



ENGLISH

OWNER'S MANUAL

Portable Blu-ray Disc™ Player

Please read this manual carefully before operating your set and retain it for future reference.

BP690B

P/NO : MFL67201933

Safety Information



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 center.

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 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 center. 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.

This device is equipped with a portable battery or accumulator.

Safety way to remove the battery or the battery from the equipment: Remove the old battery or battery pack, follow the steps in reverse order than the assembly. To prevent contamination of the environment and bring on possible threat to human and animal health, the old battery or the battery put it in the appropriate container at designated collection points. Do not dispose of batteries or battery together with other waste. It is recommended that you use local, free reimbursement systems batteries and accumulators. The battery shall not be exposed to excessive heat such as sunshine, fire or the like.

CAUTION:

- The apparatus should not be exposed to water (dripping or splashing) and no objects filled with liquids, such as vases, should be placed on the apparatus.
- Minimum distances around the apparatus for sufficient ventilation, no less than 5 cm.
- The ventilation should not be impeded by covering the ventilation openings with items, such as newspapers, table-cloth, curtains etc.
- No naked flame sources, such as lighted candles, should be placed on the apparatus.
- Internal lithium battery in the unit should not be replaced by user because of danger of explosion if battery is incorrectly replaced ,and must be replaced with the same type battery by expert.
- Use the apparatus in tropical and moderate climates only.
- The excessive sound pressure from earphones and headphones can cause hearing loss.

Caution of usage in the car

- To prevent electrical shock and possible damage to your unit or vehicle, always unplug the automotive adapter from the cigarette lighter socket before you remove the plug from your unit.
- A 3 amp. 250 V fuse for protection is installed in the automotive adapter.
- While the engine is being started, disconnect the automotive adapter from the car's cigarette lighter socket.
- Do not operate your unit when the car battery is discharged. Peak current from the car generator may cause the DC fuse to blow.
- If the vehicle's supply voltage drops below approximately 10 volts, your unit may not work properly.
- Do not leave your unit in a place where the temperature exceeds 45 °C (113 °F), or the pick-up device may be damaged.

Notes on Copyrights

- Because AACS (Advanced Access Content System) is approved as content protection system for Blu-ray Disc 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 Blu-ray Disc 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 Center.
- 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 Rovi, and is intended for home and other limited viewing uses only unless otherwise authorized by Rovi. 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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Introduction

1

Getting Started

Playable Discs and symbols used in this manual

Media/Term	Logo	Symbol	Description
Blu-ray		BD	<ul style="list-style-type: none"> Discs such as movies that can be purchased or rented. BD-R/RE discs that are recorded in BDAV format.
		MOVIE MUSIC PHOTO	<ul style="list-style-type: none"> BD-R/RE discs that contain Movie, Music or Photo files. ISO 9660+JOLIET, UDF and UDF Bridge format
DVD-ROM DVD-R DVD-RW DVD+R DVD+RW (8 cm / 12 cm disc)	    	DVD	<ul style="list-style-type: none"> Discs such as movies that can be purchased or rented. Video mode and finalized only Supports the dual layer disc also
		AVCHD	Finalized AVCHD format
		MOVIE MUSIC PHOTO	<ul style="list-style-type: none"> DVD±R/RW discs that contain Movie, Music or Photo files. ISO 9660+JOLIET, UDF and UDF Bridge format
DVD-RW (VR) (8 cm / 12 cm disc)		DVD	VR mode and finalized only
Audio CD (8 cm / 12 cm disc)		ACD	Audio CD
CD-R/RW (8 cm / 12 cm disc)		MOVIE MUSIC PHOTO	<ul style="list-style-type: none"> CD-R/RW discs that contain Movie, Music or Photo files. ISO 9660+JOLIET, UDF and UDF Bridge format
Note	–		Indicates special notes and operating features.
Caution	–		Indicates cautions for preventing possible damages from abuse.

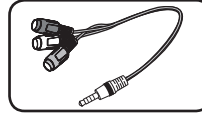
! Note

- 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.
- Depending on the recording software & the finalization, some recorded discs (CD-R/RW, DVD±R/RW, BD-R/RE) may not be playable.
- BD-R/RE, 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)

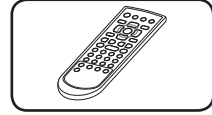
About the "⊘" Symbol Display

"⊘" 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.

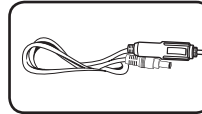
Supplied Accessories



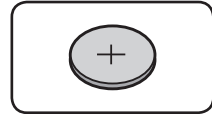
RCA Video/Audio Adaptor (1)



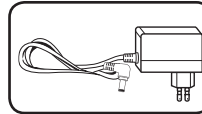
Remote control (1)



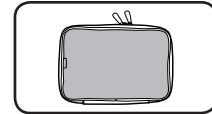
Automotive Adaptor (1)



Battery for Remote Control (Lithium Battery) (1)



AC Adaptor (1)
(IM120WL-200B)



Carrying Bag (1)

- The actual AC Adaptor may differ from the drawing.

File compatibility

Movie files

File Extension	Codec Format	Audio Format	Subtitle
“.avi”, “.mpg”, “.divx”, “.mpeg”, “.mkv”, “.mp4”, “.asf”	DIVX3.xx, DIVX4.xx, DIVX5.xx, DIVX6.xx (standard playback only), XVID, MPEG1 SS, H.264/MPEG-4 AVC, MPEG2 PS, MPEG2 TS	Dolby Digital, DTS, MP3, WMA, AAC, AC3	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)

Music files

File Extension	Sampling Frequency	Bitrate	Note
“.mp3”, “.wma”	within 11 - 48 kHz (MP3), within 32 - 48 kHz (WMA)	within 8 - 320 kbps (MP3), within 32 - 192 kbps (WMA)	Some WAV files are not supported on this player.

Photo files

File Extension	Recommended Size	Note
“.jpg”, “.jpeg”, “.png”, “.gif”	Less than 4,000 x 3,000 x 24 bit/pixel Less than 3,000 x 3,000 x 32 bit/pixel	Progressive and lossless compression photo image files are not supported.

! Note

- The file name is limited to 180 characters.
- A “avi” file which is encoded “WMV 9 codec” is not supported.
- Depending on the size and number of the files, it may take several minutes to read the contents on the media.
- The file requirements on page 10 are not always compatible. There may have some restrictions by file features.
- The total playback time of music file indicated on the screen may not correct for VBR files.
- HD video files contained on the CD or USB 1.0/1.1 may not play properly. Blu-ray Disc, DVD or USB 2.0 are recommended to play back HD video files.
- This player supports H.264/MPEG-4 AVC profile Main, High at Level 4.1. For a file with higher level, the warning message will appear on the screen.
- This player does not support files that are recorded with GMC^{*1} or Qpel^{*2}.
 - *1 GMC – Global Motion Compensation
 - *2 Qpel – Quarter pixel

! Note

- This player supports UTF-8 files even it contains Unicode subtitle contents. This player can not support the pure Unicode subtitle files.
- Depending on the types of file or ways of recording, it may not play back.
- A disc which was recorded by multi-session on normal PC is not supported on this player.
- To play back a movie file, movie file name and Subtitle file name must be the same.
- If video codec is MPEG2 TS or MPEG2 PS, subtitle does not play back.
- The total playback time of music file indicated on the screen may not correct for VBR files.

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.
- 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 color range than normal DVD camcorder discs.

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 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.

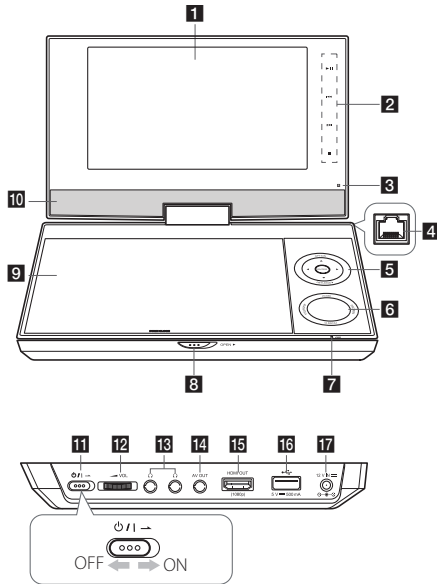
Compatibility Notes

- 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 Center.
- This unit allows you to enjoy functions such as picture-in-picture, secondary audio and Virtual packages, etc., with BD-ROM 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.
- 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 to store some discs related information, including downloaded on-line content. The disc you are using will control how long this information is retained.

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".

Main Unit



1 LCD screen

2 Playback control buttons (touch sensor buttons)

- ▶|| (Play/Pause): Press to start playback and pause playback temporarily, press again to exit pause mode.
- ◀◀ / ▶▶ (Skip): Goes to the next or previous chapter / track / file.
- (Stop): Press to stop playback.

3 Remote sensor: Point the remote control here. To control the unit using the remote control, do not fold the LCD panel down.

4 LAN Port: Connecting to LAN Port will give you, Network capabilities.

5 Menu control buttons

- ▲/▼/◀/▶: Use to select an item in the menu.
- ENTER:** Press to confirm menu selection.
- OPTION:** Press to display the Brightness or Color menu for LCD display. To adjust the color or brightness of the LCD display, press OPTION repeatedly on the main unit to display the Brightness or Color menu then

use ◀/▶ to adjust the value. Press ENTER (◎) to confirm the adjustment.

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

6 Function buttons

- **HOME:** Displays or exits the [Home Menu].
- **TITLE/POPUP:** Displays the DVD title menu or BD-ROM's pop-up menu, if available.
- **DISC MENU:** Accesses menu on a disc.
- **Q.MENU (□):** Displays or exits Quick Menu.

7 Battery charge and power indicator

- The indicator turns red in charging and it will be turned into green when the charging is complete. (Refer to page 15 for details.)
- The indicator turns green for a moment when the unit is turned on.

8 OPEN ▶: Use the slide open key to open the disc lid.

9 Disc lid

10 Speakers

11 ⏻ / | (Power): Switches the unit ON or OFF.

12 ▲ VOL (Volume): Adjusts the volume level of the built-in speaker and earphones.

13 🎧 (Earphones): Connect earphones here.

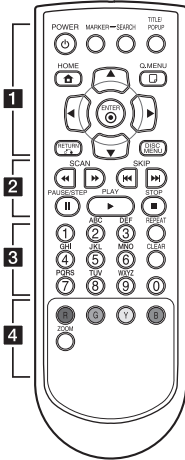
14 AV OUT: Connect to a TV with video and audio input.

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

16 USB Port: Connect a USB Flash Drive.

17 DC 12V IN: Connect the AC adapter or automotive adapter.

Remote control



..... **1**

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

MARKER (📌): Marks any point during playback.

SEARCH (🔍): Displays or exits the search menu.

TITLE/POPUP (📄): Displays the DVD title menu or BD-ROM's pop-up menu, if available.

HOME (🏠): Displays or exits the [Home Menu].

Q.MENU (📁): Displays or exits Quick Menu.

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.

DISC MENU (📀): Accesses menu on a disc.

..... **2**

SCAN (⏮/⏭): Searches backward or forward.

SKIP (⏮/⏭): Goes to the next or previous chapter / track / file.

PAUSE/STEP (⏸): Pauses playback. Press repeatedly for frame-by-frame playback.

PLAY (▶): Starts playback.

STOP (■): Stops playback.

..... **3**

0-9 numerical buttons: Selects numbered options in a menu or inputs letters in the keypad menu.

REPEAT (🔄): Repeats a desired section or sequence.

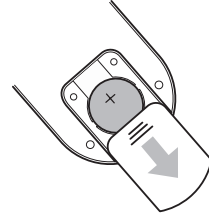
CLEAR (🗑): Removes a mark on the search menu or a number when setting the password.

..... **4**

Colored (R, G, Y, B) buttons: Use to navigate BD-ROM menus. They are also used for [MOVIE], [PHOTO], [MUSIC] or [NetCast].

ZOOM (🔍): Displays or exits the [Zoom] menu.

Battery Installation



Remove the battery cover on the rear of the Remote Control, and insert the battery with the + facing in the same direction as the + on the battery compartment.

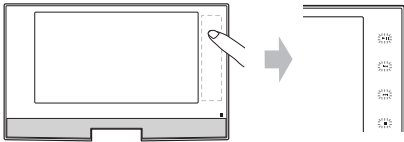
- Replace Remote Control's battery with 3 V micro lithium cells such as CR. 2025 or its equivalent.
- Dispose of battery safely in accordance with local laws. Do not dispose of in fire.

⚠ Warning

The battery used in this device may present a fire or chemical burn hazard if mistreated. Do not recharge, disassemble, incinerate, or heat above 100 °C (212 °F). Replace the battery with Matsushita Elec. Ind. Co., Ltd. (Panasonic), part no. CR. 2025 only. Use of another battery may present a risk of fire or explosion. Dispose of used batteries. Keep batteries away from children. Do not disassemble or dispose of in fire.

Using the touch sensor buttons

If you want to use the touchable sensor button, touch the right of the LCD panel as below.



! Caution

Precautions for using the touch sensor buttons:

- Use the touch pad with clean and dry hands.
- Do not touch the buttons on the touch pad with too much force.
- Do not touch the button on the touch pad with any conductive material such as metallic object. It may cause a malfunction.

! Note

If no button is pressed for a few seconds, the touch sensor buttons disappear.

Revolving the LCD panel

You can revolve the LCD panel of the unit clockwise a maximum of 180 degrees for use. You can also operate the unit after revolving the LCD panel 180 degrees and folding it back down.



To revolve the LCD panel, place the unit on a stable and even surface such as on a table. Push the LCD panel up and then lift it into a vertical position. Revolve the LCD panel clockwise slowly 180 degrees. If you need, fold the LCD panel after

revolving it.

To revolve the LCD panel to its original position, open the LCD panel to a vertical position. Revolve the LCD panel counterclockwise slowly 180 degrees.

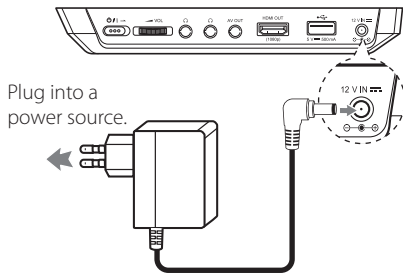
- When finished using the unit, return the LCD panel to its original position.
- Do not leave the LCD panel in the face-up position, or sudden shocks may damage it.

Rechargeable battery

- The internal rechargeable battery provides you with the freedom to pass it around and play the files without the power cord.
- The internal rechargeable battery will start when the AC adaptor or Automotive Adapter is connected to a power outlet or a Cigarette lighter socket.
- Charging time on the battery:
 - Approximately 4 hours on Power OFF mode.
 - Approximately 14 hours on Power ON mode.
- Operating time on battery: approximately 2 hours and 30 minutes. The operating time on battery may vary depending on the battery status, operational status and environment conditions, and the maximum playing time is possible up to 3 hours.
- When the remaining time of the battery power is under a few minutes, "⚠ Check Battery" will blink on the screen.

Connecting the AC Adaptor

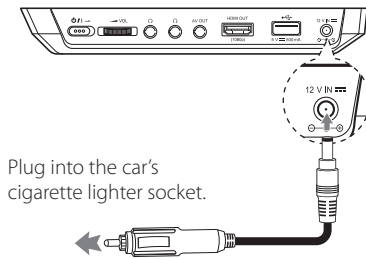
Connect the unit to the power supply with the supplied AC Adaptor.



- Contact an electrical parts distributor for assistance in selecting a suitable AC plug adaptor or AC cord set.
- This AC adaptor is manufactured by I-MAG ELECTRONICS (DONG GUAN) CO., LTD.

Connecting the Automotive Adaptor

Connect the unit to the Cigarette lighter socket with the supplied Automotive Adaptor.



- Contact an electrical parts distributor for assistance in selecting a suitable Automotive Adaptor.
- This Automotive Adaptor is manufactured by LIAN YAO ELECTRONIC TECHNOLOGY (SZ) CO., LTD.

Connecting to Your TV

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

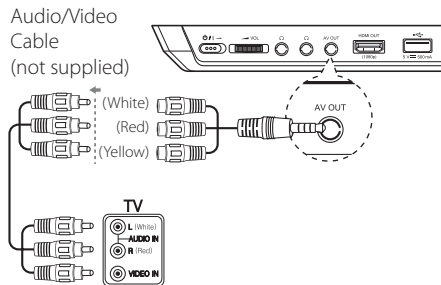
- Video connection (page 16)
- HDMI connection (page 17)

! Note

- 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 in this manual.
- Please refer to the manuals of your TV, Stereo System or other devices as necessary to make the best connections.
- Do not connect the player's AV 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.

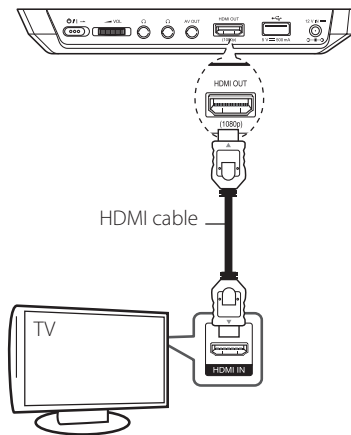
Connecting Audio and Video cable

Connect the AV OUT on the unit to AV cable connected from TV with the supplied AV Adaptor.



HDMI Connection

If you have a HDMI TV or monitor, you can connect it to this player using a HDMI cable (Type A, High Speed HDMI™ Cable). Connect the HDMI jack on the player to the HDMI jack on a HDMI compatible TV or monitor.



Set the TV's source to HDMI (refer to TV's Owner's manual).

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.

! Note

- When you use HDMI connection, the picture will not be displayed on the LCD panel.
- If a connected HDMI device does not accept the audio output of the player, the HDMI device's audio sound may be distorted or may not output.
- When you use HDMI connection, you can change the resolution for the HDMI output. (Refer to "Resolution Setting" on page 18.)
- Select the type of video output from the HDMI OUT jack using [HDMI Color Setting] option on the [Setup] menu (see page 25).
- 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 are noises or lines on the screen, please check the HDMI cable (length is generally limited to 4.5 m(15 ft)).

Resolution Setting

The player provides several output resolutions for HDMI OUT and LCD panel. You can change the resolution using [Setup] menu.

1. Press HOME (🏠).
2. Use ◀/▶ to 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 ENTER (⏻) to move to the third level.



5. Use ▲/▼ to select the desired resolution then press ENTER (⏻) to confirm your selection.
 - For HDMI OUT: Auto, 576p, 720p, 1080i, 1080p
 - For LCD panel: 576i, 576p, 720p

Note

- If your TV does not accept the resolution you have set on the player, you can set resolution to 576p as follows:
 1. Remove the disc from the unit.
 2. Press ■ (STOP) for more than 5 seconds.
- When you set the resolution to 576i with HDMI connection, actual resolution is outputted to 576p.
- When you set the resolution to [Auto], [1080i] or [1080p] for LCD panel, actual resolution is outputted to 720p.
- 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 24 Hz or 50 Hz 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.
- The resolution of the AV OUT jack is always outputted at 576i.

Connecting to an Amplifier

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

- HDMI Audio connection (page 19)
- 2CH Analog Audio connection (page 20)

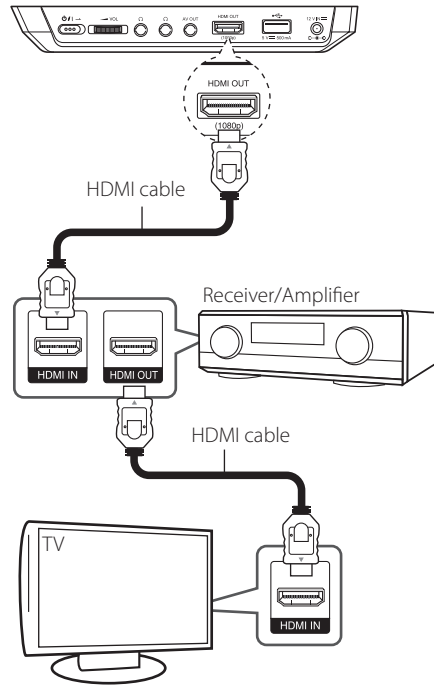
Since many factors affect the type of audio output, see “Audio Output Specifications” for details (page 50).

About 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 logos on the front of the Audio/Video receiver and the manual. (PCM Stereo, PCM Multi-Ch, Dolby Digital, Dolby Digital Plus, Dolby TrueHD, DTS and/or DTS-HD)

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.

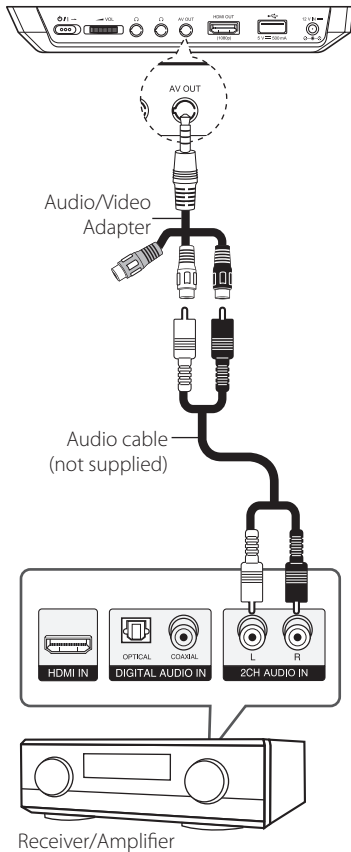


Connect the amplifier’s HDMI output jack to HDMI input jack on your TV using a HDMI cable if your amplifier has HDMI output jack.

You will need to activate the player’s digital output. (See “[AUDIO] Menu” on page 26.)

Connecting to an Amplifier via 2 Channel Audio Output

Connect the Left and Right AV OUT jacks on the player to the audio left and right in jacks on your amplifier, receiver, or stereo system using audio cables.



Connecting to your Home Network

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

Wired network connection

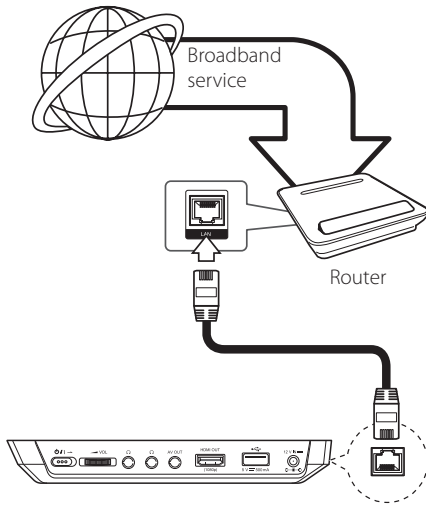
Using a wired network provides the best performance, because the attached devices connect directly to the network and are not subject to radio frequency interference.

Please refer to the documentation for your network device for further instructions.

Connect the player's LAN port to the corresponding port on your Modem or Router using a commercially available LAN or Ethernet cable.

! Note

- 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.



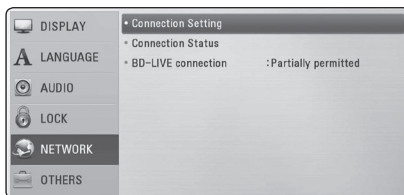
Wired Network Setup

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.

Preparation

Before setting the wired network, you need to connect the broadband internet to your home network.

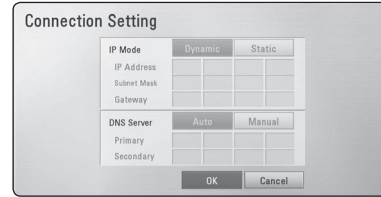
1. Select [Connection Setting] option in the [Setup] menu then press ENTER (⊙).



2. Select [Yes] and press ENTER (⊙) to continue. The new connection settings reset the current network settings.

3. Use ▲/▼/◀/▶ to select the IP mode between [Dynamic] and [Static].

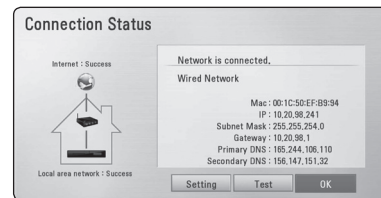
Normally, select [Dynamic] to allocate an IP address automatically.



Note

If there is no DHCP server on the network and you want to set the IP address manually, select [Static] then set [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.



Notes on Network Connection:

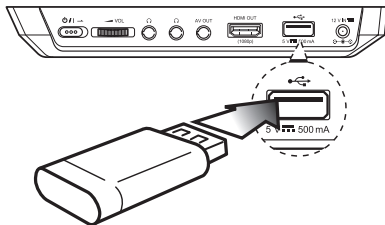
- Many network connection problems during set up can often be fixed by re-setting the router or modem. After connecting the player to the home network, quickly power off and/or disconnect the power cable of the home network router or cable modem. Then power on and/or connect the power cable again.
- 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.

USB device connection

This player can play movie, music and photo files contained in the USB device.

Playback content in the USB device

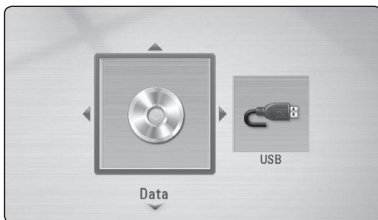
1. Insert a USB device to the USB port until it fits into place.



When you connect the USB device on the HOME menu, the player plays a music file contained in the USB storage device automatically. If the USB storage device is containing various types of files, a menu for the file type selection will appear.

File loading may take few minutes depending on the number of contents stored in the USB storage device. Press ENTER (⊙) while [Cancel] is selected to stop loading.

2. Press HOME (🏠).
3. Select [Movie], [Photo] or [Music] using ◀/▶, and press ENTER (⊙).
4. Select the [USB] option using ◀/▶, and press ENTER (⊙).



5. Select a file using ▲/▼/◀/▶, and press PLAY (▶) or ENTER (⊙) to play the file.
6. Withdraw the USB device carefully.

! Note

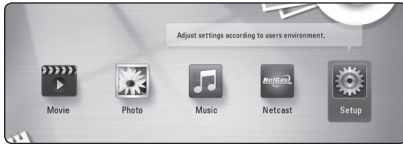
- This player supports USB flash drive/ external HDD formatted in FAT16, FAT32 and NTFS when accessing files (music, photo, movie). However, for BD-Live and Audio CD recording, only FAT16 and FAT32 formats are supported. Use the USB flash drive/ external HDD formatted in either FAT16 or FAT32 when using BD-Live and Audio CD recording.
- 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.).
- A USB device which requires additional program installation when you have connected it to a computer, is not supported.
- USB device: USB device that supports USB1.1 and USB2.0.
- Movie, music 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, USB HUB or USB Multi-reader, 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.

Settings

Adjust the Setup Settings

You can change the settings of the player in the [Setup] menu.

1. Press HOME (🏠).



2. Use ◀/▶ to select the [Setup] and press ENTER (⊙). The [Setup] menu appears.



3. Use ▲/▼ to select the first setup option, and press ▶ to move to the second level.



4. Use ▲/▼ to select a second setup option, and press ENTER (⊙) to move to the third level.



5. Use ▲/▼ to select a desired setting, and press ENTER (⊙) to confirm your selection.

[DISPLAY] Menu

TV Aspect Ratio

Select a TV aspect ratio option according to your TV type.

[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 HDMI video signal. Refer to page 18 for details about the resolution setting.

[Auto]

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

[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 [24 Hz] for smooth presentation of film material (1080p/24 Hz) with a HDMI-equipped display compatible with 1080p/24 Hz input.

! Note

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

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 press ENTER (⊙) to enter the corresponding 4-digit number according to the language code list on page 48.

[Off] (Disc Subtitle only)

Turn off Subtitle.

! Note

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

[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 "Audio Output Specifications" on page 50 for details.

HDMI

[PCM Stereo]

Select if you connect this unit's HDMI OUT jack to a device with two-channel digital stereo decoder.

[PCM Multi-Ch]

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 jack to a device with DTS decoder.

[Primary Pass-Thru]

Select if you connect this unit's HDMI OUT jack to a device with LPCM, Dolby Digital, Dolby Digital Plus, Dolby TrueHD, DTS and DTS-HD decoder.

! Note

- 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] 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)

[192 kHz]

Select this if your A/V Receiver or Amplifier is capable of handling 192 kHz signals.

[96 kHz]

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.

[48 kHz]

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)

This function allows you to listen to a movie at a lower volume without losing clarity of sound.

[Off]

Turns off this function.

[On]

Compress the dynamic range of the Dolby Digital, Dolby Digital Plus or Dolby TrueHD audio output.

[Auto]

The dynamic range of the Dolby TrueHD audio output is specified by itself.
And the dynamic range of the Dolby Digital and Dolby Digital Plus are operated as same as the [On] mode.

! Note

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

DTS Neo:6

If the player is connected to the multi-channel Audio Receiver by HDMI connection, set this option to enjoy the multi-channel surround sound with the 2-channel audio source.

[Off]

Outputs the stereo sound via front speakers.

[Music]

Outputs the multi-channel sounds that are optimized for listening to music.

[Cinema]

Outputs the multi-channel sounds that are optimized for watching movie.

! Note

- This function is not available on an on-line service.
- Only the audio source with less than 48 kHz sampling frequency is available for this function.
- This function is available only when [HDMI] option is set to [PCM Multi-Ch].

[LOCK] Menu

The [LOCK] settings affect only Blu-ray Disc 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 twice, and press ENTER (⊙) to create a new password.

Password

You can create or change the password.

[None]

Enter a 4-digit password twice, and press ENTER (⊙) to create a new password.

[Change]

Enter the current password and press ENTER (⊙). Enter a 4-digit password twice, and press ENTER (⊙) to create a new 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.

! Note

If you make a mistake before pressing ENTER (⊙), press CLEAR. Then input the correct password.

DVD Rating

Blocks playback of rated DVD 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.

Blu-ray Disc Rating

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

[255 Year(s)]

All BD-ROM can be played.

[0-254 Year(s)]

Prohibits play of BD-ROM with corresponding ratings recorded on them.

! Note

The [Blu-ray Disc Rating] will be applied only for the Blu-ray 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 48.

[NETWORK] Menu

The [NETWORK] settings are needed to use the software update, BD-Live and NetCast features.

Connection Setting

If your home network environment is ready to connect the player, the player needs to be set the wired network connection for network communication. (See "Connecting to your Home Network" on page 20.)

Connection Status

If you want to check the network status on this player, select the [Connection Status] options and press 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 AAC Online functions are prohibited for all BD-Live contents without a certificate.

[Prohibited]

Internet access is prohibited for all BD-Live contents.

[OTHERS] Menu

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 divx.com for more information and software tools to convert your files into DivX video.

ABOUT DIVX VIDEO-ON-DEMAND: This DivX Certified® device must be registered in order to play purchased DivX Video-on-Demand (VOD) movies. To obtain your registration code, locate the DivX VOD section in your device setup menu. Go to vod.divx.com for more information on how to complete your registration.

[Register]

Displays the registration code of your player.

[Deregister]

Deactivate your player and display the deactivation code.

! Note

All the downloaded videos from DivX VOD with this player's registration code can only be played back on this unit.

Auto Power Off

The screen saver appears when you leave the player in Stop mode for about 5 minutes. If you set this option to [On], the unit automatically turns itself off after the Screen Saver is displayed for 5 minutes. Set this option to [Off] to leave the screen saver until the unit is operated by the user.

Initialize

[Factory Set]

You can reset the player to its original factory settings.

[Blu-ray Storage Clear]

Initializes the BD-Live contents from the connected USB storage.

! Note

If you reset the player to its original factory settings using [Factory Set] option, you have to set all the activation for the on-line services and network settings again.

Software

[Information]

Displays the current software version.

[Update]

You can update the software by connecting the unit directly to the software update server (see page 45).

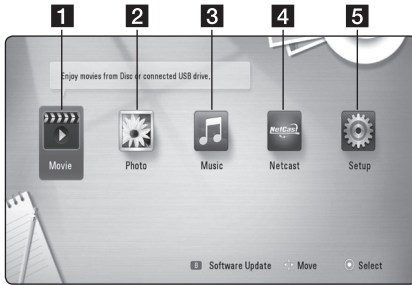
Disclaimer Notice

Press ENTER (⊙) to view the notice of Network Service Disclaimer on page 53.

General Playback

Using [HOME] menu

The home menu appears when you press HOME (🏠). Use ◀/▶ to select a category and press ENTER (⊙).



4

Operating

- 1** [Movie] - Plays video contents.
- 2** [Photo] - Plays photo contents.
- 3** [Music] - Plays audio contents.
- 4** [NetCast] - Accesses to the NetCast Home.
- 5** [Setup] - Adjusts the system settings.

Playing a Disc

BD DVD ACD

1. Turn on the Power Switch.
2. Open the disc lid and insert a disc.
3. Close the disc lid.
For the most Audio CD, BD-ROM and DVD-ROM discs, playback starts automatically.
4. Press HOME (🏠).
5. Select [Movie] or [Music] using ◀/▶, and press ENTER (⊙).
6. Select [Blu-ray Disc], [DVD], [VR] or [Audio] option using ◀/▶, and press ENTER (⊙).

! Note

- Playback functions described in this manual are not always available in every file and media. Some functions can be restricted depending on many factors.
- Depending on the BD-ROM titles, a USB device connection may be needed for the proper playback.
- Unfinalized DVD-VR format discs may not be played in this player.
- Some DVD-VR discs are made with CPRM data by DVD RECORDER. This unit cannot support these kinds of discs.

Playing a file on a disc/USB device

MOVIE MUSIC PHOTO


This player can play video, audio and photo files contained in the disc or USB device.

1. Insert a data disc on the tray or connect a USB device. (When you insert the USB device, the USB option menu will be appeared to select for [Movie], [Photo] or [Music].)
2. Select [Movie], [Photo] or [Music] using ◀/▶, and press ENTER (⊙).
3. Select [Data] or [USB] option using ◀/▶, and press ENTER (⊙).
4. Select a file using ▲/▼/◀/▶, and press ▶ (PLAY) or ENTER (⊙) to play the file.

Enjoying BD-Live™

BD

BD-ROM supporting BD-Live (BD-ROM version 2 Profile 2) that has a network extension function allows you to enjoy more functions such as downloading new movie trailers by connecting this unit to the internet.

1. Check the network connection and settings (page 20).
2. Insert a USB storage device to the USB port on the unit.
A USB storage device is needed to download bonus content.
3. Press HOME (), and set the [BD-Live connection] option on the [Setup] menu (page 28).

Depending on a disc, the BD-Live function may not be operated if [BD-Live connection] option is set to [Partially Permitted].

4. Insert a BD-ROM with BD-Live.

The operations are differ depending on the disc. Refer to the manual supplied with the disc.

Caution

Do not extract the connected USB device while content is being downloaded or a Blu-ray Disc is still in the player. 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.

Note

- 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.


Basic operations for video and audio content

To stop playback

Press  (STOP) while playback.


To pause playback

Press  (PAUSE/STEP) while playback.



Press  (PLAY) to resume playback.

To play frame-by-frame (Video)

Press  (PAUSE/STEP) while movie playback.


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

To scan forward or backward



Press  or  to play fast forward or fast reverse during playback.


You can change the various playback speeds by pressing  or  repeatedly.

To slow down the playing speed

While the playback is paused, press  repeatedly to play various speeds of slow motion.

To skip to the next/previous chapter/track/file

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.

Basic operations for photo content

To play a slide show

Press ► (PLAY) to start slide show.

To stop a slide show

Press ■ (STOP) while slide show.

To pause a slide show

Press ⏸ (PAUSE/STEP) while slide show.
Press ► (PLAY) to re-start the slide show.

To skip to the next/previous photo

While viewing a photo in full screen, press ◀ or ▶ to go to the previous or next photo.

Using the disc menu

BD DVD AVCHD

To display the disc menu

The menu screen may be displayed first after loading a disc which contains a menu. If you want to display the disc menu while playback, press DISC MENU.

Use ▲/▼/◀/▶ buttons to navigate through menu items.

To display the Pop-up menu

Some BD-ROM discs contain Pop-up menu that appears while playback.

Press TITLE/POPUP while playback, and use ▲/▼/◀/▶ buttons to navigate through menu items.

Resume playback

BD DVD AVCHD MOVIE ACD MUSIC

The unit records the point where you pressed the ■ (STOP) depending on the disc.

If "⏸ (Resume Stop)" appears on the screen briefly, press ► (PLAY) to resume playback (from the scene point).

If you press ■ (STOP) twice or unload the disc, "■ (Complete Stop)" appears on the screen. The unit will clear the stopped point.

! Note

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

Last Scene Memory

BD DVD ACD

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.

! Note

- 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.
- On BD-ROM discs with BD-J, the last scene memory function does not work.
- This unit does not memorize settings of a disc if you switch off the unit before commencing to play it.

Advanced Playback

Repeat Playback

**BD DVD AVCHD ACD MUSIC
MOVIE**

During playback, press REPEAT repeatedly to select a desired repeat mode.

Blu-ray Discs/DVDs/ MOVIE

A- – Selected portion will be repeated continually.

Chapter – The current chapter will be played back repeatedly.

Title – The current title will be played back repeatedly.

All – All the tracks or files will be played back repeatedly.

To return to normal playback, press REPEAT repeatedly to select [Off].

Audio CDs/Music files

A-B – Selected portion will be repeated continually. (Audio CD only)

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

All – All the tracks or files will be played back repeatedly.

Shuffle All – All the tracks or files will be played back repeatedly in random order.

Shuffle – The tracks or files will be played back in random order.

To return to normal playback, press CLEAR.

Note

- If you press **▶▶** once during Repeat Chapter/Track playback, the repeat playback cancels.
- This function may not work on some disc or title.

Repeating a specific portion

BD DVD AVCHD ACD MOVIE

This player can repeat a portion you have selected.

1. While playback, press REPEAT to select [A-] at the beginning of the portion you wish to repeat.
2. Press ENTER (⊙) at the end of the portion. Your selected portion will be repeated continually.
3. To return to normal playback, press REPEAT repeatedly to select [Off].

Note

- You cannot select a portion less than 3 seconds.
- This function may not work on some discs or titles.

Enlarge the playback image

BD DVD AVCHD MOVIE PHOTO

1. During playback or pause mode, press ZOOM to display the [Zoom] menu.
2. Use red (R) or green (G) colored button to zoom out or in the picture. You can move through the zoomed picture using **▲/▼/◀/▶** buttons.
3. To return to the normal picture size, press yellow (Y) colored button.
4. Press RETURN (↵) to exit the [Zoom] menu.

Marker Search

BD DVD AVCHD MOVIE

You can start playback from up to nine memorized points.

To enter a marker

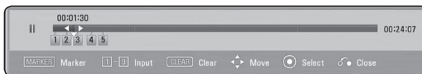
1. While playback, press MARKER at the desired point. The Marker icon appears on the TV screen briefly.
2. Repeat step 1 to add up to nine markers.

To recall a marked scene

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

To delete a Marker

1. Press SEARCH and the search menu appears on the screen.



2. Press ▼ to highlight a marker number. Use ◀/▶ to select a marked scene that you want to delete.
3. Press CLEAR and the marked scene is erased from the search menu.

! Note

- This function may not work depending on discs, titles or file types.
- 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.

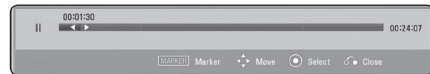
Using the search menu

BD DVD AVCHD MOVIE

Using search menu, you can easily to find the point where you want to start playback.

To search a point

1. During playback, press SEARCH to display the search menu.



2. Press ◀/▶ to skip the playback 15 seconds forward or backward. You can select a point that you want to skip by pressing and holding ◀/▶ button.

To start playback from a marked scene

1. Press SEARCH and the search menu appears on the screen.
2. Press ▼ to highlight a marker number. Use ◀/▶ to select a marked scene that you want to start playback.
3. Press ENTER (⊙) to start playback from the marked scene.

! Note

This function may not work depending on discs, titles or file types.

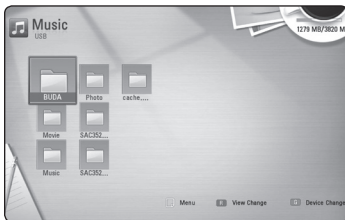
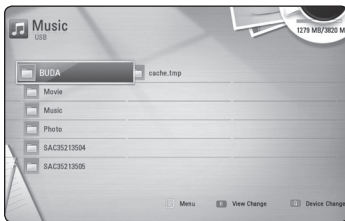
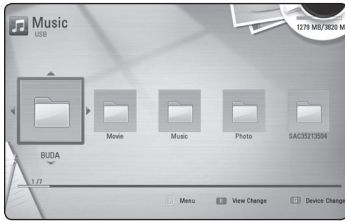
Changing content list view

MOVIE MUSIC PHOTO

On the [Movie], [Music] or [Photo] menu, you can change the content list view.

Method 1

Press red (R) colored button repeatedly.



Method 2

1. On the content list, press Q.MENU (□) to display the option menu.
2. Use ▲/▼ to select the [View Change] option.
3. Press ENTER (⊙) to change the content list view.

Viewing content information

MOVIE

The player can display the content information.

1. Select a file using ▲/▼/◀/▶.
2. Press Q.MENU (□) to display the option menu.
3. Select the [Information] option using ▲/▼, and press ENTER (⊙).

The file information appears on the screen.

While movie playback, you can display the file information by pressing TITLE/POPUP.

! Note

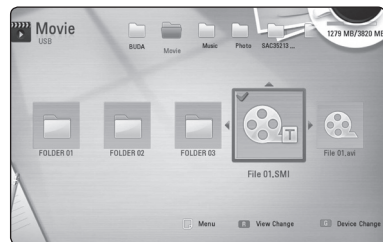
The information displayed on the screen may not be correct compared with actual content information.

Selecting a subtitle file

MOVIE

If the subtitle file name is different from the movie file name, you need to select the subtitle file on the [Movie] menu before playing the movie.

1. Use ▲/▼/◀/▶ to select the subtitle file you wish to play in the [Movie] menu.
2. Press ENTER (⊙).



Press ENTER (⊙) again to deselect the subtitle file. Selected subtitle file will be displayed when you play the movie file.

! Note

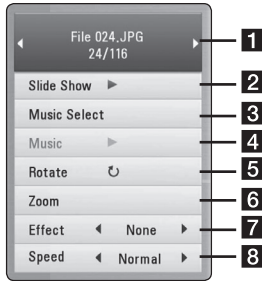
If you press ■ (STOP) while playback, the subtitle selection is cancelled.

Options while viewing a photo

PHOTO

You can use various options during viewing a photo in full screen.

1. While viewing a photo in full screen, press Q.MENU (☰) to display the option menu.
2. Select an option using ▲/▼.



1 Current photo/Total number of photos
– Use ◀/▶ to view previous/next photo.

2 Slide Show – Press ENTER (⊙) to start or pause slide show.

3 Music Select – Select the background music for the slide show (page 36).

4 Music – Press ENTER (⊙) to start or pause background music. This option is capable only if a music file or folder is selected using the [Music Select] option.

5 Rotate – Press ENTER (⊙) to rotate the photo clockwise.

6 Zoom – Press ENTER (⊙) to display the [Zoom] menu (page 33).

7 Effect – Use ◀/▶ to select a transition effect between photos in a slide show. (None, Random, Slide, Door, Lattice)

8 Speed – Use ◀/▶ to select a delaying speed between photos in a slide show. (Normal, Fast, Slow)

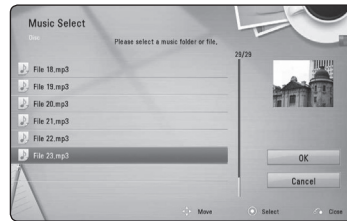
3. Press RETURN (↵) to exit the option menu.

Listening to music while slide show

PHOTO

You can display photo files while listening to music files.

1. While viewing a photo in full screen, press Q.MENU (☰) to display the option menu.
2. Use ▲/▼ to select [Music Select] option, and press ENTER (⊙) to display the [Music Select] menu.
3. Use ▲/▼ to select a device, and press ENTER (⊙).
4. Use ▲/▼ to select a file or a folder you wish to play.



Select [Music Select] and press ENTER (⊙) to display the upper directory.

5. Use ▶ to select [OK], and press ENTER (⊙) to complete music selection.

On-Screen display

You can display and adjust various information and settings about the content.

Displaying content information on-screen

BD DVD AVCHD MOVIE

1. While playback, press Q.MENU (□) to show various playback information.



- 1 Title** – current title number/total number of titles
- 2 Chapter** – current chapter number/total number of chapters
- 3 Time** – elapsed playing time/total playback time
- 4 Audio** – selected audio language or channel
- 5 Subtitle** – selected subtitle.
- 6 Angle** – selected angle/total number of angles
- 7 TV Aspect Ratio** – selected TV aspect Ratio
- 8 Picture Mode** – selected picture mode

2. Select an option using ▲/▼.
3. Use ◀/▶ to adjust the selected option value.
4. Press RETURN (↵) to exit the On-Screen display.

! Note

- If no button is pressed for a few seconds, the on-screen display disappears.
- A title number cannot be selected on some discs.
- Available items may differ depending on discs or titles.
- If a interactive Blu-ray Disc is playing back, some setting information is displayed on the screen but prohibited to be changed.

Playing from selected time

BD DVD AVCHD MOVIE

1. Press Q.MENU (□) during playback. The time search box shows the elapsed playing time.
2. 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”.

Press ◀/▶ to skip the playback 60 seconds forward or backward.

3. Press ENTER (⊙) to start playback from selected time.

! Note

This function may not work depending on discs, titles or file types.

Hearing a different audio

BD DVD AVCHD MOVIE

1. During playback, press Q.MENU (□) to display the On-Screen display.
2. Use ▲/▼ to select the [Audio] option.
3. Use ◀/▶ to select desired audio language, audio track or audio channel.

! Note

- Some discs allow you to change audio selections only via the disc menu. In this 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.

4

Operating

Selecting a subtitle language

BD DVD AVCHD MOVIE

1. During playback, press Q.MENU (□) to display the On-Screen display.
2. Use ▲/▼ to select the [Subtitle] option.
3. Use ◀/▶ to select desired subtitle language.
4. Press RETURN (↵) to exit the On-Screen display.

! Note

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

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.

1. During playback, press Q.MENU (□) to display the On-Screen display.
2. Use ▲/▼ to select the [Angle] option.
3. Use ◀/▶ to select desired angle.
4. Press RETURN (↵) to exit the On-Screen display.

Changing the TV Aspect Ratio

BD DVD AVCHD MOVIE

You can change the TV aspect ratio setting while playback.

1. During playback, press Q.MENU (□) to display the On-Screen display.
2. Use ▲/▼ to select the [TV Aspect Ratio] option.
3. Use ◀/▶ to select desired option.
4. Press RETURN (↵) to exit the On-Screen display.

Changing the Picture Mode

BD DVD AVCHD MOVIE

You can change the [Picture mode] option while playback.

1. During playback, press Q.MENU (□) to display the On-Screen display.
2. Use ▲/▼ to select the [Picture Mode] option.
3. Use ◀/▶ to select desired option.
4. Press RETURN (↵) to exit the On-Screen display.

Setting the [User setting] option

1. During playback, press Q.MENU (□) to display the On-Screen display.
2. Use ▲/▼ to select the [Picture Mode] option.
3. Use ◀/▶ to select the [User setting] option, and press ENTER (⊙).



4. Use ▲/▼/◀/▶ to adjust the [Picture Mode] options.
Select [Default] option then press ENTER (⊙) to reset the all video adjustments.
5. Use ▲/▼/◀/▶ to select the [Close] option, and press ENTER (⊙) to finish setting.

Changing subtitle code page

MOVIE

If the subtitle is displayed in broken letter, you can change the subtitle code page to view the subtitle file properly.

1. During playback, press Q.MENU (□) to display the playback menu.
2. Use ▲/▼ to select the [Code Page] option.
3. Use ◀/▶ to select desired code option.



4. Press RETURN (↵) to exit the On-Screen display.

Displaying MP3 music information (ID3 Tag)

1. Select a music file using ▲/▼/◀/▶
2. Press Q.MENU (□) to display the option menu.
3. Select [Information] option using ▲/▼, and press ENTER (⊙).
4. The music information will be displayed on the screen.

! Note

Depending on the MP3 files, information may not be displayed on the screen.

Audio CD Recording

You can record one desired track or all of the tracks in Audio CD to a USB storage device.

1. Insert a USB storage device to the USB port on the unit.
2. Insert an Audio CD.
The playback starts automatically.
3. Press Q.MENU (⏏) to display the option menu.
4. Use ▲/▼ to select [CD Recording] option, and press ENTER (⏏).
5. Use ▲/▼ to select a track you wish to copy on the menu, and press ENTER (⏏).

Repeat this step to select tracks as many as you can.

Select All	Selects all the tracks on an Audio CD.
Option	Selects an encoding option from the pop-up menu (128 kbps, 192 kbps, 320 kbps)
Close	Cancels the recording and returns to the previous screen.

6. Use ▲/▼/◀/▶ to select [Start], and press ENTER (⏏).
7. Use ▲/▼/◀/▶ to select a destination folder to be copied.



If you want to create a new folder, use ▲/▼/◀/▶ to select [New Folder] and press ENTER (⏏).

Enter a folder name using virtual keyboard, and press ENTER (⏏) while [OK] is selected.

8. Use ▲/▼/◀/▶ to select [OK], and press ENTER (⏏) to start Audio CD recording.

If you want to stop Audio CD recording, press ENTER (⏏) while [Cancel] is highlighted.

9. A message appears when Audio CD recording is completed. Press ENTER (⏏) to check the music file created in the destination folder.

Note

- The table below shows the average recording time from an audio track with 4 minutes of playback time to a music file with 192 kbps as an example.

stop mode	while playback
1 min.	4 min.

- Recording times in the table above are approximate.
- Actual recording time for USB storage device varies depending on the USB storage device's ability.
- Make sure that there is minimum of 50 MB free space is needed when recording into the USB storage device.
- The length of the music should be longer than 20 seconds for the proper recording.
- Do not turn off this player or extract the connected USB storage device during Audio CD recording.

Caution

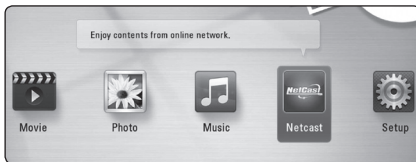
The recording or copying features on this player are provided for your personal and non-commercial use. The making of unauthorized copies of copy-protected material, including computer programs, files, broadcasts and sound recordings, may be an infringement of copyrights and constitute a criminal offense. This equipment should not be used for such purposes. LG expressly disclaims any responsibility for illegal distribution or use of unauthorized content in commercial purpose.

**Be Responsible
Respect Copyrights**

Enjoying the NetCast™ Entertainment Access

You can use various content services via Internet with the NetCast Entertainment Access feature.

1. Check the network connection and settings (page 20).
2. Press HOME (🏠).
3. Select the [NetCast] using ◀/▶, and press ENTER (⊙).



4. Select an option using ◀/▶, and press ENTER (⊙).

! Note

- Detailed information of each service, contact to the content provider or visit support link of the service.
- The content of NetCast services and service related information, including user interface, is subject to changes. Please refer to the web site of each service for most up-to-date information.

Troubleshooting

General

Symptom	Cause & Solution
The Power does not turn on.	<ul style="list-style-type: none"> • Plug the power cord into the wall outlet securely. • The battery is discharged. Recharge the battery.
The unit does not start playback.	<ul style="list-style-type: none"> • Insert a playable disc. (Check the disc type, colour system, and regional code.) • Place the disc with the playback side down. • Place the disc in the player correctly inside the guide. • Clean the disc. • Cancel the Rating function or change the rating level.
The angle cannot be changed.	<ul style="list-style-type: none"> • Multi-angles are not recorded on the DVD Video being played.
Cannot play movie, photo or music files.	<ul style="list-style-type: none"> • The files are not recorded in a format that the unit can play. • The unit does not support the codec of the movie file.
The remote control does not work properly.	<ul style="list-style-type: none"> • The remote control is not pointed at the remote sensor of the unit. • The remote control is too far from the unit. • There is an obstacle in the path of the remote control and the unit. • The batteries in the remote control are exhausted.
The unit is plugged in, but the power will not turn on or off.	<p>You can reset the unit as follows.</p> <ul style="list-style-type: none"> • Switch off the unit using the power switch on the unit and leave it for 5 seconds. Next, switch on the unit to reset.
The unit is not operating normally.	

Network

Symptom	Cause & Solution
BD-Live feature does not work.	<ul style="list-style-type: none"> The connected USB storage may not have enough space. Connect the USB storage with at least 1GB free space. Ensure that the unit is correctly connected to the local area network and can access the internet (see page 20). Your broadband speed may 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 option to [Permitted].
Streaming video services (such as YouTube™, etc.) are often stopped or “buffer” during playback.	<ul style="list-style-type: none"> Your broadband service speed may not be fast enough to stream video services. Contact your Internet Service Provider (ISP) and increase the broadband speed.

Picture

Symptom	Cause & Solution
There is no picture.	<ul style="list-style-type: none"> Select the appropriate video input mode on the TV so the picture from the unit appears on the TV screen. Connect the video connection securely. Check the [HDMI Color Setting] in the [Setup] menu is set to the appropriate item that conforms to your video connection. Your TV may not support the resolution you have set on the player. Change the resolution that your TV accepts. The player’s HDMI OUT jack is connected to a DVI device that does not support copyright protection.
Picture noise appears.	<ul style="list-style-type: none"> You are playing a disc recorded in a color system that is different from your TV. Set the resolution which your TV accepts.

Sound

Symptom	Cause & Solution
There is no sound or the sound is distorted.	<ul style="list-style-type: none"> • The volume is set to minimum. Use the volume controller to adjust the volume. • The earphone jack is connected to the unit. Separate the earphone jack from the unit. • Connect the audio connection securely. • The input source setting on the amplifier or the connection to the amplifier is incorrect. • The unit is in scan, slow motion, or pause mode. • The sound volume is low. • Check that the connected amplifier is compatible with audio format output from the unit. • The unit's HDMI OUT jack is connected to a DVI device. The DVI jack does not accept audio signal. • Check the device connected to unit's HDMI OUT jack is compatible with audio format output from the unit.

5

Troubleshooting

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 center.

Open source software notice

To obtain the corresponding source code under GPL, LGPL and other open source licenses, please visit <http://opensource.lge.com>. All referred license terms, warranty disclaimers and copyright notices are available to download with the source code.

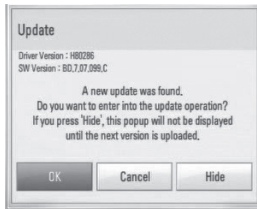
Network Software Update

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 "Update" icon appears at the bottom of the Home menu. Press blue (B) colored button to start the update procedure.

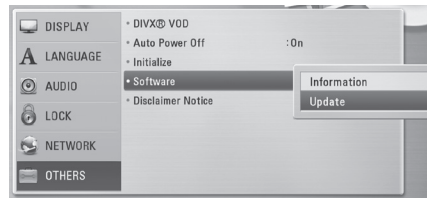
Software Update

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.

! Note

- 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. Check the network connection and settings (page 20).
2. Select [Software] option in the [Setup] menu then press ENTER (⊙).
3. Select [Update] option, and press ENTER (⊙).



The player will check for the newest update.

! Note

- Pressing ENTER (⊙) while checking for the update will end the process.
- If there is no update available, the Message, "No update is found." appears. Press ENTER (⊙) to return to the [Home Menu].

4. If newer version exists, the message "A new update was found. Do you want to download it?" appears.

5. Select [OK] to download the update. (Selecting [Cancel] will end the update.)
6. The player starts downloading the newest update from the server. (Downloading will take several minutes depending on your home network condition)
7. When downloading is completed, the message, "Download is complete. Do you want to update?" appears.
8. 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.

9. When update is completed, the power will be turned off automatically in a few seconds.
10. Turn the power back on. The system now operates with the new version.

 **Note**

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 Center then update your player. Refer to "Customer Support" on page 44.

Area Code List

Choose an area code from this list.

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

Language Code List

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

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Audio Output Specifications

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


*1 The secondary and interactive audio may not be included in the output bitstream if [HDMI] option is set to [Primary Pass-Thru]. (Except LPCM Codec: the output always includes 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 If the [HDMI] option is set to [DTS re-encode], the audio output is limited to 48 kHz and 5.1Ch. If the [HDMI] 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]).

- 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.
- You must select a digital audio output and a maximum sampling frequency that your Amplifier (or AV receiver) accepts using [HDMI] and [Sampling Freq.] options on the [Setup] menu (see page 26).
- With HDMI digital audio connection, Disc Menu button sounds of BD-ROM may not be heard if the [HDMI] option is set to [Primary Pass-Thru].
- If the audio format of the HDMI 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 HDMI connection can only be obtained if your receiver is equipped with a Digital Multi-channel decoder.

Specifications

General	
Power requirements	12 V  2 A
AC adaptor requirements	100 - 240 V ~ 1 A, 50/60 Hz
Automotive Adaptor requirements	8.5 V -16 V DC
Power consumption	18 W
Dimensions (W x H x D)	Approx. (281 x 41 x 174.5) mm
Net Weight (Approx.)	1.4 kg
Operating temperature	5 °C to 40 °C
Operating humidity	5 % to 90 %

Outputs	
AUDIO/VIDEO OUT	<ul style="list-style-type: none"> • ø 3.5 mm mini jack x 1 • Video Out: 1.0 V (p-p), 75 Ω, sync negative • Audio Out: 1.5 Vrms (1 kHz, 0 dB)
HDMI OUT (video/audio)	19 pin (Type A, HDMI™ Connector)
Earphone terminal	ø 3.5 mm stereo mini jack x 2

System	
Laser	Semiconductor laser
Wavelength	405 nm / 650 nm
Signal system	Standard PAL color TV system
Frequency response	20 Hz to 20 kHz (48 kHz, 96 kHz, 192 kHz sampling)
Signal-to-noise ratio	More than 90 dB (AV OUT connector only)
Harmonic distortion	Less than 0.02%
Dynamic range	More than 85 dB
LAN port	Ethernet jack x 1, 10BASE-T / 100BASE-TX
Bus Power Supply (USB)	DC 5 V  500 mA

Liquid Crystal Display	
Panel size	22.9 cm (diagonal)
Projection system	R.G.B. stripe
Driving system	TFT active matrix
Resolution	800 x 480 (WVGA)

- Design and specifications are subject to change without notice.

Maintenance

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, benzene, 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 center.

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 center to out.

Do not use strong solvents such as alcohol, benzene, thinner, commercially available cleaners, or anti-static spray intended for older vinyl records.

Important Information Relating to Network Services

All information, data, documents, communications, downloads, files, text, images, photographs, graphics, videos, webcasts, publications, tools, resources, software, code, programs, applets, widgets, applications, products and other content ("Content") and all services and offerings ("Services") provided or made available by or through any third party (each a "Service Provider") is the sole responsibility of the Service Provider from whom it originated.

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Should you have any inquiry or problem related to the Content or Services, you may refer to the Service Provider's website for the most up-to-date information. LGE is neither responsible nor liable for customer service related to the Content and Services. Any question or request for service relating to the Content or Services should be made directly to the respective Content and Service Providers.

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