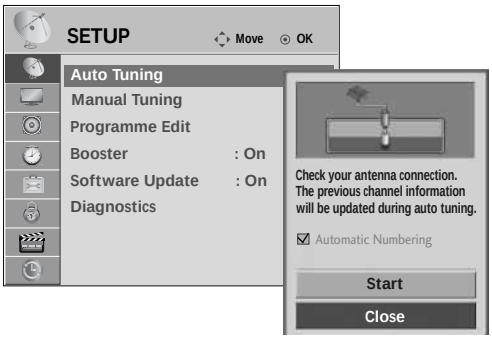
AUTO PROGRAMME TUNING

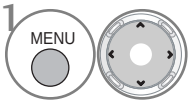
Use this to automatically find and store all available programmes.

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

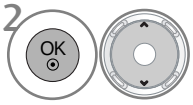
The maximum number of programmes that can be stored is 400. But the number may differ slightly depending on broadcasting signals.



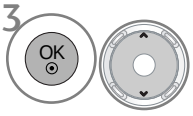


1 

Select **SETUP**.

2 

Select **Auto Tuning**.

3 

Select **Start**.

4

Run **Auto Tuning**.

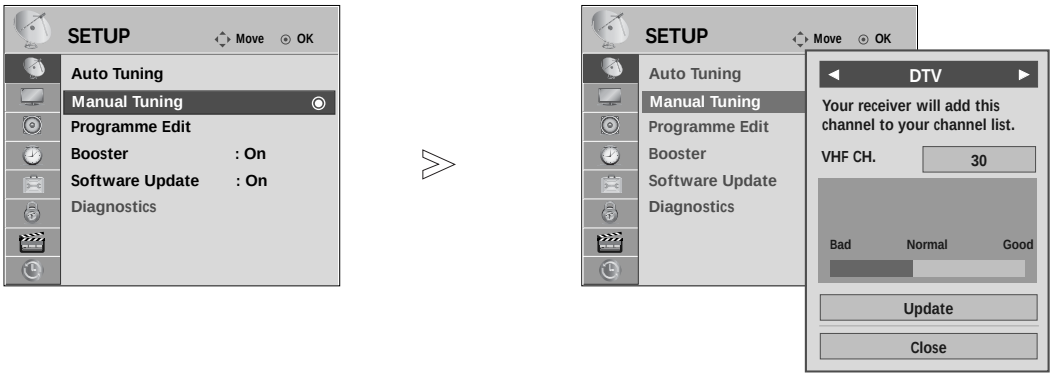
- Use NUMBER buttons to input a 4-digit password in **Lock System** '**On**'.
- If you wish to keep on auto tuning select **Start** using the ∧ ∨ button. Then, press the **OK** button. Otherwise select **Close**.
- **Automatic Numbering** : Decide whether to use the programme numbers as sent by broadcasting stations for tuning.

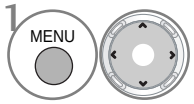
- Press the **MENU** button to return to normal TV viewing.
- Press the **RETURN** button to move to the previous menu screen.

MANUAL PROGRAMME TUNING (IN DIGITAL MODE)

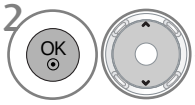
Manual Tuning lets you manually add a programme to your programme list.

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

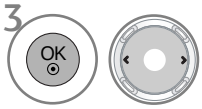




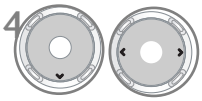
Select **SETUP**.



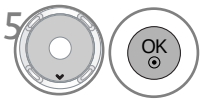
Select **Manual Tuning**.



Select **DTV**.



Select the desired channel number.



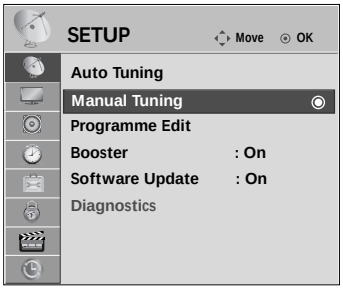
Update.

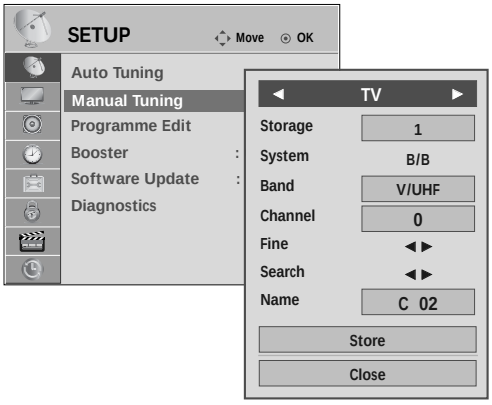
- Use NUMBER buttons to input a 4-digit password in **Lock System** '**On**'.

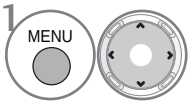
- Press the **MENU** button to return to normal TV viewing.
- Press the **RETURN** button to move to the previous menu screen.

MANUAL PROGRAMME TUNING (IN ANALOGUE MODE)

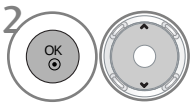
Manual Tuning lets you manually tune and arrange the stations in whatever order you desire.



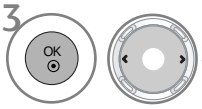


1 

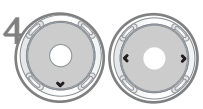
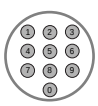
Select **SETUP**.

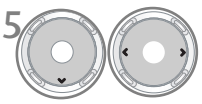
2 

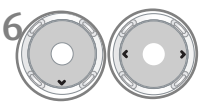
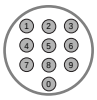
Select **Manual Tuning**.

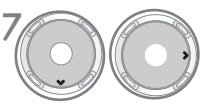
3 

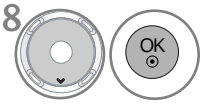
Select **TV**.

4 
or 
Select the desired programme number on.

5 
Select **V/UHF** or **Cable**.

6 
or 
Select the desired channel number.

7 
Commence searching.

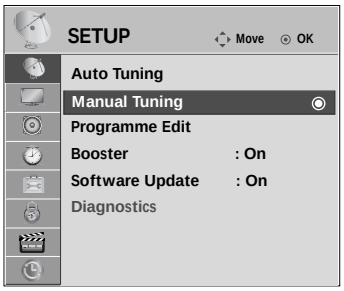
8 

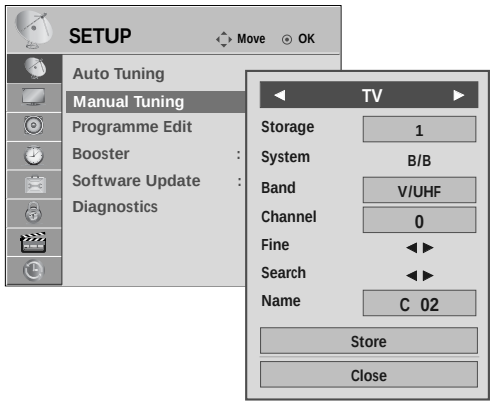
Select **Store**.

9

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

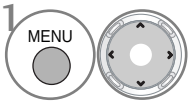
- Use NUMBER buttons to input a 4-digit password in **Lock System** '**On**'.
- To store another channel, repeat steps 4 to 9.

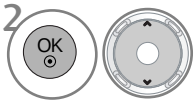


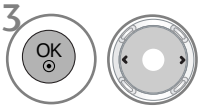


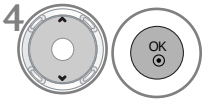
■ Assigning a station name

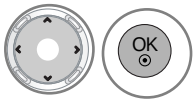
You can assign a station name with five characters to each programme number.

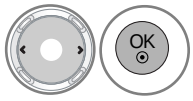
1  Select **SETUP**.

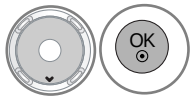
2  Select **Manual Tuning**.

3  Select **TV**.

4  Select **Name**.

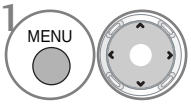
5  Select the position and make your choice of the second character, and so on.
You can use an the alphabet **A** to **Z**, the number **0** to **9**, +/ -, and blank.

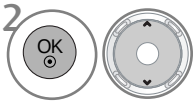
6  Select **Close**.

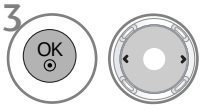
7  Select **Store**.

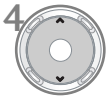
■ Fine Tuning

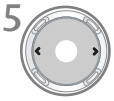
Normally fine tuning is only necessary if reception is poor.

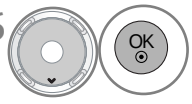
1  Select **SETUP**.

2  Select **Manual Tuning**.

3  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.

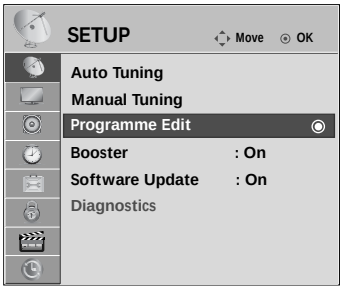
PROGRAMME EDIT

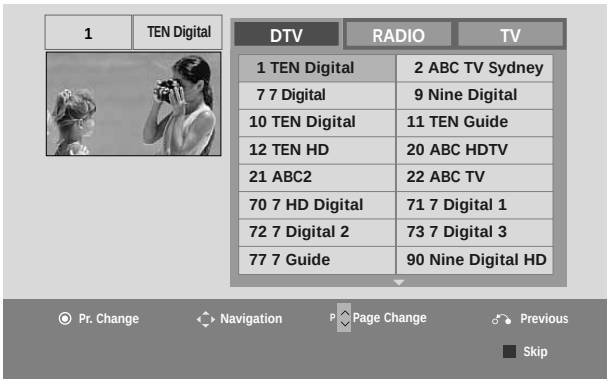
When a programme number is skipped, it means that you will be unable to select it using **P** ∧ ∨ button during TV viewing.

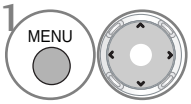
If you wish to select the skipped programme, directly enter the programme number with the NUMBER buttons or select it in the Programme edit menu.

This function enables you to skip the stored programmes.

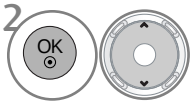
You can change the programme number using “Move”function, if “Automatic Numbering” is unchecked when you start Auto Tuning.





1 

Select **SETUP**.

2 

Select **Programme Edit**.

3

Enter the **Programme Edit**.

4
Select a programme to be stored or skipped.

- 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 BLUE Turn the programme number to blue.

3 BLUE Release.

- When programmes are to be skipped, the skipped programme shows in blue and these programmes will not be selected by the P ∧ ∨ 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.

IN TV MODE

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

■ Deleting a programme

1 Select a programme number to be deleted.

2 RED Turn the programme number to red.

3 RED Delete. RED Release.

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

■ Moving a programme

1 Select a programme number to be moved.

2 GREEN Turn the programme number to green.

3 GREEN Release.

■ Skipping a programme number

1 Select a programme number to be skipped.

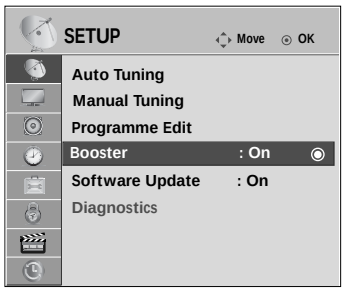
2 BLUE Turn the programme number to blue.

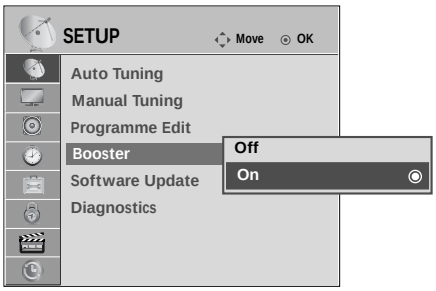
3 BLUE Release.

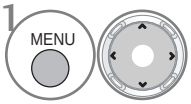
- When a programme number is skipped it means that you will be unable to select it using the P ∧ ∨ button during normal TV viewing.
- If you wish to select a skipped programme, directly enter the programme number with the NUMBER buttons or select it in the programme edit or EPG.

BOOSTER

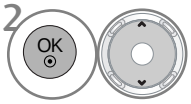
If reception is poor select Booster to On.
When the signal is strong, select "Off".



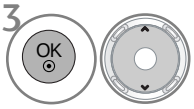


1 

Select **SETUP**.

2 

Select **Booster**.

3 

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

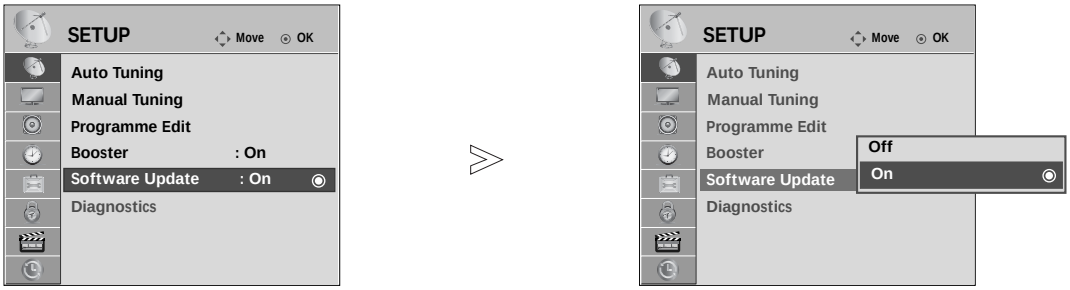
4

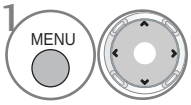
Save.

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

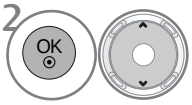
SOFTWARE UPDATE

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

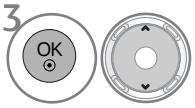


1 

Select **SETUP**.

2 

Select **Software Update**.

3 

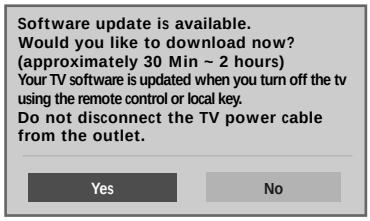
Select **On** or **Off**.
- If you select **On**, a user confirm message box will be displayed to notify that new software is found.

4

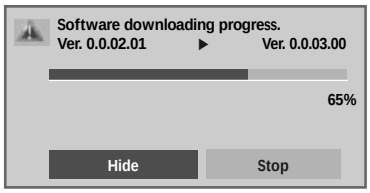
Save.

* When setting “Software Update”

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

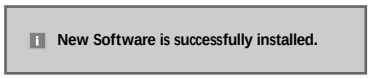


Select the **Yes** using the < > button and you will see the following picture.



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

After the Software Update is complete, the System restarts.

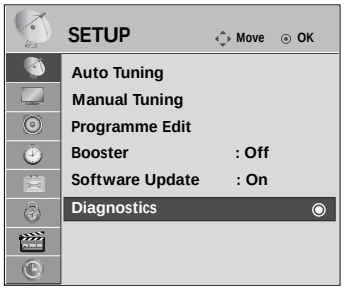


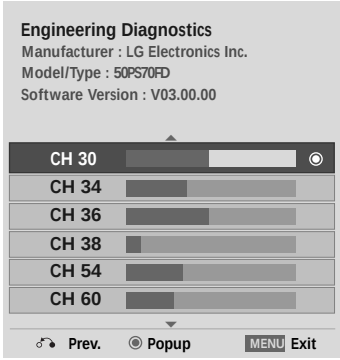
- **During Progress of a Software Update, please note the following:**
- Power to the TV must not be interrupted.
- The TV must not be switched off.
- The antenna must not be disconnected.
- After Software Update, you can confirm the updated software version in Diagnostics menu.
- It may take hours to download the software, so make sure that the power stays on during the download.

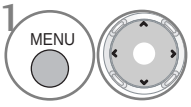
DIAGNOSTICS

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

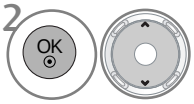
This displays the information and signal strength of the tuned *MUX.
This displays the signal information and service name of the selected MUX.
(*MUX: A higher directory of channels in digital broadcasting (a single MUX contains multiple channels.))





1 

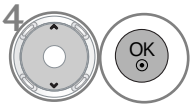
Select **SETUP**.

2 

Select **Diagnostics**.

3

Display Manufacturer, Model/Type and Software Version.

4 

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 LIST

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

🔒 Displayed when the Locked Programme.

■ Displaying programme LIST

1

Display the **Programme List.**

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

■ Selecting a programme in the programme list

1
Select a programme.

2

Switch to the chosen programme number.

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

■ Paging through a programme list

1

Turn the pages.

2

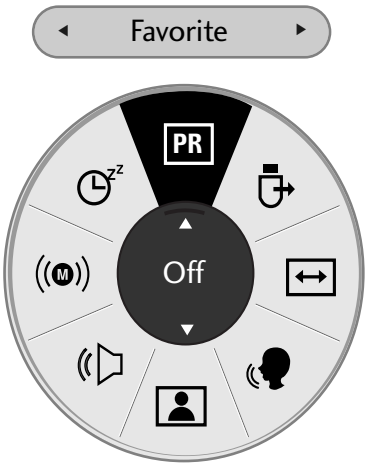
Return to normal TV viewing.

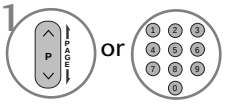
FAVOURITE PROGRAMME SETUP

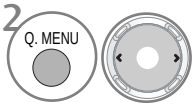
■ Selecting favourite programme

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

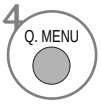
Favourite programmes is a convenient feature that lets you quickly scan up to programmes of your choice without having to wait for the TV to scan through all the in-between programmes.



1  Select your desired programme.

2  Select **Favourite**.

3 Select **Favourite.**

4  Return to TV viewing.

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

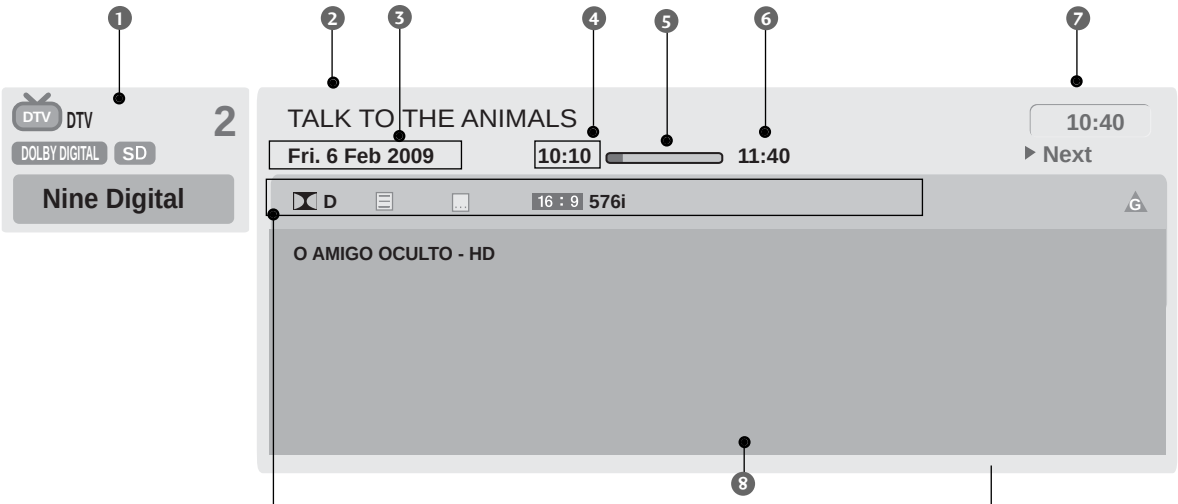
■ Displaying the favourite programme list

1 Display the Favourite Programme **List**.

BRIEF INFORMATION

Brief Info shows the present screen information.

Show the Brief Info on the screen.



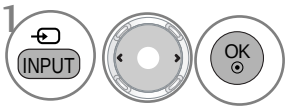
D	The programme is broadcast with Dolby Digital audio. Use the **Q. MENU** to select Dolby Digital audio.
	Teletext : Displayed with a Teletext Programme.
	Description
4:3 16:9	The original aspect ratio of the video is 4:3 The original aspect ratio of the video is 16:9 (wide)
576i 576p 720p 1080i	**Video Resolution**

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

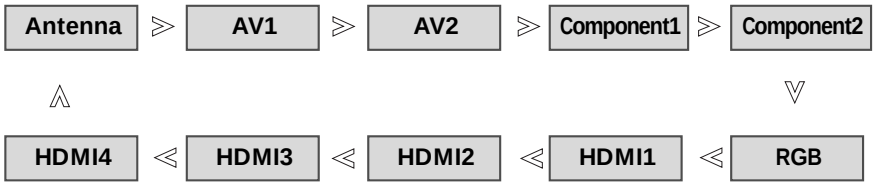
• Press the **RETURN** button to return to normal TV viewing.

INPUT LIST

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

1 

Select the input source.



- **Antenna** : Select it when watching the DTV/RADIO/TV.
- **AV1**, **AV2** : Select it when watching the VCR or external equipment.
- **Component1**, **Component2** : Select it when using the DVD or the Digital set-top box depends on connector.
- **RGB** :Select it when using PC depends on connector.
- **HDMI1**, **HDMI2**, **HDMI 3, HDMI4** : Select it when using DVD, PC or Digital set-top box depend on connector.

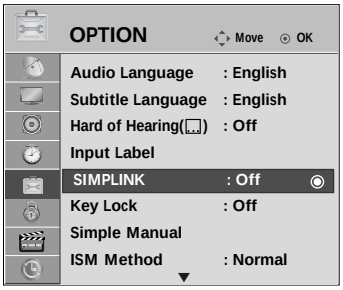
SIMPLINK

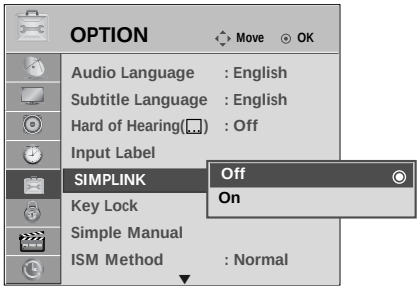
This function operates only with devices with the SIMPLINK logo.
Please check the SIMPLINK logo.

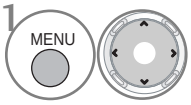
This TV might not function properly when using it with other products with HDMI-CEC function.

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

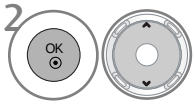
If you do not want SIMPLINK menu,select "**Off**".



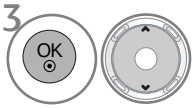


1 

Select **OPTION**.

2 

Select **SIMPLINK**.

3 

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

4

Save.

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

SIMPLINK Functions

Disc playback

Control connected AV devices by pressing the ∧ ∨ < >, OK, ▶, ■, II, ◀◀ and ▶▶ 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

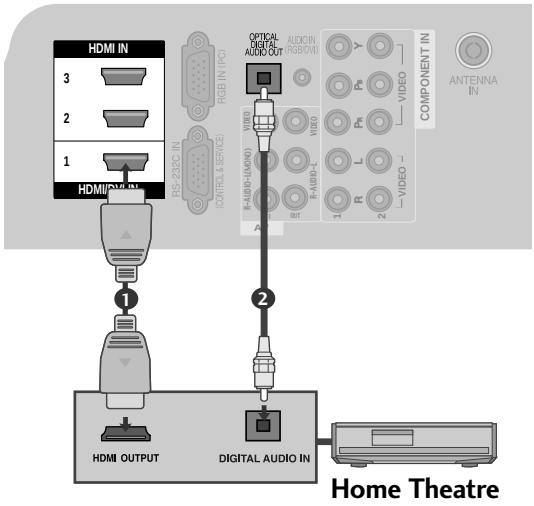
When the equipment with Simplink function connected HDMI terminal starts to play, The TV will change automatically to turn on mode.

* 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).

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

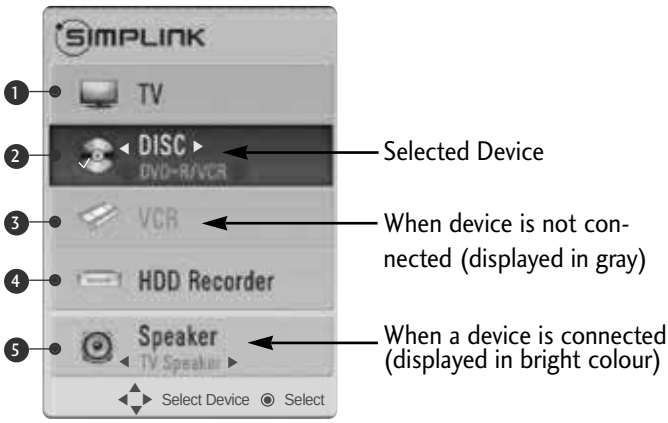
▶ Connect the HDMI/DVI IN or HDMI IN terminal of the TV to the rear terminal (HDMI terminal) of the SIMPLINK device with the HDMI cable.

▶ 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 Menu

Press the ∧ ∨ < > button and then **OK** button to select the desired SIMPLINK source.

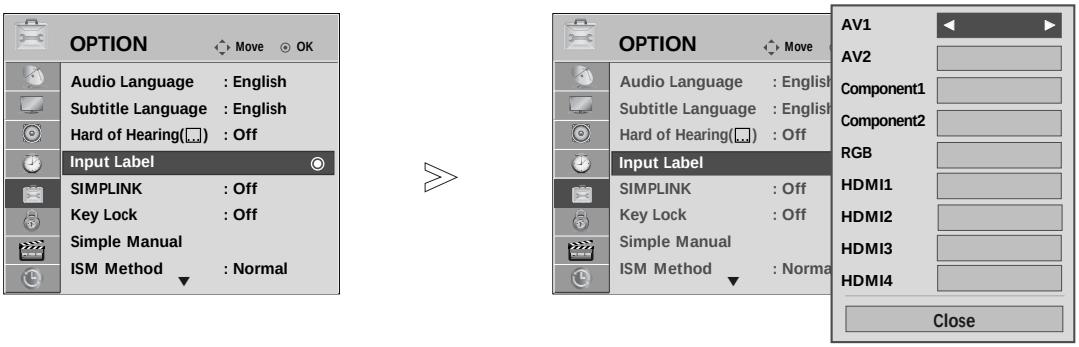
1. **TV viewing :** Switch to the previous TV programme regardless of the current mode.
2. **DISC playback :** Select and play connected discs. When multiple discs are available, the titles of discs are conveniently displayed at the bottom of the screen.
3. **VCR playback :** Play and control the connected 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.

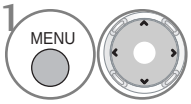


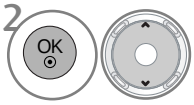
- **Home theatre**: Only one supported at a time
- **DVD, Recorder**: Up to four supported at a time
- **VCR**: Only one supported at a time

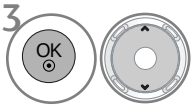
INPUT LABEL

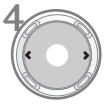
You can set a label for each input source when it's not in use.
Available label: VCR -> DVD -> Set Top Box -> Satellite -> Cable Box -> Game -> PC -> HD-DVD -> Blu-ray.



1  Select **OPTION**.

2  Select **Input Label**.

3  Select the source.

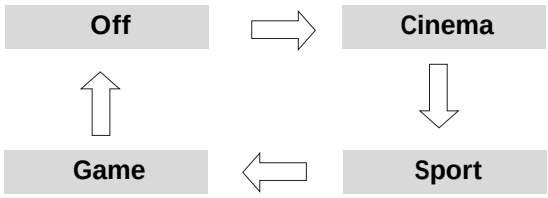
4  Select the label.

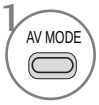
- Press the **MENU** button to return to normal TV viewing.
- Press the **RETURN** button to move to the previous menu screen.

AV MODE

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

Off	Disables the AV MODE.
Cinema	Optimizes video and audio for watching movies.
Sport	Optimizes video and audio for watching sports events.
Game	Optimizes video and audio for playing games.



1 

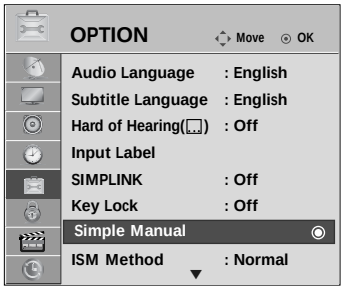
Press the **AV MODE** button repeatedly to select the desired source.

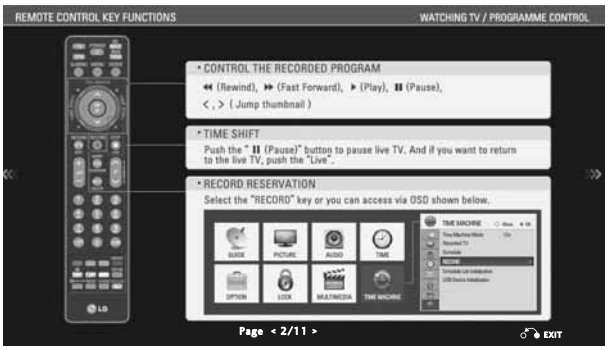
2

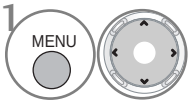
- If you select **Cinema** in AV mode, **Cinema** will be selected both for **Picture Mode** and **Sound Mode** in **PICTURE** menu and **AUDIO** menu respectively.
- If you select "**Off**" in AV mode, the picture and image which you initially set will be selected.

SIMPLE MANUAL

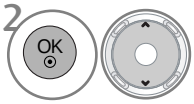
You can easily and effetively access the TV information by viewing a simple manual on the TV.
During the Simple Manual opreration, audio will be muted.



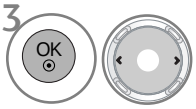


1 

Select **OPTION**.

2 

Select **Simple Manual**.

3 

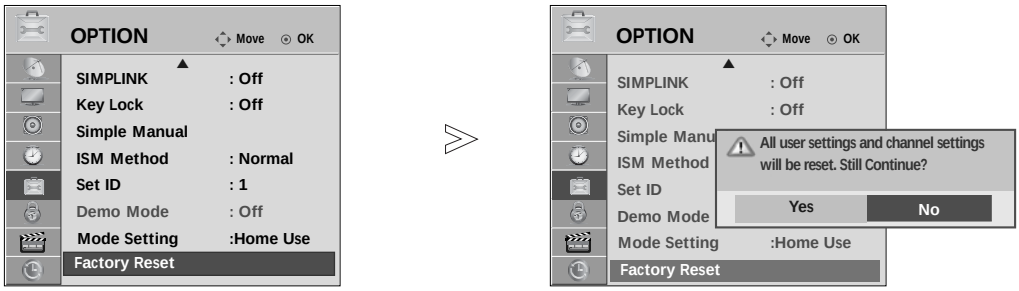
Select the part of the manual you want to see.

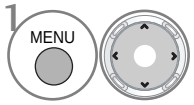
• Press the **RETURN** button to return to normal TV viewing.

Initialising
(Reset to original factory settings)

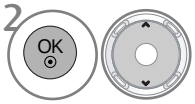
This function initializes all settings.
It is useful to initialize the product or when you move to other city.
When the Factory Reset is completed, you must restart the Initializing setup.

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

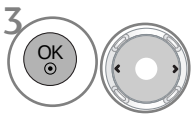




Select **OPTION**.



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.

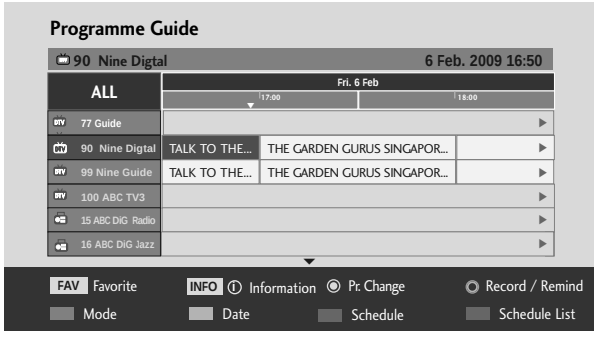
EPG (ELECTRONIC PROGRAMME GUIDE) (IN DIGITAL MODE)

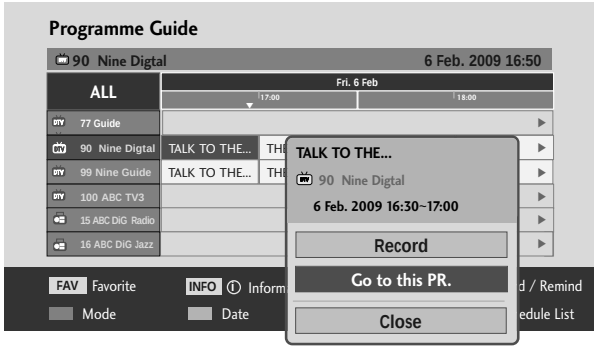
This system has an Electronic Programme Guide (EPG) to help your navigation through all the possible viewing options.

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.

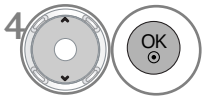




Display the **Programme Guide**.

Select desired programme.

Show the Popup menu.



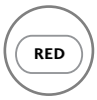
Select the desired Popup menu.

- If the TV is unplugged once or turn off with the ⏻/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.

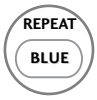
EPG (ELECTRONIC PROGRAMME GUIDE)(IN DIGITAL MODE)

Button Function in NOW/NEXT Guide Mode



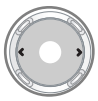
Change EPG mode.

Move to schedule option popup.



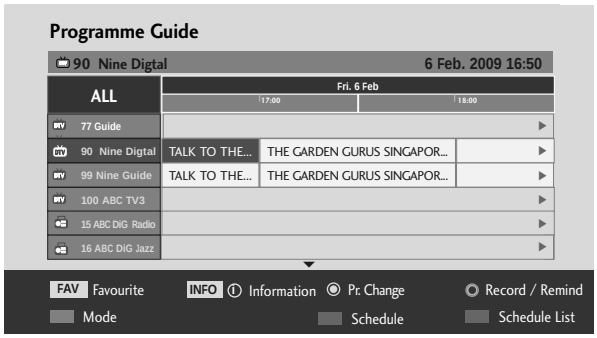
Switch the Schedule list On or off.

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.

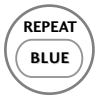
Change the favourite programme mode.

Button Function in 8Day Guide Mode

Change EPG mode.

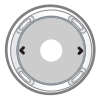
Enter Date setting mode.

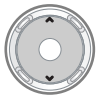
Move to schedule option popup.



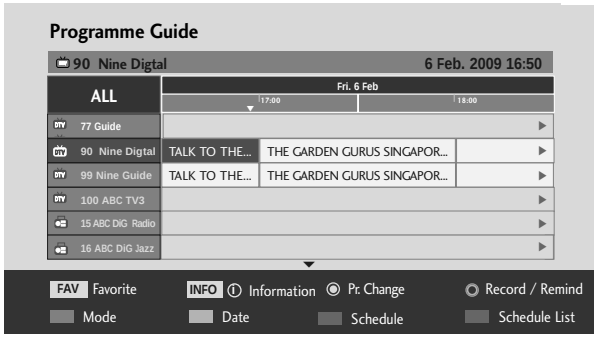
Switch the Schedule list On or off.

Change Programme (Go to this Programme).


Select a Programme.


Select the Broadcast Programme.

Page Up/Down.



Switch off EPG.

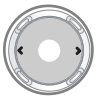
The detail information on or off.

Change the favourite programme mode.

Set Record/Remind.

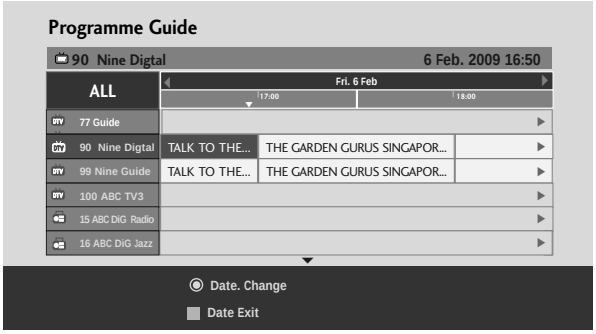
Button Function in Date Change Mode

Switch off Date setting mode.



Select a date and change to the selected date.

Switch off EPG.



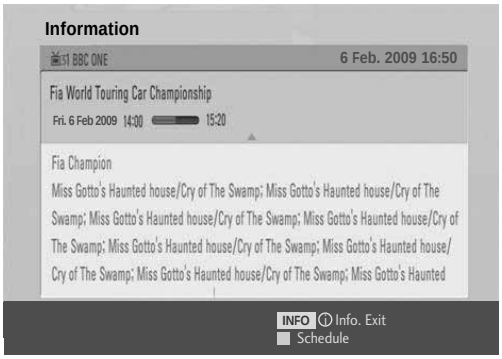
Button Function in Extended Description Box

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

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 programme 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 ⏻/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 programme 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 external hard disk 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.

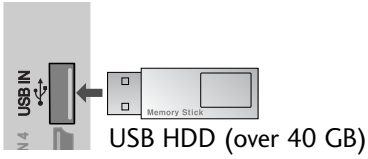
  Please use a power adaptor for an external power source. We do not guarantee an USB cable for an external power source.
- In case of USB HDD Having bad sector, Time Machine may not work.
- Before removing the USB device, please use the Remove USB Device in Quick Menu to prevent software, data loss or 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.

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.)

This function is only operated after initializating USB Device.

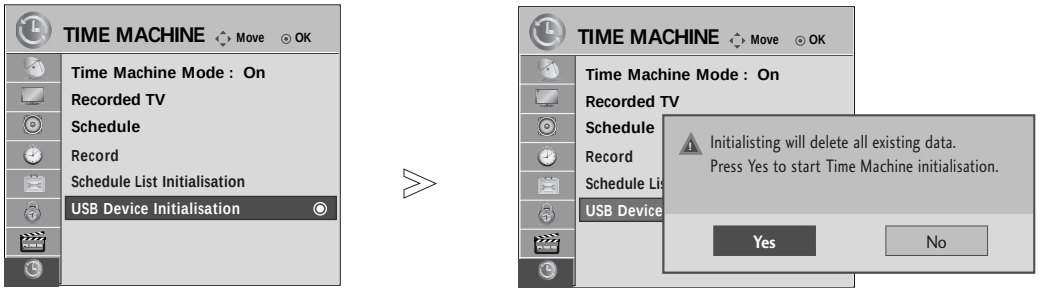
1 Connect the USB device to the **USB IN** jacks on the side(or back) of TV.

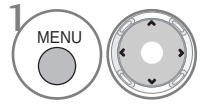


2 To use the USB device (over 40 GB) for USB Time Machine, execute **USB Device Initialisation**.

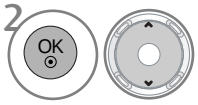
- It initializes the HDD connected to the USB as disk mode for Time Machine.
- It is activated only when the USB HDD available for Time Machine is connected.
- When **USB Device Initialisation** is executed, all the data stored in the USB device is deleted.
- While performing **USB Device Initialisation**,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

USB device Initialisation

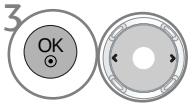




Select **TIME MACHINE**.



Select **USB Device Initialisation**.



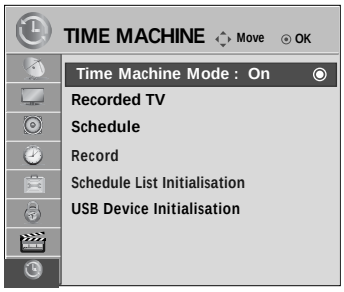
Select **Yes**.

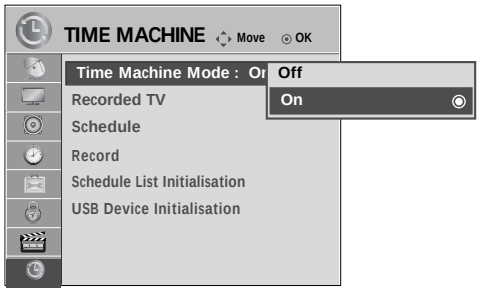
- When initialisation is completed, a popup notice of completion is displayed and the connected USB HDD is available for Time Machine.

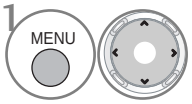
NOTE

- ▶ Depending on the capacity of the USB device, the initialisation time may vary.
- ▶ The initialised 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 USB HDD size for Time Machine is up to 1TB.

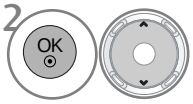
Time Machine Mode



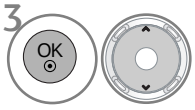


1 

Select **TIME MACHINE**.

2 

Select **Time Machine Mode**.

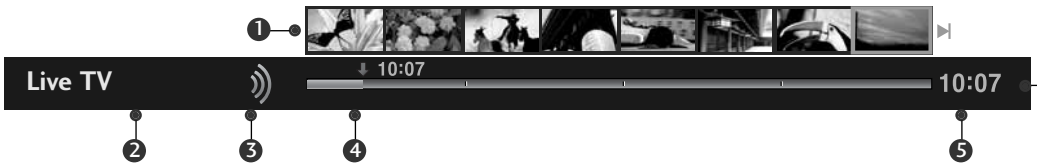
3 

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

- Time Machine Mode is available in DTV mode.

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

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.

❶ Preview
❷ Current Status while using the Time Machine
❸ Current operating function while using the Time Machine

Playback	Direct view +
Fast forward	Direct view -
Rewind	By one screen
Pause	Slow playback

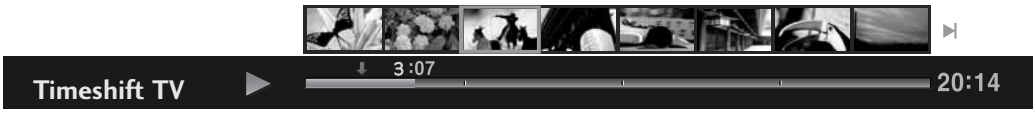
❹ Current location and progress time in playback
❺ Total progress time of the Time Machine

NOTE

- ▶ In order to save hard-disk space, nothing is saved when there is no signal.
- ▶ 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.
- ▶ Instant recording time is set to 3 hours and supported maximum time is up to 5 hours.
- ▶ Time Machine is not supported in the audio only channel, but recording is possible.

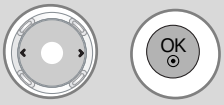
Playback during the Time Machine

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



Use of remote control

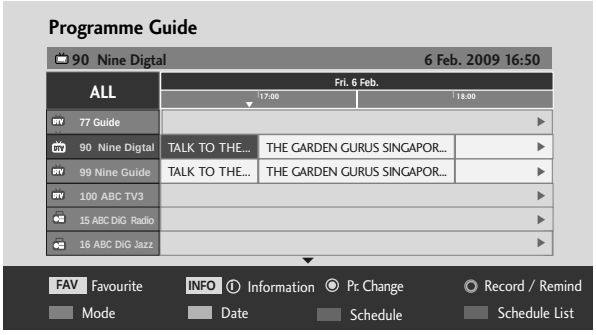
You can playback the temporarily saved part in various methods during the Time Machine.

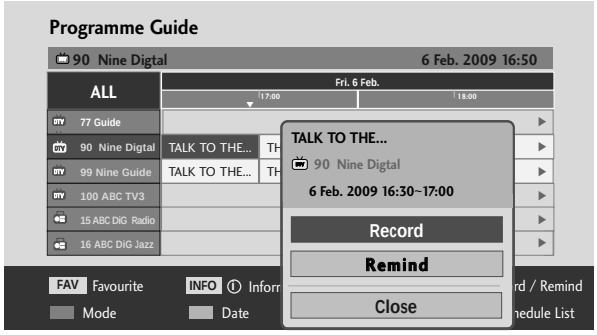
	During playback, repeatedly, press the **REW(◀◀)** or **FF(▶▶)** button to speed up. • Every time you press the button, the search speed will increase by stage (up to 5 stages).
	During playback, press the **Pause(II)** button. • Pause screen is displayed. • Every time you press the **Pause(II)** button from the pause screen, it will move screen by screen. (II▶) • Press the **Pause(II)** button and then use the **FF(▶▶)** button for slow motion. (I▶)
	When you move the cursor using the Time Machine (< , >) button during playback, and then press the **OK** button, the screen will directly play at the applicable screen where the cursor is located. (↷ , ↶)
	To view the current live broadcast, press the **LIVE** button during playback.

RECORDING

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

Recording or Reminding function in the Programme Guide

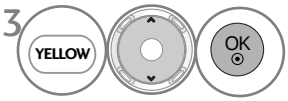




1

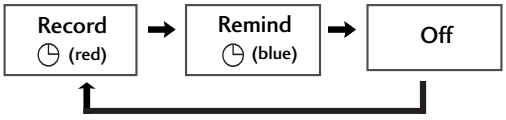
Display the **Programme Guide**.

2
Select desired programme.

3 

Select **Record** or **Remind.**

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



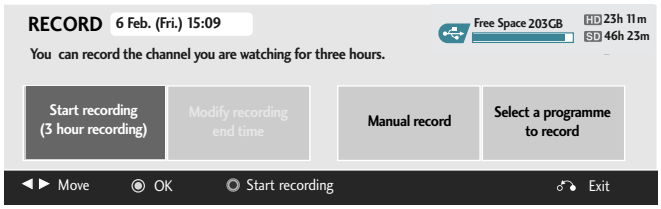
- Press the **RETURN** button to move to the previous menu screen.

NOTE

- ▶ If you turn off the main power 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 ⏻/I (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.

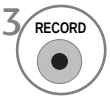


1 When watching the programme, Select it you wish to record.

2

Display the recording setting.

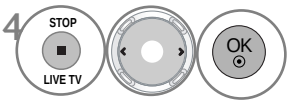
- You can also select this setting in the **RECORD** menu.

3 

or

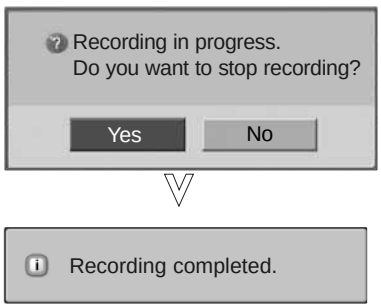
Start the recording.

- During recording, REC DTV 2 is displayed.
  Recording will be set up to 3 hours.

4 

Select **Yes** to stop the recording.

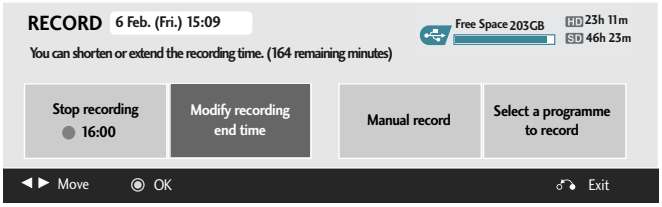
- You can also select **Stop recording** using the RECORD button .

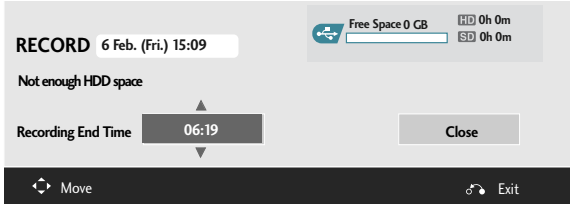


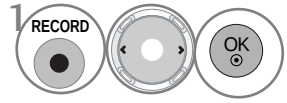
- Press the **RETURN** button to return to normal TV viewing.

Modify recording end time

You can shorten or extend the recording time.

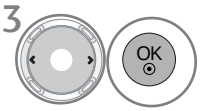






During recording ,
Select the **Modify recording end time**.

Set the Recording End Time.



Select the **Close**.

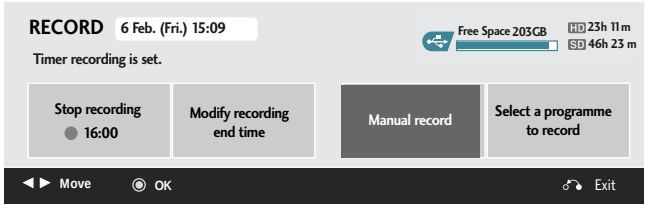
- Press the **MENU** button to return to normal TV viewing.
- Press the **RETURN** button to move to the previous menu screen.

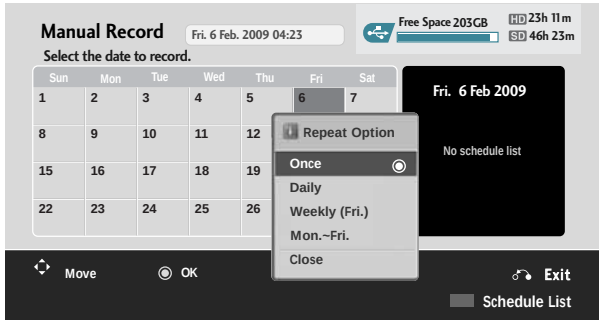
NOTE

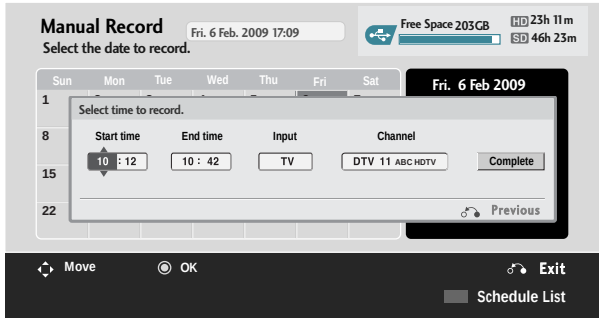
- ▶ When recording, if the available storage space is not sufficient, the recording will automatically Stop.
- ▶ Recordings of less than 10 seconds will not be saved.
- ▶ To save disk space while recording broadcasts, no data will be saved if there is no signal.
- ▶ The recording function will not initiate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

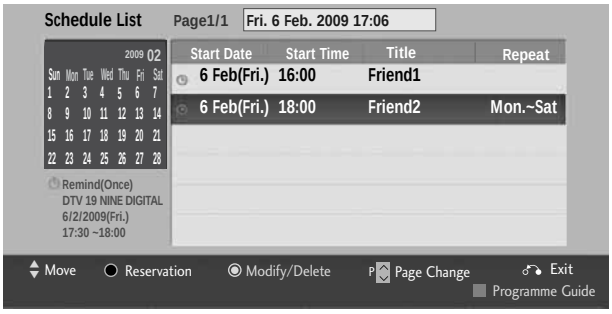
Manual record

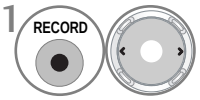
This function is easy to register to reserved recording.
Timer recording is set.



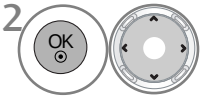




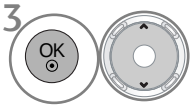


1 

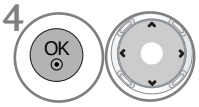
Select the **Manual record**.

2 

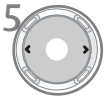
Select **Date**.

3 

Select the repeat option.

4 

Set the desired **Start Time**, **End Time**, **Input** and **Programme**.

5 
Select the **Complete**.

6

Display the Schedule List.

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

NOTE

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

> Programme with copy protection fail to record.

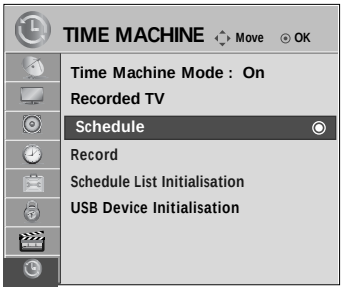
▶ Manual Recording available time is maximum 3 hours and minimum 2 minutes.

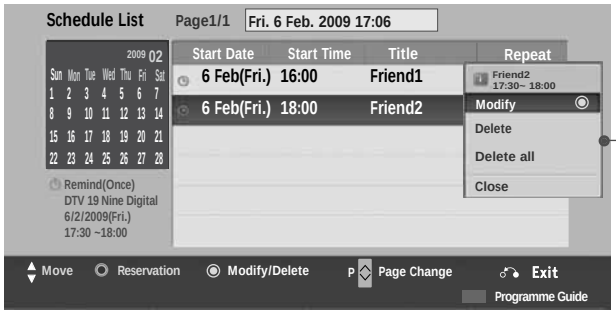
▶ If different channels are set for the same time for on time and reserved recording, this TV is powered on to the reserved recording channel.

▶ When reserved recording started while watching DTV, you cannot change to the ATV programme.

SCHEDULE LIST

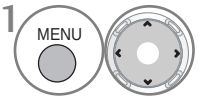
This function is used to show scheduled recordings.



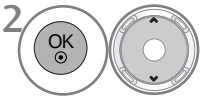


When you select a desired item, this PopUp menu is displayed.

- ▶ **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 

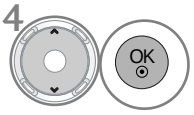
Select **Shedule**.

2 

Select a desired item in the schedule list.

3

Show the Popup menu.

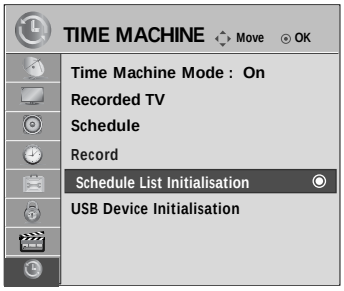
4 

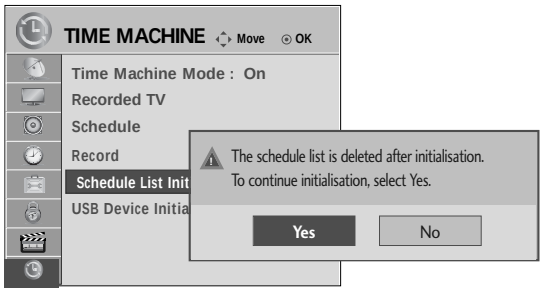
Select the desired Popup menu.

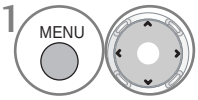
• Press the **RETURN** button to return to normal TV viewing.

Schedule List Initialisation

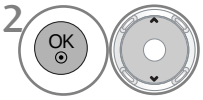
This function is to reset the schedule list.



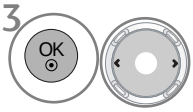


1 

Select **TIME MACHINE**.

2 

Select **Schedule List Initialisation**.

3 

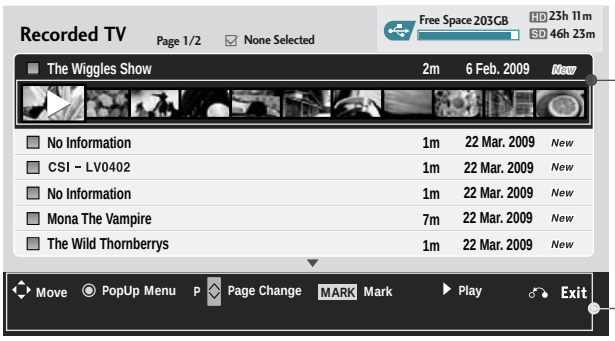
Select **Yes**.
Start the Schedule List Initialisation.

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

RECORDED LIST

You can view the recorded programme list at a glance.

The recorded programme stored the USB device can be played.



Move to the desired scene and play the recorded programme.

[Use of remote control]

OK — Show the popup menu.

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

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

MARK FAV — Check and un-check recorded programmes.

1 MENU — Select **TIME MACHINE**.

2 OK — Select Recorded TV.

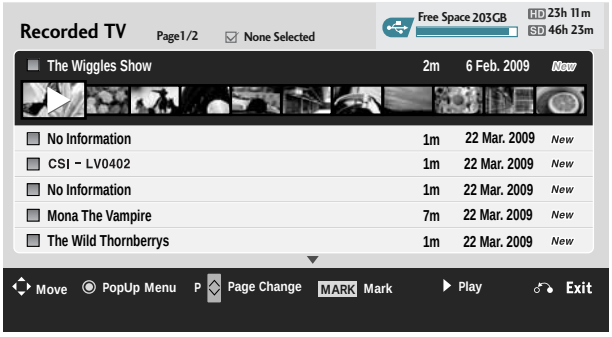
3 OK — Select a recorded programme.

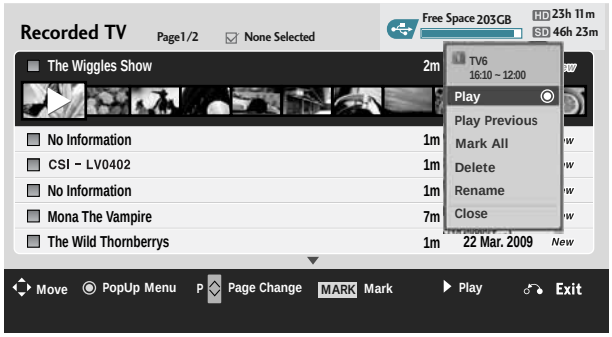
- Press the **RETURN** button to return to normal TV viewing.

NOTE

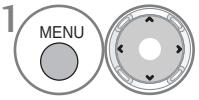
- ▶ If there is a bad sector in the disk, part or all of the items of the **Recording list** can be deleted.
- ▶ Maximum number of recordings within the Recording list is 200. When the number of recordings in the Recording list is 200, you cannot record any more.
- ▶ When the full duration of the recording 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 programme resolution.

Recorded programme Selection and Popup Menu

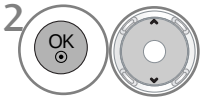




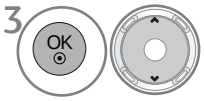
- ▶ **Play** : Playback of selected recorded programmes.
- ▶ **Play Previous** : Resumes playing at the previously stopped point.
- ▶ **Mark All** : Mark all recorded programmes in the list.
- ▶ **Unmark All** : Change marked recorded programmes to unmarked recorded programmes.
- ▶ **Delete** : Delete the selected recorded programmes.
- ▶ **Rename** : Edit recorded programme title.
- ▶ **Close** : Close the pop-up menu.

1 

Select **TIME MACHINE**.

2 

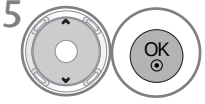
Select Recorded TV.

3 

Select a desired recorded programme.

4

Show the Popup menu.

5 

Select the desired Popup menu.

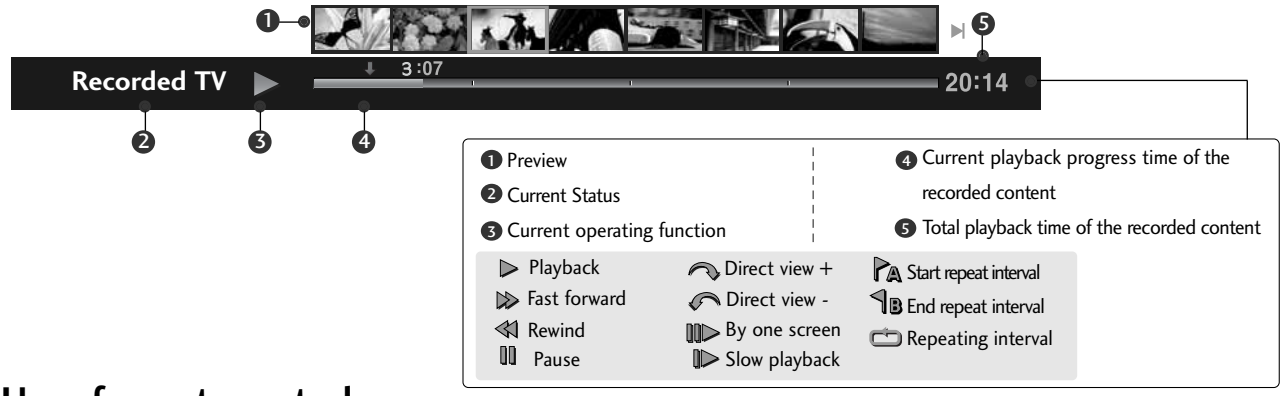
• Press the **RETURN** button to return to normal TV viewing.

Playing Recorded programmes

You can play a selected programme from the recorded list.

1 Play a recorded programme.

When you press the **OK** button during the playback, the information of the recorded programme you are current 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 **OK** button.



Use of remote control

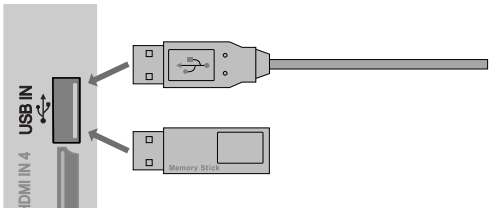
You can adjust various method during the recorded programme play.

	During playback, repeatedly, press the **REW(◀◀)** or **FF(▶▶)** button to speed up. • Every time you press the button, the search speed will increase by stage. (up to 5 stages)
	During playback, press the **Pause(II)** button. • Pause screen is displayed. • Every time you press the **Pause(II)** button from the pause screen, it will move screen by screen. (II▶) • Press the **Pause(II)** button and then use the **FF(▶▶)** button for slow motion. (I▶) • If you don't press any button 10 minutes after the pause, it will return to the playback.
	When you move the cursor using the Time Machine (**<** , **>**) button during playback, and then press the **OK** button, the screen will directly play at the applicable screen where the cursor is located. (↷ , ↶)
	When you press the **LIVE** button, the playback will end and you can watch the TV.
	* This function is available only the playback of a recorded programme. Press the **REPEAT** 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 **REPEAT** button one more time. • The start of the Interval repeat is displayed as ⚑A and end of the Interval repeat as ⚑B 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. • Interval shorter than 10 seconds cannot be set. • When the Interval repeat is cancelled, it will return to normal playback from the end point of the interval.
	To return to normal playback, press the **PLAY(▶)** button.

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 **PHOTO LIST**, **MUSIC LIST** or **MOVIE LIST**.

3 OK

When removing the USB device

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

1 Q. MENU Select **Remove USB device**.

2 OK Select **Remove** .

NOTE

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

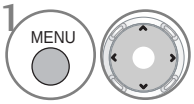
PHOTO LIST

You can view .JPG files from the USB devices.
The On Screen Display on your model may be slightly different.
This function is not operated after initializating USB Device.

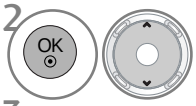
Supported photo(*.JPEG) file

Baseline: 15360 x 8640

- You can play JPEG files only.
- Both baseline scan and progressive scan are supported.
- 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.

1 

Select **MULTIMEDIA**.

2 

Select **Photo List**.

3

Screen Components

❶ Moves to upper level folder

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

❸ Current page/Total pages

❹ Total number of marked photos

❺ Corresponding buttons on the remote control

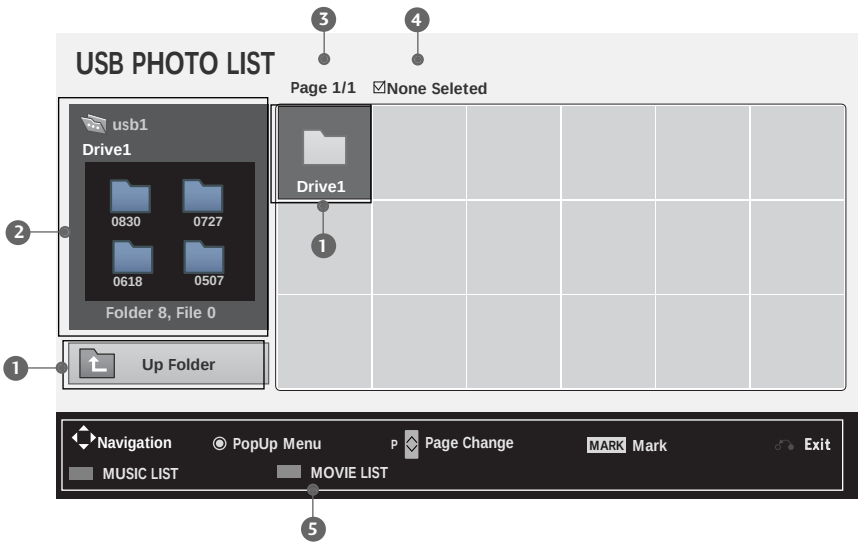
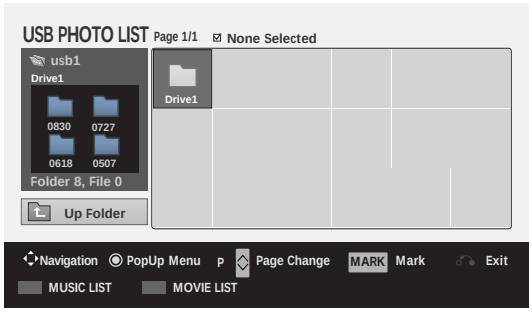
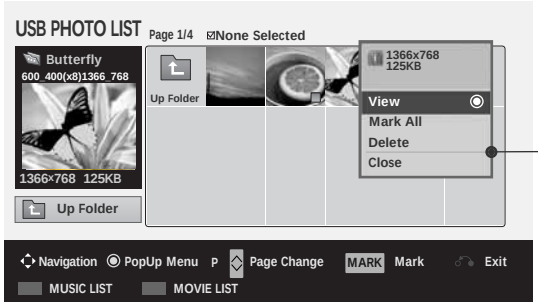


Photo Selection and Popup Menu





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.
- ▶ **Delete**: Delete the selected photo item(except NTFS file system).
- ▶ **Delete Marked** : Delete the marked photo item(except NTFS file system)
- ▶ **Close**: Close the pop-up menu.

1 Select the target folder or drive.

2 Select the desired photos.

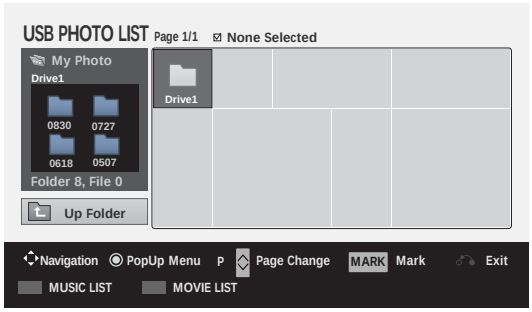
3 Show the pop-up menu.

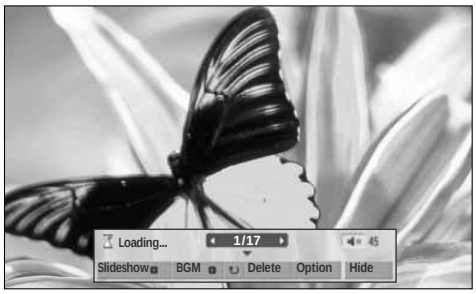
4 Select the desired Popup menu.

- Use the **P** ∧ ∨ button to navigate 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.

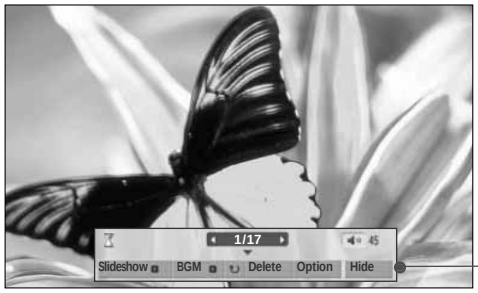
2 Select the desired photos.

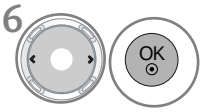
3 Show the pop-up menu.

4 Select **View**.

5 The selected photo is displayed in full size.

■ Use the **P** ∧ ∨ button to navigate in the photo page.



6 

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

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

▶ **Slideshow**: 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**.

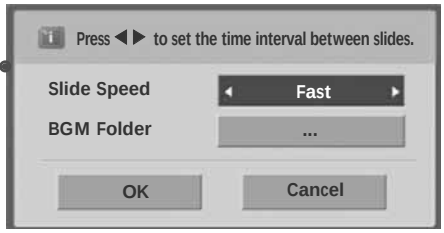
▶ **BGM**: Listen to music while viewing photos in full size.
- Set the BGM device and folder in **Option**.

▶ **(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.



NOTE

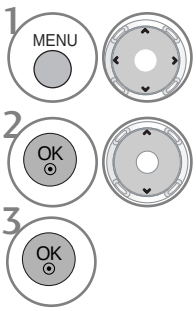
▶ This TV will not be able to decode most JPEG images saved using the Progressive option.

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.

Supported music file: *.MP3
- Bit rate range 40Kbps ~ 320Kbps
- Sampling rate (Sampling Frequency)

MPEG1 : 32000, 44100, 48000Hz
MPEG2 : 16000, 24000, 22050Hz



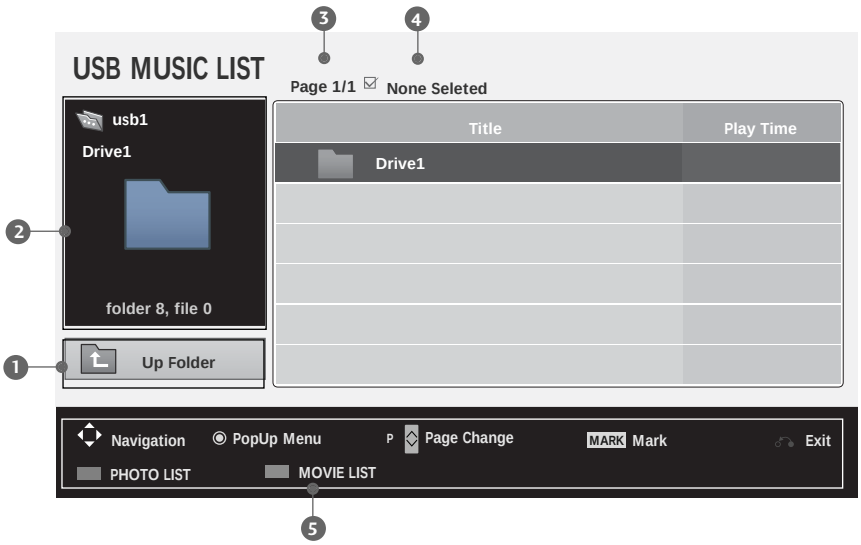
1 Select **MULTIMEDIA**.

2 Select **Music List**.

3

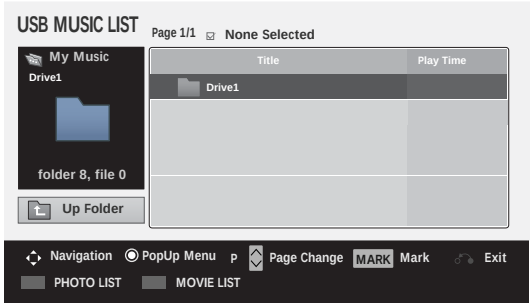
Screen Components

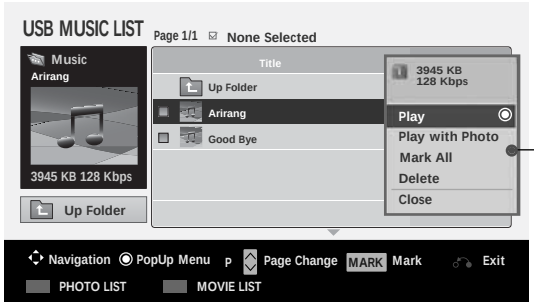
❶ Moves to upper level folder
❷ Preview: If any album jacket for the file exists, this jacket is displayed.
❸ Current page/Total pages
❹ Total number of marked music.
❺ Corresponding buttons on the remote control



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 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.
- ▶ **Delete**: Delete the selected music.
- ▶ **Close**: Close the pop-up menu.

1. Select the target folder or drive.
2. Select the desired music.
3. Show the pop-up menu.
4. Select the desired Popup menu.

- Use the **P** ∧ ∨ 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.

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

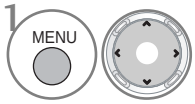
- The play information box (as shown below) will automatically move across the screen when there is no user input to prevent a fixed image remaining on the screen for a extended period of time.

NOTE

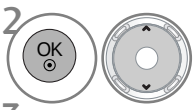
- When music is playing, ♪ is displayed in front of the music play time.
- A damaged or corrupted music file that cannot be played displays 00:00 as the play time.
- Music files with copy-protection will not play.
- Press **OK**, ■ , or **RETURN** button to stop the screen saver.
- This TV can not play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

MOVIE LIST

The movie list is activated once external HDD or USB devices are detected.
It is used when playing movie files on TV.
Displays the movies in the external 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.

1 

Select **MULTIMEDIA**.

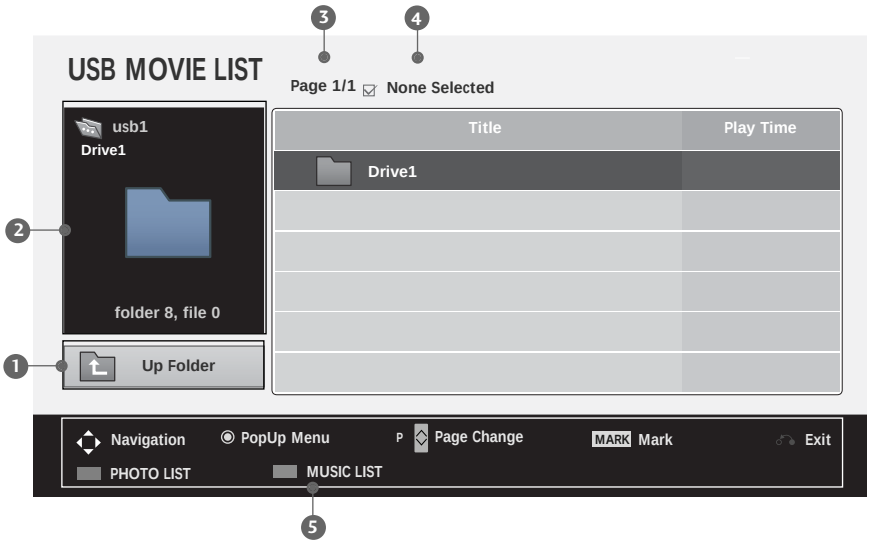
2 

Select **Movie List**.

3

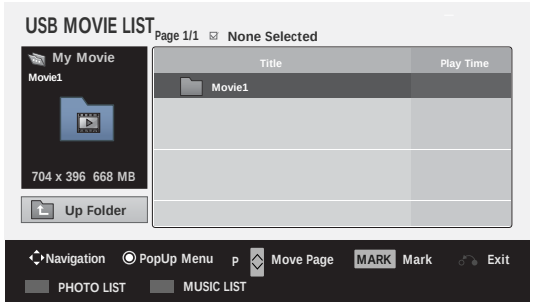
Screen Components

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. Corresponding buttons on the remote control

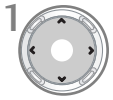
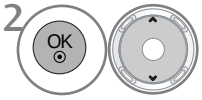
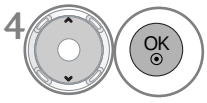


Movie Selection and Popup Menu

Up to 6 movie titles are listed per page.



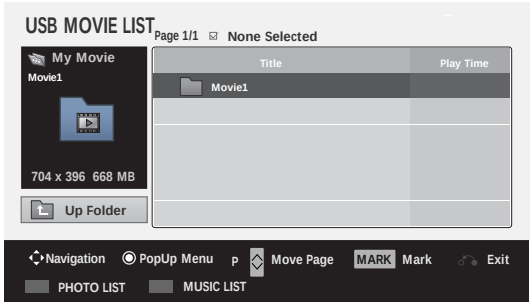
- ▶ **Play** (During stop): Play the selected movie. Once a movie finishes playing, the next selected one will be played. When there are no selected movies to play, the next one in the current folder and will be not played. While playing the movie, activating the movie list will stop playing the movie. 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.
- ▶ **Delete**: Delete the selected movie.
- ▶ **Close**: Close the pop-up menu.

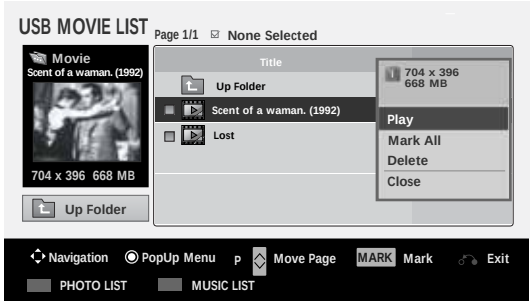
1.  Select the target folder or drive.
2.  Select the desired movies.
3. Show the Popup menu.
4.  Select the desired Popup menu.

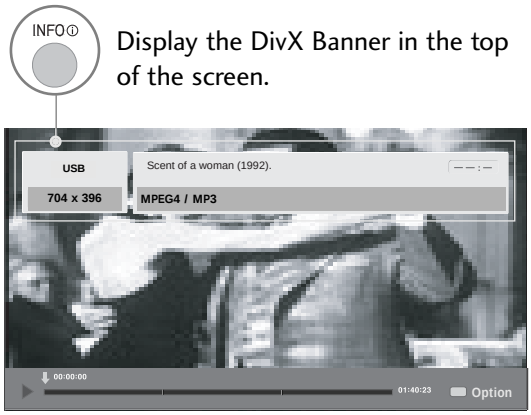
- Use the **P** ∧ ∨ button to navigate in the movie page.
- Use **MARK** button to mark or unmark a movie file. When one or more movie files are marked, the marked movie files will be played in sequence.

Playing the Movie

You can adjust various method during the movie play.







Display the DivX Banner in the top of the screen.

1 Select the target folder or drive.

2 Select the desired movies.

3 Show the pop-up menu.

4 Select **Play**.

[Use of remote control]

	Press the **REW(◀◀)** button to rewind. Press the **FF(▶▶)** button to forward fast.
	Press the **Pause(II)** button to pause the screen.
	Press the **Stop(■)** button to stop.
	Press the **Pause(II)** button and then use the **FF(▶▶)** button for slow motion.

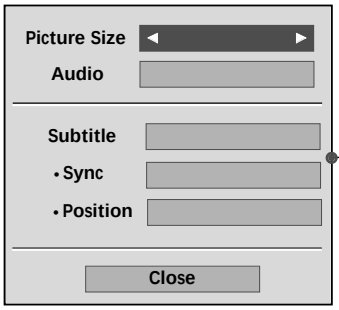
NOTE

▶ 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

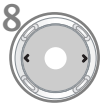
• **Sync**: Adjusts the time synchronisation of the subtitle from -10 secs ~ +10 secs by steps of 0.5 secs during movie play.

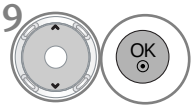
• **Position**: Changes the position of the subtitle either up or down during movie play. Select position from -2 secs ~ +2 secs by steps of 1 secs during movie play.

6

Display the **Option** menu.

7
Select the desired movie option.

8 
Make appropriate adjustments.

9 

Select **Close**.

NOTE

▶ **During the movie play,** the repeat key is not supported.

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

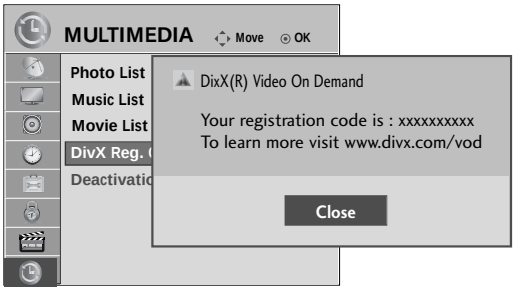
- ▶ Specific subtitles created by the user may not be operated normally.
- ▶ Some special characters are not supported in subtitles.
- ▶ HTML tags are not supported in subtitles.
- ▶ Subtitles in languages other than the supported languages are not available.
- ▶ **Time information in an external subtitle 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 occured 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.

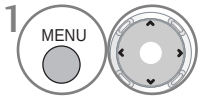
Supported Movie File

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

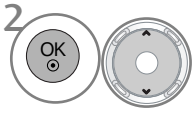
DIVX REGISTRATION CODE

Confirm the DivX registration code number of the TV.
Using the registration number, movies can be rented or purchased at www.divx.com/vod.





Select **MULTIMEDIA**.



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® is a digital video format created by DivX,Inc. This is an official DivX Certified device that plays DivX video. Visit www.divx.com for more information and software tools to convert your files into DivX video.

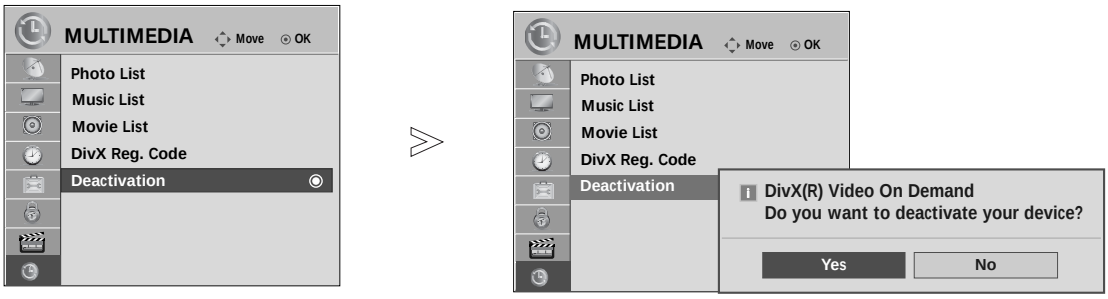
ABOUT DIVX VIDEO-ON-DEMAND: This DivX Certified® device must be registered in order to play DivX Video-on-Demand (VOD) content. To generate the registration code, locate the DivX VOD section in the device setup menu. Go to vod.divx.com with this code to complete the registration process and learn more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

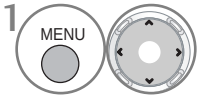
NOTE

- ▶ With a DivX registration code from another 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.

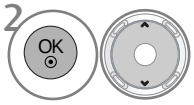
DEACTIVATION

Delete the existing authentication information to receive a new DivX user authentication for TV.
Once this function is executed, a DivX user authentication is required again to see DivX DRM files.

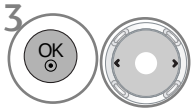


1 

Select **MULTIMEDIA**.

2 

Select **Deactivation**.

3 

Select **Yes** or **No**.

4

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

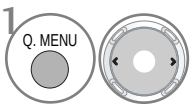
You can watch the screen in various picture formats; 16:9, Just Scan, Original, 4:3, 14:9, Zoom, Cinema Zoom1.

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

You can adjust the enlarge proportion using ∧ ∨ button.

This function works in the following signal.

---

1 

Select **Aspect Ratio**.

2
Select the desired picture format.

- You can also adjust **Aspect Ratio** in the **PICTURE** menu.
- For Zoom Setting, select 14:9, Zoom and **Cinema Zoom1** in Ratio Menu. After completing Zoom Setting, the display goes back to Q.Menu.

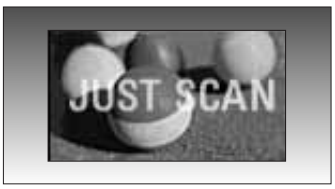
- **16:9**

  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)

- **Just Scan**

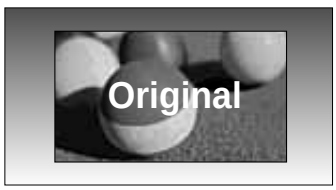
  Following Selection will lead to you view the picture of best quality without loss of original picture in high resolution image.

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



- **Original**

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



- **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.

• **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 Zoom1**

Choose Cinema Zoom1 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.

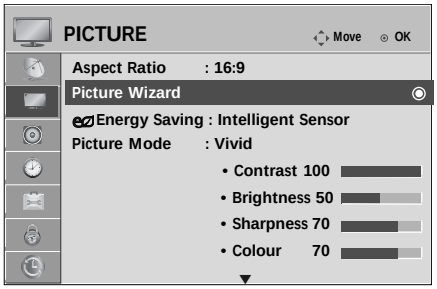
PICTURE WIZARD

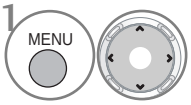
This feature lets you adjust the picture quality of the original image.

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.

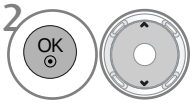
When you adjust the image to **Low**, **Recommended** or **High**, you can see the example of the changes you made.

In RGB-PC/HDMI-PC/DVI-PC mode, the changed **Colour**, **Tint** and **H/V Sharpness** values are not applied.

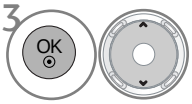


1 

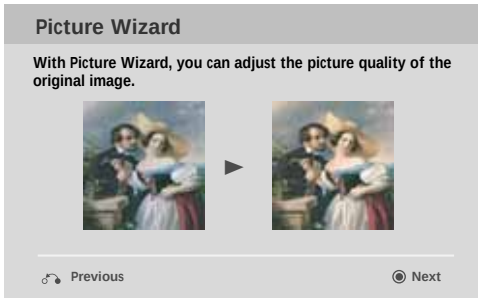
Select **PICTURE**.

2 

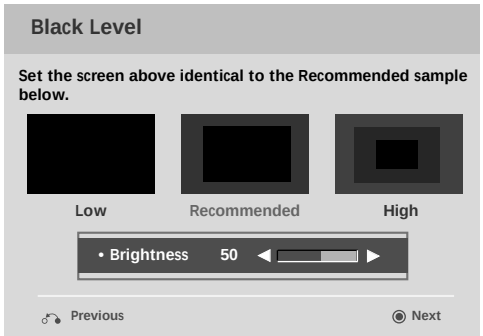
Select **PICTURE**.

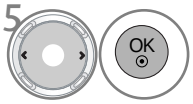
3 

Select **Picture Wizard**.

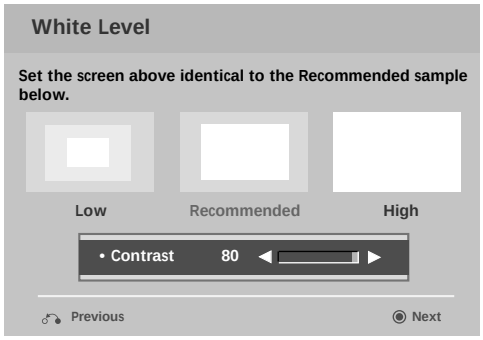


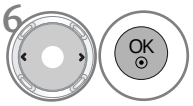
4



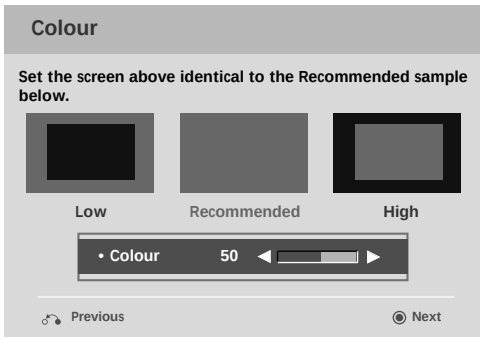
5 

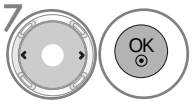
Adjust **Black Level**.



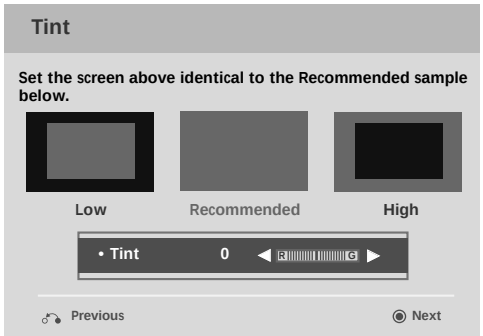
6 

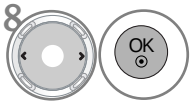
Adjust **White Level**.



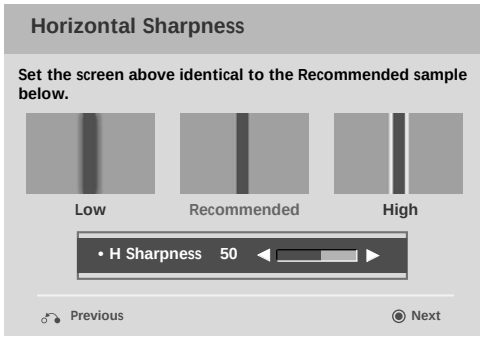
7 

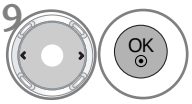
Adjust **Colour**.



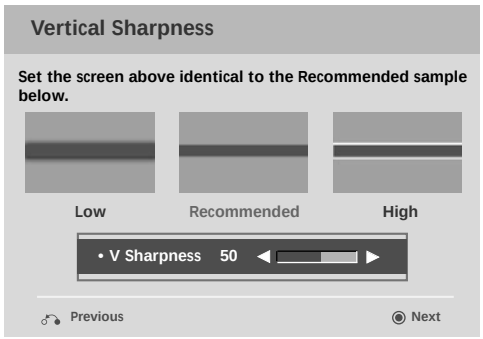
8 

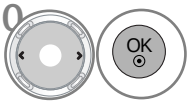
Adjust **Tint**.



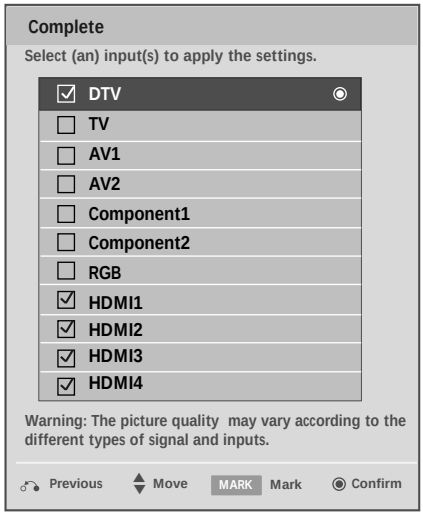
9 

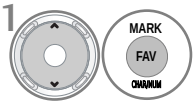
Adjust **Horizontal Sharpness**.



10 

Adjust **Vertical Sharpness**.

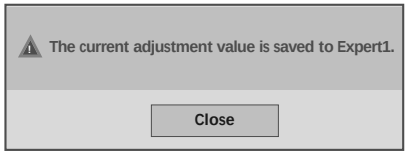


11 

Select input source to apply the settings.

12

Save.



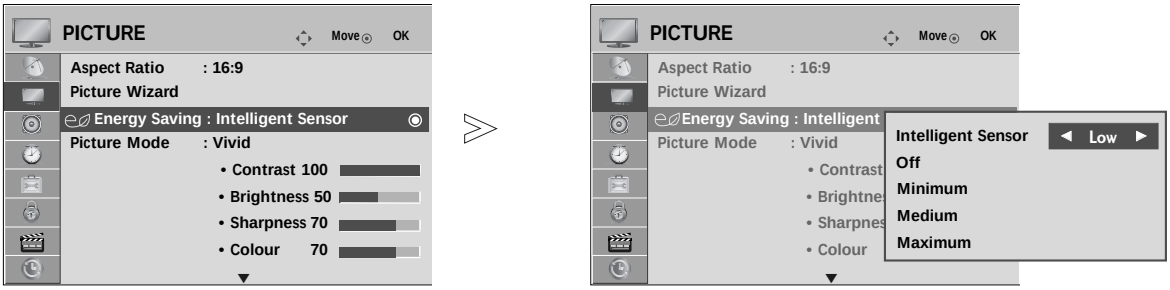
13

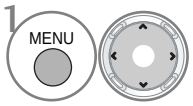
Finish the Picture Wizard.

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

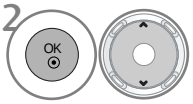
ENERGY SAVING

It reduces the plasma display's power consumption.
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**.

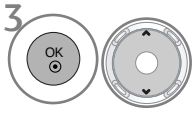




Select **PICTURE**.



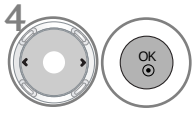
Select **Energy Saving**.



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,



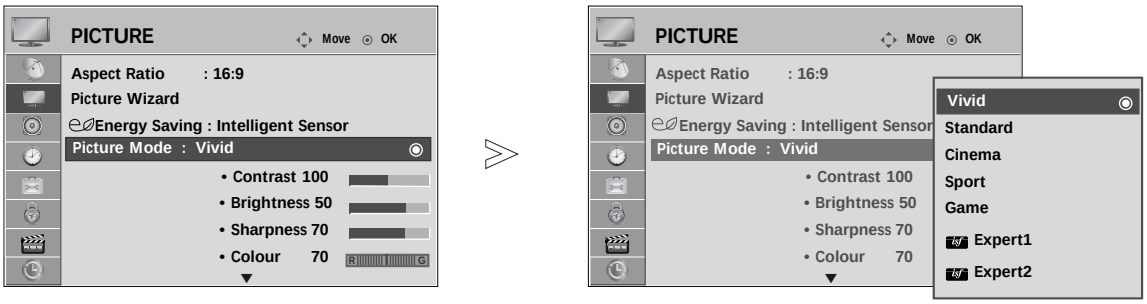
Select **Low, Middle** or **High**.

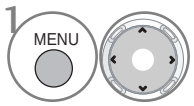
- Press the **MENU** button to return to normal TV viewing.
- Press the **RETURN** button to move to the previous menu screen.

PRESET PICTURE SETTINGS

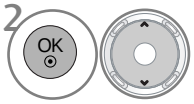
Picture Mode-Preset

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

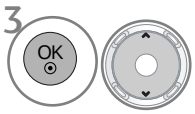




Select **PICTURE**.



Select **Picture Mode**.



Select **Vivid**, **Standard**, **Cinema**, **Sport**, **Game**, **Expert1** and **Expert2**.

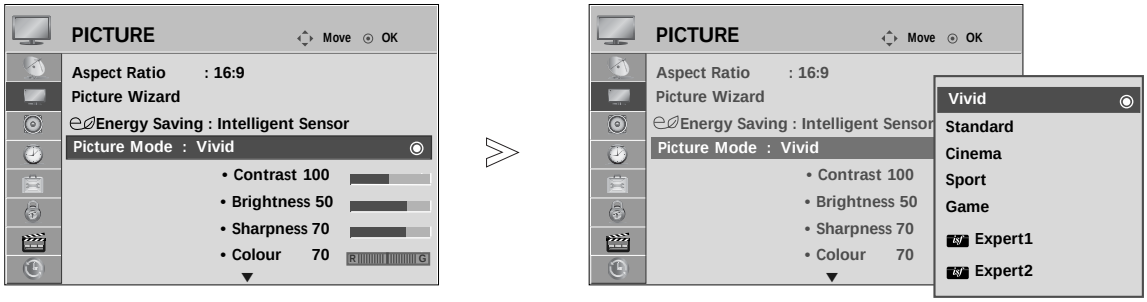
- **Picture Mode** adjusts the TV for the best picture appearance. Select the preset value in the **Picture Mode** menu based on the programme category.
- You can also adjust **Picture Mode** in the **Q. Menu**.

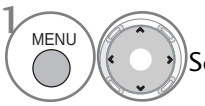
- Press the **MENU** button to return to normal TV viewing.
- Press the **RETURN** button to move to the previous menu screen.

MANUAL PICTURE ADJUSTMENT

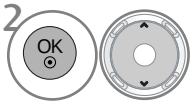
Picture Mode-User option

- **Contrast**
  Adjusts the difference between light and dark levels in the picture.
- **Brightness**
  Increases or decreases the amount of white 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.

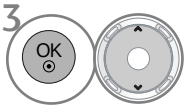




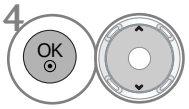
1 Select **PICTURE**.



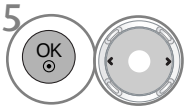
2 Select **Picture Mode**.



3 Select **Vivid**, **Standard**, **Cinema**, **Sport**, **Game**, **Expert1** or **Expert2**.



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



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.

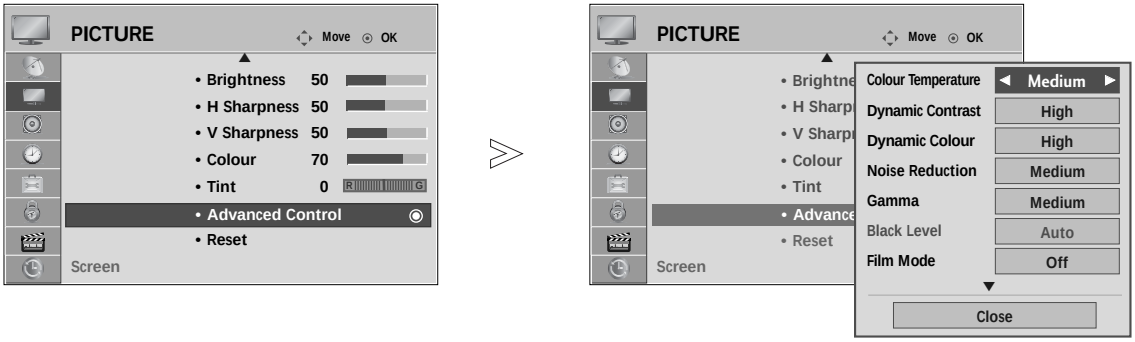
NOTE

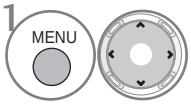
▶ You cannot adjust colour, sharpness and tint in the RGB/HDMI[PC] mode.

▶ When the **Expert 1/2** is selected, you can select **Contrast**, **Brightness**, **H Sharpness**, **V Sharpness**, **Colour** or **Tint.**

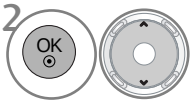
PICTURE IMPROVEMENT TECHNOLOGY

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 adjustment to each video mode, execute the “Picture Reset” function for each Picture Mode.

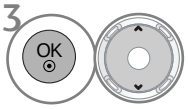


1 

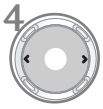
Select **PICTURE**.

2 

Select **Advanced Control**.

3 

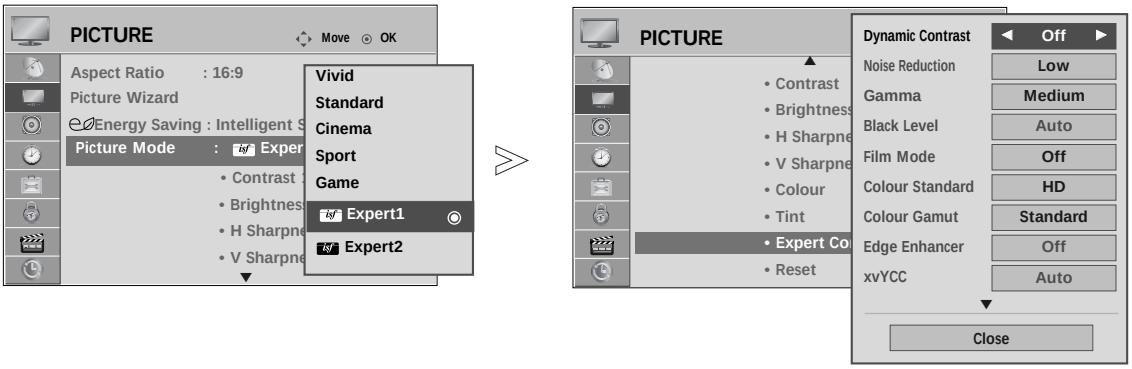
Select your desired Source. : **Colour Temperature, Dynamic Contrast, Dynamic Colour, Noise Reduction, Gamma, Black Level, Film Mode, Colour Gamut, Edge Enhancer** or **xvYCC**.

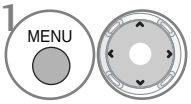
4 
Make appropriate adjustments.

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

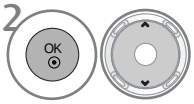
Expert Picture Control

By segmenting categories, **Expert1** and **Expert2** provide more categories which users can set as they see fit, offering the optimal picture quality for users.
This may also be used to help a professional optimize the TV performance using specific videos.

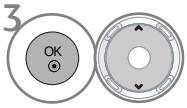


1 

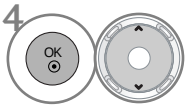
Select **PICTURE**.

2 

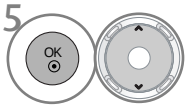
Select **Picture Mode**.

3 

Select **Expert1** or **Expert2**.

4 

Select **Expert Control**.

5 

Select your desired Source.

6
Make appropriate adjustments.

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

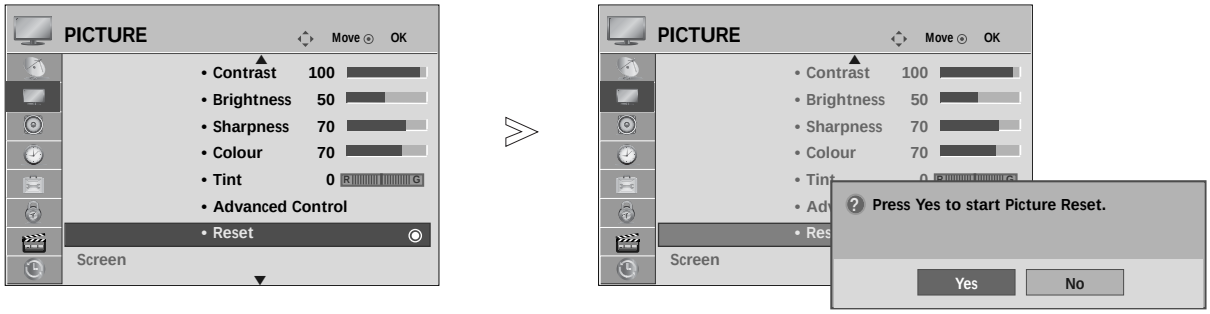
PICTURE CONTROL

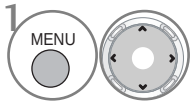
Colour Temperature (Warm/Medium/Cool)	■ Choose one of three automatic colour adjustments. Set to warm to enhance hotter colours such as red, or set to cool to make picture bluish.
Dynamic Contrast (Off/Low/High)	■ Adjusts the contrast to keep it at the best level according to the brightness of the screen. The picture is improved by making bright parts brighter and dark parts darker.
Dynamic Colour (Off/Low/High)	■ 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.
Noise Reduction (Off/Low/Medium/High)	■ Reduces screen noise without compromising video quality.
Gamma (Low/Medium/High)	■ You can adjust brightness of dark area and middle gray level area of the picture. • **Low** : Make dark and middle gray level area of the picture brighter. • **Medium**: Express original picture levels. • **High**: Make dark and middle gray level area of the picture darker.
Black Level (Low/High)	• **Low** : The picture of the screen gets darker. • **High** : The picture of the screen gets brighter. • **Auto** : Realizing the black level of the screen and set it to High or Low automatically. ■ **Set black level of the screen to proper level.** ■ 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'.
Film Mode (On/Off)	■ **You can watch a cinema-like video by eliminating judder effect.** ■ **Use this function when you watch movies.**
Colour Gamut (Wide/Standard)	• **Standard** : Mode to reproduce original colour according to the standard of input signal independent of the display characteristics. • **Wide:** Mode to use and set the rich colour area of the display. ■ Maximize the utilization for colour area that can be expressed.
Edge Enhancer (On/Off)	■ Shows clearer and distinctive yet natural corners of the video.
xvYCC (Auto/off/on)	■ This is the function to express richer colour. ■ This function is enabled in "Picture mode - Cinema, Expert" when xvYCC signal is inputted through HDMI, 1080p.
Colour Standard (SD/HD)	■ 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.
Expert Pattern (Off/Pattern1/Pattern2)	■ This is the pattern necessary for expert adjustment. ■ This function is enabled in "Picture Mode - Expert" when you watch DTV.

Colour Filter (Off/Red/Green/Blue)	■ This is the function to filter the specific colours of the video. You can use the RGB filter to set colour saturation and hue accurately.
White Balance (Medium/Warm/Cool)	■ This is the function to adjust the overall colour of the screen to the feeling you want. a. • Method : 2 Points • Pattern: Inner, Outer • Red/Green/Blue Contrast, Red/Green/Blue Brightness: The adjustment range is -50 ~ +50. b. • Method : 20 Point IRE • Pattern: Inner / Outer • IRE (Institute of Radio Engineers) is the unit to display the size of the video sig nal and can be set among 5, 10, 15 ~ 100. You can adjust Red, Green or Blue according to each setting. • Red/Green/Blue: The adjustment range is -50 ~ +50.
Colour Management System	■ 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). Colour difference may not be distinctive even when you make the adjustments for the general video. ■ Adjusts Red/Green/Blue/Yellow/Cyan/Magenta. • Red/Green/Blue/Yellow/Cyan, Magenta Colour : The adjustment range is -30 ~ +30. • Red/Green/Blue/Yellow/Cyan/Magenta Tint : The adjustment range is -30 ~ +30. ■ This feature is disable in RGB-PC and HDMI (PC) mode.

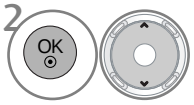
PICTURE RESET

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

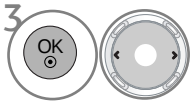




Select **PICTURE**.



Select **Reset**.



Select **Yes**.

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.

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.

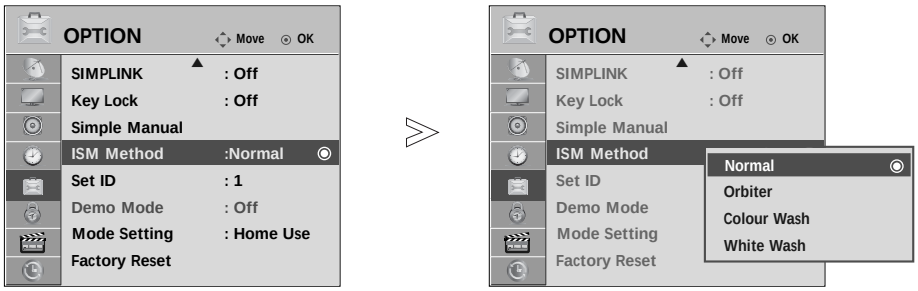
Colour Wash

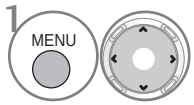
The colour block with the screen moved a little and the white pattern are alternately displayed. It is difficult to sense the afterimage occurred while the temporary afterimage is removed and the colour pattern is operating.

White Wash

White wash removes permanent images from the screen.

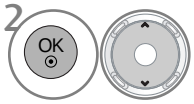
Note: An excessive permanent image may be impossible to clear entirely with White Wash.



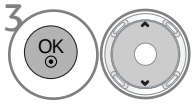


Select **OPTION**.

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



Select **ISM Method**.



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

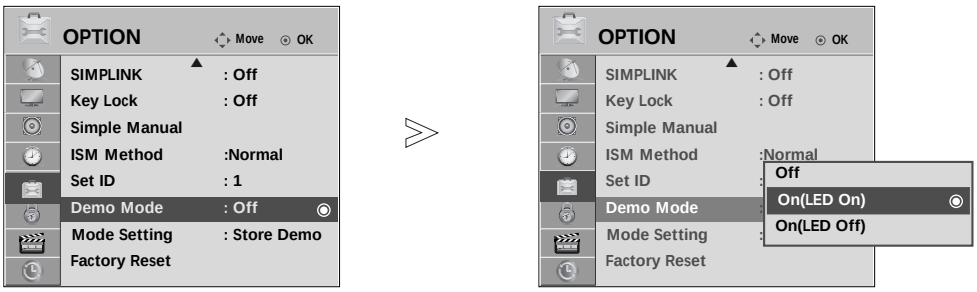
Save.

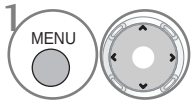
• Press the **MENU** button to return to normal TV viewing.

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

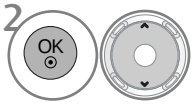
DEMO MODE

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**.

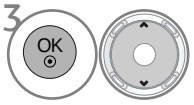




1 Select **OPTION**.



2 Select **Demo Mode**.



3 Select **On** to show the various feature of the TV.

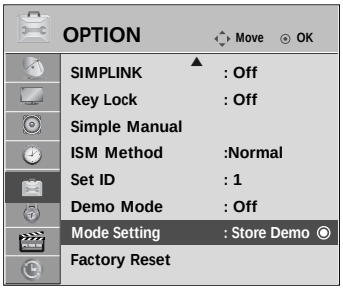
4 After a while, **Demo Mode** starts.
If you want to stop the demo, press any button (Except ◿ + or - and MUTE button).

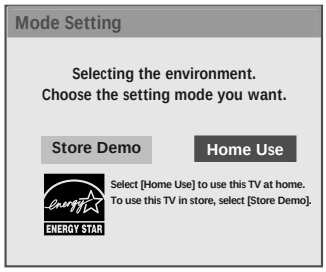
- **On(LED On)** : The LED at the bottom of TV operates in Store Mode.
- **On(LED Off)** : The LED at the bottom of TV does not operate in Store Mode.

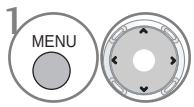
- Press the **MENU** button to return to normal TV viewing.
- Press the **RETURN** button to move to the previous menu screen.

MODE SETTING

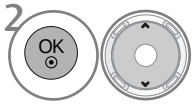
We recommend setting the TV to “Home Use” mode for the best picture in your home environment.
“Store Demo” mode is an optimal setting for displaying at stores.



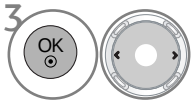




Select **OPTION**.



Select **Mode Setting**.



Select **Store Demo** or **Home Use.**

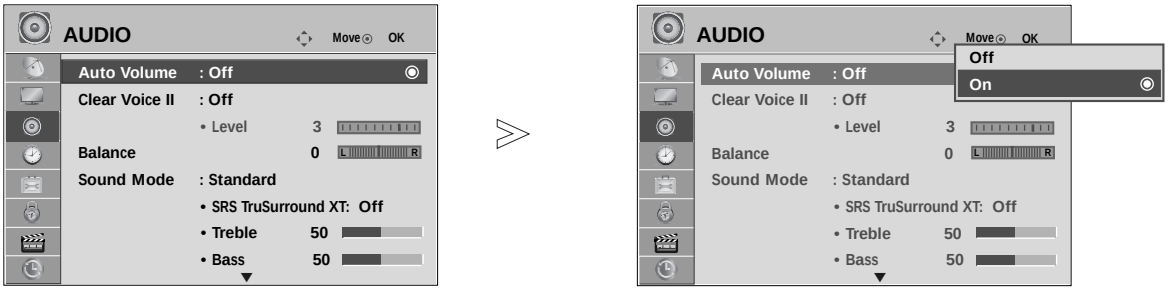
Save.

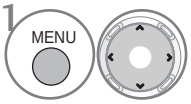
• Press the **RETURN** button to return to normal TV viewing.

AUTO VOLUME LEVELLER (AUTO VOLUME)

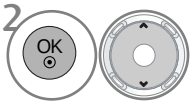
Auto Volume makes sure that the volume level remains consistent whether you are watching a commercial or a regular TV programme.

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.

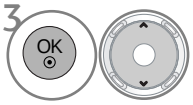


1 

Select **AUDIO**.

2 

Select **Auto Volume**.

3 

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

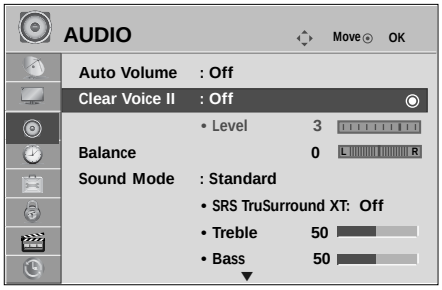
4

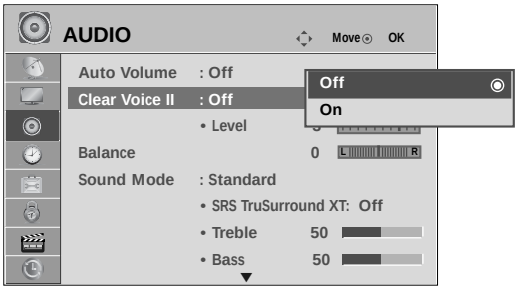
Save.

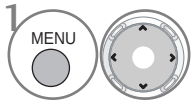
- Press the **MENU** button to return to normal TV viewing.
- Press the **RETURN** button to move to the previous menu screen.

CLEAR VOICE II

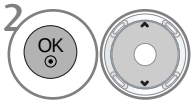
By differentiating the human sound range from others, it improves the sound quality of voices.



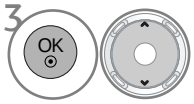




Select **AUDIO**.



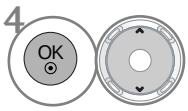
Select **Clear Voice II**.



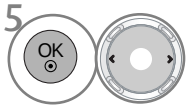
Select **On** or **Off**.

- 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



Select **Level**.



Make appropriate adjustments.

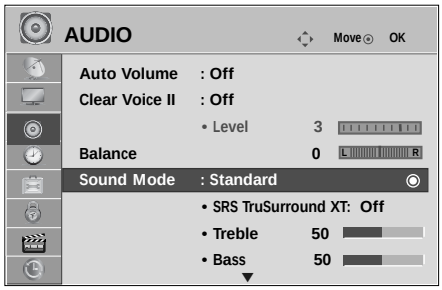
- Press the **MENU** button to return to normal TV viewing.
- Press the **RETURN** button to move to the previous menu screen.

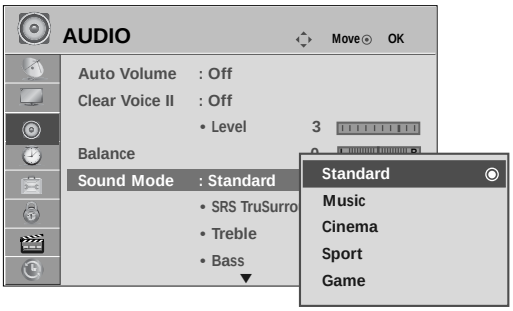
PRESET SOUND SETTINGS (SOUND MODE)

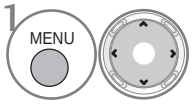
Sound Mode lets you enjoy the best sound without any special adjustment as the TV sets the appropriate sound options based on the programme content.

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

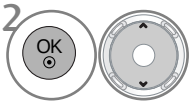
Standard, **Music**, **Cinema**, **Sport**, and **Game** are preset for optimum sound quality at the factory.
Standard: Offers standard-quality sound.
Music: Optimizes sound for listening to music.
Cinema: Optimizes sound for watching movies.
Sport: Optimizes sound for watching sports events.
Game: Optimizes sound for playing games.



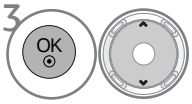




Select **AUDIO**.



Select **Sound Mode**.



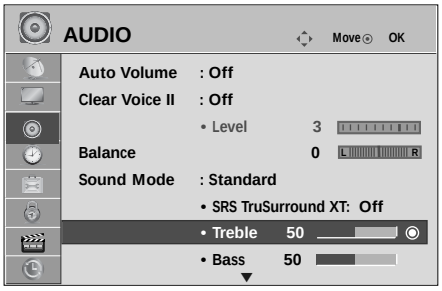
Select **Standard**, **Music**, **Cinema**, **Sport** or **Game**.

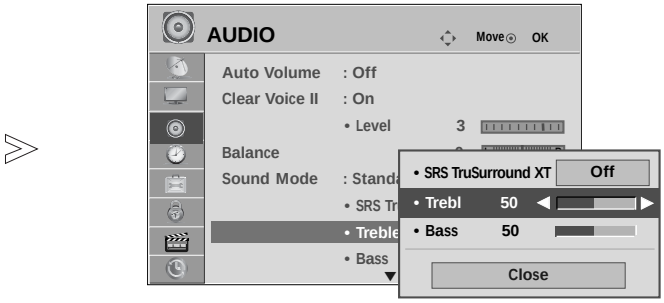
• You can also adjust **Sound Mode** in the **Q.MENU**.

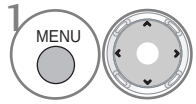
• Press the **MENU** button to return to normal TV viewing.

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

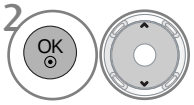
SOUND SETTING ADJUSTMENT - USER MODE



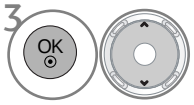




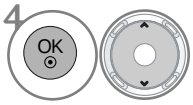
Select **AUDIO**.



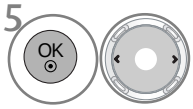
Select **Sound Mode**.



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



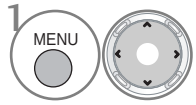
Select **Treble** or **Bass**.



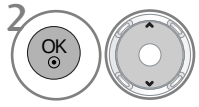
Make appropriate adjustments.

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

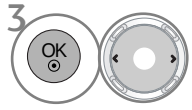
SRS TRUSURROUND XT



Select **AUDIO**.



Select **SRS TruSurround XT**



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

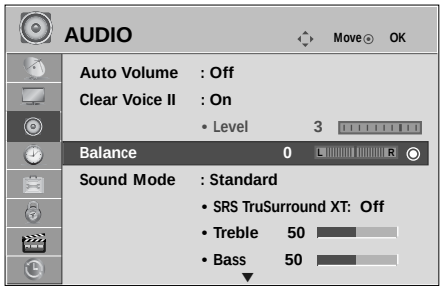
- **SRS TruSurround XT**: TruSurround XT takes advantage of any multi-channel format without needing to add extra speakers or equipment. Dialog clarity, bass enrichment, and the addition of stereo audio enhancement produces an immersive sound experience from standard stereo material.
- If sound quality 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.

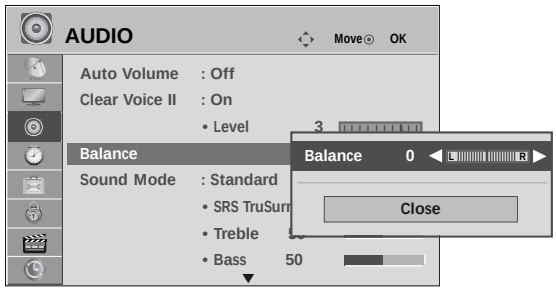
- Press the **MENU** button to return to normal TV viewing.
- Press the **RETURN** button to move to the previous menu screen.

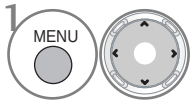
▶ SRS TruSurround XT is a trademark of SRS Labs, Inc.
▶ TruSurround XT technology is incorporated under license from SRS Labs, Inc.

BALANCE

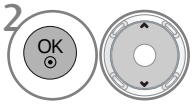
Adjust the left/right sound of speaker to suit your taste and room situations.



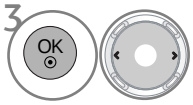




Select **AUDIO**.



Select **Balance**.



Make appropriate adjustments.

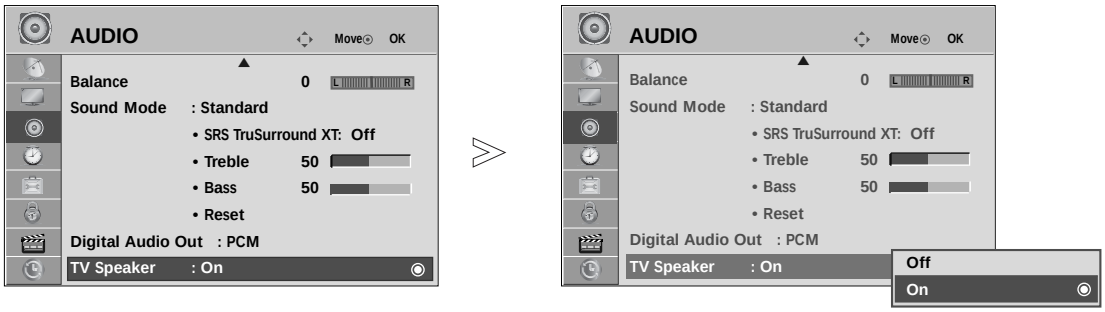
- Press the **MENU** button to return to normal TV viewing.
- Press the **RETURN** button to move to the previous menu screen.

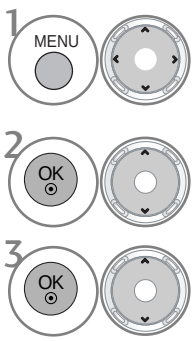
TV SPEAKERS ON/OFF SETUP

You can adjust the TV internal speaker status.

In **AV1**, **AV2**, **COMPONENT1**, **COMPONENT2**, **RGB** and **HDMI1**, **HDMI2**, **HDMI3**, **HDMI4** 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's internal speakers.





Select **AUDIO**.

Select **TV Speaker**.

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.

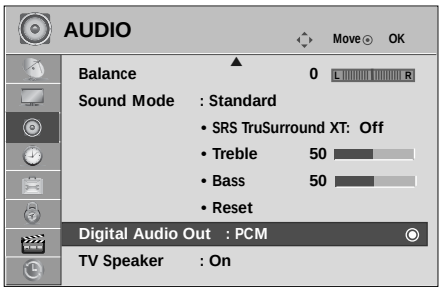
NOTE

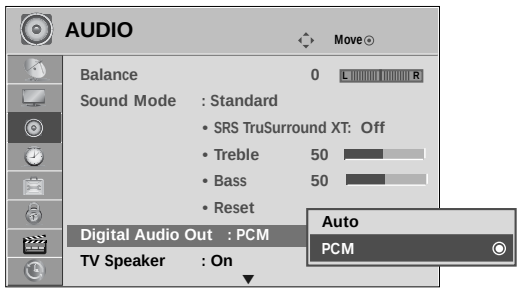
▶ When the TV speaker is turned off while the Simplink home theatre is operating, the sound output automatically switches to the Home theatre speaker, but when the TV speaker is turned on, the sound output the TV speaker.

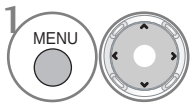
▶ Some menus in **AUDIO** are disabled when TV Speaker is set to Off.

SELECTING DIGITAL AUDIO OUT

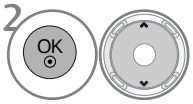
This function allows you to select your preferred Digital Audio Output.
The TV can only output DOLBY Digital if a programme is broadcast with Dolby Digital audio.
When Dolby digital is available, selecting Dolby Digital in the Digital Audio Out menu will set SPDIF(Sony Philips Digital Interface) output 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).



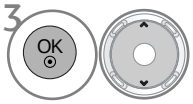




Select **AUDIO**.



Select **Digital Audio Out**.



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

DOLBY DIGITAL

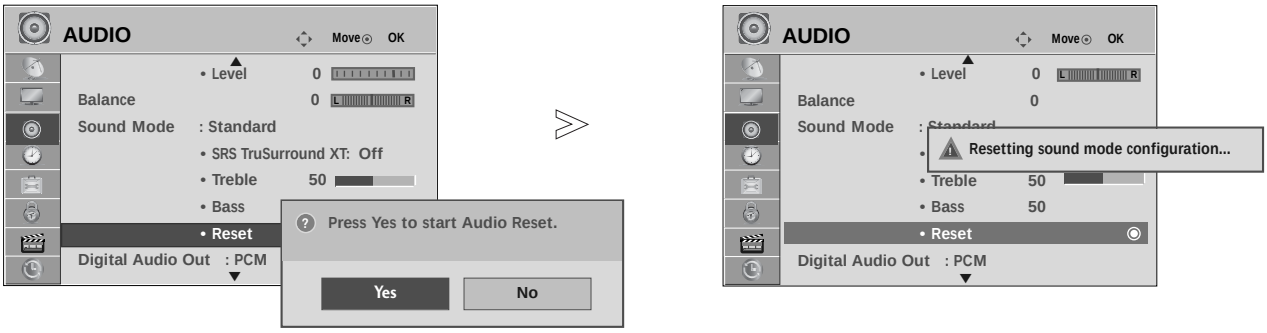
Manufactured under license from Dolby Laboratories. "*Dolby* "and the double-D symbol are trade-marks of Dolby Laboratories.

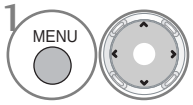
- There is a possibility that when HDMI mode, some DVD player do not make SPDIF sound, At that time, set the output of the digital audio of the DVD player to PCM.(In HDMI, Dolby Digital Plus is not supported).
- During recording or playback of audio only channel , Digital Audio Out is disabled.

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

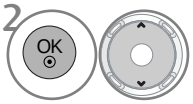
AUDIO RESET

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

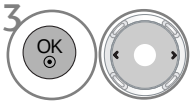




Select **AUDIO**.



Select **Reset**.



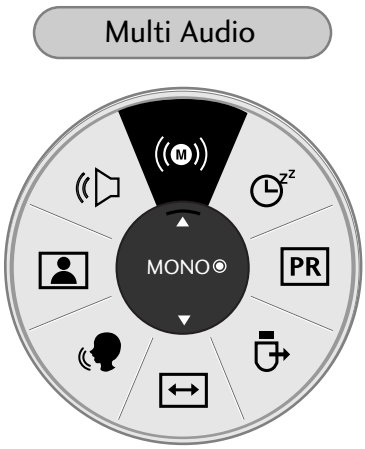
Select **Yes** or **No**.

Initialize the adjusted value.

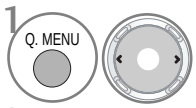
- Press the **MENU** button to return to normal TV viewing.
- Press the **RETURN** button to move to the previous menu screen.

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.



Analogue TV



Select **Multi Audio**.

Select **Mono** or **Stereo**.

• Press the **RETURN** 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.

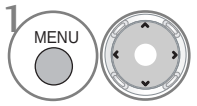
R+R: Audio signal from audio R input is sent to left and right loudspeakers.

LANGUAGE SELECTION (IN DIGITAL MODE ONLY)

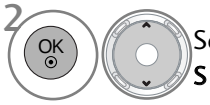
The Audio function allows selection of a preferred language.
If audio data in a selected language is not broadcast, the default language audio will be played.

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.

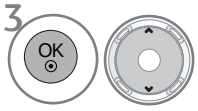
When the languages you selected as the primary for Audio Language and Subtitle Language are not supported, you can select desired language in OPTION Menu.



Select **OPTION**.

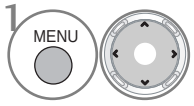


Select **Audio Language** or **Subtitle Language**.

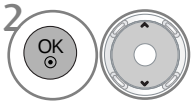


Select your desired language.

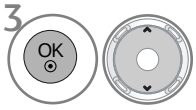
Save.



Select **OPTION**.



Select **Hard of Hearing(⊡)**.

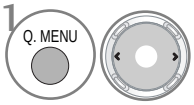


Select **On** or **Off**.

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

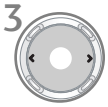
< **Audio Language Selection** >

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



Select **Multi Audio**.

Select an audio language.



Select **L+R**, **L+L** or **R+R**.

▶ 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	MPEG Audio
DD	Dolby Digital Audio
	Audio for "Visual Impaired"
ABC	Audio for "Hearing Impaired"

Subtitle Language OSD Information

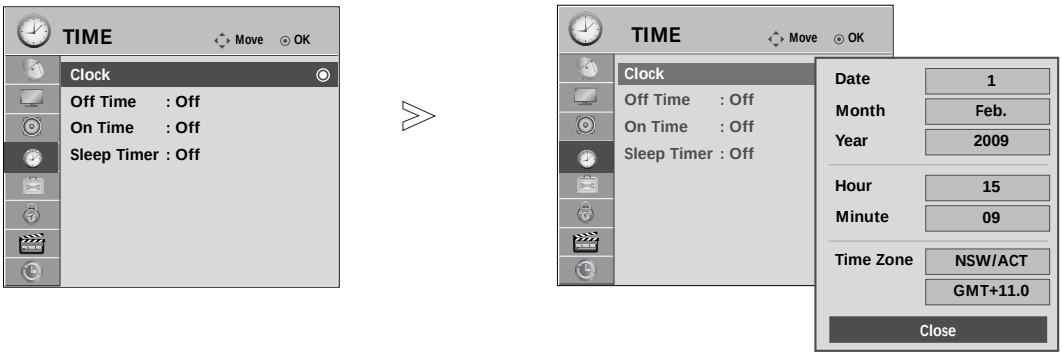
Display	Status
N.A	Not Available
	Teletext Subtitle
ABC	Subtitle for "Hard of Hearing"

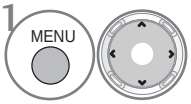
TIME SETTING

CLOCK SETUP

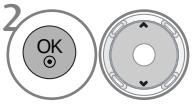
The clock is set automatically when receiving a digital signal. (You can set the clock manually only if the TV has no DTV signal.)

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

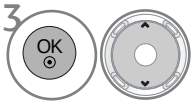


1 

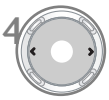
Select **TIME**.

2 

Select **Clock**.

3 

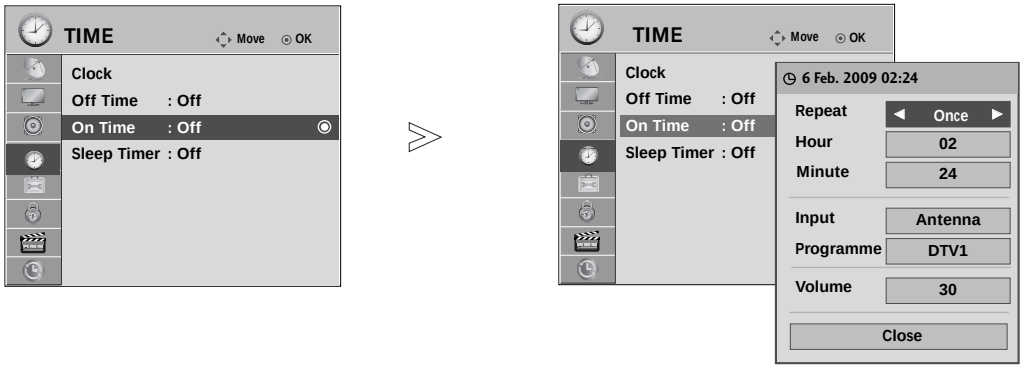
Select either the year, date, or time option.

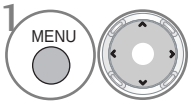
4 
Set the year, date, and time options.

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

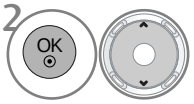
AUTO ON/OFF TIME SETTING

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.

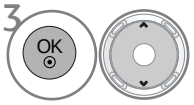


1 

Select **TIME**.

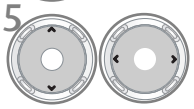
2 

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

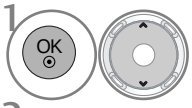
3 

Select **Repeat**.

4
Select **Off**, **Once**, **Daily**, **Mon.~Fri.**, **Mon.~Sat.**, **Sat.~Sun.**, or **Sunday**.

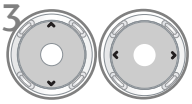
5 
Select and set **Hour** or **Minute**.

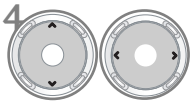
- To cancel **On/Off Time** function, select **Off**.
- Only for On Time function

1 

Select **Input**.

2
Select the desired input source.

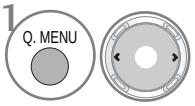
3 
When Selecting **Antenna**: set the programme at turn-on.

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**.

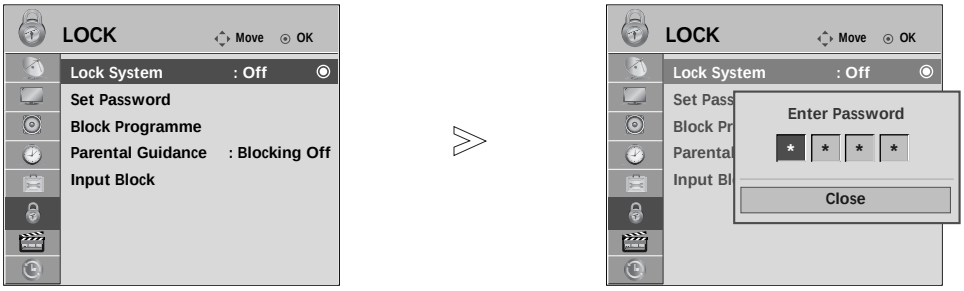
2
Select **Off**, **10**, **20**, **30**, **60**, **90**, **120**, **180** or **240 min.**.

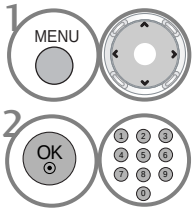
- When you switch the TV off, the preset sleep timer is cancelled.
- You can also adjust **Sleep Timer** in the **TIME** menu.

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.





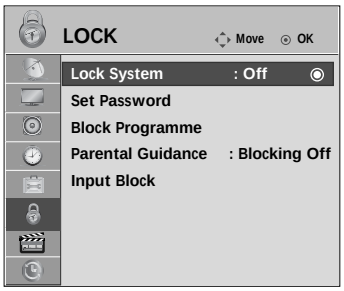
Select **LOCK**.

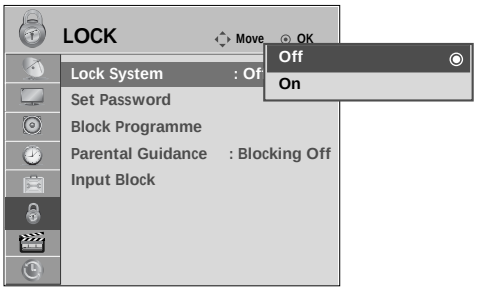
Input the password.

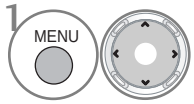
- Enter the password as requested.
- The TV is set up with the initial password “0-0-0-0”.

Lock System

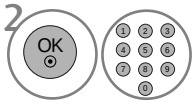
Revitalize **Block Programme**, **Parental Guidance** and **Input Block** function.





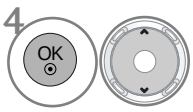


Select **LOCK**.



Input the password.

Select **Lock System**.



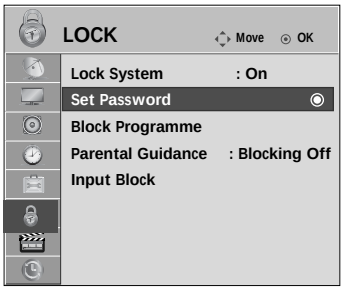
Select **On** or **Off**.

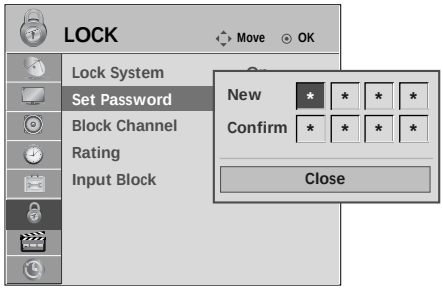
- If selecting **On**, **Block Programme**, **Parental Guidance** and **Input Block** operates.

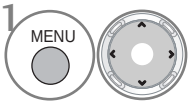
- Press the **MENU** button to return to normal TV viewing.
- Press the **RETURN** button to move to the previous menu screen.

Set Password

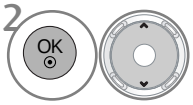
Change the password by inputting a new password twice.



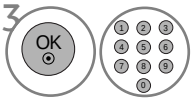


1 

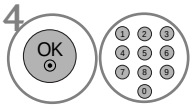
Select **LOCK**.

2 

Select **Set password**.

3 

Input the password.

4 

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**.

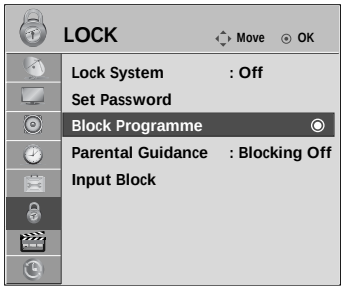
- Press the **MENU** button to return to normal TV viewing.
- Press the **RETURN** button to move to the previous menu screen.

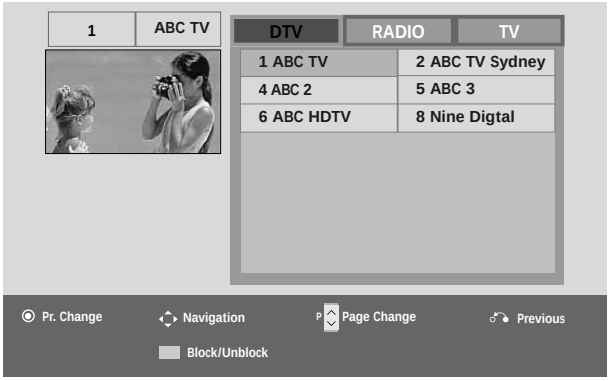
BLOCK PROGRAMME

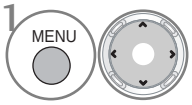
Blocks any programme that you do not want to watch or that you do not want your children to watch.

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

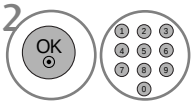
Enter the password to watch a blocked programme.





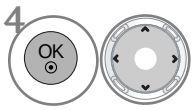


Select **LOCK**.



Input the password.

Select **Block Programme**.



Select a programme to block or unblock.

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.

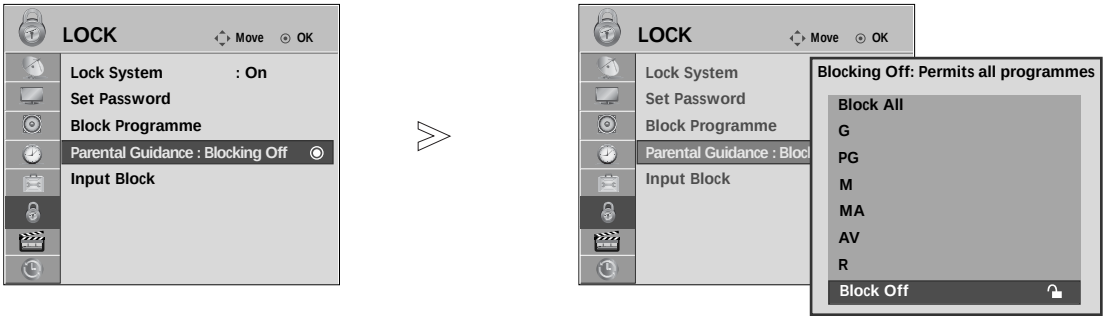
Parental Guidance

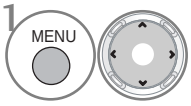
This function operates according to information from the broadcasting station. Therefore if the signal has incorrect information, this function does not operate.

A password is required to gain access to this menu.

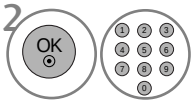
This set is programmed to remember which option it was last set to even if you switch the set off.

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



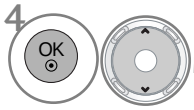
1 

Select **LOCK**.

2 

Input the password.

3
Select **Parental Guidance**.

4 

Make appropriate adjustments.

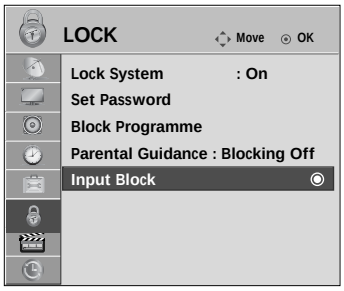
5

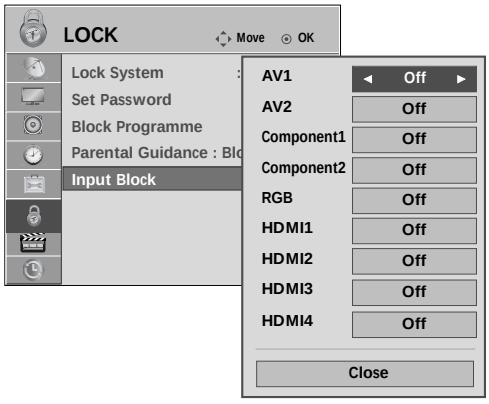
Save.

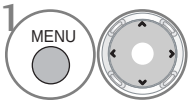
- Press the **MENU** button to return to normal TV viewing.
- Press the **RETURN** button to move to the previous menu screen.

EXTERNAL INPUT BLOCKING

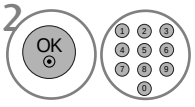
Enables you to block an input.



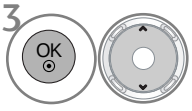


1 

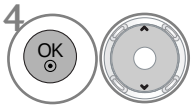
Select **LOCK**.

2 

Input the password.

3 

Select **Input Block**.

4 

Select input source.

5
Select **On** or **Off**.

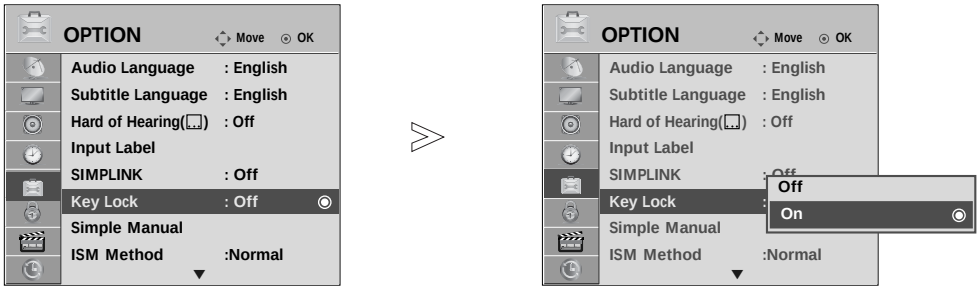
6

Save.

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

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 **OPTION**.

2 OK Select **Key Lock**.

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

4 OK Save.

- In **Key Lock** '**On**', if the TV is turned off, press the ⏻ / I, **INPUT**, **P** ▲ or ▼ button on the TV or **POWER**, **INPUT**, **P** ∧ ∨ or NUMBER buttons on the remote control then the set will be turned on.
- With the **Key Lock On**, the display ' ⚠ **Key Lock** ' appears on the screen if any button on the front panel is pressed while viewing the TV. (Except for ⏻ / I button)

- 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

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

❷ The **P** ∧ ∨ 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

❶ With the blue button you can progress from block to block.

❷ Use the yellow button to proceed to the next group with automatic overflow to the next block.

❸ With the green button you can proceed to the next existing page with automatic overflow to the next group. Alternatively the **P** ∧ button can be used.

❹ The red button returns to the previous selection. Alternatively the P ∨ 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.

FASTEXT

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

■ Page selection

❶ Press the **T.OPT** button and then use ∧ ∨ button to select menu. Display the index page.
❷ You can select the pages which are colour coded along the bottom line with corresponding coloured buttons.
❸ AS with SIMPLE teletext mode, you can select a page by entering its three digit page number with the NUMBER buttons in FASTEXT mode.
❹ The **P** ∧ ∨ button can be used to select the preceding or following page.

SPECIAL TELETEXT FUNCTIONS

■ Press the **T. OPT** button and then use ∧ ∨ 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.

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 -). ■ Install new batteries.
Power is suddenly turned off	■ Is the sleep timer set? ■ 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 TV 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 TV 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.

The audio function does not work.	
Picture OK & No sound	■ Press the ◿ + or - button. ■ Sound muted? Press **MUTE** button. ■ Try another channel. The problem may be with the broadcast. ■ Are the audio cables installed properly?
No output from one of the speakers	■ Adjust **Balance** in menu option.
Unusual sound from inside the TV	■ A change in ambient humidity or temperature may result in an unusual noise when the TV is switched on or off and does not indicate a fault with the TV.
No sound when connecting HDMI or USB	■ Check HDMI cable over version 1.3. ■ Check USB cable over version 2.0. *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)	■ Adjust resolution, horizontal frequency, or vertical frequency. ■ Check the input source.
Vertical bar or stripe on background & Horizontal Noise & Incorrect position	■ Use Auto configure or adjust size, phase, or H/V position. (Option)
Screen colour is unstable or single colour	■ Check the signal cable. ■ Reinstall the PC video card.

There is a problem with PICTURE settings.	
When the user changes the picture settings, the TV automatically converts back to the initial settings after a certain period of time.	■ It means that the TV is currently set to **Store Demo** mode. To switch to **Home Use** mode you should do the followings: From the TV Menu, choose **OPTION** -> Choose **Mode Setting** -> Choose **Home Use**. Now, you have completed switching to the **Home Use** mode.

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.

PRODUCT SPECIFICATIONS

MODELS		50PS7*** 50PS70FD-AA	60PS7*** 60PS70FD-AA
Dimensions (Width x Height x Depth)	with stand	1228.8 x 835.8 x 309 mm 48.4 x 32.9x 12.2inches	1465.4x 986.4 x 371 mm 57.7 x 38.9 x 14.6 inches
	without stand	1228.8x 784.5 x 78.9 mm 48.4 x 30.9 x 3.1 inches	1465.4 x 932.2 x 82.1 mm 57.7 x 36.7 x 3.2 inches
Weight	with stand without stand	38.1 kg / 84.0 lbs 34.1kg / 75.2 lbs	53.3kg / 117.5 lbs 46.3kg / 102.1 lbs
Power requirement		AC100-240V~ 50/60Hz	AC100-240V~ 50/60Hz
Television System Programme Coverage External Antenna Impedance		PAL B/B, DVB-T VHF 0-12, UHF 20-75, CATV 02-44, DTV 06-12, 27-69 75 ohm	
Environment condition	Operating Temperature Operating Humidity	32 ~ 104˚F (0 ~ 40˚C) Less than 80%	
	Storage Temperature Storage Humidity	-4 ~ 140˚F (-20 ~ 60˚C) Less than 85%	
Supported movie files		Refer to p. 77 ~ 78	

■ 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 a **STB**) on the remote control, while pointing at the component. Test the POWER and P ∧ ∨ 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 **MUT**E 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			
ALPHASTAR DSR	123			
AMPLICA	050			
BIRDVIEW	051	126	129	
CHANNEL MASTER	013	014	015	018
	036	055		
CHAPARRAL	008	009	012	077
CITOH	054			
CURTIS MATHES	050	145		
DRAKE	005	006	007	010
	011	052	112	116
	141			
DX ANTENNA	024	046	056	076
ECHOSTAR	038	040	057	058
	093	094	095	096
	097	098	099	100
	122			
ELECTRO HOME	089			
EUROPLUS	114			
FUJITSU	017	021	022	027
	133	134		
GENERAL INSTRUMENT	003	004	016	029
	031	059	101	
HITACHI	139	140		

Brand	Codes			
HOUSTON TRACKER	033	037	039	051
	057	104		
HUGHES	068			
JANIEL	060	147		
JERROLD	061			
KATHREIN	108			
LEGEND	057			
LG	001			
LUTRON	132			
LUXOR	062	144		
MACOM	010	059	063	064
	065			
MEMOREX	057			
NEXTWAVE	028	124	125	
NORSAT	069	070		
PACE SKY SATELLITE	143			
PANASONIC	060	142		
PANSAT	121			
PERSONAL CABLE	117			
PHILIPS	071			
PICO	105			
PRESIDENT	019	102		
PRIMESTAR	030	110	111	

Brand	Codes			
PROSAT	072			
RCA	066	106		
REALISTIC	043	074		
SAMSUNG	123			
SATELLITE SERVICE CO	028	035	047	057
	085			
SCIENTIFIC ATLANTA	032	138		
SONY	103			
STARCAST	041			
SUPER GUIDE	020	124	125	
TEECOM	023	026	075	087
	088	090	107	130
	137			
TOSHIBA	002	127		
UNIDEN	016	025	042	043
	044	045	048	049
	078	079	080	086
	10	135	136	
VIEWSTAR	115			
WINEGARD	128	146		
ZENITH	081	082	083	084
	091	120		

IR CODES

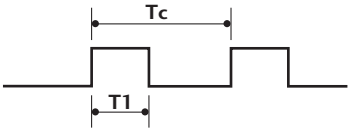
1. How to Connect

■ 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



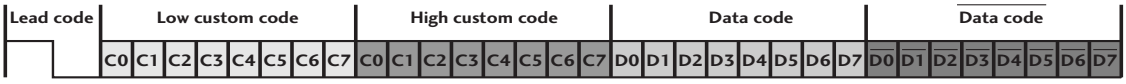
Carrier frequency

FCAR = 1/Tc = fOSC/12

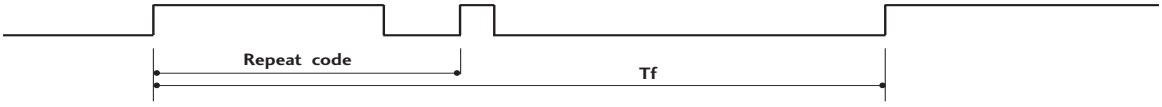
Duty ratio = T1/Tc = 1/3

■ Configuration of frame

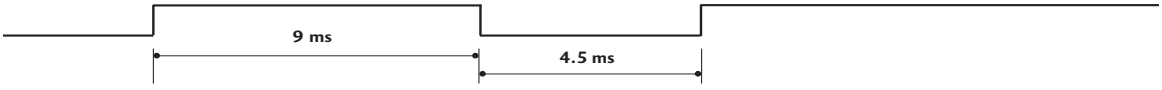
1st frame



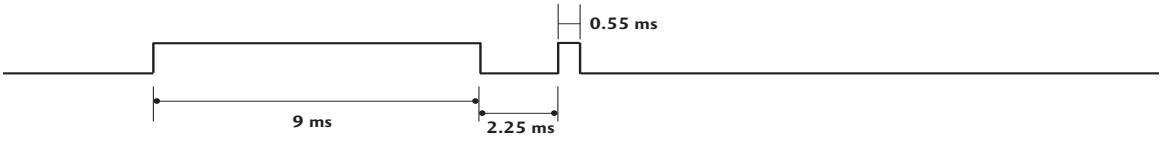
Repeat frame



■ Lead code

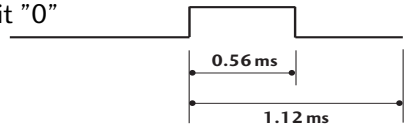


■ Repeat code

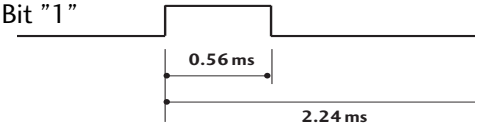


■ Bit description

Bit "0"



Bit "1"



■ 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 (∨)	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	◿ —	R/C BUTTON
1E	FAV	R/C BUTTON
09	MUTE	R/C BUTTON
00	P ∧	R/C BUTTON
01	P ∨	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

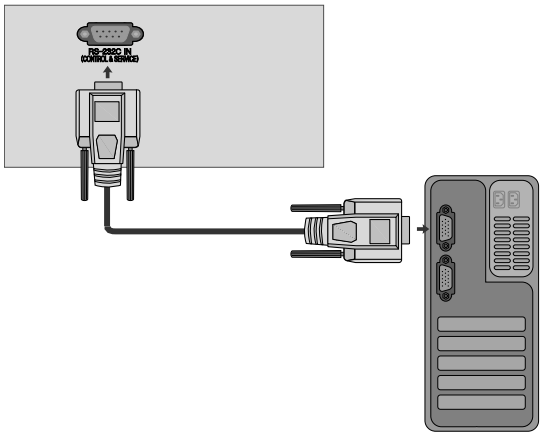
EXTERNAL CONTROL DEVICE SETUP

RS-232C Setup

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

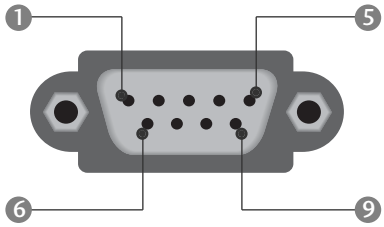
Connect the serial port of the control device to the RS-232C jack on the product back panel.

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



Type of Connector; D-Sub 9-Pin Male

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



RS-232C Configurations

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

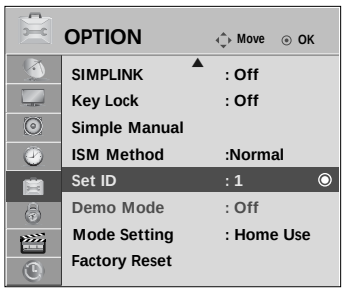
	PC	TV	
RXD	2	3	TXD
TXD	3	2	RXD
GND	5	5	GND
DTR	4	6	DSR
DSR	6	4	DTR
RTS	7	8	CTS
CTS	8	7	RTS
	D-Sub 9	D-Sub 9	

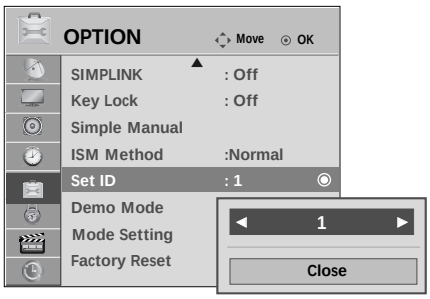
3-Wire Configurations(Not standard)

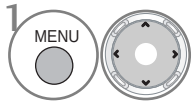
	PC	TV	
RXD	2	3	TXD
TXD	3	2	RXD
GND	5	5	GND
DTR	4	6	DTR
DSR	6	4	DSR
RTS	7	7	RTS
CTS	8	8	CTS
	D-Sub 9	D-Sub 9	

Set ID

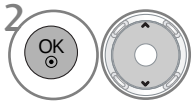
Use this function to specify a set ID number.
Refer to 'Real Data Mapping'. ▶ p.129



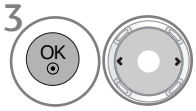




Select **OPTION**.



Select **Set ID**.



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

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

Communication Parameters

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

Command Reference List

	COMMAND 1	COMMAND 2	DATA (Hexadecimal)
01. Power Control	k	a	00 ~ 01
02. Aspect Ratio	k	c	Refer to p.127
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.129
18. Lower Power	j	q	00 ~ 12
19. Auto Configure	j	u	01
20. Tune Command	m	a	Refer to p.130
21. Programme Memory/ Skip	m	b	00 ~ 01
22. Key	m	c	Key Code
23. Input select	x	b	Refer to p.130

* 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
02: 16 : 9
04: Zoom
06: Original
07: 14 : 9
09: Just Scan
10: Cinema Zoom1
⋮
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.129.

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.129.

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.129.

Ack

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

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.129.

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.129.

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

Data Min: 00H ~ Max: 64H
(*transmit by Hexadecimal code)
*Refer to 'Real data mapping'. ▶ p.129.

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][l][ ][Set ID][ ][Data][Cr]

Data 00: off Data 01: on

Ack

[l][ ][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.129.

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.129.

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)
*Refer to 'Real data mapping'. ▶ p.129.

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]

0	0	0	0	0	0	0	0

2 th Byte — 1 th Byte

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	1	0	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]

0	0	0	0	0	0	0	0

5th bit : 0 : Low Power
1 : Intelligent Power
Level : 0~15
6~8th bit : Reserved bit

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

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 123.

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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Version 1.1

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