BD350-P.BFRALLC_5207_ENG 9/7/09 3:32 PM Page 1

ENGLISH

LG
Life's Good

BD350

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. : MFL62745207

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 PERSONNEL.

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.

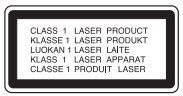
The exclamation point within an equilateral triangle is intended to alert the user to the presence of important operating and maintenance (servicing) instructions in the literature accompanying the product.

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.

This product is manufactured to comply with EMC Directive 2004/108/EC and Low Voltage Directive 2006/95/EC.

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, analog 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.

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

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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.

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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
MOVIE	Movie files contained in the USB/Disc
ACD	Audio CDs
MUSIC	Music files contained in the USB/Disc

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 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)
- Finalized disc 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/CD-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.

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 1.1.

- Discs supporting BONUSVIEW (BD-ROM version 1.1 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.Colour" format.
- This player can playback AVCHD discs using "x.v.Colour" format.
- Some AVCHD format discs may not play, depending on the recording condition.
- AVCHD format discs need to be finalized.
- "x.v.Colour" 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 Flash Drive 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 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, center, surround speakers and subwoofer as necessary for chosen format.

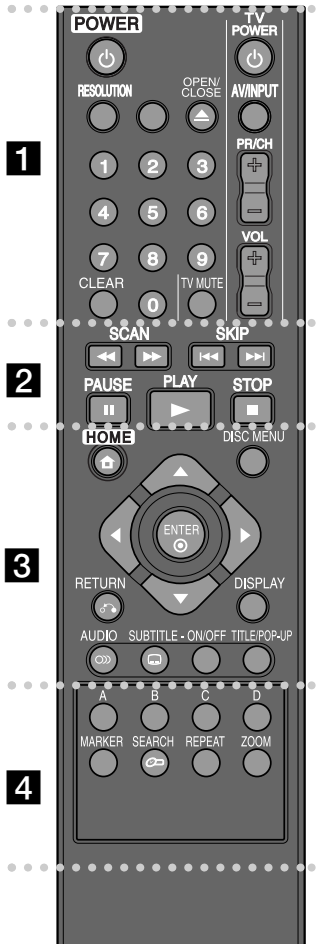
Important Notice for TV colour system

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 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.
- If you try to record a NTSC output signal from the player with your recorder, the recorder may not record the signal correctly.

Remote control



1

POWER (⏻): Switches the player ON or OFF.

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

RESOLUTION: Sets the output resolution for HDMI jacks.

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

TV Control Buttons: See page 31.

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

2

SCAN (◀◀ / ▶▶): Searches backward or forward.

SKIP (I◀◀ / ▶▶I): Go to next or previous chapter / track / file.

PAUSE (❚❚): Pauses playback.

PLAY (►): Starts playback.

STOP (■): Stops playback.

3

HOME: Displays or exits the [Home Menu].

DISC MENU: Accesses menu on a disc.

RETURN (↶): Exits the menu or resumes playback. The resume play function may work depending on the BD-ROM disc.

DISPLAY: Displays or exits On-Screen Display.

Direction buttons: Selects an option in the menu.

ENTER (⊙): Acknowledges menu selection.

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

SUBTITLE (💬): Selects a subtitle language.

SUBTITLE-ON/OFF: Switches the subtitle on or off.

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

4

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

MARKER: Marks any point during playback.

SEARCH: Displays or exits the search menu.

REPEAT: Repeat a desired section or sequence.

ZOOM: Displays or exits the [Zoom] menu.

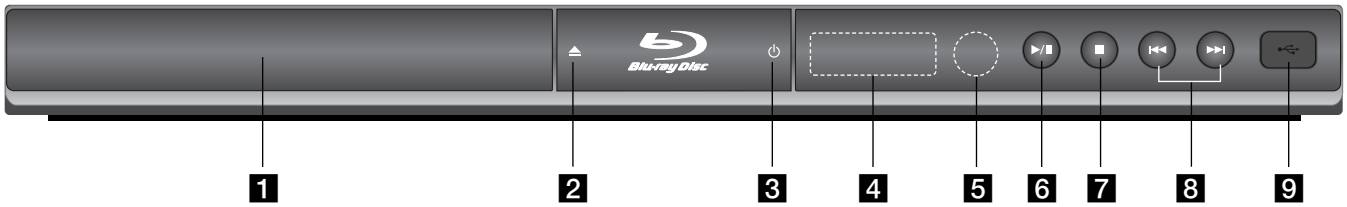
Remote Control Operation

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 Disc Tray
Insert a disc here.

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

3 ⏻ (POWER)
Switches the unit ON or OFF.

4 Display Window
Shows the current status of the player.

5 Remote Sensor
Point the remote control here.

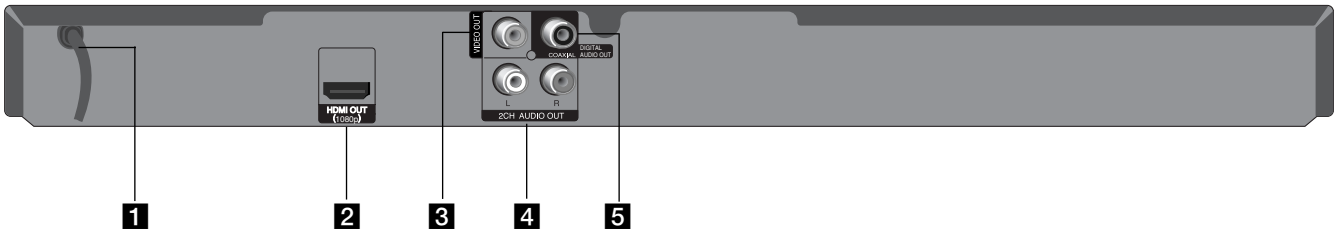
6 ► / ❚❚ (PLAY / PAUSE)
Starts playback.
Pause playback temporarily,
press again to exit pause mode.

7 ■ (STOP)
Stops playback.

8 ⏮ / ⏭ (SKIP)
Go to next or previous file/track/chapter.

9 USB Port
Connect a USB Flash Drive.

Rear panel



1 AC Power Cord
Connect to a power source.

2 HDMI OUT (1080p)
Connect to TV with HDMI inputs. (Interface for digital audio and video)

3 VIDEO OUT
Connect to a TV with video inputs.

4 2CH AUDIO OUT (Left/Right)
Connect to a TV with 2 channel audio inputs.

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

Connections to your TV

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

Tips:

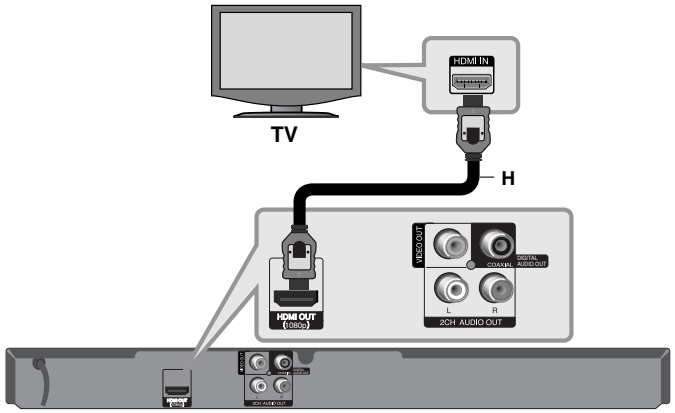
- Depending on your TV and other equipment you wish to connect, there are various ways you could connect the player. Use only one of the connections described below.
- Please refer to the manuals of your TV, Stereo System or other devices as necessary to make the best connections.

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.



BD player

Connect the HDMI OUT jack on the player to the HDMI IN 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 15-16.)
- Select the type of video output from the HDMI OUT jack using [HDMI Color Setting] option on the [Setup] menu (see page 19).

Cautions:

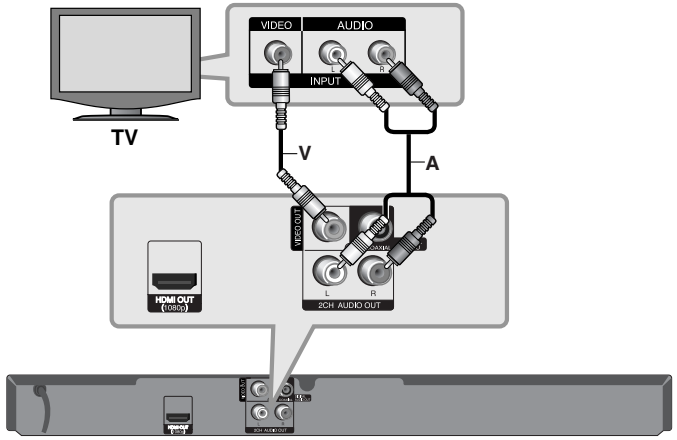
- Changing the resolution when the connection has already been established may result in malfunctions. To solve the problem, turn off the player and then turn it on again.
- When the HDMI connection with HDCP is not verified, TV screen is changed to black screen. In this case, check the HDMI connection,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

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.

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)**.



BD player

Connecting to an Amplifier

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

Note:

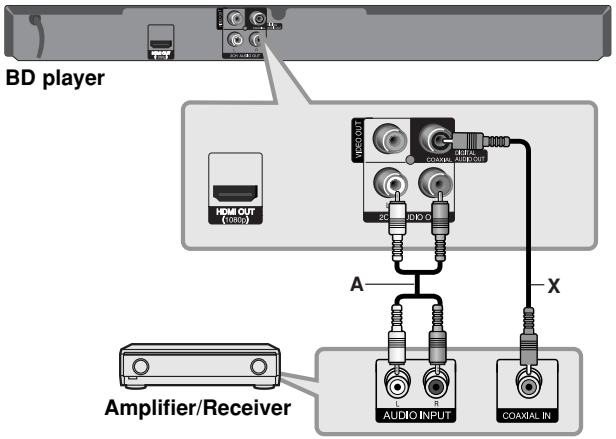
Since many factors affect the type of audio output, see “The unit’s Audio Output Specifications” on page 15 for details.

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)**.

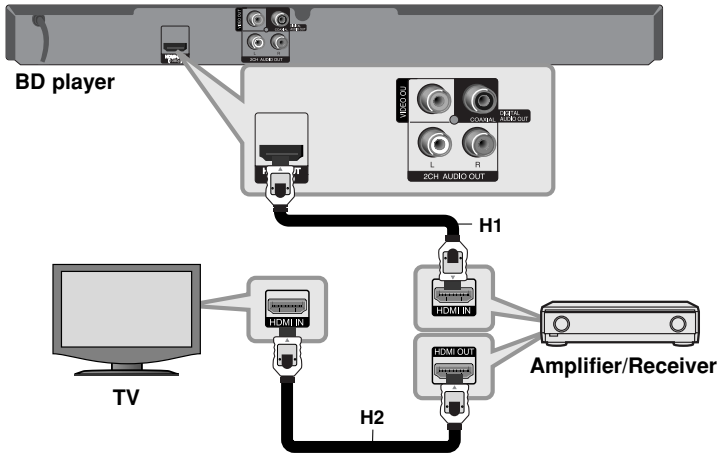
Connecting to an Amplifier via Digital Audio Output (Coaxial)

Connect the player’s DIGITAL AUDIO OUT jack to the corresponding in jack (COAXIAL **X**) on your amplifier. Use an optional digital (coaxial **X**) audio cable. You will need to activate the player’s digital output.
(See “[AUDIO] Menu” on pages 20-21.)



Connecting to an Amplifier via HDMI Output

Connect the player's HDMI OUT jack to the corresponding in jack on your amplifier. Use a HDMI cable **(H1)**. You will need to activate the player's digital output. (See "[AUDIO] Menu" on pages 20-21.)



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 20-21).
- 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 Output Stereo	SPDIF (DIGITAL AUDIO OUT) *5		
		PCM Stereo	DTS Re-encode *3 *6	Primary Pass-Thru *1
Dolby Digital	PCM 2ch	PCM 2ch	DTS	Dolby Digital
Dolby Digital Plus	PCM 2ch	PCM 2ch	DTS	Dolby Digital
Dolby TrueHD	PCM 2ch	PCM 2ch	DTS	Dolby Digital
DTS	PCM 2ch	PCM 2ch	DTS	DTS
DTS-HD	PCM 2ch	PCM 2ch	DTS	DTS
Linear PCM 2ch	PCM 2ch	PCM 2ch	DTS	PCM 2ch
Linear PCM 5.1ch	PCM 2ch	PCM 2ch	DTS	PCM 2ch
Linear PCM 7.1ch	PCM 2ch	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
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]).

Resolution Setting

The player provides several output resolutions for HDMI 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”.

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 Setting	HDMI OUT
576i	576p
576p	576p
720p	720p
1080i	1080i
1080p / 24Hz	1080p / 24Hz
1080p / 50Hz	1080p / 50Hz

• When the copy protected media is playing back

Video Output / Resolution Setting	HDMI OUT
576i	576p
576p	576p
720p	720p
1080i	1080i
1080p / 24Hz	1080p / 24Hz
1080p / 50Hz	1080p / 50Hz

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.

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.

VIDEO OUT connection

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

Using a USB Flash Drive

This unit can play the movie, music and photo files contained on the USB Flash Drive.	ON REMOTE
1 Insert a USB Flash Drive to the USB port:	**–**
2 Displays the [Home Menu]:	**HOME**
3 Select a main option: [Music], [Photo] or [Movie] option	**◄ ►, ENTER**
4 Select the [USB] option:	**◄ ►**
5 Displays corresponding menu list: [MOVIE], [MUSIC] or [PHOTO] menu appears. Details for the menu are on pages 27-30.	**ENTER**

Tip:

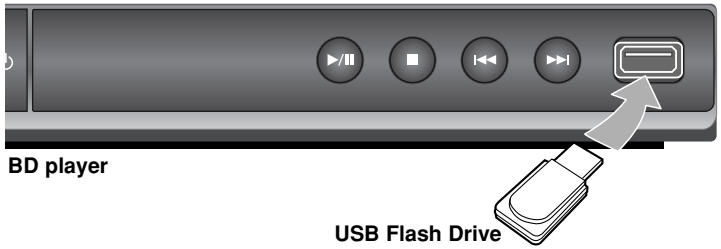
If you select the [Movie], [Photo] or [Music] option when a USB Flash Drive is connected and a disc is inserted simultaneously, the menu for selecting a media will appear. Select a media then press ENTER.



Insert/Remove a USB Flash Drive

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

Removing a USB Flash Drive – Withdraw the USB Flash Drive carefully.



BD player

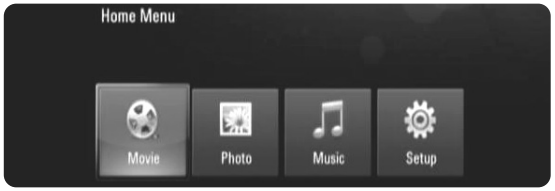
USB Flash Drive

Notes:

- This unit supports only USB Flash Drive with FAT16 or FAT32 format.
- Do not extract the USB Flash Drive during operation (play, etc.).
- A USB Flash Drive which requires additional program installation when you have connected it to a computer is not supported.
- USB Flash Drive: USB Flash Drive that support USB1.1 and USB2.0.
- Movie Files (DivX), Music files (MP3/WMA) and photo files (JPEG/PNG) 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 Flash Drive may not be recognized.
- Some USB Flash Drives 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 Select 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] – Displays [PHOTO] menu. (page 29-30)

[Music] – Displays [MUSIC] menu. (page 28)

[Setup] – Displays the [Setup] menu. (page 18-22)

Tip:

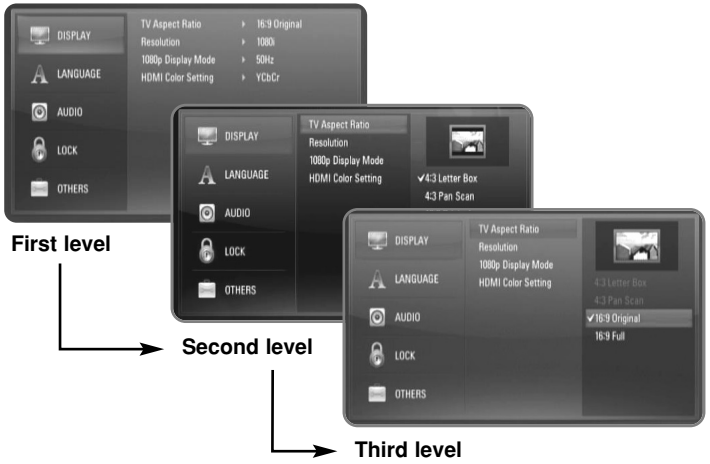
If you select the [Movie], [Photo] or [Music] option when a USB Flash Drive is connected and a disc is inserted simultaneously, the menu for selecting a media will appear. Select a media then press ENTER.

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 Select the [Setup] option:	◄►, ENTER
3 Select a desired option on the first level:	▲▼
4 Move to second level:	►
5 Select a desired option on the second level:	▲▼
6 Move to 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 HDMI video signal.
Refer to “Resolution Setting” on page 15-16 for details about the resolution.

[Auto] – If the HDMI OUT jack is connected for TVs providing display information (EDID), automatically selects the resolution best suited to the connected TV.

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

[576p] – Outputs 576 lines progressive video.

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

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

[1080p] – Outputs 1080 lines of progressive 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 or 60Hz to match the video source format.
- When the 1080p/24Hz video source is outputted via HDMI connection, the 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 RGB 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 32.

[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 15 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.

[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.

[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.

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

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

DRC (Dynamic Range Control)

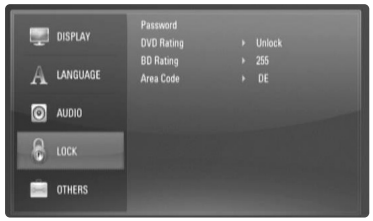
When a disc encoded in Dolby Digital or Dolby Digital Plus is playing back, you may wish to compress the dynamic range of the audio output (the difference between the loudest sounds and the quietest ones). This allows you to listen to a movie at a lower volume without losing clarity of sound. Set DRC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

[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 [LOCK] 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 32.

[OTHERS] Menu



Skin

Changes the background of the initial screen.

Initialize

You can reset the player to its original factory settings or initialize the BD storage.

[Factory Set] – If you need to, you can reset the player to all its factory settings. Some options cannot be reset. (Rating, Password and Area Code, etc.)

[BD Storage Clear] – Initializes the BD contents from the connected USB Flash Drive.

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.

Play a disc

	ON REMOTE
1 **Open the disc tray:**	**OPEN/CLOSE (⏏)**
2 **Insert a disc:**	**-**
3 **Close the disc tray:**	**OPEN/CLOSE (⏏)**
4 **Adjust 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.

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

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

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.

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 PAUSE (❚❚) once again to resume playback.

Frame-by-Frame playback **BD** **DVD** **AVCHD** **MOVIE**

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

Slow down the playing speed

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

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

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.

Note:

This function may not work on some disc or titles.

Playing repeatedly BD DVD AVCHD ACD MUSIC

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] menu, refer to the mode icons as shown below.

- Track – The current track or file will be played back repeatedly.
- 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.
- 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.

Notes:

- If you press SKIP (▶▶I) once during Repeat Chapter/Track playback, the repeat playback cancels.
- This function may not work on some disc or titles.

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” for more details about repeat and random icons in the [MUSIC] menu.

Note:

This function may not work on some disc or titles.

Playing in random order ACD MUSIC

During playback, press REPEAT repeatedly to select a Random ( ) or Random All (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” for more details about repeat and random icons in the [MUSIC] menu.

Enlarge the playback image BD DVD AVCHD MOVIE

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 [Zoom] menu.

Note:

This function may not work on some disc or titles.

Viewing the Title menu or Popup menu BD DVD

Press TITLE/POP-UP to displays 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.

Marker Search BD DVD AVCHD MOVIE

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 you press STOP (■) twice (complete stop), 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.

Hearing a different audio BD DVD AVCHD MOVIE

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.

Selecting a subtitle language BD DVD AVCHD MOVIE

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.

Using the search menu BD DVD AVCHD MOVIE

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.

Note:

This function may not work on some disc or titles.

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.

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.

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.

Displaying disc information

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



1 Title/Track – Current title/track number/total number of titles/tracks.
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/track

BD DVD AVCHD MOVIE

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

Playing from selected time **BD DVD AVCHD MOVIE**

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.

Note:
This function may not work on some disc or titles.

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.

Playing a movie

The player can play movie files on the disc/USB Flash Drive and video contents recorded on a DVD-RW(VR mode) discs. Before playing movie files, read “Movie file requirement”.	ON REMOTE
1 Inserts a disc/USB Flash Drive 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 Flash Drive 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 23-25.
- 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:

- DIVX 3.xx – DIVX 6.xx: 720 x 576 (W x H) pixels
- XVID, H.264/MPEG-4 AVC, MPEG1 SS, MPEG2 PS, MPEG2 TS: 1920 x1080 (W x H) pixels

File extensions: “.avi”, “.divx”, “.mpg”, “.mpeg”, “.mp4”

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, MPEG1 SS, MPEG2 PS, MPEG2 TS

Playable Audio format: “Dolby Digital”, “DTS”, “MP3”, “WMA”, “AC3”, “AAC”

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

Bit rate: within 20-320 kbps (WMA), within 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

- 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 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 Flash Drive 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 23-25.

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: within 8-48 kHz (WMA), within 11-48 kHz (MP3)

Bit rate: within 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)

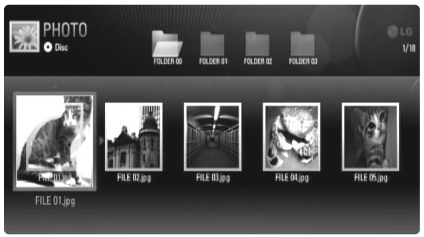
Notes on MP3/WMA file

- 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 30.

	ON REMOTE
1 Inserts a disc/USB Flash Drive 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 Flash Drive 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] 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.



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.

4 Selects the background music.
1) Press ENTER and the menu will appear.
2) Use ▲▼◄ ► to select a media or folder that 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 Flash Drive, 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 ⏮ or ⏭ 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 impossible code to express in the file name, it may be displayed as illegible.

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

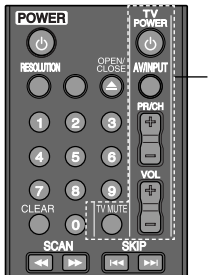
- Progressive and lossless compression photo image files are not supported.
- Depending on the size and number of the photo files, it may take several minutes to read the contents of the media.

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.



TV Control Buttons

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.
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 / GoldStar	1 (Default), 2
Zenith	1, 3, 4
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.
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 page 20).
	• 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.

Specifications

General

Power requirements:	AC 200-240 V, 50/60 Hz
Power consumption:	23 W
Dimensions (W x H x D):	Approx. 430 x 35 x 200 mm without foot
Net Weight (Approx.):	2.7 kg (6 lbs)
Operating temperature:	5 °C to 35 °C (41 °F to 95 °F)
Operating humidity:	5 % to 90 %

Outputs

VIDEO OUT:	1.0 V (p-p), 75 Ω, sync negative, RCA jack x 1
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
DIGITAL OUT (COAXIAL):	0.5 V (p-p), 75 Ω, RCA jack x 1

Input

USB IN:	4 pin (USB 1.1/2.0 standard)
Bus power supply (USB):	DC 5 V ⎓ 500 mA

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

Accessories

Remote control (1), Battery (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.

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