DENON

BLU-RAY DISC / DVD VIDEO TRANSPORT

DVD-2500BTCI

OPERATING INSTRUCTIONS MODE D'EMPLOI INSTRUCCIONES DE FUNCIONAMIENTO

Introduction

Safety Precautions



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.



The 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 appliance.

WARNING: TO REDUCE THE RISK OF FIRE OR ELECTRIC SHOCK, DO NOT EXPOSE THIS APPLIANCE TO RAIN OR MOISTURE.

Laser Safety

CAUTION:

VISIBLE AND INVISIBLE LASER RADIATION WHEN OPEN. DO NOT STARE INTO BEAM.

LOCATION: INSIDE, NEAR THE DECK MECHANISM.

CAUTION:

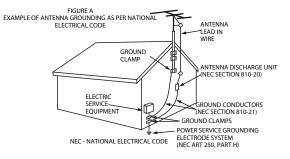
USE OF CONTROLS OR ADJUSTMENTS OR PERFORMANCE OF PROCEDURES OTHER THAN THOSE SPECIFIED HEREIN MAY RESULT IN HAZARDOUS RADIATION EXPOSURE.

THIS PRODUCT SHOULD NOT BE ADJUSTED OR REPAIRED BY ANYONE EXCEPT PROPERLY OUALIFIED SERVICE PERSONNEL.

- Read Instructions All the safety and operating instructions should be read 1. before the product is operated.
- 2. Retain Instructions - The safety and operating instructions should be retained for future reference.
- Heed Warnings All warnings on the product and in the operating instructions 3. should be adhered to. Follow Instructions - All operating and use instructions should be followed.
- 4. 5. Cleaning - Unplug this product from the wall outlet before cleaning. Do not use
- liquid cleaners or aerosol cleaners. 6. Attachments - Do not use attachments not recommended by the product
- manufacturer as they may cause hazards. 7.
- Water and Moisture Do not use this product near water for example, near a bath tub, wash bowl, kitchen sink, or laundry tub; in a wet basement; or near a swimming pool; and the like.
- 8. Accessories - Do not place this product on an unstable cart, stand, tripod, bracket, or table. The product may fall, causing serious injury to a child or adult, and serious damage to the product. Use only with a cart, stand, tripod, bracket, or table recommended by the manufacturer, or sold with the product. Any mounting of the product should follow the manufacturer's instructions, and should use a mounting accessory recommended by the manufacturer.
- 9. A product and cart combination should be moved with care. Quick stops, excessive force, and uneven surfaces may cause the product and cart combination to overturn.
- 10. Ventilation Slots and openings in the cabinet are provided for ventilation and to ensure reliable operation of the product and to protect it from overheating, and these openings must not be blocked or covered. The

openings should never be blocked by placing the product on a bed, sofa, rug, or other similar surface. This product should not be placed in a built-in installation such as a bookcase or rack unless proper ventilation is provided or the manufacturer's instructions have been adhered to.

- Power Sources This product should be operated only from the type of power source indicated on the marking label. If you are not sure of the type of power 11. supply to your home, consult your product dealer or local power company. For products intended to operate from battery power, or other sources, refer to the operating instructions.
- 12. Grounding or Polarization - This product may be equipped with a polarized alternating-current line plug (a plug having one blade wider than the other). This plug will fit into the power outlet only one way. This is a safety feature. If you are unable to insert the plug fully into the outlet, try reversing the plug. If the plug should still fail to fit, contact your electrician to replace your obsolete outlet. Do not defeat the safety purpose of the polarized plug.



- 13. Power-Cord Protection Power-supply cords should be routed so that they are not likely to be walked on or pinched by items placed upon or against them, paying particular attention to cords at plugs, convenience receptacles, and the point where they exit from the product.
- 14. Outdoor Antenna Grounding If an outside antenna or cable system is connected to the product, be sure the antenna or cable system is grounded so as to provide some protection against voltage surges and built-up static charges. Article 810 of the National Electrical Code, ANSI/NFPA 70, provides information with regard to proper grounding of the mast and supporting structure, grounding of the lead-in wire to an antenna discharge unit, size of grounding conductors, location of antenna-discharge unit, connection to grounding electrodes, and requirements for the grounding electrode. See Figure A.
- 15. Lightning For added protection for this product during a lightning storm, or when it is left unattended and unused for long periods of time, unplug it from the wall outlet. This will prevent damage to the product due to lightning and powerline surges.
- 16. Power lines - An outside antenna system should not be located in the vicinity of overhead power lines or other electric light or power circuits, or where it can fall into such power lines or circuits. When installing an outside antenna system. extreme care should be taken to keep from touching such power lines or circuits as contact with them might be fatal.
- Overloading Do not overload wall outlets, extension cords, or integral 17 convenience receptacles as this can result in a risk of fire or electric shock.
- Object and Liquid Entry Never push objects of any kind into this product through openings as they may touch dangerous voltage points or short-out parts that could result in a fire or electric shock. Never spill liquid of any kind on the product.
- 19. Servicing - Do not attempt to service this product yourself as opening or removing covers may expose you to dangerous voltage or other hazards. Refer all servicing to qualified service personnel.
- 20. Damage Requiring Service Unplug this product from the wall outlet and refer a) When the power-supply cord or plug is damaged.
 b) If liquid has been spilled, or objects have fallen into the product.

 - If the product has been exposed to rain or water. c)

 - If the product does not operate normally by following the operating d) instructions. Adjust only those controls that are covered by the operating instructions as an improper adjustment of other controls may result in damage and will often require extensive work by a qualified technician to restore the product to its normal operation.
 - e) If the product has been dropped or damaged in any way.
 - f) When the product exhibits a distinct change in performance this indicates a need for service.
- 21. Replacement Parts When replacement parts are required, be sure the service technician has used replacement parts specified by the manufacturer or have the same characteristics as the original part. Unauthorized substitutions may result in fire, electric shock, or other hazards.
- 22. Safety Check Upon completion of any service or repairs to this product, ask the service technician to perform safety checks to determine that the product is in proper operating condition.
- Wall or Ceiling Mounting The product should be mounted to a wall or ceiling 23 only as recommended by the manufacturer.
- Heat The product should be situated away from heat sources such as radiators, 24. heat registers, stoves, or other products (including amplifiers) that produce heat.



SAFETY INSTRUCTIONS



Introduction

FCC INFORMATION (For US customers)

1. PRODUCT

This product complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) this product may not cause harmful interference, and (2) this product must accept any interference received, including interference that may cause undesired operation.

2. IMPORTANT NOTICE: DO NOT MODIFY THIS PRODUCT

This product, when installed as indicated in the instructions contained in this manual, meets FCC requirements. Modification not expressly approved by DENON may void your authority, granted by the FCC, to use the product.

3. NOTE

This product has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation.

This product generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this product does cause harmful interference to radio or television reception, which can be determined by turning the product OFF and ON, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the product into an outlet on a circuit different from that to which the receiver is connected.
- Consult the local retailer authorized to distribute this type of product or an experienced radio/TV technician for help.

This Class B digital apparatus complies with Canadian ICES-003. Cet appareil numérique de la classe B est conforme à la norme NMB-003 du Canada.

CAUTION:

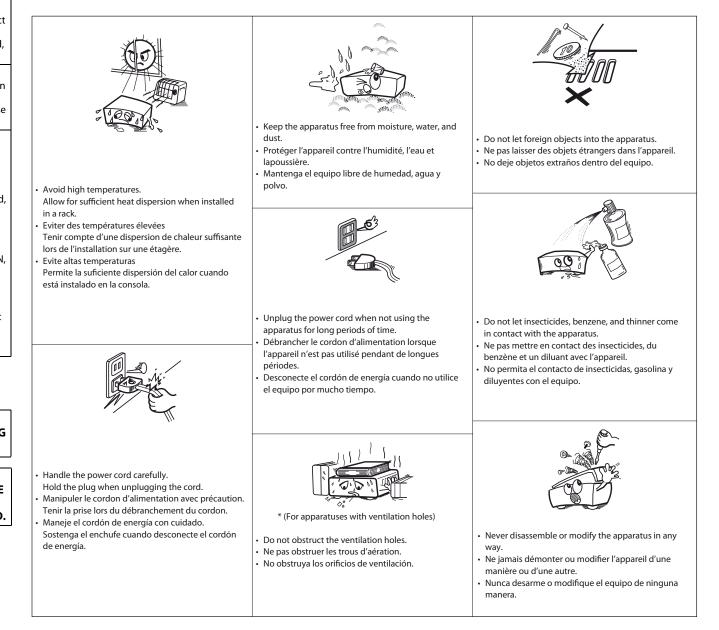
TO PREVENT ELECTRIC SHOCK, MATCH WIDE BLADE OF PLUG TO WIDE SLOT, FULLY INSERT.

ATTENTION:

POUR ÉVITER LES CHOCS ÉLECTRIQUES, INTRODUIRE LA LAME LA PLUS LARGE DE LAFICHE DANS LA BORNE CORRESPONDANTE DE LA PRISE ET POUSSER JUSQU'AU FOND.

■ Note on use / Observations relatives a l'utilisation / Notas sobre el uso

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Features

•HDMI (High-Definition Multimedia Interface)

You can enjoy clearer video output when connecting this unit to a display device with an HDMI-compatible port.

Dialog Speed

Playback in slightly faster speed while keeping the sound quality as in the normal playback.

Dialog speed is available only on discs recorded in the Dolby Digital format.

• Still/Fast/Slow/Step Playback

Various playback modes are available including still pictures, fast forward/reverse, slow motion and step frames.

•Still Mode

The resolution of pictures while in the still (pause) mode can be adjusted.

●Random Playback for audio CD, MP3, JPEG, and Windows Media™ Audio

This unit can shuffle the playback order of tracks/files.

●Program Playback for audio CD, MP3, JPEG, and Windows Media™ Audio

You can program the playback order of tracks/files in a desired order.

•BD/DVD Menus in a Desired Language

You can display BD/DVD menus in a desired language, if available on a BD/DVD.

Auto Power Off

The power turns off automatically if there is no activity at the unit or its remote control for more than 30 minutes (refer to page 33).

• Subtitles in a Desired Language

You can select a desired language for subtitles if that language is available on the BD/DVD and DivX[®].

• Selecting a Camera Angle

You can select a desired camera angle if a disc contains sequences recorded from different angles.

•Choices for Audio Language and Sound Mode

You can select a desired audio language and sound mode if different languages and modes are available on a disc.

• Ratings Control (Parental Lock)

You can set the control level to limit playback of discs which may not be suitable for children.

• Automatic Detection of Discs

This unit automatically detects if a loaded disc is BD, DVD, audio CD, MP3, JPEG, Windows Media^m Audio or DivX[®].

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On-Screen Display

Information about the current operation can be displayed on a screen, allowing you to confirm the currently active functions (such as program playback) using the remote control.

•Dimmer

The brightness of the front panel display can be adjusted.

Screen Saver

The screen saver program starts if there is no activity at the unit or its remote for more than 5 minutes. The brightness of the display is darken by 75%. The program is deactivated when there is any activity.

Picture Control

Picture control adjusts black level and noise reduction of the specific display.

Search

Chapter search: Search for a desired chapter.				
Title search: Search for a desired title.				
Track search:	Search for a desired track/file.			
Time search:	Search for a desired time point or a title or a track/			
	file.			

Repeat

Chapter:	Repeated playback of a chapter of the disc.
Title:	Repeated playback of a title of the disc.
Track:	Repeated playback of a track/file of the disc.
All:	Repeated playback of the entire disc.
	(not available for BD, DVD-video)
A-B:	Repeated playback of a part between two points.
Group:	Repeated playback of a folder of the MP3/JPEG/
·	Windows Media [™] Audio/DivX [®] disc being played back is possible.

Zoom

x1.2, x1.5, x2.0, x4.0 magnified image can be displayed. (not available for BD)

Marker

Electric reference points designated by user can be called back.

Resume Playback

User can resume playback from the point at which the playback has been stopped even if the power is turned off.

Bit Rate Indication

The bit rate (the amount of video data currently being read) can be displayed during the playback of video contents. (not available for BD)

•DRC (Dynamic Range Control)

Use this procedure to set the dynamic range of the output signals when playing back DVD/BD recorded in Dolby Digital/ Dolby Digital Plus/Dolby TrueHD.

• Displaying a JPEG picture

Kodak Picture CD can be played back. Still images stored in JPEG format on DVD-RW/-R, CD-RW/-R or SD Memory Card can also be played back.

●Playing Back Windows Media[™] Audio File

You can enjoy Windows Media[™] Audio files which are recorded on DVD-RW/-R, CD-RW/-R or SD Memory Card.

• Playing Back an MP3 File

You can enjoy MP3 files which are recorded on DVD-RW/-R, CD-RW/-R or SD Memory Card.

Playing Back DivX[®] File

You can enjoy $\text{DivX}^{\circledast}$ files which are recorded on DVD-RW/-R or CD-RW/-R.

- Official DivX[®] Certified product
- Plays all versions of $\text{Div}X^{\circledast}$ video (including $\text{Div}X^{\circledast}$ 6) with standard playback of $\text{Div}X^{\circledast}$ media files.

• Playing Back the Contents in SD Memory Card

- You can playback MP3, Windows Media[™] Audio, or JPEG stored in an SD Memory Card.
- You can store picture-in-picture commentary, subtitles or other extras for BD-ROM Profile 1.1 files in a SD Memory Card and playback with the BD-ROM.

•BD-J Application

• With some BD that supports Java applications (BD-J), you can enjoy interactive function (e.g., game).

Important

Use only discs marked with logos listed on page 4.

Power Supply

The main power supply is engaged when the main plug is plugged in a 120V, 60Hz AC outlet. To operate the unit, press **<ON/STANDBY>** to turn on the unit.

Warning

To avoid fire or electric shock, do not expose this unit to rain or moisture.

WARNING:

LIVE PARTS INSIDE. DO NOT REMOVE ANY SCREWS.

Installation Location

For safety and optimum performance of this unit:

- Do not stand the unit up vertically. Install the unit in a horizontal and stable position. Do not place anything directly on top of the unit. Do not place the unit directly on top of the TV.
- Shield it from direct sunlight and keep it away from sources of intense heat. Avoid dusty or humid places. Avoid places with insufficient ventilation for proper heat dissipation. Do not block the ventilation holes on the sides of the unit. Avoid locations subject to strong vibration or strong magnetic fields.
- Be sure to remove a disc and unplug the AC cord from the outlet before carrying the unit.

Non-use periods - Turn off the unit when it is not in use. Unplug the unit from the household AC outlet if it is not to be used for a long time. Unplug the unit during lightning storms.

Please read this operating instructions carefully before using the unit, and keep it for future reference.

Cautions on Installation

Noise or disturbance of the picture may be generated if this unit or any other electronic equipment using microprocessors is used near a tuner or TV.

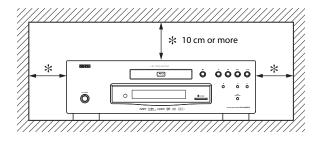
If this happens, take the following steps:

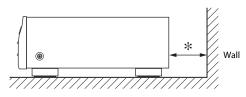
- Install this unit as far as possible from the tuner or TV.
- Set the antenna wires from the tuner or TV away from this unit's AC cord and input/output connection cords.
- Noise or disturbance tends to occur particularly when using indoor antennas or 300Ω /ohms feeder wires. We recommend using outdoor antennas and 75Ω /ohms coaxial cables.

Note

• For heat dispersal, do not install this equipment in a confined space such as a book case or similar unit.

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Caution on Handling

•Cautions on using mobile phones.

Using a mobile phone near this unit may result in noise. If so, move the mobile phone away from this unit when it is in use.

•Before turning the power operation button on.

Check once again that all connections are correct and that there are not problems with the connection cables. Always set the power operation button to the standby position before connecting and disconnecting connection cables.

• Sufficiently ventilate the place of installation.

If the unit is left in a room full of the smoke from cigarettes, etc., for long periods of time, the surface of the optical pickup could get dirty, in which case it will not be able to read the signals properly.

Dew Warning

Moisture condensation may occur inside the unit when it is moved from a cold place to a warm place, or after heating a cold room or under conditions of high humidity. Do not use the unit at least for 2 hours until its inside is dry.

Avoid the Hazards of Electrical Shock and Fire

- Do not handle the AC cord with wet hands.
- Do not pull on the AC cord when disconnecting it from AC wall outlet. Grasp it by the plug.
- If, by accident, water is spilled on this unit, unplug the AC cord immediately and take the unit to our authorized service center for servicing.

Before Using

Pay attention to the following before using this unit:

Moving the unit.

To prevent short-circuits or damaged wires in the connection cables, always unplug the power supply cord and disconnect the connection cables between all other audio components when moving the unit.

• Store the operating instructions in a safe place.

After reading the operating instructions, store them in a safe place as they could come in handy in the future.

•Whenever <ON/STANDBY> is in the STANDBY state, the unit is still connected to AC line voltage.

Please be sure to unplug the cord when you leave home for, say, a vacation.

Note that the illustrations in these instructions may differ from the actual unit for explanation purposes.

The serial number of this product may be found on the back of the unit. No others have the same serial number as yours. You should record the number and other vital information here and retain this book as a permanent record of your purchase to aid identification in case of theft.

Date of Purchase	
Dealer Purchase from	
Dealer Address	
Dealer Phone No.	
Model No.	
Serial No.	

Supplied Accessories

Please check to make sure the following items are included with the main unit in the carton.



AC cord

"AA" (R6P) batteries x2









Trademark Information



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

DIGITAL

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

dts

Digital Surround

Manufactured under license under U.S. Patent #'s: 5,451,942: 5,956,674; 5,974,380; 5,978,762; 6,487,535 & other U.S. and worldwide patents issued & pending. "DTS" and "DTS Digital Surround" are registered trademarks and the DTS logos and Symbol are trademarks of DTS, Inc. © 1996-2007 DTS, Inc. All **Rights Reserved.**



Introduction



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

DivX, DivX Certified, and associated logos are trademarks of DivX, Inc. and are used under license.



Windows Media and the Windows logo are trademarks or registered trademarks of Microsoft Corporation in the United States and/or other countries.

"Blu-ray Disc" and Surger are trademarks.

is a trademark of DVD Format/Logo Licensing Corporation.

Ricture CD COMPATIBLE is trademark of Eastman Kodak Company.

About Discs

Disc Handling

- Handle the discs so that fingerprints and dust do not adhere to the surfaces of the discs.
- Always store the disc in its protective case when it is not used.
- Note that discs with special shapes cannot be played on this product. Do not attempt to play back such discs, as they may damage the unit.

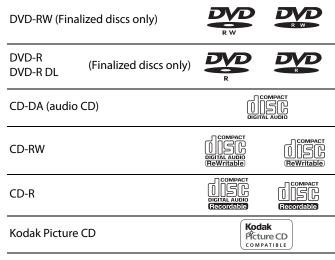
Cleaning Discs

- When a disc becomes dirty, clean it with a cleaning cloth. Wipe the disc from the center to out. Do not wipe in a circular motion.
- Do not use solvents such as benzine, thinner, commercially available cleaners, detergent, abrasive cleaning agents or antistatic spray intended for analog records.

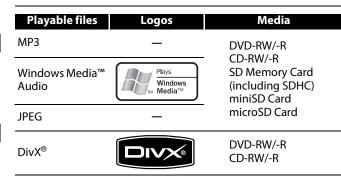
Playable Discs and Files

This unit is compatible to play back the following discs. To play back a BD or DVD, make sure that it meets the requirements for region codes and color systems as described on page 5. You can play back discs that have the following logos on the disc. Other disc types are not guaranteed to play back

other disc types are not guaranteed to play back.			
Playable discs	Logos		
Blu-ray Disc			
- BD-video			
- BD-RE(ver.2.1)			
(Recorded in BDMV format)	5		
- BD-R(ver.1.1)	Blu-rayDisc		
(Recorded in BDMV format)			
(Unclosed discs may not be played			
back.)			
DVD-video			



DTS - CD (5.1 Music Disc)



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Note

- Discs containing the DivX[®] files with the DivX[®] GMC (Global Motion Compensation) playback feature, which is DivX[®] supplemental function, cannot be played back on this unit.
- This unit cannot play back the disc contents protected by Windows Media™ Digital Rights Management (DRM).
- "WMA" (Windows Media™ Audio) is an audio codec developed by Microsoft[®] in the United States of America.
- This unit supports AAC as an audio format recorded with video contents for BD-R, BD-RE. This unit does not support AAC as an independent audio file.

Readable cards	Playable files / data
SD Memory Card (8MB - 2GB)	
SDHC Memory Card (4GB)	JPEG, Picture-in-picture
miniSD Card (8MB - 2GB)	commentary, subtitles or other
microSD Card (8MB - 2GB)	extras for BD-ROM Profile 1.1

Note for SD Memory Cards

- Do not remove the SD Memory Card or turn off the unit while the contents of the card is in playback. It may result in malfunction or loss of the card's data.
- Please keep the SD Memory Cards in their cases when you are not using them.
- Do not try to open or modify the card.
- Do not touch the terminal surface with your fingers or any metals.
- Do not attach additional labels or stickers to cards.
- Do not remove the label of the SD Memory Cards.
- This unit supports SD Memory Card with FAT12/FAT16 file system, and SDHC Memory Card with FAT32 file system.
- This unit may not read the SD Memory Cards formatted on computer. If that is the case, please reformat the SD Memory Cards on this unit and try again.
- This unit does not supports mini SDHC and micro SDHC Memory Card.
- For miniSD Card and microSD Card adapter is necessary.



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Unplayable Discs

The following discs will not play back on this unit.

- BD-RE Ver.1.0 (BD-disc with cartridge)
- BD-R Ver.1.2 (HTL 4x or LTH 2x)
- BD contains MP3/ Windows Media[™] Audio/ JPEG/ DivX[®] files
- BD/DVD hybrid disc (e.g., Total Hi Def hybrid disc)
- BD-video that does not include "A" on its region code.
- DVD-video that does not include either "1" nor "ALL" on its region code.
- DVD-ROM/RAM (For DVD-ROM discs, data files in DivX[®] 3.11, 4.x, 5.x and 6 can be played)
- DVD-RW/-R recorded in non-compatible recording format
- CD-ROM (Data files in DivX[®] 3.11, 4.x, 5.x and 6 can be played)
- CDV (Only the audio part can be played)
- CD-G (Only the audio signals can be output)
- CompactDisc-Interactive (CD-I)
- Video Single Disc (VSD)
- Video CD, Super Video CD
- Super audio CD (Only the sound on the CD layer can be heard. The sound on the high-density super audio CD layer cannot be heard.)
- DVD-audio
- HD DVD
- Disc with recording area less than 55mm in diameter
- Unauthorized disc (Pirated disc)
- Unfinalized disc

Color Systems

BD and DVD are recorded in different color systems throughout the world. The most common color system is NTSC (which is used primarily in the United States and Canada).

This unit uses NTSC, so BD or DVD you play back must be recorded in the NTSC system. You cannot play back BD or DVD recorded in other color systems.

BD-video

Region Codes

This unit has been designed to play back BD with region A and DVD-video with region 1. You cannot play back BD or DVD-video that are labeled for other regions. Look for the symbols on the right on your BD or DVD-video. If these region symbols do not appear DVD-video on your BD or DVD-video, you cannot play back the disc in this unit. The letter or number inside the globe refers to region of the world. A BD or DVDvideo labeled for a specific region can only play back on the unit with the same region code.

Structure of Disc/SD Memory Card Contents

The contents of BD / DVD are generally divided into titles. Titles may be further subdivided into chapters.

←────	BD/DVD
title 1	← title 2
chapter 1 chapter 2	chapter 1 chapter 2 chapter 3

Audio CDs are divided into tracks.

Audio CD,				
track 1	track 2	track 3	track 4	track 5
NE.	LEN.		INT N.	\sim נות \sim
d d d d \sim	\sim		\sim	

Data discs or SD Memory Cards contains MP3/Windows Media™ Audio/JPEG/DivX[®] is divided into folders, and the folders are subdivided into files.

••••					
	l ⊲ M	P3, Window	s Media™ Au	idio, JPEG, D	ivX [⊚] —⊢
	👞 folder (group) 1 🔔		↓ fo	older (group)	2
	file (track) 1 file (track) 2		file (track) 3	file (track) 4	file (track) 5
	או \sim	<u>~</u> זנו	\sim L11 L	\sim 1 L(1	M^{-}
	600	S ,	to the second se		<u> </u>

Symbols Used in this Operating Instructions

To specify for which media type each function is, we put the following symbols at the beginning of each item to operate.

Symbol	Description
BD-V	Description refers to BD-video and BD-RE (ver. 2.1)/ BD-R recorded in BDMV format
DVD-V	Description refers to DVD-video and DVD-RW/-R recorded in video mode
DVD-VR	Description refers to DVD-RW/-R recorded in VR mode
CD	Description refers to audio CD and DTS-CD
MP3	Description refers to DVD-RW/-R, CD-RW/-R and SD Memory Card with MP3 files
WMA	Description refers to DVD-RW/-R, CD-RW/-R and SD Memory Card with Windows Media™ Audio files
JPEG	Description refers to DVD-RW/-R, CD-RW/-R and SD Memory Card with JPEG files
DivX®	Description refers to DVD-RW/-R and CD-RW/-R with $DivX^{\circledast}$ files

If you do not find any of the symbols listed above under the function heading, the operation is applicable to all media.

About the button names in this explanation

<>: Buttons on the main unit

[]: Buttons on the remote control

Button name only:

Buttons on the main unit and remote control



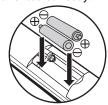
About the Remote Control

Loading the Batteries

(1) Open the battery compartment cover.



(2) Insert two "AA" (R6P) batteries, with each one oriented correctly.



(3) Close the cover.

Cautions on Batteries

- Use "AA" (R6P) batteries in this remote control.
- Replace the batteries with new ones approximately once a year, though this depends on the frequency with which the remote control is used.
- If the remote control does not operate within a close proximity of the main unit, replace the batteries with new ones, even if less than a year has passed.
- The included batteries serve only for verifying operation. Replace them with new batteries as soon as possible.
- When inserting the batteries, be careful to do so in the proper direction, following the ⊕ and ⊖ marks in the remote control's battery compartment.
- To prevent damage or battery fluid leakage:
- Do not mix a new battery with an old one.
- Do not mix two different types of batteries such as alkaline and manganese.
- Do not short-circuit, disassemble, heat or dispose of batteries in flames.
- Remove the batteries when not planning to use the remote control for a long period of time.
- If the batteries should leak, carefully wipe off the fluid from the inside of the battery compartment, then insert new batteries.

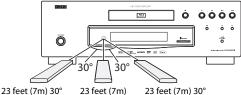
Using a Remote Control

Keep in mind the following when using the remote control:

• Make sure that there are no obstacles between the remote control and infrared sensor window on the unit.

 Remote operation may become unreliable if strong sunlight or fluorescent light is shining on infrared sensor window of the unit.

- Remote control for different devices can interfere with each other. Avoid using remote control for other equipment located close to the unit.
- Replace the batteries when you notice a fall off in the operating range of the remote control.
- The maximum operable ranges from the unit are as follows.
- Line of sight: approx. 23 feet (7m)
- Either side of the center: approx. 23 feet (7m) within 30°



Setting this Unit not React to Other DENON's DVD Player's Remote Control

If you have other DENON's DVD players around this unit, this unit reacts to the commands you made for DVD players through its remote control. To avoid this situation, you can set this unit not react to other DENON's DVD player's remote control.

1) In stop mode, press [SETUP].

2) Press [7],[8],[9],[2].

- 3) Press [SETUP].
 - "Only Attached Remocon" will be displayed on the upper right corner of the screen and this unit only react to the commands from this unit's remote control.

• To set back to default, press [7],[8],[9],[1] at step 2. "Normal Remocon" will be displayed on the upper right corner of the screen and this unit react to both the commands from this unit's remote control and the other DENON's DVD players' remote control.

Note

- The setting remains after you turn off this unit or unplug the AC cord.
- If you try to operate this unit with the other DENON's DVD players' remote control, some of the operation may not available depends on the manufactured year or type of the remote control.



Changing the Signal Code of a Remote Control

To avoid the other DENON's BD players responding the remote signal of this unit, you can change the signal code of the remote control. If the signal code of the remote control does not match to the signal code of the unit, you cannot control the unit with the remote control.

Change the signal code of the unit

- 1) In stop mode, press [SETUP].
- 2) Use $[\triangleleft / \triangleright]$ to select \mathbb{R} , then press [ENTER].
- 3) Use $[\triangleleft / \triangleright]$ to select other, then press [ENTER].
- 4) Use $[\Delta / \nabla]$ to select "Remote Control Setting".
- 5) Press [ENTER] to select "DENON1" or "DENON2".



6) Press [SETUP] to exit.

• At this point the new signal code of the unit is effective. Please change the signal code of the remote control to match to the signal code of the unit with following procedure.

Change the signal code of the remote control

Set to "DENON1":

Press and hold [RETURN], and press [3], [2], [1]. Set to "DENON2":

Press and hold [RETURN], and press [1], [2], [3].

- If the signal code does not match, the signal code of the remote control will be displayed on the front panel display.
- The default setting and the setting after you change the batteries is "DENON1".

Introduction

ENGLISH

Introduction

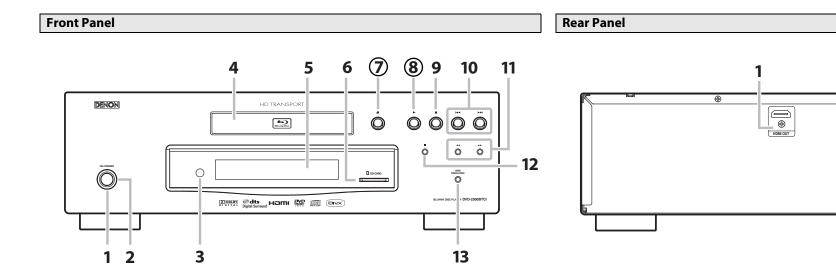
Part Names and Functions



2

3

Δ



The unit can also be turned on by pressing the buttons with circled numbers.

1. ON/STANDBY button

Press to turn the unit on or off.

2. Power indicator

This indicator lights up in green when the power is on, and lights up in red when in standby mode.

3. Infrared sensor window

Receive signals from your remote control so that you can control the unit from a distance.

- **4. Disc tray** Place a disc when opening the disc tray.
- 5. Display
- Refer to "Front Panel Display" on page 9. 6. SD CARD slot

Insert an SD Memory Card, and play back the contents in it.

7. 🔺 (OPEN/CLOSE) button

Press to open or close the disc tray.

8. (PLAY) button

Press to start or resume playback.

9. 🔳 (STOP) button

Press to stop playback.

- **10.** |**◄** / **▶**► | (SKIP DOWN/UP) button Press to skip down/up titles/chapters/tracks/
- file. 11. ◀◀ / ►► (FAST FORWARD/REVERSE) button

During playback, press to fast forward / fast reverse the playback. When playback is in pause, press to slow forward the playback.

- **12. [] (STILL/PAUSE) button** Press to pause playback.
- 13. HDMI RESOLUTION button

Press to set the HDMI jack's video signal output mode.

1. HDMI OUT jack

Use an HDMI cable to connect to a display with an HDMI jack.

- **2. CONTROL CONNECTOR (RS-232C)** Control terminal for system extension.
- 3. ROOM TO ROOM IN / OUT jacks Connecting the DENON Satellite Remote Control to these jacks enables you to operate more than one DENON components with one remote control.
- 4. AC IN Terminal Use the AC cord to connect to the AC outlet.

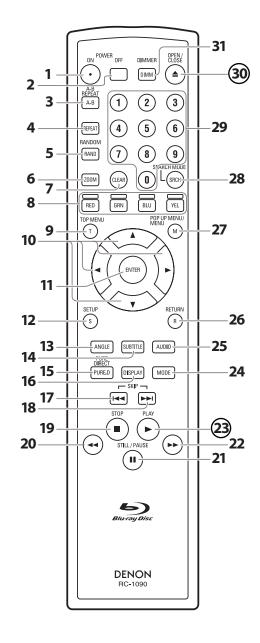
Note

• Do not touch the inner pins of the jacks on the rear panel. Electrostatic discharge may cause permanent damage to the unit.



Introduction

Remote Control



The unit can also be turned on by pressing the buttons with circled numbers.

1. POWER ON button

Press to turn the unit on. **2.** POWER OFF button

- Press to turn the unit off.
- 3. A-B REPEAT button
 - Press to mark a segment between A and B for A-B repeat playback.
- 4. REPEAT buttonPress to select the repeat mode.
- 5. RANDOM button
 Press to display the random playback screen for shuffling the playback order of tracks/files.
- 6. ZOOM button
 - During playback, press to enlarge the picture on the screen.
- 7. CLEAR button
- Press to clear the information once entered, to clear the marker settings, or to cancel the programming for CD, etc.
 8. RED/GRN/BLU/YEL button
 - Press to select item on some BD menus.
- Press to select item on some BD me
 - Press to display the top menu.
- **10.** Cursor $\triangle / \nabla / \triangleleft / \triangleright$ buttons
 - Press to select items or settings.
- 11. ENTER button
 - Press to confirm or select menu items.
- 12. SETUP button

Press to display the setup menu.

- 13. ANGLE button
 - Press to access various camera angles on the disc.
 - Press to rotate the JPEG/Kodak Picture images.

14. SUBTITLE button

• Press to display the subtitle menu.

15. PURE DIRECT button

Press to stop output of front panel display.

16. DISPLAY button

• Press to display the On-Screen display menu.

17. SKIP I d button

• During playback, press to return to the beginning of the current title chapter, track or file.

18. SKIP ►► | button

• During playback, press to skip the next chapter, track or file.

8 ENGLISH

19. STOP 🖬 button

Press to stop playback.

20. REW 🔫 button

• During playback, press to fast reverse the playback.

21. STILL/PAUSE || button

- Press to pause playback.
- When playback is in pause, press repeatedly to forward the playback step by step.

22. FFW ►► button

- During playback, press to fast forward the playback.
- When playback is in pause, press to slow forward the playback.

23. PLAY ► button

Press to start playback or resume playback.

24. MODE button

- During playback, press to display the picture adjustment menu, and rapid playback.
- During the JPEG playback, press to display menus for changing the visual effect for switching the image or changing the size of the image.
- In stop mode with BD inserted, press to display a menu for setting the BD audio mode.
- In stop mode with BD or DVD inserted, press to display a menu for setting the virtual surround.
- In stop mode with audio CD, or disc with MP3, Windows Media[™] Audio, JPEG files inserted, press to display menus for program and random playback.

25. AUDIO button

- Press to display the audio menu.
- 26. RETURN button
 - Press to return to the previously displayed menu screen.

27. POP UP MENU / MENU button

• Press to display the disc menu.

28. SEARCH MODE button

• Press to display the search menu.

29. Number buttons

Press to enter the title/chapter/track/file numbers.

30. OPEN/CLOSE 📥 button

Press to open or close the disc tray.

31. DIMMER button

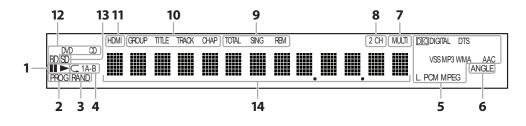
• Press to adjust the brightness of the front panel display.

Note

• [ZOOM], and [RANDOM] are not available for BD.

Introduction

Front Panel Display



- ► : Appears when playing back a disc.
 : Appears when playback is paused.
- 2. Appears during program playback.
- 3. Appears during random playback.
- 4. Appears during repeat playback.
- 5. These indicate the format being decoded.This is not a indication of the recorded
 - This is not a indication of the recorded format or the format that will be output.
 Appears when playing back a multi angle
- 6. Appears when playing back a multi angle disc.
- 7. Appears when playing back a multi-channel audio disc.
- 8. Appears when playing back a 2-channel audio disc.
- 9. Indicates the time display mode.
 - TOTAL : Appears when displaying the total remain/elapsed time of audio CD.
 - SING : Appears when sound data is being played or sound data is highlighted in program menu.
 - REM : Appears when displaying remaining time.

Adjusting the Brightness of the Display

You can adjust the brightness of the display by the pressing **[DIMMER]** repeatedly. The brightness changes as bright \rightarrow dimmer \rightarrow auto each time you press **[DIMMER]**. If you select auto, the display gets dimmer during playback.

Note

• [DIMMER] is not available when the setup menu is displayed.

- 10. These indicate the type of the different sections of the currently playing disc.
- Appears when HDMI video or audio signals are being output.
 Does not appear when HDMI connection is not verified.
- 12. Indicates the type of the currently playing disc.
- Appears when inserting an SD Memory Card.
 Appears various type of information on the disc, the elapsed playing time, etc.

Examples of Displays during Operation

Display	Description
POWER-ON	Power on
POWER-OFF	Standby mode
OPEN	Tray open
CLOSE	Tray is closing
LOADING	Loading the disc
NO DISC	No disc inserted
NO SD MEMORY	No SD Memory Card inserted
	This unit cannot read the disc or SD Memory Card inserted.
STOP	Stop mode.
480.i	HDMI output mode(480i) is selected.
480.P	HDMI output mode(480p) is selected.
720.P	HDMI output mode(720p) is selected.
1080.i	HDMI output mode(1080i) is selected.
1080.P	HDMI output mode(1080p) is selected.
1080.P24	HDMI output mode(1080p24 frame) is selected.
Normal	Pure direct mode is set to pure direct off.
Display Off	Pure direct mode is set to front panel display off.
P00 01	The total number of the track that has been registered for the program playback and track number currently selected.
P00 F001-0002	The total number of the files that has been registered for the program playback and folder/file number currently selected.
P00 R00T-0002	When the root folder is selected "ROOT" is displayed.
ALL CLEAR	"All Clear" for program playback setting is selected.

Note

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• When playing back the disc that contains more than 100 titles, display of the chapter and time on the front panel display will be moved a few dots to the right.

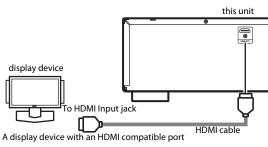
Introduction

Connections

Connecting to a Display Device with HDMI Cable

Connecting this unit to device with an HDMI jack using an HDMI cable enables digital transfer of both digital video signals and multi-channel audio signals.

After making the connection, please make HDMI settings on setup menu according to your display device. Refer to page 28-30.

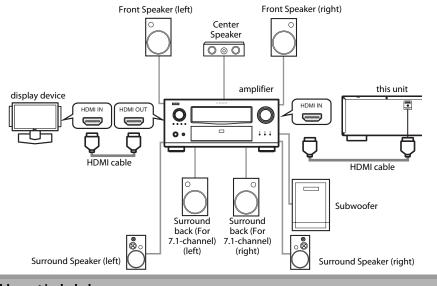


Cables not included.

Please purchase the necessary cables at your local store.

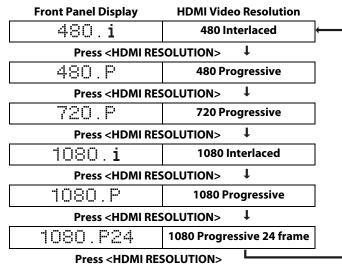
Connecting to a Display Device and an Amplifier/Receiver with HDMI Cable

Connecting this unit to display device and an amplifier/receiver with an HDMI jack using HDMI cables enables digital surround sound with high quality video.



HDMI Output Mode and Actual Output Signals

Press **<HDMI RESOLUTION>** to select the HDMI output mode. HDMI video resolution changes as following.



Note

10 english

- After you select a HDMI output mode, corresponding HDMI video resolution will be output. Then if the connected display device is not compatible with the HDMI video resolution, this unit will output the next HDMI video resolution in order until this unit finds the HDMI video resolution that is supported by connected display device.
- During BD playback,<HDMI RESOLUTION> is not available.
- Video and audio signals may distorted temporarily when switching to/from the HDMI output mode.
- You can also change the HDMI output mode from "HDMI Video Resolution" in the "Video" menu on the setup menu. Refer to page 29.
- In order to get natural and high quality film reproduction of 24-frame film material, select "1080p24" if the connected display device is compatible with 1080p24 frame input.
- Even if you set to "1080p24" for the "HDMI Video Resolution", when the contents of the disc is not compatible for 1080p24 frame, 1080p60 frame will be output.

Cables not included.

Please purchase the necessary cables at your local store.

Connections

Audio Setting

When using HDMI connections make the "HDMI Audio Out" settings in the "Audio" menu on the setup menu according to the specifications of the device or monitor to be connected.

Device to be connected	"HDMI Audio Out" setting	Output HDMI audio signal
Device compatible with DTS, DTS-HD, Dolby Digital, Dolby Digital Plus or Dolby TrueHD decoding	HDMI Multi(Normal)	Dolby Digital, Dolby Digital Plus, Dolby TrueHD, DTS, or DTS-HD bitstream are output from HDMI OUT. Make the speaker settings on the connected AV amplifier, etc.
Device compatible with 3 or more channels of audio inputs (not DTS, DTS-HD, Dolby Digital, Dolby Digital Plus or Dolby TrueHD compatible)	HDMI Multi(LPCM)	Multi-channel audio signals are output from the HDMI terminal. Make the speaker settings with the speaker setting items appear after you select "HDMI Multi(LPCM)". Refer to page 30.
Device compatible with 2- channel audio input or device not compatible with audio input	HDMI 2ch	Down-mixed 2-channel audio signals are output from HDMI OUT.

Audio signals output from HDMI OUT

Disc type	Audio recording format	"HDMI Audio Out" setting		
		HDMI Multi(Normal)	HDMI Multi(LPCM)	HDMI 2ch
	Dolby Digital	Dolby Digital*1	Multi LPCM	2ch Downmix LPCM
	Dolby Digital Plus	Dolby Digital Plus*1	Multi LPCM*2	2ch Downmix LPCM
BD-video	Dolby TrueHD	Dolby TrueHD*1	Multi LPCM* ³	2ch Downmix LPCM
BD-video	DTS	DTS*1	Multi LPCM	2ch Downmix LPCM
	DTS-HD	DTS-HD*1	Multi LPCM* ⁴	2ch Downmix LPCM
	LPCM	Multi LPCM	Multi LPCM	2ch Downmix LPCM
BD-RE/BD-R	AAC	AAC	Multi LPCM	2ch Downmix LPCM
BD-RE/BD-R	LPCM	Multi LPCM	Multi LPCM	2ch Downmix LPCM
	Dolby Digital	Dolby Digital	Multi LPCM	2ch Downmix LPCM
DVD-video	DTS	DTS	Multi LPCM	2ch Downmix LPCM
	LPCM	Multi LPCM	Multi LPCM	2ch Downmix LPCM
DivX®	Dolby Digital	Dolby Digital	Multi LPCM	2ch Downmix LPCM
DIVA	MP3/MP2	2ch LPCM	2ch LPCM	2ch LPCM
audio CD/ M Media™ Aud		2ch LPCM	2ch LPCM	2ch LPCM
DTS-CD		DTS	Multi LPCM	2ch Downmix LPCM

*1If "BD Audio Mode" is set to "Mix Audio Output" audio will be output as multi LPCM. Refer to page 22.

*²Outputs audio signals decoded from independent substream.

*³Outputs audio signals decoded from Dolby Digital stream.

*4Outputs audio signals decoded from DTS core stream.

• If the connected device is not compatible with the HDMI BITSTREAM, audio will be output as Multi LPCM or 2ch Downmix LPCM depends of the capability of the connected device even if you select "HDMI Multi(Normal)" in "HDMI Audio Out" setting. Refer to page 30.

Copyright protection system

To play back the digital video images of a BD/DVD via an HDMI connection, it is necessary that both the unit and the display device (or an AV amplifier) support a copyright protection system called HDCP (high-bandwidth digital content protection system). HDCP is copy protection technology that comprises data encryption and authentication of the connected AV device. This unit supports HDCP. Please read the operating instructions of your display device or AV amplifier) for more information.

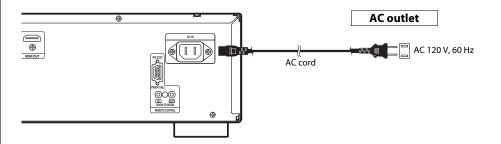
* HDMI: High-Definition Multimedia Interface

Note

- When using HDCP-incompatible display device, the image will not be viewed properly.
- Among the devices that support HDMI, some devices can control other devices via the HDMI jack, this unit cannot be controlled by another device via the HDMI jack.
- The audio signals from the HDMI jack (including the sampling frequency, the number of channels and bit length) maybe limited by the device that is connected.
- Among the monitors that support HDMI, some do not support audio output (e.g, projectors). In connections with device such as this unit, audio signals are not output from the HDMI output jack.

Connecting the AC Cord

After you made all necessary connections, connect the AC cord to the AC IN. Then connect the AC cord to the AC outlet.

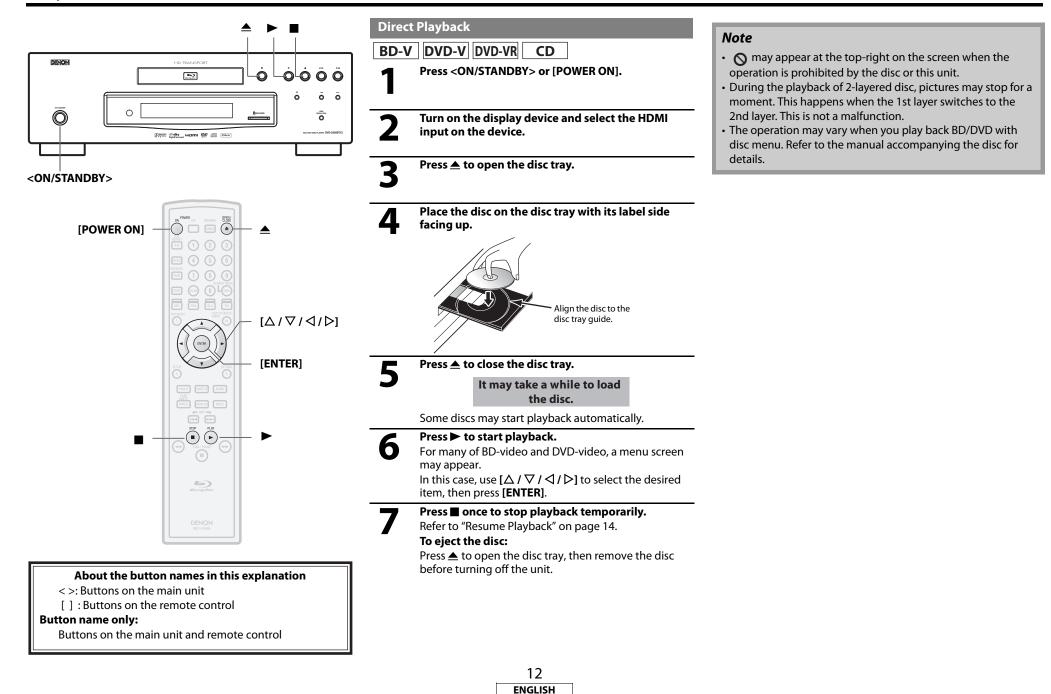


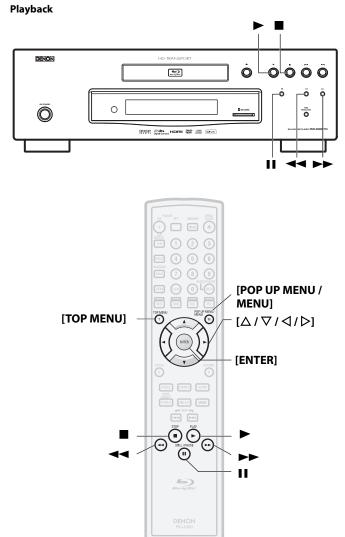
Supplied cables used in this connection are as follows: • AC cord x 1

Note

• Insert the plugs securely. Incomplete connections will result in the generation of noise.







About the button names in this explanation

- < >: Buttons on the main unit
- []: Buttons on the remote control

Button name only:

Buttons on the main unit and remote control

Operations Using Disc Menu, Title Menu, and Popup Menu

BD-V DVD-V DVD-VR

Many of BD and DVD disc contains Disc menu (DVD), Title menu (BD/DVD) or Pop-up menu (BD-video) which describes the contents of the disc, or a disc menu, which guides you through the available functions in the disc. The contents of the menus may differ depending on the discs.

Disc menu (DVD)

1) Press [POP UP MENU / MENU].

- The disc menu will appear.
- 2) Use $[\triangle / \nabla / \triangleleft / \triangleright]$ to select an item, then press [ENTER].

Title menu (BD/DVD)

1) Press [TOP MENU].

2) Use $[\triangle / \nabla / \triangleleft / \triangleright]$ to select an item, then press [ENTER].

Pop-up menu (BD-video)

- This is a special feature available for some BD. When you press [**POP UP MENU** / **MENU**], a menu pops out on the screen while the contents still play back.
- 1) During BD playback, press [POP UP MENU / MENU].
- 2) Use $[\Delta / \nabla / \langle \rangle]$ to select an item, then press [ENTER].

Note

- If the feature is not available, 🚫 may appear on the TV screen.
- Contents of menus and corresponding menu operations may vary among discs. Refer to the manual accompanying the disc for details.

Playing Back a VR mode DVD-RW/-R

DVD-VR

When you are playing back a VR mode DVD-RW/-R, you can choose "Original" or "Playlist" if the disc contains a "Playlist".

- 1) In stop mode, press [POP UP MENU / MENU] to call up DVD menu.
- 2) Use $[\triangleleft/\triangleright]$ to select "Original" or "Playlist".



3) Use [\triangle / ∇] to select desired title, then press [ENTER].

Note

- "Original" is the title which is actually recorded on the disc.
- Playlist is edited version of the Original.
- DVD menu varies depending on discs.
- If the disc does not contain Playlist, Playlist will not be displayed on the DVD menu.

Pause

1) During playback, press II. Playback will be paused.



2) Press ► to return to normal playback.

Note

• For BD, DVD and DivX[®], set "Still Mode" to "Field" in the "Video" menu if pictures in the pause mode are blurred (refer to page 29).



Resume Playback

1) During playback, press **I**.

• Resume message will appear on the screen.



2) Press ►.

In a few seconds, playback will resume from the point at which it stopped last. To cancel the resume playback and start playing back the disc from the beginning, press ■ again while the playback is stopped.

Note

- For MP3, JPEG or Windows Media[™] Audio, playback will resume from the beginning of the current file.
- The resume information will be saved even when the power is turned off.
- Resume playback is not available for the BD that supports Java applications (BD-J).

Fast Forward / Fast Reverse Playback



DivX®

 During playback, press ◄< or ►► repeatedly to select a desired forward or reverse speed.

Button



2) Press ► to return to normal playback.

- For BD and DVD, speed changes in 5 different levels. For audio CD, MP3, Windows Media[™] Audio, and DivX[®], speed changes in 3 different levels.
- For audio CD, MP3 and Windows Media[™] Audio, sound will be output at any speed of fast forward and reverse search.

Note

- For MP3 and Windows Media[™] Audio, fast forward/fast reverse search between different files are not available.
- For audio CD, fast forward/fast reverse search between different titles are not available during the program playback.
- For some $\mathsf{DivX}^{\circledast}$ files, fast forward/fast reverse search may not function.

Slow Forward Playback

BD-V DVD-V DVD-VR DivX®

- 1) During playback, press II.
- 2) Press ►►.
 - Slow motion playback will begin and sound will be muted.
- 3) Press ►► repeatedly to select a desired speed.

Slow forward speed changes in 3 different levels.



4) Press ► to return to normal playback.

Note

- Set "Still Mode" to "Field" in the "Video" menu if pictures in
- the slow playback mode are blurred (refer to page 29).
- Slow reverse is not available.

Step by Step Playback

BD-V DVD-V DVD-VR DivX®

1) During playback, press II.

• Playback will pause and sound will be muted. The disc advances frame by frame each time II is pressed.



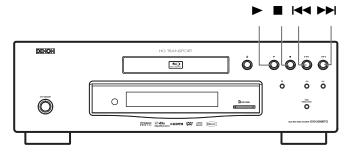
2) Press ► to return to normal playback.

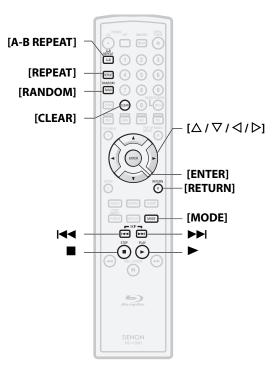
Note

- Set "Still Mode" to "Field" in the "Video" menu if pictures in the pause mode are blurred (refer to page 29).
- Only step by step forward is available.

Playback







About the button names in this explanation

- < >: Buttons on the main unit
- []: Buttons on the remote control

Button name only:

Buttons on the main unit and remote control

Dialog Speed

BD-V DVD-V DVD-VR

This function plays back approximately at 1.3 times of normal playback with sound being output. This function is available only on discs recorded in the Dolby Digital format.

1) During playback, press [MODE] repeatedly until the dialog speed setting appears.

v) → Off

- - "))" : Plays back approximately at 1.3 times of normal playback.
- 3) Press ► to return to normal playback.

Note

- Every time you press ■, the setting will be turned "Off".
- Subtitle can be viewed during this function.
- Picture control, and audio language setting cannot be changed during this function.
- Virtual surround does not function during this function.
- This function may not work at some points on a disc.
- During this function, 2ch LPCM sound will be output.

Repeat Playback

Available repeat function may vary depending on the discs.

1) During playback, press [REPEAT] repeatedly until desired repeat mode appears on the screen.

Playback

The following repeat modes are available.

Repeat mode	Available media	
Chapter repeat		
The current chapter will be played back repeatedly.	BD-V DVD-V DVD-VR	
Title repeat		
The current title will be played back repeatedly.	BD-V DVD-V DVD-VR	
Track repeat	CD MP3 WMA	
The current track or file will be played back repeatedly.		
Group repeat	MP3 WMA JPEG	
The current folder will be played back repeatedly.	DivX®	
All repeat	DVD-VR CD MP3	
All titles, tracks or files in the media will be played back repeatedly.	WMA JPEG DivX®	

A-B Repeat

BD-V DVD-V DVD-VR CD DivX®

Desired section can be played back repeatedly.

- 1) Press [A-B REPEAT] at the desired starting point A.
- 2) Press [A-B REPEAT] at the desired ending point B.
 The repeat sequence begins.
- 3) Press [A-B REPEAT] to exit the sequence.



Playback

Note

- The chapter/title/track/group repeat setting will be cleared when moving to other chapter, title, track/file or folder.
- Repeat playback does not function during A-B repeat playback.
- Repeat chapter/title is not available with some scenes.
- A-B Repeat can only be set within the current title or current track/file.
- A-B Repeat is not available with some scenes.
- To cancel the A point which was set, press [CLEAR].
- A-B Repeat playback does not function during chapter, title, track, group or all repeat playback.
- For some DivX[®] files, A-B Repeat playback may not function.

Program Playback

CD MP3 WMA JPEG

You can program the disc to play back in your desired order.

1) In stop mode, press [MODE].

- The program screen will appear.
- 2) Use [\triangle / ∇] to select a track/file, then press [ENTER].



<Example : MP3>

- For MP3, Windows Media[™] Audio, and JPEG, use [△ / ▽] to select a folder, then press [ENTER] first, and then use
- $[\Delta / \nabla]$ to select a track/file, then press **[ENTER]**.
- Press [CLEAR] to erase the last track/file of the program.
- Select "All Clear" at the bottom of the list to erase all the tracks/files in the program.
- The programmed track/file is displayed in the right hand screen.
- If the entire program cannot be displayed on the screen, "▼" or "▲" appears.
- Use $[\triangleleft i]$ to going back forward between the hierarchy of folders.
- If eight or more tracks/files were set in a program, use the I < < / → I to see all the tracks/files.

- 3) Press ► to start program playback.
 - Program playback will start.

Note

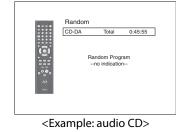
- Your program is still stored until either the disc tray is open or power is turned off.
- Up to 99 tracks/files can be entered.
- To repeat the current track/file in the program, press
- [**REPEAT**] repeatedly until " Track" appears during play back. To repeat the entire program press [**REPEAT**]
- repeatedly until " All" appears during playback.
- Even if an inserted disc contains mixed MP3, JPEG and Windows Media[™] Audio files, program function allows 99 files in combination of MP3, JPEG and Windows Media[™] Audio files.
- The current selected number on the front panel display blinks while setting the program playback.
- "F***" is displayed in the front panel display while selecting the folder.(*** is folder number.), and file is displayed as "-****" after the folder indication.
- Playback from a desired track/ file and random playback are not available during program playback.

Random Playback

CD MP3 WMA JPEG

This function shuffles the play back order of tracks/files.

1) In stop mode, press [RANDOM].



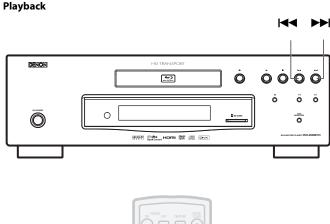
2) Press ► to start random playback.

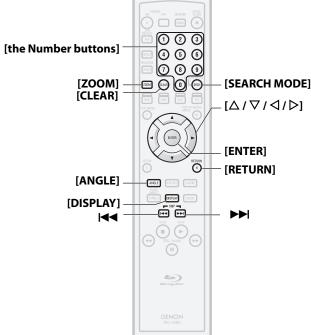
Note

- During the random playback, press once to set the resume point, and then press ► to resume the random playback fromwhere was pressed (audio CD) or from beginning of the file where was pressed (MP3, Windows Media[™] Audio, or JPEG).
- During the random playback, press twice to display the random playback screen. To cancel the random playback, press **[RANDOM]** when the random playback screen is displayed.
- To repeat the current track/file in the random selection, press [REPEAT] repeatedly until " Track" appears during
- playback. To repeat the entire random selection press [REPEAT] repeatedly until "

playback.

- You cannot go back to the previous track/file during random playback.
- For a disc containing mixed MP3, JPEG and Windows Media[™] Audio files, random playback of those files will be performed.
 "RAND" is displayed on the front panel display.





About the button names in this explanation

- < >: Buttons on the main unit
- []: Buttons on the remote control unit

Button name only:

Buttons on the main unit and remote control unit

► Zoom

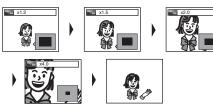
DVD-V DVD-VR JPEG DivX®

This function allows you to enlarge the video image and to pan through the zoomed image.

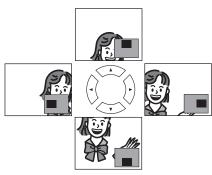
1) Press [ZOOM] during playback.

Playback will continue.

- 2) Press [ZOOM] repeatedly to select a desired zoom factor: x1.2, x1.5, x2.0, x4.0 or off.
 - "x4.0" zoom is not available for JPEG and DivX[®].



3) Use [△/▽/</▷] to move the zoomed picture across the screen.



4) Press [ZOOM] to exit zoom mode.

Note

- For BD, zoom function is not available.
- Zoom function does not work while disc menu is shown.
- Navigation screen is not available on JPEG.
- You cannot pan through the zoomed picture on some JPEG files.
- For some DVD, "x4.0" zoom is not available.
- For $\text{Div}X^{\textcircled{B}}$ files with small image, zoom function is not available.
- For DivX[®], depends on the size of the image, some zoom factor may not available.

Camera Angle

BD-V DVD-V

Some BD and DVD contain scenes which have been shot simultaneously from various angles. You can change the camera angle when appears on the screen.

1) Press [ANGLE] during playback.

- The selected angle will be displayed on the display bar at the top of the screen.
- 2) Use $[\Delta / \nabla]$ to select your desired angle.

Note

• If the "Angle Icon" setting is "Off" in the "Others" menu, [™] will not appear. Refer to page 33.

Search

■ Using |<< / >>

1) Press ▶▶ I to skip to the next chapter, track or file during playback.

To go back to the previous chapter, track or file, press **I**

Note

• If title contains no chapters, I◄◄ / ►►I changes the title.

Using [SEARCH MODE]

1. By using the [SEARCH MODE], you can select following search options.

Search mode	Available media
TT / GH Title / Chapter search	BD-V DVD-V DVD-VR
TR Track Search	CD MP3 WMA JPEG DivX [®]
Time Search	BD-VDVD-VDVD-VRCDDivX®
Marker Search	BD-V DVD-V DVD-VR CD



Playback

- Select a type of search by pressing [SEARCH MODE].
 Every time you press [SEARCH MODE], type of search changes.
- 2) Enter the desired chapter, track, file, title number or time to search for using [the Number buttons].
 - Chapter, title, track or time search will start.

Note

- During program and random playback, search functions are not available except the search using I
- Time search function is available only in the same track, file or title.
- For some DivX[®] files, time search may not function.
- For BD, chapter and time search are available only during playback.

Marker search

This feature allows you to assign a specific point on a title or track to be called back later.

- 1) During playback, press [SEARCH MODE] repeatedly until marker setting appears.
- 2) Use $[\triangleleft / \triangleright]$ to select a marker number (1-9).

MIAR 1 2 3 4 5 6 7 8 9 AC

- When the disc reaches the point you want to set a marker, press [ENTER].
 - The title or track and elapsed playback time will appear on the screen.
- 4) Press [SEARCH MODE] or [RETURN] to exit.
- 5) To return to the marker later, call the marker setting by pressing [SEARCH MODE] repeatedly during playback or in stop mode, and use [

Note

- Opening the disc tray, turning off the power or selecting "AC" at step 2 and pressing [ENTER] will erase all markers.
- To clear a marker, use [| b] to select the marker number to be cleared and press [CLEAR].
- You can mark up to 9 points.
- For BD, marker search between different titles is not available.
- For BD, you can return to the maker only during playback.

On-Screen Display

You can check information about the current disc by pressing **[DISPLAY]**.

To call the On-Screen Display, press **[DISPLAY]** during playback. Each time you press **[DISPLAY]**, the information changes. Depending on the media, available information varies.

BD-V

- $OFF \Rightarrow$ Title/Chapter information \Rightarrow Title information(elapsed
- time) → Title information(remaining time) → HDMI information → OFF

DVD-V DVD-VR

- OFF → Chapter information (elapsed time)
- → Chapter information (remaining time) → Title information
- (elapsed time) → Title information (remaining time)
- ➡ Bit rate information ➡ HDMI information ➡ OFF

CD

 $OFF \Rightarrow Track information (elapsed time) \Rightarrow Track information (remaining time) \Rightarrow Disc information* (elapsed time)$

- → Disc information* (remaining time) → HDMI information
 → OFF
- (*not available during the program/random playback)

MP3 JPEG

 $OFF \Rightarrow$ File name information \Rightarrow File information (elapsed time*) \Rightarrow HDMI information \Rightarrow OFF (*not available for JPEG)

WMA

- OFF \rightarrow File name information \rightarrow Tag information (title name)
- \rightarrow Tag information (artist name) \rightarrow File information (elapsed time)
- ➡ HDMI information ➡ OFF

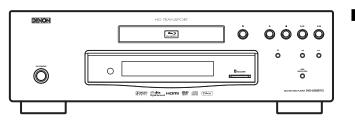
DivX®

- OFF → File name information → File information (elapsed time)
- ➡ File information (remaining time) ➡ HDMI information ➡ OFF
- For audio CD, MP3, Windows Media[™] Audio and JPEG, during the program or random playback, the indication will be displayed after the track/file information.



ENGLISH

Playback



[A-B REPEAT] [△/▽/⊲/▷] [DISPLAY] [DISPLAY] [DISPLAY] [DISPLAY] [DISPLAY] [DISPLAY] [DISPLAY] [DISPLAY]

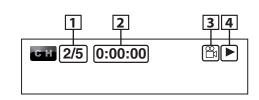
About the button names in this explanation

- < >: Buttons on the main unit
- []: Buttons on the remote control

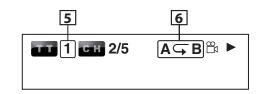
Button name only:

Buttons on the main unit and remote control

Chapter information

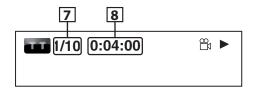


<Title / Chapter information for BD>



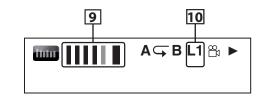
- 1. Current chapter number/total number of chapters
- 2. Elapsed time/remaining time of the current chapter
- 3. Indicates that the multi camera angle images are available on the scene
- 4. Current playback status
- 5. Current title number
- 6. Current repeat setting (Only when repeat setting is active) (C: Chapter repeat, T: Title repeat, AB : A-B repeat)

Title information

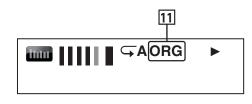


- 7. Current title number/total number of titles
- 8. Elapsed time/remaining time of the current title

Bit rate information

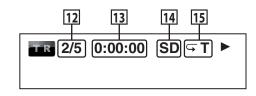


<For VR mode DVD-RW/-R>



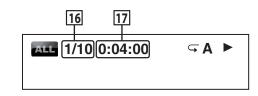
- 9. Bit rate (the amount of video data currently being read)
- 10. Layer number (Only for 2-layered discs)
- (L0: Layer 0 is played back. L1: Layer 1 is played back) 11. Type of title (ORG: original, PL: playlist)

Track/File information



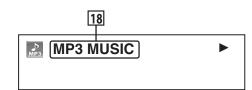
- 12. Current track (file) number/total number of track (file)
- 13. Elapsed time/remaining time of the current track (file)
- 14. Indication of SD Memory Card playback
- 15. Current repeat setting (Only when repeat setting is active) (T: Track/file repeat, G: Group repeat, A: All repeat)

Disc information



16. Current track number/Total number of tracks 17. Elapsed time/remaining time of the current disc

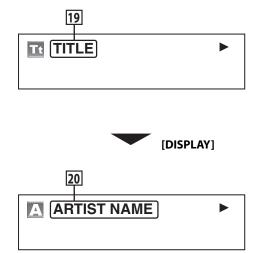
Playback



18. Media icon and File name

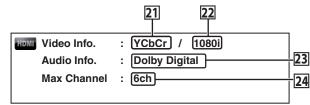


Tag information



- 19. Title name based on tag information of current Windows Media™ Audio file
- 20. Artist name based on tag information of current Windows Media™ Audio file

HDMI information



21. HDMI video format

- 22. Resolution of the HDMI output image
- 23. HDMI audio format
- 24. Maximum numbers of audio channels that can be accepted by the connected device

Selecting the Format of Audio and Video

Selecting Audio Streams/Channels

BD-V DVD-V CD DivX®

Some BD and DVD contain multiple audio streams. Those are often in different audio languages or audio formats. For BD available audio varies depends on the "BD Audio Mode" setting. Refer to page 22 for more information.

BD-V

- 1) During playback, press [AUDIO].
- Use [△ / ▽] to select "Primary" or "Secondary" audio to set, then press [ENTER].

0))	Prim	ary			
	1	ENG	Dolby D	Multi-ch	/3
	Seco	ndary			
	2	ENG	Dolby D +	Multi-ch	/3

"Primary" : Sets the audio for the main picture.

"Secondary" : Sets the audio for the sub-picture.
In order to listen to the secondary audio, the "BD Audio Mode"

- must be set to "Mix Audio Output". Refer to page 22.
- 3) Use $[\Delta / \nabla]$ to select your desire audio stream/channel.

4) Press [AUDIO] to exit.

- 1) During playback, press [AUDIO].
- 2) Use [Δ / ∇] to select your desired audio stream/channel.



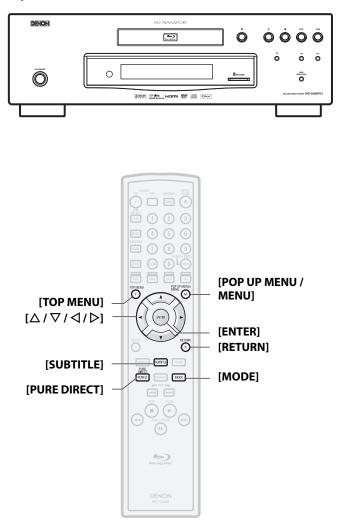
- For audio CD, you can select following options.
- "Stereo" : Both right and left channels are active (stereo)
- "L-ch" : Only left channel is active
- "R-ch" : Only right channel is active
- 3) Press [AUDIO] to exit.

Note

- For VR mode DVD-RW/-R with MTS (Multi-channel Television Sound) system, you can switch between "1.Main" (main audio), "1. Sub" (sub audio), and "1.Main/Sub" (main and sub audio).
- The sound mode cannot be changed during playback of discs not recorded in multiple sound.
- Some discs allow to change audio language setting on the disc menu. (Operation varies between discs. Refer to the manual accompanying the disc.)
- Pressing **[AUDIO]** may not work on some discs with multiple audio Streams/Channels (e.g. DVD which allow to change audio setting on the disc menu).
- If you choose a language that has a 3-letter-language code, the code will be displayed every time you change the Audio Language setting. If you choose any other Languages, "---" will be displayed instead (refer to page 35).
- Audio Language selection cannot be made during dialog speed (refer to page 15).
- If the disc has no audio language, "Not Available" will be displayed.
- For discs with DivX[®] files, only MP3, MP2 or Dolby Digital audio is displayed. Other audio will be displayed with "---".
- For DTS-CD(5.1 music disc), selecting audio streams or channels is not available.

ENGLISH

Playback



About the button names in this explanation

- < >: Buttons on the main unit
- []: Buttons on the remote control

Button name only:

Buttons on the main unit and remote control

Selecting Subtitle Language

BD-V DVD-V DivX®

BD, DVD-video and DivX[®] may have subtitles in 1 or more languages. Available subtitle languages can be found on the disc case. You can switch subtitle languages anytime during playback.

BD-V

- 1) During playback, press [SUBTITLE].
- 2) Use $[\triangle / \nabla]$ to select "Primary Subtitle", "Secondary Subtitle" or "Subtitle Style", then press [ENTER].

Primary Subtitle	2.ENG/255
Secondary Subtitle	2.ENG/255
Subtitle Style	2/25

"Primary Subtitle": Sets the subtitle for the main picture. "Secondary Subtitle": Sets the subtitle for the sub-picture. "Subtitle Style": Sets style of the subtitle.

- 3) Use $[\Delta / \nabla]$ to select your desired subtitle.
- 4) Press [SUBTITLE] to exit.

DVD-V DivX[®]

- 1) During playback, press [SUBTITLE].
- 2) Use $[\Delta / \nabla]$ to select your desired subtitle. /3 🗘

ENG

3) Press [SUBTITLE] to exit.

Note

- Some discs will only allow you to change the subtitle from the disc menu. Press [TOP MENU] or [POP UP MENU / MENU] to display the disc menu.
- If 4 digit language code appears in the subtitle menu, refer to the "Language Code" on page 35.
- If the disc has no subtitle language or subtitle style, "Not Available" will be displayed.
- For DivX[®], the screen only displays the number of subtitle languages.

Adjusting the Picture

BD-V DVD-V DVD-VR DivX®

You can adjust the picture quality.

1) During playback, press [MODE] repeatedly until the picture adjustment menu appears.

PICT	6.Noise Reduction	Off
\$	1.Contrast	⋖₀►
	2.Brightness	0

- 2) Use $[\Delta / \nabla]$ to select a item to be adjusted, then use $[\langle / \rangle]$ to adjust the setting
- 3) Press [RETURN] repeatedly to exit.

ltem	Description	Adjustment range (*:default)
Contrast	Adjusts the difference between the bright and dark parts of the picture	-7 to +7 (0*)
Brightness	Adjusts the brightness of the picture.	0 to +15 (0*)
Sharpness Adjusts the sharpness of the picture.		-6 to +6 (0*)
Gamma Correction	Changes the amount of gamma correction to adjust overall brightness of a picture. Make dark/bright section easier to see	0 to +5 (0*)
Color Adjusts the balance between the green and red.		-7 to +7 (0*)



ltem	Description	Adjustment range (*:default)
		Off*
		+1: Execute MPEG noise reduction witch reduce the block noise and mosquito noise on the subtitle on movie.
Noise Reduction	Reduces the noise of the playback picture.	+2: Execute 3D noise reduction witch detect and delete the noise by comparing each picture frames.
		+3: Execute both MPEG noise reduction and 3D noise reduction.

Note

- The setting remains even you turn off the unit.
- You cannot adjust the setting during the dialog speed playback.
- For BD, noise reduction is not effective.

Virtual Surround

BD-V DVD-V DVD-VR

You can enjoy stereo phonic virtual space through your existing 2-channel stereo system.

1) In stop mode, press [MODE] repeatedly until the virtual surround setting appears.

۲

off 😢 ک

- Use [△ / ▽] to select "1" (Natural effect), "2" (Emphasized effect) or "Off".
- 3) Press [RETURN] to exit.

Note

- Select virtual surround "Off" or lower the volume if the sound is distorted.
- This function cannot be used during dialog speed (refer to page 15).
- For the virtual surround, audio signal will always be 2-channel LPCM.

Pure Direct Mode

By selecting the pure direct mode, you can shut down the circuitry of the front panel.

1) Press [PURE DIRECT] repeatedly to select your desired pure direct mode.

 Each time you press [PURE DIRECT], the pure direct mode changes as "Normal" → "Display Off" → "Normal". The modes will be displayed on the front panel display.

"Normal" : Pure direct mode is off.



[PURE DIRECT]

"Display Off" : Front panel display will be turned off.

Note

• The "Display Off" mode goes back to "Normal" mode if you turn off this unit.



BD-V

BD audio mode is to choose between two ways; you could output the secondary and interactive audio accompanied by the primary audio or you could output the primary audio only. Depending on the setting of the mode, Dolby Digital, DTS, Dolby Digital Plus, Dolby TrueHD, or DTS-HD output changes between multi LPCM and bitstream.

- 1) In stop mode with BD inserted, press [MODE].
- 2) Use $[\triangle / \nabla]$ to select desired setting.

BD Audio Mode

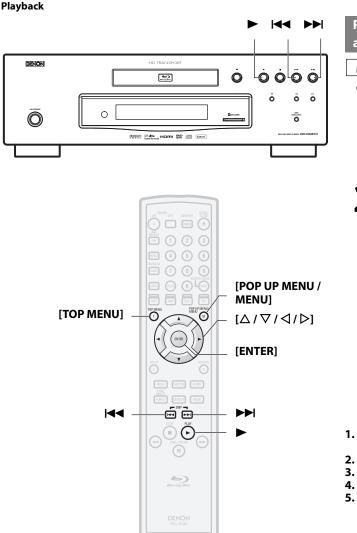
- "Mix Audio Output" : The Dolby Digital, DTS, Dolby Digital Plus, Dolby TrueHD or DTS-HD format will be converted to Multi LPCM. If it is available, secondary and interactive audio it will be output with primary audio.
- "HD Audio Output" : Dolby Digital, DTS, Dolby Digital Plus, Dolby TrueHD, or DTS-HD will be output in a full stream. Please refer to page 11 for output audio signals. In this mode secondary or interactive audio will not be output.
- The secondary audio is the audio for the sub picture (Director's comment etc.) and the interactive audio is the audio for the interactive application (Button click sounds etc.).

3) Press [RETURN] to exit.

• You can also set the BD Audio Mode from the setup menu. Refer to page 30.



Playback



About the button names in this explanation

< >: Buttons on the main unit

Button name only:

[]: Buttons on the remote control

Buttons on the main unit and remote control

Playing Back an MP3, Windows Media[™] Audio, JPEG and DivX[®] File

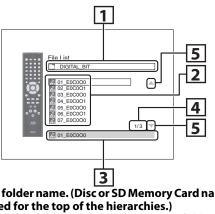
MP3 WMA JPEG DivX[®]

Insert a DVD-RW/-R or CD-RW/-R with MP3, Windows Media[™] Audio, JPEG, DivX[®] files.

- The file list will appear on the screen.
- If file list does not appear automatically, press
- [POP UP MENU / MENU].
- Press [POP UP MENU / MENU] to exit and resume the file list.

Use $[\Delta / \nabla]$ to select a desired folder or file, then press [ENTER]. Use $[\triangleleft / \triangleright]$ to go back and forward between the hierarchies.

• If you press [ENTER] on the files playback will start.



- 1. Current folder name. (Disc or SD Memory Card name will be displayed for the top of the hierarchies.)
- 2. List of the file/folder names in the current folder/disc.
- 3. Selected file/folder name.
- Current page / total page number 4.
- 5. Indication of previous/next page • Use | < < / > >>> I to go back and forward between the pages. • Press [TOP MENU] to return to the first item.

23 ENGLISH

Icons:

WMA

Folders

MP3 MP3 files

- Windows Media[™] Audio files
- 9 JPEG files



Playback It is recommended that files to be played back in this unit are recorded under the following specifications: <MP3 / Windows Media[™] Audio>

: 44.1 kHz or 48 kHz
: 112 kbps - 320 kbps (MP3), 48 kbps - 192 kbps (Windows Media™ Audio)
: 2,560 x 1,900 dots (sub sampling is 4:4:4)
5,120 x 3,840 dots (sub sampling is up to 4:2:2)
: 32 x 32 dots
: 12 MB
: DivX [®] 3.x, DivX [®] 4.x, DivX [®] 5.x, DivX [®] 6.0
: 720 x 480 @30 fps, 720 x 576 @25 fps
: 8 kHz - 48 kHz
: MPEG1 audio layer 3 (MP3), MPEG1 audio layer 2, Dolby Digital

Note

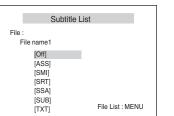
- The system can recognize up to 255 folders/999 files for CD, 999 folders/9999 files for DVD and SD Memory Card.
- The name of folder and file can be displayed up to 28 characters. Unrecognizable characters will be replaced with asterisks.
- The 9th and deeper hierarchies cannot be displayed for CD and the 10th and deeper hierarchies cannot be display for DVD and SD Memory Card.
- Files whose extension is other than ".mp3(MP3)" ".wma(Windows Media[™] Audio)", ".jpg / .jpeg(JPEG)" or ".avi/ .divx" will not be listed.
- Some unplayable folders or files may be listed due to the recording status.
- High-resolution JPEG files take longer to be displayed.
- Progressive JPEG files (JPEG files saved in progressive format) cannot be played back on this unit.
- This unit recognize up to 8 characters of file name in the SD Memory Card. Characters after 9th will not be displayed.

Playback

To Play Back the $DivX^{\otimes}$ Subtitle Created by the User.

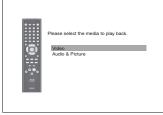
The subtitle created by the user can be displayed during $\mathsf{DivX}^{\$}$ playback.

- 1) After selecting the DivX[®] file, the "Subtitle List" will appear when "DivX Subtitle" is set to anything other than "Off". (Refer to page 28.)
- Use [△ / ▽] to select the desired extension you want to display, then press [ENTER].



 $\mathsf{DivX}^{\circledast}$ with the subtitle starts playback. The subtitle cannot be displayed when the setting is "Off".

- If there is more than one extension, the extension selection appears in the subtitle list.
- If you insert a DVD-RW/-R, CD-RW/-R with DivX[®] files that are mixed with MP3/Windows Media[™] Audio/JPEG files, the playback media selection screen will be displayed. Use [△ / ▽] to select your desired media to play back then press [ENTER].



• Press [**TOP MENU**] to call up the playback media selection screen in stop mode.

Hint for the purchased or rental official $\text{Div}X^{\textcircled{B}}$ Certified product

- When you purchased or rented a DivX[®] file through the official site of DivX[®] video which is called DivX[®] Video-On-Demand (VOD) services, a registration code is required every time you get the new file from the DivX[®] VOD services. Refer to "DivX(R) VOD" on page 33.
- Some DivX[®] VOD files are restricted with the limited playable times (you cannot play them back beyond the limit). If your DivX[®] VOD file has such limit, the playback confirmation screen will appear.

DIVA(H) VC	DD Herital	
nis rental has O vie o you want to use o	ews left. one of your O views now	?
Yes	No	

Div(V(B) VOD Bontol

- Use [<// →] to select "Yes" if you want to play back the file, or to select "No" if you do not wish to play it back. Then, press **[ENTER]** to confirm the selection.
- You cannot play back the DivX[®] VOD files, of which rental period has been expired. In such case, press [POP UP MENU / MENU] and select other files that can be played back.
- You cannot play back the DivX[®] VOD files obtained with different registration codes on this unit. Press [POP UP MENU / MENU] and select other files that can be played back.
- You cannot playback the DivX[®] file that has the resolution which this unit does not support. This unit does not support the DivX[®] files that have the image size that exceeds 720 x 480 @ 30fps or 720 x 576 @ 25fps.

y it	back. T	hen, press	s [ENTE
	This rental	Rental Expired is expired. Please p	ush 'MENU'.

	/ anonzanon	n Error	
This pla	ver is not authorized	d to play back t	this video
Please	oush 'MENU'.		



What is DivX[®]?

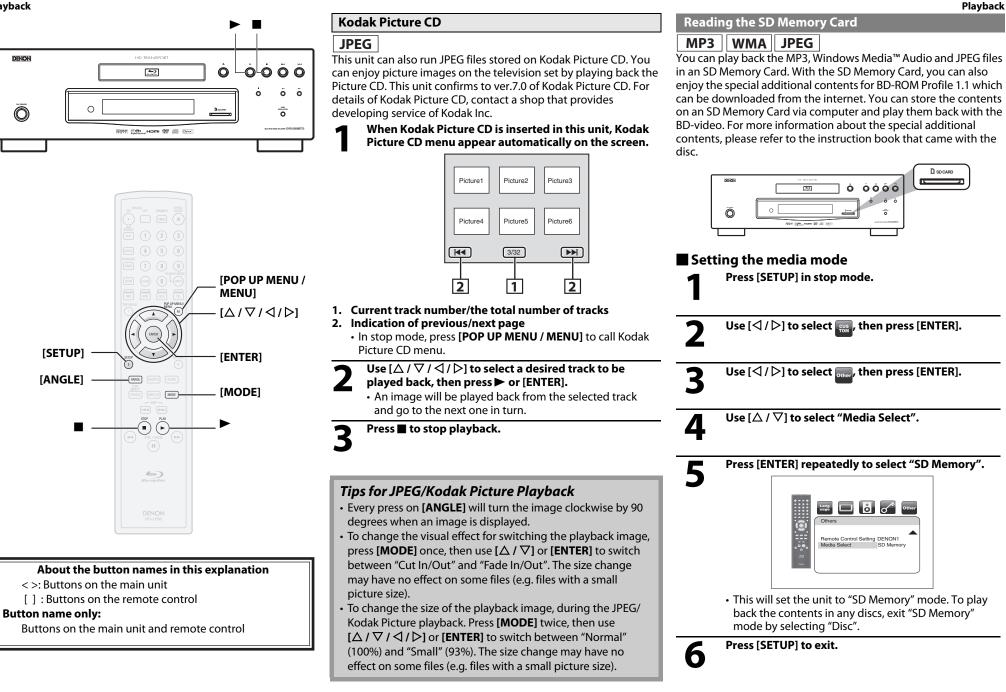
- DivX[®] is a codec (compression/decompression) that can compress images to a very small amount of data. The software can compress video data from almost any devices to the size that can be sent on the Internet without compromising visual quality of the images.
- A file with an extension of ".avi" and ".divx" is called an DivX[®] file. All files with the DivX[®] extension are recognized as MPEG4.
- For more information for DivX[®], please visit <u>http://www.divx.com</u>.

Note for DivX[®]

- Even if the file has an extension of either ".avi" and ".divx", this unit cannot play it back if it is recorded in the format other than DivX[®].
- It may take a while for audio and images to be output after you inserted a disc and pressed ►.
- When playing back the files recorded in high bit rates, the images can be interrupted in some occasions.
- Although DivX[®] logo has been obtained for this unit, it may not be able to play back some data, depending on the characteristics, bit rates, or audio format settings, etc.
- A DivX[®] file whose file size exceeds 2 GB cannot be played back.
- If a large-sized DivX[®] file is selected, it may take awhile to start the playback (over 20 seconds sometimes).
- If you try to playback the DivX[®] file that has the screen resolution which this unit does not support, the playback will be stopped and error message will appear.
- Some DivX[®] files cannot be played back on this unit due to the configuration and characteristics of the disc, or due to the condition of recording and authoring software.
- Multi-session burn DivX[®] DVD cannot be played back on this unit.

Note for DivX[®] Subtitle

- To utilize this function, the following conditions must meet.
- "DivX Subtitle" must be activated in "Language" setting. (Refer to "DivX Subtitle" on page 28.)
- Playback file and the subtitle file must have the same name.
- Playback file and the subtitle file must locate in the same folder.
- Only the subtitle files with the following extensions are supported; .smi (.SMI), .srt (.SRT), .sub (.SUB), .ass (.ASS), .ssa (.SSA), .txt (.TXT). (.sub (.SUB) and .txt (.TXT) files may not be recognized.)
- The subtitles that exceeds the playback time of the DivX[®] file will not be displayed.

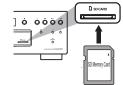




Playback Inserting the SD Memory Card and playback



Insert an SD Memory Card into the SD CARD slot until it clicks with the label facing up. File list will appear.



2

Follow the step 2 in "Playing Back an MP3, Windows Media™ Audio, JPEG and DivX® File" on page 23.

Removing the SD Memory Card



In stop mode, push the SD Memory Card and then slowly remove your finger.

Grasp the card and pull it out from the SD CARD slot.

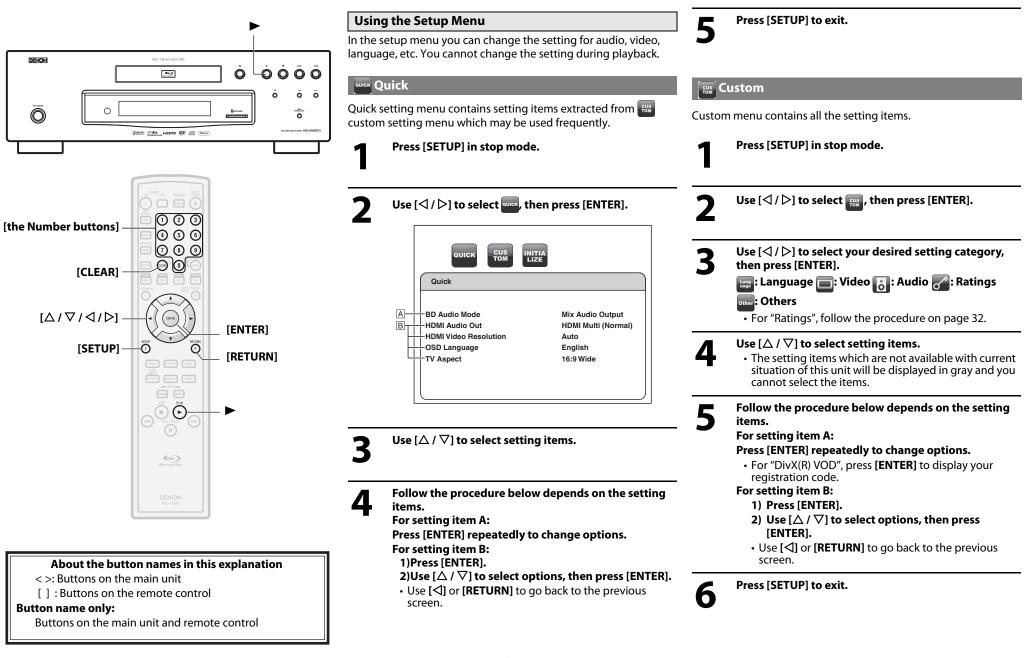
Compatible Cards:

- SD Memory Card (8MB 2GB)
- SDHC Memory Card (4GB)
- miniSD Card (8MB 2GB)
- microSD Card (8MB 2GB)
- For miniSD Card and microSD Card, adapter will be required.

Note

- Do not remove the card during its playback.
- This unit supports SD Memory Card with FAT12/FAT16 file system, and SDHC Memory Card with FAT32 file system.
- Do not delete the folders or files in the SD Memory Card with your computer. This unit might not read the SD Memory Card.
- This unit recognize up to 8 characters of file name in the SD Memory Card. Characters after 9th will not be displayed.





Function Setup

	Lang uage	Other
	Language	
B	Dialog Subtitle Disc Menu OSD Language DivX Subtitle	Original Off English English Off

• For how to select the setting items and options, refer to the "Custom" on page 27.

Setting items	Options
Dialog Sets the language for audio.	Original*/English/French/Spanish/German/Italian/ Swedish/Dutch/Russian/Chinese/Japanese/Korean/ Danish/Finnish/Norwegian/Icelandic/Hungarian/ Romanian/Turkish/Greek/Irish/Portuguese/Polish/ Czech/Slovak/Bulgarian/Other
Subtitle Sets the language for subtitle.	Off*/English/French/Spanish/German/Italian/Swedish/ Dutch/Russian/Chinese/Japanese/Korean/Danish/ Finnish/Norwegian/Icelandic/Hungarian/Romanian/ Turkish/Greek/Irish/Portuguese/Polish/Czech/Slovak/ Bulgarian/Other
Disc Menu Sets the language for disc menu.	English*/French/Spanish/German/Italian/Swedish/ Dutch/Russian/Chinese/Japanese/Korean/Danish/ Finnish/Norwegian/Icelandic/Hungarian/Romanian/ Turkish/Greek/Irish/Portuguese/Polish/Czech/Slovak/ Bulgarian/Other
OSD Language Sets the language for OSD (on-screen display).	English*/Français/Español
DivX Subtitle	Off* / English / French / Spanish
Sets the language for DivX [®] Subtitle.	

• Settings with (*) are the default.

Quick menu consists of the setting menus frequently used, and they are accompanied with mark.

 If you select "Other", enter the 4-digit number code for the desired language (refer to the "Language Code" list on page 35). Only the languages supported by the disc can be selected.



Lang uage O Other Lang Other Video Video B Still Mode B TV Aspect 16:9 Wide Auto HDMI Select YCbCr A Picture HDMI RGB Setting Normal -HDMI Auto Format Max -HDMI Video Resolution Auto -HDMI Deep Color Auto B Progressive Mode Auto -

• For how to select the setting items and options, refer to the "Custom" on page 27.

Setting items	Options
TV Aspect QUICK Sets a picture size according to aspect ratio of the connected display device.	 16:9 Wide*: Select this when a wide-screen TV is connected. Disc recorded in wide screen format is played over the entire screen. 4:3 Pan & Scan: Select this to play back the disc recorded in wide screen format with 4:3 TV in the pan & scan mode (with the sides of the picture cut off). Discs which pan & scan is not specified are played in the letter box mode.
	 4:3 Letter Box: Select this to play back the disc recorded in wide screen format with 4:3 TV in the letter box mode. (with black strips at the top and bottom). 4:3 Squeeze Auto: When playing 4:3 images, the picture is displayed in the
	center of the 16:9 screen with a 4:3 aspect ratio. 4:3 Squeeze On: The picture is displayed in the center of the 16:9 TV screen with a 4:3 aspect ratio, regardless of the original image size.
HDMI Select Select an HDMI output mode between "YCbCr" and "RGB".	YCbCr*: Component format video signals and audio signals are output from the HDMI OUT.
	RGB: RGB format video signals and audio signals are output from the HDMI OUT.

Setting items	Options
HDMI RGB Setting	Normal*:
Sets the digital RGB image range (data range) output from the HDMI	Output as "16 (black)" to "235 (white)".
OUT.	Enhanced: Output as "0 (black)" to "246 (white)". Depending on the TV you are using, the black colors may seem to stand out when using HDMI connections. If so, set to "Enhanced".
HDMI Auto Format	Max*:
Make the setting of the "Auto" for "HDMI Video Resolution".	The maximum resolution that can be input to the connected HDMI device is detected and the HDMI output resolution is selected automatically.
	Panel: The number of pixels of the connected HDMI device's panel is detected and the HDMI output resolution is selected automatically.
HDMI Video Resolution	Auto*:
Sets the HDMI video resolution.	HDMI video resolution will be selected automatically depending on the connected HDMI device.
	480i
	480p
	720p
	1080i
	1080p
	1080p24:
	Gives a natural and high quality film reproduction of 24- frame film material. The connected display device has to be compatible with 1080p24 frame input.
HDMI Deep Color	Auto*:
Sets whether output the picture from HDMI with the Deep Color or	The picture through the HDMI will be output with Deep Color if the connecting device supports deep color.
not.	Off: The picture through the HDMI will be output without Deep Color.
Progressive Mode	Auto*:
Sets the optimum progressive mode for the image material.	The progressive mode will detect 24-frame film material (movies) and automatically select appropriate progressive mode.
	Video1: Suited for playing video material discs (TV shows or animation).
	Video2: In addition to "Video1", this unit detects 30-frame video material and selects appropriate progressive mode.

Setting items	Options
Still Mode	Auto*:
Adjusts picture resolution and quality in still mode.	Automatically selects the best resolution setting ("Frame" or "Field") based on the data characteristics of the pictures.
	Field: Stabilizes the pictures, although the picture quality may become coarse due to the limited amount of data. Select "Field" when the pictures are still unstable even if "Auto" is selected.
	Frame: Displays relatively motionless pictures in higher resolution. "Frame" improves the picture quality, although it may unstabilize the pictures due to alternate output of two field data.
Wallpaper	Picture*
Sets the picture to be displayed on	Blue
the screen for stop mode or audio	Black
playback mode.	Gray
Settings with (*) are the default.	

Settings with (*) are the default.

 Quick menu consists of the setting menus frequently used, and they are accompanied with mark.

• For "HDMI RGB Setting", select "Enhanced" if the black-white contrast is not clear. The setting is effective only for HDMI RGB output.

- If you set to "1080p24" for the "HDMI Video Resolution", and the contents of the disc is not compatible for 1080p24 frame, 1080p60 frame will be output.
- An individual picture on the screen is called as "Frame", which consists of two separate images called as "Field". Some pictures may be blurred at the auto setting in "Still Mode" due to their data characteristics.
- If the picture is not output properly to the display device because of the "HDMI Video Resolution" setting, press and hold ► on the front panel for more than 5 seconds. The "HDMI Video Resolution" setting will be switched to "Auto" automatically.

• For "TV Aspect", 4:3 squeeze function is not available during BD playback.

Function Setup



	Lang uage	other	
Au	dio		
B H HDM	Audio Mode II Audio Out : Jal Surround	Mix Audio Output HDMI Multi (Normal) Off Off	

• For how to select the setting items and options, refer to the "Custom" on page 27.

Setting items	Options
BD Audio Mode For BD, select whether to output the secondary and interactive audio with primary audio if it is available (audio will be output in a multi LPCM format.) or only the primary audio (audio will be output in bitstream.).	Mix Audio Output*: Output the secondary and interactive audio with primary audio if it is available (audio will be output in a multi LPCM format.).
	HD Audio Output: Output only the primary audio (audio will be output in bitstream.).
HDMI Audio Out	HDMI Multi(Normal)*:
Sets the audio format for the audio output from the HDMI OUT.	The multi-channel audio signals are output from the HDMI OUT with a bitstream or LPCM.
	HDMI Multi(LPCM):
	The multi-channel audio signals are output from the HDMI OUT with a LPCM.
	Refer to page 11 for setting options.
	HDMI 2ch: The audio signals are output from the HDMI OUT with a downmixed to 2-channels.
DRC	On
Sets whether to compress the	
range of sound volume (Dynamic Range Control) when Dolby Digital audio is played back.	Off*

Setting items	Options
Virtual Surround Sets to create a surround effect in a system with 2 speakers connected.	Off*: Virtual surround is set to off.
	1 : A natural surround effect in a system with 2 speakers connected.
	2 : A stronger surround effect in a system with 2 speakers connected than "1".

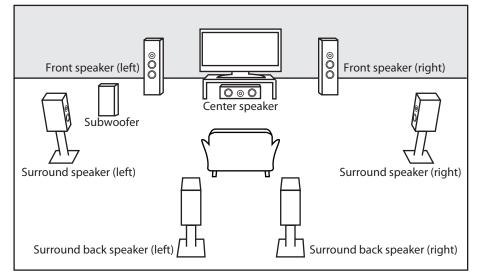
Settings with (*) are the default.
Quick menu consists of the setting menus frequently used, and they are accompanied with are mark.

• The default of the "BD Audio Mode" is "Mix Audio Output". If you want to output only the high quality primary audio, set "BD Audio Mode" to "HD Audio Output".

Function Setup Speaker Setting

This unit allows you to enjoy multi-channel surround sound such as 5.1-channel / 7.1-channel surround.

<Example of basic layout with 7.1ch surround system>



To make the most of its feature, set up your speakers appropriately by referring to the table below. Speaker setting options are available in Setup \rightarrow Quick \rightarrow HDMI Audio Out \rightarrow HDMI Multi(LPCM) or Setup \rightarrow Custom \rightarrow Audio \rightarrow HDMI Audio Out \rightarrow HDMI Multi(LPCM).

How to navigate through the "HDMI Multi(LPCM)" setting

- 1) Use $[\Delta / \nabla]$ to select the menu item.
- 2) Use $[\Delta / \nabla]$ to select setting items.
- Use [RETURN] to go back to the previous screen.
- 3) Use [<//>
 [<//>
) to select desired options.(Except for "Test Tone" and "Default".) For "Test Tone":

Use $[\triangleleft / \triangleright]$ to select "Manual" or "Auto", then press [ENTER].

- The test tone will be output. If you select "Manual", use $[\Delta / \nabla]$ to select desired speaker, then use $[\lhd / \triangleright]$ to adjust the volume. If you select "Auto", use $[\lhd / \triangleright]$ to adjust the volume of the speaker that output the test tone.
- If you want to stop the test tone, press [RETURN]. For "Default":
- Press [ENTER] to reset the "Delay Time" setting to the default.
- 4) Press [SETUP] to exit.

			Function Setup		
Menu	Setting items	Options	Descriptions		
Speaker Configuration Select the desired	Front	Large*	Large: For the large speakers		
speaker to set. Then		Small	with strong low frequency		
change the setting appropriately by	Center	Large*	reproduction capabilities. Small:		
referring to the descriptions.		Small	For the small speakers		
	Subwoofer	On*	which do not provide strong bass sound		
	Surround	Large*	You cannot change the		
		Small	setting of "Subwoofer". If connected device is not		
	Surround Back	Large*	compatible with		
		Small	subwoofer, "Subwoofer" will be displayed in gray.		
Channel Level Test or set the volume for	Test Tone: "Test Tone" is the	Off*	Select "Off" to deactivate the "Test Tone" feature.		
each speakers.	test tone which can be out put from the speakers so that you can adjust the	Manual	Select "Manual", then press [ENTER] to manually set the volume for the desired speaker.		
	volume for each speaker.	Auto	Select "Auto", then press [ENTER] to automatically output the test tone from each speakers.		
	Front Lch	0 dB to -12 dB (0 dB*)	lf you have selected "Manual" in "Test Tone",		
	Center	0 dB to -12 dB (0 dB*)	select the desired speaker to set and adjust the		
	Front Rch	0 dB to -12 dB (0 dB*)	volume for the selected speaker. If you have selected		
	Surround Rch	0 dB to -12 dB (0 dB*)	"Auto" in "Test Tone", adjust the volume while		
	Surround Back Rch	0 dB to -12 dB (0 dB*)	the desired speaker is outputting the test tone.		
	Surround Back Lch	0 dB to -12 dB (0 dB*)			
	Surround Lch	0 dB to -12 dB (0 dB*)			
	Subwoofer	0 dB to -12 dB (0 dB*)			

Function Setup

Function Setup

Menu	Setting items	Options	Descriptions	
Delay Time This is a parameter for optimizing the timing at which the sound is output from the speakers	Distance	Feet*	Set the desired measure system. This measure system will be used for "Delay Time"	
		Meters	setting. Press [ENTER] to switch the setting.	
	Front (L/R)	0ft - 60ft (12ft*)	Select the distance from the	
according to their distance from the		(0m-18m (3.6m*))	listening point to the	
listening position.	Center	0ft - 60ft (12ft*)	speaker to get the ideal	
insterning position.		(0m-18m (3.6m*))	delay time.	
	Surround (L/R)	0ft - 60ft (10ft*)		
		(0m-18m (3.0m*))		
	Surround Back (L/R)	0ft - 60ft (10ft*)		
		(0m-18m (3.0m*))		
	Default		Select "Default", then press [ENTER], to reset the "Delay Time" setting to the default.	

• Settings with (*) are the default.

- For "Speaker Configuration", if you set "Front" to "Small", you cannot set "Center", "Surround" and "Surround Back" to "Large".
- For "Speaker Configuration", if you set "Surround" to "Small", you cannot set "Surround Back" to "Large".
- For "Delay Time", the difference between the value of the "Front (L/R)", "Surround (L/R)" and "Surround Back (L/R)" setting cannot exceed 15 ft (4.5m), and the difference between the value of the "Front (L/R)" and "Center" setting cannot exceed 5 ft (1.5m).
- For "Delay Time", the value of the "Center", "Surround (L/R)" and "Surround Back (L/R)" setting cannot exceed the value of the "Front (L/R)" setting.
- For "Delay Time", the setting of "Center", "Surround (L/R)" and "Surround Back (L/R)" will be changed automatically to the setting value of the "Front (L/R)". (e.g., If the "Front (L/R)" is set to 60ft (18m), the setting of "Center", "Surround (L/R)" and "Surround Back (L/R)" will be changed to 60ft (18m) as well.)

Ratings

Ratings control allows you to set a limit, which prevents your children from viewing inappropriate materials. Playback will stop if the ratings exceed the levels you set, and it will require you to enter a password before the disc will play back.

Lang uage	ò	0	Other	
Ratings				
BD Rating Level	All			
DVD Rating Level	All			
Password Change				

1) Use $[\triangleleft/\triangleright]$ to select \mathbb{Z} , then press [ENTER].

2) Press [the Number buttons] to enter your 4-digit password.

For the first time use: Press [the Number buttons] to enter any 4-digit number (except for 4737), then press [ENTER]. That number will be used as the password from the second time. Record your password in case you forget it.

- If you forgot the password, enter [4], [7], [3], [7]. The password will be cleared and rating level will be set to "All".
- While you input the password, press [CLEAR] to clear the number, then re-enter the password.

Proceed to A – C

A) BD Rating Level

1) Use $[\triangle / \nabla]$ to select "BD Rating Level", then press [ENTER].

- 2) Use [\triangle / ∇] to select your desired option, then press [ENTER].
 - "All" : To release the limitation.

"Age Setting": To set the age limitation.

- After selecting "Age Setting", use [the Number buttons] to enter the age from 0 254. (e.g. for age 15, press [0],[1],[5])
- 3) Press [SETUP] to exit.

B) DVD Rating Level

1) Use $[\Delta / \nabla]$ to select "DVD Rating Level", then press [ENTER].

2) Use $[\Delta / \nabla]$ to select a desired level, then press [ENTER].

3) Press [SETUP] to exit.

RATING EXPLANATIONS

• All	: Parental control is inactive; all discs can play back.
• 8 [Adult]	: DVD software of any grades (adult/general/children) can be played
	back.
• 7 [NC-17]	: No one under 17 admitted.
• 6 [R]	: Restricted; under 17 requires accompanying parent or adult guardian.
• 5 [PGR]	: Parental guidance recommended.
• 4 [PG13]	: Unsuitable for children under 13.
• 3 [PG]	: Parental guidance suggested.
• 2 [G]	: General audience.
• 1 [Kid Safe]	: Suitable for children.

C) Password Change

- 1) Use $[\triangle / \nabla]$ to select "Password Change", then press [ENTER].
- 2) Enter a new 4-digit password, then press [ENTER].
- 3) Press [SETUP] to exit.

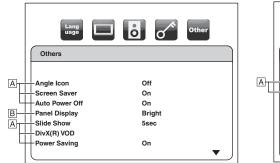


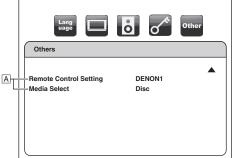


- -----

Function Setup

Others





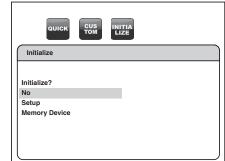
• For how to select the setting items and options, refer to the "Custom" on page 27.

Setting items	Options
Angle Icon	On: The angle icon appears on the screen when playback the scene with various angle.
	Off*: The angle icon disappears on the screen.
Screen Saver	On*: If this unit is left with no activity for more than 5 minutes, the screen saver will be activated.
	Off: Sets off the screen saver.
Auto Power Off	On*: If this unit is left with no activity for more than 30 minutes, this unit turns off automatically.
	Off: Sets off the auto power off.
Panel Display Sets the brightness of the front	Bright*: Front panel display gets brighter.
panel display.	Dimmer: Front panel display gets darker.
	Auto: Front panel gets darker during playback.
Slide Show	5sec*
Sets the display time for the still picture (in JPEG format) playback	10sec
DivX(R) VOD Provide DivX [®] VOD registration code.	For more information about DivX [®] VOD visit <u>www.divx.com/vod</u>

Setting items	Options
Power Saving Lower the power consumption for standby mode by denying the command from RS-232C during standby mode.	On*: Denies the command from RS-232C when the power is off. Off: Accepts the command from RS-232C when the power is off.
Remote Control Setting Changing the signal code of a remote control. (Refer to page 6)	DENON1* DENON2
Media Select Select the media to playback.	Disc*: Select this when you play back a disc. SD Memory: Select this when you play back a SD Memory Card.

Initialize

Initialize the setting or SD Memory Card.



1) Press [SETUP] in stop mode.

- 2) Use $[\triangleleft / \triangleright]$ to select "Initialize", then press [ENTER].
- 3) Use $[\Delta / \nabla]$ to select a desired option, then press [ENTER].
 - "No" :Exit without any initialization.
 - "Setup" :Reset the SETUP setting to the factory default.
 - "Memory Device" :Initializes the SD Memory Card. After confirmation message appears, use $[\Delta / \nabla]$ to select "Yes", then press [ENTER].
- 4) Press [ENTER]. (For "Setup" and "Memory Device" only)
- 5) Press [SETUP] to exit.

Note

• The setting for "Ratings" will not be reset.

33 ENGLISH

Function Setup

Others

Troubleshooting

If the unit does not perform properly when operated as instructed in this Operating Instruction, check the unit, consulting the following checklist.

Problem	Solution	Page
No power	- Check if the AC cord is properly connected.	-
	 Unplug the AC cord once, and wait for 5-10 seconds and then plug it in again. 	-
No sound or picture	- Check if the connected display device is turned on.	-
	 Check the HDMI connection. (Check the status of the HDMI related indications.) 	10
	 Check whether the connected display device or other device supports HDCP. (This unit will not output a video signal unless the other device supports HDCP.) 	11
	 Check whether the output format of this unit (HDMI FORMAT) matches the supported input format of other connected device. 	10,28,29
	- Check if the "HDMI Deep Color" is set to "Auto". If it is the case, set it to "Off".	29
Distorted picture	 Sometimes a small amount of picture distortion may appear. This is not a malfunction. 	-
Completely distorted picture or black/white picture with BD/DVD	- Make sure the disc is compatible with this unit.	4
No sound or distorted sound	- Adjust the volume.	-
	- Check that the speakers are connected correctly.	10
	 Check the HDMI connections. Check the "Audio" settings. 	10 30
Picture freezes momentarily during	- Check the disc for fingerprints/scratches and clean with a soft cloth	4
playback	wiping from center to edge. - Clean the disc.	4
Disc cannot be played back	- Clean the disc.	4
	- Ensure the disc label is facing up.	12
	- Check if the disc is defective by trying another disc.	-
	 Cancel the ratings control or change the control level. Insert a correct disc that can be played back on this unit. 	32
		4
SD Memory Card cannot be read.	 The format of the card does not match to this unit or the card is not compatible. 	-
No return to start-up screen when disc is removed	- Reset this unit by turning it off, then on again.	-
The unit does not respond to the remote control	- Aim the remote control directly at infrared sensor window on the front of the unit.	6
	 Reduce the distance to infrared sensor window. 	-
	 Replace the batteries in the remote control. 	6
	- Re-insert the batteries with their polarities (+/- signs) as indicated.	6
	 Make the signal code of the remote control match to the signal code of the unit. 	6
Buttons do not work or the unit stops responding	- To completely reset the unit, unplug the AC cord from the AC outlet for 5-10 seconds.	-

Problem	Solution	Page
The unit does not respond to some operating commands during playback	 Operations may not be permitted by the disc. Refer to the instructions of the disc. 	12
The unit cannot read BD/DVD/CD	- Condensation ? (Let sit 1 or 2 hours)	3
	 You are attempting to play a disc other than one with one of the marks on page 4. 	4
	- Wipe the dirt off the disc or replace the disc.	4
Angle does not switch	 The angle cannot be switched for BD/DVD which do not contain multiple angles. In some cases multiple angles are only recorded for specific scenes. 	17
Playback does not start when the title is selected	- Check the "Ratings" setting.	32
The password for rating level has been forgotten	- Enter the default password "4737", then your forgotten password will be cleared.	32

Note

• Some functions are not available in specific modes, but this is not a malfunction. Read the description in this Operating Instructions for details on correct operations.

• Some functions are prohibited on some discs.

Others

Language Code

Language	Code	Language	Code	Language	Code	Language	Code	Language
A-B		Esperanto	5161	Kinyarwanda	6469	Quechua	6367	Tigrinya
Abkhazian	4748	Estonian	5166	Kirghiz	5771	Rhaeto-Romance	6459	Tonga
Afar	4747	F-H		Kirundi	6460	Romanian [RUM]	6461	Tsonga
Afrikaans	4752	Faroese	5261	Korean [KOR]	5761	Russian [RUS]	6467	Turkish [TUR]
Albanian	6563	Fiji	5256	Kurdish	5767	S		Turkmen
Amharic	4759	Finnish [FIN]	5255	L-N		Samoan	6559	Twi
Arabic	4764	French [FRE]	5264	Laothian	5861	Sangho	6553	U-Z
Armenian	5471	Frisian	5271	Latin	5847	Sanskrit	6547	Ukrainian
Assamese	4765	Galician	5358	Latvian;Lettish	5868	Scots Gaelic	5350	Urdu
Aymara	4771	Georgian	5747	Lingala	5860	Serbian	6564	Uzbek
Azerbaijani	4772	German [GER]	5051	Lithuanian	5866	Serbo-Croatian	6554	Vietnamese
Bashkir	4847	Greek [GRE]	5158	Macedonian	5957	Sesotho	6566	Volapuk
Basque	5167	Greenlandic	5758	Malagasy	5953	Setswana	6660	Welsh
Bengali;Bangla	4860	Guarani	5360	Malay	5965	Shona	6560	Wolof
Bhutani	5072	Gujarati	5367	Malayalam	5958	Sindhi	6550	Xhosa
Bihari	4854	Hausa	5447	Maltese	5966	Singhalese	6555	Yiddish
Bislama	4855	Hebrew	5569	Maori	5955	Siswat	6565	Yoruba
Breton	4864	Hindi	5455	Marathi	5964	Slovak [SLO]	6557	Zulu
Bulgarian [BUL]	4853	Hungarian [HUN]	5467	Moldavian	5961	Slovenian	6558	
Burmese	5971	I-K		Mongolian	5960	Somali	6561	
Byelorussian	4851	Icelandic [ICE]	5565	Nauru	6047	Spanish [SPA]	5165	
C-E		Indonesian	5560	Nepali	6051	Sundanese	6567	
Cambodian	5759	Interlingua	5547	Norwegian [NOR]	6061	Swahili	6569	
Catalan	4947	Interlingue	5551	O-R		Swedish [SWE]	6568	
Chinese [CHI]	7254	Inupiak	5557	Occitan	6149	Т		
Corsican	4961	Irish [IRI]	5347	Oriya	6164	Tagalog	6658	
Croatian	5464	Italian [ITA]	5566	Oromo(Afan)	6159	Tajik	6653	
Czech [CZE]	4965	Japanese [JPN]	5647	Panjabi	6247	Tamil	6647	
Danish [DAN]	5047	Javanese	5669	Pashto;Pushto	6265	Tatar	6666	
Dutch [DUT]	6058	Kannada	5760	Persian	5247	Telugu	6651	
English [ENG]	5160	Kashmiri	5765	Polish [POL]	6258	Thai	6654	
	0.00	Kazakh	5757	Portuguese [POR]	6266	Tibetan	4861	

Others

Code

Note

• If you choose a language that has a 3-letter-language code (written in bracket), the code will be displayed every time you change the audio or subtitle language setting on pages 20 - 21. If you choose any other languages, '---' will be displayed instead.



Others

Others

Specifications

SIGNAL SYSTEM

NTSC color

MASS

9.2 kg (20.3 lbs)

APPLICABLE DISCS

(1) BD/DVD-video Discs

1-layer 12cm single-sided discs, 2-layer 12cm single-sided discs, 2-layer 12cm double-sided discs (1 layer per side)

1-layer 8cm single-sided discs, 2-layer 8cm single-sided discs, 2-layer 8cm double-sided discs (1 layer per side)

(2) BD-RE / BD-R (Recorded in BDMV format)

1-layer 12cm single-sided discs, 2-layer 12cm single-sided discs

1-layer 8cm single-sided discs, 2-layer 8cm single-sided discs

(3) DVD-R

1-layer 12cm single-sided discs, 2-layer 12cm single-sided discs

1-layer 8cm single-sided discs, 2-layer 8cm single-sided discs

(4) DVD-RW

1-layer 12cm single-sided discs

- 1-layer 8cm single-sided discs
- (5) Compact discs (audio CD)
- 12cm discs, 8cm discs
- (6) CD-RW/-R 12cm discs, 8cm discs

APPLICABLE MEMORY CARDS

- (1) SD Memory Card
- (2) SDHC Memory Card
- (3) miniSD Card
- (4) microSD Card

HDMI OUTPUT

Output jack: 19-pin HDMI terminal, 1 set HDMI ver. 1.3a (Deep Color, Dolby Digital Plus, Dolby TrueHD, DTS-HD)

POWER SUPPLY

AC 120V, 60Hz

POWER CONSUMPTION

30W (Standby: 0.8W)

MAXIMUM EXTERNAL DIMENSIONS

- W :434mm (17-2/16")
- H :139mm (5-8/16")
- D :391mm (15-7/16")
- (including protruding parts)

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- D :30mm (1-3/16")
- Mass: 171g (0.4 lbs) (included batteries)

• For purposes of improvement, specifications and design are subject to change without notice.

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