LG
Life's Good

OWNER'S MANUAL

Twin HD Recorder/
Blu-ray Combo

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

MODEL
HR500

P/NO : MFL62320941

1
Safety Information

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.

Cautions and Warnings

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.
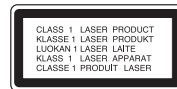
CAUTION: This product employs a Laser System.
To ensure proper use of this product, please read this owner's manual carefully and retain it for future reference. Shall the unit require maintenance, contact an authorized service center.
Use of controls, adjustments or the performance of procedures other 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 lile.

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.

For Wireless product European Union Notice

LG Electronics hereby declares that this/these product(s) is/are in compliance with the essential requirements and other relevant provisions of Directive 1999/5/EC, 2004/108/EC, 2006/95/EC and 2009/125/EC.

Please contact to the following address for obtaining a copy of the DoC (Declaration of Conformity).

European representative : LG Electronics Service Europe B.V. Veluwezoom 15, 1327 AE Almere, The Netherlands (Tel : +31-(0)36-547-8888)

Indoor use only.

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.

Notes on Copyrights

• Recording equipment should be used only for lawful copying and you are advised to check carefully what is lawful copying in the area in which you are making a copy. Copying of copyright material such as films or music is unlawful unless permitted by a legal exception or consented to by the rights owner.

• This product incorporates copyright protection technology that is protected by method claims of certain U.S. patents and other intellectual property rights owned by Macrovision Corporation and other rights owners. Use of this copyright protection technology must be authorized by Macrovision Corporation, and is intended for home and other limited viewing uses only, unless otherwise authorized by Macrovision corporation. Reverse engineering or disassembly is prohibited.

• CONSUMERS SHOULD NOTE THAT NOT ALL HIGH DEFINITION TELEVISION SETS ARE FULLY COMPATIBLE WITH THIS PRODUCT AND MAY CAUSE ARTIFACTS TO BE DISPLAYED IN THE PICTURE. IN CASE OF 625 PROGRESSIVE SCAN PICTURE PROBLEMS, IT IS RECOMMENDED THAT THE USER SWITCH THE CONNECTION TO THE 'STANDARD DEFINITION' OUTPUT. IF THERE ARE QUESTIONS REGARDING OUR TV SET COMPATIBILITY WITH THIS MODEL 625p UNIT PLEASE CONTACT OUR CUSTOMER SERVICE CENTRE.

- Because AACS (Advanced Access Content System) is approved as content protection system for BD format, similar to use of CSS (Content Scramble System) for DVD format, certain restrictions are imposed on playback, analogue signal output, etc., of AACS protected contents. The operation of this product and restrictions on this product may vary depending on your time of purchase as those restrictions may be adopted and/or changed by AACS after the production of this product.

- Furthermore, BD-ROM Mark and BD+ are additionally used as content protection systems for BD format, which imposes certain restrictions including playback restrictions for BD-ROM Mark and/or BD+ protected contents. To obtain additional information on AACS, BD-ROM Mark, BD+, or this product, please contact an authorized Customer Service Centre.

- Many BD-ROM/DVD discs are encoded with copy protection. Because of this, you should only connect your player directly to your TV, not to a VCR. Connecting to a VCR results in a distorted picture from copy-protected discs.

- This product incorporates copyright protection technology that is protected by U.S. patents and other intellectual property rights. Use of this copyright protection technology must be authorized by Macrovision, and is intended for home and other limited viewing uses only unless otherwise authorized by Macrovision. Reverse engineering or disassembly is prohibited.

- Under the U.S. Copyright laws and Copyright laws of other countries, unauthorized recording, use, display, distribution, or revision of television programs, videotapes, BD-ROM discs, DVDs, CDs and other materials may subject you to civil and/or criminal liability.

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2
Preparation

Introduction

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.

⚠ CAUTION

Indicates cautions for preventing possible damages from abuse.

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

BD	BD-ROM disc
DVD	DVD-Video, DVD±R/RW in Video mode or VR mode and finalized
AVCHD	DVD±R/RW in AVCHD format
ACD	Audio CDs
MOVIE	Movie files contained in the Disc
MOVIE-N	Movie files in the DLNA server or PC
MUSIC	Music files contained in the Disc
MUSIC-N	Music files in the DLNA server or PC
PHOTO	Photo files contained in the Disc
MOVIE-M	Movie files contained in the HDD/USB
MUSIC-M	Music files contained in the HDD/USB
PHOTO-M	Photo files contained in the HDD/USB
REC	Titles recorded via this unit

Supplied Accesorries
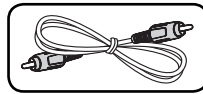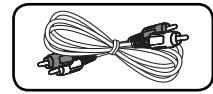
Video cable (1)

Audio cables (1)
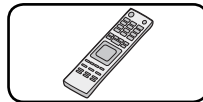
Remote control (1)
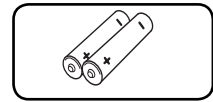
Batteries (2)
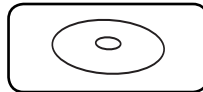
Nero MediaHome4 Essentials software CD-ROM (1)

RF cable (1)

2
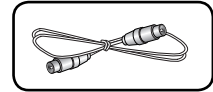
Playable Discs

Blu-ray Disc
- Discs such as movies that can be purchased or rented.
- BD-R/RE discs that contain 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
- Finalized AVCHD format
- DVD±R discs that contain Movie, Music or Photo files.

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

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

Audio CD (8 cm / 12 cm disc)

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

> ### ! 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 or DVD±R/RW) 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 unit 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.
> - 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.
> - 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)Vista)

File compatibility

Overall

Available Files extensions: ".jpg", ".jpeg", ".png", ".avi", ".divx", ".mpg", ".mpeg", ".mkv", ".mp4", ".mp3", ".wma"

- Available file extensions differ depending on the DLNA servers.
- The file name is limited to 180 characters.
- Depending on the size and number of the files, it may take several minutes to read the contents on the media.

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

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

MOVIE

Available resolution size: 1920 x 1080 (W x H) pixels

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), DVD Subtitle System (.txt)

Playable Codec format: "DIVX3.xx", "DIVX4. xx", "DIVX5.xx", "XVID", "DIVX6.xx" (Standard playback only), H.264/MPEG-4 AVC, DIVX-HD, MPEG1 SS, MPEG2 PS, MPEG2 TS

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

- Not all the WMA and AAC Audio format is compatible with this unit.

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

Bit rate: within 20-320Kbps (WMA), within 32-320Kbps (MP3)

> **! NOTE**
>
> - 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

MUSIC

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

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

> **! NOTE**
>
> - This unit cannot support the ID3 Tag embedded MP3 file.
> - The total playback time indicated on the screen may not correct for VBR files.

PHOTO

Recommended size:
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.
- Depending on the size and number of the photo files, it may take several minutes to read the contents of the media.

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 labelled same as the rear of the unit or "ALL".

AVCHD (Advanced Video Codec High Definition)

• This player can playback AVCHD format discs. These discs are normally recorded and used in camcorders.

• The AVCHD format is a high definition digital video camera format.

• The MPEG-4 AVC/H.264 format is capable of compressing images at higher efficiency than that of the conventional image compressing format.

• Some AVCHD discs use the "x.v.Color" format.

• This player can playback AVCHD discs using "x.v.Color" format.

• Some AVCHD format discs may not play, depending on the recording condition.

• AVCHD format discs need to be finalized.

• "x.v.Color" offers a wider colour range than normal DVD camcorder discs.

Certain System Requirements

For high definition video playback:

• High definition display that has COMPONENT or HDMI input jacks.

• BD-ROM disc with high definition content.

• HDMI or HDCP capable DVI input on your display device is required for some content (as specified by disc authors).

• For up-conversion of standard definition DVD, a HDMI or HDCP capable DVI input on your display device is required for copy protected content.

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

• An amplifier/receiver with a built-in (Dolby Digital, Dolby Digital Plus, Dolby TrueHD, DTS or DTS-HD) decoder.

• Main, centre, surround speakers and subwoofer as necessary for chosen format.

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.

• Viewing high-definition content and up-converting standard DVD content may require a HDMI-capable input or HDCP-capable DVI input on your display device.

• Some BD-ROM and DVD discs may restrict the use of some operation commands or features.

• Dolby TrueHD, Dolby Digital Plus and DTS-HD are supported with maximum 7.1 channels if you use HDMI connection for the audio output of the unit.

• You can use a USB device that is used to store some disc related information, including downloaded on-line content. The disc you are using will control how long this information is retained.

Remote control
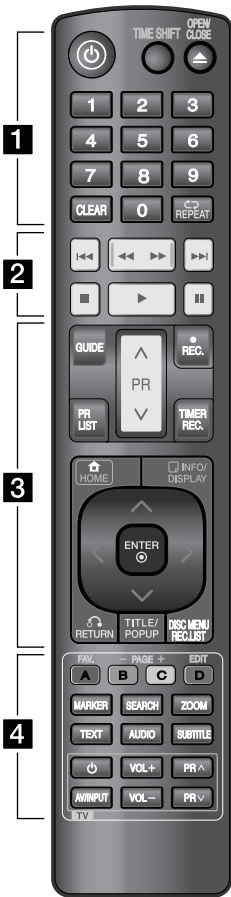
Battery Installation

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

• • • • • • **1** • • • • • •

⏻ **(Power):** Switches the unit ON or OFF.

TIME SHIFT: Activates pause live TV/playback (timeshift) for a live TV programme (only working in HDD mode).

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

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

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

REPEAT: Repeats a desired section or sequence.

• • • • • • **2** • • • • • •

I◄◄ /►►I: Go to next or previous chapter/track/file.

◄◄/►►: Searches backward or forward.

■ **:** Stops playback.

► **:** Starts playback.

II **:** Pauses playback or recording.

• • • • • • **3** • • • • • •

GUIDE: Displays the EPG menu.

PR (Λ/V): Scans up or down through memorized programmes.

REC. (●): Starts recording and copying.

PR LIST: Displays the programme list.

TIMER REC.: Display [Timer Recording] menu.

HOME (⌂): Accesses or removes the HOME menu.

INFO/DISPLAY (▢): Displays or exits On-Screen Display.

Λ/V/</> (left/right/up/down): Navigates on-screen displays.

ENTER (◉): Acknowledges menu selection or displays the programme list.

RETURN (⟲): Exits the menu or back to previous step.

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

DISC MENU/REC.LIST: Accesses menu on a disc or switches between Title List-Playlist menu.

• • • • • • **4** • • • • • •

FAV.: Displays the favourite programme list.

PAGE (-/+): Moves to next or previous page of contents/TV list.

EDIT: Displays an editing menu

A/B/C/D: Used for [MOVIE], [PHOTO] and [MUSIC] menu. The function of each button will be described on-screen, and changes depending on the screen being displayed.

MARKER: Marks any point during playback.

SEARCH: Displays or exits the search menu.

ZOOM: Displays or exits the [Zoom] menu.

TEXT: Switches between teletext mode and normal TV viewing.

AUDIO: Selects an audio language or audio channel.

SUBTITLE: Selects a subtitle language.

TV Control Buttons: See page 80.

Main Unit
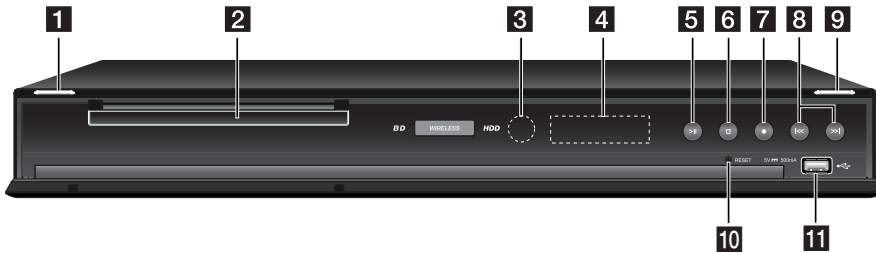
1 ⏻ **(Power)**

2 **Disc Tray**

3 **Remote Sensor**

4 **Display window**

5 **>II (Play/Pause)**

6 ☐ **(Stop)**

7 ● **(Recording)**

8 **I<</>>I (Skip)**

9 **⏏ (Open/Close)**

10 **RESET**
Press this button to reboot.

11 **USB Port**

1 **ANTENNA IN**

2 **HDMI OUT (1080p)**

3 **LAN port**

4 **DIGITAL AUDIO OUT (COAXIAL)**

5 **2CH AUDIO OUT (Left/Right)**
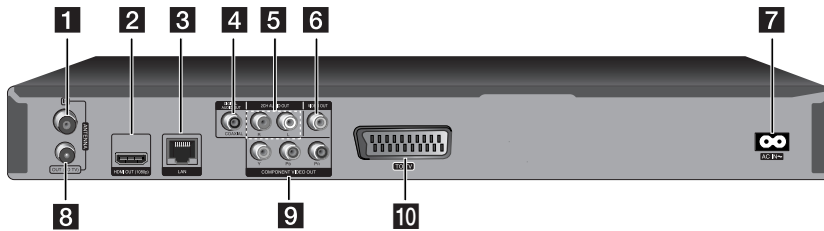
6 **VIDEO OUT**

7 **AC IN connector**
Connect the supplied power cord.

8 **ANTENNA OUT (TO TV)**

9 **COMPONENT VIDEO OUT (Y P$_B$ P$_R$)**

10 **TO TV (SCART Jack)**

3
Installation

Connections to Your TV

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

- Antenna connection (page 14)
- HDMI connection (page 15)
- Component Video connection (page 16)
- Composite connection (page 16)
- Scart 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.
> - 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.

Antenna connection to your TV and this unit

Connect one end of the RF cable to ANTENNA OUT(TO TV) jack on the unit and other end to ANTENNA IN jack on your TV. Passes the signal from the ANTENNA IN jack to your TV/monitor.

Connect the Terrestrial TV antenna to the ANTENNA IN jack on the unit. If you want to use an indoor antenna, use one with a signal amplifier rated at 5V, 100mA and set [Antenna Feed 5V] to [ON] in the setup menu (See page 32).

Antenna Connection

Rear of this unit

ANTENNA

RF Cable   TV

ANTENNA IN
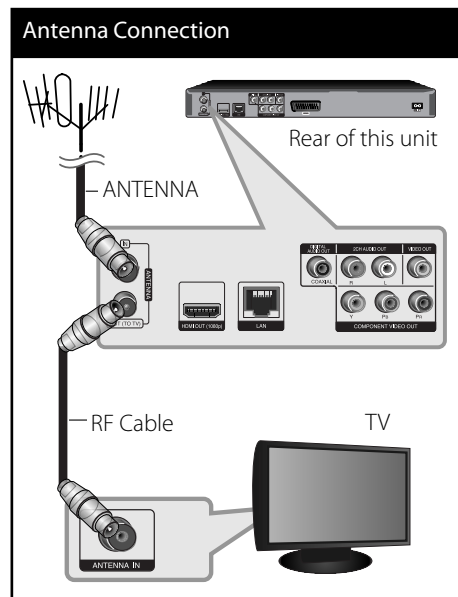
HDMI Connection

If you have a HDMI TV or monitor, you can connect it to this unit using a HDMI cable (Type A, Version 1.3). Connect the HDMI jack on the unit to the HDMI jack on a HDMI compatible TV or monitor.

HDMI Connection

Rear of this unit

HDMI Cable   TV

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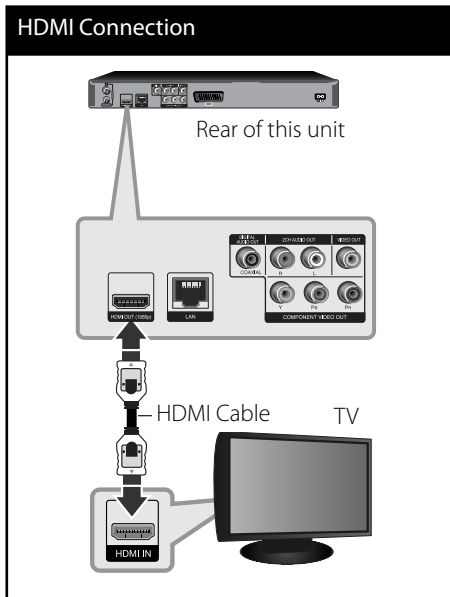
Set the TV's source to HDMI (refer to TV's Owner's manual).

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.

• When you use HDMI connection, you can change the resolution for the HDMI output. (Refer to "Resolution Setting" on page 17.)

• Select the type of video output from the HDMI OUT jack using [HDMI Color Setting] option on the [Setup] menu (see page 34).

• Changing the resolution when the connection has already been established may result in malfunctions. To solve the problem, turn off the player and then turn it on again.

• When the HDMI connection with HDCP is not verified, TV screen is changed to black screen. In this case, check the the HDMI connection, or disconnect the HDMI cable.

• If there is noise or lines on the screen, please check the HDMI cable (length is generally limited to 4.5m).

Additional Information for HDMI

• When you connect a HDMI or DVI compatible device make sure of the following:
  - Try switching off the HDMI/DVI device and this player. Next, switch on the HDMI/DVI device and leave it for around 30 seconds, then switch on this player.
  - The connected device's video input is set correctly for this unit.
  - The connected device is compatible with 720x576p, 1280x720p, 1920x1080i or 1920x1080p video input.

• Not all HDCP-compatible HDMI or DVI devices will work with this player.
  - The picture will not be displayed properly with non-HDCP device.
  - This player does not playback and TV screen is changed to black screen.

3

Installation

Component Video Connection

Connect the COMPONENT VIDEO OUT jacks on the unit to the corresponding input jacks on the TV using Y PB PR cables. Connect the left and right AUDIO OUT jacks of the unit to the audio left and right IN jacks on the TV using the audio cables.

Component Connection

Rear of this unit

Audio Cable

Component video cable

COMPONENT INPUT

VIDEO   AUDIO INPUT

TV
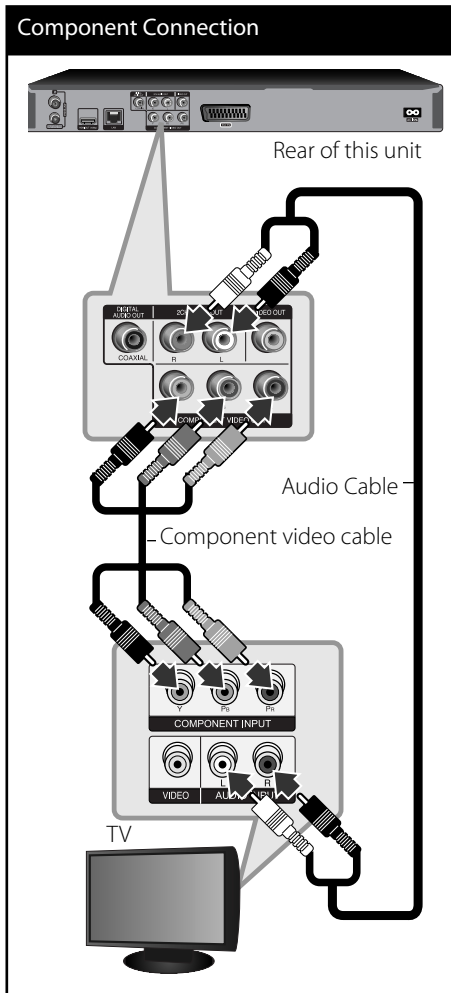
❗ NOTE

When you use COMPONENT VIDEO OUT connection, you can change the resolution for the output. (Refer to "Resolution setting" on page 88.)

Composite connection

Connect the VIDEO OUT jack on the Recorder to the video in jack on the TV using the video cable supplied. Connect the Left and Right AUDIO OUT jacks on the Recorder to the audio left/right in jacks on the TV using the supplied audio cables.

Composite connection

Rear of this unit

Audio Cable

Video Cable

TV
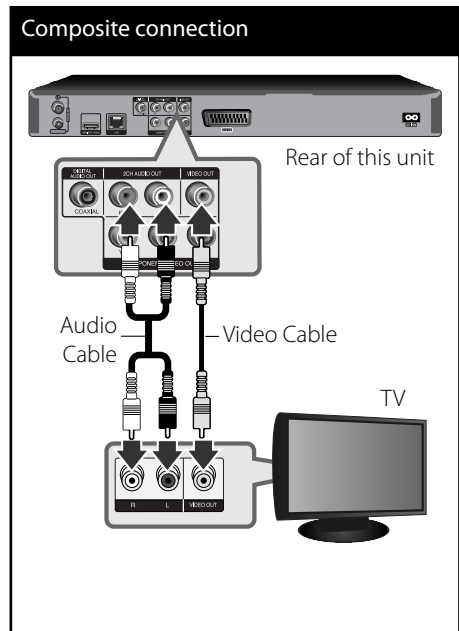
Scart connection

Connect one end of the scart cable into the TO TV SCART jack on the unit and other end to the corresponding in jack on your TV. You can get Audio and Video signals together with this connection.

Scart Connection

Rear of this unit

Scart Cable

TV
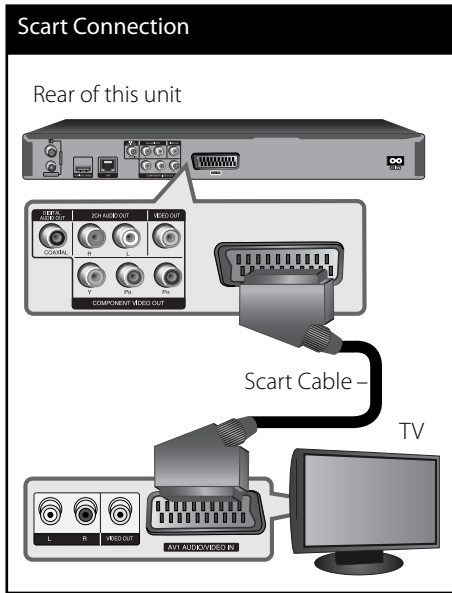
Resolution Setting

The unit provides several output resolutions for HDMI OUT and COMPONENT VIDEO OUT jacks. You can change the resolution using [Setup] menu.

1. Press HOME.

2. Use ∧/∨/</> to select the [Setup] and press ENTER (◉).
The [Setup] menu appears.
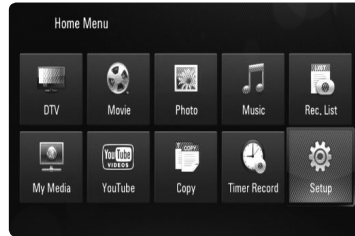
3. Use ∧/∨ to select [DISPLAY] option then press ENTER (◉) or > to move to the second level.

4. Use ∧/∨ to select the [Resolution] option then press ENTER (◉) or > to move to the third level.
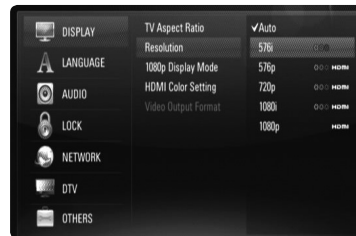
5. Use ∧/∨ to select the desired resolution then press ENTER (◉) to confirm your selection.

Connecting to an Amplifier

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

• HDMI Audio connection (page 18)

• Digital Audio connection (page 19)

• 2CH Analogue Audio connection (page 19)

Since many factors affect the type of audio output, see "Audio Output Specifications" for details (pages 86-87).

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 unit. 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)

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. You will need to activate the player's digital output. (See "[AUDIO] Menu" on pages 35-36.)

HDMI Audio Connection

Rear of this unit

HDMI Cable

Amplifier/Receiver

HDMI Cable

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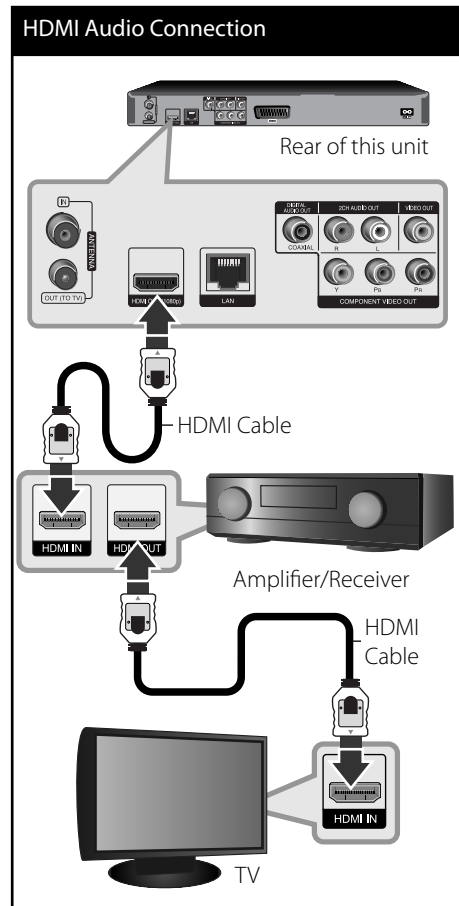
Connect the amplifier's HDMI output jack to HDMI input jack on your TV using a HDMI cable if your amplifier has HDMI output jack.

Connecting to an Amplifier via Digital Audio Output

Connect the player's DIGITAL AUDIO OUT (COAXIAL) jack to the corresponding in jack (COAXIAL) on your amplifier.
Use an optional digital (coaxial) audio cable. You will need to activate the unit's digital output. (See "[AUDIO] Menu" on page 35-36.)

Digital Audio Connection

Rear of this unit

— Coaxial Cable

Amplifier/Receiver
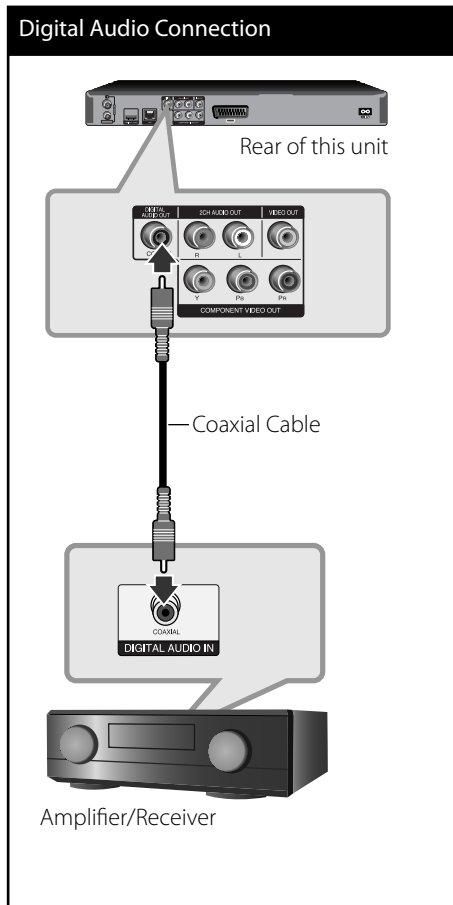
Connecting to an Amplifier via 2 Channel Audio Output

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

2CH Analogue Audio Connection

Rear of this unit

Audio Cable —

Amplifier/Receiver

3

Installation
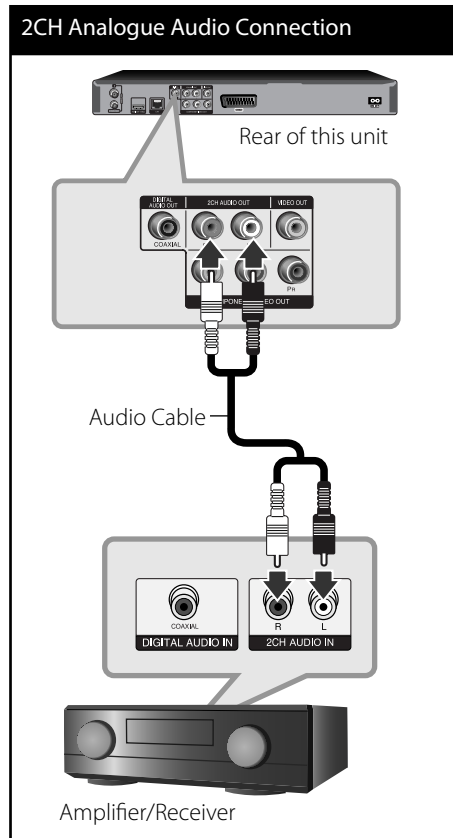
Connecting to your Home Network

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

Wired network 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 (CAT5 or better with RJ45 connector). In the example configuration for wired connection below, this player would be able to access content from either of the PCs.

> ### ⚠️ 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.
> - If you want to access content from PCs or DLNA servers, this unit must be connected to the same local area network with them via a router.

Wired Network Connection

Router

WAN

LAN 1

LAN 2

LAN 3

Broadband service

PC

PC

LAN Cable

Rear of this unit
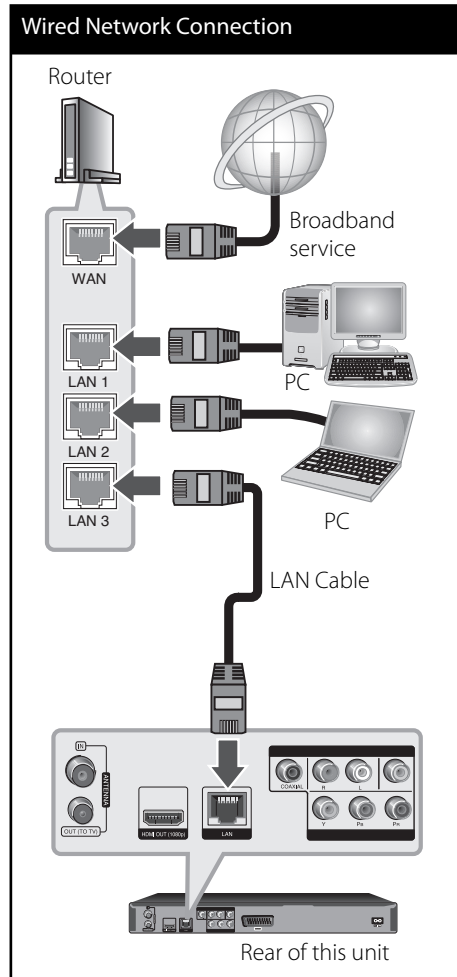
Wired Network Setup

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 follow.

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. The [CONNECTION SETTING] menu appear on the screen. Use Λ/V to select the [Wired] and press ENTER (●).
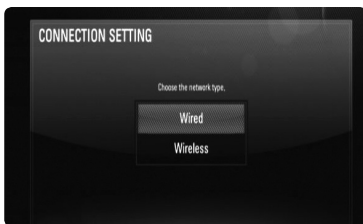
3. Use Λ/V/</> to select the IP mode between [Dynamic] and [Static].
Normally, select [Dynamic] to allocate an IP address automatically
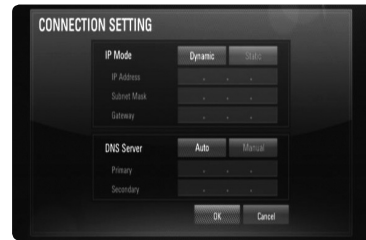
NOTE

If there is no DHCP server on the network and you want to set the IP address manually, select [Static] then set the [IP Address], [Subnet Mask], [Gateway] and [DNS Server] using Λ/V/</> 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 unit will ask you to test the network connection. Select [OK] and press ENTER (●) to complete the network connection.
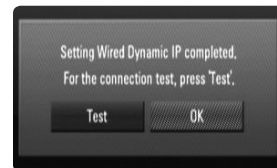
6. If you select [Test] and press ENTER (●) at step 5 above, the network connection status is displayed on the screen.
You can also test it on the [Connection Status] in the [Setup] menu.

Wireless Network Connection

Another connection option is to use an Access Point or an wireless router. In the example configuration for wireless connection below, this unit would be able to access content from either of the PCs.

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

This player is equipped with an IEEE 802.11n (2.4 GHz band only) wireless module, which also supports the 802.11b/g standards. For the best wireless performance, we recommend using a IEEE 802.11n certified Wi-Fi network (access point or wireless router).

Wireless Network Connection

Front of this unit

Wireless Communication

PC

Access Point or Wireless Router

WAN

Broadband service

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

> **⚠ NOTE**
>
> For best performance, a direct wired connection from this player to your home network's router or cable/DSL modem is always the best option. If the player is far away from your router or cable/DSL modem, Ethernet or LAN cables are available at many stores in lengths of 50 feet and longer. If you do chose to use the wireless option, note that performance can sometimes be affected by other electronic devices in the home.
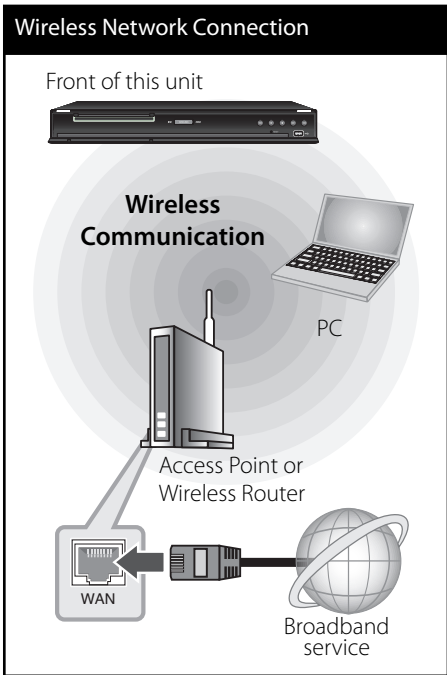
Wireless Network Setup

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

PREPARATION

Before setting the wireless network, you need to:
- connect the broadband internet to the wireless home network.
- set the access point or wireless router.
- note the SSID and security code of the network.

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

🖥 DISPLAY	**Connection Setting** — Select > or ⊙ to
A LANGUAGE	Connection Status — set the connection.
◎ AUDIO	BD-LIVE connection
🔒 LOCK	
◎ NETWORK	
📺 DTV	
🗔 OTHERS	

2. The [CONNECTION SETTING] menu appears on the screen. Use ∧/∨ to select the [Wireless] and press ENTER (⊙).

CONNECTION SETTING

Choose the network type.

Wired
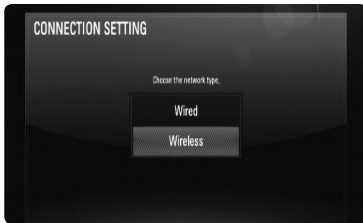
Wireless

3. Selects [OK] and press ENTER (⊙) to continue. The new connection settings reset the current network settings.

CONNECTION SETTING

The new setting resets the existing one.
Continue?

OK   No
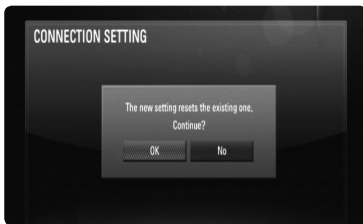
4. The unit scans all available access points or wireless routers within range and displays them as a list. Use ∧/∨ to select an access point or wireless router on the list, and then press ENTER (⊙).

CONNECTION SETTING

Access point name(SSID)   1/3

Belkin_N1_Wirel   ▯▯▯▯▯   Push Button

HMS-AP-3d0a   ▯▯▯▯   Manual

LGEWLESS   ▯▯▯

If you have security on your access point or wireless router, verify that the WEP or WPA key that was entered into the player matches the router's information exactly. You need to input the security code as necessary.

! **NOTE**

• WEP security mode generally have 4 keys available on an access point or wireless router's setting. If your access point or wireless router use WEP security, enter the security code of the key "No.1" to connect on your home network.

• An Access Point is a device that allows you to connect to your home network wirelessly.

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

[Push Button] – If your access point or wireless router that supports Push Button Configuration method, select this option and press the Push Button on your access point or wireless router within 120 counts. You do not need to know the access point name (SSID) and security code of your access point or wireless router.

5. Use ∧/∨/</> to select the IP mode between [Dynamic] and [Static]. Normally, select [Dynamic] to allocate an IP address automatically.

CONNECTION SETTING

IP Mode   Dynamic   Static
IP Address   .   .   .
Subnet Mask   .   .   .
Gateway   .   .   .

DNS Server   Auto   Manual
Primary   .   .   .
Secondary   .   .   .

OK   Cancel

3

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Installation
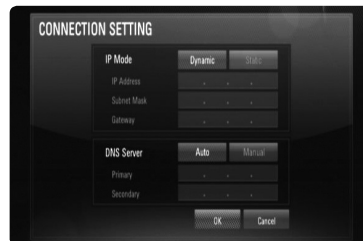
⚠ NOTE

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

6. Select [OK] and press ENTER (⊙) to apply network settings.

7. The unit will ask you to test the network connection. Select [OK] and press ENTER (⊙) to complete the network connection.

8. If you select [Test] and press ENTER (⊙) at step 7 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 unit 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 unit.
- You must use a Router to use xDSL service.
- A DSL modem is required to use DSL service and a cable modem is required to use cable modem service. Depending on the access method of and subscriber agreement with your ISP, you may not be able to use the internet connection feature contained in this player or you may be limited to the number of devices you can connect at the same time. (If your ISP limits subscription to one device, this player may not be allowed to connect when a PC is already connected.)
- The use of a "Router" may not be allowed or its usage may be limited depending on the policies and restrictions of your ISP. For details, contact your ISP directly.
- The wireless network operate at 2.4GHz radio frequencies that are also used by other household devices such as cordless telephone, Bluetooth® devices, microwave oven, and can be affected by interference from them.
- Turn off all unused network equipment in your local home network. Some devices may generate network traffic.
- For the purpose of the better transmission, placing the player from the access point as close as possible.
- In some instances, placing the access point or wireless router at least 1.5 ft (0.45m) above the floor may improve the reception.
- Move closer to the access point if possible or re-orient the player so there is nothing between it and the access point.

- The reception quality over wireless depends on many factors such as type of the access point, distance between the player and access point, and the location of the player.
- Set your access point or wireless router to Infrastructure mode. Ad-hoc mode is not supported.

3

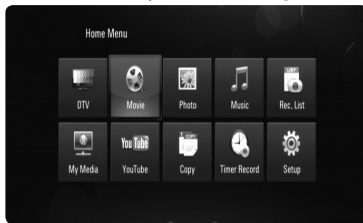Installation

USB device connection

This unit can play movie, music and photo files contained in the USB device.
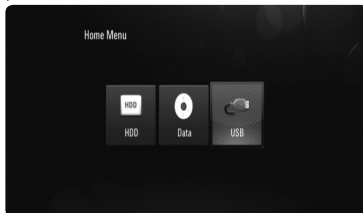
Playback content in the USB device

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

USB device connection

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 ▶ or ENTER (◉) to play the file.

6. Withdraw the USB device carefully.

> ## ! NOTE
>
> - This unit supports USB flash memory/external HDD formatted in FAT16, FAT32 and NTFS when accessing files (music, photo, movie). However, for BD-Live, only FAT16 and FAT32 formats are supported. Please use the Internal Flash Memory or USB flash memory/external HDD formatted in either FAT16 or FAT32 when using BD-Live.
> - The USB device can be used for the local storage for enjoying BD-Live discs with Internet.
> - This unit can support up to 4 partitions of the USB device.
> - Do not extract the USB device during operation (play, recording, etc.).
> - An USB device which requires additional programme 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 or USB HUB, the USB device may not be recognized.
> - Some USB device may not work with this unit.
> - Digital camera and mobile phone are not supported.
> - USB Port of the unit cannot be connected to PC. The unit cannot be used as a storage device.
> - Unformatted storage must be used after formatting.
> - If USB HDD cannot be recognized, try another different USB cable.
> - Some of USB cable may not support enough current for normal USB operation.

Home Menu Overview

To access numerous functions of the unit, press HOME on the remote.

Basic button operations

HOME: Accesses or removes the Home Menu.
∧/∨/</> : Used to navigate on-screen displays.
ENTER (◉): Acknowledges menu selection.
RETURN (⤺): Exits the menu.
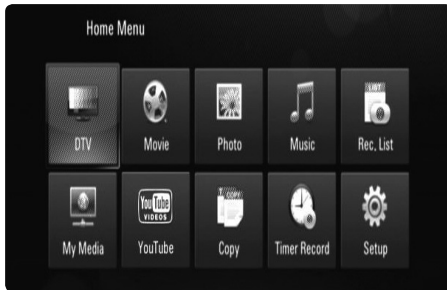
DTV
You can watch digital broadcasts.
(page 29-31)

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

Photo
Displays [PHOTO] menu. (page 61-63)

Music
Displays [MUSIC] menu. (page 63-64)

Rec. List
Displays the Recording List menu. (page 52)

My Media
Displays and play the shared contents from the selected server or PC. (page 65-69)

YouTube
Shows YouTube videos streamed from the Youtube server via the internet to your TV. (page 70-73)

Copy
Copies media files by connecting to various storage devices. (page 69-70)

Timer Record
Displays [Timer Record] menu. (page 47)

Setup
Displays [Setup] menu. (page 28-41)

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Settings

Adjust the Setup Settings

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

1. Press HOME.

2. Use Λ/V/</> to select the [Setup] and press ENTER (◉). The [Setup] menu appears.

3. Use Λ/V to select a first setup option, and press ENTER (◉) or > to move to the second level.

4. Use Λ/V to select a second setup option, and press ENTER (◉) or > to move to the third level.
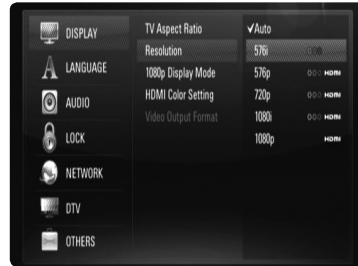
5. Use Λ/V to select a desired setting, and press ENTER (◉) to confirm your selection.

Settings for Digital TV

To use DTV functions, this recorder needs some settings in advance.

Selecting a Region

1. Press HOME.

2. Use Λ/V/</> to select the [Setup], and press ENTER (◉).

3. Use Λ/V to select the [DTV] , and press ENTER (◉).

4. Use Λ/V to select the [Region] and press ENTER (◉).

5. Use Λ/V to select a region where you operate this unit, and press ENTER (◉).

> ⚠ **NOTE**
>
> If the [DTV Lock System] option is set to [On], this function is not available (page 31).

Scanning programmes automatically

All available digital TV or radio programmes are searched and stored automatically based on the selected region.

1. Display [Setup] menu.

2. Use Λ/V/</> to select the [Auto Programming] and press ENTER (◉).

3. Use Λ/V to select the [Auto Scan] and press ENTER (◉) to start the programme scanning.

Select [Cancel] and press ENTER (◉) to cancel.

> ⚠ **NOTE**
>
> • This option is not available while recording or the [Permanent Timeshift] option is set to [On].
>
> • If the [DTV Lock System] option is set to [On], this function is not available (page 31).

Scanning programmes manually

Scans digital TV or radio programmes and adds the found programmes to the programme list.

1. Display [Setup] menu.

2. Use Λ/V/</> to select the [Auto Programming] and press ENTER (◉).

3. Use Λ/V to select the [Manual Scan] and press ENTER (◉) to display the [Manual Scan] menu.

4. Use </> to select the desired multiplexer (MUX), and press ENTER (◉) to start scanning.

OR

If you know the programme bandwidth and frequency, use </> to select the desired [Bandwidth], and fill the [Frequency] field using numerical buttons.

5. Press ENTER (◉) to start programme scanning.

> ⚠ **NOTE**
>
> • This option is not available while recording or the [Permanent Timeshift] option is the [Setup] menu is set to [On].
>
> • If the [DTV Lock System] option is set to [On], this function is not available (page 31).

Editing Programme List

You can remove any digital TV or radio programs stored on this recorder using [Program edit] menu.

1. Display [Setup] menu.

2. Use Λ/V/</> to select the [Program Edit] and press ENTER (◉).

3. Use Λ/V to select the [DTV] and press ENTER (◉) to display the [Edit - TV] menu.

4. Press yellow coloured (**C**) button to toggle the list between TV and Radio programme list.

[Edit - TV] or [Edit - Radio] menu shows the signal strength (📶) and quality (📶) of the current programme at the bottom.

5. Use Λ/V to select a programme you want to delete from the list, and press blue coloured (**D**) button.

If you do not want to remove the programme, select [No] and press ENTER (◉) on the popup menu.

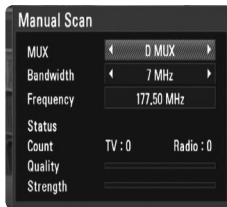**6.** Press RETURN (↩) to return to the TV screen.

> ⚠ **NOTE**
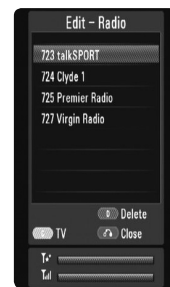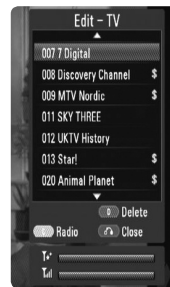>
> This option is not available while recording or the [Permanent Timeshift] option is set to [On].

Setting the DTV Lock System

Allows you to activate or deactivate all of the lock schemes previously set. When the [DTV Lock System] is set to [Off], the [DTV Rating] option is not effective.

1. Display [Setup] menu.

2. Use Λ/V/</> to select the [LOCK] and press ENTER (◉).

3. Use Λ/V to select the [DTV Lock System] and press ENTER (◉).

4. Input the password using numerical buttons.
If you have not set your password yet, input "0000" and press ENTER (◉).

5. Use Λ/V to select the [On] and press ENTER (◉) to activate the DTV Lock system.

Adjusting DTV Rating level

Viewing of some digital TV programmes can be limited according to the age limit you set.

1. Display [Setup] menu.

2. Use Λ/V to select the [LOCK] and press ENTER (◉).

3. Use Λ/V to select the [DTV Rating] and press ENTER (◉).

4. Input the password using numerical buttons.
If you have not set your password yet, input "0000" and press ENTER (◉).

5. Use Λ/V to set the limitation level and press ENTER (◉).

Allow All
You can view all programs.

04 Year(s) - 18 Year(s)
Rating [04 Year(s)] has the most restrictions and [18 Year(s)] is the least restrictive.

Block All
All programs are locked. To view a programme, you must input the 4-digit password you have created.

> **! NOTE**
>
> If the [DTV Lock System] is set to [Off] in the [Setup] menu, the [DTV Rating] option is not available.

Setting the antenna power

If you are using indoor antenna with a signal amplifier rated at DC 5V, 100mA, the recorder can supply power through ANTENNA IN jack.

1. Display [Setup] menu.

2. Use ∧/∨/</> to select the [Antenna Feed 5V] and press ENTER (◉).

3. Use ∧/∨ to select the [On], and press ENTER (◉) to supply antenna power.

> ⚠ **NOTE**
>
> The [Antenna Feed 5V] option must be set to [Off] when your indoor antenna is supplied the power from the mains. If you set the [Antenna Feed 5V] option to [On] for the indoor antenna which is supplied power from the mains, it may cause serious defect to this unit.

Setting the permanent Timeshift

You can set the Time Shift function automatically without pressing TIME SHIFT button. The timeshift will start after Digital TV tuner mode is started.

1. Display [Setup] menu.

2. Use ∧/∨ to select the [DTV], and press ENTER (◉).

3. Use ∧/∨ to select the [Permanent Timeshift] and press ENTER (◉).

4. Use ∧/∨ to select the [On] to apply permanent timeshift.

Setting a recording storage location

You can set the storage location where you want to store the DTV recordings.

1. Display [Setup] menu.

2. Use ∧/∨ to select the [OTHERS], and press ENTER (◉).

3. Use ∧/∨ to select the [REC Device] and press ENTER (◉).

4. Use ∧/∨ to select a storage, and press ENTER (◉).

> ⚠ **NOTE**
>
> This option is not available while recording.

[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 of the Component and HDMI video signal. Refer to page 17 and 88 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. If the COMPONENT VIDEO OUT is only connected, this changes the resolution to 1080i as default resolution.

[1080p]
Outputs 1080 lines of progressive video.

[1080i]
Outputs 1080 lines of interlaced video.

[720p]
Outputs 720 lines of progressive video.

[576p]
Outputs 576 lines of progressive video.

[576i]
Outputs 576 lines of interlaced video.

1080p Display Mode

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

> **! NOTE**
>
> •   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 1080p/24 Hz, the actual frame frequency of the video output will be 50 Hz to match the video source format.
> •   When the 1080p/24 Hz video source is outputted via HDMI connection, the VIDEO OUT and COMPONENT VIDEO OUT will not output any video signal.

HDMI Color Setting

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

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

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

Video Output Format

Select an option according to the TV connection type.

[YPbPr]
When your TV is connected to the COMPONENT OUT jacks on the unit.

[RGB]
When your TV is connected to the SCART (RGB signal) jack on the unit.

> **! NOTE**
>
> •   If HDMI cable is connected, the menu screen is disabled.
> •   This function is available only when the [Resolution] is set to [576i].

[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 82.

[Off] (Disc Subtitle only)
Turn off Subtitle.

> **! NOTE**
>
> Depending on the disc, your language setting may not work.

DTV Audio

Digital channels sometimes provide multiple audio tracks, often in a different language. You can set a default audio language with this setting. If provided by the broadcaster, you can also select a different audio language while viewing TV by pressing AUDIO repeatedly. (See "Selecting DTV audio language" on page 43.)

DTV Subtitle

Digital channels sometimes provide subtitle, often in a different language. You can set a default subtitle language with this setting, if DTV subtitle is provided by the broadcaster. Press SUBTITLE repeatedly to select a subtitle language while viewing digital TV viewing. (See "Selecting DTV subtitle language" on page 44.)

[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 pages 86-87 for details.

Digital 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 unit.

[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.

[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.

> ! **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 [Digital Output] option is set to [Re-encode], the 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.

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

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

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

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

DRC (Dynamic Range Control)

When a content 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

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 twice, and press ENTER ($\odot$) to create a new password.

Password

You can create or change the password.

[New]
Enter a 4-digit password twice, and press ENTER ($\odot$) to create a new password.

[Change]
Enter the current password and press ENTER ($\odot$). Enter a 4-digit password twice, and press ENTER ($\odot$) 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 ($\odot$), 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.

BD Rating

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.

Area Code

Enter the code of the area whose standards were used to rate the DVD video disc, based on the list on page 81.

DTV Lock System

Allows you to set up specific programs and ratings through blocking schemes. Also allows you to activate or disable all of the lock schemes previously set up. A password is required to gain access to the lock menu options. When the DTV Lock System is set to [OFF], the [DTV Rating] is not effective. (See "Setting the DTV Lock System" on page 31.)

DTV Rating

You can set the rating to block out all the programs with rating above a specified level. (See "Adjusting DTV Rating level" on pages 31.)

[NETWORK] Menu

The [NETWORK] settings are needed to use the software update, BD Live and My Media.

Connection Setting

If your home network environment is ready to connect the unit, the unit needs to be set the wired or wireless network connection for network communication. (See "Connecting to your Home Network" on pages 20-25.)

Connection Status

If you want to check the network status on this unit, select the [Connection Status] option and press ENTER (◉) to check whether a connection to the network and the internet has been established.

BD-LIVE connection

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

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

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

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

[DTV] Menu

Region

Select a region where you operate this recorder. Refer to page 29 for more information.

Auto Programming

This option scans a programme and sets the available programmes. Refer to page 29-30 for more information.

Program Edit

This option allows you to edit the TV or Radio programmes. Refer to page 30 for more information.

Time

The clock must be set in order to use timer recording.

[Auto]
Select a programme that broadcasts a clock signal and the clock will be set automatically. If the time that has been automatically set is not correct when compared your local time, you can set additional time option. Select an option relative to GTM in [Time Zone].

[Manual]
If there is no channel that broadcasts a clock signal in your area, you can set the time and date manually. Use </> to select each field, and input correct time and date using Λ/V, and press ENTER (◉).

Antenna Feed 5V

If you are using an indoor antenna, use one with a signal amplifier rated at DC 5V, 100mA and set this option to [On]. Refer to page 32 for more information.

Permanent Timeshift

Set this option to [On] to use the Time Shift function automatically without pressing TIME SHIFT button. The timeshift will start after TV viewing is started. Refer to page 32 for more information.

[OTHERS] Menu

Power Save Mode

Selects whether this recorder is in power save mode when the power is turned off. This option is not available when a timer recording is set.

[On]
The front panel display is off and only signals arriving at the antenna input are passed through when the recorder is turned off.

[Off]
Turns off the [Power Save Mode] function.

REC Device

This option sets the storage where your TV recording will be stored. Select an option between [HDD] or [USB], and press ENTER (◉) to set. Refer to page 32 for more information.

> **! NOTE**
>
> • When you select [USB], make sure that there is sufficient space for the recording on the USB HDD device.
> • This option is not available while recording.

BD Storage Select

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

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

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

BD Storage Clear

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

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

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

> **! NOTE**
>
> If you select USB Storage, playback, copying and recording on the USB device is disabled.

HDD Format

Everything recorded on the HDD will be erased.

1. Press HOME.

2. Use $\wedge$/$\vee$/$<$/$>$ to select [Setup] in the [Home] menu, and press ENTER (⊙).

3. Use $\wedge$/$\vee$ to select the [OTHERS] option from the [Setup] menu, and press ENTER (⊙).

4. Use $\wedge$/$\vee$ to select the [HDD Format], and press ENTER (⊙) to display the sub-options.

5. Use $<$/$>$ to select the [OK], and press ENTER (⊙).

   Select [Cancel] and press ENTER (⊙) to cancel.

   Warning message appears on the screen.

6. Use $\wedge$/$\vee$ to adjust the buffer for timeshift function, and press ENTER (⊙) while [Next] option is highlighted.

   This option is available only when you are formatting the HDD.

   Select [Back] and press ENTER (⊙) to return to the previous.

7. Use $<$/$>$ to select the [Format], and press ENTER (⊙) to start the HDD format.

   Select [Back] and press ENTER (⊙) to return to the previous.

8. After HDD format is finished, press ENTER (⊙) to reboot the recorder.

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 video.

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

[DivX reg. Code]
Displays the registration code of your player.

[Deactivate]
Deactivate your unit and display the deactivation code.

NOTE

All the downloaded videos from DivX VOD with the unit's registration code can only be played on the unit's internal hard disk drive/USB Device.

Factory Set

You can reset the unit to its original factory settings.

NOTE

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

Software Update

You can update the software by connecting the unit directly to the software update server (see page 84-85).

Software Update (DTV)

You can also update the latest software through the builtin digital tuner.

NOTE

- DTV antenna must be connected to the ANTENNA IN jack on the rear panel.
- Stop recording before using update function.

1. Press HOME.

2. Use Λ/V/</> to select [Setup] in the Home menu, and press ENTER (⏺).

3. Use Λ/V to select the [OTHERS] option from the [Setup] menu, and press ENTER (⏺).

4. Use Λ/V to select the [Software Update (DTV)], and press ENTER (⏺) to display the sub-options.

5. Use Λ/V to select the [Operation mode], and press ENTER (⏺).

6. Use </> to select the [Yes], and press ENTER (⏺) to search for a new update.

The recorder will check for the newest update.

If there is no update available, the Message, "No software" appears.

7. Press ENTER (⏺) to select the [Yes], and press ENTER (⏺) to start software update.

8. When update is completed, the message, "Update is complete." will appear, and the power will turn off automatically after 5 seconds.

9. Turn the power back on. The system now operates with the new version.

Disclaimer Notice

Press ENTER (⏺) to view the notice of Network Service Disclaimer on page 90.

3

Installation

4
Operation

Using the Digital TV functions

You can watch and record the digital TV programmes or playback the recorded TV programmes you want to watch using this unit.
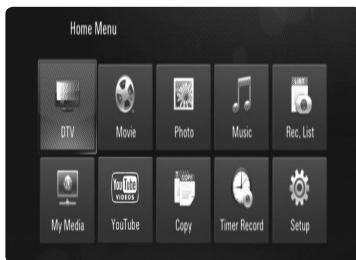
Viewing the Digital TV

Viewing the Digital TV broadcasting on the TV screen.

> **! NOTE**
>
> • DTV antenna connection is required. (page 14)
> • DTV settings such as [Auto Programming] in the [Setup] menu may be required. (page 29)

1. Press ⏻ (POWER) to turn on the recorder.

2. Use ∧/∨/</> to select [DTV] on the HOME menu and press ENTER (⊙).

Changing Digital TV programmes

Generally, press PR (∧/∨) or ∧/∨ to select the programme position, or entering a programme number using numerical buttons. If you want to change the programme on the programme list, follow the instruction as below.

1. While watching DTV, press ENTER (⊙) or PR LIST.
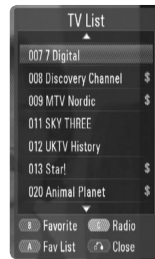
2. Press yellow coloured (**C**) button to toggle menu between [TV List] and [Radio List].

3. Use ∧/∨ to select a desired programme, and press ENTER (⊙).

4. Press RETURN (⮌) to exit the programme list.

Setting favourite programmes

You can set a program to favorite channel.

1. While watching DTV, press ENTER (◉) or PR LIST.

2. Press yellow coloured (**C**) button to toggle menu between [TV List] and [Radio List].

3. Use Λ/V to select a programme you want to add on the Favourite List.

4. Press green coloured (**B**) button to set the programme as a favourite programme.

> The ◉ mark appears for the favourite programmes.
>
> To cancel the favourite programmes, select a programme with ◉ mark, and press red coloured button.

5. Press **A** coloured (Red) button to display the favourite programme list.

> On the Favourite List menu, press yellow coloured (**C**) button to toggle menu between TV FAV List and Radio FAV List.

Viewing the programme information

You can view a description of the programme being broadcast.

1. While watching DTV, press INFO/DISPLAY (⊡) to display the programme information.

2. Press INFO/DISPLAY (⊡) again to close the programme information.

Selecting DTV audio language

Some digital programmes may broadcast several audio languages or encoding methods. You can select an audio language or an encoding method when it is available.

1. While watching DTV, press AUDIO.

2. Use </> to select an audio language or an encoding method, and press ENTER (◉).

Selecting DTV subtitle language

Some digital programmes may broadcast several subtitle language. You can select a subtitle language when it is available.

1. While watching DTV, press SUBTITLE.

2. Use **</>** to select a subtitle language, and press ENTER (⦿).

> **! NOTE**
>
> You can find a programme that supports subtitle language on the programme information.
> For the programmes with subtitle, SUB icon appears on the programme information.

Viewing the EPG (Electronic Programme Guide) Display

The Electronic Programme Guide is a guide showing the programme schedule for a day or more at a time.

1. Press GUIDE while watching Digital TV.

   The EPG screen appears and it updates automatically if the EPG data is acquired successfully.

2. Select an item using **</>** and adjust the selected item using **Λ/V**.

   The adjustable items are **3** , **4** and **5**.

1 Shows the Live Digital TV programme that you have chosen on the programme field.

2 Indicates the detailed information of the currently selected programme.

3 Indicates the currently selected date. Use **Λ/V** to select a different date.

4 Indicates the current programme name. Use **Λ/V** to change the programme.

5 Indicates the programme guide of the selected programme. Shows the start time, end time and title of the programme.

> **! NOTE**
>
> Digital Services availability and contents may differ depending on the broadcaster.

Using the timeshift function manually

You can pause a Live TV broadcast, then continue watching the programme at a later time. This is useful when you receive an unexpected call or visitor while watching TV.

The Following are operating steps when the [Permanent Timeshift] option is set to [Off].

1. Press TIME SHIFT while watching a TV broadcast. The picture pauses, and the recorder starts recording the current TV programme to the HDD.

2. Press ▶ to resume watching the prgramme.

Press INFO/DISPLAY (▱) to display the progress of timeshift.

Press ◀◀ / ▶▶ to move the starting point or the ending point of timeshift.

Press ◀◀ / ▶▶ to playback of timeshift fast forward or fast reverse.

Press ▶▶ while in pause mode to slow down the timeshift playback speed. Press ▶▶ repeatedly to change the playback speed.

3. Press ■ to cancel the timeshift.

Timeshift cannot be saved as a recorded title.

## Using the permanent timeshift

If you set the [Permanent Timeshift] option to [On], live TV broadcast will automatically be recorded to the HDD without pressing TIME SHIFT button. The timeshift will start automatically when the Digital TV tuner mode is started.

Refer to "Setting the permanent Timeshift" on page 32 to set the [Permanent Timeshift] option.

1. Press ⏻ (POWER) to turn on the unit.

2. Use Λ/V/</> to select [DTV] and press ENTER (◉).
The timeshift function will automatically start.

Press ◀◀ / ▶▶ to move the starting point or the ending point of timeshift.

Press ◀◀ / ▶▶ to playback of timeshift fast forward or fast reverse.

Press ▶▶ while in pause mode to slow down the timeshift playback speed. Press ▶▶ repeatedly to change the playback speed.

3. Press HOME to exit from the DTV viewing.

Using the teletext (Viewing Teletext)

Many Digital TV programmes broadcast information via their text service, and this recorder has access to dedicated text programmes transmitted by the broadcasters.
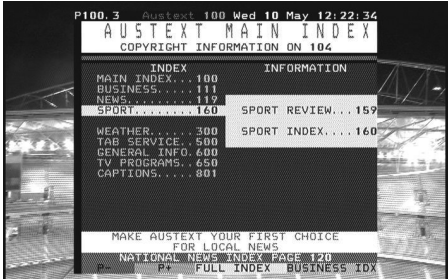
1. Press TEXT while watching TV.

2. Use green or yellow coloured (**B** or **C**) button to select a page.

   You can also select a page by entering a three digit number with the numerical buttons.

3. Press TEXT to exit the teletext screen.

> **NOTE**
>
> Additionally, you now have four coloured buttons to navigate through the content of the page. The use of these coloured buttons will be displayed on the screen.

Recording TV programmes

You can record Digital TV programmes, store it on the HDD or USB device.

PREPARATION

- Select the recording location using [REC Device] option on the SETUP menu. (page 32).
- Connect a USB device, if [REC Device] option is set to [USB].

Normal Recording

1. Use PR (∧/∨) or ∧/∨ to select a programme you want to record.

2. Press ● REC to start recording.

   Press ▌▌ to pause recording, press ▌▌ again to resume recording.

   You can watch another programme while recording.

3. Press ■ to stop recording.

   To stop recording, you must move to the programme being recorded before pressing ■.

> **NOTE**
>
> • TV recordings will be stored in the [REC] folder of the storage you've set in the [REC Device].
> • Only HDD type USB storages are Available for USB recording. Flash type USB storages are not available for recording.

Dual Programme Recording

You can record two Digital TV programme at the same time.

1. Use PR (∧/∨) or ∧/∨ to select a programme you want to record.

2. Press ● REC to start recording.

3. Use PR (∧/∨) or ∧/∨ to select another programme you want to record.

4. Press ● REC to start recording.

While recording two programmes simultaneously, you can only watch the programmes being recorded.

5. Press ■ to stop recording.

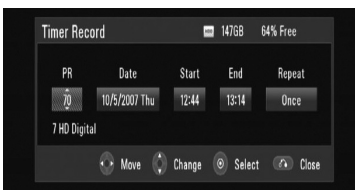To stop recording, you must move to the programme being recorded before pressing ■.

Timer Recording (Manual)

You can set the timer for a total of 32 programmes, up to 30 days in advance.

1. While watching TV, press TIMER REC.

2. Use ∧/∨ to select [NEW], and press ENTER (◉).

3. Select an item using </> and adjust it using ∧/∨.
The adjustable items are listed below.

PR	Sets the programme position.
Date	Sets the date.
Start	Sets the start time.
End	Sets the end time.
Repeat	Choose a desired repeat mode. (Once, Everyday, Mon-Fri, Mon-Sat or Weekly)

> ! **NOTE**
>
> • The timer recording can be set from 3 minutes after the current time.
> • Timer recording is not available on a USB device.

4. Press ENTER (◉) and confirm message appears.

5. Select [OK] then press ENTER (◉).

If you input the wrong information, an error message will be appear and the timer recording cannot be made.

Select [Cancel] and press ENTER (◉) to cancel.

Timer Recording (EPG)

You can also set the timer based on the information provided by the EPG.

1. While watching TV, press GUIDE.

2. Use **</>** to select date field, and select the date of recording schedule using **∧/∨**.

3. Use **</>** to select programme field, and set the programme using **∧/∨**.

4. Use **</>** to select the programme list, and select a programme you want to record using **∧/∨**.

5. Press ● REC.

For the successfully scheduled programme, a red bullet mark appears.

A red bullet mark may not appear for inavailable programme to record.

6. Press RETURN (⮌) to return to the TV viewing.

7. Press TIMER REC, and check whether the schedule is registered properly or not.

Canceling a timer recording

You can cancel a timer recording before the timer recording actually starts.

1. While watching TV, press TIMER REC.

2. Use **∧/∨** to select a schedule you want to cancel.

3. Press the blue coloured (**D**) button.

4. Use **</>** to select [Delete one], and press ENTER (◉).
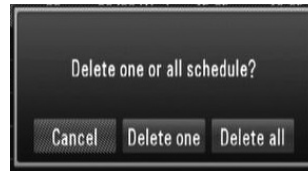
Select [Cancel] and press ENTER (◉) to cancel.

Select [Delete all] and press ENTER (◉) to delete whole schedules.

Checking a timer history

You can check if the timer recording is completed or not on the [Timer Record History] menu. The [Result] column shows "OK" or "Fail".

1. While watching TV, press TIMER REC.

2. Press yellow coloured (**C**) button to display the [Timer Record History] menu.

To delete an item, select an item and press ENTER (●). And select [OK] and press ENTER (●) to delete the history.

Editing a timer recording

You can edit a pre-scheduled timer recording before the timer recording actually starts.

1. While watching TV, press TIMER REC.

2. Use ∧/∨ to select a schedule you want to edit.

3. Press ENTER (●) to display the [Timer Record] menu.
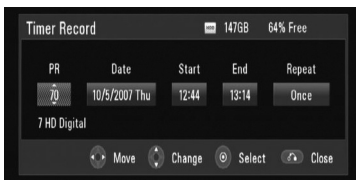
4. Follow the steps 3-5 from "Timer Recording (Manual)" on page 47 to complete the editing.

Instant Timer Recording

You can set the recording time instantly to stop the recording automatically.

1. Use PR (∧/∨) or ∧/∨ to select a programme you want to record.

2. Press ● REC. to start recording.

3. While recording, press ● REC. repeatedly to set the recording duration.

   Continue (Normal recording) => 10M => 20M => 30M => 60M => 90M => 120M => Continue
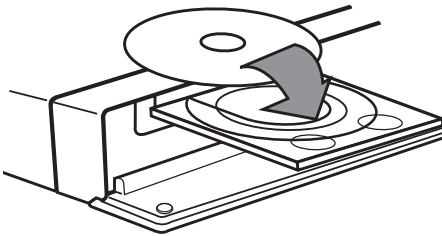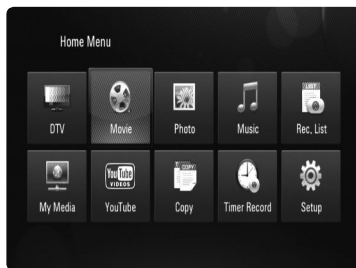

4. Press ■ to stop recording.

General Playback

Playing Discs

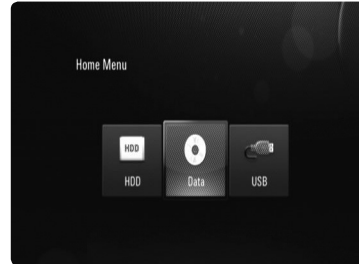**1.** Press OPEN/CLOSE(▲) and place a disc on the disc tray.

2. Press OPEN/CLOSE(▲) to close the disc tray.

For the most Audio CD, BD-ROM and DVD-ROM discs, playback starts automatically.

3. Press HOME.

4. Select [Movie], [Photo] or [Music] using Λ/V/</>, and press ENTER (⦿).

5. Select the [Data] option using </>, and press ENTER (⦿).

This step is needed only when a disc and/or a USB device is connected simultaneously in this unit.

6. Select a file using Λ/V/</>, and press ▶ or ENTER (⦿) to play the file.

> ⚠️ **NOTE**
>
> • Playback functions described in this manual are not always available in every files 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.

Playing HDD or USB

The unit can play movie, music and photo files on the HDD or USB.

Before playing movie, music or photo files, read "File requirement" on page 10.

1. Press HOME.

2. Use ∧/∨/</> to select [Movie], [Photo] or [Music] in the [Home] menu, and press ENTER (◉).

3. Select a storage type using </> and press ENTER (◉).

[HDD]
Displays media (Movie, Music, Photo) files stored in HDD.

[USB]
Displays media (Movie, Music, Photo) files stored in a connected USB device.

4. Use </> to select a media type (Movie, Music or Photo).

5. Use ∧/∨ to select a file you want to play.

   Use ∧/∨ to select a folder, and press ENTER (◉). A list of files and sub-folders in the folder appears.

   If you want to move to the upper directory, press RETURN or use ∧/∨ to select 🔺 and press ENTER (◉).

   Press INFO/DISPLAY (🔲) while selecting a movie file to display the detailed file information.

6. Press ▶ or ENTER (◉) to play the selected file.

To stop playback
Press ■ while playback.

To pause playback
Press ❚❚ while playback.
Press ❚❚ 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.
While the playback is paused, press ►► repeatedly to play various speed 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.

In the [My Media] menu, there may be many types of contents in the current folder together. In this case, press ◄◄❙ or ❙►► to go to the previous or next content with same type.

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.

4

Operation

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   MOVIE-N
 ACD   MUSIC   MUSIC-N   REC
 MOVIE-M   MUSIC-M

The unit records the point where you pressed the ■ depending on the disc.
If "▌▌■ (Resume Stop)" appears on the screen briefly, press ▶ to resume playback (from the scene point).

If you press ■ 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), OPEN/CLOSE, etc).
>
> • On BD-Video discs with BD-J, the resume playback function does not work.
>
> • If you press ■ once during BD-ROM interactive title playback, the unit will be in Complete Stop mode.

Sorting the recorded titles
 REC

1. Press HOME.

2. Use </> to select [Rec. List], and press ENTER (⏺).

3. Press red coloured (**A**) button to bring up the options menu.

4. Use ∧/∨ to select a sorting method among [Latest], [Time] or [Title Name].

Latest : sorted by recorded date.

Time : sorted by recorded time in numerical order.

Title Name : by title name in alphabetical orderr

Playing selected files
`REC` `MOVIE-M` `MUSIC-M` `PHOTO-M`

You can play only the selected files, using MARKER on the file list.

1. Follow the steps 1-5 from "Playing HDD or USB" on page 51 to select files.

2. Press MARKER on the file.

You can mark multiple files using MARKER button.

3. Press EDIT to display option menu.

To unmark all marked files, select the [Unmark ALL] on the option menu.

4. Use ∧/∨ to select [Select play], and press ENTER (◉) to play selected files.

Delete a file/folder from the list
`REC` `MOVIE-M` `MUSIC-M` `PHOTO-M`

You can delete files/folders from HDD or USB.

1. Follow the steps 1-5 from "Playing HDD or USB" on page 51 to select a file.

2. Press EDIT to display option menu.

3. Use ∧/∨ to select [Delete], and press ENTER (◉) to delete file.

If you want to delete multiple files and/or folders from HDD or USB, press MARKER on each file, folder and select the [Select Delete] on the option menu.

To unmark all marked files, select the [Unmark ALL] on the option menu.

Naming a file
`REC` `MOVIE-M` `MUSIC-M` `PHOTO-M`

You can rename the selected file on HDD or USB.

1. Follow the steps 1-5 from "Playing HDD or USB" on page 51 to select a file.

2. Press EDIT to display option menu.

3. Use ∧/∨ to select [Rename], and press ENTER (◉) to display the virtual keyboard.

4. Use ∧/∨/</> to select a character, and press ENTER (◉) to confirm your selection.

Select [Alphabet Capital], [Alphabet Small] or [Symbol], and press ENTER (◉) to change the character set of the virtual keyboard.

[Space] – Inserts a space at the cursor position.

[Delete] – Delete a previous character at the cursor position.

[←/→] – Moves cursor to the left or right.

[OK] – Complete naming.

[Cancel] – Cancels the naming, and return to the previous.

5. Use ∧/∨/</> to select [OK] and press ENTER (◉) to complete a naming.

4

Operation

Advanced Playback

Repeat Playback
`BD` `DVD` `AVCHD` `ACD` `MUSIC` `MUSIC-N` `REC`

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

BDs/DVDs/Movie files

🔁 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.

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

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

Audio CDs/Music files

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

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

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

⤨ ⟨A⟩ All – All the tracks or files will be played back repeatedly in random order.

↻ A–B – Selected portion will be repeated continually. (Audio CD only)
To return to normal playback, press CLEAR.

REC (File recordings)

⟨1⟩ – The current file will be played back repeatedly.

⟨A⟩ – All files in the current directory will be played back repeatedly.

> ! **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`

This unit 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 disc or title.

Enlarge the playback image
`BD` `DVD` `AVCHD` `MOVIE` `MOVIE-N` `PHOTO`

1. During playback or pause mode, press ZOOM to display the [Zoom] menu.

2. Use green or yellow coloured (**B** or **C**) buttons to zoom out or in the picture. You can move through the zoomed picture using ∧/∨/</> buttons.

3. Press RETURN (⤺) to exit the [Zoom] menu.

Marker Search
BD **DVD** **AVCHD** **MOVIE** **MOVIE-N**

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.
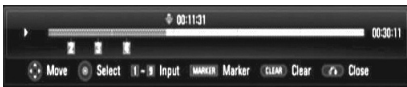
2. Press **v** to highlight a marker number. Use **</>** to select a marked scene that you want to delete.

3. Press CLEAR and the marked scene is erased from the search menu.

> ⚠ **NOTE**
>
> • This function may not work depending on discs, titles.
> • All marked points are cleared if the title is in complete stop (■) mode, the title is changed or if you unload the disc.

Changing content list view
MOVIE **MOVIE-N** **ACD** **MUSIC** **MUSIC-N** **PHOTO**

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

Method
Press INFO/DISPLAY (☐) button repeatedly.
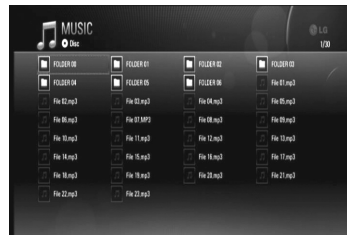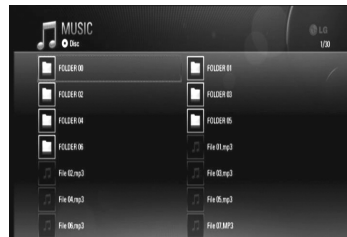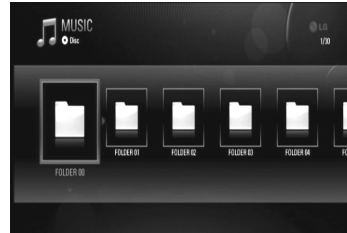
> ⚠ **NOTE**
>
> The equalizer will disappear when you change the music contents list view.

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.

> **! 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.

Screen Saver

The screen saver appears when you leave the player in Stop mode for about five minutes. The screen saver also appears when you are palying music for about five minutes, but the unit may not be turned off.

On-Screen display

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

Displaying content information on-screen

1. While playback, press INFO/DISPLAY (☐) to show various playback information.

a	**Title** – Current title number/total number of titles.
b	**Chapter** – Current chapter number/total number of chapters.
c	**Time** – Elapsed playing time/Total playback time.
d	**Audio** – Selected audio language or channel.
e	**Subtitle** – Selected subtitle.
f	**Angle** – Selected angle/total number of angles.

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 BD interactive title is playing back, some setting information is displayed on the screen but prohibited to be changed.

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

1. Press INFO/DISPLAY (▢) 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".

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

NOTE

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

Hearing a different audio
BD **DVD** **AVCHD** **MOVIE** **MOVIE-N**

1. During playback, press INFO/DISPLAY (▢) to display the playback menu.

2. Use Λ/V 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. If this is the case, press TITLE/POPUP 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** **MOVIE-N**

1. During playback, press INFO/DISPLAY (▢) to display the playback menu.

2. Use Λ/V 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.

4

Operation

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 INFO/DISPLAY ( ) to display the playback menu.

2. Use Λ/V to select the [Angle] option.

3. Use </> to select desired angle.

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

Enjoying BD-LIVE

This unit allows you to enjoy functions such as picture-in-picture, secondary audio and Virtual packages, etc., with BD-Video supporting BONUSVIEW (BD-ROM version 2 Profile 1 version 1.1/ Final Standard Profile). Secondary video and audio can be played from a disc compatible with the picture-in-picture function. For the playback method, refer to the instructions in the disc.

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

1. Check the network connection and settings (pages 20-25).

2. Insert a USB storage device to the USB port on the front panel.

   A USB storage device is needed to download bonus content.

USB device connection
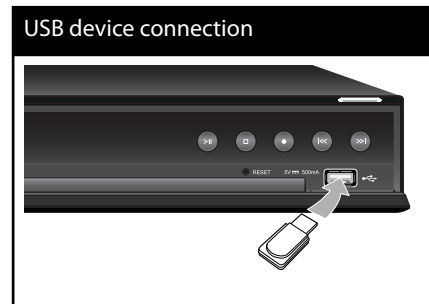
3. Press HOME, and set the [BD-LIVE connection] option on the [Setup] menu (page 38).

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 disc tray. Doing so may damage the connected USB device and BD-LIVE features may not operate properly with the damaged USB device anymore. If the connected USB device seems damaged from such an action, you can format the connected USB device from the PC and reuse it with this unit.

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

Playing a movie files and VR disc

You can play DVD-RW discs that is recorde in Video Recording (VR) format and movie files contained in a disc/HDD/USB device.

1. Press HOME.
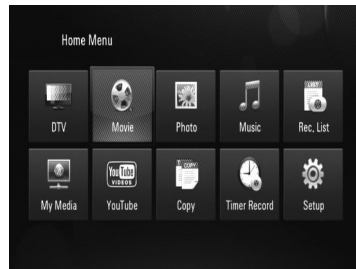
2. Select [Movie] using **</>**, and press ENTER (◉).

3. Select the [Data] option using **</>**, and press ENTER (◉).
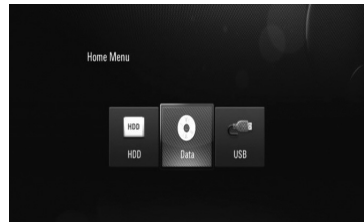
This step is needed only when a disc and/or a USB device is connected simultaneously on this unit.

4. Select a file using $\wedge/\vee/</>$, and press ▶ or ENTER (●) to play the file.

> ## ⚠ NOTE
>
> • The file requirements are described on page 10.
> • You can use various playback functions. Refer to pages 50-58.
> • Unfinalized DVD VR format discs may not be played in this unit.
> • 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.

Selecting a subtitle file
`MOVIE` `MOVIE-N`

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.

1. Use $\wedge/\vee/</>$ 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.

Viewing a photo

You can view photo files using this unit.

1. Press HOME.

2. Select [Photo] using **</>**, and press ENTER (◉).
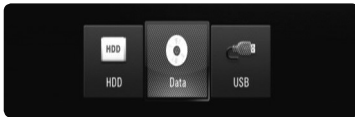
3. Select the [Data], [HDD] or [USB] option using **</>**, and press ENTER (◉).

This step is needed only when a disc and/or a USB device is connected simultaneously on this unit.

4. Select a file using **∧/∨/</>**, and press ENTER (◉) to view the photo.
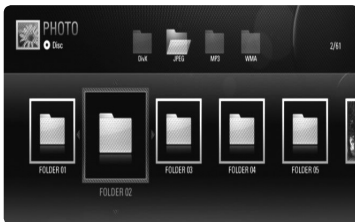
Disc/Network menu

HDD/USB menu

To play a slideshow
Press ▶ to start slideshow.

To stop a slideshow
Press ■ while slideshow.

To pause a slideshow
Press ❚❚ while slideshow.
Press ▶ to re-start the slideshow.

To skip to the next/previous photo
While viewing a photo in full screen, press **</>** to go to the previous or next photo.

> ## ⚠ NOTE
>
> • The file requirements are described on page 10.
> • You can use various playback functions. Refer to pages 50-58.

4

Operation

Options while viewing a photo

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

1. While viewing a photo in full screen, press INFO/DISPLAY ( ) to display the option menu.

2. Select an option using Λ/V/</>.

Options of **HDD/USB** menu

Prev	Press ◄◄ to move to the previous file.
Next	Press ►► to move to the next file.
90°	Press Λ/V to rotate the picture clockwise or counterclockwise.
Stop	Press ■ to stop the slideshow.
Hide	Press RETURN ( ) to hide the control icons. To show the icons again, press INFO/DISPLAY ( ).

Options of **PHOTO** menu
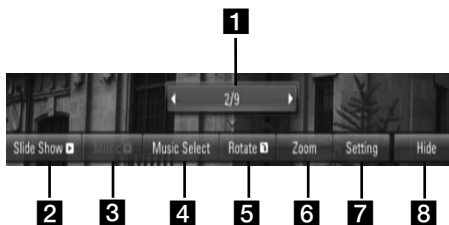
Options of **My Media** menu
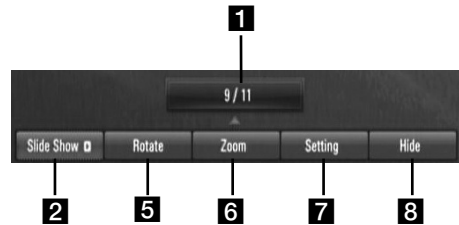
a Current photo/Total number of photos
Use </> to advance to the previous or next file.

b Slide Show – Press ENTER (◉) to start or pause the slide show.

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

d Music Select – Selects the background music.This option is not available on [My Media] menu.
1) Press ENTER (◉) and the menu will appear.
2) Use Λ/V/</> to select a media or folder where there are music file(s).
3) Press ENTER (◉) to confirm your selection.

e Rotate – Press ENTER (◉) to rotate the picture clockwise. This option is not available during slide show.

f Zoom – Use green or yellow buttons to zoom in or out of the picture. You can move through the zoomed picture using Λ/V/</> 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 **Setting** – 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 **Hide** – Press ENTER (⊙) to exit the option menu. To access the menu again, press ENTER (⊙).

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

Listening to music

The unit can play Audio CDs and music files

1. Press HOME.

2. Select [Music] using </>, and press ENTER (⊙).
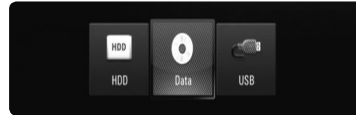
3. Select the [Data], [HDD] or [USB] option using </>, and press ENTER (⊙).

This step is needed only when a disc and/or a USB device is connected simultaneously on this unit.

4. Select a music file or audio track using ∧/∨/</>, and press ENTER (⊙) to play the music.
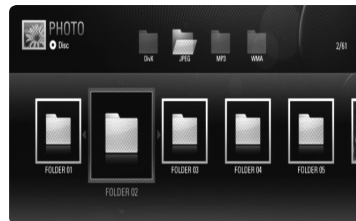
Disc/Network menu
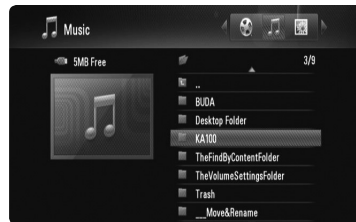
HDD/USB menu

!**NOTE**

- The file requirements are described on page 10.
- You can use various playback functions. Refer to pages 50-58.
- For the files that are contained in a disc or USB device, you can enter the file number using the numbered buttons (0-9) to go directly to a specific file.
- You can advance to the previous or next file by pressing ◄◄ or ►►I during viewing a photo file in full screen.
- You can start the slide show without option menu by pressing ► during viewing a photo file in full screen.
- Use ∧/∨/</> to select a folder then press ENTER (◉) and you can view the files in the folder. If you want to move to the upper or lower directory, use ∧/∨ to move to the desired directory.
- If there is a code that is impossible to express in the file name, it may be displayed as illegible.
- Depending on the DLNA server, the file name displayed on the screen may differ from the original file name.

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

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

1. Press HOME and select [My Media] in the [Home Menu].

2. Select a server from the list and press ENTER (◉) to display the shared folders from the server.

3. Select a music file from the menu and press ► to play the music.

4. Use ∧/∨/</> to select a photo file from the menu and press ENTER (◉) to display in full screen.

5. Select [SlideShow] option and press ENTER (◉) to start slide show.

Playing content via your home network

The play can browse and play content on your PC and DLNA certified media servers connected on your home network.

Accessing a DLNA media server

1. Check the network connection and settings. (pages 20-25).

2. Press HOME.

3. Select [My Media] using **Λ/V/</>**, and press ENTER (●).

4. Select a DLNA media server from the list using **Λ/V**, and press ENTER (●).

> ⚠ **NOTE**
>
> Depending on the media server, this player may need to get the permission from the server.

5. Select a file using **Λ/V/</>**, and press ENTER (●) to play the file.
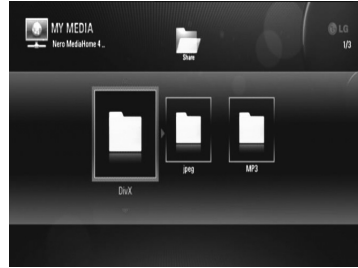
> ⚠ **NOTE**
>
> • The file requirements are described on page 10.
>
> • You can use various playback functions. Refer to pages 50-58.
>
> • Because the compatibility and available playback functions on the [My Media] menu are tested on the bundle DLNA server (Nero MediaHome 4 Essentials) environment, file requirements and playback functions on the [My Media] menu may differ depending on media servers.
>
> • The file requirements on page 10 are not always compatible. There may have some restrictions by file features and media server's ability.
>
> • If there is an unplayable music file in the [My Media] menu, the player skip the file and play next file.
>
> • Playing a movie subtitle files are only available on DLNA media server created by supplied Nero MediaHome 4 Essentials software on this player package.
>
> • The subtitle file name and movie file name have to be the same and located at the same folder.
>
> • The playback and operating quality of the [My Media] function may be affected by your home network condition.
>
> • The files from removable media such as USB drive, DVD-drive etc. on your media server may not be shared properly.

About Nero MediaHome 4 Essentials

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

> **! NOTE**
>
> • The Nero MediaHome 4 Essentials CD-ROM is designed for PCs and should not be inserted in this player or in any product other than a PC.
> • The supplied Nero MediaHome 4 Essentials CD-ROM is a customized software edition only for sharing files and folders to this player.
> • The supplied Nero MediaHome 4 Essentials software does not support following functions: Transcoding, Remote UI, TV control, Internet services and Apple iTunes
> • This manual explains operations with the English version of Nero MediaHome 4 Essentials as examples. Follow the explanation referring to the actual operations of your language version.

Installing Nero MediaHome 4 Essentials

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

• Windows® XP (Service Pack 2 or higher), Windows Vista® (no Service Pack required), Windows® XP Media Centre Edition 2005 (Service Pack 2 or higher), Windows Server® 2003
• Windows Vista® 64-bit edition (application runs in 32-bit mode)
• Hard drive space: 200 MB hard drive space for a typical installation of Nero MediaHome stand-alone
• 1.2 GHz Intel® Pentium® III or AMD Sempron™ 2200+ processors
• Memory: 256 MB RAM

• Graphics card with at least 32 MB video memory, minimum resolution of 800 x 600 pixels, and 16-bit colour settings
• Windows® Internet Explorer® 6.0 or higher
• DirectX® 9.0c revision 30 (August 2006) or higher
• Network environment: 100 Mb Ethernet, WLAN (IEEE 802.11b/g/n)

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

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

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

3. Click [Nero MediaHome 4 Essentials]. The installation is prepared and the installation wizard appears.

4. Click the [Next] button to display the serial number input screen. Click [Next] to go to the next step.

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

6. Click [Typical] and click [Next]. The installation process is started.

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

8. Click the [Exit] button to complete the installation.

Sharing files and folders

On your computer, you must share the folder contained movie, music and/or photo content to play them using [My Media] features.

This parts explains the procedure for selecting the shared folders on your computer.

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

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

3. Click [Shares] icon on the left.

4. Click [Local Folders] tab on the [Shares] screen.

5. Click [Add] icon to open the [Browse Folder] window.

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

7. Click [Start Server] icon to start the server.

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

Accessing a share folder from your PC

1. Start your PC that connected on your local area network.

2. On your PC, share folders which contain movie, photo or audio files.

3. On the player, check the network connection and settings.

4. Press HOME.

5. Select [My Media] using ∧/∨/</>, and press ENTER (◉).

6. Select a share folder from the list using ∧/∨, and press ENTER (◉).
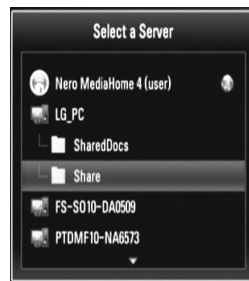
> **! NOTE**
>
> Depending on the share folder, this player may need to input network user ID and password for accessing the folder.

7. Select a file using ∧/∨/</>, and press ENTER (◉) to play the file.

> # ! NOTE
>
> • The file requirements are described on page 10.
>
> • You can use various playback functions. Refer to pages 50-58.
>
> • The thumbnail of the unplayable files can be displayed in the [My Media] menu, but those cannot be played on this player.
>
> • If there is an unplayable music file in the [My Media] menu, the player skip the file and play next file.
>
> • The subtitle file name and movie file name have to be the same and located at the same folder.
>
> • The playback and operating quality of the [My Media] function may be affected by your home network condition.
>
> • The files on an removable media such as USB drive, DVD-drive etc. on your PC may not be shared properly.
>
> • You may experience connection problems depending on your PC's environment.

PC requirements

• Windows® XP (Service Pack 2 or higher), Windows Vista® (no Service Pack required)

• 1.2 GHz Intel® Pentium® III or AMD Sempron™ 2200+ processors

• Network environment: 100 Mb Ethernet, WLAN (IEEE 802.11b/g/n).

> # ! NOTE
>
> If you use Windows® XP or Windows Vista®, visit link below for more information on file share settings.
>
> **Windows® XP:**
> **http:// support.microsoft.com/kb/304040**
>
> **Windows Vista®:**
> **http:// support.microsoft.com/kb/961498**

Entering a network user ID and the password

Depending on your PC's environment, you may need to enter a network user ID and the password for accessing a shared folder.

1. The keyboard menu appears automatically if the network user ID and the password are required.

2. Use Λ/V/</> to select a character then press ENTER ($\bigodot$) to confirm your selection on the keyboard menu.

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

Example: Select "D" and then press INFO/DISPLAY ( ) to display the extended character set. Use </> to select "D" or "Ď" and then press ENTER ($\bigodot$).

[OK]
Searching related videos of search words.

[Clear]
Clear all entered characters.

[Space]
Inserts a space at the cursor position.

[Backspace]
Deletes the previous character at the cursor position.

[ABC / abc / #+-=&]
Change the keyboard menu settings to capital letter, small letters or symbols.

3. When you finish entering the network user ID and password, select [OK] using ∧/∨/</> and press ENTER (⊙) to access the folder.

The network user ID and password will be remembered after accssing the folder for your convenience. If you do not want the network user ID and password to be remembered, press A colored (Red) button to un-tick the [Remember] check box before accessing the folder.

Using [Copy] features

You can move or copy files to the other storage or folder. You can delete files also.

Copying or moving files/folders

1. Press HOME.

2. Use ∧/∨/</> to select [Copy], and press ENTER (⊙).

3. Use ∧/∨ to select a storage you want to copy or move file from, and press >.

4. Use ∧/∨ to select a storage you want to copy or move to, and press ENTER (⊙).

5. Use ∧/∨ to select file/folder you want to copy or move, and press MARKER.

Repeat this step to mark additional files and folders.

6. Press > to select the destination field.

7. Use ∧/∨ to select directory you want to copy or move to, and press ●REC.

8. Use </> to select [Copy] or [Move], and press ENTER (⊙).
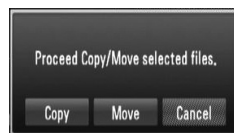
Select [Cancel] to cancel copying or moving.

! NOTE

- If you try to copy or move a broken file, copy or move procedure will be stopped.

- If you copy or move a files/folders to a FAT16/ FAT32 formatted storage, copy or move capacity is limited to 4GB.

Deleting files/folders

1. Press HOME.

2. Use ◄/► to select [Copy], and press ENTER (⏺).

3. Use ∧/∨ to select a storage that contains files to delete, and press ►.

4. Use ∧/∨ to select [Trash Can], and press ENTER (⏺).

5. Use ∧/∨ to select file/folder you want to delete, and press MARKER.

Repeat this step to mark additional files and folders.
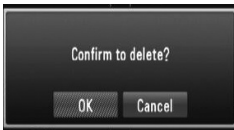
6. Press ►.

7. Use ◄/► to select [OK], and press ENTER (⏺).

Select [Cancel] to cancel deleting.

Playing YouTube™ videos

You can browse, search and watch YouTube™ videos over the internet to your TV via your unit.

Watch YouTube™ videos on your TV

1. Press HOME.

2. Use ∧/∨/◄/► to select [YouTube™], and press ENTER (⏺).

3. Press ∧ to select the option menu bar.

4. Use ◄/► to select an option and press ENTER (⏺) to search videos.

5. Use ◄/► to select a video and press ENTER (⏺) or ► to play the video.

Button	Operation
► or ENTER (⏺)	Starts playback the video with content detail.
INFO/ DISPLAY (▭)	Toggle between playback in full screen and playback screen with content detail.
❚❚	To pause a video while it is playing. To resume playing a paused video, press ► again.
■	Stops the video and displays related videos list.
◄◄/►►	Skip the playback forward or backward .

About the YouTube™ menu

There are various options on the YouTube™ menu. Use Λ/V/</> to select an option and press ENTER (◉) to select the options as described below.
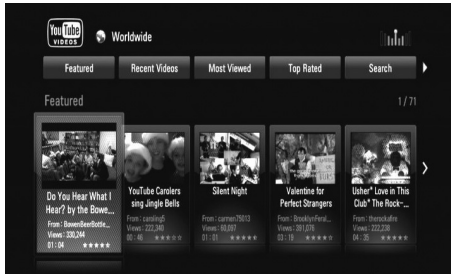
Featured – The featured videos list will be displayed.

Recent Videos – The most recently updated videos list will be displayed.

Most Viewed – The most viewed videos list will be displayed. The period option appears at the bottom of the screen.

Top Rated – The best rated videos list from YouTube server will be displayed. The period option appears at the bottom of the screen.

Search – The keyboard menu will be displayed. See "Searching videos" on page 72 for more detail.

History – The videos list that you previously played on this unit will be displayed. Maximum of 25 videos can be stored.

Favorites – This option will be appeared only when the unit is in sign-in status. Displays the videos list that is arranged in the YouTube server with your account. Some videos may not appear on the [Favorites] list, even if the videos are arranged in the server.

Sign in (Sign Out) – Displays the keyboard menu to sign in or returns to the sign-out status. See "Sign in with your YouTube account" on page 72 for more details.

Local site – Choose which country's videos you would like to view. The countries listed on the [Local Site] menu may different with those listed on the YouTube web site.

> ⚠ **NOTE**
>
> • The YouTube™ menu can display 5 videos in the videos list. Press red or blue button to display next/previous 5 videos.
>
> • If you select the [Most Viewed] or [Top Rated] option in the YouTube™ menu, the period options appear at the bottom of the screen. Use Λ/V/</> to select a period option and press ENTER (◉) to display the videos list within the selected period.
>
> • The videos list searched from the player may different with the list searched from a web browser on PC.

4

Operation

Searching videos

You can search for videos by entering search words of up to 128 characters.

1. Use **</>** to select [Search] option from the menu and press ENTER (◉) to display the keyboard menu.

When you entering a character, maximum of 5 suggestion words will be displayed.

[OK] – Searching related videos of search words.

[Clear] – Clear all entered characters.

[Space] – Inserts a space at the cursor position.

[Backspace] – Deletes the previous character at the cursor position.

[ABC / abc / #+-=&] – Change the keyboard menu settings to capital letters, small letters or symbols.

Press CLEAR to clear all entered characters.

> ⚠ **NOTE**
>
> To enter a letter with an accent mark:
> 1. Select a letter using **∧/∨/</>** on the keyboard menu.
> 2. Press INFO/DISPLAY (⬛) to display the extended character set.
> 3. Use **</>** to select a character then press ENTER (◉).

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

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

Sign in with your YouTube™ account

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

1. Use **</>** to select [Sign In] option from the menu and press ENTER (◉) to display the keyboard menu.

2. Use **∧/∨/</>** to select a character then press ENTER (◉) to confirm your selection on the keyboard menu.

    Refer to the step 1 from "Searching Videos" on page 72 for using virtual keyboard.

3. When you finish entering the ID and the password, select [OK] and press ENTER (◉) to sign in.

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

This unit can automatically store up to 5 IDs which were previously signed-in. The IDs list appears when you select the [Sign In] option.

Select a stored ID on the list and press ENTER (⊙) to display the keyboard menu with the selected ID is entered. You will then only need to enter the password to sign in.

Select the [X] symbol and press ENTER (⊙) to delete the stored ID.

4

Operation

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Maintenance

Notes on Discs

Handling Discs

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

Storing Discs

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

Cleaning Discs

Fingerprints and dust on the disc can cause poor picture quality and sound distortion. Before playing, clean the disc with a clean cloth. Wipe the disc from the centre to out.

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

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.

About the hard disk drive HDD

The internal hard disk drive (HDD) is a fragile piece of equipment. Please use the recorder following the guidelines below to protect against possible HDD failure.

• Do not move the recorder while it is on.

• Do not use the damaged HDD. Product can be damaged.

• Install and use a recorder on a stable, level surface.

• Do not use the recorder in excessively hot or humid places, or in places that may be subject to sudden changes in temperature. Sudden changes in temperature can cause condensation to form inside the recorder. This can be a cause of HDD failure.

• While the recorder is switched on, do not unplug from the wall socket or switch the electricity off from the breaker switch.

• Do not move the recorder immediately after switching it off. If you need to move the recorder, please follow the steps below:
   1. After the message "OFF" is shown in the display, wait at least two minutes.
   2. Unplug from the wall socket.
   3. Move the recorder.

• If there's a power failure while the recorder is on, there is a chance that some data on the HDD will be lost.

• The HDD is very delicate. If used improperly or in an unsuitable environment, it is possible that the HDD will fail after a few years of use. Signs of problems include playback unexpectedly freezing and noticeable block noise (mosaic) in the picture. However, sometimes there will be no warning signs of HDD failure.

• If the HDD fails, playback of recorded material will not be possible. In this case it will be necessary to replace the HDD.

• The manufacturer disclaims responsibility for loss of data contained in HDD.

• The HDD capacity displayed on your TV screen may not exactly same with the capacity printed on your HDD.

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Maintenance

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Troubleshooting

General

Symptoms	Cause & Solution
The Power does not turned on.	• Plug the power cord into the wall outlet securely.
The unit does not start playback.	• Insert a playable disc. (Check the disc type, color system, and regional code.) • Place the disc with the playback side down. • Place the disc on the disc tray correctly inside the guide. • Clean the disc. • Cancel the Rating function or change the rating level.
The angle cannot be changed.	• Multi-angles are not recorded on the DVD Video being played.
Cannot play movie, photo or audio files.	• 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.	• 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.

Picture

Symptoms	Cause & Solution
There is no picture.	• 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 unit. 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	• You are playing a disc recorded in a colour system that is different form your TV.
	• Set the resolution which your TV accepts.

Sound

Symptoms	Cause & Solution
There is no sound or the sound is distorted.	• 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 player.
	• The player's HDMI OUT jack is connected to a DVI device. The DVI jack does not accept audio signal.
	• Check the device connected to player's HDMI OUT jack is compatible with audio format output from the unit.

6

Troubleshooting

Network

Symptoms	Cause & Solution
BD-LIVE feature does not work.	• 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 pages 20-25). • 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 stop or "buffer" during playback.	• Your broadband service speed may not be fast enough to stream video services. Contact your Internet Service Provider (ISP) and increase the broadband speed is recommended.
Shared folder or files from your PC or a media server are not displayed on the [My Media] menu.	• The firewall or anti-virus software on your media server is running. Turn off the firewall or anti-virus software running on your PC or media server. • The unit is not connected to the local area network that your PC or the media server are connected.
Cannot connect the player to the access point or wireless LAN router.	• The wireless communication may be interrupted from household devices that are using radio frequencies. Move the player away from them.
Access point is not displayed on the "Access point name" list.	• The access point or wireless LAN router may not broadcast its SSID. Set your access point to broadcast its SSID through your computer.

Customer Support

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

Recording

Symptoms	Cause & Solution
Cannot record or does not record successfully.	• Check the remaining space on the HDD. • If your source is copy-protected, you cannot record it using this recorder. • If you set a DTV rating for the recorder and higher rated digital programs are received, the programme cannot be recorded. Change the DTV rating level in order to record it.
Timer record does not record successfully.	• Clock is not set to correct time. • The start time of the timer recording is past. • Two timer recordings may have overlapped, in which case only the earlier one will record completely. • When setting the recording programme, make sure you set the recorder's built-in tuner, not the TV's built-in tuner. • If the the HDD is damaged, the recording may not complete successfully.
Stereo Audio Record and/Playback is not present.	• TV is not Stereo-compatible. • Broadcast programme is not in stereo format.
You cannot enter a timer programme when.	• A recording is already underway. • The time you're trying to set has already passed. • There are already 32 timer programs set.
If two or more timer programs overlap.	• The earlier programme takes priority. • The recorder can record 2 channels simultaneously but do not make overlap timer recording, may some programme cannot be recorded according to it's priority.

7
Appendix

Controlling a TV with the Supplied Remote Control

You can control your TV using the buttons below.

By pressing	You can
⏻ (TV POWER)	Turn the TV on or off.
AV/INPUT	Switch the TV's input source between the TV and other input sources.
PR ∧/∨	Scan up or down through memorized channels.
VOL +/−	Adjust the volume of the TV

> ⚠ **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.

1. While holding down ⏻ (TV POWER) button, and press the manufacturer code for your TV with the numerical buttons (see the table below).

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

2. Release the ⏻ (TV POWER) button to complete setting.

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.

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	Netherlands		Spain	ES
Bolivia	BO	Greenland	GL	Antilles	AN	Sri Lanka	LK
Brazil	BR	Hong Kong	HK	New Zealand	NZ	Sweden	SE
Cambodia	KH	Hungary	HU	Nigeria	NG	Switzerland	CH
Canada	CA	India	IN	Norway	NO	Taiwan	TW
Chile	CL	Indonesia	ID	Oman	OM	Thailand	TH
China	CN	Israel	IL	Pakistan	PK	Turkey	TR
Colombia	CO	Italy	IT	Panama	PA	Uganda	UG
Congo	CG	Jamaica	JM	Paraguay	PY	Ukraine	UA
Costa Rica	CR	Japan	JP	Philippines	PH	United States	US
Croatia	HR	Kenya	KE	Poland	PL	Uruguay	UY
Czech Republic	CZ	Kuwait	KW	Portugal	PT	Uzbekistan	UZ
Denmark	DK	Libya	LY	Romania	RO	Vietnam	VN
Ecuador	EC	Luxembourg	LU	Russian		Zimbabwe	ZW
Egypt	EG	Malaysia	MY	Federation	RU		
El Salvador	SV	Maldives	MV	Saudi Arabia	SA		
Ethiopia	ET	Mexico	MX	Senegal	SN		

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
Ameharic	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			Vietnamese	8673
Danish	6865	Kazakh	7575	Rumanian	8279	Volapük	8679
Dutch	7876	Kirghiz	7589	Russian	8285	Welsh	6789
English	6978	Korean	7579	Samoan	8377	Wolof	8779
Esperanto	6979	Kurdish	7585	Sanskrit	8365	Xhosa	8872
Estonian	6984	Laothian	7679	Scots Gaelic	7168	Yiddish	7473
Faroese	7079	Latin	7665	Serbian	8382	Yoruba	8979
Fiji	7074	Latvian, Lettish	7686	Serbo-Croatian	8372	Zulu	9085
Finnish	7073	Lingala	7678	Shona	8378		

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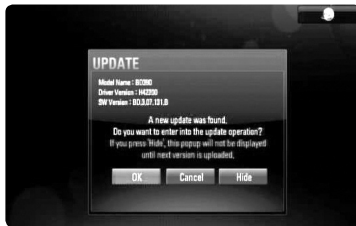
Network Software Update

Network update notification

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

Option 1:
1. The update menu will appear on the screen when you turn on the player.

2. Use **</>** to select a desired option and then press ENTER (●).

[OK]
Starts the software update.

[Cancel]
Exits the update menu and displays it next booting.

[Hide]
Exits the update menu and it does not appear until next software is uploaded in the update server.

Option 2:
If the software update is available from the update server, the "Software Update" icon appears at the bottom of the Home menu. Press blue colored (D) button to start the update procedure. (see page 83-84 for more detail)

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.

> ⚠ **CAUTION**
>
> • 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 20-25).

2. Select [Software Update] option in the [Setup] menu then ENTER (●).

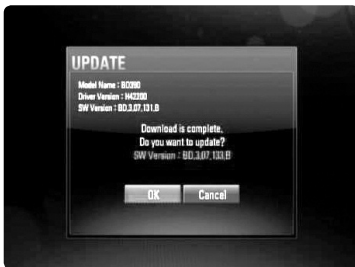The unit will check for the newest update.

⚠ CAUTION

Pressing ENTER (⊙) while checking for the update will end the process.

❗ NOTE

If there is no update available, the Message, "No update is found." appears. Press ENTER (⊙) to return to the [Home Menu].

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

4. Select [OK] to download the update. (Selecting [Cancel] will end the update.)

5. The player starts downloading the newest update from the server. (Downloading will take about 80 seconds at the network speed of 4Mbps Speed.)

6. When downloading is completed, the message, "Download is complete. Do you want to update?" appears.

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

⚠ CAUTION

Do not turn off the power during the software update.

❗ NOTE

If the software includes the driver update, disc tray may open during the process.

8. When update is completed, the message, "Update is complete." will appear, and the power will turn off automatically after 5 seconds.

9. Turn the power back on. The system now operates with the new version.

10. After completing the update process, repeat procedures 1-4 in Step 4 and check if there are no more updates available.

❗ 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 Centre then update your player. Refer to "Customer Support" on page 78.

Audio Output Specifications

Source \ Jack/Setting	Analogue Output Stereo	Digital Output (DIGITAL AUDIO OUT) *5		
		PCM Stereo/ PCM Multi-Ch	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

Source \ Jack/Setting	Digital Output (HDMI OUT)			
	PCM Stereo	PCM Multi-Ch *3	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	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 *4

*1 The secondary and interactive audio may not be included in the output bitstream if [Digital Output] 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 [Digital Output] option is set to [Primary Pass-Thru].

*3 The [PCM Multi-Ch]/[Primary Pass-Thru] setting of the [Digital Output] option and [Re-encode] setting of the [Digital Output] option cannot be set together. If you set them together, the [Digital Output] option is set to [PCM Stereo] automatically.

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

*5 On the PCM audio output, the sampling frequency of Digital Output is limited to 96 kHz.

*6 If the [Digital Output] option is set to [Re-encode], the audio output is limited to 48 kHz and 5.1Ch. If the [Digital Output] option is set to [Re-encode], the Re-encode audio is outputted for BD-ROM discs, and the original audio is outputted for the other discs (like [Primary Pass-Thru]).

• If [Digital Output] option is set to [PCM Multi-CH] and [Primary Pass-Thru] while playback Dolby Digital Plus or TrueHD audio, audio output 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, DIGITAL AUDIO OUT jack is limited to "PCM 2ch" (When the Digital Output 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 [Digital Output] is set to [PCM Stereo] and [Primary Pass-Thru]).

7

Appendix

Video Output Resolution

When the non-copy protected media is playing back

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

When the copy protected media is playing back

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

HDMI OUT connection

- For the 576i resolution setting, real output resolution of HDMI OUT will change to 576p.
- If you select a resolution manually and then connect the HDMI jack to TV and your TV does not accept it, the resolution setting is set to [Auto].
- If you select a resolution that your TV does not accept, the warning message will appear. After resolution change, if you cannot see the screen, please wait 20 seconds and the resolution will automatically revert back to the previous resolution.

- The 1080p video output frame rate may be automatically set to either 24Hz or 50Hz depending both on the capability and preference of the connected TV and based on the native video frame rate of the content on the BD-ROM disc.

COMPONENT VIDEO OUT Connection

BD, DVD could prevent up-scaling on analogue output.

VIDEO OUT connection

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

Specifications

General

Power requirements:
AC 200-240 V, 50/60 Hz

Power consumption:
40 W

Dimensions (W x H x D):
Approx. 430 x 49 x 295 mm without foot

Net Weight (Approx.):
4.4 kg

Operating temperature:
5 °C to 35 °C

Operating humidity:
5 % to 90 %

Television system:
DVB-T Standard Compliant

TV Recording

Recording format:
TS (Transport Stream format)

Recordable media:
Hard Disk Drive (250 GB), USB 2.0 HDD

Audio recording format:
Dolby Digital (2CH)

Connectors

VIDEO OUT:
1.0 V (p-p), 75 Ω, sync negative, RCA jack x 1 / SCART x 1

COMPONENT VIDEO OUT:
(Y) 1.0 V (p-p), 75 Ω, sync negative, RCA jack x 1, (Pb)/(Pr) 0.7 V (p-p), 75 Ω, RCA jack x 2

HDMI OUT (video/audio):
19 pin (HDMI standard, Type A)

ANALOGUE 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

ANTENNA IN:
Antenna input, 75 ohms

USB Port:
4 pin (USB 2.0 standard)

System

Laser:
Semiconductor laser

wavelength:
405 nm / 650 nm

Signal system:
Standard PAL 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
(Analogue OUT connectors only)

Harmonic distortion:
Less than 0.008 %

Dynamic range:
More than 95 dB

LAN port:
Ethernet jack x 1, 10BASE-T/100BASE-TX

Wireless LAN (internal antenna):
Integrated IEEE 802.11n (Draft 2.0) wireless networking access, compatible with 802.11b/g Wi-Fi networks.

Bus Power Supply (USB):
DC 5V $=$ 500 mA

• Design and specifications are subject to change without notice.

7

Appendix

Important Information Relating to Network Services

PLEASE READ CAREFULLY. USE OF THE NETWORK SERVICES IS SUBJECT TO THE FOLLOWING TERMS AND CONDITIONS.

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