LG
Life's Good

OWNER'S MANUAL

LED LCD TV

Please read manual careful before operating your set and reain if for future reference.

32LW5500
42LW5500
47LW5500

P/NO : SAC34453525(1108-REV00)
Printed in China

www.lg.com

LICENSES

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ASSEMBLING AND PREPARING

Unpacking

Check your product box for the following items. If there are any missing accessories, contact the local dealer where you purchased your product. The illustrations in this manual may differ from the actual product and item. and item.

Remote control and batteries (AAA)	Nero MediaHome 4 Essentials CD	Owner's manual & card	Polishing cloth
x 8 M4 X 12		x 4	
Screw for assembly	Component gender cable x 1 AV gender cable x 1	3D Glasses	Screw for fixing (Only 32LW5500)

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Separate purchase

Optional extras can be changed or modified for quality improvement without any notification.
Contact your dealer for buying these items.
This device only works with compatible LG LED LCD TV or LCD TV.

Magic Motion Remote Control, Batteries (AA)

M-Rmote Dongle (Use with theMagic Motion Remote Control)

Wireless LAN for Broadband /DLNA Adaptor (AN-WF100)

Model	32LW5500	42/47LW5500
VESA (A x B)	200 x 100	400 x 400
Standard screw	M4	M6
Number of screws	4	4
Wall mount bracket	LSW100B(G)	LSW400B(G)

Wireless Intelligent Media Box

CAUTION

- Do not use any pirated items to ensure the safety and product life span.
- Any damages or injuries by using pirated items are not covered by the warranty.

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Parts and buttons

Image shown may differ from your TV.

NOTE

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

CAUTION

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.

FRONT PANEL

Remote control

intelligent sensor
(Adjusts the image quality and brightness based on the surrounding environment.)

Power indicator
(You can set the Power indicator to on or off by selecting **OPTION** in the Home menu - SETUP.)

Touch buttons
(All of the buttons are touch sensitive and can be operated through simple touch with your finger.)

Touch button	Description
⏻/I	Turns the power on or off
INPUT	Changes the input source
HOME	Accesses the Home menu, or saves your input and exits the menus.
OK⊙	Selects the highlighted menu option or confirms an input
− ◿ +	Adjusts the volume level
∨ P ∧	Scrolls through the saved programmes

BACK PANEL

Rear Connection panel

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Setting up the TV

If you are not mounting the TV to a wall, use the following instructions to attach the stand.

Attaching the stand

1 Lay the TV with the screen side down on a flat surface.

CAUTION

Lay a foam mat or soft protective cloth on the surface to protect the screen from damage. Make sure not objects press against the screen.

2 Assemble the parts of the **Stand Body** with the **Stand Base** of the TV.

3 Assembel the TV as shown.

4 Secure the TV and the stand with screws.

CAUTION

Tighten the screws firmly to prevent the TV from tilting forward. Do not over tighten.

DESKTOP PEDESTAL INSTALLATION

■ Image shown may differ from your TV
For adequate ventilation allow a clearance of 10cm all around the TV.

1 Lift and tilt the TV into its upright position on a table.

2 Connect the power cord to a wall outlet.

CAUTION

■ Do not place the TV near or on sources of heat, as this may result in fire or other damage.

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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 soild 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.
  —Inorrect fastening of screws to surface which may cause TV to fall and cause personal injury.
  —Not following the recommended Installation method.

- Image shown may differ from your TV.

SWLVEL 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.

Securing the TV to a table

- Image shown may differ from your TV.
  (Only 32LW5500)

Fix the TV to a table to prevent from tilting forward, damage, and potential injury.
Mount the TV on a table, and then insert and tighten the supplied screw on the rear of the stand.

WARNING

To prevent TV from falling over, the TV should be securely attached to the floor/wall per installation instructions. Tipping, shaking, or rocking the TV may cause injury.

Tidying cables

1 Image shown may differ from your TV.
After connecting the cables as necessary,install **Cable Holder** as shown and bundle the cables.

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CAREFUL INSTALLATION ADVICE

This feature is not available for all models.
Image shown may differ from your TV.

- You should purchase necessary components to fix the TV safety and secure to the wall on 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.

CAUTION

- 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.

KENSINGTON SECURITY SYSTEM

This feature is not available for all models.
Image shown may differ from your TV.

The TV is equipped with a Kensington Security System connector on the back panel. Connect the Kensington Security System cable as shown below.
For the detailed installation and use of the Kensington Security System, refer to the user's guide provided with the Kensington Security System.
For further information, contact http://www.kensington.com, the internet homepage of the Kensington company. Kensington sells security systems for expensive electronic equipment such as notebook PCs and LCD projectors.

CAUTION

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

REMOTE CONTROL

The descriptions in this manual are based on the buttons of the remote control. Please read this manual carefully and use the TV correctly.
To replace batteries, open the battery cover, replace batteries (1.5 V AAA) matching ⊕ and ⊖ ends to the label inside the compartment, and close the battery cover. Be sure to point the remote control at the remote control sensor on the TV.
To remove the batteries, perform the installation actions in reverse.

CAUTION

Do not mix old and new batteries, as this may damage the remote control.
Make sure to point the remote control at the remote control sensor on the TV.

- Image shown may differ from your TV.

⏻ **(POWER)**	Turns the TV on or off.
ENERGY SAVING	Adjusts the brightness of the screen to reduce energy consumption.
AV MODE	Selects an AV mode.
INPUT	Changes the input source; Turns the TV on.
TV/RAD	Selects Radio, TV and DTV programme.
Alphanumeric buttons	Enters letters and numbers.
LIST	Accesses the saved programme list.
Q.VIEW	Returns to the previously viewed programme.
◿ + -	Adjusts the volume level.
MARK	Selects a menu or option.
FAV	Accesses your favourite programme list.
CHAR/NUM	Switches between Letter and Number input modes.
3D (Only 3D models)	Uses for viewing 3D video.
DELETE	Deletes letters and numbers.
MUTE	Mutes all sounds.
P ∧ ∨	Scrolls through the saved programmess.
PAGE	Moves to the previous or next screen.
PREMIUM	Accesses the Premium menus.
HOME	Accesses the Home menu.
Q.MENU	Accesses the quick menus.
3D OPTION	Used for viewing 3D video.
Navigation buttons (up/down/left/right)	Scrolls through menus or options.
OK	Selects menus or options and confirms your input.
BACK	Returns to the previous level.
GUIDE	Shows programme guide.
EXIT	Clears all on-screen displays and return to TV viewing.
Coloured buttons	These buttons are used for teletext (on TELETEXT models only), Programme edit.
SUBTITLE	Recalls your preferred subtitle in digital mode.
INFO	Views the information of the currently programme and the screen.
Control buttons (■, ▶, II, ◀◀, ▶▶)	Controls the Time Machine or MY MEDIA menus or the SIMPLINK compatible devices (USB,SIMPLINK or Time Machine).
LIVE TV	Return to the LIVE TV.
REC	Uses to adjust Timeshift Mode.
RATIO	Resizes an image

Magic Motion Remote Control Functions

- Image shown may differ from your TV.

This item is not included for all models.
The descriptions in this manual are based on the buttons of the remote control.
Please read this manual carefully and use the TV correctly.
When the message "Magic motion remote control battery is low. Change the battery." is displayed, replace the battery.
To replace batteries, open the battery cover, replace batteries (1.5 V AA) matching ⊕ and ⊖ ends to the label inside the compartment, and close the battery cover. Be sure to point the remote control to the remote control sensor on the TV.

To remove the batteries, perform the installation actions in reverse.

CAUTION

Magic Motion Remote Control need to seprate purchase by yourself, and use it with the M-Rmote Dongle.

Do not mix old and new batteries, as this may damage the remote control

Make sure to point the remote control to the remote control sensor on the TV.

ENGLISH

Pointer Receiver
Blinks the light when operating.

⏻ (POWER)
Turns the TV on or off.

HOME
Accesses the Home menu.

Navigation buttons (up/down/left/right)
Scrolls through menus or options.

OK
Press this button to display the pointer when it disappears from the screen. You can control the TV by selecting Quick Menu on the screen.

⊿ + -
Adjusts the volume level.

P ∧ ∨
Scrolls through the saved programmes.

MUTE
Mutes all sounds.

Registrating Magic Motion Remote Control

The Magic Motion Remote Control operates by pairing with your TV.
Register the Magic Motion Remote Control after purchasing the TV.

How to register the Magic Motion Remote Control

To register the Remote Control, press the **OK** button on the Remote Control while aiming it at your TV.

How to Re-register the Magic Motion Remote Control after Registration Failure

Reset the remote control by pressing and holding both the **OK** and **MUTE** buttons for 5 seconds. (Once the reset is complete, the light on the Pointer RF Receiver blinks.) Then repeat the above procedure to register the remote control.

How to use Magic Motion Remote Control

1 Press **OK** button if there is no pointer on your TV screen. The pointer will then appear on the screen.
If the pointer has not been used for a certain period of time, it will disappear.

2 You can move the pointer by aiming the Pointer Receiver of the remote control at your TV then move it left, right, up or down.
If the pointer does not work properly after clicking the **OK** button, leave the remote control for 10 seconds then use it again.

Precautions to Take when Using the Magic Motion Remote Control

- Use the remote control within the maximum communication distance (10 m). Using the remote control beyond this distance, or with an object obstructing it, may cause a communication failure.
- A communication failure may occur due to nearby devices. Electrical devices such as a microwave oven or wireless LAN product may cause interference, as this will use the same bandwidth (2.4 GHz) as the Magic Motion Remote Control.
- The Magic Motion Remote Control may be damaged or may malfunction if it is dropped or receives a heavy impact.
- When playing a game using the Magic Motion Remote Control, hold it securely by wrapping its strap around your wrist and adjusting the length with the adjustable ring.
- Take care not to bump into nearby furniture or other people when using the Magic Motion Remote Control.
- Manufacturer and installer cannot provide service related to human safety as the applicable wireless device has possibility of electric wave interference.

WATCHING TV

Connecting to an antenna

Connect an antenna to watch TV referring to the following.
To prevent damage do not connect to the mains outlet until all connections are made between the devices.

Connecting an antenna

Connect the TV to a wall antenna socket with a RF cable (75 Ω).

NOTE

- Use a signal splitter to use more than 2 TVs.
- If the image quality is poor, install a signal amplifier properly to improve the image quality.
- If the image quality is poor with an antenna connected, aim the antenna to the proper direction.
- An antenna cable and converter are not supplied.

Turning the TV on for the first time

When you turn the TV on for the first time, the Initial setting screen appears. Select a language and customize the basic settings.

1 Connect the power cord to a power outlet.

2 In Standby mode, press **POWER** to turn the TV on.

The Initial setting screen appears if you turn the TV on for the first time.

NOTE

- You can also access **Factory Reset** by accessing **OPTION** in the Home menu-SETUP.

3 Follow the on-screen instructions to customize your TV settings according to your preferences.

Country（city）	Selects a country to display.
⇩	
Mode Setting	Selects **Home Use** for the home environment.
⇩	
Power Indicator	Sets the power indicator. (When you select Home Use from Mode Setting)
⇩	
Auto Tuning	Scans and saves available programmes automatically.

NOTE

- For those countries without confirmed DTV broadcasting standards, some DTV features might not work, depending on the DTV broadcasting environment.
- To display images in the best quality for your home environment, select **Home Use**.
- **Store Demo** is suitable for the retail environment.
- If you select **Store Demo** , the previously customized settings will switch to the default settings of **Store Demo** in 5 minutes.

4 When the basic settings are complete, press **OK**.

NOTE

- If you do not complete the Initial setting, it will appear whenever the TV turns on.Disconnect the power cord from the power outlet when you do not use the TV for a long period of time.

Watching TV

1 In Standby mode, press **POWER** to turn the TV on.

2 Press **INPUT** and select **Antenna**.

3 To turn the TV off, press **POWER**.
The TV switches to Standby mode.

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Accessing Home menu

1 Press **HOME** to access the Home menu.

2 Press the Navigation buttons to scroll to one of the following menus and press **OK**.

3 Press the Navigation buttons to scroll to the setting or option you want and press **OK**.

4 When you are finished, press **EXIT**.

■ Image shown may differ from your TV

Notes:
the “Premium” item list is under the testing process; it will be avaliable by updating the software after July 2011, and the instruction could be find on page 84 of the user's guide on software updating.

Notes:
click the “Quick Apps" icon, jump out the “Coming Soon" window. this implies the fact that the "Quick Apps" is under the development process.
it will be avaliable by updating the software after July 2011, and the instruction could be find on page 84 of the user's guide on software updating.

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Manually setting up programme (In digital mode)

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

1 Press **HOME** to access the Home menu.

2 Press the Navigation buttons to scroll to **SETUP** and press **OK**.

3 Press the Navigation buttons to scroll to **Manual Tuning** and press **OK**.

4 Press the Navigation buttons to scroll to **DTV** or **Cable DTV** and press **OK**.

5 Scroll through the programme types, and then add or delete programmes.

6 When you are finished, press **EXIT**.
When you return to the previous menu, press **BACK**.

NOTE

- If the TV scans a blocked programme, you will be prompted to enter your password to keep the programme scanned.
- When manually tuning, you use the figures that are set up at Auto Tuning for each of necessary item.
- When the change is needed, please first perform Auto Tuning.
- Please inquire of the cable service provider about the correct values.

Manually setting up programme (In analogue mode)

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

1 Press **HOME** to access the Home menu.

2 Press the Navigation buttons to scroll to **SETUP** and press **OK**.

3 Press the Navigation buttons to scroll to **Manual Tuning** and press **OK**.

4 Press the Navigation buttons to scroll to **TV** or **Cable TV** and press **OK**.

5 Scroll through the programme types, and then add or delete programmes.

6 Press the Navigation buttons to scroll to TV System.

7 Press the Navigation buttons to scroll to **V/UHF** or **Cable**.

8 Press the Navigation buttons or Number buttons to scroll to the desired channel number.

9 Press the Navigation buttons to scroll to commence searching**.**

10 Press the Navigation buttons to scroll to **Store** and press **OK.**

11 When you are finished, press **EXIT**.
When you return to the previous menu, press **BACK**.

NOTE

If the TV scans a blocked programme, you will be prompted to enter your password to keep the programme scanned.

- **I** : PAL I/II (U.K. / Ireland / Hong Kong / South Africa)
- **DK** : PAL D/K (East Europe / China / Africa / CIS)
- **NTSC M** : USA / Korea / Philippines

To store another channel, repeat steps 5 to 10.

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Assigning a station name

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

1 Press **HOME** to access the Home menu.

2 Press the Navigation buttons to scroll to **SETUP** and press **OK**.

3 Press the Navigation buttons to scroll to **Manual Tuning** and press **OK**.

4 Press the Navigation buttons to scroll to **TV** or **Cable TV**.

5 Press the Navigation buttons to scroll to **Name** and press **OK**.

6 Press the Navigation buttons to scroll 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 and press **OK**.

7 Press the Navigation buttons to scroll to **Close** and press **OK**.

8 Press the Navigation buttons to scroll to **Store** and press **OK**

9 When you are finished, press **EXIT**.
When you return to the previous menu, press **BACK**.

Fine Tuning

Normally fine tuning is only necessary if reception is poor.

1 Press **HOME** to access the Home menu.

2 Press the Navigation buttons to scroll to **SETUP** and press **OK**.

3 Press the Navigation buttons to scroll to **Manual Tuning** and press **OK**.

4 Press the Navigation buttons to scroll to **TV** or **Cable TV**.

5 Press the Navigation buttons to scroll to **Fine**.

6 Fine tune for the best picture and sound.

7 Press the Navigation buttons to scroll to **Store** and press **OK**

8 When you are finished, press **EXIT**.
When you return to the previous menu, press **BACK**.

Editing your programme list

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 Press **HOME** to access the Home menu.

2 Press the Navigation buttons to scroll to **SETUP** and press **OK**.

3 Press the Navigation buttons to scroll to **Programme Edit** and press **OK**.

4 Edit programmes using the following buttons.

Button	Description	
∧	Highlight the programme type.	
∧ ∨ < >	Scrolls through programme types or programmes.	
OK	Edits programmes.	
	Watch	Selects the highlighted programme to view.
	Set as Favourite	Registers or cancels the current programme in favourite programme list.
	Skip	Selects a programme number to be skipped.
	Delete	Selects a programme number to be deleted.
	Move	Selects a programme number to be moved.
	Block	Blocks or unblocks a programme.
P ∧ ∨	Moves to the previous or next page.	
Red button	Selects your desired favourite programme group.	

5 When you are finished, press **EXIT**.
When you return to the previous menu, press **BACK**.

Selecting a programme on the programme list

1 Press **LIST** to access the programme list.

Button	Description
< >	Selects programme list or recent programme list.
∧ ∨	Scrolls through programme.
OK	Selects the highlighted programme to view.
P ∧ ∨	Moves to the previous or next page.
Red button	Edits Channel.
FAV	Sets up a favourite programme list.

2 When you are finished, press **EXIT**.
When you return to the previous menu, press **BACK**.

NOTE

If you select the blocked programme, you will be prompted to enter your password.

ENGLISH

Using favourite programmes

Add the programmes that you watch frequently to the favourite list.

1 Select a programme to add to the favourite list.

2 Press **FAV**.

NOTE

- You can also access the input favourite list by selecting **Favourite List** in the Home menu.

Button	Description
< >	Selects a desired programme group.
P ∧ ∨	Moves to the previous or next page.
Red button	Moves to the **Programme Edit**.
Green button	Register or cancel the selected programme.
FAV	Moves to the **Programme List**.

3 When you are finished, press **EXIT**.

NOTE

You can also setup Favourite List in the **SETUP** menu - **Programme Edit**.

Booster(In air digital mode)

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

1 Press **HOME** to access the Home menu.

2 Press the Navigation buttons to scroll to **SETUP** and press **OK**.

3 Press the Navigation buttons to scroll to **Booster** and press **OK**.

4 When you are finished, press **EXIT.**

Using additional options

Adjusting aspect ratio

Resize an image to view at its optimal size by pressing **RATIO** while you are watching TV.

NOTE

- You can also change the image size by pressing **Q. MENU** or accessing **Aspect Ratio** in the **PICTURE** menus.
- You can adjust the enlarge proportion using the Navigation buttons.
- You can only select **16:9**, **4:3**, **14:9**, **Cinema Zoom** in Component mode.
- You can only select **16:9**, **Original**, **4:3**, **14:9**, **Cinema Zoom** in HDMI mode.
- You can only select **16:9**, **4:3** in RGB-PC, mode only.
- In DTV/HDMI/Component (over 720p) mode, **Just Scan** is available.
- In DTV mode, **Full Wide** is available.

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- **16:9**: Resizes images to fit the screen width.

- **Just Scan**: Displays video images in the original size without disappearing parts at the edge of the image.

NOTE

- If you select **Just Scan**, you may see image noises at the edge of the original signal.

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

- **Full Wide**: When TV receives the wide screen signal,it will lead you to adjust the picture horizontally or vertically, in a linear proportion,to fill the entire screen fully.

4:3 and 14:9 video is supported in full screen without any video distortion through DTV input.

- **4:3**: Resizes images at the standard 4:3 without distortion.

- **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 moved to the up and down.

- **Cinema Zoom**: Choose Cinema Zoom when you want to enlarge the picture in correct proportion.
  To change the ratio of the cinema zoom, press < > and its range is from 1 to 16.
  To move the zoom focus up or down, press ^ v.

NOTE

- If you enlarge or reduce an image, the image may be distorted.

Changing AV modes

Each AV mode has the optimized image and sound settings.
Press **AV MODE** repeatedly to select an appropriate mode.

Mode	Description
Off	Changes to the previously customized settings.
Cinema or **THX Cinema**	Use the optimized image and sound setting for the cinematic look.
Game	Use the optimized image and sound setting for fast gaming. When playing a video game using PlayStation or Xbox, it is recommended to use the **Game** mode. When in **Game** mode, functions related to picture quality will be optimized for playing games.

Using the input list

Selecting an input source

1 Press **INPUT** to access the input sources.
- The connected device displays on each input source.

NOTE

- You can also access the input source list by selecting **INPUT** in the Home menu.

2 Press the Navigation buttons to scroll to one of the input sources and press **OK**.
Image shown may differ from your TV.

Input source	Description
Antenna or **Cable**	Watch TV over the air, cable, and digital cable broadcast.
USB	Use the movie, photo or music file.
NETWORK	Use it for DLNA.
AV	Watch the contents in a VCR or other external devices.
Component	Watch the contents in a DVD or other external devices, or through a digital set-top box.
RGB	View a PC display on the screen.
HDMI	Watch contents in a HTS or other high definition devices.

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The connected input sources display in black and the disconnected input sources in grey.
- To add an input label, press the Green button. You can easily identify a device connected to each input source.
- If you connect a new external device to the TV, a pop-up window appears. Select **Yes** on the pop-up window to select an input source.
- To access the SIMPLINK, press the Red button. If you select "**SIMPLINK** and **On**", the pop-up window for the HDMI input will not display.

Adding an Input label

Add a label to an input source so that you can easily identify a device connected to each input source.

Image shown may differ from your TV.

1 Press **INPUT** to access the input sources.

2 Press Green button.

3 Press the Navigation buttons to scroll to one of the input sources.

4 Press the Navigation buttons to scroll to one of the input labels.

5 When you are finished, press **EXIT**.

When you return to the previous menu, press **BACK**.

Using the quick menu

Customize the frequently using menus.

1 Press **Q. MENU** to access the quick menus.

2 Press Navigation buttons to scroll through the following menus and press **OK**.

Menu	Description
Aspect Ratio	Changes the image size (16:9, Just Scan, Original, Full Wide, 4:3, 14:9, Cinema Zoom)
Picture Mode	Changes the image mode (Intelligent Sensor, Vivid, Standard, Cinema, Game, Expert1, Expert2)
Sound Mode	Changes the sound mode (Standard, Music, Cinema, Sport, Game)
Sleep Timer	Sets the length of time until the TV to turns off
Audio or **Audio Language**	Changes the sound output.
Energy Saving	Reduces the power consumption by adjusting the screen brightness. (Auto, Off, Minimum, Medium, Maximum, Screen Off)
AV Mode	Sets the optimized image and sound settings (Off, Cinema, Game)
Skip Off/On	Sets the Skip Off/On.
USB Device	Eject a USB device.

NOTE

- The available menus and options may differ from the input source that you are using.

3 Press Navigation buttons to scroll to the option you want.

4 When you are finished, press **Q. MENU.**

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ENTERTAINMENT

Connecting the TV to a network

Connecting the wired network

Connect the TV and a local area network (LAN) via the LAN port as shown on the following illustration and set up the network settings.
If wired and wireless networks are both available, wired is the preferred method.
After making a physical connection, a small number of home networks may require the TV network settings to be adjusted.
For detail information, contact your internet provider or router manual.

- Image shown may differ from your TV.

CAUTION

- Do not connect a modular phone cable to the LAN port.
- Since there are various connection methods, please follow the specifications of your telecommunication carrier or internet service provider.
- After connecting the LAN port, use the Premium or TV Apps menu. For more information about Premium or TV App setup and troubleshooting, visit http://lgknowledgebase.com.

To set up the network settings,

1 Press **HOME** to access the Home menu. Press the Navigation buttons to scroll to **SETUP** and press **OK**.

2 Press the Navigation buttons to scroll to **NETWORK** and press **OK**.

3 Press the Navigation buttons to select **Network Setting** and press **OK**.

4 If wired and wireless are simultaneously connected, press the Navigation buttons to select **Wired** and press **OK**.

5 If you already set Network Setting, select **Resetting**. The new connection settings resets the current network settings.

6 Select **IP Auto Setting** or **IP Manual Setting**.
- If selecting **IP Manual Setting**, press the Navigation and Number buttons. IP addresses will need to be input manually.
- **IP Auto Setting**: Selects if there is a DHCP server on the local area network (LAN) via wired connection, the TV will automatically be allocated an IP address. If you're using a broadband router or broadband modem that has a DHCP (Dynamic Host Configuration Protocol) server function. The IP address will automatically be determined.
- **IP Manual Setting**: Selects if there is no DHCP server on the network and you want to set the IP address manually.

7 When you are finished, press **EXIT**.

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NOTE

- If you want to access the Internet directly on your TV, the broadband internet connection should always be on.
- If you cannot access the Internet, check the network conditions.
- When you use **Network Setting**, check the LAN cable or check if the DHCP in the router turns on.
- If you do not complete the network settings, the network may not work properly.

Connecting the wireless network

The LG Wireless LAN for Broadband/DLNA Adaptor, which is sold separately, allows the TV to connect to a wireless lan network.
The network configuration and connection method may vary depending on the equipment in use and the network environment. Refer to the setup instructions supplied with your access point or wireless router for detailed connection steps and network settings.
Setting up the AP (Access Point) or the wireless router is required before connecting the TV to the network.

- Image shown may differ from your TV.

NOTE

- For enjoying pictures, music, or video stored in the PC using the router, the use of wired port in the router is recommended.
- When the wireless port of the router is used, there may be restrictions for some functions. It is recommended that an Access Point (AP) is installed more than 1 m away from the
- TV. If the AP is installed closer than 1 m, the magic motion remote control may not perform as expected due to frequency interference.

ENGLISH

To set up the network settings,

1 Press **HOME** to access the Home menu.

2 Press the Navigation buttons to scroll to **SETUP** and press **OK**.

3 Press the Navigation buttons to scroll to **NETWORK** and press **OK**.

4 Press the Navigation buttons to select **Network Setting** and press **OK**.

5 Press the Navigation buttons to select **Wireless** and press **OK**.

6 If you already set Network Setting, select **Resetting** and press **OK**.
The new connection settings resets the current network settings.

7 Press the Navigation buttons to select **Setting from the AP list** and press **OK**.
- Scan the all available AP (Access Point) or wireless routers within range and display them as a list.

8 Press the Navigation buttons to select an AP (Access Point) or wireless router on the list. (If your AP is locked, insert the security key of AP) and press **OK**.

9 Press the Number buttons to Input the security key of AP and press **OK**.

10 Repeat step 6-7 on “Connecting the wired network”.

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When a security code is already set

PIN (Personal Identification Number)

If you want to connect the AP (Access Point) or router with PIN, use this feature.

1 Repeat step 1-7 on “Connecting the wireless network”.

2 Press Red button to connect the access point with **PIN** mode.

3 You can see the Network ID and Security Key on your TV screen.
Enter the PIN number to your device.
PIN number is the unique 8 digit number of the dongle.

4 Press **OK** to select **Connect**.

5 Repeat step 6-7 on “Connecting the wired network”.

WPS (Wi-Fi Protected Setup)

If your access point or wireless router that supports PIN or WPS(Wi-Fi Protected Setup), it’s available to use your access point or wireless router within 120 counts. You do not need to know the access point name (SSID: Service Set Identifier) and security code of your access point or wireless router.

1 Repeat step 1-7 on “Connecting the wireless network”.

2 Press the Navigation buttons to select the **Simple setting (WPS-button mode)**.

3 Press **OK** to select **Connect**.

4 Repeat step 6-7 on “Connecting the wired network”.

Ad-hoc Mode

This is the method of communicating directly with the machine to communicate without AP.
This is the same as connecting two PCs with a cross cable.

1 Repeat step 1-5 on “Connecting the wireless network”.

2 Press the Navigation buttons to select **Setting Ad-hoc network** and press **OK**.

3 Press the Navigation buttons to select **OK** and press **OK**.

4 Press **OK** to select **Connect** to connect Ad-hoc network.
- You can see the Network ID and Security Key on your TV screen.
- Enter this Network ID and Security Key to your device.
- If a network may not operate, change the setting information using the Red button.

NOTE

Example of the PC setting that supports a wireless network
- Find a wireless network device in your PC.
- Select LGTV10 that appears in the list. (Select the same name as the network ID that appears on your TV screen.)
- Type 1111111111 in the Inserting the security key dialog. (Type the security key that appears on your TV screen.)

5 Press the Navigation buttons to insert the IP address and press **OK**.

PC Setting	■ Internet Protocol(TCP/IP) of PC needs to be set manually. ■ IP address, Subnet Mask, and default Gateway can be set with your own discretion. ■ i.e) IP address: 192.168.0.1 / Subnet Mask: 255.255.255.0 / default Gateway: 192.168.0.10
TV Setting	■ Verify IP address and gateway of PC. ■ Input Gateway address of PC to IP Address, and IP Address of PC to Gateway, and select **OK**. ■ i.e) IP address: 192.168.0.10 / Subnet Mask: 255.255.255.0 / default Gateway: 192.168.0.1

6 Press the Navigation buttons to select **Close** after Network setting is completed.

7 Press the **OK** .

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Tips for Network setting

- For more information about Premium or TV App setup and troubleshooting, visit http://lgknowledgebase.com.
- Use a standard LAN cable with this TV. Cat5 or better with a RJ45 connector.
- Many network connection problems during set up can often be fixed by re-setting the router or modem. After connecting the player to the home network, quickly power off and/or disconnect the power cable of the home network router or cable modem. Then power on and/or connect the power cable again.
- Depending on the internet service provider (ISP), the number of devices that can receive internet service may be limited by the applicable terms of service. For details, contact your ISP. LG is not responsible for any malfunction of the TV and/or the internet connection feature due to communication errors/malfunctions associated with your broadband internet connection, or other connected equipment.
- LG is not responsible for problems within your internet connection.
  Some content available through the network connection may not be compatible with the TV. If you have questions about such content, please contact the producer of the content.
- You may experience undesired results if the network connection speed does not meet the requirements of the content being accessed.
- Some internet connection operations may not be possible due to certain restrictions set by the Internet service provider (ISP) supplying your broadband Internet connection.
- Any fees charged by an ISP including, without limitation, connection charges are your responsibility.
- A 10 Base-T or 100 Base-TX LAN port is required for connection to this TV. If your internet service does not allow for such a connection, you will not be able to connect the TV.
- A DSL modem is required to use DSL service and a cable modem is required to use cable modem service. Depending on the access method of and subscriber agreement with your ISP, you may not be able to use the internet connection feature contained in this TV or you may be limited to the number of devices you can connect at the same time. (If your ISP limits sub-scription to one device, this TV may not be allowed to connect when a PC is already connected.)
- The use of a “Router” may not be allowed or its usage may be limited depending on the policies and restrictions of your ISP. For details, contact your ISP directly.
- The wireless network operates at 2.4 GHz radio frequencies that are also used by other household devices such as cordless telephone, Bluetooth® devices, microwave oven, and can be affected by interference from them.It can be interrupted by the device using 5 Ghz radio frequencies. It is same device with LG wireless media box, cordless telephone, other Wi-Fi device.
- It may decrease the service speed using Wireless network by surrounding wireless condition.
- Turn off all unused network equipment in your local home network. Some devices may generate network traffic.
- In some instances, placing the access point or wireless router higher up away from the floor may improve the reception.
- The reception quality over wireless depends on many factors such as type of the access point, distance between the TV and access point, and the location of the TV.
- When connecting internet through the wired/wireless sharing machine, it may interrupt the connection because of the use limitation and confirmation of service company.
- To connect wireless AP, an AP that supports the wireless connection is necessary, and the wireless connection function of the AP needs to be activated. Please enquire to the AP supplier for the possibility of AP wireless connections.
- Please verify the security settings of AP SSID for wireless AP connection, and enquire to the AP supplier for the AP SSID security settings.
- The TV can become slower or malfunction with wrong settings of network equipments (wired/wireless router, hub, etc). Please install correctly by referring to the manual of the equipment, and set the network.
- When AP is set to include 802.11 n(Except for Russia), and if Encryption is designated as WEP(64/128bit) or WPA(TKIP/AES), the connection may not be possible. There may be different connection methods according to the AP manufacturers.

Network Status

1 Press **HOME** to access the Home menu.

2 Press the Navigation buttons to scroll to **SETUP** and press **OK**.

3 Press the Navigation buttons to scroll to **NETWORK** and press **OK**.

4 Press the Navigation buttons to select **Network Status**.

5 Press **OK** to check the network status.

Option	Description
Setting	Return to the network setting menu or wireless network setting type menu.
Test	Test the current network status after setting the network.
Close	Return to the previous menu.

Premium card function

LG's Premium technology allows you to access a variety of online services or contents directly on your TV. Your TV offers instant streaming of movies, TV shows, videos, and Widget-based services with Premium and the Internet connection.
Enjoy entertainment including not only entertainment content, but also up-to-the minute news, stock information, weather updates, photo management, and more by simply using the TV's remote control without a separate PC.

1 Press **Premium** to access the Premium option.

2 Press the Navigation buttons to scroll to the contents you want and press **OK**.

■ Image shown may differ from your TV

Option	Description
❶	Sign into the premium service.
❷	Moves to the previous menu screen.
❸	Returns to TV viewing.
❹	Selects your desired online service. ■ If a service requires you to log in, you must first sign up for the service on your computer and then log into the service on the TV.
❺	Launcher bar

3 Enjoy Online service.

Notes:
the "Premium" item list is under the testing process;
it will be avaliable by updating the software after July 2011, and the instruction could be find on page 84 of the user's guide on software updating.

CAUTION

- These services are provided by separate Content Provider.
- Please visit the content providers web site for specific information on their service (But, some content manual maybe not provide depending on Content Provider).
- Premium menu can differ by country.
- If a service requires you to log in, you must first sign up to the service website on your computer and then log into the service on the TV.
- Note that content may be updated automatically depending on the service provider, so the content layout or operation method may change without notice. Please refer to the help menu on the screen.
- Content may be changed or deleted without prior notice depending on the Content Provider.
- All content furnished by the contents provider are subject to change at any time including, but not limited to the removal of content. Should you have any inquiry or problem related to the content, you may refer to the cervice provider's website for the most up-to-date information. Please note that LG is not responsible for any content provided by the content provider or any changes concerning such content.
- Some content may be harmful to minors depending on the service provider.

NOTE

- The videos list searched from the TV may different with the list searched from a web browser on PC.
- The playback of videos may be paused, stopped or buffering occurring often depending on your broadband speed.
- For service that requires log in, join the applicable service on the website using the PC and log in through the TV to enjoy various additional functionalities.

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Legal Notice

IMPORTANT NOTICE RELATING TO NETWORK SERVICE

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My Media Card Function

Connecting USB storage devices

Connect USB storage devices such as a USB flash drive, external hard drive, or MP3 player to the TV and use multimedia features (See "Browsing files" on p.36).
Connect a USB flash drive or USB memory card reader to the TV as shown on the following illustration.

- Image shown may differ from your TV.

To disconnect a USB storage device,
make sure to end the connection properly to prevent damages to the TV or files.

1 Press **Q.MENU** to access the quick menus.

2 Press the Navigation buttons to scroll to **USB Device** and press **OK**.

3 Disconnect the USB storage device only when the message says that it is safe to remove.

CAUTION

- Do not turn the TV off or remove a USB storage device while the USB storage device is connected to the TV, as this could result in loss of files or damage to the USB storage device.
- Back up your files saved on a USB storage device frequently, as you may lose or damage the files and this may be not covered by the warranty.

Tips for using USB storage devices

- The TV recognizes only a USB storage device.
- If you connect a USB storage device to the TV through a USB hub, your TV may not recognize the USB storage device.
- The TV may not recognize a USB storage device that uses its own.
- The recognition speed of a USB storage device may differ depending on the device. Only use a USB storage device which has normal music or image files.
- Use only USB storage devices that are formatted as a FAT 32 or NTFS file system. If you format a USB storage device as a NTFS file system, you cannot delete the saved files.
- You may need to connect a USB storage device to an external power supply with a power adapter.
- If the TV does not recognize a connected USB storage device, replace the cable and try again. Do not use an excessively long cable.
- The TV does not support some USB storage devices properly.
- You can use a multi-partition (up to 4) USB storage device.
- You can use up to 4 USB storage devices at a time by using a USB multi-card reader.
- The file alignment method of a USB storage device is similar to the one of Window XP.
- You cannot create or delete a folder saved in a USB storage device directly on the TV.
- The number of characters for a file name is up to 100 English characters.
- The recommended capacity for a USB external hard disk is 1 TB or less and for a USB storage device is 40 GB or less.
- If a USB external hard disk with the Energy Saving feature does not work, turn the USB external hard disk off and on again to make it work properly. For more information, refer to the user manual of the USB external hard disk.
- USB storage devices below USB 2.0 are supported as well. But they may not work properly in the movie list.

DLNA DMP (Digital Living Network Alliance, Digital Media Player)

This TV can display and play many types of movie, photo and music files from your DLNA server and has been certified by DLNA for photos.
The Digital Living Network Alliance (DLNA) is a cross-industry organization of consumer electronics, computing industry and mobile device companies. Digital Living provides consumers with easy sharing of digital media through a wired or wireless network in the home.
The DLNA certification logo makes it easy to find products that comply with the DLNA Interoperability Guidelines. This unit complies with DLNA Interoperability Guidelines v1.5. When a PC running DLNA server software or other DLNA compatible device is connected to this TV, some setting changes of software or other devices may be required. Please refer to the operating instructions for the software or device for more information.
Please refer to "Using integrated media features" for additional information on supported file types and other instructions.

NOTE

- The supplied Nero MediaHome 4 Essentials CD-ROM is a customized software edition only for sharing files and folders to this TV.
- The supplied Nero MediaHome 4 Essentials software does not support following functions: Transcoding, Remote UI, TV control, Internet services and Apple iTunes
- This manual explains operations with the English version of Nero MediaHome 4 Essentials as examples. Follow the explanation referring to the actual operations of your language version.
- If there are too many folders and files in one folder, it may not operate properly.
- For the DLNA option, use the Nero MediaHome programme that is provided with the TV. However, we cannot guarantee that third party programme will work perfectly.
- You can select a programme while viewing the small preview programme list on your TV screen.
- Check your network settings when the DLNA option does not work properly.
- If there is an abnormal operation or an error occurs in Nero Media Home, the DLNA option may not work properly. In this case, exit Nero Media Home and restart the
- programme. You can download the latest version of Nero Media Home by clicking the question mark at the bottom-left of the programme.
- When the network is unstable, the device may be slower or may need to load during playback.
- When playing a video in DLNA mode, the Multi Audio and Closed Caption features are not supported.
- When selecting Full Screen in DLNA mode, the ratio of the outputted screen may differ from the original.
- When more than one TV is connected to a single server in DLNA mode, a file may not play properly, depending on the server performance.
- If the play time information is not provided by the server, it is displayed as "--:--:--."
- When using Movie List, DRM files in the DLNA server cannot be played.
- DLNA operation may not work properly according to the AP manufacturers.

Installing Nero MediaHome 4 Essentials

Nero MediaHome 4 Essentials is easy to use DLNA server software for Windows.

1 Start up your computer.

2 Close all Microsoft Windows programmes and exit any anti-virus software that may be running.

3 Insert the Nero MediaHome 4 Essentials CD-ROM into your computer's CD-ROM drive.

4 Click **Nero MediaHome 4 Essentials**. The installation is prepared and the installation wizard appears.

5 Click the **Next** button to display the serial number input screen. Click **Next** to go to the next step.

6 If you accept all conditions, click **I accept the License Conditions** check box and click **Next**. Installation is not possible without this agreement.

7 Click **Typical** and click **Next**. The installation process is started.

8 If you want to take part in the anonymous collection of data, select the check box and click the **Next** button.

9 Click the **Exit** button to complete the installation.

Sharing files and folders

After installing Nero MediaHome, you must add folders you wish to share.

1 Double-click the Nero MediaHome 4 Essentials icon on the desktop.

2 Click Network icon on the left and define your network name in the Network name field. The Network name you enter will be recognized by your TV.

3 Click Shares icon on the left.

4 Click Local Folders tab on the Shared screen.

5 Click Add icon to open the Browse Folder window.

6 Select the folder containing the files you want to share. The selected folder is added to the list of shared folders.

7 Click Start Server icon to start the server.

NOTE

- If the shared folders or files are not displayed on the TV, click the folder on the Local Folders tab and click **Rescan Folder** at the **More** button.
- Visit *http://www.nero.com* for more information and software tools.

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Playing back shared contents

You can display and play movie, photo and music content stored on your computer or other DLNA media servers.

1 Press **HOME** to access the Home menu.

2 Press the Navigation buttons to scroll to **Smart Share** and press **OK**.

3 Press the Navigation buttons to scroll to the device you want and press **OK**.

4 Press the Navigation buttons to select **DLNA**.
Depending on the media server, this TV may need to get the permission from the server.
If you want to re-scan available media server, press blue colour button.

NOTE

- To play the file on the media server, the TV and the media server must be connected to the same access point.
- Because the compatibility and available playback functions on the My Media menu are tested on the bundle DLNA server (Nero MediaHome 4 Essentials) environment, file requirements and
- playback functions on the My Media may differ depending on media servers.
- The file requirements on this page are not always compatible. There may have some restrictions by file features and media server's ability.
- Even the files that are not supported can be displayed in photo thumbnail or music thumbnail.
- Movie thumbnail is only supported when DLNA server supports a Movie thumbnail. If there is an unplayable music file in the My Media menu, the TV will skip the file and play next file.
- The file information indicated on the screen may not always correct for music and movie files in My Media menu.
- This TV only supports movie subtitle files supplied by Nero MediaHome 4.
- The subtitle file name and movie file name have to be the same and located at the same folder.
- If subtitle files have been added after a directory has been indexed already, the user has to remove and re-add the folder to the list of shares.
- The playback and operating quality of the My Media function may be affected by your home network condition.
- The files from removable media such as USB drive, DVD-drive etc. on your media server may not share properly.
- When playing the Media through DLNA connection, it does not support the DivX file play which is protected by DRM.
- Up to 999 including folders and files can be recognized.
- If there are too many folders and files in one folder, it may not operate properly.
- Files in a folder can be played only when they are of the same type.

DLNA DMR (Digital Living Network Alliance, Digital Media Renderer)

If the PC uses Windows 7, or a device (e.g. mobile phone) with the DLNA DMC certificate is connected to a network, you can play music, videos or photos etc. on the TV.

The DMR function only works properly when the TV and PC are configured to use the same network.

1 To play a file, select the file by using the **Remote Play** feature in Windows 7. To do this, right-click on the file you want to play.

   Refer to the mobile phone's user manual to find out how to use it to play a file.

   You can change the name of a connected TV by double-clicking the item you want to change in Control Panel > Network and Internet > View network computers and devices.

   You cannot change the name of a TV while DMR media is playing. Change it when playback is stopped.

2 To exit, press the **EXIT** button on the remote control. During play, only the volume, mute, exit and backwards buttons are available.

NOTE

- The DMR function may not work properly in a wireless network.
- The seek function of the DMC only works on video files.
- The DMR is not available when another function is operating (recording, playback or my media work etc.).

Browsing files

Access the photo, music, or movie lists and browse files.

1 Connect a USB storage device.

2 Press **HOME** to access the Home menu.

3 Press the Navigation buttons to scroll to **Smart Share** and press **OK**.

4 Press the Navigation buttons to scroll to the device you want and press **OK**.

5 Press Navigation buttons to scroll to **All Media, Movie List**, **Photo List**, or **Music List** and press **OK**.

- All Media: Shows all files in the file list.
- Movie List, Photo List, or Music List: Shows only one type of file in the file list.

6 Press Navigation buttons to select a folder or file you want.

No.	Description
❶	Shows all media folder.
❷	Current page number/total number of pages of folder.
❸	Moves to the previous or next page.
❹	Current page number/total number of pages of contents.
❺	Files info or thumbnail.
❻	Available buttons on the remote control.

Thumbnail information

Type	Abnormal files	Non-supported files
Movie		
Photo		
Music		

Tips for using USB storage devices

Type	Supported file format
Video	■ MPG, MPEG, DAT, TS, TRP, TP, VOD, MP4, MOV, MKV, DivX, AVI, Motion JPEG (AVI, MP4, MKV), ASF, WMV, FLV ■ Resolution: under 1920 pixel (width) x 1080 pixel (height) ■ Frame Rate: under 30 frame/sec (1920 x 1080), under 60 frame/sec (1280 x 720) ■ Max bitrate of playable movie file: 20 Mbps (Mega bit per second) Bit rate of audio format: within 32 kbps to 320 kbps (MP3) ■ Supported subtitle format: *.smi, *.srt, *.sub (MicroDVD, SubViewer 1.0/2.0), *.ass, *ssa, *txt (TMPlayer), *.psb (PowerDivX)
Photo	■ JPG, MPO (Only 3D models) ■ Available size Baseline: 64 pixel (W) x 64 pixel (H) - 15360 pixel (W) x 8640 pixel (H) Progressive: 64 pixel (W) x 64 pixel (H) - 1920 pixel (W) x 1440 pixel (H) * Do not use the progressive option when saving JPG files on your PC. ■ It may take some time to open high-resolution images in full screen.

Only 3D models

	File Extensions	Item	Profile
2D	jpeg jpg jpe	Supported file format	* SOF0: * baseline * SOF1: Extend Sequential * SOF2: * Progressive
		Photo size	* Min: 64 x 64 * Max - Normal Type: 15360 (W) x 8640 (H) * Progressive Type: 1920 (W) x 1440 (H)
3D	mpo	Supported file format	* mpo
		Photo size	* 4:3 size: 3,648 x 2,736 2,592 x 1,944 2,048 x 1,536 * 3:2 size: 3,648 x 2,432

Music	MP3 Bit rate range 32 Kbps to 320 Kbps Sampling rate (Sampling Frequency) MPEG1 layer 3: 32 kHz, 44.1 kHz, 48 kHz MPEG2 layer 3: 16 kHz, 22.05 kHz, 24 kHz * A copy-protected file will not play.

Viewing videos

Play video files on the TV. Your TV can display video files from a USB storage device.

1 Press **HOME** to access the Home menu.

2 Press the Navigation buttons to scroll to **Smart Share** and press **OK**.

3 Press the Navigation buttons to scroll to **Movie List** and press **OK**.

4 Press Navigation buttons to select a folder or file you want and press **OK**.

5 Play a movie by using the following menus/buttons.

Button	Description
Navigation button	Scrolls the file.
OK	Plays the highlighted file.
P ∧ ∨	Moves to the previous or next page.
Red button	Change device: Changes to a different input.
Green button	Go to root folder.
Yellow button	Go to upper folder.

6 Control playback by using the following buttons.

Button	Description
■	Stops the playback.
▶	Plays a video.
❚❚	Pauses or resumes the playback
◀◀	Scans backward in a file
▶▶	Scans forward in a file
❚❚ and ▶▶	Plays videos in slow motion
Red button and **< >**	Selects the frame directly. The entire file is divided into 10 frames. Frames may not be displayed depending on the file.
ENERGY SAVING	Increases or deceases the brightness of your screen.
3D	Views the 3D imaging.
Q.MENU	Shows the Option menu.
AV MODE	Select the desired source
BACK	Hides the menu on screen. To see the menu again, press **OK** button to display.
EXIT	Moves to the previous menu screen.

ENGLISH

Tips for playing video files

- Some user-created subtitles may not work properly.
- Subtitles may not display some special characters or HTML tags.
- Subtitles in the non-supported languages are unavailable.
- The time information in an external subtitle file should be arranged in ascending order to play.
- The screen may suffer from temporary interruptions such as image stoppage or faster playback when you change the audio language.
- If you play a damaged video file, the video file may not be played correctly or some player functions may not be unavailable.
- The TV may not properly play the video files produced with certain encoders.
- If the recorded file does not have video or audio, either video or audio is not outputted
- If the TV plays the recorded file without video or audio, either video or audio is not outputted.
- The TV may not smoothly play the video files with a resolution higher than the supported resolution for each frame.
- The TV may not properly play the video files not included on the specified type and format.
- The TV may not play the files encoded with GMC (Global Motion Compensation) or quarter-pel motion estimation.
- The TV supports the only files saved in ASCII code in subtitles.
- The maximum number of characters displayed on each subtitle line is 250 (Korean), 500 (English), and 500 (Numbers).
- The TV supports the only 10,000 sync blocks within the subtitle file.
- The TV supports the H.264 codec up to the profile level 4.1.
- The TV does not support DTS audio codec. The TV cannot play a video file whose size is larger than 30 GB.
- If you play a video file through the USB connection that does not support the high speed, the video player may not work properly.
- The TV supports a USB storage device whose version is lower than 2.0. However, the USB storage device may not work properly in the movie list.
- The video file and its subtitle should be in the same folder and the name of the video file and subtitle should be identical.
- You can adjust the image by using ∧ ∨ and **< >**. But you cannot customize image options of each mode.
- The TV may not play the video files in the supported file format depending on the encoded condition.
- The TV will not play the video files that has a damaged index or no index.

Q.MENU options for movie list

1 Press **Q. MENU**.
A pop-up window will appears.

2 Press the Navigation buttons to scroll to movie list option and press **OK**.

3 Press the Navigation buttons to scroll to one of the following options and press **OK**.

Set Video Play.

Option	Description	
Picture Size	Selects your desired picture format for videos. ■ **Full Mode**: Files are played in full screen mode regardless of the aspect ratio of video. ■ **Original Mode**: Files are played according to the aspect ratio of video.	
Audio Language	Changes the Language Group of the audio for video files. Files with a single audio track cannot be selected.	
Subtitle Language	The subtitles can be turned on or off.	
Language	Activated for SMI subtitles and can select the language within the subtitle.	
Code Page	Subtitle font selection. When set to default, contents are displayed in the language set in "Option - Language - Menu Language."	
	Subtitle Language	Supported Language
	Latin1	English, Spanish, French, German, Italian, Swedish, Finnish, Dutch, Portuguese, Danish, Romanian, Norwegian, Albanian, Gaelic, Welsh, Irish, Catalan,Valencian
	Latin2	Bosnian, Polish, Croatian, Czech, Slovak, Slovenian, Serbian, Hungarian
	Latin4	Estonian, Latvian, Lithuanian
	Cyrillic	Bulgarian, Macedonian, Russian, Ukrainian, Kazakh
	Greek	Greek
	Turkish	Turkish
Sync	When the video is not synchronized with the captions, it can be adjusted by 0.5 second.	
Position	Move the location of the subtitles.	
Size	Changes the subtitle font size.	
Repeat	Turn on/off repeat function of movie playback. When turned on, the file within the folder will be played back repeatedly. When turned off, if the next file name is similar to the previous file, it can be played sequentially.	

NOTE

- Option values changed in Movie List does not affect Photo List and Music List.
- Option value changed in Photo List and Music List are changed likewise in Photo List and Music List excluding Movie List.
- When replaying a video file after stopping, you can play from where it stopped automatically.
- If you select “Yes” when playing the same file after the video file has been stopped, it will restart where it stopped previously.
- If continuous series files exist within the folder, the next file will automatically be played. But, this excludes cases when the **Repeat** function of Movie List Option is turned “On”.

Set Video.

Control the menu option (Refer to “PICTURE Settings” on page 64).

Set Audio.

Control the menu option (Refer to “AUDIO Settings” on page 68).

DivX registration code

Registering the DivX code

Check and register the DivX registration code of your TV so that you can rent or purchase the latest movies at www.divx.com/vod. To play a rented or purchased DivX file, the file's registration code should be same with your TV's DivX registration code.

1 Press **HOME** to access the Home menu.

2 Press the Navigation buttons to scroll to **SETUP** and press **OK**.

3 Press the Navigation buttons to scroll to **Smart Share Setting (DivX/DLNA)** and press **OK**.

4 Press the Navigation buttons to scroll to **DivX VOD Registration** and press **OK**.

5 View the registration code of your TV.

6 When you are finished, press **EXIT**.

NOTE

- While you are checking the registration code, some buttons may not work.
- If you use the DivX registration code of another device, you cannot play the rented or purchased DivX file. Make sure to use the DivX registration code assigned to your TV.
- The video or audio files that are not converted by the standard DivX codec may be corrupted or not be played.
- The DivX VOD code allows you to activate up to 6 devices under one account.

Deactivating the DivX feature

Deactivate all of the devices through the web server and block devices from activating.
Delete the existing authentication information to receive a new DivX user authentication for the TV. Once this function is executed, a DivX user authentication is required again to see DivX DRM files.

1 Press **HOME** to access the Home menu.

2 Press the Navigation buttons to scroll to **SETUP** and press **OK**.

3 Press the Navigation buttons to scroll to **Smart Share Setting (DivX/DLNA)** and press **OK**.

4 Press the Navigation buttons to scroll to **DivX Deactivation** and press **OK**.

5 Select **Yes** to confirm.

6 When you are finished, press **EXIT**.

ENGLISH

Viewing photos

View image files saved in a USB storage device. The displays on the screen may differ from the model.

1 Press **HOME** to access the Home menu.

2 Press the Navigation buttons to scroll to **Smart Share** and press **OK**.

3 Press the Navigation buttons to scroll to **Photo List** and press **OK**.

4 Press the Navigation buttons to scroll to a folder/file you want and press **OK**.

5 View photos by using the following menus/buttons.

Button	Description
Navigation button	Scrolls the file.
OK	Views the highlighted file.
P ∧ ∨	Moves to the previous or next page.
Red button	Change device: Changes to a different input.
Green button	Go to root folder.
Yellow button	Go to upper folder.

6 Use the following options while viewing photos.

Option	Description
Slideshow	Starts or stops a slideshow. All photos saved in the current folder display during a slideshow. To set a slideshow speed, select Option.
BGM (Background Music)	Turns the background music on or off. To set the background music folder, select Option. **NOTE** You can't change or set-up the BGM while viewing the *.mpo file (3D camera file).
↻ (Rotate)	Rotates photos clockwise (90°, 180°, 270°, 360°). **NOTE** The supported photo size is limited. You cannot rotate a photo if the resolution of the rotated width is larger than the supported resolution size.
	Views the photo in full mode or original mode.
(ENERGY SAVING)	Increases or decreases the brightness of your screen.
3D	Views the 3D imaging.
Option	Shows the Option menu.
Hide	Hides the option window. To display the options, press **OK**.
Exit	Moves to the previous menu screen.

ENGLISH

Q.MENU options for photo list

1 Press **Q. MENU**.
A pop-up window will appears.

2 Press the Navigation buttons to scroll to photo list option and press **OK**.

3 Press the Navigation buttons to scroll to one of the following options and press **OK**.

Set Photo View.

Option	Description
Slide Speed	Selects a slideshow speed (Fast, Medium, Slow).
BGM	Selects a music folder for the background music. Select Repeat or Random option. **NOTE** You cannot change the music folder while the background music is playing.

NOTE

- Option values changed in Photo List do not affect Movie List and Music List.
- Option values changed in Photo List or Music List are changed likewise in Photo List and Music List, but not Movie List.
- You cannot select the Option in 3D imaging mode. (Only 3D models)

Set Video.

Control the menu option (Refer to “PICTURE Settings” on page 64).

Set Audio.

Control the menu option (Refer to “AUDIO Settings” on page 68).

Listening to music

1 Press **HOME** to access the Home menu.

2 Press the Navigation buttons to scroll to **Smart Share** and press **OK**.

3 Press the Navigation buttons to scroll to **Music List** and press **OK**.

4 Press the Navigation buttons to select a folder or file you want and press **OK**.

5 Play music by using the following menus/buttons.

Button	Description
Navigation button	Scrolls the file.
OK	Plays the highlighted file.
P ∧ ∨	Moves to the previous or next page.
Red button	Change device: Changes to a different input.
Green button	Go to root folder.
Yellow button	Go to upper folder.
Blue button	Open music player. It is enabled during palying a music.

6 Control playback by using the following buttons.

Button	Description
■	Stops playback.
▶	Plays a music file.
❚❚	Pauses or resumes playback.
◀◀	Skips to the next file.
▶▶	Skips to the previous file.
< >	Indicates a cursor.
(ENERGY SAVING)	Increases or deceases the brightness of your screen.
Q.MENU	Shows the Option menu .
BACK	Hides the option window. To display the options, press **OK**.
EXIT	Moves to the previous menu screen.

ENGLISH

Q.MENU options for music list

1 Press **Q. MENU**.
A pop-up window will appears.

2 Press the Navigation buttons to scroll to photo list option and press **OK**.

3 Press the Navigation buttons to scroll to one of the following options and press **OK**.

Set Audio Play.

Select Repeat or Random option.

Set Audio.

Control the menu option (Refer to “AUDIO Settings” on page 68).

NOTE

- Option values changed in Movie List does not affect Photo List and Music List.
- Option value changed in Photo List and Music List are changed likewise in Photo List and Music List excluding Movie List.
- You can listen to the music only within the device currently played.

NOTE

- A copy-protected file will not play.
- If the TV is not in use for some time during playback, the information box as a screen-saver will appear to prevent image burn. To return to the Music list screen, press **OK**.

ENGLISH

Time Machine Card Function

(This feature is not available for all models.)

Precautions when using the USB Device

NOTE

- 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 several paritions or 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 turn off the TV or unplug the USB device when the connected USB storage device is working. When such device is suddenly separated or unplugged, the stored files or the USB storage device may be damaged.
- Please connect a USB storage device with cable is offered by USB maker. If connected with cable is not offered by USB maker or an excessively long cable, the device may not be recognized.
- Some USB storage devices may not be supported or operate properly.
- The TV will display up to 128 characters of a files name.
- Please backup important files because data on USB device may be damaged. Data
- management is consumer's responsibility and as a result, the manufacturer does not cover data damage.
- The recommended capacity is 1TB or less for a USB HDD and 40GB or over 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.
- 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 USB hard disk supports only SSD or HDD disk types. (USB storage is not supported.)
- A SSD (Solid State Drive) has a limited number of write/delete cycles. A HDD (Hard Disk Drive) is recommended for this product.

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 initializing USB Device.

Connecting USB storage devices

- Image shown may differ from your TV.

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

2 To use the USB device (over 40 GB) for Timemachine, execute USB Device Initialization.

NOTE

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

USB device Initialization

1 Connect an unformatted USB for DVR and press REC to initialize the USB device.

2 Press the Navigation buttons to scroll to **OK** and press **OK**.

3 Press Navigation buttons to scroll to **On** or **Off** and press **OK**.

NOTE

- When initialization is completed, a popup notice of completion is displayed and the connected USB HDD is available for Timemachine.
- Depending on the capacity of the USB device, the initialization time may vary.
- The initialized USB device is not recognized by the PC.
- When a USB device of less than 40 GB is connected, the USB Device Initialization is not activated.
- Supported maximum external HDD size for back-up is up to 1TB.

Timeshift Mode change during using Time Machine

1 After selecting **Timeshift Mode-On**, press the **OK** button.

2 Press Yellow button to show the Time Machine option menu and press **Q.MENU**.

3 Press the Navigation buttons to scroll to **Timeshift Mode** and press **OK**.

4 Press Navigation buttons to scroll to **On** or **Off** and press **OK**.

5 When you are finished, press **EXIT**.
When you return to the previous menu, press **BACK**.

Menu	Description
Recorded TV	Moves to the **Recorded TV** .
Schedule List	Moves to the **Schedule List**.
Select schedule by date	Moves to the **Manual Timer**.
Select schedule by programme	Set up timer recording by going to the **Programme Guide**

NOTE

- Timeshift Mode is available in DTV mode.
- Radio or satellite channels cannot be recorded.

USB Device Reinitialization during using Time Machine

1 After selecting **Timeshift Mode-On**, press the **OK** button.

2 Press Yellow button to show the Time Machine option menu and press **Q.MENU**.

3 Press the Navigation buttons to scroll to **USB device Initialization** and press **OK**.

4 When you are finished, press **EXIT**.

When you return to the previous menu, press **BACK**.

ENGLISH

Time Machine Progress

1 After selecting **Timeshift Mod-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.
- It Press the **BACK** button to hide the 'Progress Bar' or press the **OK** button to display the 'Progress Bar'.
- This function is preserved even change a programme on progressing the Time Machine.

The 'Progress Bar'?

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

1. Preview
2. Current location and progress time in playback
3. Total progress time of the Time Machine

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

NOTE

- In order to save hard-disk space, nothing is saved when there is no signal.
- Time Machine can be used for maximum of 3 hours.
- You can't do the programme change or input conversion on recording.
- When turning power on, it may take up to a maximum of 3 minutes to initialize the HDD.
- Recording or playing the recorded programme may not initiate for a copy-protected programme.
- Instant recording time is set to 3 hours and supported maximum time is up to 5 hours.
- A thumbnail is created every 3 minutes for recordings longer than 18 minutes and every 1 to 3 minutes for recordings shorter than 18 minutes.
- Up to 6 thumbnails are created on one screen.

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.

Button	Description
◀◀ ▶▶	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).
II ▶▶	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▶).
< >, OK	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. (,)
LIVE TV	To view the current live broadcast, press the **LIVE TV** button during playback.

RECORDING

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

Start/Stop record

You can record the programme you are watching.

Start record

1 Press **REC** to start the recording.

Stop record

1 Press **REC** to stop the recording.

2 Press Navigation buttons to scroll to **Recording stop** and press **OK**.

NOTE

- You can also stop the recording by pressing **STOP**.

ENGLISH

Modify recording end time

1 Press **REC** on the recording.

2 Press Navigation buttons to scroll to **Modify recording end time** and press **OK**.

3 Press Navigation buttons to scroll to set the recording end time and press **OK**.

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.
- When there is no signal or a film source is being viewed, the displayed time may differ slightly from the actual time.

Manual Timer

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

1 After selecting **Timeshift Mode-On**, press the **OK** button.

2 Press Yellow button**.**

3 Press Navigation buttons to scroll to **Select schedule by date** and press **OK**.

4 Press Navigation buttons to scroll to select a date and press **OK**.

5 Press Navigation buttons to scroll to select repeat option and press **OK**.

6 Press Navigation buttons to scroll to set the schedule type, time and programme and press **OK**.

7 When you are finished, press **EXIT**.

When you return to the previous menu, press **BACK**.

ENGLISH

NOTE

- Recording is not possible with copy-protected programmes.
- When a poor quality external source is recorded the quality of the recording will not be optimal.
- Manual Recording available time is maximum 5 hours and minimum 2 minutes.
- When broadcasting station send the wrong time information, reserved recording may be failed.
- If different programmes are set for the same time for on time and reserved recording, this TV is powered on to the reserved recording programme.
- If you turn off the 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.
- Recording time may differ depending on resolution of input signal or USB HDD capacity.
- 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.
- If the TV is unplugged once or turn off, the reserved recording will not work.

SCHEDULE

Schedule List

This function is used to show scheduled recordings. You can store up to 30 programmes.

1. After selecting **Timeshift Mode-On**, press the **OK** button.
2. Press Yellow button**.**
3. Press Navigation buttons to scroll to **Schedule List** and press **OK**.
4. Press Navigation buttons to select a desired programme and press **OK**.
5. When you are finished, press **EXIT**.

   When you return to the previous menu, press **BACK**.

ENGLISH

Menu	Description
Modify	Edit the contents of **Start date/ Start time/End time/Title/Repeat**. You must press the **BACK** button to save the edited contents. This feature is disable in reserved reminding.
Delete	Delete the selected item in the list.
Delete All	Delete all items in the list.
Close	Close the pop-up menu.

Schedule List Initialzation

This function is to reset the schedule list.

1 After selecting **Timeshift Mode-On**, press the **OK** button.

2 Press Yellow button to show the Time Machine option menu and press **Q.MENU**.

3 Press the Navigation buttons to scroll to **Schedule list Initialization** and press **OK**.

4 Press Navigation buttons to scroll to **OK** and press **OK**. Start the Schedule List Initialization.

5 When you are finished, press **EXIT**.
When you return to the previous menu, press **BACK**.

Programme Guide

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

1 After selecting **Timeshift Mode-On**, press the **OK** button.

2 Press Yellow button**.**

3 Press Navigation buttons to scroll to **Select schedule by programme** and press **OK**.

4 Press Navigation buttons to scroll to select a programme and press **OK**.

5 When you are finished, press **EXIT**.

When you return to the previous menu, press **BACK**.

ENGLISH

RECORDED TV

You can view the recorded programme list at a glance.
The recorded programme stored in the USB device can be played.

Recorded TV List

1 After selecting **Time Timeshift Mode**, press the **OK** button.

2 Press Green button**.**

3 Press Navigation buttons to scroll to **Recorded TV** and press **OK**.

4 Press Navigation buttons to recorded programme and press **OK**.

5 When you are finished, press **EXIT**.

When you return to the previous menu, press **BACK**.

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.

ENGLISH

Mark Mode

1 After selecting **Timeshift Mode-On**, press the **OK** button.

2 Press Green button**.**

3 Press Navigation buttons to scroll to **Recorded TV** and press **OK**.

4 Press Navigation buttons to select a desired recorded programme.

5 Press **FAV** to mark your desired recorded programme.

6 Press Yellow button to play the marked recorded programme.

Button	Description
Red button	**Unmark All**: Change marked recorded programmes to unmarked recorded programmes.
Green button	**Mark All**: Mark all recorded programmes in the list.
Yellow button	**Play Marked**: Play the first selected file. Once recorded programmes finishes playing, the next selected one will be played automatically.
Blue button	**Delete Marked**: Delete the marked recorded programmes.
FAV	Exit Mark Mode.

Playing Recorded programmes

You can play a selected programme from the recorded list.

1 After selecting **Timeshift Mode-On**, press the **OK** button.

2 Press Green button**.**

3 Press Navigation buttons to scroll to **Recorded TV** and press **OK**.

4 Press Navigation buttons to recorded programme and press **OK**.

5 Press Navigation buttons to scroll to select play option and press **OK**.

6 When you are finished, press **EXIT**.

When you return to the previous menu, press **BACK**.

Menu	Description
Play on previous playtime.	Resumes playing at the previously stopped point.
Play from the start	Playback of selected recorded programmes.
Rename	Rename the programme.
Delete	Delete the programme.

ENGLISH

The ‘Progress Bar’?

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

1. Preview
2. Current location and progress time in playback
3. Total progress time of the Time Machine
   - Playback
   - Fast forward
   - Rewind
   - Pause
   - Direct view +
   - Direct view -
   - By one screen
   - Slow playback
   - (Blue) Start repeat interval
   - (Yellow) Start clip-edit interval
   - (Blue) End repeat interval
   - (Yellow) End clip-edit interval
   - Repeating interval

Use of remote control

You can adjust various method during the recorded programme play.

Button	Description
◀◀ ▶▶	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).
Green button	**Option**: Press the GREEN button to switch between video/audio settings.
Yellow button	**Clip-Edit:** Press the **YELLOW** button at the starting point where you want to set the Interval clip-edit and press it again at the ending point. To save, select Yes. - The start of the Interval clip-edit is displayed as A and end of the Interval clip-edit as B in the recording progress bar at the bottom of the screen. Start and end of the Interval clip-edit can be set both in forward and reverse direction. - Interval shorter than 10 seconds cannot be save.
Blue button	**Repeat**: Press the **BLUE** 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 BLUE 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 canceled, it will return to normal playback from the end point of the interval.
II ▶▶	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.
< >, OK	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. (,)
3D	Uses for viewing 3D video.

ENGLISH

EPG (Electronic Programme Guide) Card Function (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.
You must set the Clock in the **Time** menu, before using EPG function.
The EPG displays the programme details for 8 days.

■ Press **INFO** to show current programme information.

	Displayed with a TV or DTV Programme.
	Displayed with a Radio Programme.
HE-AAC	Displayed with a HE-AAC Programme.
4:3	Aspect ratio of broadcasting programme.
16:9	Aspect ratio of broadcasting programme.
	Displayed with a Teletext Programme.
	Displayed with a Subtitle Programme.
	Displayed with a Scramble Programme.
DD	Displayed with a Dolby Digital Programme.
DD+	Displayed with a Dolby Digital PLUS Programme.
576i/p, 720p, 1080i/p : Resolution of broadcasting programme	
>	Shows next programme information.
∧ ∨	Shows other programme information.

OK	**Record** : A pop-up window for record settings appear.
∧ ∨	Select Timer Record/Remind setting mode.

Switch on/off EPG

1 Press **GUIDE** to switch on or off EPG.

Select a programme

1 Press Navigation buttons or **P** ∧ ∨ to select desired programme.

ENGLISH

NOW/NEXT Guide Mode

You can view a programme being broadcasted and one scheduled to follow.

Button	Description
Red button	Change EPG mode.
Yellow button	Enter Manual Timer mode.
Blue button	Enter Schedule List mode.
OK	When 'NOW' is selected, it is moved to selected Programme and EPG disappears. When 'NEXT' is selected, a reservation pop-up window appears.
< >	Select NOW or NEXT Programme.
∧ ∨	Select the Broadcast Programme.
P ∧ ∨	Page Up/Down.
GUIDE	Switch off EPG.
BACK	
EXIT	
TV/RAD	Select DTV or RADIO Programme.
INFO	Detail information on or off.

Date Change Mode

Button	Description
Green button	Switch off Date setting mode.
v	
BACK	
OK	Change to the selected date.
< >	Select a date.
GUIDE	Switch off EPG.
EXIT	

8 Day Guide Mode

Button	Description
Red button	Change EPG mode.
Green button	Enter Date setting mode.
Yellow button	Enter Manual Timer mode.
Blue button	Enter Schedule List mode.
OK	When 'Currently broadcasting programme' is selected, it is moved to selected programme and EPG disappears. When 'Future broadcasting programme' is selected, a reservation pop-up window appears.
< >	Select Programme.
∧ ∨	Select the Broadcast Programme.
P ∧ ∨	Page Up/Down.
GUIDE	Switch off EPG.
BACK	
EXIT	
TV/RAD	Select DTV or RADIO Programme.
INFO	Detail information on or off.

Extended Description Box

Button	Description
INFO	The detail information on or off.
∧ ∨	Text Up/Down.
< >	Select Timer Record/Remind setting mode.
GUIDE	Switch off EPG.
EXIT	

ENGLISH

3D IMAGING

(Only 3D Models)

3D Technology

This TV can display in 3D via 3D broadcasting or when the TV is connected to a compatible device, such as a Blu-ray 3D Player. The viewer needs to wear 3D glasses in order to see these images in 3D format.

WARNING

- When viewing 3D imaging, watch the TV from an effective viewing angle and within the appropriate distance. The appropriate angel and distance are provided on the next page of this manual. If you exceed this viewing angle or distance, you may not be able to view the 3D imaging.
- If you watch the 3D imaging too closely or for a long period of time, it may harm your eyesight.
- Watching the TV or playing video games that incorporate 3D imaging with the 3D glasses for a long period of time can cause drowsiness, headaches or fatigue to you and/or your eyes. If you have a headache, or otherwise feel fatigued or drowsy, stop watching the TV and take a rest.
- Pregnant woman, seniors, persons with heart problems or persons who experience frequent drowsiness should refrain from watching 3D TV.
- Some 3D imaging may cause you to duck or dodge the image displayed in the video. Therefore, it is best if you do not watch 3D TV near fragile objects or near any objects that can be knocked over easily.
- Please prevent children under the age of 5 from watching 3D TV. It may affect their vision development.
- Warning for photosensitization seizure: Some viewers may experience a seizure or epilepsy when exposed to certain factors, including flashing lights or images in TV or video games. If you or anybody from your family has a history of epilepsy or seizure, please consult with your doctor before watching 3D TV.
  Also certain symptoms can occur in unspecified conditions without any previous history. If you experience any of the following symptoms, immediately stop watching the 3D imaging and consult a doctor: dizziness or lightheadedness, visual transition or altered vision, visual or facial instability, such as eye or muscle twitching, unconscious action, convulsion, loss of conscience, confusion or disorientation, loss of directional sense, cramps, or nausea. Parents should monitor their children, including teenagers, for these symptoms as they may be more sensitive to the effects of watching 3D TV.
- Risk of photosensitization seizure can be reduced with the following actions.
  - » Take frequent breaks from watching 3D TV.
  - » For those who have vision that is different in each eye, they should watch the TV after taking vision correction measures.
  - » Watch the TV so that your eyes are on the same level as the 3D screen and refrain from sitting too closely to the TV.
  - » Do not watch the 3D imaging when tired or sick, and avoid watching the 3D imaging for a long period of time.
  - » Do not wear the 3D glasses for any other purpose than viewing 3D imaging on a 3D TV.
  - » Some viewers may feel disoriented after watching 3D TV. Therefore, after you watch 3D TV, take a moment to regain awareness of your situation before moving.

NOTE

- In Analog TV, 3D Imaging does not work.
- When watching 2D images, it is recommended to take off the 3D glasses. If you watch 2D images with the 3D glasses on, you may see distorted images.

When using 3D Glasses

CAUTION

- To watch the TV in 3D, you must put on your 3D glasses. For best results, you should wear LG Brand 3D glasses. The 3D imaging may not display properly when using another brand of 3D glasses. Please see the 3D glasses manual for instructions on how to use the 3D glasses.
- Do not use the 3D glasses to replace your corrective glasses, sunglasses or protective goggles.
- Do not store the 3D glasses in hot or cold locations.
- Do not drop objects onto the 3D glasses. Do not drop or bend the glasses.
- Since the lenses of the 3D glasses are easily scratched, make sure to clean only with a soft cloth. Shake off any dust before using the cloth since the glasses are easily scratched.

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3D Imaging viewing range

TV size, viewing angle & other circumstances may change the viewing distance and the angle of view.

Viewing Distance	Viewing Angle
2 m - 15 m	120 ° (When the viewing distance is 2 m)

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Viewing 3D Imaging

1 Play the video produced in 3D.

2 Press **"3D"** to watch 3D imaging.

3 Wear the 3D glasses as shown.

- Image shown may differ from your TV.

4 Press the Navigation buttons to select the 3D mode,Viewing 3D imaging.

2D>3D Changed from 2D imaging to 3D imaging.

Side by Side

Top & Bottom

Checker Board

Frame Sequential

5 If you don't want to watch 3D video, Press the**"3D"**button.
then chose"3D→2D" option, watch 2D video or chose "close 3D mode"option ,watch original video

3D Mode Setting

1 Press the **3D SETTING** while viewing 3D imaging. A pop-up window will appears.

2 Press the Navigation buttons to scroll to one of the following options and press **OK**.

Picture option may difference depend on input source

■ Antenna or Cable

■ USB

3D Mode Setting

Button	Description
3D Picture Correction	Select **Left/Right** or**Right/Left**
3D Depth	Adjusts the distance between the object and the background in the picture to enhance the 3D effect in 2D to 3D mode.
3D Viewpoint	Brings the picture (including both the object and background images) to the front or back to enhance the 3D effect in 3D mode.

Set Video.

Control the menu option (Refer to “PICTURE Settings” on page 66).

Set Audio.

Control the menu option (Refer to “AUDIO Settings” on page 70).

CAUTION

* Some menus may not work while viewing 3D imaging.
* The 3D imaging is disabled automatically when switching input source.
* 3D effect can be seen when 3D Mode is selected appropriately for the 3D input signal supplied to the TV.
* For *mpo files (3D camera files), the 3D imaging mode is enabled automatically.

NOTE

* If you select 3D mode, “Power indicator” is turned off automatically.
* You can only choose “**off** or **Cinema**” with the **AV MODE** button on the remote control.AV Mode is set as Standard while playing in 3D.
* Energy Saving is disabled while playing in 3D.

CUSTOMIZING TV SETTINGS

Accessing SETUP Menu

1 Press **HOME** to access the Home menu.

2 Press the Navigation buttons to select the **SETUP** menu and press **OK**.

3 Press the Navigation buttons to scroll to one of the following menus and press **OK**.

4 Press the Navigation buttons to scroll to the setting or option you want and press **OK**.

5 When you are finished, press **EXIT**.

Menu		Description
	SETUP	Sets up and edit programmes.
	PICTURE	Adjusts the image size, quality, or effect.
	AUDIO	Adjusts the sound quality, effect, or volume level.
	TIME	Sets the time, date, or timer feature.
	LOCK	Locks or unlocks channels and programmes.
	OPTON	Customizes the general settings.
	NETWORK	Sets up the network setting.
	SUPPORT	Checks the customer information.

Customizing Settings

SETUP Settings

1 Press **HOME** to access the Home menu.

2 Press the Navigation buttons to scroll to **SETUP** and press **OK**.

3 Press the Navigation buttons to scroll to **SETUP** and press **OK**.

4 Press the Navigation buttons to scroll to the setting or option you want and press **OK**.
- To return to the previous level, press **BACK**.

5 When you are finished, press **EXIT**.

The available programme settings are described in the following:

Setting	Description
Auto Tuning	Tunes and stores all available programmes through antennas or cable inputs.
Manual Tuning	Tunes and stores the programmes you want manually.
Programme Edit	Adds or deletes pregrammes on the programmes .
Booster	If reception is poor select Booster to "On". When the signal is strong, select "Off".

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PICTURE Settings

1 Press **HOME** to access the Home menu.

2 Press the Navigation buttons to scroll to **SETUP** and press **OK**.

3 Press the Navigation buttons to scroll to **PICTURE** and press **OK**.

4 Press the Navigation buttons to scroll to the setting or option you want and press **OK**.
- To return to the previous level, press **BACK**.

5 When you are finished, press **EXIT**.

The available picture settings are described in the following.

Setting	Description
Aspect Ratio	Changes the image size to view images at its optimal size .
Picture Wizard	Adjusts the image quality and calibrates the screen. The customized options will be saved as **Expert1** in the **Picture Mode**. **NOTE** ■ If you use **Picture Wizard**, the Energy saving feature will turn off automatically. ■ To reset changes made by **Picture Wizard**, operate **Picture Reset** when **Picture Mode** is on **Expert1**. ■ In RGB-PC/HDMI-PC/DVI-PC mode, the changed **Colour, Tint** and **H/V Sharpness** values are not applied.
Set 3D Video (Only 3D models)	Sets the 3D imaging option.
Energy Saving	Reduces the power consumption by adjusting the screen brightness. **NOTE** ■ When adjusting Energy Saving in MHEG/MHP mode, the Energy Saving setting is applied after MHEG/MHP is finished. ■ Selecting 'Screen Off' while tuned to a radio station channel will reduce power consumption. ■ When selecting **Auto** or **Maximum**, **Backlight** will not work.

Option	
Auto	The backlight is adjusted automatically corresponding to the surroundings when selecting **Auto** using the **Intelligent sensor** feature.
Off	The Energy Saving is off
Minimum/Medium/Maximum	Selects the brightness level.
Screen off	The screen turns off in 3 seconds.

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Setting	Description	
Picture Mode	Selects one of the preset image or customizes options in each mode for the best TV screen performance. You are also able to customize advanced options of each mode. The available preset picture modes vary depending on the TV. **NOTE** ■ If you select **Intelligent Senesor**, the option of the Energy saving feature will switch to **Auto** automatically.	
	Mode	
	Intelligent Sensor	Sets the TV to adjust the image settings, such as contrast, brightness, sharpness, colour, or tint, automatically corresponding to the surrounding environments.
	Vivid	Adjusts the video image for the retail environment by enhancing the contrast, brightness, colour, and sharpness.
	Standard	Adjusts the image for the normal environment.
	Cinema (Depending on models)	Optimizes the video image for a cinematic look to enjoy movies as if you are in a movie theater.
	Game	Optimizes the video image for a fast gaming screen such as PCs or games.
	Expert	Adjusts the detailed video image settings for video experts as well as general viewers.
TruMotion	Advance video technology that provides clearer, smoother images, even during fast action scenes creating a more stable structure for a crisper picture. TruMotion works with all inputs except PC mode. **NOTE** ■ If you enable “TruMotion”, noise may appear on the screen. If this occurs, set “TruMotion” to “Off”. ■ If you select “Picture Mode-Game ”, set “TruMotion” to “Off”.	
	Mode	
	High	Provides smoother picture movement.
	Low	Provides smooth picture movement. Use this setting for standard use.
	Off	Turn off TruMotion operation.
	User	De-Judder: Adjusts noise of the screen. De-Blur: Adjusts after-image of the screen.
SCREEN	Customizes the PC display options.	
	Option	
	Resolution	Selects a proper resolution when your PC uses.
	Auto Configure	Sets the TV to optimize the options automatically for the TV display.
	Position	Locates the image at the proper position.
	Size	Adjusts the image size.
	Phase	Eliminates horizontal streaking.
	Reset	Restores the options to the default setting.
LED LOCAL DIMMING	After analyzing the signal of the input video by areas of the screen, it adjusts the backlight to improve the contrast ratio.	

ENGLISH

Basic image options

Setting	Description
Backlight	Adjusts the brightness of the screen by controlling the LCD backlight. If you decrease the brightness level, the screen becomes darker and the power consumption will be reduced without any video signal loss. **NOTE** ■ If you use the "**Energy saving** - **Off**, **Minimum**, **Medium**", **Backlight** will be available.
Contrast	Increases or decreases the gradient of the video signal. You may use **Contrast** when the bright part of the picture is saturated.
Brightness	Adjusts the base level of the signal in the picture.
Sharpness	Adjusts the level of crispness in the edges between the light and dark areas of the picture. The lower the level, the softer the image.
Colour	Adjusts intensity of all colours.
Tint	Adjusts the balance between red and green levels.
Colour Temp.	Set to warm to enhance hotter colours such as red, or set to cool to enhance cooler colours such as blue.
Advanced Control or Expert Control	Customizes the advanced options
Picture Reset	Restores the options of each mode to the factory default

NOTE

- It is not available to use this function in "**Intelligent Sensor**".
- You cannot adjust colour, sharpness and tint in the RGB-PC/HDMI-PC mode.
- When the **Expert 1/2** is selected, you can select **Backlight, Contrast, Brightness, H Sharpness, V Sharpness, Colour** or **Tint**.

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Advanced control options (Depending on model)

Setting	Description
Dynamic Contrast	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	Adjusts screen colours so that they look livelier, richer and clearer. This feature enhances hue, saturation and luminance so that red, blue and green white look more vivid.
Clear White	Make the white area of screen brighter and more white.
Skin Colour	It detects the skin area of video and adjusts it to express a natural skin colour.
Noise Reduction	Reduces screen noise without compromising video quality.
Super Resolution	This function provides a crystal-clear picture by improving the details in an area that has a blurry or unclear picture.
MPEG Noise Reduction	Reduces noise regarding MPEG compressed video.
Gamma	You can adjust brightness of dark area and middle gray level area of the picture. » Low: Make the dark and middle gray level areas brighter. » Medium: Express the original picture level. » High: Make the dark and middle gray level area darker.
Black Level	Sets black level of the screen to proper level. This function is available in the following modes: AV (NTSC-M), HDMI or Component. » Low: The reflection of the screen gets darker. » High: The reflection of the screen gets brighter.
Eye Care	Adjusts the brightness of the screen to prevent the screen from being too bright. Dims extremely bright pictures. This feature is disable in "**Picture Mode-Vivid, Cinema, Expert1, Expert2, Intelligent Sensor**".

Setting	Description
Real Cinema	Makes video clips recorded in film look more natural by eliminating judder effect. Uses this function when you watch film-originated movie contents. This function can also work when TruMotion is off.
Colour Gamut	**Advanced Control** Maximizess the utilization of colour to increase colour quality. » Standard: Displays standard set of colours. » Wide: Increase number of colours used.
	Expert Control Displays colour domain of the signal. » Standard: Displays standard set of colours. » Wide: Increase number of colours used. » EBU: Mode to display EBU standard colour area. » SMPTE: Mode to display SMPTE standard colour area. » BT709: Mode to display BT709 standard colour area.
xvYCC	This is produces richer colours. This feature represents rich colours as much as a conventional video signal. This function is enabled in “Picture mode - Cinema, Expert” when xvYCC signal is inputted through HDMI.

AUDIO Settings

1 Press **HOME** to access the Home menu.

2 Press the Navigation buttons to scroll to **SETUP** and press **OK**.

3 Press the Navigation buttons to scroll to **AUDIO** and press **OK**.

4 Press the Navigation buttons to scroll to the setting or option you want and press **OK**.
- To return to the previous level, press **BACK**.

5 When you are finished, press **EXIT**.

The available audio settings are described in the following.

Setting	Description	
Auto Volume	Activates the Auto Volume feature to keep the volume level consistent whenever you change channels. The volume level may not be consistent due to different signal conditions of broadcasting stations.	
Clear Voice Ⅱ	Sets whether to enhance human voice clarity. You can adjust the level of clarity when you set this feature on. **NOTE** ■ If you select "**On**" for **Clear Voice II**, **Infinite 3D Surround** feature will not work.	
Balance	Adjust balance between the left and right speakers according to your room environment.	
Sound Mode	Selects one of the preset sound modes or customizes options in each mode.	
	Mode	
	Standard	Select when you want standard-quality sound.
	Music	Select when you listen to music.
	Cinema	Select when you watch movies.
	Sport	Select when you watch sports events.
	Game	Select when you play games.
	NOTE ■ If sound quality or volume is not at the level you want, it is recommended to use a separate home theater system or amplifier to cope with different user environments.	
	Option	
	Infinite 3D Surround	Patents LG proprietary sound processing technology that strives immersive 5.1 surround sound with just two front speakers.
	Treble	Controls the dominant sounds in the output. When you turn up the treble, it will increase the output to the higher frequency range.
	Bass	Controls the softer sounds in the output. When you turn up the bass, it will increase the output to the lower frequency range.
	Sound Reset	Resets the sound mode to the default setting.

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Setting	Description		
Sound Optimizer	This function optimizes the sound depending on the environment in which the TV is installed.		
	Mode		
	Normal	Normal sound mode.	
	Wall Mount Type	Optimized sound mode for a wall-mounted TV.	
	Stand Type	Optimized sound mode for a stand-type TV.	
Digital Audio Out	This function allows you to select your preferred Digital Audio Output. When Dolby Digital is available, selecting Auto in the Digital Audio Out menu will set SPDIF(Sony Philips Digital InterFace) output to Dolby Digital. If Auto is selected in the digital audio out menu when Dolby Digital is not available, SPDIF output will be PCM(Pulse-code modulation). Even if both Dolby Digital and Audio language have been set in a channel which broadcast Dolby Digital Audio, only Dolby Digital will be played.		
	Item	**Audio Input**	**Digital Audio output**
	Auto	MPEG Dolby Digital Dolby Digital Plus HE-AAC	PCM Dolby Digital Dolby Digital Dolby Digital
	PCM	All	PCM
TV Speaker	Turns on the internal speaker of the TV when using an external Hi-Fi system. You can use the TV speaker as an audio output device even if there is no video input. **NOTE** ■ When the **TV speaker** is turned off while the Simplink home theater is operating, the sound output automatically switches to the Home theater 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**.		
ARC Mode (Audio Return Channel)	When using an external audio device with the Audio Return Channel (ARC) feature, optical SPDIF can be output using only a HDMI cable , and SIMPLINK can be enabled. **NOTE** ■ Some HDMI cables may not support this mode. (A High Speed HDMI cable is recommended.) The ARC mode only works for HDMI 1.		
	Mode		
	On	If the device with the ARC feature is turned On , the device speaker is automatically used when SIMPLINK is enabled.	
	Off	Even if the device with the ARC feature is turned On and SIMPLINK is enabled, the device speaker is not automatically used.	
DTV Audio Setting (In digital mode)	When different audio types exist in an input signal, this function allows you to select the audio type you want.		
	Mode		
	Auto	Automatically outputs in the order **HE-AAC** > **Dolby Digital+** > **Dolby Digital** > **MPEG**.	
	HE-AAC, Dolby Digital+, Dolby Digital, MPEG	Allows users to select the audio type they want. ex) If **MPEG** is selected, **MPEG** is always outputted. If **MPEG** is not supported, another audio type is set in that order.	
AV Sync.	If the video and sound are not synced, you can adjust it manually. - : Make audio output faster than the default. +: Make audio output slower than the default.		
	Option		
	AV Sync.	Adjusts the sync between the TV speaker and SPDIF.	
	TV Speaker	Adjusts the sync of the sound from the TV's internal speaker.	
	SPDIF (Sony Philips Digital InterFace)	Adjusts the sync of the sound from an external speaker connected to the digital audio output port.	

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Stereo/Dual Reception (In Analogue Mode Only)

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

1 Press **Q. MENU**.

2 Press the Navigation button to access the **Audio** and press **OK**

3 Press the Navigation button to scroll to the sound output and press **OK**.

Broadcast	On Screen Display
Mono	MONO
Stereo	STEREO
Dual	DUAL I , DUAL II , DUAL I + II

■ **Mono sound selection**
If the stereo signal is weak in stereo reception, you can switch to mono. In mono reception, the clarityof sound is improved.

■ **Language selection for dual language broadcast**
If a programme can be received in two languages (dual language), you can switch to DUAL I, DUAL II or DUAL I+II.

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

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Nicam Reception (In Analogue Mode Only)

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

Sound output can be selected according to the type of broadcast received.

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

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

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

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.

TIME Settings

1 Press **HOME** to access the Home menu.

2 Press the Navigation buttons to scroll to **SETUP** and press **OK**.

3 Press the Navigation buttons to scroll to **TIME** and press **OK**.

4 Press the Navigation buttons to scroll to the setting or option you want and press **OK**.
- To return to the previous level, press **BACK**.

5 When you are finished, press **EXIT**.

The available time settings are described in the following

Setting	Description
Clock	Sets the time, date, time zone, and daylight-saving time feature. The time will be set automatically according to a digital channel signal which includes time information provided by the broadcasting station. If not, set the time and date manually.
Off Time/On Time	Sets the time to turn on or off the TV automatically. To use this function, you should set the current time and date in advance. **NOTE** ■ If you do not press any button within 2 hours after the TV turns on by the On Time feature, the TV enters the Standby mode automatically. ■ If you set both Off time and On time features to the same time, the Off time feature overrides the On time feature.
Sleep Timer	Sets the length of time until the TV to turns off. When you turn the TV off and turn it on again, the Sleep timer faature will be set to off.

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LOCK Settings

1 Press **HOME** to access the Home menu.

2 Press the Navigation buttons to scroll to **SETUP** and press **OK**.

3 Press the Navigation buttons to scroll to **LOCK** and press **OK**.

4 Press the Navigation buttons to scroll to the setting or option you want and press **OK**.
- To return to the previous level, press **BACK**.

5 When you are finished, press **EXIT**.

The available lock settings are described in the following.

Setting	Description
Set Password	Changes the 4-digit password. The default PIN is ‘0’,‘0’,‘0’,‘0’. If you forget your password, press ‘0’, ‘3’,‘2’, ‘5’ on the remote control handset.
Lock System	Activates or deactivates the lock system.
Block Programme	Blocks the programmes that contain inappropriate contents for children. The programmes can be selected but the screen blank and the audio is muted. To watch a locked programme, enter the password. It is available to use this function in **Lock System** ”**On**”.
Input Block	Block the input sources. It is available to use this function in **Lock System** ”**On**”.

OPTION Settings

1 Press **HOME** to access the Home menu.

2 Press the Navigation buttons to scroll to **SETUP** and press **OK**.

3 Press the Navigation buttons to scroll to **OPTION** and press **OK**.

4 Press the Navigation buttons to scroll to the setting or option you want and press **OK**.
- To return to the previous level, press **BACK**.

5 When you are finished, press **EXIT**.

The available general settings are described in the following:

Setting	Description	
Language	Selects a language for the display or audio.	
	Option	
	Menu Language	Select your desired language.
	Audio Language	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.
	Subtitle Language	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.
	NOTE ■ 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.	

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Setting	Description	
City/Area	Selects a desired country. **NOTE** ■ If you do not finish the set-up **Installation Guide** by pressing **BACK** or if you time out on the OSD (On Screen Display) the installation menu will continuously appear until the set up is completed whenever the TV is switched on. ■ DTV mode control buttons may not function based on country broadcasting circumstances. ■ In country that Digital broadcasting regulation isn't fixed, some DTV function may not work depending on digital broadcasting circumstances.	
Hard of Hearing	This function is for the blind, and provides explanatory audio describing the current situation in a TV programme in addition to the basic audio.	
Power Indicator	Sets to turn on or off the indicator light on the TV.	
	Option	
	Standby Light	Set to turn on or off the indicator light in Standby mode.
	Power Light	Set to turn on or off the indicator light when you turn on the power.
Factory Reset	Resets the TV to factory default and erases all stored programmes. Customizes the TV settings to suit your preference. The factory reset screen will appear when you turn on the TV for the first time. **NOTE** ■ In **Lock System "On"**, if you forget your password, press '0', '3', '2', '5' on the remote control handset.	
Set ID	Adds an ID to the connected devices	

ENGLISH

Setting	Description	
Mode Setting	Default selection is “Home Use”. We recommend setting the TV to “Home Use” mode for the best picture in your home environment.	
	Option	
	Home Use	Selects it for the home environment.
	Store Demo	Selects it for the retail environment.
	Demo Mode	Sets to show special features of the TV. You can cancel the demo mode by pressing any buttons except the Volume and Mute buttons. **NOTE** ■ 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**.

NETWORK Settings

1 Press **HOME** to access the Home menu.

2 Press the Navigation buttons to scroll to **SETUP** and press **OK**.

3 Press the Navigation buttons to scroll to **NETWORK** and press **OK**.

4 Press the Navigation buttons to scroll to the setting or option you want and press **OK**.
- To return to the previous level, press **BACK**.

5 When you are finished, press **EXIT**.

The available network settings are described in the following.

Setting	Description
Network Setting	Configure the network settings .
Network Status	Display the network status .
Smart TV Setting	Stream movies, TV shows and video, or get up to the minute news, stock information or weather updates directly to your TV.
Legal Notice	Display the Legal notice.

SUPPORT Settings

1 Press **HOME** to access the Home menu.

2 Press the Navigation buttons to scroll to **SETUP** and press **OK**.

3 Press the Navigation buttons to scroll to **SUPPORT** and press **OK**.

4 Press the Navigation buttons to scroll to the setting or option you want and press **OK**.
- To return to the previous level, press **BACK**.

5 When you are finished, press **EXIT**.

The available support settings are described in the following.

Setting	Description
Software Update	Update the TV with the latest firmware.
Picture Test	Executes picture or built-in melody sound tests. » If this test has an error, select Yes. You can see the product or service information. » If this test has no errors, check the connection status of external devices and refer to the manual of external devices.
Sound Test	
Signal Test	Views information on the Manufacturer, Model/Type, Serial Number and Software Version. **NOTE** 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.))
Product/Service Info.	Shows the product or service information. Customer Service Center can differ by country.
Initialization of Premium	Premium will be initialized, the TV set will restart when the initialization is completed.

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EXTERNAL EQUIPMENT SETUP

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

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MAKING CONNECTIONS

Connect various external devices to the TV and switch input modes to select an external device. For more information of external device's connection, refer to the manual provided with each device.
Available external devices are: HD receivers, DVD players, VCRs, audio systems, USB storage devices, PC, camcorders or cameras, gaming devices, and other external devices.

NOTE

* If you record a TV programme on a DVD recorder or VCR, make sure to connect the TV signal input cable to the TV through a DVD recorder or VCR. For more information of recording, refer to the manual provided with the connected device.
* The external device connection may differ from the model.
* Connect external devices to the TV regardless of the order of the TV port.
* The TV can receive video and audio signals simultaneously when using an HDMI cable.
* If the DVD does not support Auto HDMI, you must set the output resolution appropriately.
* Check that your HDMI cable is High Speed HDMI Cable. If the HDMI cablesare not High Speed HDMI Cable flickering or no screen display can result. , Please use the High Speed HDMI Cable.
* If cables are installed incorrectly, it could case the image to display in black and white or with distorted colour. Check to ensure the cable are matched with the corresponding colour connection.
* If you have a mono VCR, connect the audio cable from the VCR to the AUDIO L/MONO jack of the TV.
* It is recommended to use the TV set with the HDMI connection for the best image quality.
* If you use an external audio device instead of the built-in speaker, set the TV speaker feature to off
* Do not look into the optical output port. Looking at the laser beam may damage your vision.
* AUDIO menu items are disabled when connecting a headphone.
* When changing **AV MODE** with a headphone connected, the change is applied to video but not to audio.
* Optical Digital Audio Out is not available when connecting a headphone.
* Headphone impedance: 16 Ω
* Max audio output of headphone: 10 mW to 15 mW
* Headphone jack size: 0.32 cm

NOTE

- 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, 60 Hz for the PC mode, this should 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 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 too long an RGB-PC cable, there may beinterference on the screen. We recommend using under 5m of cable. This provides the best picture quality.

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Connecting to a equipment wirelessly

LG TVs with a Wireless Control port support the LG Wireless Media Box, which is sold separately. When you connect the Wireless Ready Dongle (included with the Wireless Media Box) to the TV, external devices can be connected to the LG Wireless Media Box and video and audio will be sent to the TV wirelessly.

NOTE

- When using the external device connected to the Wireless Media Box, some functions of the TV menu may not work.

SIMPLINK connection

Use the TV remote control to play and control the AV device connected with the HDMI cable through HDMI-CEC. Your TV only works with the devices that support HDMI-CEC.

Connect one end of the HDMI cable to the HDMI/DVI IN or HDMI IN terminal on the rear of the TV and the other end to the SIMPLINK device.

In wireless external output, SIMPLINK function is not supported.

NOTE

- If the connected device does not support HDMI-CEC, the SIMPLINK feature is unavailable.
- To operate SIMPLINK, an High Speed HDMI Cable with *CEC function should be used. (*CEC: Consumer Electronics Control).

Activating and Using the SIMPLINK menus

1 Press **INPUT** to access the Input List. To access the SIMPLINK, press the Red button.

2 Press the Navigation buttons to scroll to **On**.

3 Press the Navigation buttons to scroll to one of the devices and press **OK**.

No.	Description
1	Displays the previously viewed TV channel.
2	Plays discs. When multiple discs are available, the title of the disc appears at the bottom of the screen.
3	Controls the connected VCR.
4	HDD recordings playback: Controls the recording stored in HDD.
5	Audio out to home theater speaker or Audio out to TV: Changes the audio output between Home theater speaker and TV speaker.

- A check mark appears in front of the selected device.
- Available devices display in a bright colour.
- Unavailable devices display in grey.

4 Control the selected AV device.
- **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.
- **Disc playback**: Control connected AV devices by pressing the Navigation buttons, **OK**, ▶, ■, ❙❙, ◀◀ and ▶▶ buttons.
- **Power off all devices**: When you power 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 automatically turn on.

NOTE

- If you change the input source by pressing **INPUT**, the progressing function of the SIMPLINK device will stop.
- If you select a device that has the home theater feature, the sound output automatically switches to the home theater speaker and the TV speaker turns off.
- If a connected SIMPLINK home theater system does not play the audio from the TV, connect the DIGITAL AUDIO OUT terminal on the rear of the TV to the DIGITAL AUDIO IN terminal on the back of the SIMPLINK device with an optical cable.

MAINTENANCE

Update and clean your TV regularly to keep the best performance and to extend the product lifespan.

Updating the TV firmware

Download and install the latest firmware by connecting to the firmware update server to enhance or change the product function, or add new features.
The firmware update may not work properly depending on the Internet environment. If so, you may obtain the latest firmware update from the authorized LG Electronics service center.

To check the current firmware version or update the firmware,

1 Press **HOME** to access the Home menu.

2 Press the Navigation buttons to scroll to **SETUP** and press **OK**.

3 Press the Navigation buttons to scroll to **SUPPORT** and press **OK**.

4 Press the Navigation buttons to scroll to **Software Update** and press **OK**.
The current firmware version displays.

5 Select **Check Update Version** to check a new firmware version manually.

If selecting **Software Update** - **On**, the TV finds a new firmware through the NSU* and the update pop-up window will appear on the screen.
* NSU (Network Software Update): If the TV is connected to the internet, the TV finds a new firmware uploaded on the LG server.

NOTE

- While you are updating the firmware, disconnect the LAN cable, turn the TV off, or unplug the power cord.
- If you change the channel during the firmware update through OTA, the update is stoped.
- If you change the channel during the firmware update via OTA, the update stops. The process resumes when you go back to the original channel. The update continues even when the power is switched off using the remote control. In this case, it is normal that the colour of the power indicator may change and a dim light may be displayed on the screen. The system operates normally once the update is complete.
- Premium service is disabled while the software is being updated through NSU.

6 When the update is complete, the TV will automatically restart in 5 seconds.
You may need to reset some **SETUP**, **PICTURE**, or **AUDIO** menus.

NOTE

- You cannot downgrade back to an older firmware version.
- The period of time for the firmware update may be different depending on the firmware size, network condition or DTV signal strength.

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Cleaning your TV

CAUTION

- Make sure to turn the power off and disconnect the power cord and all other cables first.
- When the TV is left unattended and unused for a long time, disconnect the power cord from the wall outlet to prevent possible damage from lightning or power surges.

Screen and frame

To remove dust or light dirt, wipe the surface with a dry, clean, and soft cloth.
To remove major dirt, wipe the surface with a soft cloth dampened in clean water or a diluted mild detergent. Then wipe immediately with a dry cloth.

CAUTION

- Do not push, rub, or hit the surface with your fingernail or a sharp object, as this may result in scratches on the screen and image distortions.
- Do not use any chemicals, such as waxes, benzene, alcohol, thinners, insecticides, air fresheners, lubricants, as these may as these may damage the screen's finish and cause discolorations.

Cabinet and stand

To remove dust or light dirt, wipe the cabinet with a dry, clean, and soft cloth.
To remove major dirt, wipe the cabinet with a soft cloth dampened in a clean water or water containing a small amount of mild detergent. Then wipe immediately with a dry cloth.

CAUTION

- Do not spray liquid onto the surface. If water enters the TV, it may result in fire, electric shock, or malfunction.
- Do not use any chemicals as this may deteriorate the surface.

Power cord

Remove the accumulated dust or dirt on the power cord regularly.

Preventing “Image burn” or “Burn-in” on your TV screen

- If a fixed image displays on the TV screen for a long period of time, it will be imprinted and become a permanent disfigurement on the screen. This is “image burn” or “burn-in” and not covered by the warranty.
- If the aspect ratio of the TV is set to 4:3 for a long period of time, image burn may occur on the letterboxed area of the screen.
- Avoid displaying a fixed image on the TV screen for a long period of time (2 or more hours for LCD, 1 or more hours for the Plasma TV) to prevent image burn.

TROUBLESHOOTING

General

Problem	Resolution
Cannot control the TV with the remote control.	Check the remote control sensor on the product and try again. Check if there is any obstacle between the product and the remote control. Check if the batteries are still working and properly installed (⊕ to ⊕, ⊖ to ⊖). Check if the appropriate input mode such as TV or VCR is set for using the remote control.
No image display and no sound is produced.	Check if the product is turned on. Check if the power cord is connected to a wall outlet. Check if there is a problem in the wall outlet by connecting other products.
Image appears slowly when the TV turns on.	The image is muted during the product startup process. This is normal. If the image does not appear in a few minutes, unplug the TV for 30 seconds and try again. If the image still does not appear, contact the authorized service center in your local area.
Cannot connect external devices.	Refer to the "**Making Connections** " and connect an external device.
The TV turns off suddenly.	Check the power control settings. The power supply may be interrupted. Check if the Auto sleep feature is activated in the Time settings. Refer to the "**Sleep Timer**" . If there is no signal while the TV is on, the TV will turn off automatically after 15 minutes of inactivity.

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Audio

Problem	Resolution
No sound is produced while images are displaying.	Press ◿ + or - button. Check if the sound is muted by pressing **MUTE**. Scroll to other channels. There may a problem with the broadcast. Check if the audio cables are connected properly.
One of the speakers produce noises or does not produce sound.	A change in ambient humidity or temperature may result in an unusual noise when the product turns on or off. There is no problem with your product.

Video

Problem	Resolution
An image displays in black and white or the colour quality is poor.	Adjust the colour setting in the Picture menu . Keep a sufficient distance between this product and other electronic products. Scroll to other channels. There may a problem with the broadcast.
Horizontal or vertical bars appears or images blur	Check if there are local interferences such as an electrical appliance or power tool.
Lines or streaks appear on images	Check the antenna or aim the antenna to the proper direction.
Afterimages (ghosts) appear when the product turns off	Pixels may have been damaged from a fixed image displayed for a long time (image burn). Use a screen saver to prevent the pixel damage on the screen.
The power is on but the screen appears extremely dark.	Adjust the brightness and contrast in the Picture menu .
“No Signal” appears on the screen.	Check if the signal cable is connected between the TV and products properly. Check the selected input source by pressing **INPUT**.
Black spots appear on the screen.	Several pixels in red, green, white, or black may appear on the screen that can attribute to the characteristics of the LCD panel. This is normal.
The display offset is wrong.	Adjust the position setting in the Picture menu . Check if the video card resolution and frequency are supported by the product. If the frequency is out of range, set to the recommended resolution using the display settings on the external device.
Thin lines appear in the background of the screen.	Check the video cable connections.
Horizontal noises appear or characters blur.	Adjust the Phase setting in the Picture menu. Refer to the “SCREEN”.
The reception on some channels is poor	Scroll to other channels. There may a problem with the broadcast. The station signal may be weak. Aim the antenna to the proper direction. Check if there are local interferences such as an electrical appliance or power tool.

ITEM \ MODELS		32LW5500	42LW5500
Dimensions (W x H x D)	With stand	776mm x 549mm x 240mm	1012mm x683mm x 256mm
	Without stand	776mm x485mm x 34.9mm	1012mm x617mm x29.9mm
Weight	With stand	16.2kg	21.7kg
	Without stand	13.4kg	18.8kg
Power requirement		AC 100-240V~50/60Hz	AC 100-240V~50/60Hz

ITEM \ MODELS		47LW5500
Dimensions (W x H x D)	With stand	1121mm x746mm x 256mm
	Without stand	1121mm x 678mm x 29.9mm
Weight	With stand	27.0kg
	Without stand	22.0kg
Power requirement		AC 100-240V~50/60Hz

ITEM \ MODELS		32LW5500	42LW5500	47LW5500
Environment condition	Operating Temperature Operating Humidity	0 °C to 40 °C Less than 80 %		
	Storage Temperature Storage Humidity	-20 °C to 60° C Less than 85 %		
Supported movie files		Refer to p.89		

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

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RGB-PC, HDMI/DVI-PC supported 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
1360x768	47.72	59.80
1920x1080 (RGB-PC)	66.587	59.93
1920x1080 (HDMI-PC)	67.5	60.00

HDMI/DVI-DTV supported mode

Resolution	Horizontal Frequency (kHz)	Vertical Frequency (Hz)
720x480	31.469 31.5	59.94 60
720x576	31.25	50
1280x720	37.5 44.96 45	50 59.94 60
1920x1080	33.72 33.75 28.125 26.97 27 33.716 33.75 56.25 67.43 67.5	59.94 60 50 23.97 24 29.976 30.00 50 59.94 60

Component port connecting information

Component ports on the TV	Y	P_B	P_R

Video output ports on DVD player	Y	P_B	P_R
	Y	B-Y	R-Y
	Y	Cb	Cr
	Y	Pb	Pr

Signal	Component
480i/576i	O
480p/576p	O
720p/1080i	O
1080p	O (50 Hz / 60 Hz only)

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Video supported mode

File Extensions	Audio/ Video	Codec	Profile/Level Support	Explanation
.asf .wmv	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)	
	Audio	WMA Standard		
		WMA 9 Professional		
.divx .avi	Video	DivX3.11		Global motion compensation or quarterpel motion estimation does not supported. Streams using this syntax are not supported.
		DivX4 DivX5 DivX6	Advanced Simple Profile (e.g. 720p/1080i)	
		XViD		
		H.264 / AVC	Main Profile@ Level 4.1 High Profile@ Level 4.1 (e.g. 720p60, 1080i60, 1080p30)	
	Audio	MPEG-1 Layer I, II MPEG-1 Layer III (MP3) Dolby Digital		
.mp4 .m4v	Video	H.264 / AVC	Main Profile@ Level 4.1 High Profile@ Level 4.1 (e.g. 720p60, 1080i60, 1080p30)	Global motion compensation or quarterpel motion estimation does not supported. Streams using this syntax are not supported.
		MPEG-4 Part 2	Advanced Simple Profile (e.g. 720p/1080i)	
	Audio	AAC	AAC-LC and HE-AAC	
.mkv	Video	H.264 / AVC	Main Profile@ Level 4.1 High Profile@ Level 4.1 (e.g. 720p60, 1080i60, 1080p30)	Most of the MKV content available is encoded by the open source x264 codec.
	Audio	AAC	AAC-LC and HE-AAC	
		Dolby Digital		
.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)	
		VC-1	Simple Profile@Medium Level (e.g. CIF, QVGA) Main Profile@High Level (e.g. 1080p30) Advanced Profile@Level3 (e.g. 720p60, 1080i60, 1080p30)	Only streams compliant to SMPTE 421M VC-1 standard are supported.
	Audio	MPEG-1 Layer I, II MPEG-1 Layer III (MP3) Dolby Digital Dolby Digital Plus		
		AAC	AAC-LC and HE-AAC	
.vob	Video	MPEG-1		
		MPEG-2	Main Profile@High Level (e.g. 720p60, 1080i60)	
	Audio	Dolby Digital MPEG-1 Layer I, II DVD-LPCM		
.mpg	Video	MPEG-1	Main Profile@High Level (e.g. 720p60, 1080i60)	Only streams compliant configured properly for TS, PS or ES
	Audio	MPEG-1 Layer I, II		

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3D supported mode

	Signal	Resolution	Horizontal Frequency (kHz)	Vertical Frequency (Hz)	Playable 3D video format
HDMI Input	720p	1280x720	45	60	Top & Bottom, Side by Side
			89.9/90	59.94/60	HDMI (V. 1.4 with 3D), Frame Packing
			37.5	50	Top & Bottom, Side by Side
			75		HDMI (V. 1.4 with 3D), Frame Packing
	1080i	1920X1080	33.75	60	Top & Bottom, Side by Side
			28.125	50	
	1080p	1920X1080	67.50	60	Top & Bottom, Side by Side, Checker Board, Single Frame Sequential
			56.250	50	Top & Bottom, Side by Side
			27	24	Top & Bottom, Side by Side, Checker Board
			53.95/54	23.98/24	HDMI (V. 1.4 with 3D), Frame Packing
			33.75	30	Top & Bottom, Side by Side, Checker Board
USB Input	1080p	1920X1080	33.75	30	Top & Bottom, Side by Side, Checker Board, MPO(Photo)
				24	Top & Bottom, Side by Side, MPO(Photo)
	Signal				Playable 3D video format
DTV	720p, 1080i				Top & Bottom, Side by Side

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APPENDIX

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  - software written by Tim Hudson.
  - software developed by the OpenSSL Project for use in the OpenSSL Toolkit. (http://www.openssl.org)

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Version 2, June 1991

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