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ENGLISH

LG
Life's Good

BD390

**FOR THE GUARANTEE TERMS & CONDITIONS,
PLEASE REFER TO BACK COVER OF THIS MANUAL.**

As an ENERGY STAR® Partner, LG has determined that this product or product models meet the ENERGY STAR® guidelines for energy efficiency.

ENERGY STAR® is a U.S. registered mark.

P/No. : MFL62344751

CAUTION
RISK OF ELECTRIC SHOCK DO NOT OPEN

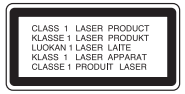
CAUTION: TO REDUCE THE RISK OF ELECTRIC SHOCK DO NOT REMOVE COVER (OR BACK) NO USER-SERVICEABLE PARTS INSIDE REFER SERVICING TO QUALIFIED SERVICE PERSO NNEL.

This lightning flash with arrowhead symbol within an equilateral triangle is intended to alert the user to the presence of uninsulated dangerous voltage within the product's enclosure that may be of sufficient magnitude to constitute a risk of electric shock to persons.

The exclamation point within an equilateral triangle is intended to alert the user to the presence of important operating and maintenance (servicing) instructions in the literature accompanying the product.

WARNING: TO PREVENT FIRE OR ELECTRIC SHOCK HAZARD, DO NOT EXPOSE THIS PRODUCT TO RAIN OR MOISTURE.

WARNING: Do not install this equipment in a confined space such as a book case or similar unit.



CAUTION: Do not block any ventilation openings. Install in accordance with the manufacturer's instructions.
Slots and openings in the cabinet are provided for ventilation and to ensure reliable operation of the product and to protect it from over heating.
The openings shall be never be blocked by placing the product on a bed, sofa, rug or other similar surface. This product shall not be placed in a built-in installation such as a bookcase or rack unless proper ventilation is provided or the manufacturer's instruction has been adhered to.

CAUTION: This product employs a Laser System.
To ensure proper use of this product, please read this owner's manual carefully and retain it for future reference. Shall the unit require maintenance, contact an authorized service centre. Use of controls, adjustments or the performance of procedures other than those specified herein may result in hazardous radiation exposure. To prevent direct exposure to laser beam, do not try to open the enclosure. Visible laser radiation when open. DO NOT STARE INTO BEAM.

CAUTION: The apparatus shall not be exposed to water (dripping or splashing) and no objects filled with liquids, such as vases, shall be placed on the apparatus.

CAUTION concerning the Power Cord
Most appliances recommend they be placed upon a dedicated circuit;
That is, a single outlet circuit which powers only that appliance and has no additional outlets or branch circuits. Check the specification page of this owner's manual to be certain. Do not overload wall outlets. Overloaded wall outlets, loose or damaged wall outlets, extension cords, frayed power cords, or damaged or cracked wire insulation are dangerous. Any of these conditions could result in electric shock or fire. Periodically examine the cord of your appliance, and if its appearance indicates damage or deterioration, unplug it, discontinue use of the appliance, and have the cord replaced with an exact replacement part by an authorized service centre. Protect the power cord from physical or mechanical abuse, such as being twisted, kinked, pinched, closed in a door, or walked upon. Pay particular attention to plugs, wall outlets, and the point where the cord exits the appliance. To disconnect power from the mains, pull out the mains cord plug. When installing the product, ensure that the plug is easily accessible.

Disposal of your old appliance

1. When this crossed-out wheeled bin symbol is attached to a product it means the product is covered by the European Directive 2002/96/EC.
2. All electrical and electronic products shall be disposed of separately from the municipal waste stream via designated collection facilities appointed by the government or the local authorities.
3. The correct disposal of your old appliance will help prevent potential negative consequences for the environment and human health.
4. For more detailed information about disposal of your old appliance, please contact your city office, waste disposal service or the shop where you purchased the product.

POWER: This unit operates on a mains supply of 200-240V~, 50/60Hz.

WIRING: This unit is supplied with a BSI 1363 approved 13 amp mains plug, fused at 5 amp. When replacing the fuse always use a 5 amp BS 1362, BSI or ASTA approved type. Never use this plug with the fuse cover omitted. To obtain a replacement fuse cover contact your dealer. If the type of plug supplied is not suitable for the mains sockets in your home, then the plug should be removed and a suitable type fitted. Please refer to the wiring instructions below:

WARNING: A mains plug removed from the mains lead of this unit must be destroyed. A mains plug with bared wires is hazardous if inserted in a mains socket. Do not connect either wire to the earth pin, marked with the letter E or with the earth symbol ⏚ or coloured green or green and yellow. If any other plug is fitted, use a 5 amp fuse, either in the plug, or at the distribution board.

IMPORTANT: The wires in this mains lead are coloured in accordance with the following codes:

- BLUE: NEUTRAL, BROWN: LIVE - As the colours of the wires in the mains lead of this unit may not correspond with the coloured marking identifying the terminals in your plug, proceed as follows: The wire which is coloured blue must be connected to the terminal which is marked with the letter N or coloured black. The wire which is coloured brown must be connected to the terminal which is marked with the letter L or coloured red.

CE0560 **For Wireless product European Union Notice**
Products bearing the CE marking comply with the R&TTE Directive (1999/5/EC), EMC Directive (2004/108/EC), and the Low Voltage Directive (2006/95/EC) issued by the Commission of the European Community. Indoor use only.

Compliance with these directives implies conformity to the following European Norms (in parentheses are the equivalent international standards and regulations):
• EN 55022 (CISPR 22)-Electromagnetic Interference
• EN 55024 (IEC61000-4-2,3,4,5,6,8,11)-Electromagnetic Immunity
• EN 60065 (IEC 60065) - Product Safety
• EN 300 328-Technical requirements for radio equipment
• 301 489-1 and EN 301 489-17-General EMC requirements for radio equipment.

European representative :
LG Electronics Service Europe B.V.
Veluwezoom 15, 1327 AE Almere, The Netherlands
(Tel : +31-036-547-8940)

Notes on Copyrights

- Because AACS (Advanced Access Content System) is approved as content protection system for BD format, similar to use of CSS (Content Scramble System) for DVD format, certain restrictions are imposed on playback, analogue signal output, etc., of AACS protected contents. The operation of this product and restrictions on this product may vary depending on your time of purchase as those restrictions may be adopted and/or changed by AACS after the production of this product.
  Furthermore, BD-ROM Mark and BD+ are additionally used as content protection systems for BD format, which imposes certain restrictions including playback restrictions for BD-ROM Mark and/or BD+ protected contents.
  To obtain additional information on AACS, BD-ROM Mark, BD+, or this product, please contact an authorized Customer Service Centre.
- Many BD-ROM/DVD discs are encoded with copy protection. Because of this, you should only connect your player directly to your TV, not to a VCR. Connecting to a VCR results in a distorted picture from copy-protected discs.
- This product incorporates copyright protection technology that is protected by U.S. patents and other intellectual property rights. Use of this copyright protection technology must be authorized by Macrovision, and is intended for home and other limited viewing uses only unless otherwise authorized by Macrovision. Reverse engineering or disassembly is prohibited.
- Under the U.S. Copyright laws and Copyright laws of other countries, unauthorized recording, use, display, distribution, or revision of television programs, videotapes, BD-ROM discs, DVDs, CDs and other materials may subject you to civil and/or criminal liability.

SIMPLINK

What is SIMPLINK?

Some functions of this unit are controlled by the TV's remote control when this unit and LG TV's with SIMPLINK are connected through HDMI connection.

- Controllable functions by LG TV's remote control; Play, Pause, Scan, Skip, Stop, Power Off, etc.
- Refer to the TV owner's manual for the details of SIMPLINK function.
- LG TV's with SIMPLINK function have the logo as shown above.

Note:
Depending on the disc type or playing status, some SIMPLINK operation may differ from your purpose or not work.

Licenses

Java and all Java-based trademarks and logos are trademarks or registered trademarks of Sun Microsystems, Inc. in the United States and other countries.

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

Manufactured under license under U.S. Patent #'s: 5,451,942; 5,956,674; 5,974,380; 5,978,762; 6,226,616; 6,487,535; 7,212,872; 7,333,929; 7,392,195; 7,272,567 & other U.S. and worldwide patents issued & pending. DTS is a registered trademark and the DTS logos, Symbol, DTS-HD and DTS-HD Master Audio are trademarks of DTS, Inc. © 1996-2008 DTS, Inc. All Rights Reserved.

"BD-LIVE" logo is a trademark of Blu-ray Disc Association.

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

"DVD Logo" is a trademark of DVD Format/Logo Licensing Corporation.

"x.v.Color" is a trademark of Sony Corporation.

"Blu-ray Disc" is a trademark.

"BONUSVIEW" is trademark of Blu-ray Disc Association.

This product is licensed under the AVC patent portfolio license and VC-1 patent portfolio license for the personal and non-commercial use of a consumer to (i) encode video in compliance with the AVC Standard and VC-1 Standard ("AVC/VC-1 Video") and/or (ii) decode AVC/VC-1 Video that was encoded by a consumer engaged in a personal and non-commercial activity and/or was obtained from a video provider licensed to provide AVC/VC-1 Video. No license is granted or shall be implied for any other use. Additional information may be obtained from MPEG LA, LLC. See http://www.mpegla.com.

"AVCHD" and the "AVCHD" logo are trademarks of Panasonic Corporation and Sony Corporation.

YouTube is a trademark of Google Inc.

DLNA and DLNA CERTIFIED are trademarks and/or service marks of Digital Living Network Alliance.

WIFI CERTIFIED 802.11n based on Draft 2.0.
Draft 2.0 refers to the version of the not-yet-ratified IEEE 802.11n standard used in Wi-Fi Alliance as of June 2007.

The specifications of the 802.11n WLAN (wireless local area network) are draft specifications and not final. If the final specifications differ from the draft specification, it may affect the ability of this device to communicate with other 802.11n WLAN devices.

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Before connecting, operating or adjusting this product,
please read this instruction booklet carefully and completely.

Introduction

To ensure proper use of this product, please read this owner's manual carefully and retain for future reference.
This manual provides information on the operation and maintenance of your player. Should the unit require service, contact an authorized service location.

About the ⊘ Symbol Display

"⊘" may appear on your TV display during operation and indicates that the function explained in this owner's manual is not available on that specific media.

Symbols Used in this Manual

Note:
Indicates special notes and operating features.

Tip:
Indicates tips and hints for making the task easier.

A section whose title has one of the following symbols are applicable only to the disc represented by the symbol.

ALL	All discs listed below
BD	BD-ROM disc
DVD	DVD-Video, DVD±R/RW in Video mode or VR mode and finalized
AVCHD	DVD±R/RW in AVCHD format
ACD	Audio CDs
MOVIE	Movie files contained in the USB/Disc
MOVIE-N	Movie files in the DLNA server or PC
MUSIC	Music files contained in the USB/Disc
MUSIC-N	Music files in the DLNA server or PC

Handling the Unit

When shipping the unit
Please save the original shipping carton and packing materials. If you need to ship the unit, for maximum protection, re-pack the unit as it was originally packed at the factory.

Keeping the exterior surfaces clean
- Do not use volatile liquids such as insecticide spray near the unit.
- Wiping with strong pressure may damage the surface.
- Do not leave rubber or plastic products in contact with the unit for a long period of time.

Cleaning the unit
To clean the player, use a soft, dry cloth. If the surfaces are extremely dirty, use a soft cloth lightly moistened with a mild detergent solution.
Do not use strong solvents such as alcohol, benzine, or thinner, as these might damage the surface of the unit.

Maintaining the Unit
The unit is a high-tech, precision device. If the optical pick-up lens and disc drive parts are dirty or worn, the picture quality could be diminished.
For details, please contact your nearest authorized service centre.

Notes on Discs

Handling Discs
Do not touch the playback side of the disc. Hold the disc by the edges so that fingerprints do not get on the surface. Never stick paper or tape on the disc.

Storing Discs
After playing, store the disc in its case. Do not expose the disc to direct sunlight or sources of heat and never leave it in a parked car exposed to direct sunlight.

Cleaning Discs
Fingerprints and dust on the disc can cause poor picture quality and sound distortion. Before playing, clean the disc with a clean cloth. Wipe the disc from the centre to out.
Do not use strong solvents such as alcohol, benzine, thinner, commercially available cleaners, or anti-static spray intended for older vinyl records.

Playable Discs



Blu-ray Disc
- Discs such as movies that can be purchased or rented.
- BD-R/RE discs that contain audio titles, Movie, Music or Photo files.



DVD-VIDEO (8 cm / 12 cm disc)
Discs such as movies that can be purchased or rented.



DVD-R (8 cm / 12 cm disc)
- Video mode and finalized only
- Supports the dual layer disc also
- AVCHD format
- DVD-R discs that contain audio titles, Movie, Music or Photo files.



DVD-RW (8 cm / 12 cm disc)
- VR mode, Video mode and finalized only
- AVCHD format
- DVD-RW discs that contain audio titles, Movie, Music or Photo files.



DVD+R (8 cm / 12 cm disc)
- Video mode and finalized only
- Supports the dual layer disc also
- AVCHD format
- DVD+R discs that contain audio titles, Movie, Music or Photo files.



DVD+RW (8 cm / 12 cm disc)
- Video mode and finalized only
- AVCHD format
- DVD+RW discs that contain audio titles, Movie, Music or Photo files.



Audio CD (8 cm / 12 cm disc)
Audio CDs or CD-Rs/RWs in audio CD format that can be purchased.



CD-R/CD-RW (8 cm / 12 cm disc)
CD-R/CD-RW discs that contain audio titles, Movie, Music or Photo files.

Notes:

- Depending on the conditions of the recording equipment or the CD-R/RW (or DVD±R/RW) disc itself, some CD-R/RW (or DVD±R/RW) discs cannot be played on the unit.
- Do not attach any seal or label to either side (the labeled side or the recorded side) of a disc.
- Do not use irregularly shaped CDs (e.g., heart-shaped or octagonal). Doing so may result in malfunctions.
- Depending on the recording software & the finalization, some recorded discs (CD-R/RW or DVD±R/RW) may not be playable.
- DVD±R/RW and CD-R/RW discs recorded using a personal computer or a DVD or CD Recorder may not play if the disc is damaged or dirty, or if there is dirt or condensation on the player's lens.
- If you record a disc using a personal computer, even if it is recorded in a compatible format, there are cases in which it may not play because of the settings of the application software used to create the disc. (Check with the software publisher for more detailed information.)
- This player requires discs and recordings to meet certain technical standards in order to achieve optimal playback quality. Pre-recorded DVDs are automatically set to these standards. There are many different types of recordable disc formats (including CD-R containing MP3 or WMA files) and these require certain pre-existing conditions to ensure compatible playback.
- Customers should note that permission is required in order to download MP3 / WMA files and music from the Internet. Our company has no right to grant such permission. Permission should always be sought from the copyright owner.
- You have to set the disc format option to [Mastered] in order to make the discs compatible with the LG players when formatting rewritable discs. When setting the option to Live System, you cannot use it on LG player. (Mastered/Live File System : Disc format system for windows Vista)

BD-ROM Disc Features

BD-ROM Discs can store 25 GB (single layer) or 50 GB (dual layer) on a single sided disc - about 5 to 10 times the capacity of a DVD.
BD-ROM Discs also support the highest quality HD video available in the industry (up to 1920 x 1080) - Large capacity means no compromise on video quality. Furthermore, a BD-ROM disc has the same familiar size and look as DVD.

- The following BD-ROM disc features are disc dependent and will vary.
- Appearance and navigation of features will also vary from disc to disc.
- Not all discs will have the features described below.
- BD-ROM, Hybrid disc have both BD-ROM and DVD (or CD) layers on one side. On such discs, BD-ROM layer will be only played back in this player.

Video highlights
The BD-ROM format for movie distribution supports three highly advanced video codecs, including MPEG-2, MPEG4 AVC (H.264), and SMPTE VC1. HD video resolutions are also available:

- 1920 x 1080 HD
- 1280 x 720 HD

Graphic planes
Two individual, full HD resolution (1920x1080) graphic planes (layers) are available on top of the HD video layer. One plane is assigned to video-related, frame accurate graphics (like subtitles), and the other plane is assigned to interactive graphic elements, such as buttons or menus.
For both planes, various wipes, fades and scroll effects may be available.

For High-Definition Playback
To view high-definition contents from BD-ROM discs, an HDTV is required. Some discs may require HDMI OUT for viewing of high-definition contents. Ability to view high-definition contents in BD-ROM discs may be limited depending on the resolution of your TV.

Menu sounds
When you highlight or select a menu option, sounds can be heard such as button clicks or a voice-over explaining the highlighted menu choice.

Multi-page/PopUp Menus
With DVD-Video, playback is interrupted each time a new menu screen is accessed. Due to BD-ROM disc's ability to preload data from the disc without interrupting playback, a menu can consist of several pages.
You can browse through the menu pages or select different menu paths, while the audio and video remain playing in the background.

Interactivity
Certain BD-ROM Discs may contain animated menus and/or trivia games.

User Browsable Slideshows
With BD-ROM Discs, you can browse through various still pictures while the audio remains playing.

Subtitles
Depending on what is contained on the BD-ROM disc, you may be able to select different font styles, sizes and colours for some subtitles. Subtitles may also be animated, scrolled or faded in and out.

BD-J Interactive Capability
The BD-ROM format supports Java for interactive functions. "BD-J" offers content providers almost unlimited functionality when creating interactive BD-ROM titles.

BD-ROM Disc Compatibility
This player supports BD-ROM Profile 2.

- Discs supporting BD-Live (BD-ROM version 2 Profile 2) that allows interactive functions to be used when this unit is connected to the Internet in addition to the BONUSVIEW function.
- Discs supporting BONUSVIEW (BD-ROM version 2 Profile 1 version 1.1/Final Standard Profile) that allows Virtual packages or Picture-in-Picture functions to be used.

Regional Code

This unit has a regional code printed on the rear of the unit. This unit can play only BD-ROM or DVD discs labeled same as the rear of the unit or "ALL".

AVCHD (Advanced Video Codec High Definition)

- This player can playback AVCHD format discs. These discs are normally recorded and used in camcorders.
- The AVCHD format is a high definition digital video camera format.
- The MPEG-4 AVC/H.264 format is capable of compressing images at higher efficiency than that of the conventional image compressing format.
- Some AVCHD discs use the "x.v.Color" format.
- This player can playback AVCHD discs using "x.v.Color" format.
- Some AVCHD format discs may not play, depending on the recording condition.
- AVCHD format discs need to be finalized.
- "x.v.Color" offers a wider colour range than normal DVD camcorder discs.

Compatibility Notes

- Because BD-ROM is a new format, certain disc, digital connection and other compatibility issues are possible. If you experience compatibility problems, please contact an authorized Customer Service Centre.
- Viewing high-definition content and up-converting standard DVD content may require a HDMI-capable input or HDCP-capable DVI input on your display device.
- Some BD-ROM and DVD discs may restrict the use of some operation commands or features.
- Dolby TrueHD, Dolby Digital Plus and DTS-HD are supported with maximum 7.1 channels if you use HDMI connection for the audio output of the unit.
- You can use a USB device that is used to store some disc related information, including downloaded on-line content. The disc you are using will control how long this information is retained.

Certain System Requirements

For high definition video playback:

- High definition display that has COMPONENT or HDMI input jacks.
- BD-ROM disc with high definition content.
- HDMI or HDCP capable DVI input on your display device is required for some content (as specified by disc authors).
- For up-conversion of standard definition DVD, a HDMI or HDCP capable DVI input on your display device is required for copy protected content.

For Dolby® Digital Plus, Dolby TrueHD and DTS-HD multi-channel audio playback:

- An amplifier/receiver with a built-in (Dolby Digital, Dolby Digital Plus, Dolby TrueHD, DTS or DTS-HD) decoder.
- Main, centre, surround speakers and subwoofer as necessary for chosen format.

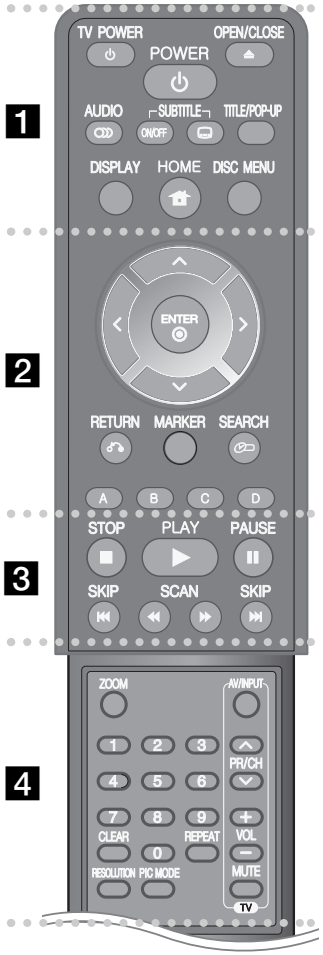
Important Notice for TV colour system

The colour system of this player differs according to currently playing discs.
For example, when the player plays back the disc recorded in the NTSC colour system, the image is outputted as a NTSC signal.
Only the multi system colour TV can receive all signals outputted from the player.

Notes:

- If you have a PAL colour system TV, you will see just distorted images when using discs or video contents recorded in NTSC.
- The multi system colour TV changes the colour system automatically according to input signals. In case that the colour system is not changed automatically, turn it off and then on to see normal images on screen.
- Even if the disc recorded in NTSC colour system are well displayed on your TV, these may not be recorded correctly on your recorder.

Remote control



OPEN/CLOSE (⏏): Opens and closes the disc tray.

TV POWER: Switches the TV ON or OFF.

POWER: Switches the player ON or OFF.

AUDIO ( ): Selects an audio language or audio channel.

SUBTITLE ON/OFF: Switches the subtitle ON or OFF.

SUBTITLE ( ): Selects a subtitle language.

TITLE/POP-UP: Displays the DVD title menu or BD-ROM's popup menu, if available.

DISPLAY: Displays or exits On-Screen Display.

HOME: Displays or exits the [Home Menu].

DISC MENU: Accesses menu on a disc.

Direction buttons: Selects an option in the menu.

ENTER ( ): Acknowledges menu selection.

RETURN ( ): Exits the menu or resumes playback. The resume play function may not work depending on the BD-ROM disc.

MARKER: Marks any point during playback.

SEARCH: Displays or exits the search menu.

Coloured (A, B, C, D) buttons: Use to navigate BD-ROM menus. They are also used for [MOVIE], [PHOTO], [MUSIC], [My Media] and [YouTube] menu.

■ **(STOP):** Stops playback.

► **(PLAY):** Starts playback.

❚❚ **(PAUSE):** Pauses playback.

◄◄ **/** ►► **(SCAN):** Searches backward or forward.

I◄◄ **/** ►►I **(SKIP):** Go to next or previous chapter / track / file.

ZOOM: Displays or exits the [Zoom] menu.

TV Control Buttons: See page 54.

0-9 numerical buttons: Select numbered options in a menu.

CLEAR: Removes a mark on the search menu or a number when setting the password.

REPEAT: Repeat a desired section or sequence.

RESOLUTION: Sets the output resolution for HDMI and COMPONENT VIDEO OUT jacks.

PIC MODE: Displays or exits the [Picture Mode] menu.

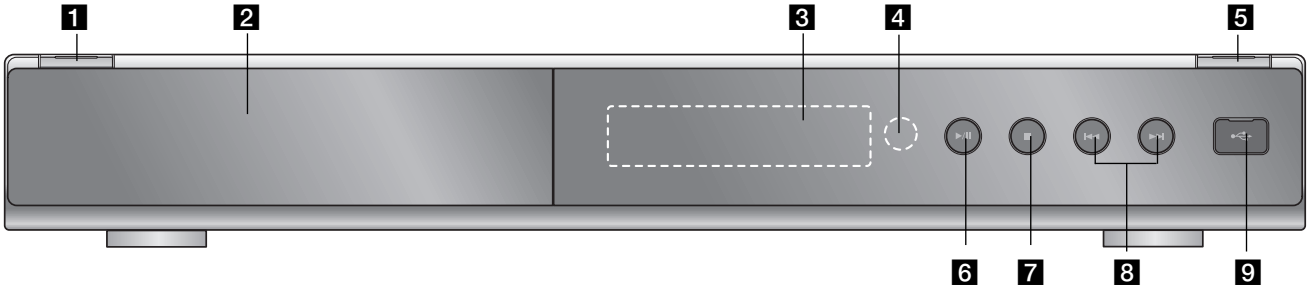
Remote Control Operation

Point the Remote Control at the remote sensor and press the buttons.

Remote Control Battery Installation

Remove the battery cover on the rear of the Remote Control, and insert a R03 (size AAA) battery with ⊕ and ⊖ matched correctly.

Front panel



1 ⏻ **(POWER) Button**
Switches the unit ON or OFF.

2 **Disc Tray**
Insert a disc here.

3 **Display Window**
Shows the current status of the player.

4 **Remote Sensor**
Point the remote control here.

5 **OPEN/CLOSE (⏏)**
Opens or closes the disc tray.

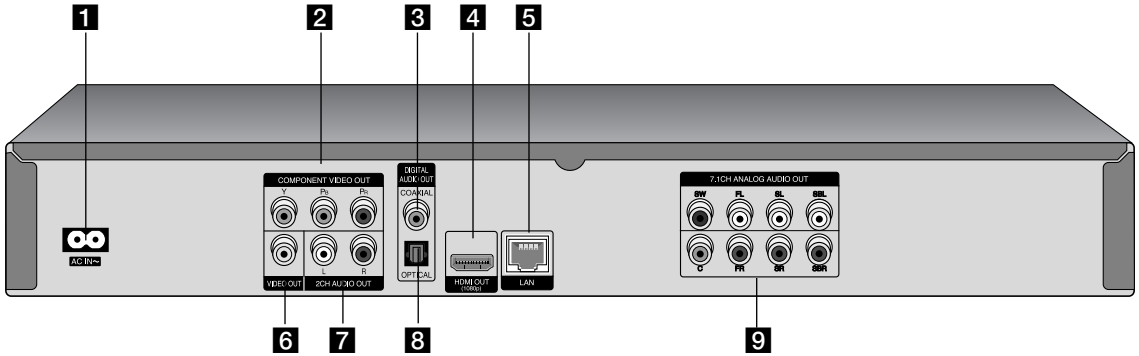
6 **► / ❚❚ (PLAY / PAUSE)**
Starts playback.
Pause playback temporarily,
press again to exit pause mode.

7 **■ (STOP)**
Stops playback.

8 **I◄◄ / ►►I (SKIP)**
Go to next or previous file/track/chapter.

9 **USB Port**
Connect a USB device.

Rear panel



1 AC IN connector
Connect the supplied power cord.

2 COMPONENT VIDEO OUT (Y PB PR)
Connect to a TV with Y Pb Pr inputs.

3 DIGITAL AUDIO OUT (COAXIAL)
Connect to digital (coaxial) audio equipment.

4 HDMI OUT (Type A)
Connect to TV with HDMI inputs. (Interface for digital audio and video)

5 LAN port
Connect a network with an always-on broadband connection.

6 VIDEO OUT
Connect to a TV with video inputs.

7 2CH AUDIO OUT (Left/Right)
Connect to a TV with 2 channel audio inputs.

8 DIGITAL AUDIO OUT (OPTICAL)
Connect to digital (optical) audio equipment.

9 7.1CH ANALOG AUDIO OUT
Connect to 7.1CH analogue input on an audio equipment.
(SW – Subwoofer, C – Centre, FL – Front Left, FR – Front Right
SL – Surround Left, SR – Surround Right, SBL – Surround Back Left,
SBR – Surround Back Right)

Connections to Your TV

Make one of the following connections, depending on the capabilities of your existing equipment.

Tips:

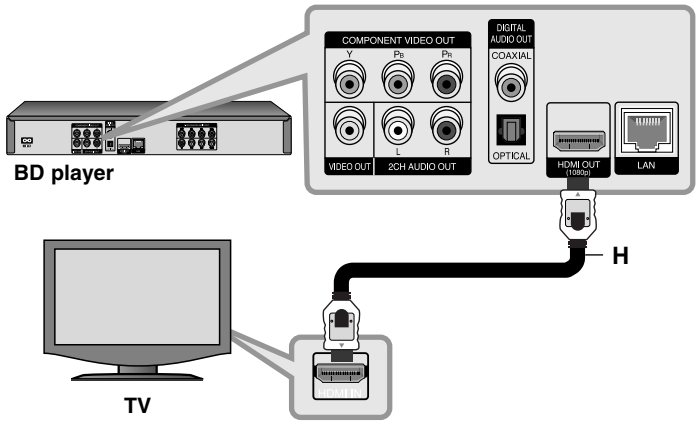
- Depending on your TV and other equipment you wish to connect, there are various ways you could connect the player. Use only one of the connections described below.
- Please refer to the manuals of your TV, Stereo System or other devices as necessary to make the best connections.

Cautions:

- Make sure the player is connected directly to the TV. Tune the TV to the correct video input channel.
- Do not connect the player's AUDIO OUT jack to the phono in jack (record player) of your audio system.
- Do not connect your player via your VCR. The image could be distorted by the copy protection system.

HDMI Connection

If you have a HDMI TV or monitor, you can connect it to this player using a HDMI cable.



Connect the HDMI jack on the player to the HDMI jack on a HDMI compatible TV or monitor **(H)**.
Set the TV's source to HDMI (refer to TV's Owner's manual).

Note:

If a connected HDMI device does not accept the audio output of the unit, the HDMI device's audio sound may be distorted or may not output.

Tips:

- When you use HDMI connection, you can change the resolution for the HDMI output. (Refer to "Resolution Setting" on page 18-19.)
- Select the type of video output from the HDMI OUT jack using [HDMI Color Setting] option on the [Setup] menu (see page 28).

Cautions:

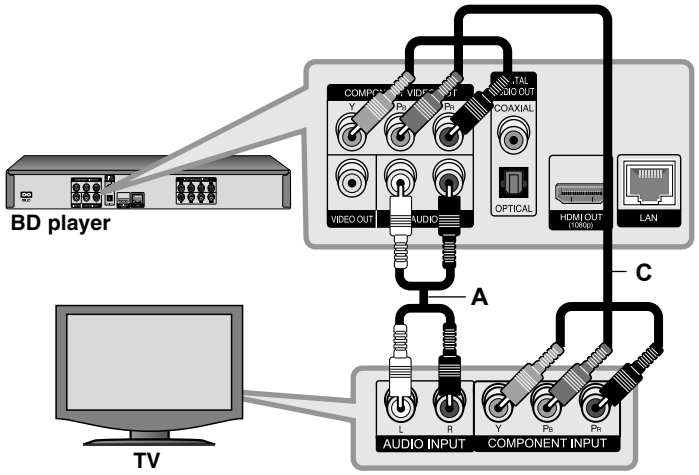
- Changing the resolution when the connection has already been established may result in malfunctions. To solve the problem, turn off the player and then turn it on again.
- When the HDMI connection with HDCP is not verified, TV screen is changed to black screen. In this case, check the the HDMI connection, or disconnect the HDMI cable.
- If there is noise or lines on the screen, please check the HDMI cable (length is generally limited to 4.5m).

Additional Information for HDMI

- When you connect a HDMI or DVI compatible device make sure of the following:
  - Try switching off the HDMI/DVI device and this player. Next, switch on the HDMI/DVI device and leave it for around 30 seconds, then switch on this player.
  - The connected device's video input is set correctly for this unit.
  - The connected device is compatible with 720x576p, 1280x720p, 1920x1080i or 1920x1080p video input.
- Not all HDCP-compatible HDMI or DVI devices will work with this player.
  - The picture will not be displayed properly with non-HDCP device.
  - This player does not playback and TV screen is changed to black screen.

Component Video Connection

Connect the COMPONENT VIDEO OUT jacks on the player to the corresponding input jacks on the TV using Y Pb Pr cables **(C)**.
Connect the left and right AUDIO OUT jacks of the player to the audio left and right IN jacks on the TV using the audio cables **(A)**.

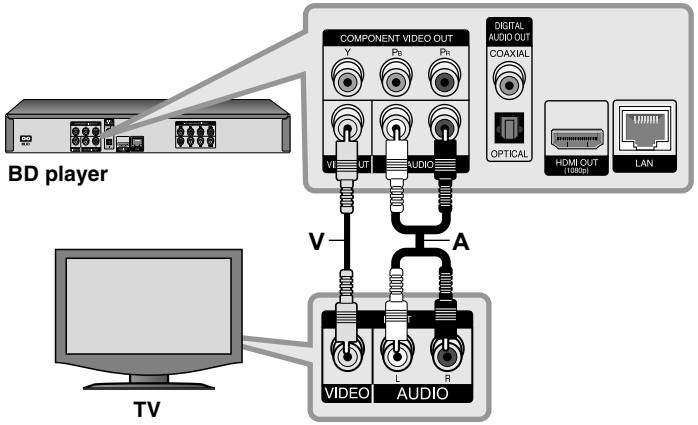


Tip:

When you use COMPONENT VIDEO OUT connection, you can change the resolution for the output. (Refer to "Resolution setting" on page 18-19.)

Video/Audio (Left/Right) Connection

Connect the VIDEO OUT jack on the player to the video in jack on the TV using a video cable **(V)**.
Connect the left and right AUDIO OUT jacks of the player to the audio left and right IN jacks on the TV using the audio cables **(A)**.



Connecting to an Amplifier

Make one of the following connections, depending on the capabilities of your existing equipment.

Note:

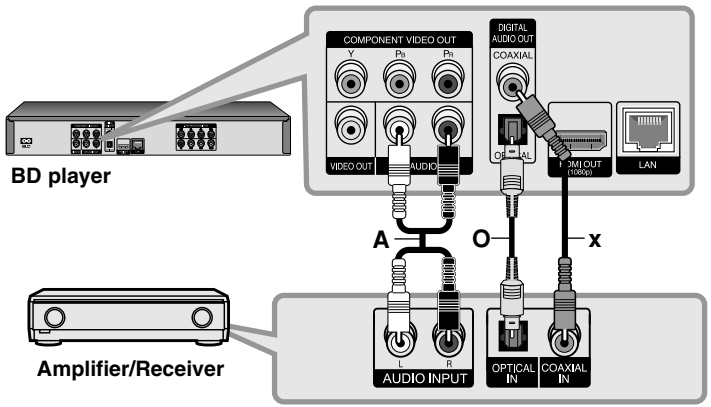
Since many factors affect the type of audio output, see “The unit’s Audio Output Specifications” on page 17 for details.

Connecting to an Amplifier via 2 Channel Audio Output

Connect the Left and Right 2CH AUDIO OUT jacks on the player to the audio left and right in jacks on your amplifier, receiver, or stereo system using audio cables **(A)**.

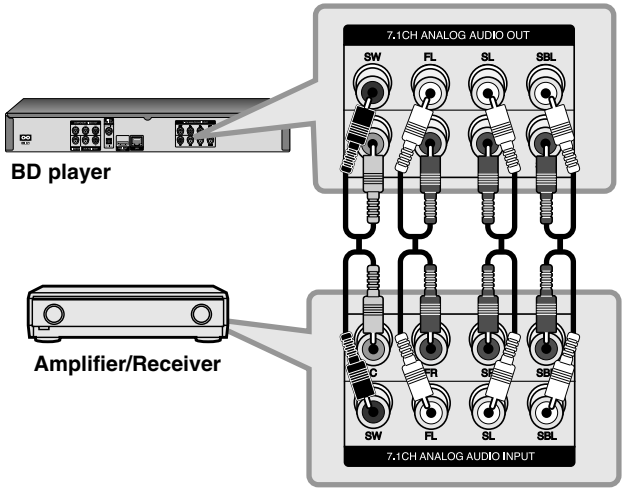
Connecting to an Amplifier via Digital Audio Output (Optical or Coaxial)

Connect the player’s DIGITAL AUDIO OUT jack to the corresponding in jack (OPTICAL **O** or COAXIAL **X**) on your amplifier. Use an optional digital (optical **O** or coaxial **X**) audio cable. You will need to activate the player’s digital output. (See “[AUDIO] Menu” on pages 29-30.)



Connecting to an Amplifier via 7.1 Channel Analog Audio Output

Connect the 7.1CH ANALOG AUDIO OUT (SW, C, FL, FR, SL, SR, SBL and SBR) jacks on the player to the corresponding 7.1CH ANALOG IN jacks on your amplifier. You need to set the audio input of your amplifier to enjoy 7.1 channel surround sound. Refer to your amplifier’s owner’s manual to set the audio input.



You may need to set the [Speaker Setup] option in the [Setup] menu to obtain the best surround sound via 7.1CH ANALOG AUDIO OUT connection (see page 30).

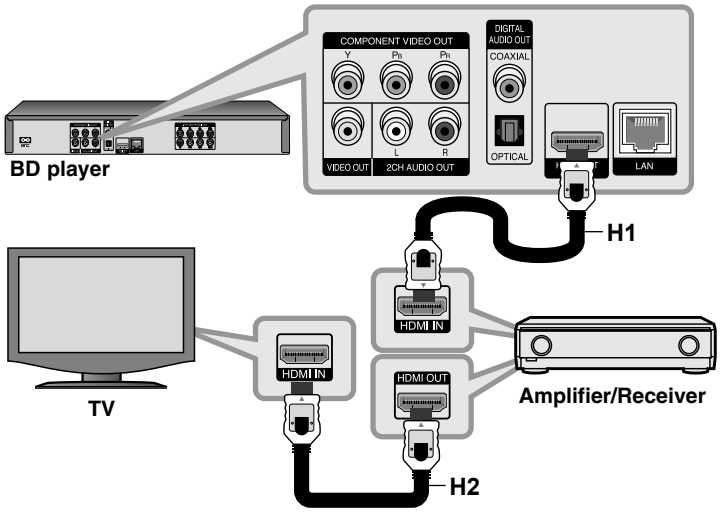
Note:

If your amplifier has only 5.1 channel input jacks, connect all the analogue audio output jacks except SBL and SBR outputs.

Connecting to an Amplifier via HDMI Output

Connect the player's HDMI OUT jack to the corresponding in jack on your amplifier using a HDMI cable **(H1)**. You will need to activate the player's digital output. (See "[AUDIO] Menu" on pages 29-30.)

Digital Multi-channel sound
A digital multi-channel connection provides the best sound quality. For this, you need a multi-channel Audio/Video Receiver that supports one or more of the audio formats supported by your player. Check the receiver manual and the logos on the front of the receiver. (PCM Stereo, PCM Multi-Ch, Dolby Digital, Dolby Digital Plus, Dolby TrueHD, DTS and/or DTS-HD)



Tip:
Connect the amplifier's HDMI output jack to HDMI input jack on your TV using a HDMI cable **(H2)** if your amplifier has HDMI output jack.

Notes:

- You must select a digital audio output and a maximum sampling frequency that your Amplifier (or AV receiver) accepts using [SPDIF], [HDMI] and [Sampling Freq.] options on the [Setup] menu (see page 29-30).
- With digital audio connection (SPDIF or HDMI), Disc Menu button sounds of BD-ROM may not be heard if the [SPDIF] or [HDMI] option is set to [Primary Pass-Thru].
- If the audio format of the digital output does not match the capabilities of your receiver, the receiver will produce a strong, distorted sound or no sound at all.
- Multi-channel Digital Surround Sound via digital connection can only be obtained if your receiver is equipped with a Digital Multi-channel decoder.
- To see the audio format of the current disc in the on-screen display, press AUDIO.

The unit's Audio Output Specifications

Jack/Setting / Source	Analog 7.1 CH Output	SPDIF (DIGITAL AUDIO OUT) *5		
		PCM Stereo	DTS Re-encode *3 *6	Primary Pass-Thru *1
Dolby Digital	PCM 5.1ch	PCM 2ch	DTS	Dolby Digital
Dolby Digital Plus	PCM 7.1ch	PCM 2ch	DTS	Dolby Digital
Dolby TrueHD	PCM 7.1ch	PCM 2ch	DTS	Dolby Digital
DTS	PCM 5.1ch	PCM 2ch	DTS	DTS
DTS-HD	PCM 7.1ch	PCM 2ch	DTS	DTS
Linear PCM 2ch	PCM 2ch	PCM 2ch	DTS	PCM 2ch
Linear PCM 5.1ch	PCM 5.1ch	PCM 2ch	DTS	PCM 2ch
Linear PCM 7.1ch	PCM 7.1ch	PCM 2ch	DTS	PCM 2ch

Jack/Setting / Source	HDMI OUT			
	PCM Stereo	PCM Multi-Ch *3	DTS Re-encode *6	Primary Pass-Thru *1 *2 *3
Dolby Digital	PCM 2ch	PCM 5.1ch	DTS	Dolby Digital
Dolby Digital Plus	PCM 2ch	PCM 7.1ch	DTS	Dolby Digital Plus
Dolby TrueHD	PCM 2ch	PCM 7.1ch	DTS	Dolby TrueHD
DTS	PCM 2ch	PCM 5.1ch	DTS	DTS
DTS-HD	PCM 2ch	PCM 7.1ch	DTS	DTS-HD
Linear PCM 2ch	PCM 2ch	PCM 2ch	DTS	PCM 2ch
Linear PCM 5.1ch	PCM 2ch	PCM 5.1ch	DTS	PCM 5.1ch
Linear PCM 7.1ch	PCM 2ch	PCM 7.1ch	DTS	PCM 7.1ch *4

Notes:

*1 The secondary and interactive audio may not be included in the output bitstream if [SPDIF] or [HDMI] option is set to [Primary Pass-Thru]. (Except LPCM Codec : the output always include interactive and secondary audio.)

*2 This player automatically selects the HDMI audio according to the decoding capability of the connected HDMI device even though [HDMI] option is set to [Primary Pass-Thru].

*3 The [PCM Multi-CH]/[Primary Pass-Thru] setting of the [HDMI] option and [DTS re-encode] setting of the [SPDIF] option cannot be set together. If you set the [HDMI] option to [PCM Multi-CH] or [Primary Pass-Thru], the [SPDIF] option is set to [PCM Stereo] automatically. Also, if you set the [SPDIF] option to [DTS Re-encode], the [HDMI] option is set to [PCM Stereo] automatically.

*4 The LPCM audio recorded at 192kHz sampling frequency will be outputted as stereo sound.

*5 On the PCM audio output, the sampling frequency of SPDIF (DIGITAL AUDIO OUT) is limited to 96 kHz.

*6 If the [HDMI] or [SPDIF] option is set to [DTS re-encode], the audio output is limited to 48 kHz and 5.1 ch. If the [HDMI] or [SPDIF] option is set to [DTS re-encode], the DTS Re-encode audio is outputted for BD-ROM discs, and the original audio is outputted for the other discs (like [Primary Pass-Thru]).

- If [HDMI] option is set to [PCM Multi-CH] and [SPDIF] option is set to [Primary Pass-Thru] when the unit plays back Dolby Digital Plus or TrueHD audio, SPDIF (DIGITAL AUDIO OUT) jack is limited to "PCM 2ch".
- If the HDMI connection is version 1.3 and Dolby Digital Plus/Dolby TrueHD is outputted from HDMI OUT jack, SPDIF (DIGITAL AUDIO OUT) jack is limited to "PCM 2ch" (When the HDMI and SPDIF are connected simultaneously).
- The audio is outputted as PCM 48 kHz/16 bit for MP3/WMA file and PCM 44.1kHz/16 bit for Audio CD while playback.
- The Dolby TrueHD audio recorded on some Blu-ray discs consists of Dolby Digital and TrueHD audio. Dolby Digital audio is output through DIGITAL AUDIO OUT jacks and "DD" displays on the screen if TrueHD audio is not output (for example, when [HDMI] is set to [PCM Stereo] and [SPDIF] is set to [Primary Pass-Thru]).
- The analogue 2 channel output connection is always output PCM 2CH sound.

Resolution Setting

The player provides several output resolutions for HDMI OUT and COMPONENT VIDEO OUT jacks.
You can change the resolution using [Setup] menu or pressing the RESOLUTION button in stop mode.

Note:

Since several factors affect the resolution of video output, see “Available resolution according to the resolution setting” on the right.

How to change the resolution using RESOLUTION button

Press RESOLUTION repeatedly in stop mode to change the resolution. The display window will show you the current resolution.

How to change the resolution using the [Setup] menu

1. Press HOME and the [Home Menu] appears.
2. Select the [Setup] and press ENTER. The [Setup] menu appears.
3. Use ▲ / ▼ to select [DISPLAY] option then press ► to move to the second level.
4. Use ▲ / ▼ to select the [Resolution] option then press ► to move to the third level.
5. Use ▲ / ▼ to select the desired resolution then press ENTER to confirm your selection.

Available resolution according to the resolution setting

• When the non-copy protected media is playing back

Video Output / Resolution	HDMI OUT	COMPONENT VIDEO OUT	
		HDMI connected	HDMI disconnected
576i	576p	576i	
576p	576p	576p	
720p	720p	720p	
1080i	1080i	1080i	
1080p / 24Hz	1080p / 24Hz	576i	1080i
1080p / 50Hz	1080p / 50Hz	576i	1080i

• When the copy protected media is playing back

Video Output / Resolution	HDMI OUT	COMPONENT VIDEO OUT	
		HDMI connected	HDMI disconnected
576i	576p	576i	
576p	576p	576p	
720p	720p	576i	576p
1080i	1080i	576i	576p
1080p / 24Hz	1080p / 24Hz	576i	576p
1080p / 50Hz	1080p / 50Hz	576i	576p

Notes:

- Depending on your display, some of the resolution settings may result in the picture disappearing or an abnormal picture appearing. In this case, press HOME then RESOLUTION repeatedly until the picture re-appear.
- This player supports simultaneous output of all video out jacks. The resolution of the HDMI output will not be the same as the resolution output on the component video output.

HDMI OUT connection

- For the 576i resolution setting, real output resolution of HDMI OUT will change to 576p.
- If you select a resolution manually and then connect the HDMI jack to TV and your TV does not accept it, the resolution setting is set to [Auto].
- If you select a resolution that your TV does not accept, the warning message will appear. After resolution change, if you cannot see the screen, please wait 20 seconds and the resolution will automatically revert back to the previous resolution.
- The 1080p video output frame rate may be automatically set to either 24Hz or 50Hz depending both on the capability and preference of the connected TV and based on the native video frame rate of the content on the BD-ROM disc.

COMPONENT VIDEO OUT connection

- For the 720p, 1080i, 1080p resolution setting with protected media, real output resolution of COMPONENT VIDEO OUT will change to 576i or 576p depending on the connectivity of HDMI cable.
- BD and DVD could prevent up-scaling on analogue output.

VIDEO OUT connection

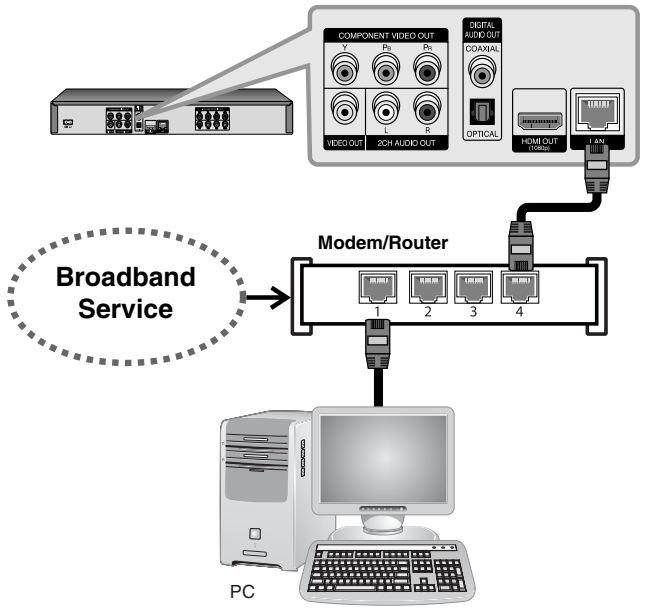
The resolution of the VIDEO OUT jack is always outputted at 576i resolution.

Connecting to your Home Network

This player can be connected to a local area network (LAN) via the LAN port on the rear panel or the internal wireless module.
By connecting the unit to a broadband home network, you have access to services such as software updates, My Media, BD-Live interactivity and streaming services.

Wired network

Connect the player's LAN port to the corresponding port on your Modem or Router using a commercially available LAN or Ethernet cable (CAT5 or better with RJ45 connector).
In the example configuration for wired connection below, this player would be able to access content from any PC connected via the Modem/Router.



Using a wired network provides the best performance, because the attached devices connect directly to the network and are not subject to radio frequency interference.

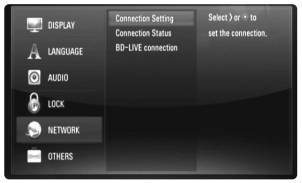
Cautions:

- When plugging or unplugging the LAN cable, hold the plug portion of the cable. When unplugging, do not pull on the LAN cable but unplug while pressing down on the lock.
- Do not connect a modular phone cable to the LAN port.
- Since there are various connection configurations, please follow the specifications of your telecommunication carrier or internet service provider.

• Adjusting [NETWORK] settings for wired network

If there is a DHCP server on the local area network (LAN) via wired connection, this player will automatically be allocated an IP address. After making the physical connection, a small number of home networks may require the player's network setting to be adjusted. Adjust the [NETWORK] setting as follows.

1.



Select the [Connection Setting] option in the [Setup] menu then press ► or ENTER.

2.



The [CONNECTION SETTING] menu appear on the screen. Use ▲▼ to select [Wired] and press ENTER.

3. 

Use ▲ ▼ ◄ ► to select the IP mode between [Dynamic] and [Static]. Normally, select [Dynamic] to allocate an IP address automatically.

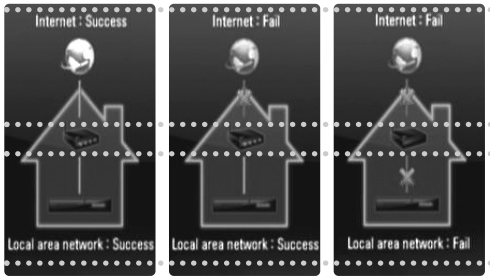
Note: If there is no DHCP server on the network and you want to set the IP address manually, select [Static] then set the [IP Address], [Subnet Mask], [Gateway] and [DNS Server] using ▲ ▼ ◄ ► and numerical buttons. If you make a mistake while entering a number, press CLEAR to clear the highlighted part.

4. Select [OK] and press ENTER to apply network settings.

5. 

The player will ask you to test the network connection. Select [OK] and press ENTER to complete the network connection.

6. If you select [Test] and press ENTER at step 5 above, the network connection status is displayed on the screen.
You can also test it on the [Connection Status] in the [Setup] menu.

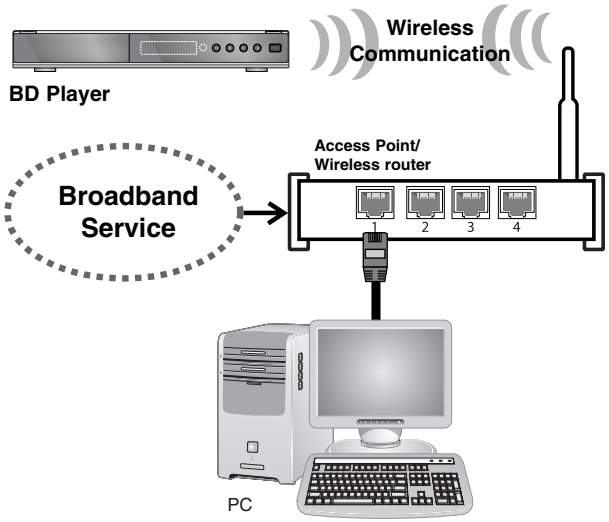


Internet connection status

Local Area Network status

Wireless network

Another connection option is to use an Access Points or an wireless routers. In the example configuration for wireless connection below, this player would be able to access content from any PC connected via the Modem/Router.



The network configuration and connection method may vary depending on the equipment in use and the network environment.

This player is equipped with an IEEE 802.11n wireless module, which also supports the 802.11b/g standards. For the best wireless performance, we recommends using a IEEE 802.11n certified Wi-Fi network (access point or wireless router).

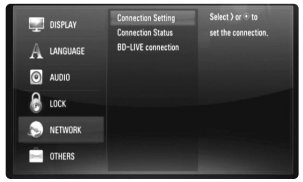
Refer to the setup instructions supplied with your access point or wireless router for detailed connection steps and network settings.

Caution:

Wired internet connection is strongly recommended.
Using the [My Media] features, network update and video streaming services (such as YouTube Videos) with wireless network can be affected by the household devices using radio frequencies.

• Adjusting [NETWORK] settings for wireless network

For the wireless network connection, the player needs to be set up for network communication. This adjustment can be done from the [Setup] menu. Adjust the [NETWORK] setting as follows.
Setting up the access point or the wireless router is required before connecting the player to the network.

1. 

Select the [Connection Setting] option in the [Setup] menu then press ► or ENTER.

2. 

The [CONNECTION SETTING] menu appear on the screen. Use ▲▼ to select [Wireless] and press ENTER.

3. 

Selects [OK] and press ENTER to continue. The new connection settings resets the current network settings.

4. The player scans the all available access points or wireless routers within range and display them as a list. Use ▲▼ to select an access point or wireless router on the list, and then press ENTER.
If you have security on your access point or wireless router, verify that the WEP or WPA key that was entered into the player matches the router's information exactly. You need to input the security code as necessary.

Notes:

- WEP security mode generally have 4 keys available on an access point or wireless router's setting. If your access point or wireless router use WEP security, enter the security code of the key "No.1" to connect on your home network.
- An Access Point is a device that allows you to connect to your home network wirelessly.



[Manual] – Your access point may not be broadcasting its access point name(SSID). Check your router settings through your computer and either set your router to broadcast SSID, or manually enter the access point name(SSID) in [Manual].

[Push Button] – If your access point or wireless router that supports Push Button Configuration method, select this option and press the Push Button on your access point or wireless router within 2 minutes. You do not need to know the access point name (SSID) and security code of your access point or wireless router.

5. Follow the steps 3-6 on page 21 to complete the network connection settings.

Notes on Network Connection

- 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.
- Our company is not responsible for any malfunction of the player and/or the internet connection feature due to communication errors/malfunctions associated with your broadband internet connection, or other connected equipment.
- The features of BD-ROM discs made available through the Internet Connection feature are not created or provided by our company, and our company is not responsible for their functionality or continued availability. Some disc related material available by the Internet Connection may not be compatible with this player. If you have questions about such content, please contact the producer of the disc.
- Some internet contents may require a higher bandwidth connection.
- Even if the player is properly connected and configured, some internet contents may not operate properly because of internet congestion, the quality or bandwidth of your internet service, or problems at the provider of the content.
- 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 wired connection to this player. If your internet service does not allow for such a connection, you will not be able to connect the player.
- You must use a Router to use xDSL service.
- 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 player or you may be limited to the number of devices you can connect at the same time. (If your ISP limits subscription to one device, this player 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 operate at 2.4GHz 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.
- Turn off all unused network equipment in your local home network. Some devices may generate network traffic.
- For the purpose of the better transmission, placing the player from the access point as close as possible.
- In some instances, placing the access point or wireless router at least 0.45m above the floor may improve the reception.
- Move closer to the access point if possible or re-orient the player so there is nothing between it and the access point.
- The reception quality over wireless depends on many factors such as type of the access point, distance between the player and access point, and the location of the player.
- Set your access point or wireless router to Infrastructure mode. Ad-hoc mode is not supported.

Network Software Update

Network update notification

From time to time, performance improvements and/or additional features or services may be made available to units that are connected to a broadband home network. If there is new software available and the unit is connected to a broadband home network, the player will inform you about the update as follows.

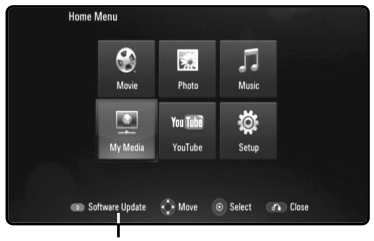
Option 1:

1. The update menu will appear on the screen when you turn on the player.
2. Use ◄ / ► to select a desired option and then press ENTER.
   [OK] - Starts the software update.
   [Cancel] - Exits the update menu and displays it next booting.
   [Hide] - Exits the update menu and it does not appear until next software is uploaded in the update server.



Option 2:

If the software update is available from the update server, the “Software Update” icon appears at the bottom of the Home menu. Press blue coloured button to start the update procedure. (see page 24-25 for more detail)



Software Update

Updating software in the [Setup] menu

You can update the player using the latest software to enhance the products operation and/or add new features. You can update the software by connecting the unit directly to the software update server.

Step 1: Check the Network Connection and settings

See page 20-23.

Step 2: Updating Software

Cautions:

- Before updating the software in your player, remove any disc and USB Device from the player.
- Before updating the software in your player, turn the player off and then turn it back on.
- **During the software update procedure, do not turn off the player or disconnect AC power, or do not press any button.**
- If you cancel the update, turn off the power and turn it on for stable performance.
- This unit cannot be updated to previous software version.

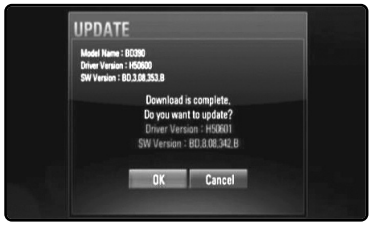
1. Select [Software Update] option in the [Setup] menu then press ► or ENTER.



2. The player will check for the newest update.
   Caution: Pressing ENTER while checking for the update will end the process.

   Note: If there is no update available, the Message, “No update is found.” appears. Press ENTER to return to the [Home Menu].

3. If newer version exists, the message “A new update was found. Do you want to download it?” appears.
4. Select OK to download the update. (Selecting [Cancel] will end the update.)
5. The player starts downloading the newest update from the server. (Downloading will take about 80 seconds at the network speed of 4Mbps Speed.)
6. When downloading is completed, the message, “Download is complete. Do you want to update?” appears.



7. Select OK to start updating.
   (Selecting [Cancel] will end the update and downloaded file will not be re-usable. To update software the next time, the software update procedure has to be started from the beginning again.)
   Caution: Do not turn off the power during the software update.

   Note: If the software includes the driver update, disc tray may open during the process.
8. When update is completed, the message, “Update is complete.” will appear, and the power will turn off automatically after 5 seconds.
9. Turn the power back on. The system now operates with the new version.
10. After completing the update process, repeat procedures 1-4 in Step 4 and check if there are no more updates available.

Tip:

The Software Update function may not work properly depending on your internet environment. In this case, you can obtain the latest software from the authorized LG Electronics Service Centre then update your player. Refer to “Customer Support” on page 58.

Using a USB device

This unit can play the movie, music and photo files contained in the USB device.	ON REMOTE
1. Insert a USB device to the USB port:	**–**
2 Displays the [Home Menu]:	**HOME**
3 Select a main option: [Movie], [Photo] or [Music] option	**◄ ►, ENTER**
4 Select the [USB] option:	**◄ ►**
5 Displays corresponding menu list: [MOVIE], [PHOTO] or [MUSIC] menu appears. Details for the menu are on pages 41-44.	**ENTER**

Tip:

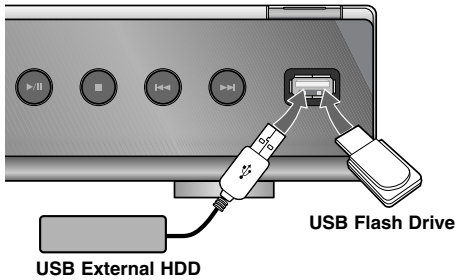
If you select the [Movie], [Photo] or [Music] option when a USB device is connected and a disc is inserted simultaneously, the menu for selecting a media will appear. Select a media then press ENTER.



Insert/Remove a USB device

Inserting a USB device – Insert straight-in until it fits into place.

Removing a USB device – Withdraw the USB device carefully.



Notes:

- This player supports USB flash memory/external HDD formatted in FAT16, FAT32 and NTFS when accessing files (music, photo, movie). However, for BD-Live, only FAT16 and FAT32 formats are supported. Please use the Internal Flash Memory or USB flash memory/external HDD formatted in either FAT16 or FAT32 when using BD-Live.
- The USB device can be used for the local storage for enjoying BD-Live discs with Internet
- This unit can support up to 4 partitions of the USB device.
- Do not extract the USB device during operation (play, etc.).
- An USB device which requires additional program installation when you have connected it to a computer, is not supported.
- USB device: USB device that support USB1.1 and USB2.0.
- Movie Files, Music files and photo files can be played. For details of operations on each file, refer to relevant pages.
- Regular back up is recommended to prevent data loss.
- If you use a USB extension cable or USB HUB, the USB device may not be recognized.
- Some USB device may not work with this unit.
- Digital camera and mobile phone are not supported.
- USB Port of the unit cannot be connected to PC.
  The unit cannot be used as a storage device.

Using the Home Menu

	ON REMOTE
1 Displays the [Home Menu]:	HOME
2 Selects an option:	▲▼◄►
3 Displays the selected option menu:	ENTER
4 Exit the [Home Menu]:	HOME



[Movie] – Start video media's playback or displays the [MOVIE] menu.

[Photo] – Display the [PHOTO] menu. (page 43-44)

[Music] – Display the [MUSIC] menu. (page 42)

[My Media] – Display and play the shared contents from the selected server. (pages 45-50)

[YouTube] – Watch YouTube videos streamed from the Youtube server via the internet to your TV. (pages 51-53)

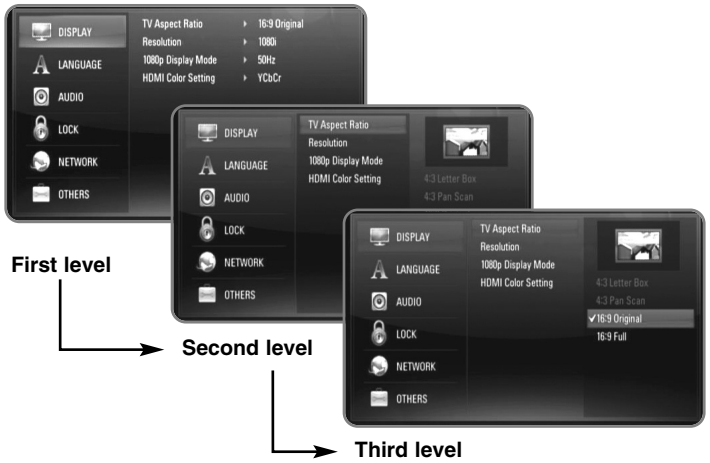
[Setup] – Display the [Setup] menu. (page 27-33)

Note:

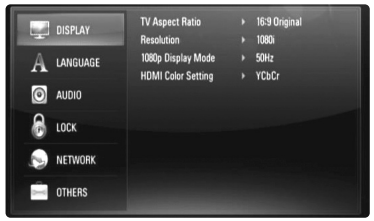
The unit will be in stop mode then the [Home Menu] will appear if you press HOME during playback.

Adjust the Setup settings

	ON REMOTE
1 Displays the [Home Menu]:	HOME
2 Selects the [Setup] option:	▲▼◄►, ENTER
3 Selects a desired option on the first level:	▲▼
4 Moves to the second level:	►
5 Select a desired option on the second level:	▲▼
6 Moves to the third level:	►
7 Adjust or confirm the setting:	▲▼, ENTER
8 Go back to the previous level:	◄
9 Exit the [Setup] menu:	HOME



[DISPLAY] Menu



TV Aspect Ratio

[4:3 Letter Box] – Select when a standard 4:3 TV is connected. Displays theatrical images with masking bars above and below the picture.

[4:3 Pan Scan] – Select when a standard 4:3 TV is connected. Displays pictures cropped to fill your TV screen. Both sides of the picture are cut off.

[16:9 Original] – Select when a 16:9 wide TV is connected. The 4:3 picture is displayed with an original 4:3 aspect ratio, with black bars appearing at the left and right sides.

[16:9 Full] – Select when a 16:9 wide TV is connected. The 4:3 picture is adjusted horizontally (in a linear proportion) to fill the entire screen.

Note:

You cannot select [4:3 Letter Box] and [4:3 Pan Scan] option when the resolution is set to higher than 720p.

Resolution

Sets the output resolution of the Component and HDMI video signal. Refer to “Resolution Setting” on page 18-19 for details about the resolution.

[Auto] – If the HDMI OUT jack is connected to TVs providing display information (EDID), automatically selects the resolution best suited to the connected TV. If the COMPONENT VIDEO OUT is only connected, this changes the resolution to 1080i as default resolution.

[1080p] – Outputs 1080 lines of progressive video.

[1080i] – Outputs 1080 lines of interlaced video.

[720p] – Outputs 720 lines of progressive video.

[576p] – Outputs 576 lines of progressive video.

[576i] – Outputs 576 lines of interlaced video.

1080p Display Mode

When the resolution is set to 1080p, select [24Hz] for smooth presentation of film material (1080/24p) with a HDMI-equipped display compatible with 1080/24p input.

Notes:

- When you select [24Hz], you may experience some picture disturbance when the video switches video and film material. In this case, select [50Hz].
- Even when [1080p Display Mode] is set to [24Hz], if your TV is not compatible with 1080/24p, the actual frame frequency of the video output will be 50Hz to match the video source format.
- When the 1080p/24Hz video source is outputted via HDMI connection, the VIDEO OUT and COMPONENT VIDEO OUT will not output any video signal.

HDMI Color Setting

Select the type of output from the HDMI OUT jack. For this setting, please refer to the manuals of your display device.

[YCbCr] – Select when connecting to a HDMI display device.

[RGB] – Select when connecting to a DVI display device.

[LANGUAGE] Menu



Display Menu

Select a language for the [Setup] menu and on-screen display.

Disc Menu / Disc Audio / Disc Subtitle

Select the language you prefer for the audio track (disc audio), subtitles, and the disc menu.

[Original] – Refers to the original language in which the disc was recorded.

[Other] – Press ENTER to select another language. Use number buttons then ENTER to enter the corresponding 4-digit number according to the language code list on page 55.

[Off] (for Disc Subtitle) – Turn off Subtitle.

Note:

Depending on the disc, your language setting may not work for some discs.

[AUDIO] Menu

Each disc has a variety of audio output options. Set the player's Audio options according to the type of audio system you use.

Note:

Since many factors affect the type of audio output, see "The unit's Audio Output Specifications" on page 17 for details.



HDMI / SPDIF (Digital Audio Output)

Select the output sound format when a device equipped with a HDMI or Digital Audio input jack is connected to the HDMI OUT or DIGITAL AUDIO OUT jack on this player.

[PCM Stereo] – Select if you connect this unit's HDMI OUT or DIGITAL AUDIO OUT jack to a device with two-channel digital stereo decoder.

[PCM Multi-Ch] (HDMI only) – Select if you connect this unit's HDMI OUT jack to a device with multi-channel digital decoder.

[DTS Re-Encode] – Select if you connect this unit's HDMI OUT or DIGITAL AUDIO OUT jack to a device with DTS decoder.

[Primary Pass-Thru] – Select if you connect this unit's DIGITAL AUDIO OUT and HDMI OUT jack to a device with LPCM, Dolby Digital, Dolby Digital Plus, Dolby TrueHD, DTS and DTS-HD decoder.

Notes:

- When [HDMI] option is set to [PCM Multi-Ch], the audio may output as PCM Stereo if the PCM Multi-Ch information is not detected from HDMI device with EDID.
- If the [HDMI] or [SPDIF] option is set to [DTS re-encode], the DTS Re-encode audio is outputted for BD-ROM discs with secondary audio and the original audio is outputted for the other discs (like [Primary Pass-Thru]).

Sampling Freq. (Digital Audio Output)

[192KHz] – Select this if your A/V Receiver or Amplifier is capable of handling 192 KHz signals.

[96KHz] – Select this if your A/V Receiver or Amplifier is NOT capable of handling 192 KHz signals. When this choice is made, this unit automatically converts any 192 KHz signals to 96 KHz so your system can decode them.

[48KHz] – Select this if your A/V Receiver or Amplifier is NOT capable of handling 192 KHz and 96 KHz signal. When this choice is made, this unit automatically converts any 192 KHz and 96 KHz signals to 48 KHz so your system can decode them.

Check the documentation for your A/V Receiver or Amplifier to verify its capabilities.

DRC (Dynamic Range Control)

When a disc encoded in Dolby Digital or Dolby Digital Plus is playing back, you may wish to compress the dynamic range of the audio output (the difference between the loudest sounds and the quietest ones). This allows you to listen to a movie at a lower volume without losing clarity of sound. Set DRC to [On] for this effect.

Note:

The DRC setting can be changed only when a disc is not inserted or the unit is in complete stop mode.

Speaker Setup

To obtain the best possible sound via the 7.1CH ANALOG AUDIO OUT connection, set the speaker size and sound level of speakers you have connected.

[2.1 Channel] – Select this if you connect only the FL, FR and SW jacks to the amplifier.

[5.1 Channel] – Select this if you connect only the FL, FR, SL, SR, C and SW jacks to the amplifier.

[7.1 Channel] – Select this if you connect all of the 7.1CH ANALOG AUDIO OUT jacks to the amplifier.

Select a connection type among [2.1 Channel], [5.1 Channel] and [7.1 Channel] and press ENTER. The [Speaker Setup] menu appears.



On the [Speaker Setup] menu, you can set each speaker using the following steps:

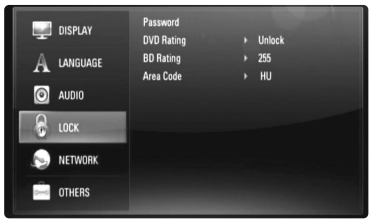
1. Use ◄ ► to select a speaker you want to set in the [Speaker] field.
2. Use ▲▼ to select the [Size] or [Level] option. And then press ◄ ► to select an appropriate setting.
3. Repeat step 1-2 to set other speakers.
4. Use ▲▼ to select [Test] and press ENTER to emit the test sound from the selected speaker.
5. Use ▲▼ to select [OK] to complete the speaker setting.

Notes:

- The [Speaker Setup] can be changed only when a disc is not inserted or the unit is in complete stop mode.
- Because the amplifier is not included on this player for connecting speakers directly, the sounds are affected by the receiver's performance. Thus, the signal level may not be changed correctly when you change size and level.

[LOCK] Menu (Parental Control)

The [LOCK] settings affect only BD and DVD playback.



To access the any features in [LOCK] settings, you must enter the 4-digit security code you have created.
If you have not entered a password yet, you are prompted to do so. Enter a 4-digit password and press ENTER. Enter it again and press ENTER to verify.

Password

You can create, change or delete the password.

[New] – Enter a 4-digit password and press ENTER. Enter it again and press ENTER to create a new password.

[Change] – Enter the current password and press ENTER.
Enter a 4-digit password and press ENTER. Enter it again and press ENTER to create a new password.

[Delete] – Enter the 4-digit password and press ENTER to delete the password.

Tip:
If you make a mistake before pressing ENTER, press CLEAR. Then input the correct password.

If you forget your password

If you forget your password, you can clear it using the following steps:

1. Remove any disc that might be in the player.
2. Select [Password] option in the [Setup] menu.
3. Use Number buttons to enter “210499”. The password is cleared.

DVD Rating DVD

Blocks playback of rated disc based on their content. (Not all discs are rated.)

[Rating 1-8] – Rating one (1) has the most restrictions and rating eight (8) is the least restrictive.

[Unlock] – If you select unlock, parental control is not active and the disc plays in full.

BD Rating BD

Set an age limit of BD-ROM play. Use number buttons to input an age limit for BD-ROM viewing.

[255] – All BD-ROM can be played.

[0-254] – Prohibits play of BD-ROM with corresponding ratings recorded on them.

Note:
The [BD rating] will be applied only for the BD disc that containing the Advanced Rating Control.

Area Code

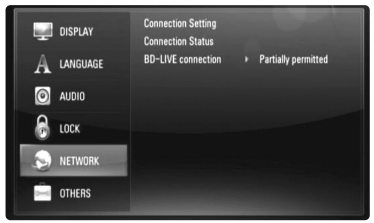
Enter the code of the area whose standards were used to rate the DVD video disc, based on the list on page 55.

[NETWORK] Menu

The [NETWORK] settings are needed to use the software update, BD Live, My Media and YouTube features.
Some BD-ROM discs may enable you to access special BD-ROM sites, if you connect the player to the Internet. For example, if a BD-ROM site includes content such as links to future movie trailers, you can watch the downloaded on-line content on the player.
You do not need to connect to a PC to use this function.

Preparations:

- This feature requires an always-on broadband internet connection. (see page 20-23.)
- A BD-ROM disc compatible with this feature is required. Not all BD-ROM discs are compatible.



Connection Setting

If you have connected this player to a local area network (LAN), the player needs to be set up for network communication. (See “Connecting to your Home Network” on pages 20-23.)

Connection Status

If you want to check the network status on this player, select the [Connection Status] options and press ► or ENTER to check whether a connection to the network and the internet have been established.

BD-LIVE connection

You can restrict Internet access when BD-Live functions are used.

[Permitted] – Internet access is permitted for all BD-Live contents.

[Partially permitted] – Internet access is permitted only for BD-Live contents which have content owner certificates. Internet access and AACS Online functions are prohibited for all BD-Live contents without a certificate.

[Prohibited] – Internet access is prohibited for all BD-Live contents.

[OTHERS] Menu



Skin

Changes the background of the initial screen.

BD Storage Select

This player can store some BD-ROM disc related information, including downloaded on-line content such as movie trailers and special features into the internal Flash Memory or an USB device.

[Built-In Storage] – Store the downloaded Blu-ray disc content on the Internal Flash Memory.

[USB Storage] – Store the downloaded Blu-ray disc content on the connected USB device.

BD Storage Clear

Initializes the BD contents from the built-in storage or the connected USB storage.

[Built-In Storage] – Delete all the downloaded contents from the built-in storage.

[USB Storage] – Delete all the downloaded contents from the connected USB storage.

DivX VOD

ABOUT DIVX VIDEO: DivX® is a digital video format created by DivX, Inc. This is an official DivX Certified device that plays DivX video.
Visit www.divx.com for more information and software tools to convert your files into DivX videos.
ABOUT DIVX VIDEO-ON-DEMAND: This DivX® Certified device must be registered in order to play DivX Video-on-Demand (VOD) content.
To generate the registration code, locate the [DivX VOD] section in the [Setup] menu. Go to vod.divx.com with this code to complete the registration process and learn more about DivX VOD.

[DivX reg. Code] – Displays the registration code of your player.
[Deactivate] – Deactivate your player and display the deactivation code.

Note:

All the downloaded videos from DivX VOD can only be played back on this unit.

Factory Set

You can reset the player to its original factory settings.

Note:

If you reset the player to its original factory settings using [Factory Set] option, you have to set the network settings again.

Software Update

You can update the software by connecting the unit directly to the software update server (see page 24-25).

Disclaimer Notice

Press ENTER or ► to view the notice of Network Service Disclaimer on page 59.

Play a disc

	ON REMOTE
1 Open the disc tray:	OPEN/CLOSE (⏏)
2 Inserts a disc:	-
3 Close the disc tray:	OPEN/CLOSE (⏏)
4 Adjusts the disc menu settings: A disc menu may not appear on the screen depending on the disc.	▲▼◄►, ENTER
5 Starts playback:	PLAY (►)
6 Stops playback:	STOP (■)

Notes:

- When you turn on the player or replace a disc, the player returns to the initial default setting. Depending on the disc, a specific type of audio that the disc has is output.
- Depending on the pre-recorded contents of the BD-ROM, some functions may not be available or may be operated differently than other media.

If a disc menu screen is displayed

BD **DVD** **AVCHD** **MOVIE**

The menu screen may be displayed first after loading a disc which contains a menu.

Use ◄►▲▼ buttons to select the title/chapter you want to view, then press ENTER to start playback.

Resume playback **ALL**

During playback, press STOP (■) to stop playback.
The unit records the stopped point, depending on the disc. "❚❚■" appears on the screen briefly. Press PLAY (►) to resume playback (from the scene point). If you press STOP (■) again or unload the disc ("■" appears on the screen.), the unit will clear the stopped point. **(❚❚■ = Resume Stop, ■ = Complete Stop)**

Notes:

- The resume point may be cleared when a button is pressed (for example; POWER, OPEN/CLOSE, etc).
- On BD-Video discs including BD-J, the resume play function does not work.
- On BD-ROM interactive title, the unit will be in Complete Stop mode if you press STOP once during playback.

Skip to the next/previous chapter/track/file **ALL**

During playback, press ⏮ or ⏭ to go to the next chapter/track/file or to return to the beginning of the current chapter/track/file.
Press ⏮ twice briefly to step back to the previous chapter/track/file.

Note:

When you are playing a content in the [My Media] menu, there may be many types of contents in the current folder together. In this case, press ⏮ or ⏭ to go to the previous or next content with same type.

Fast forward or fast reverse **ALL**

Press SCAN (◄◄ or ►►) to play fast forward or fast reverse during playback.
You can change the various playback speeds by pressing SCAN (◄◄ or ►►) repeatedly. Press PLAY (►) to continue play at normal speed.

Notes:

- This function may not work on some disc or titles.
- Some music files on the [My media] menu may not operate this function.

Pause a playback ALL

During playback, press PAUSE (❚❚) to pause playback. Press PLAY (►) to continue playback.

Tip: During Audio CD or MP3/WMA playback, press ❚❚ once again to resume playback.

Frame-by-Frame playback

BD DVD AVCHD MOVIE MOVIE-N

Press PAUSE (❚❚) repeatedly to play Frame-by-Frame playback.

Slow down the playing speed

BD DVD AVCHD MOVIE MOVIE-N

While the playback is paused, press SCAN ►► repeatedly to play in slow motion (4 steps, forward only).

Playing repeatedly

BD DVD AVCHD ACD MUSIC MUSIC-N

During playback, press REPEAT repeatedly to select a desired repeat mode. The current title, chapter or track will be played back repeatedly. To return to normal playback, press REPEAT repeatedly to select [OFF].

When you are using the repeat, A-B repeat or random functions in the [MUSIC] or [My Media] menu, refer to the mode icons as shown below.

- 1 Track – The current track or file will be played back repeatedly.
- A All – All the tracks or files will be played back repeatedly.
- A–B – Selected portion will be repeated continually. (Audio CD only)
- ⤮ – The tracks or files will be played back in random order.
- ⤮ A All – All the tracks or files will be played back repeatedly in random order.

To cancel the A-B repeat, repeat or Random playback, press CLEAR.

Note:

If you press ►►I once during Repeat Chapter/Track playback, the repeat playback cancels.

Repeating a specific portion (A-B)

BD DVD AVCHD ACD

Press REPEAT to select [A-] at the beginning of the portion you wish to repeat and press ENTER at the end of the portion. Your selected portion will be repeated continually. You cannot select a portion less than 3 seconds. To return to normal playback, press REPEAT repeatedly to select [OFF]. See “Playing repeatedly” on page 35 for more details about repeat and random icons in the [MUSIC] and [My Media] menu.

Playing in random order ACD MUSIC MUSIC-N

During playback, press REPEAT repeatedly to select a Random (⤮) or Random All (⤮ A All) mode icon. The tracks or files will be played in random order. To return to normal playback, press REPEAT repeatedly to delete the mode icons. See “Playing repeatedly” on page 35 for more details about repeat and random icons in the [MUSIC] and [My Media] menu.

Selecting a subtitle language

BD DVD AVCHD MOVIE MOVIE-N

During playback, press SUBTITLE ON/OFF to switch the subtitle on or off and press SUBTITLE repeatedly to select a desired subtitle language.

OR

During playback, press DISPLAY to display the playback menu. Use ▲ ▼ to select the [Subtitle] option then use ◄ ► to select desired subtitle language.

Note:

Some discs allow you to change subtitle selections only via the disc menu. If this is the case, press TITLE/POP-UP or DISC MENU button and choose the appropriate subtitle from the selections on the disc menu.

Selecting a subtitle file MOVIE

If names of the movie file and subtitle file are same, subtitle file is played automatically when playing the movie file. If the name of the subtitle file is different from movie file name, you need to select the subtitle file on the [Movie] menu before playing the movie.
Use ▲▼◄► to select the subtitle file you wish to play in the [Movie] menu,and then press MARKER. Press MARKER again to deselect the subtitle file. Selected subtitle file will be displayed when you play the movie file. If you press STOP (■) while playback, the subtitle selection is canceled.

Hearing a different audio

BD **DVD** **AVCHD** **MOVIE** **MOVIE-N**

During playback, press AUDIO repeatedly to hear a different audio language, audio track or audio channel.

OR

During playback, press DISPLAY to display the playback menu.
Use ▲▼ to select the [Audio] option then use ◄► to select desired audio language, audio track or audio channel.

Notes:

- Some discs allow you to change audio selections only via the disc menu. If this is the case, press TITLE/POP-UP or DISC MENU button and choose the appropriate audio from the selections on the disc menu.
- Immediately after you have switched sound, there may be a temporary discrepancy between the display and actual sound.
- On BD-ROM disc, the multi audio format (5.1CH or 7.1CH) is displayed with [MultiCH] in the on-screen display.

Using the search menu

BD **DVD** **AVCHD** **MOVIE** **MOVIE-N**

During playback, press SEARCH to display the search menu.
Press ◄ ► to skip the playback 15 seconds forward or backward.



Tip:

You can select a point that you want to skip by pressing and holding ◄ / ► button.

Notes:

- This function may not work on some disc or titles.
- This function may not work on some [My media] content depending on the file type and ability of the DLNA server.

Marker Search BD DVD AVCHD MOVIE MOVIE-N

To enter a Marker

You can start playback from up to nine memorized points. To enter a marker, press MARKER at the desired point on the disc. The Marker icon appears on the TV screen briefly. Repeat to enter up to nine markers.

To Recall or Clear a Marked Scene

Press SEARCH and the search menu appears on the screen.
Press a number button to select a marker number that you want to recall. Playback starts from the marked scene.

OR

Press ▼ to highlight a marker number. Use ◄ / ► to select a marked scene that you want to recall or clear.
Press ENTER and playback starts from the marked scene. Press CLEAR and the marked scene is erased from the search menu.

Notes:

- This function may not work on some disc or titles.
- All marked points are cleared if the title is in complete stop (■) mode, the title is changed or if you unload the disc.

- If the total length of the title is less than 10 seconds, this function is not available.
- This function may not work on some [My media] content depending on the file type and ability of the DLNA server.

Enlarge the playback image

BD **DVD** **AVCHD** **MOVIE** **MOVIE-N**

During playback or pause mode, press ZOOM to display the [Zoom] menu. Use the green or yellow buttons to zoom in or out of the picture. You can move through the zoomed picture using ▲▼◄► buttons.
To return to the normal picture size, press the yellow button repeatedly to fully zoom out of the picture. Press RETURN to exit the [Zoom] menu.

Using coloured (A, B, C, D) Buttons **BD**

These buttons are available only during BD-J contents playback. Use the appropriate buttons as indicated by the display. Depending on the disc contents, the functions of each button may differ.

Viewing the Title menu or Popup menu **BD** **DVD**

Press TITLE/POP-UP to display the title menu or popup menu.
If the current DVD or BD-ROM disc has a menu, the Title menu or Popup menu appears on the screen. Depending on the disc, the menu may not be available.

Last Scene Memory **BD** **DVD**

This unit memorizes the last scene from the last disc that is viewed. The last scene remains in memory even if you remove the disc from the unit or switch off the unit. If you load a disc that has the scene memorized, the scene is automatically recalled.

Notes:

- Settings are stored in memory for use any time.
- This unit does not memorize settings of a disc if you switch off the unit before commencing to play it.
- Last Scene Memory function for a previous disc is erased once a different disc is played.
- This function may not work depending on the disc.

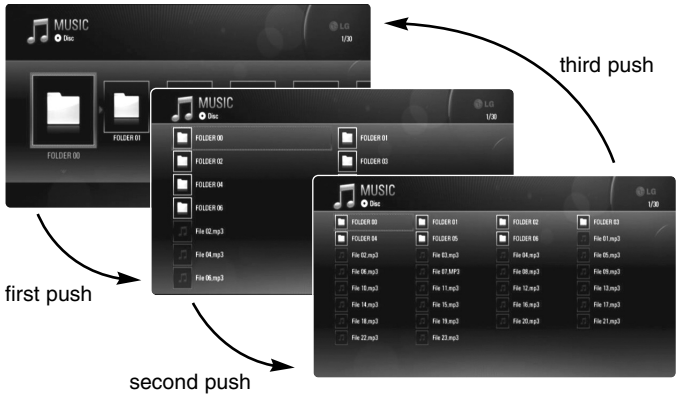
Screen Saver

The screen saver appears when you leave the player in Stop mode for about five minutes. If the Screen Saver is displayed for five minutes, the unit automatically turns itself off.
The screen saver also appears when you are playing music for about five minutes, but the player will not be turned off.

Changing content list view

MOVIE **MOVIE-N** **ACD** **MUSIC** **MUSIC-N**

On the [Movie], [Music], [Photo] and [My Media] menu, you can change the content list view by pressing DISPLAY repeatedly.



Note:
The equalizer will disappear when you change the music contents list view.

Adjusting the Picture Mode

BD **DVD** **AVCHD** **MOVIE** **MOVIE-N**

Select the video quality mode during playback. You can adjust various options such as [Contrast], [Brightness], [Sharpness], etc.

1. Press PIC MODE while playing a BD, DVD, movie file or Youtube video. The [Picture Mode] menu appears on the screen.
2. Use ◄ ► to select the [User Setting] mode to enable video colour setting options.
   • Select [Standard] option to disable video colour setting options.



3. Use ▲▼ to select a desired option then use ◄ ► to adjust the value. The other options will be disappeared for the picture setting. Press ENTER to display the other options after adjusting.
   • Select [Default] option then press ENTER to reset all of the video adjustments.
4. Use ▲▼◄ ► to select [Close] or press RETURN to complete the settings.

The settings below can be used to reduce the noise or to set the black level of the video image on the screen. These filter settings can be adjusted even if the picture mode is in [Standard] mode.



[Block NR] (Block Noise Reduction) – Set this option to [Low], [Mid] or [High] to reduce the block noise, which may appear especially on fast-moving pictures, produced in the MPEG compression process.

[Mosquito NR] (Mosquito Noise Reduction) – Set this option to [Low], [Mid] or [High] to reduce the mosquito (scattering) noise produced in the MPEG compression process.

[Black Level] – You can adjust the black level of the output signal. Set this option [On] to display deeper, richer black than in [Off] setting. Black Level control is only valid in composite output (VIDEO OUT).

Displaying disc information

	ON REMOTE
1 Play the disc loaded on the unit:	PLAY (►)
2 Displays the playback menu:	DISPLAY
3 Selects an item:	▲▼
4 Adjusts the playback menu settings:	◄►
5 Exit the disc playback menu:	DISPLAY



1 Title – Current title number/total number of titles.
2 Chapter – Current chapter number/total number of chapters.
3 Time – Elapsed playing time.
4 Audio – Selected audio language or channel.
5 Subtitle – Selected subtitle.
6 Angle – Selected angle/total number of angles.

Notes:

- If no button is pressed for a few seconds, the on-screen display disappears.
- A title number cannot be selected on some discs.
- An item may not be available on some discs or titles.
- If BD interactive title is playing back, some setting information is displayed on the screen but prohibited to be changed.

Moving to another title/chapter

BD **DVD** **AVCHD** **MOVIE**

When a disc has more than one title/chapter, you can move to another title/chapter.
Press DISPLAY during playback then use ▲ / ▼ to select the [Title/Chapter] icon. Then, press the appropriate numbered button (0-9) or ◄ / ► to select a title/chapter number.

Playing from selected time

BD **DVD** **AVCHD** **MOVIE** **MOVIE-N**

Press DISPLAY during playback. The time search box shows the elapsed playing time. Select the [Time] option and then input the required start time in hours, minutes, and seconds from left to right. For example, to find a scene at 2 hours, 10 minutes, and 20 seconds, enter “21020” and press ENTER. If you enter the wrong numbers, press CLEAR and enter the correct numbers.

Notes:

- This function may not work on some disc or titles.
- This function may not work on some [My media] content depending on the file type and ability of the DLNA server.

Watching from a different angle **BD** **DVD**

If the disc contains scenes recorded at different camera angles, you can change to a different camera angle during playback.
During playback, press DISPLAY to display the playback menu. Use ▲ ▼ to select the [Angle] option, then use ◄ ► to select desired angle.

Enjoying BD-LIVE™

	ON REMOTE
1 Selects the [BD Storage Select] option in the [Setup] menu:	**HOME, ▲▼◄►**
2 Check the network connection and settings: See pages 20-23.	**HOME, ▲▼◄►**
3 Inserts a BD-ROM disc with BD-LIVE™ features:	**OPEN/CLOSE (⏏)**
4 Selects a BD-LIVE™ features on the disc menu:	**▲▼◄►, ENTER**

This unit allows you to enjoy functions such as picture-in-picture, secondary audio and Virtual packages, etc., with BD-Video supporting BONUSVIEW (BD-ROM version 2 Profile 1 version 1.1/ Final Standard Profile). Secondary video and audio can be played from a disc compatible with the picture-in-picture function. For the playback method, refer to the instructions in the disc. In addition to the BONUSVIEW function, BD-Video supporting BD-Live (BD-ROM version 2 Profile 2) that has a network extension function allows you to enjoy more functions such as online games by connecting this unit to the Internet.

Enjoying BD-Live discs with Internet

This unit supports BD-Live, a new BD-Video function that allows you to use the following interactive functions when connected to the Internet. (The usable functions and the operating method may vary with each disc. For details, refer to the instructions for the disc.)

– Additional contents such as movie's trailer, subtitles and BD-J, etc. can be downloaded to the USB device or built-in storage to play them.

Preparations:

- The unit must be connected to the Internet and set up to use the BD-Live functions (see page 20-23).
- If you set the [BD Storage Select] option in the [Setup] menu to [USB Storage], you should insert the USB device with more than 1GB free space before using the BD-Live features.
- Although the player is correctly connected to the internet, the player can not support the BD-Live features if selected BD storage does not have sufficient free space. At that time, the warning messages may be different depending on the discs.
- If free space of the internal-Flash Memory is insufficient, change the [BD Storage Select] to [USB Storage] or format the internal Flash Memory using [BD Storage Clear] option in the [Setup] menu.

Caution:

Do not extract the connected USB device while content is being downloaded or a Blu-ray disc is still in the disc tray. Doing so may damage the connected USB device and BD-Live features may not operate properly with the damaged USB device anymore. If the connected USB device seems damaged from such an action, you can format the connected USB device from the PC and reuse it with this player.

Notes:

- Some BD-Live contents may be restrictively accessed in some territories by contents provider's own decision.
- It may take up to several minutes to load and start enjoying BD-Live contents.
- Depending on a disc, the BD-Live function may not be operated if [BD-LIVE connection] option is set to [Partially Permitted]. (See page 32)
- The connection to the Internet may take time or the Internet may not be connected depending on the connection environment. It is required that you use a broadband connection.
- Do not remove the USB device during operation. The USB device may be damaged. Stop playback and turn off the menu beforehand.

Tip:

Special video data, etc. may be played back while they are being downloaded to a storage using one function of BD-Live. The playback may be paused depending on the communication environment. Some functions may be disabled to prevent skipping to sections that have not been downloaded, etc.

AACS Online

When discs supporting BD-Live are played back, the player or disc IDs may be sent to the content provider via the Internet.
Services and functions to be provided differ depending on the disc.

– You can be introduced to other similar movies if you record your viewing history on the server by using these IDs.

– Game score histories can be saved.

Playing a movie

The player can play movie files on the disc/USB device and video contents recorded on a DVD-RW(VR mode) discs. Before playing movie files, read "Movie file requirement" on page 41.	ON REMOTE
1 Inserts a disc/USB device containing movie contents.	–
2 Displays the [Home Menu]:	**HOME**
3 Selects the [Movie] option:	**◀ ▶, ENTER**
4 Selects a movie from the [MOVIE] menu:	**▲ ▼**
5 Plays the selected movie:	**PLAY**
6 Stops the playback:	**STOP**

Notes:

- When the USB device is connected and a disc is inserted simultaneously, the menu for selecting a media will appear. Select a media then press ENTER.
- You can use various playback functions. Refer to pages 34-38.
- On the [MOVIE] menu, use red or blue button to move to the first or the last file or track and green or yellow button to move to the previous or next page.
- Unfinalized DVD VR format discs may not be played in this player.
- Some DVD-VR disc are made with CPRM data by DVD RECORDER. This unit cannot support these kinds of discs.

  What is CPRM?
  CPRM is a copy protection system (with scramble system) only allowing the recording of 'copy once' broadcast programs. CPRM stands for Content Protection for Recordable Media.

Notice for displaying the DivX subtitle

If the subtitle does not display properly, press and hold SUBTITLE for 3 seconds during playback. The language code will appear.
Press SUBTITLE repeatedly to select another language code until the subtitle is displayed properly and then press ENTER.

Movie file requirement (USB/DISC)

Movie file compatibility with this player is limited as follows:

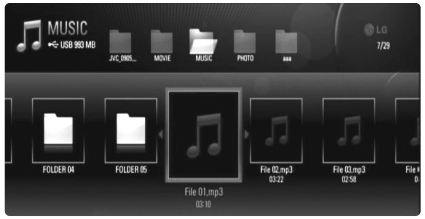
Available resolution size: 1920 x 1080 (W x H) pixels
File extensions: ".avi", ".divx", ".mpg", ".mpeg", ".mp4", ".mkv"
Playable subtitle: SubRip (.srt / .txt), SAMI (.smi), SubStation Alpha (.ssa/.txt), MicroDVD (.sub/.txt), VobSub (.sub) SubViewer 1.0 (.sub), SubViewer 2.0 (.sub/.txt), TMPlayer (.txt), DVD Subtitle System (.txt)
Playable Codec format: "DIVX3.xx", "DIVX4.xx", "DIVX5.xx", "XVID", "DIVX6.xx" (Standard playback only), H.264/MPEG-4 AVC, DIVX-HD, MPEG1 SS, MPEG2 PS, MPEG2 TS
Playable Audio format: "Dolby Digital", "DTS", "MP3", "WMA", "AAC", "AC3"
Sampling frequency: between 32-48 kHz (WMA), between 16-48 kHz (MP3)
Bit rate: between 20-320 kbps (WMA), between 32-320 kbps (MP3)
CD-R/RW, DVD±R/RW, BD-R/RE Format:
ISO 9660+JOLIET, UDF and UDF Bridge format
Maximum Files/Folder:
Less than 2000 (total number of files and folders)

- The movie file name and subtitle are limited to 180 characters.
- Not all the WMA and AAC Audio format is compatible with this unit.
- HD movie files contained on the CD or USB 1.0/1.1 may not played properly. BD, DVD or USB 2.0 are recommended to play back HD movie files.
- This player support H.264/MPEG-4 AVC profile Main, High at Level 4.1. For a file with higher level, the warning message will be appeared on the screen.
- This player does not support the file that are recorded with GMC*1 or Qpel*2. Those are video encoding techniques in MPEG4 standard, like DivX or XVID have.

  *1 GMC – Global Motion Compensation
  *2 Qpel – Quarter pixel

Listening to music

The player can play Audio CDs and MP3/WMA files. Before playing MP3/WMA files, read "MP3/WMA audio file requirement" on page 42.	ON REMOTE
1 Inserts an Audio CD or a disc/USB Flash Drive containing MP3/WMA files.	–
2 Displays the [Home Menu]:	**HOME**
3 Selects the [Music] option:	**◄ ►, ENTER**
4 Selects a music from the [MUSIC] menu:	**▲▼◄►**
5 Plays the selected music:	**PLAY (►)**
6 Stops the playback:	**STOP (■)**



Example) MP3 files

Notes:

- When the USB device is connected and a disc is inserted simultaneously, the menu for selecting a media will appear. Select a media then press ENTER.
- You can use various playback functions. Refer to pages 34-38.
- The file name displayed in the [My Media] menu may differ from the file name on the media server.
- Playback quality on the [My Media] menu is affected by the server's ability and condition.

Tips:

- To go directly to any track or file and play, enter the track/file number using the numbered buttons (0-9).
- The playback may start automatically if the Audio CD inserted.
- Use ▲/▼/◄/► to select a folder then press ENTER and you can view the files in the folder. If you want to move to the upper or lower directory, use ▲/▼ to move to the desired directory.
- On the [MUSIC] menu, use red or blue button to move to the first or the last file or track and green or yellow button to move to the previous or next page.
- The equalizer indicator is not coupled with the music in play back.
- If there is impossible code to express in the file name, it may be displayed as illegible.

MP3/WMA audio file requirement (USB/DISC)

File extensions: ".mp3", ".wma"

Sampling frequency: between 8-48 kHz (WMA), between 11-48 kHz (MP3)

Bit rate: between 8-320 kbps (WMA, MP3)

CD-R/RW, DVD±R/RW, BD-R/RE Format:
ISO 9660+JOLIET, UDF and UDF Bridge format

Maximum Files/Folder:
Less than 2000 (total number of files and folders)

Notes on MP3/WMA file

- Depending on the size and number of the MP3/WMA files, it may take several minutes to read the contents of the media.
- This unit cannot support the ID3 Tag embedded in the MP3 file.
- The total playback time indicated on the screen may not correct for VBR files.

Viewing a photo

This unit can play a photo files. Before playing photo files, read “Photo file requirement” on page 44.

	ON REMOTE
1 Inserts a disc/USB device containing photo files.	–
2 Displays the [Home Menu]:	HOME
3 Selects a [Photo] option:	◄ ►, ENTER
4 Selects a photo from the [PHOTO] menu:	▲▼◄►
5 Displays the selected photo in full screen:	ENTER
6 Displays the next or previous photo:	I◄◄ / ►►I
7 Returns to the [PHOTO] menu screen:	STOP (■)



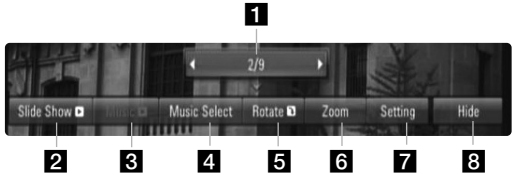
Notes:

- When the USB device is connected and a disc is inserted simultaneously, the menu for selecting a media will appear. Select a media then press ENTER.
- You can start the slide show by pressing PLAY (►) while photo file is selected in the [PHOTO] or [My Media] menu.
- On the [PHOTO] menu, use red or blue button to move to the first or the last file and green or yellow button to move to the previous or next page.
- You can change the content list view by pressing DISPLAY repeatedly.

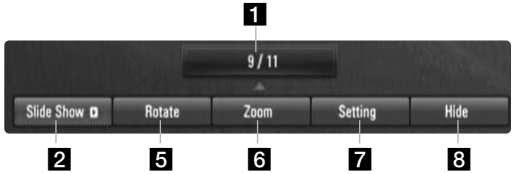
Options during viewing a photo file in full screen

You can use various options during viewing a picture in full screen. Use ▲▼◄► to select an option and use the options as described below. Available options in the [PHOTO] menu and [My Media] menu are different as shown below.

Options of [PHOTO] menu



Options of [My Media] menu



1 Use ◄ ► to advance to the previous or next file.

2 Press ENTER to start or pause the slide show.

3 Press ENTER to play or pause the background music. This option is available after the background music is selected using [Music Select] option. This option is not available on [My Media] menu.

4 Selects the background music.This option is not available on [My Media] menu.
1) Press ENTER and the menu will appear.
2) Use ▲▼◄► to select a media or folder where there are music file(s).
3) Press ENTER to confirm your selection.

5 Press ENTER to rotate the picture clockwise. This option is not available during slide show.

6 Use green or yellow buttons to zoom in or out of the picture.
You can move through the zoomed picture using ▲ ▼ ◄ ► buttons.
Press RETURN to exit the [Zoom] menu and return to the normal picture size.
• The zoom function can be operated by the ZOOM button on the remote control.

7 Use ▲ ▼ to select an option between [Effect] or [Delay].
Use ◄ ► to adjust and press ENTER to set the selected option.
[Effects] – You can apply various effects during a photo slide show.
OFF : Slide Show without any effect.
Random : Slide show effects are applied randomly.
Slide : Reveals a photo in a sliding motion from various directions.
Door : Photo will be appear like door opening.
Lattice : Photo will be appear from tiled pieces to full screen image
[Delay] – You can set the photo delaying time while Slide Show.

8 Press ENTER to exit the option menu.
To access the menu again, press ENTER.

Tips:

- For the files that are contained in a disc or USB device, you can enter the file number using the numbered buttons (0-9) to go directly to a specific file.
- You can advance to the previous or next file by pressing I◄◄ or ►►I during viewing a photo file in full screen.
- You can start the slide show without option menu by pressing PLAY (►) during viewing a photo file in full screen.
- Use ▲ ▼ ◄ ► to select a folder then press ENTER and you can view the files in the folder. If you want to move to the upper or lower directory, use ▲ ▼ to move to the desired directory.
- If there is a code that is impossible to express in the file name, it may be displayed as illegible.
- Depending on the DLNA server, the file name displayed on the screen may differ from the original file name.

Listening to music during slide show in [My Media] menu

You can view photos as a slide show while listening to music content on [My Media] menu.

1. Press HOME and select [My Media] in the [Home Menu].
2. Select a server from the list and press ENTER to display the shared folders from the server.
3. Select a music file from the menu and press PLAY (►) to play the music.
4. Use ▲ ▼ ◄ ► to select a photo file from the menu and press ENTER to display in full screen.
5. Select [SlideShow] option and press ENTER to start slide show.

Photo file requirement (USB/DISC)

File extensions: ".jpg", ".jpeg", ".png"

Recommended size:
Less than 4,000 x 3,000 x 24 bit/pixel
Less than 3,000 x 3,000 x 32 bit/pixel

CD-R/RW, DVD±R/RW, BD-R/RE Format:
ISO 9660+JOLIET, UDF and UDF Bridge format

Maximum Files/Folder: Less than 2000 (total number of files and folders)

Notes on Photo file

- Progressive and lossless compression photo image files are not supported.
- Depending on the size and number of the photo files, it may take several minutes to read the contents of the media.

Accessing DLNA servers

The player can browse and play movies, music and photo stored on your DLNA Certified media servers connected within your home network.	ON REMOTE
1 Check the network connection and settings: See pages 20-23.	**HOME, ▲▼◄►**
2 Displays the [Home Menu]:	**HOME**
3 Selects a [My Media] option: The player automatically scans and displays DLNA servers within your local network.	**▲▼◄►, ENTER**
4 Selects a DLNA server from the server list:	**▲▼, ENTER**
5 Selects a file from the list:	**▲▼◄►**
6 Plays the selected file:	**PLAY (►)**
7 Stops the playback:	**STOP (■)**
8 Return to the server list menu:	**SEARCH**

Before accessing DLNA server:
- DLNA server and this player must be connected to the same local area network.
- DLNA servers must be turned on.
- To play files on your computer, you must share folders on your computer using Nero MediaHome 4 Essentials (page 46).

Note:
On the server list, a DLNA-compatiable digital media servers will be appeared with the DLNA indicator as shown below:



About DLNA

This Player is a DLNA Certified digital media player that can display and play movie, photo and music content from your DLNA-compatiable digital media server (PC and Consumer Electronics).

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 player, 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.

About Nero MediaHome 4 Essentials

Nero MediaHome 4 Essentials is a software for sharing movie, music and photo files stored on your computer to this player as a DLNA-compatiable digital media server.

Notes:
- The supplied Nero MediaHome 4 Essentials CD-ROM is a customized software edition only for sharing files and folders to this player.
- 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.

Installing Nero MediaHome 4 Essentials

Before you install Nero MediaHome 4 Essentials, check the system requirement shown below.

- Windows® XP (Service Pack 2 or higher), Windows Vista® (no Service Pack required), Windows® XP Media Centre Edition 2005 (Service Pack 2 or higher), Windows Server® 2003
- Windows Vista® 64-bit edition (application runs in 32-bit mode)
- Hard drive space: 200 MB hard drive space for a typical installation of Nero MediaHome stand-alone
- 1.2 GHz Intel® Pentium® III or AMD Sempron™ 2200+ processors
- Memory: 256 MB RAM
- Graphics card with at least 32 MB video memory, minimum resolution of 800 x 600 pixels, and 16-bit colour settings
- Windows® Internet Explorer® 6.0 or higher
- DirectX® 9.0c revision 30 (August 2006) or higher
- Network environment: 100 Mb Ethernet, WLAN (IEEE 802.11b/g/n)

Start up your computer, and insert the Nero MediaHome 4 Essentials CD-ROM into your computer's CD-ROM drive. An installation wizard will walk you through the quick and uncomplicated installation process. To install Nero MediaHome 4 Essentials, proceed as follows:

1. Close all Microsoft Windows programs and exit any anti-virus software that may be running.
2. Insert the Nero MediaHome 4 Essentials CD-ROM into your computer's CD-ROM drive.
3. Click [Nero MediaHome 4 Essentials]. The installation is prepared and the installation wizard appears.
4. Click the [Next] button to display the serial number input screen. Click [Next] to go to the next step.
5. If you accept all conditions, click [I accept the License Conditions] check box and click [Next]. Installation is not possible without this agreement.
6. Click [Typical] and click [Next]. The installation process is started.
7. If you want to take part in the anonymous collection of data, select the check box and click the [Next] button.
8. Click the [Exit] button to complete the installation.

Sharing files and folders

On your computer, you must share the folder containing movie, music and/or photo content to play them using [My Media] features.
This part explains the procedure for selecting the shared folders on your computer.

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 player.
3. Click [Shares] icon on the left.
4. Click [Local Folders] tab on the [Shares] 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.

Notes:

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

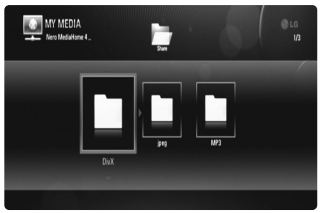
Playing shared files from DLNA media server

On this player, you can display and play movie, photo and music files stored on DLNA-compatiable digital media servers.

1. Start the DLNA-compatiable media server that connected on your local area network.
2. Press HOME. The [Home Menu] appears on the screen.
3. Use ▲▼◄► to select [My Media] and press ENTER. The server list appears on the screen.
4. 

Use ▲▼ to select a server from the list and press ENTER to display the shared folders from the server.

Notes:
- Depending on the media server, this player may need to get the permission from the server.
- If you want to re-scan available media server, press blue coloured button.

5. 

Use ▲▼◄► to navigate the DLNA media server and select a file you want to play.
On the [My Media] menu, use the red or blue button to move to the first or the last file/folder and the green or yellow button to move to the previous or next page

6. Press ENTER or PLAY (►) to playback the selected content.
Note: You can use various playback functions. Refer to pages 41-44.
7. Press STOP (■) to stop playback and go to the contents list menu.

Notes on DLNA features

- 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] menu may differ depending on media servers.
- The file requirements on page 48 are not always compatible. There may be some restrictions to the file features and media server's ability.
- If you press TITLE/POP-UP while a movie file is selected, The file information is displayed on the screen. But, the information may not be correct compared to the actual file features.
- The thumbnail of the unplayable files can be displayed in the [My Media] menu, but those cannot be played on this player.
- If there is an unplayable music file in the [My Media] menu, the player skips the file and plays the next file.
- The file information indicated on the screen may not correct for music and movie files in [My Media] menu.
- Playing a movie subtitle files are only available on DLNA media server created by supplied Nero MediaHome 4 Essentials software on this player's package.
- The subtitle file name and movie file name have to be the same and located in 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 shared media.
- 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 be shared properly.

File requirements

Overall

File extensions: ".jpg", ".jpeg", ".png", ".avi", ".divx", ".mpg", ".mpeg", ".mkv", ".mp4", ".mp3", ".wma", ".pcm" (LPCM)

- Available file extensions differ depending on the DLNA servers.
- The LPCM music are only available for files on DLNA servers.

Maximum Files/Folder: Less than 2000 (total number of files and folders)

Music Files

Sampling frequency: between 8 - 48 kHz (WMA), between 11 - 48 kHz (MP3), 44.1 and 48 kHz (LPCM)

Bit rate: between 8 - 320 kbps (WMA, MP3), 768Kbps and 1.536Mbps (LPCM)

Photo files

Recommended photo size:

Less than 4,000 x 3,000 x 24 bit/pixel
Less than 3,000 x 3,000 x 32 bit/pixel

Movie files

Available resolution size: 1920 x1080 (W x H) pixels

Playable subtitle : SubRip (.srt / .txt), SAMI (.smi), SubStation Alpha (.ssa/.txt), MicroDVD (.sub/.txt), SubViewer 1.0 (.sub), SubViewer 2.0 (.sub/.txt), TMPlayer (.txt), DVD Subtitle System (.txt)

- The subtitle files are not displayed on the [My Media] menu.
- Viewing internal subtitle is not available for mkv/mp4 file playback.
- If there are more than 1 subtitle file within a folder, displaying priority is as follow:

Priority	High ◄——————————► Low				
file extension	".smi"	".sub"	".srt"	".txt"	".ssa"

Playable Codec format: "DIVX3.xx", "DIVX4.xx", "DIVX5.xx", "XVID", "DIVX6.xx" (Standard playback only), DIVX-HD, MPEG1 SS, MPEG2 PS, MPEG2 TS

Audio format: "Dolby Digital", "DTS", "MP3", "WMA", "AAC", "AC3",

Sampling frequency: between 32 - 48 kHz (WMA), between 16 - 48 kHz (MP3)

Bit rate: between 20 - 320 kbps (WMA), between 32 - 320 kbps (MP3)

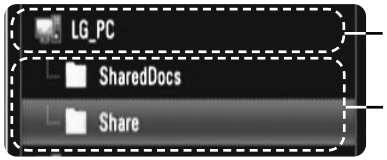
- The movie file and subtitle names are limited to 128 characters.
- Not all WMA and AAC Audio formats are compatible with this unit.
- This player support H.264/MPEG-4 AVC profile Main, High at Level 4.1. For a file with higher level, the warning message will be appeared on the screen.
- This player does not support the file that are recorded with GMC*1 or Qpel*2. Those are video encoding techniques in MPEG4 standard, like DivX or XVID.

*1 GMC – Global Motion Compensation

*2 Qpel – Quarter pixel

Accessing your PC

The player can browse and play movie, music and photo stored on your PC within your home network.	ON REMOTE
1 Check the network connection and settings: See pages 20-23.	**HOME, ▲▼◄►**
2 Displays the [Home Menu]:	**HOME**
3 Selects a [My Media] option: The player automatically scans and displays available PCs and shared folders.	**▲▼◄►, ENTER**
4 Selects a shared folder from the server list:	**▲▼, ENTER**
5 Selects a file from the list:	**▲▼◄►**
6 Plays the selected file:	**PLAY (►)**
7 Stops the playback:	**STOP (■)**
8 Return to the server list menu:	**SEARCH**



Available PCs on your local area network

Shared folders on a PC

Note:

If your PC is protected by password, shared folder on your PC may not displayed on the screen.

Before accessing your PC:

- Your PC and this player must be connected to the same local area network.
- Note the Network User ID, password of your PC, if it is required.
- Your PC must be turned on.
- To play files on your computer, you must share folders on your computer before accessing it.

Entering a network user ID and the password

Depending on your PC's environment, you may need to enter a network user ID and the password for accessing a shared folder.The keyboard menu appears automatically if the network user ID and the password are required. Use ▲▼◄► to select a character then press ENTER to confirm your selection on the keyboard menu.

To enter a letter with an accent mark, select the letter from extended character set.

Example: Select "D" and then press DISPLAY to display the extended character set. Use ◄► to select "D" or "Ď" and then press ENTER.



[OK]: Searching related videos of search words.
[Clear]: Clear all entered characters.
[Space]: Inserts a space at the cursor position.
[Backspace]: Deletes the previous character at the cursor position.
[ABC / abc / #+-=&]: Change the keyboard menu settings to capital letter, small letters or symbols.

When you finish entering the network user ID and password, select [OK] and press ENTER to access the folder.

The network user ID and password will be remembered after accssing the folder for your convenience. If you do not want the network user ID and password to be remembered, press red coloured betton to un-tick the [Remember] check box before accessing the folder.

Note:

Available languages to enter on the keyboard menu are as follows: English, Spanish, Italian, French, German, Dutch, Portuguese, Swedish, Polish and Czech.

Playing shared files from your PC

On this player, you can display and play movie, photo and music files stored on your PC.

1. Start your PC that connected on your local area network.
2. On your PC, share folders which contains movie, music and/or photo files you want to play on this player.

Note:

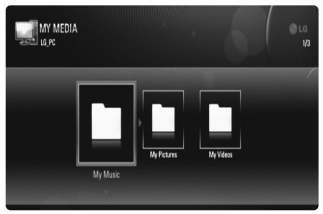
Sharing methods may vary depeding on your PC's environment.

3. Press HOME. The [Home Menu] appears on the screen.
4. Use ▲▼◄► to select [My Media] and press ENTER. The server list appears on the screen.
5. 

Use ▲▼ to select a shared folder from the list and press ENTER to display the shared folders from the server.

Notes:

- If you want to re-scan available PCs and shared folders, press blue colored button.
- Depending on your PC's environment, you may need to enter a network user ID and the password for accessing a shared folder (page 49).

6. 

Use ▲▼◄► to navigate the folder and select a file you want to play. On the [My Media] menu, use red or blue button to move to the first or the last file/folder and green or yellow button to move to the previous or next page

7. Press ENTER or PLAY (►) to playback the selected content.

Notes:

- You can use various playback functions. Refer to pages 41-44.
- The file requirements for your PC's share folder are described on page 48.

8. Press STOP (■) to stop playback and go to the file list menu.

Notes on PC features

- The thumbnail of the unplayable files can be displayed in the [My Media] menu, but those cannot be played on this player.
- If there is an unplayable music file in the [My Media] menu, the player skip the file and play next file.
- The subtitle file name and movie file name have to be the same and located at the same folder.
- The playback and operating quality of the [My Media] function may affected by your home network condition.
- The files on an removable media such as USB drive, DVD-drive etc. on your PC may not be shared properly.
- You may experience connection problems depending on your PC's environment.

PC requirements

- Windows® XP (Service Pack 2 or higher), Windows Vista® (no Service Pack required)
- 1.2 GHz Intel® Pentium® III or AMD Sempron™ 2200+ processors
- Network environment: 100 Mb Ethernet, WLAN (IEEE 802.11b/g/n)

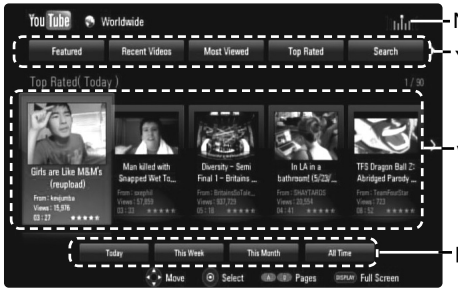
Note:

If you use Windows® XP or Windows Vista®, visit link below for more information on file share settings.

Windows® XP: http:// support.microsoft.com/kb/304040
Windows Vista®: http:// support.microsoft.com/kb/961498

Playing YouTube videos

	ON REMOTE
1 Check the network connection and settings: See pages 20-23.	**HOME, ▲▼◄►, ENTER**
2 Displays the [Home Menu]:	**HOME**
3 Select the [YouTube] option:	**▲▼◄►, ENTER**
4 Select a desired option on the YouTube menu:	**▲▼◄►, ENTER**
5 Select a video you want to play:	**◄►**
6 Starts playback the selected video:	**PLAY (►), ENTER or DISPLAY**



Network condition

YouTube menu

video list

period options

About the YouTube menu

There are various options on the YouTube menu. Use ▲▼◄► to select an option and press ENTER to select the options as described below.



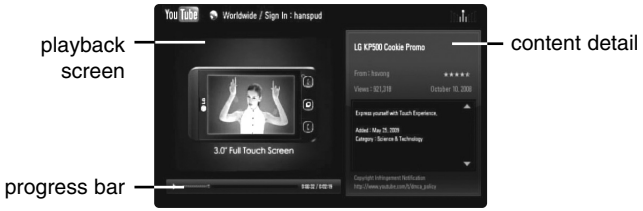
1. Featured – The featured videos list will be displayed.
2. Recent Videos – The most recently updated videos list will be displayed.
3. Most Viewed – The most viewed videos list will be displayed. The period option appears at the bottom of the screen.
4. Top Rated – The best rated videos list from YouTube server will be displayed. The period option appears at the bottom of the screen.
5. Search – The keyboard menu will be displayed. See “Searching videos” on page 53 for more detail.
6. History – The videos list that you previously played on this unit will be displayed. Maximum of 25 videos can be stored.
7. Favorites – This option will be appeared only when the unit is in sign-in status. Displays the videos list that is arranged in the YouTube server with your account. Some videos may not appear on the [Favorites] list, even if the videos are arranged in the server.
8. Sign in (Sign Out) – Displays the keyboard menu to sign in or returns to the sign-out status. See “Sign in with your YouTube account” on page 53 for more details.
9. Local site – Choose which country’s videos you would like to view. The countries listed on the [Local Site] menu may different with those listed on the YouTube web site.

Notes:

- The YouTube menu can display 5 videos in the videos list. Press red or blue button to display next/previous 5 videos.
- If you select the [Most Viewed] or [Top Rated] option in the YouTube menu, the period options appear at the bottom of the screen. Use ▲▼◄► to select a period option and press ENTER to display the videos list within the selected period.
- The videos list searched from the player may different with the list searched from a web browser on PC.

About YouTube playback screen

When you press PLAY (►) or ENTER at the video you want to watch, the playback screen and content detail will appear on the screen.



while playing

And when the playback ends or stops, the stopped playback screen and related videos list appear on the screen. Use ▲▼◄► to select the current video or a video from the related videos list and then press PLAY (►) or ENTER to play the selected video.



while stopped

When you press DISPLAY at the video you want to watch, the playback starts in full screen.



Full Screen

Press DISPLAY to toggle between playback in full screen and playback screen with content detail.

Playing a video

While watching a video from YouTube via your player, you can control the YouTube video playback. You can use the buttons on the remote to pause and resume viewing, just like when you watch a DVD. While playing a video, the buttons on the remote do the following:

Button(s)	Operations
► or ENTER	Starts playback the video with content detail.
DISPLAY	Toggle between playback in full screen and playback screen with content detail.
II	To pause a video while it is playing. To resume playing a paused video, press PLAY (►) again.
■	Stops the video and displays related videos list.
I◄◄/►►I	Skip the playback forward or backward .
HOME	When you have finished watching videos, simply press the HOME button on the remote control to go to the [Home Menu].

Notes:

- The settings of this player do not affect the YouTube's playback quality.
- The playback of YouTube videos may be paused, stopped or buffering occurring often depending on your broadband speed.
  We recommend a minimum connection speed of 1.5 Mbps. For the best playback condition, a connection speed of 4.0 Mbps is required. Sometimes your broadband speed varies based on your ISP's network conditions. Contact your ISP if you have problems maintaining a fast connection that is reliable, or if you want to increase your connection speed. Many ISPs offer a variety of broadband speed options.

Searching videos

You can search for videos by entering search words of up to 128 characters. Use ◄ ► to select [Search] option from the menu and press ENTER to display the keyboard menu. Use ▲▼◄ ► to select a character then press ENTER to confirm your selection on the keyboard menu.
When you entering a character, maximum of 5 suggestion words will be displayed.
To enter a letter with an accent mark, select the letter from extended character set.
Example: Select “D” and then press DISPLAY to display the extended character set. Use ◄ ► to select “D” or “Ď” and then press ENTER.



[OK]: Searching related videos of search words.
[Clear]: Clear all entered characters.
[Space]: Inserts a space at the cursor position.
[Backspace]: Deletes the previous character at the cursor position.
[ABC / abc / #+-=&]: Change the keyboard menu settings to capital letter, small letters or symbols.

When you finish entering the search words, select [OK] and press ENTER to display the related videos list.

Note:

Available languages to enter on the keyboard menu are as follows: English, Spanish, Italian, French, German, Dutch, Portuguese, Swedish, Polish and Czech.

Sign in with your YouTube account

To watch videos from your [Favorites] video list on the YouTube server with your account, you need to sign in with your YouTube account.

Use ◄ ► to select [Sign In] option from the menu and press ENTER to display the keyboard menu. Use ▲▼◄ ► to select a character then press ENTER to confirm your selection on the keyboard menu.



[OK]: Finish entering an ID or password.
[Clear]: Clear all entered characters.
[Space]: Inserts a space at the cursor position.
[Backspace]: Deletes the previous character at the cursor position.
[ABC / abc / #+-=&]: Change the keyboard menu settings to capital letters, small letters or symbols.

If you want to sign out, select the [Sign Out] from the YouTube menu and press ENTER.

This unit can automatically store up to 5 IDs which were previously signed-in. The IDs list appears when you select the [Sign In] option. Select a stored ID on the list and press ENTER to display the keyboard menu with the selected ID is entered. You will then only need to enter the password to sign in.



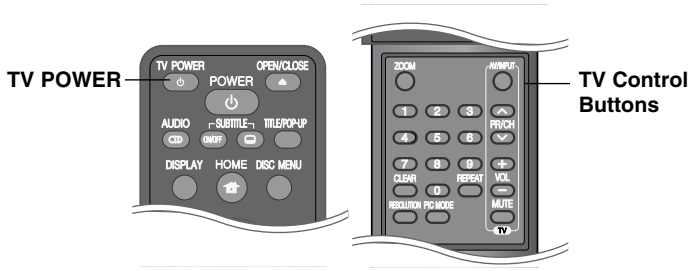
[New ID]: Displays the keyboard menu for entering a new ID and password.
[X]: Delete the stored ID as shown left of the [X] symbol.

Reference

Controlling a TV with the Supplied Remote Control

You can control the volume, input source, and power state of your TV with the supplied Remote Control.

You can control your TV using the buttons below.



By pressing	You can
TV POWER	Turn the TV on or off.
AV/INPUT	Switch the TV's input source between the TV and other input sources.
PR/CH ∧/∨	Scan up or down through memorized channels.
VOL +/–	Adjust the volume of the TV.
MUTE	Temporarily turns TV sound OFF, press again to restore.

Note:

Depending on the unit being connected, you may not be able to control your TV using some of the buttons.

Setting up the remote to control your TV

You can operate your TV with the supplied remote control.
If your TV is listed in the table below, set the appropriate manufacturer code.

While holding down TV POWER button, and press the manufacturer code for your TV with the numerical buttons (see the table below).
Release the TV POWER button to complete setting.

Manufacturer	Code Number
LG	1 (Default), 2
Zenith	1, 3, 4
GoldStar	1, 2
Samsung	6, 7
Sony	8, 9
Hitachi	4

Depending on your TV, some or all buttons may not function on the TV, even after entering the correct manufacturer code. When you replace the batteries of the remote, the code number you have set may be reset to the default setting. Set the appropriate code number again.

Resetting the unit

If you observe any of the following symptoms.

- The unit is plugged in, but the power will not turn on or off.
- The front panel display is not working.
- The unit is not operating normally.

You can reset the unit as follows.

- Press and hold the POWER button for at least five seconds. This will force the unit to power off then turn the unit back on.
- Unplug the power cord, wait at least five seconds, and then plug it in again.

Language Codes

Use this list to input your desired language for the following initial settings: [Disc Audio], [Disc Subtitle] and [Disc Menu].

Language	Code	Language	Code	Language	Code	Language	Code	Language	Code	Language	Code
Afar	6565	Croatian	7282	Hausa	7265	Lingala	7678	Quechua	8185	Tajik	8471
Afrikaans	6570	Czech	6783	Hebrew	7387	Lithuanian	7684	Rhaeto-Romance	8277	Tamil	8465
Albanian	8381	Danish	6865	Hindi	7273	Macedonian	7775	Rumanian	8279	Telugu	8469
Ameharic	6577	Dutch	7876	Hungarian	7285	Malagasy	7771	Russian	8285	Thai	8472
Arabic	6582	English	6978	Icelandic	7383	Malay	7783	Samoan	8377	Tonga	8479
Armenian	7289	Esperanto	6979	Indonesian	7378	Malayalam	7776	Sanskrit	8365	Turkish	8482
Assamese	6583	Estonian	6984	Interlingua	7365	Maori	7773	Scots Gaelic	7168	Turkmen	8475
Aymara	6588	Faroese	7079	Irish	7165	Marathi	7782	Serbian	8382	Twi	8487
Azerbaijani	6590	Fiji	7074	Italian	7384	Moldavian	7779	Serbo-Croatian	8372	Ukrainian	8575
Bashkir	6665	Finnish	7073	Japanese	7465	Mongolian	7778	Shona	8378	Urdu	8582
Basque	6985	French	7082	Kannada	7578	Nauru	7865	Sindhi	8368	Uzbek	8590
Bengali; Bangla	6678	Frisian	7089	Kashmiri	7583	Nepali	7869	Singhalese	8373	Vietnamese	8673
Bhutani	6890	Galician	7176	Kazakh	7575	Norwegian	7879	Slovak	8375	Volapük	8679
Bihari	6672	Georgian	7565	Kirghiz	7589	Oriya	7982	Slovenian	8376	Welsh	6789
Breton	6682	German	6869	Korean	7579	Panjabi	8065	Spanish	6983	Wolof	8779
Bulgarian	6671	Greek	6976	Kurdish	7585	Pashto, Pushto	8083	Sudanese	8385	Xhosa	8872
Burmese	7789	Greenlandic	7576	Laothian	7679	Persian	7065	Swahili	8387	Yiddish	7473
Byelorussian	6669	Guarani	7178	Latin	7665	Polish	8076	Swedish	8386	Yoruba	8979
Chinese	9072	Gujarati	7185	Latvian, Lettish	7686	Portuguese	8084	Tagalog	8476	Zulu	9085

Area Codes

Choose an area code from this list.

Area	Code	Area	Code	Area	Code	Area	Code	Area	Code	Area	Code
Afghanistan	AF	Costa Rica	CR	Greenland	GL	Maldives	MV	Paraguay	PY	Sri Lanka	LK
Argentina	AR	Croatia	HR	Hong Kong	HK	Mexico	MX	Philippines	PH	Sweden	SE
Australia	AU	Czech Republic	CZ	Hungary	HU	Monaco	MC	Poland	PL	Switzerland	CH
Austria	AT	Denmark	DK	India	IN	Mongolia	MN	Portugal	PT	Taiwan	TW
Belgium	BE	Ecuador	EC	Indonesia	ID	Morocco	MA	Romania	RO	Thailand	TH
Bhutan	BT	Egypt	EG	Israel	IL	Nepal	NP	Russian Federation	RU	Turkey	TR
Bolivia	BO	El Salvador	SV	Italy	IT	Netherlands	NL	Saudi Arabia	SA	Uganda	UG
Brazil	BR	Ethiopia	ET	Jamaica	JM	Netherlands Antilles	AN	Senegal	SN	Ukraine	UA
Cambodia	KH	Fiji	FJ	Japan	JP	New Zealand	NZ	Singapore	SG	United States	US
Canada	CA	Finland	FI	Kenya	KE	Nigeria	NG	Slovak Republic	SK	Uruguay	UY
Chile	CL	France	FR	Kuwait	KW	Norway	NO	Slovenia	SI	Uzbekistan	UZ
China	CN	Germany	DE	Libya	LY	Oman	OM	South Africa	ZA	Vietnam	VN
Colombia	CO	Great Britain	GB	Luxembourg	LU	Pakistan	PK	South Korea	KR	Zimbabwe	ZW
Congo	CG	Greece	GR	Malaysia	MY	Panama	PA	Spain	ES		

Troubleshooting

Symptom	Possible Cause	Correction
No power.	• The power cord is disconnected.	• Plug the power cord into the wall outlet securely.
The power is on, but the player does not work.	• No disc is inserted.	• Insert a disc. (Check the disc indicator in the display window is lit.)
No picture.	• The TV is not set to receive video signal output.	• Select the appropriate video input mode on the TV.
	• The video cable is not connected securely.	• Connect the video cable securely.
	• The selected resolution is not capable with your TV.	• Select another resolution using RESOLUTION button.
No sound.	• The equipment connected with the audio cable is not set to receive disc signal output.	• Select the correct input mode of the audio receiver so you can listen to the sound from the player.
	• The power of the equipment connected with the audio cable is turned off.	• Turn on the equipment connected with the audio cable.
	• The [AUDIO] options are set to the wrong position.	• Set the [AUDIO] options to the correct position (see pages 29-30).
	• The player is in reverse play, fast forward, slow motion or pause mode.	• Return to the normal playback.
The player does not start playback.	• The disc is upside down.	• Insert the disc with the playback side down.
	• An unplayable disc is inserted.	• Insert a playable disc. (Check the disc type and regional code.)
	• The rating level is set.	• Change the rating level.
	• The disc was recorded on another unit and was not finalized.	• Finalize the disc on that unit.
The Remote Control does not work properly.	• The Remote Control is not pointed at the remote sensor on the player.	• Point the Remote Control at the remote sensor of the player.
	• The Remote Control is too far from the player.	• Operate the Remote Control closer to the player.

Troubleshooting

Symptom	Possible Cause	Correction
BD-Live feature does not work.	• The internal Flash Memory does not have enough space.	• Change the [BD Storage Select] to [USB Storage] or format the internal Flash Memory using [BD Storage Clear] option in the [Setup] menu.
	• Internet connection is not established.	• Ensure that the unit is correctly connected to the local area network and can access the internet (see pages 20-23).
	• Your broadband speed is not fast enough to use the BD-Live features.	• Contact your Internet Service Provider (ISP) and increase the broadband speed is recommended.
	• The [BD-LIVE connection] option in the [Setup] menu is set to [Prohibited].	• Set the [BD-LIVE connection] option to [Permitted].
Streaming video services (such as YouTube, etc.) often stop or "buffer" during playback.	• Your broadband service speed may not be fast enough to stream video services (such as YouTube, etc.)	• Contact your Internet Service Provider (ISP) and increase the broadband speed is recommended.
The YouTube ID is not automatically stored in the ID list.	• The ID list is full.	• Delete one of the stored IDs and sign in with the ID again.
Shared folder or files from the media server are not displayed on the [My Media] menu.	• The firewall or anti-virus software on your media server is running.	• Turn off the firewall or anti-virus software running on your media server.
	• The folders or files have been added or removed after a directory has been indexed already.	• Rescan the shared folder on your media server.
The shared files from DLNA media server are not played on the [My Media] menu.	• Shared file is not playable on the player.	• See “File requirement” on page 48.

Specifications

General

Power requirements:	AC 200-240 V, 50/60 Hz
Power consumption:	21W
Dimensions (W x H x D):	Approx. 430 x 58 x 277 mm without foot
Net Weight (Approx.):	3 kg
Operating temperature:	5 °C to 35 °C
Operating humidity:	5 % to 90 %

Outputs

VIDEO OUT:	1.0 V (p-p), 75 Ω, sync negative, RCA jack x 1
COMPONENT VIDEO OUT:	(Y) 1.0 V (p-p), 75 Ω, sync negative, RCA jack x 1 (Pb)/(Pr) 0.7 V (p-p), 75 Ω, RCA jack x 2
HDMI OUT (video/audio):	19 pin (HDMI standard, Type A)
ANALOG AUDIO OUT:	2.0 Vrms (1 kHz, 0 dB), 600 Ω, RCA jack (L, R) x 1
MULTI CHANNEL OUT:	2.0 Vrms (1 kHz, 0 dB), 600 Ω, RCA jack x 8
DIGITAL OUT (COAXIAL):	0.5 V (p-p), 75 Ω, RCA jack x 1
DIGITAL OUT (OPTICAL):	3 V (p-p), Optical jack x 1

System

Laser:	Semiconductor laser, wavelength: 405nm / 650 nm
Signal system:	Standard PAL/NTSC colour TV system
Frequency response:	20 Hz to 20 kHz (48 kHz, 96 kHz, 192 kHz sampling)
Signal-to-noise ratio:	More than 100 dB (ANALOG OUT connectors only)
Harmonic distortion:	Less than 0.008%
Dynamic range:	More than 95 dB
LAN port:	Ethernet jack x 1, 10BASE-T/100BASE-TX
Wireless LAN: (internal antenna)	Integrated IEEE 802.11n (Draft 2.0) wireless networking access, compatible with 802.11b/g Wi-Fi networks.

Accessories

Video cable (1), Audio cable (1), Remote control (1), Battery (1),
Nero MediaHome 4 Essentials software CD-ROM (1)

Customer Support

You can update the Player using the latest software to enhance the products operation and/or add new features.
To obtain the latest software for this player (if updates have been made), please visit **http://lgservice.com** or contact LG Electronics customer care centre.

- Design and specifications are subject to change without notice.

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  - software written by Tim Hudson (tjh@cryptsoft.com).
  - software developed by the OpenSSL Project for use in the OpenSSL Toolkit. (http://www.openssl.org)
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Technology with the human touch

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PLEASE NOTE:

A. The dealer may restrict the guarantee to the original purchaser.

B. The dealer is not obliged to carry out service under guarantee if unauthorized modifications are made to the apparatus, or if non standard components are used or if the serial number of the apparatus is removed, defaced, misused, or altered.

C. Any claims made under guarantee must be directed to the dealer from whom the equipment was originally purchased. The dealer may, before carrying out service under guarantee, require a receipted account as evidence of the date of purchase.

D. We respectfully point out that your dealer is not obligated to replace batteries if they become exhausted or worn in use.

E. Aerial alignment and consumer control adjustments are not covered by this guarantee.

This guarantee does not affect your statutory rights.

- REQUIREMENTS TO MAINTAIN WARRANTY COVERAGE:

  RETAIN YOUR RECEIPT TO PROVE DATE OF PURCHASE. A COPY OF YOUR RECEIPT MUST BE SURRENDERED AT THE TIME GUARANTEE SERVICE IS PROVED.

- Product Registration Card : It is helpful to complete at least your name, address, phone, model & serial numbers and return it. This will enable LG to assist you in the future should you lose your receipt, your units be stolen, or should modifications be necessary.

- To obtain information or assistance: Call 0870 873 5454 Monday-Friday 9.00am-4.30pm

MODEL NO.*	SERIAL NO.*	DATE OF PURCHASE.*

* Please complete for your own record

In all cases of difficulty - consult your LG dealer from whom the product was purchased

LGEUK Website : www.lge.co.uk
(service website : www.lgelectronics.co.uk)