ONKYO®

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DVD AUDIO/VIDEO Player

DV-S939

Instruction Manual

Thank you for purchasing the Onkyo DVD AUDIO/ VIDEO Player. Please read this manual thoroughly before making connections and turning on the power. Following the instructions in this manual will enable you to obtain optimum performance and listening enjoyment from your new Player. Please retain this manual for future reference.



WARNING:

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

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.

Important Safeguards

- Read Instructions All the safety and operating instructions should be read before the appliance is operated.
- 2. **Retain Instructions** The safety and operating instructions should be retained for future reference.
- 3. **Heed Warnings** All warnings on the appliance and in the operating instructions should be adhered to.
- 4. **Follow Instructions** All operating and use instructions should be followed.
- 5. **Cleaning** Unplug the appliance from the wall outlet before cleaning. The appliance should be cleaned only as recommended by the manufacturer.
- 6. **Attachments** Do not use attachments not recommended by the appliance manufacturer as they may cause hazards.
- 7. **Water and Moisture** Do not use the appliance 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 the appliance on an unstable cart, stand, tripod, bracket, or table. The appliance may fall, causing serious injury to a child or adult, and serious damage to the appliance. Use only with a cart, stand, tripod, bracket, or table recommended by the manufacturer, or sold with the appliance. Any mounting of the appliance should follow the manufacturer's instructions, and should use a mounting accessory recommended by the manufacturer.
- An appliance and cart combination should be moved with care. Quick stops, excessive force, and uneven surfaces may cause the appliance and cart combination to overturn.





- 10. Ventilation Slots and openings in the cabinet are provided for ventilation and to ensure reliable operation of the appliance and to protect it from overheating, and these openings must not be blocked or covered. The openings should never be blocked by placing the appliance on a bed, sofa, rug, or other similar surface. The appliance should not be placed in a built-in installation such as a bookcase or rack unless proper ventilation is provided. There should be free space of at least 5 cm (2 in.) and an opening behind the appliance.
- 11. **Power Sources** The appliance 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 supply to your home, consult your appliance dealer or local power company.
- 12. **Grounding or Polarization** The appliance 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 appliance.
- 2

- 14. **Lightning** For added protection for the appliance during a lightning storm, or when it is left unattended and unused for long periods of time, unplug it from the wall outlet and disconnect the antenna or cable system. This will prevent damage to the appliance due to lightning and power-line surges.
- 15. **Overloading** Do not overload wall outlets, extension cords, or integral convenience receptacles as this can result in a risk of fire or electric shock.
- 16. Object and Liquid Entry Never push objects of any kind into the appliance 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 appliance.
- 17. **Servicing** Do not attempt to service the appliance yourself as opening or removing covers may expose you to dangerous voltage or other hazards. Refer all servicing to qualified service personnel.
- Damage Requiring Service Unplug the appliance form the wall outlet and refer servicing to qualified service personnel under the following conditions:
 - A. When the power-supply cord or plug is damaged,
 - B. If liquid has been spilled, or objects have fallen into the appliance,
 - C. If the appliance has been exposed to rain or water,
 - D. If the appliance does not operate normally by following the operating 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 appliance to its normal operation,
 - E. If the appliance has been dropped or damaged in any way, and
 - F. When the appliance exhibits a distinct change in performance this indicates a need for service.
- 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.
- 20. **Safety Check** Upon completion of any service or repairs to the appliance, ask the service technician to perform safety checks to determine that the appliance is in proper operation condition.
- 21. **Wall or Ceiling Mounting** The appliance should be mounted to a wall or ceiling only as recommended by the manufacturer.
- 22. **Heat** The appliance should be situated away from heat sources such as radiators, heat registers, stoves, or other appliances (including amplifiers) that produce heat.

Precautions

This unit contains a semiconductor laser system and is classified as a "CLASS 1 LASER PRODUCT". So, to use this model properly, read this Instruction Manual carefully. In case of any trouble, please contact the store where you purchased the unit. To prevent being exposed to the laser beam, do not try to open the enclosure.

CAUTION:

VISIBLE LASER RADIATION WHEN OPEN AND INTERLOCK FAILED OR DEFEATED. DO NOT STARE INTO BEAM.

CAUTION:

THIS PRODUCT UTILIZES A LASER. USE OF CONTROLS OR ADJUSTMENTS OR PERFORMANCE OF PROCEDURES OTHER THAN THOSE SPECIFIED HEREIN MAY RESULT IN HAZARDOUS RADIATION EXPOSURE.

For U.S. model

The laser is covered by a housing which prevents exposure during operation or maintenance. However, this product is classified as a Laser Product by CDRH (Center for Devices and Radiological Health) which is a department of the Food and Drug Administration. According to their regulations 21 CFR section 1002.30, all manufactures who sell Laser Products must maintain records of written communications between the manufacturer, dealers and customers concerning radiation safety. If you have any complaints about instructions or explanations affecting the use of this product, please feel free to write to the address on the back page of this manual. When you write us, please include the model number and serial number of your unit.

In compliance with Federal Regulations, the certification, identification and the period of manufacture are indicated on the rear panel.

FCC INFORMATION FOR USER

CAUTION:

The user changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

NOTE:

This equipment 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 equipment 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 equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment 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 equipment into an outlet on a circuit different from that to which the receiver is connected.
- · Consult the dealer or an experienced radio/TV technician for help.

The label on the right is applied on the rear panel except for USA and Canadian models.

"CLASS 1 LASER PRODUCT"

- 1. This unit is a CLASS 1 LASER PRODUCT and employs a laser inside the cabinet.
- 2. To prevent the laser from being exposed, do not remove the cover. Refer servicing to qualified personnel.

For Canadian model

This class B digital apparatus complies with Canadian ICES-003.

For models having a power cord with a polarized plug:

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

Modele pour les Canadien

Cet appareil numérique de la classe B est conforme à la norme NMB-003 du Canada.

Sur les modeles dont la fiche est polarisee:

ATTENTION: POUR EVITER LES CHOCS ELECTRIQUES, INTRODUIRE LA LAME LA PLUS LARGE DE LA FICHE DANS LA BORNE CORRESPONDANTE DE LA PRISE ET POUSSER JUSQU'AU FOND.

Precautions

1. Regional Restriction Codes (Region Number)

Regional restriction codes are built into DVD Players and DVD-Video media for each sales region. If the regional code of the DVD Player does not match one of the regional codes on the DVD-Video, playback is not possible.

The regional number can be found on the rear panel of the DVD P_{1}

Player. (e.g. for Region 1)

2. About This Manual

This manual explains the basic procedures for operating the DVD Player. Some DVD-Video and DVD-Audio discs do not support the full potential of the DVD technology. Your DVD Player may therefore not respond to all operating commands. Refer to instruction notes on discs.

A " \bigcirc " mark may appear on the TV screen during operation. It means that the operation is not permitted by the DVD Player or the disc.

3. Warranty Claim

You can find the serial number on the rear panel of the unit. In case of warranty claim, please report this number.

4. Recording Copyright

Recording of copyrighted material for other than personal use is illegal without permission of the copyright holder.

5. Power

WARNING

BEFORE PLUGGING IN THE UNIT FOR THE FIRST TIME, READ THE FOLLOWING SECTION CAREFULLY.

The voltage of the available power supply differs according to country or region. Be sure that the power supply voltage of the area where the unit will be used meets the required voltage (e.g., AC 120 V, 60 Hz) written on the rear panel.

6. Do not touch the unit with wet hands

Do not handle the unit or power cord when your hands are wet or damp. If water or any other liquid enters the case, take the unit to an authorized service center for inspection.

7. Location of the unit

- Place the unit in a well-ventilated location. Take special care to provide plenty of ventilation on all sides of the unit especially when it is placed in an audio rack. If ventilation is blocked, the unit may overheat and malfunction.
- Do not expose the unit to direct sunlight or heating units as the unit's internal temperature may rise and shorten the life of the pickup.
- Avoid damp and dusty places and places directly affected by vibrations from the speakers. In particular, avoid placing the unit on or above one of the speakers.
- Be sure the unit is placed in a horizontal position. Never place it on its side or on a slanted surface as it may malfunction.
- When you place the unit near a TV, radio, or VCR, the playback picture may become poor and the sound may be distorted. In this case, place the unit away from the TV, radio, or VCR.

8. Care

From time to time you should wipe the front and rear panels and the cabinet with a soft cloth. For heavier dirt, dampen a soft cloth in a weak solution of mild detergent and water, wring it out dry, and wipe off the dirt. Following this, dry immediately with a clean cloth. Do not use rough material, thinners, alcohol or other chemical solvents or cloths since these could damage the finish or remove the panel lettering.

9. Notes on Handling

- When shipping the unit, use the original shipping carton and packing materials. For maximum protection, repack the unit as it was originally packed at the factory.
- Do not use volatile liquids, such as insect spray, near the unit. Do not leave rubber or plastic products in contact with the unit for a long time. They will leave marks on the finish.
- The top and rear panels of the unit <u>may become warm after a</u> long period of use. This is not a malfunction.
- When the unit is not in use, be sure to remove the disc and turn off the power.
- If you do not use the unit for a long period, the unit may not function properly in the future. Turn on and use the unit occasionally.

10. To Obtain a Clear Picture

The unit is a high technology, precision device. If the optical pick-up lens and disc drive parts are dirty or worn down, the picture quality becomes poor. To obtain a clear picture, we recommend regular inspection and maintenance (cleaning or parts replacement) every 1,000 hours of use depending on the operating environment. For details, contact your nearest dealer.

11. Notes on Moisture Condensation Moisture condensation damages the unit. Please read the following carefully.

• What is moisture condensation?

Moisture condensation occurs, for example, when you pour a cold drink into a glass on a warm day. Drops of water form on the outside of the glass. In the same way, moisture may condense on the optical pick-up lens inside the unit, one of the most crucial internal parts of the unit.

Moisture condensation occurs in the following cases.

- When you bring the unit directly from a cold place to a warm place.

- When you use the unit in a room where you just turned on the heater, or a place where the cold wind from the air conditioner directly hits the unit.
- In summer, when you use the unit in a hot and humid place just after you move the unit from an air conditioned room.
- When you use the unit in a humid place.
- Do not use the unit when moisture condensation may occur.

If you use the unit in such a situation, it may damage discs and internal parts. Remove the disc, connect the power cord of the unit to the wall outlet, turn on the unit, and leave it for two or three hours. After a few hours, the unit will have warmed up and evaporated any moisture. Keep the unit connected to the wall outlet and moisture condensation will seldom occur.

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Notes on Discs

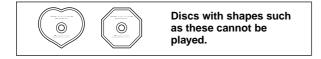
This section shows you how to handle, clean, and store discs.

Playable Discs

This DVD Player can playback the following discs.

	Disc mark	Contents	Disc size
DVD-	DVD	Audio +	12 cm
Video	V I D E O	Video (moving pictures)	8 cm
DVD-	DVD	Audio	12 cm
Audio	AUDIO [™]	Audio	8 cm
Video		Audio + Video	12 cm
CD	DIGITAL VIDEO	(moving pictures)	8 cm
CD		Audio -	12 cm
		7 tudio	8 cm (CD single)

- CD-R and CD-RW discs recorded by CD-DA method can also be played. Some CD-R/RW discs may be incompatible.
- · You cannot playback discs other than those listed above.
- You cannot play discs such as CD-ROM, DVD-RAM, DVD-RW, etc., even if the marks in the above table are labeled on those discs.
- This DVD Player uses the PAL*/NTSC color system, and cannot playback video media recorded in any other color system (SECAM, etc.).
- Avoid using heart-shaped or octagonal discs. Playing irregularly shaped discs may damage the internal mechanism of the DVD Player.



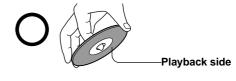
• Do not use discs that have residue from adhesive tape, rental discs that have peeling labels, or discs that have custom labels or stickers. Otherwise, you may not be able to eject the discs or the DVD Player may become inoperative.

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* PAL is not applicable for USA and Canadian models

Handling Discs

• Do not touch the playback side of the disc.



• Do not attach paper or tape to discs.



Cleaning Discs

• Fingerprints and dust on the disc cause picture and sound deterioration. Wipe the disc from the center outwards with a soft cloth. Always keep the disc clean.



- If you cannot wipe off the dust with a soft cloth, wipe the disc lightly with a slightly moistened soft cloth and finish with a dry cloth.
- Do not use any type of solvent such as thinner, benzine, commercially available cleaners or antistatic spray for vinyl LPs. It may damage the disc.

Storing Discs

- Do not store discs in a place subject to direct sunlight or near heat sources.
- Do not store discs in places subject to moisture and dust such as a bathroom or near a humidifier.
- Store discs vertically in a case. Stacking or placing objects on discs outside of their case may cause warping.

About Video CDs

This DVD Player supports Video CDs equipped with the PBC (Version 2.0) function. (PBC is the abbreviation of Playback Control.) You can enjoy two playback variations depending on the type of disc.

- Video CD not equipped with PBC function (Version 1.1) Sound and movies can be played on this DVD Player in the same way as a CD.
- Video CD equipped with PBC function (Version 2.0) In addition to operation of the Video CD not equipped with the PBC function, you can enjoy playback with interactive software and search function using the menu displayed on the TV screen (Menu Playback). Some of the functions described in this Instruction Manual may not work with some discs.

Notes on Copyright

It is forbidden by law to copy, broadcast, show, broadcast on cable, play in public, and rent copyrighted material without permission. The video recorded on DVD-Video is copy protected, and any recordings made from these discs will be distorted. This product incorporates copyright protection technology that is

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

The Structure of the Disc Content

DVD-Video

Normally, the contents of DVD-Video are divided into titles, and the titles are subdivided into chapters.

Title 1	Title 2		
Chapter 1 Chapter 2	Chapter 1	Chapter 2	Chapter 3

DVD-Audio

The contents of DVD-Audio are divided into groups, and the groups are subdivided into tracks.

Group 1		Group 2		
Track 1	Track 2	Track 1 Track 2 Track 3		Track 3
\sim תוז \sim	עתו⊃	\sim tttl		<u>רווע</u>

Video CD/CD

Video CD and CD are divided into tracks.

Track 1	Track 2	Track 3	Track 4	Track 5
\sim L(I	ענון~	\sim rttr	\sim t \mathfrak{u} t	\sim trit

Features/Supplied Accessories

Features

- THX^{*1} Ultra Certified
- Plays DVD-Audio & Video Discs, Video CDs, CD-Rs & CDs
- 54 MHz/10-bit Video DAC
- 192 kHz/24-bit DACs
- DB-25 and RCA-6ch Multichannel Outputs
- 2 Gold-Plated Progressive Component-Video Outputs
- 4 Digital Outputs pass DTS^{®*2}, Dolby^{®*3} Digital and PCM Signals
- Dolby[®] Digital decoder Built In
- Separate Transformers for Digital and Analog Sections
- Electrical and Magnetic Shielded Mechanism
- Heavy-Duty Mechanical Tray Door
- Full-function remote controller with "Learning" function for control of other component

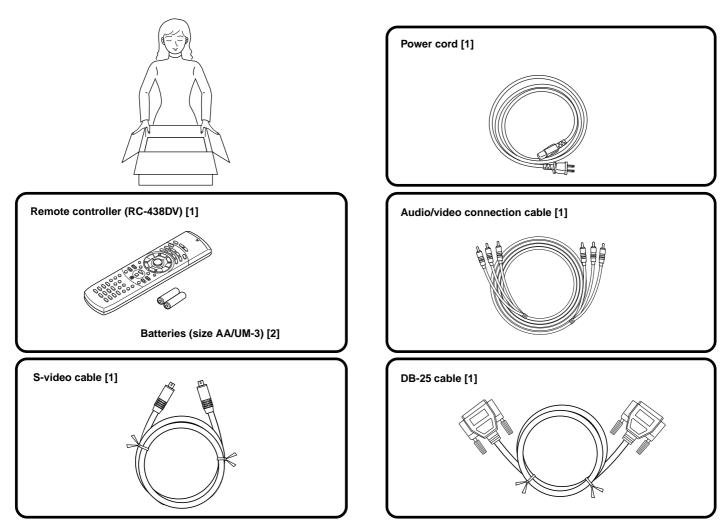
- *1 Manufactured under licence from Lucasfilm Ltd. Lucasfilm and THX are registered trademarks of Lucasfilm Ltd.
- ^{k2} Manufactured under license from Digital Theater Systems, Inc. US Pat. No.5,451,942 and other worldwide patents issues and pending, "DTS" and "DTS Digital Surround" are trademarks of Digital Theater Systems, Inc. ©1996 Digital Theater Systems, Inc. All Rights reserved.
- *3 Manufactured under license from Dolby Laboratories.
 *Dolby", "Pro Logic" and the double-D symbol are trademarks of Dolby Laboratories. Confidential Unpublished Works.
 ©1992-1997 Dolby Laboratories, Inc. All rights reserved.

THX Ultra

Before any home theatre component can be THX Ultra certified, it must pass a rigorous series of quality and performance tests. Only then can product feature the THX Ultra logo, which is your guarantee that the Home Theatre products you purchase will give you superb performance for many years to come.

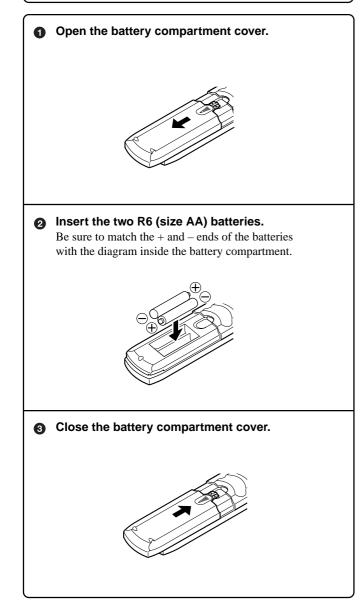
Supplied Accessories

Make sure your box contains everything listed below. If any pieces are missing, contact your nearest Onkyo dealer. The number of accessories is indicated in brackets [].



Preparing the Remote Controller

Inserting the Batteries

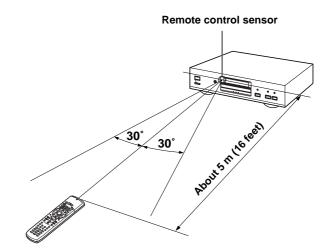


Notes

- Do not mix new batteries with old batteries or different kinds of batteries.
- To avoid corrosion, remove the batteries if the remote controller is not to be used for a long time.
- Remove dead batteries immediately to avoid damage from corrosion. If the remote controller does not operate smoothly, replace both batteries at the same time.
- The life of the batteries supplied is about six months but this will vary depending on usage.

Using the Remote Controller

Point the remote controller toward the remote control sensor.



- Place the unit away from strong light such as direct sunlight or inverted fluorescent light which can prevent proper operation of the remote controller.
- Using another remote controller of the same type in the same room or using the unit near equipment which uses infrared rays may cause operational interference.
- Do not put any object such as a book on the remote controller. The buttons of the remote controller may be pressed by mistake and drain the batteries.
- Make sure the audio rack doors do not have colored glass. Placing the unit behind such doors may prevent proper remote controller operation.
- If there is any obstacle between the remote controller and the remote control sensor, the remote controller will not operate.

Making Connections

To accommodate a wide range of home entertainment systems, this player features numerous connection types for both audio and video. Please refer to the instructions on this and the following pages to determine the best possible type of connections for your system.

• Connect the plugs securely.

Incomplete

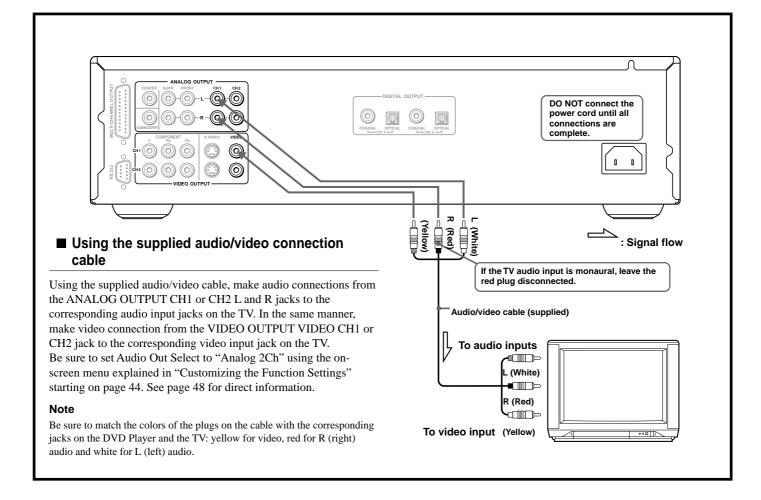
Inserted completely

Before Connecting

- Refer to the instruction manuals supplied with any and all components that you plan to connect the DVD Player to.
- Be sure to turn off the power of all components to be connected and unplug them from the wall outlet before making any connections.
- Connect the DVD Player to the TV directly. If you connect the DVD Player to a VCR, TV/VCR combination, or video selector, the playback picture may be distorted as DVD Video images are copy protected.
- Please note that video connections to a TV or monitor are necessary because some discs require on-screen menu interaction before they can be played.

Connections to a TV

The diagram below shows how to make connections to a TV with built-in stereo speakers using the supplied audio/video cable. After making the connections on this page, you will be able to start using the DVD Player.



Optional Video Connections

Visible improvements in DVD-Video quality can be achieved by making either S-video or component video connections to a TV or monitor compatible with these types of connections.

Note

When either S-video or component video connection is made, it is not necessary to make composite video connections using the yellow cord of the audio-video cable.

Making component video connections

If the TV or monitor has component video inputs, making this type of video connection will produce the ideal picture quality for the presentation of DVD-Video. Using a componect video cable (sold separately), connect the VIDEO OUTPUT COMPONENT CH1 or CH2 jacks to the corresponding component video input jacks on the TV.

Actual labels for component video inputs may vary depending on the TV manufacturer. (e.g. Y, R-Y, B-Y or Y, CB, CR)

In some TVs or monitors, the color levels of the playback picture may be reduced slightly or the tint may change. In such a case, adjust the TV or monitor for optimum performance.

Be sure to set Audio Out Select to "Analog 2Ch" using the on-screen menu explained in "Customizing the Function Settings" starting on page 44. See page 48 for direct information.

PROGRESSIVE outputs/inputs

Some TVs or monitors are equipped with component video inputs that are capable of reproducing a progressively scanned video signal. Connecting to these inputs allows you to view the highest quality pictures with less flicker.

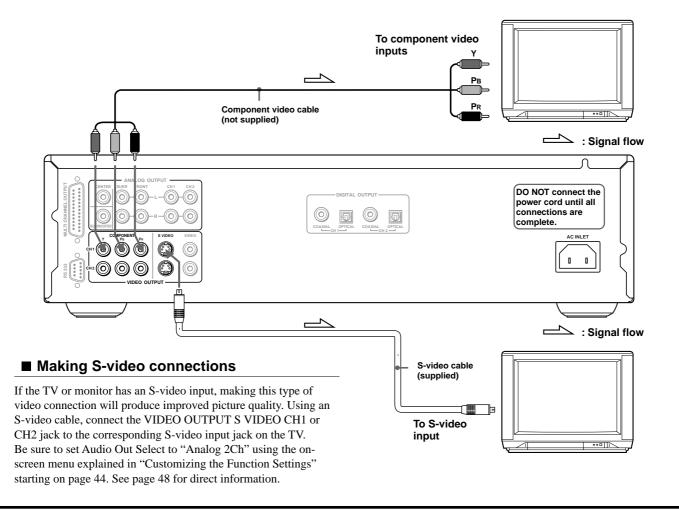
Interlaced outputs/inputs

Some TVs or monitors are equipped with component video inputs. Connecting to these inputs allows you to enjoy higher quality picture playback.

In some TVs or monitors, the color levels of the playback picture may be reduced slightly or the tint may change. In such a case, adjust the TV or monitor for optimum performance.

To switch the output signal (Progressive/Interlaced) Press PROGRESSIVE on the remote control.

The output signal alternates between component progressive and component interlaced. For details, refer to "Selecting Progressive Scan Video Output" on page 42.



Making Connections

Optional Audio Connections

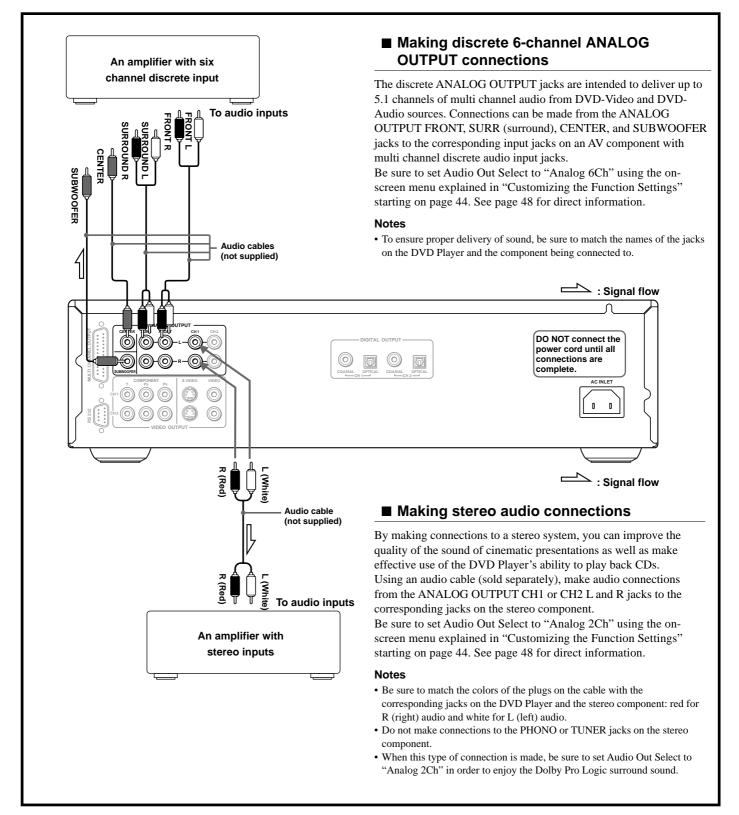
This DVD Player provides numerous ways to take full advantage of the digital multi channel sound recorded on DVD media.

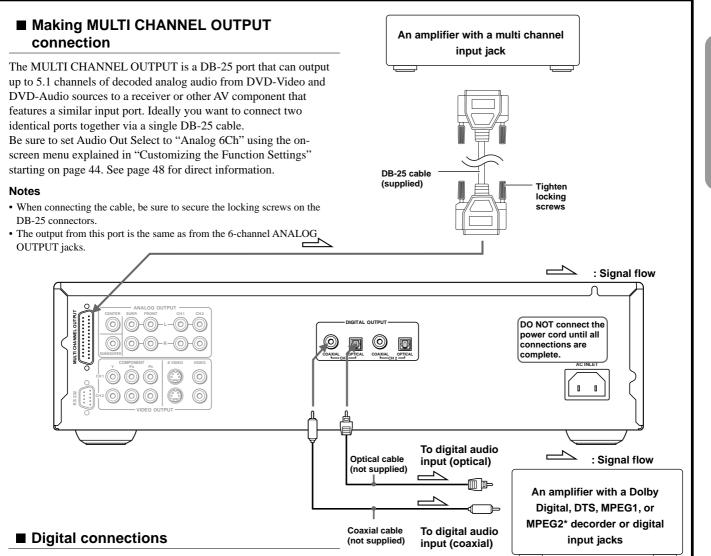
When listening to DVD-Audio

For full enjoyment of DVD-Audio media, it is recommended to make connections to the 6-channel ANALOG OUTPUT jacks. Audio output of DVD-Audio cannot be played back efficiently when output as a bitstream or PCM from the DIGITAL OUTPUT jacks.

Analog connections

In addition to offering two stereo outputs for connection to a stereo system, two types of multi channel analog output allow you to make connections to an AV component that features multi channel analog input for full enjoyment of multi channel DVD-Audio discs.





Make digital connections from the DVD Player to an AV component that features digital input capability or one or more multi-channel audio decoders to realize the full cinematic experience made possible by the DVD format. This DVD Player features two sets of optical and coaxial digital audio output jacks and can output Dolby Digital, DTS, and MPEG2* bitstreams as well as outputting standard PCM.

Make connections from the DIGITAL OUTPUT OPTICAL CH1 or CH2 jacks to the digital optical input jack on the AV component using an optical fiber cable (sold separately). Make connections from the DIGITAL OUTPUT COAXIAL CH1 or CH2 jacks to the digital coaxial input jack on the AV component using a coaxial cable (sold separately). It is not necessary to make more than one type of digital connection to a single component.

When you are making connections to an amp or receiver that has internal Dolby Digital, DTS, or MPEG decoding capabilities, set Audio Out Select to "Bitstream" using the on-screen menu explained in "Customizing the Function Settings" starting on page 44. See page 48 for direct information.

When you are making connect miorination. When you are making connections to an amp or receiver that has digital input capabilities, but no internal decoder, set Audio Out Select to "PCM" using the on-screen menu explained in "Customizing the Function Settings" starting on page 44. See page 48 for direct information. Setting Audio Out Select to any other setting could result in digital noise being output that could cause harm your hearing and may also damage your speakers.

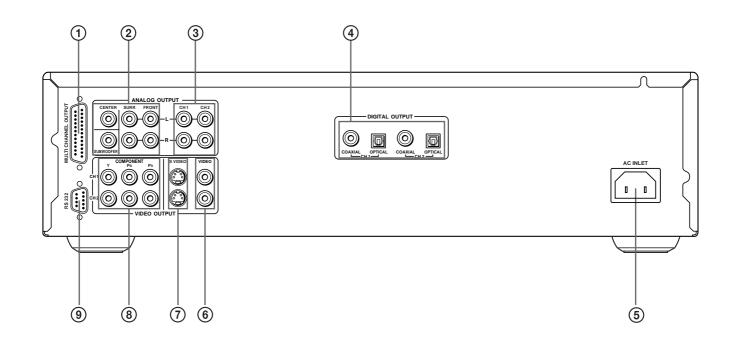
13

- Refer to the instructions supplied with the AV component for details on what digital audio formats it is compatible with.
- After making digital audio connections, be sure to set Audio Out Select appropriately for the type of digital signal the connected AV component is compatible with using the on-screen menu explained in "Customizing the
- Function Settings" starting on page 44. See page 48 for direct information.Even if digital audio connections are made, it is also recommended to make analog connections, because some conditions or media may prohibit digital audio output.

Control Position and Names

Rear panel

For operational instructions, see the page indicated in brackets [].

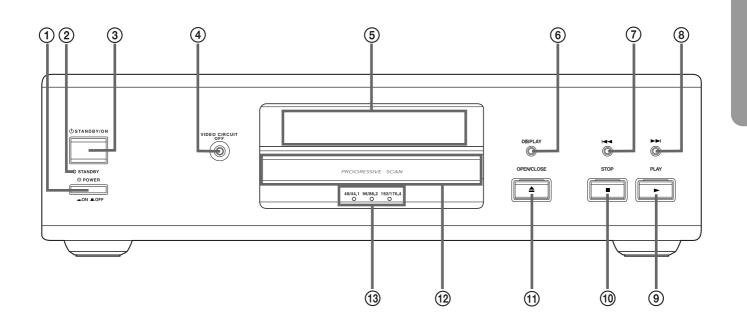


- ① 5.1-Channel SURROUND AUDIO OUT MULTI CHANNEL OUTPUT terminal [13]
- ② 5.1-Channel ANALOG OUTPUT [12]
- ③ 2-Channel ANALOG OUTPUT [10,12]
- ④ DIGITAL OUTPUT COAXIAL, OPTICAL [13]

- ⑤ AC INLET [17]
- 6 VIDEO output [10]
- ⑦ S VIDEO output [11]
- (8) COMPONENT (PROGRESSIVE) VIDEO output (Y/PB/PR) [11]

Front Panel

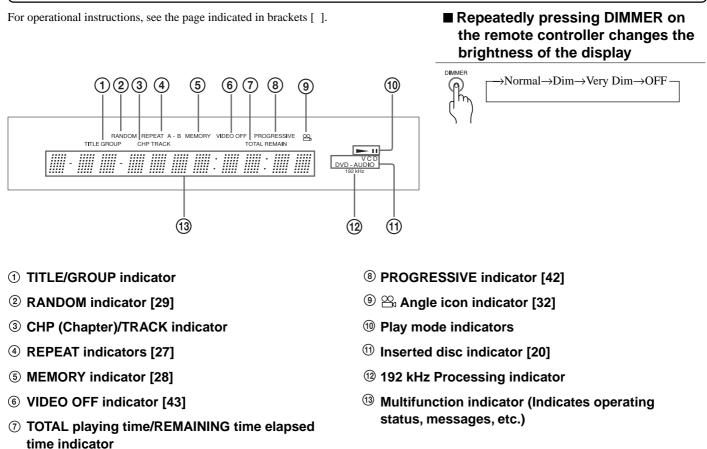
For operational instructions, see the page indicated in brackets [].



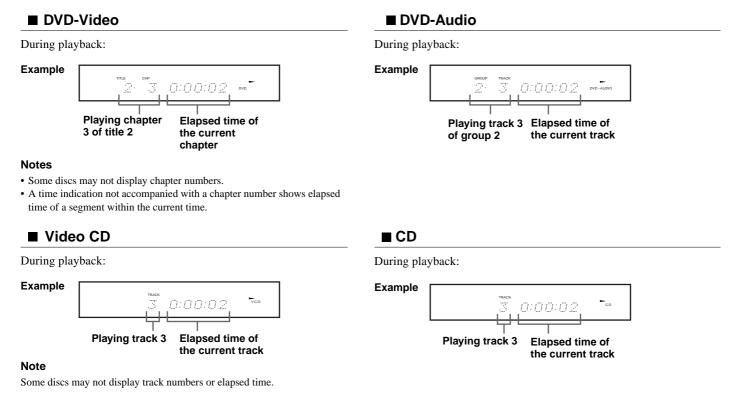
- ① POWER button [17]
- ② SYANDBY indicator [17]
- ③ () STANDBY/ON button [17]
- ④ VIDEO CIRCUIT OFF button [43]
- **⑤** Front panel display [16]
- 6 DISPLAY button [16, 38]
- ⑦ া button [26]
- ⑧ ►►I button [26]
- ⑨ PLAY ► button [20]
- ① STOP button [21]
- ⑦ OPEN/CLOSE ▲ button [20]
- 12 Disc tray [20]
- (1) Audio sampling rate indicators [20]

Control Position and Names

Display

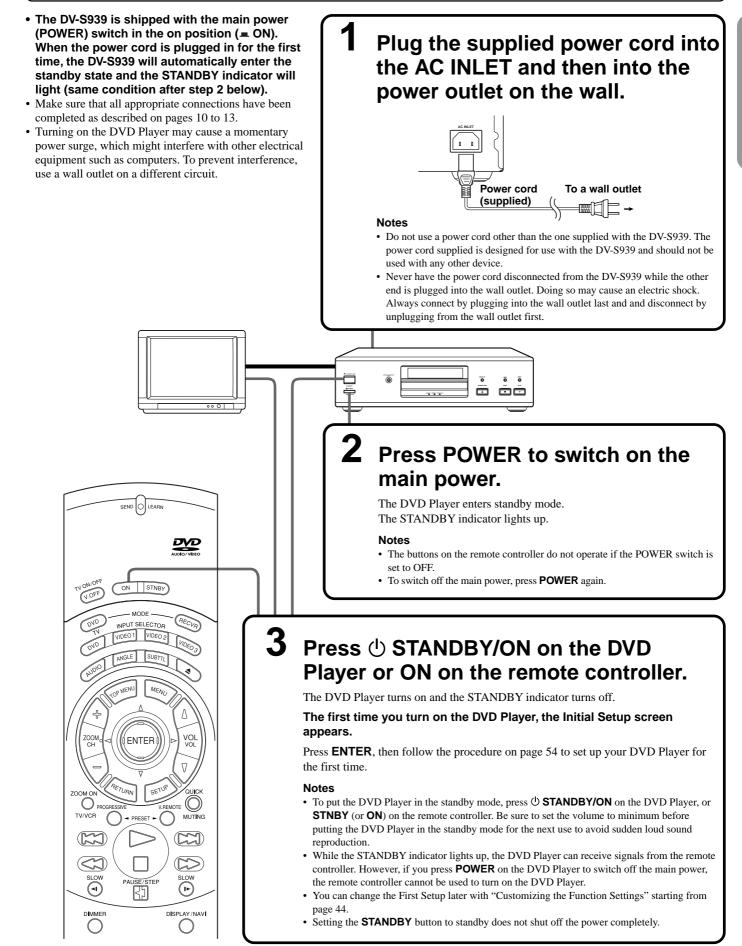


By repeatedly pressing **DISPLAY** on the front panel of the DVD Player, you can switch between the elapsed time and remaining time displays.



Connecting the Power/ Turning on the DVD Player

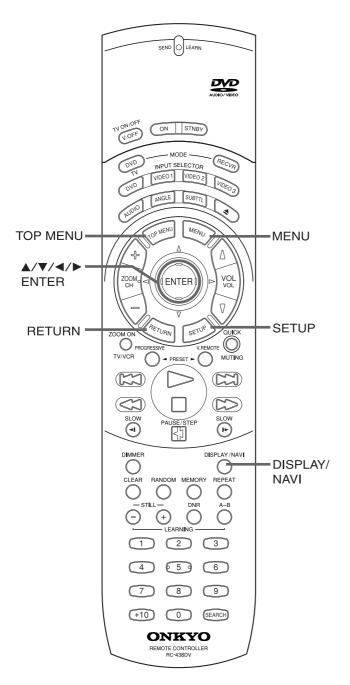
Before connecting the POWER



Setting up the DVD Player for Optimal Performance

Using the Remote Control to Navigate On-screen Displays

On-screen navigation is a simple procedure that is done mostly by using $\blacktriangle/\bigtriangledown/\checkmark/\checkmark$ and **ENTER** on the supplied remote controller. To move the highlighted section on the screen (cursor), simply press the edge of the button that corresponds to the direction you wish to move in $(\bigstar/\lor/\checkmark/\circlearrowright)$. Press the center of the button (**ENTER**) to enter settings or selections.



About the disc menu

A DVD-Video or DVD-Audio may include more than one language and more than one sound system. In many instances, such DVD let you choose the language (e.g. disc menu language/audio language/subtitle language), sound system, and so on using the menu. Depending on the disc, the name of the disc menu varies and the disc menu may

be included in the main menu.

About the title menu and a von

DVD-Video, DVD-Audio, or Video CD with PBC (Playback Control) function (see "About Video CDs" on page 7) may let you locate a title, chapter, group, or track (see page 7) using the menu.

Depending on the disc, the name of the title menu varies and the title menu may be included in the main menu.

The following buttons are also used in conjunction with onscreen navigation.

SETUP:	Press to display the Setup screen when you wish to make changes or adjustments in the DVD Player performance settings. For details of the DVD Player settings, refer to "Customizing the Function Settings" starting from page 44.
MENU and TOP MENU:	These button select the menu screen(s) recorded on
	DVD media.
DISPLAY/NAVI:	This button displays information about the current
	settings of the disc loaded in the player and also
	offers a variety of playback options (see page 38).
RETURN:	Press to return to a previous screen or setting. This
	button is convenient when you do not wish to change
	a setting or selection.

My My Various sound formats and sound effects



The 5.1-channel digital surround format of DOLBY DIGITAL/DTS/ MPEG2* enables you to individually play five full-range (20 Hz-20 kHz) channels (left and right front, center, two surround channels) plus an LFE (Low Frequency Effect) channel for the low-range effect sound. It will create a realistic sound as heard in theaters and concert halls.

DOLBY DIGITAL Surround

DVD Video that have the $D_{D + G + T + L}^{D 0 + B + T + L}$ mark are recorded using this system.

DTS Surround

DVD Video and CD that have the creater mark are recorded using this system.

MPEG2*

DVD Video that have the MPEG M Multichannel mark are recorded using this system. MPEG2* may have 8 channels. In this case, left and right center speakers in addition to the above speaker configuration are used.

DOLBY PRO LOGIC Surround

This surround format consists of 4 channels (left and right front, center, and monaural surround channel) and emphasizes the center channel. This format is very effective for panning music, conversation, and three-dimensional sound movement output from three front channels. It also simulates the atmosphere and surround effects of the sound reflected from the side and rear walls of the theater.

DVD Video that have the **DOLBY SURROUND** mark are recorded using this system.

* Not applicable for USA and Canadian models

Playing DVD-Video/Audio, Video CD, and CD

Before playing

- DVD-Video, DVD-Audio, Video CD, CD, CD-R and CD-RW can be played with the DVD Player (see "Playable Discs" on page 6). Do not play anything else.
- When playing DVD-Video, Video CD, or DVD-Audio with video features, turn on the TV and set the TV to the DVD Player's input.
- · If an audio system is connected to the DVD Player, turn on the audio system and set it to the DVD Player's input.

About the Mark, Marks in the pages related to disc operation

- means the function or title is related to DVD-Audio operation.
- VCD means the function or title is related to Video CD operation.
- (CD) means the function or title is related to audio CD operation.

CD CDV CAUS (VOID

Basic Playback If the DVD Player is in standby mode Press when the button is pressed The DVD Player turns on and the disc tray opens. The disc tray opens. In this case, it takes several seconds until the disc tray opens. Ζ Place a disc on the disc tray. Put the disc in the tray with the label side facing up. There are two different disc sizes. Place the disc in the correct guide on Whenever a disc is loaded in the the disc tray. player, indicators above and light up. DEO CIRCI 0 $(\bigcirc$ 0 48/44.1 96/88.2 192/176 O O O Press . DVD The disc tray closes and playback starts. If you press \triangleq to close the tray after step 2, playback may automatically start depending on the disc. /44.1 96(88,2 192/176 0 -0 - 0 The appropriate disc indicator lights, and the audio sampling rate indicator also lights. For the other information that appears in the display, see page 35. CAUTION Keep your fingers well clear of the disc tray as it is closing. Neglecting to do so may cause serious personal injury.

Warning

If the DVD Player is connected to the TV or amplifier through the analog audio jacks, do not play DTS-encoded discs. Excessive noise may be output from the analog stereo jacks, which may damage the connected equipment.

To reproduce DTS surround sounds, digital connection to an amplifier with a DTS decoder is needed.

20

If the screen on the right appears - Screen Saver

If you pause for a long time, the screen saver operates.

To resume normal playback, press (You can set this function to Off using the menu explained in "Customizing the Function Settings" starting from page 44. See page 51 for direct information.)



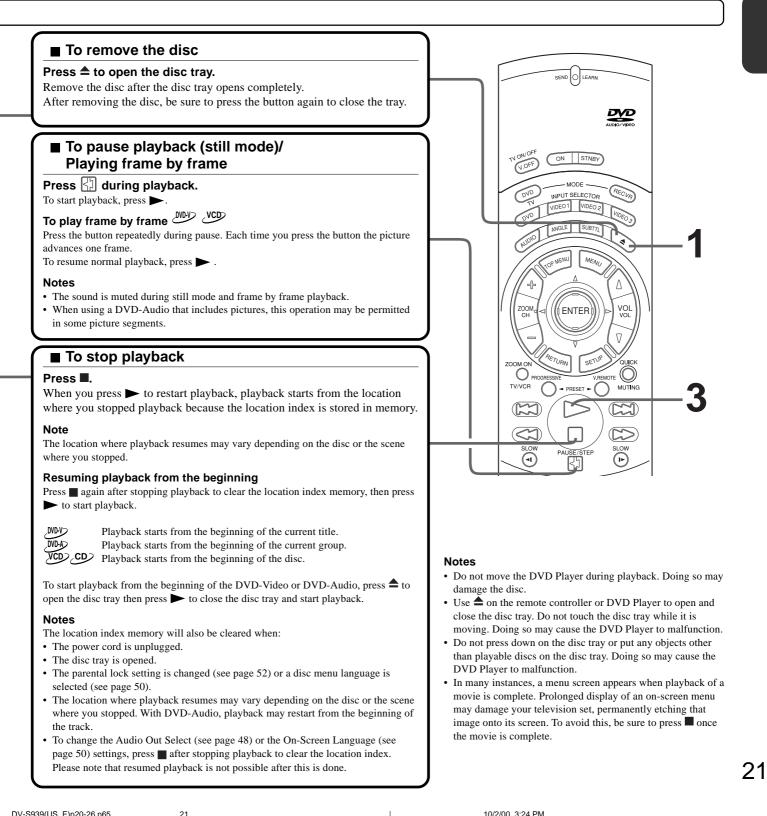
Tip to obtain a higher quality picture

Occasionally, some picture noise not usually visible during a normal broadcast may appear on the TV screen while playing a DVD-Video because the high resolution pictures on these discs include a lot of information. While the amount of noise depends on the TV you use, you should generally adjust the TV to reduce sharpness when viewing **DVD-Videos**

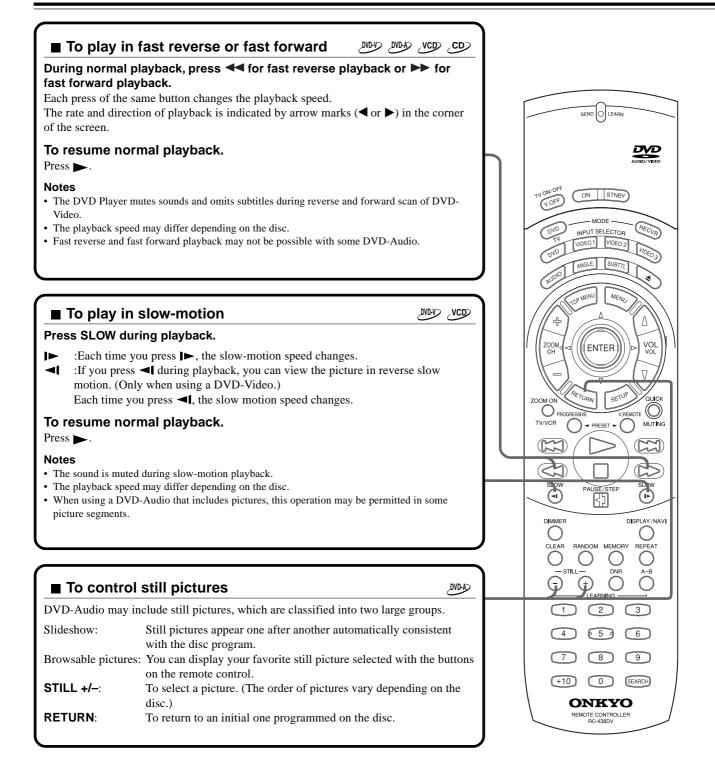
To play NTSC discs (Multisystem TV is needed)*

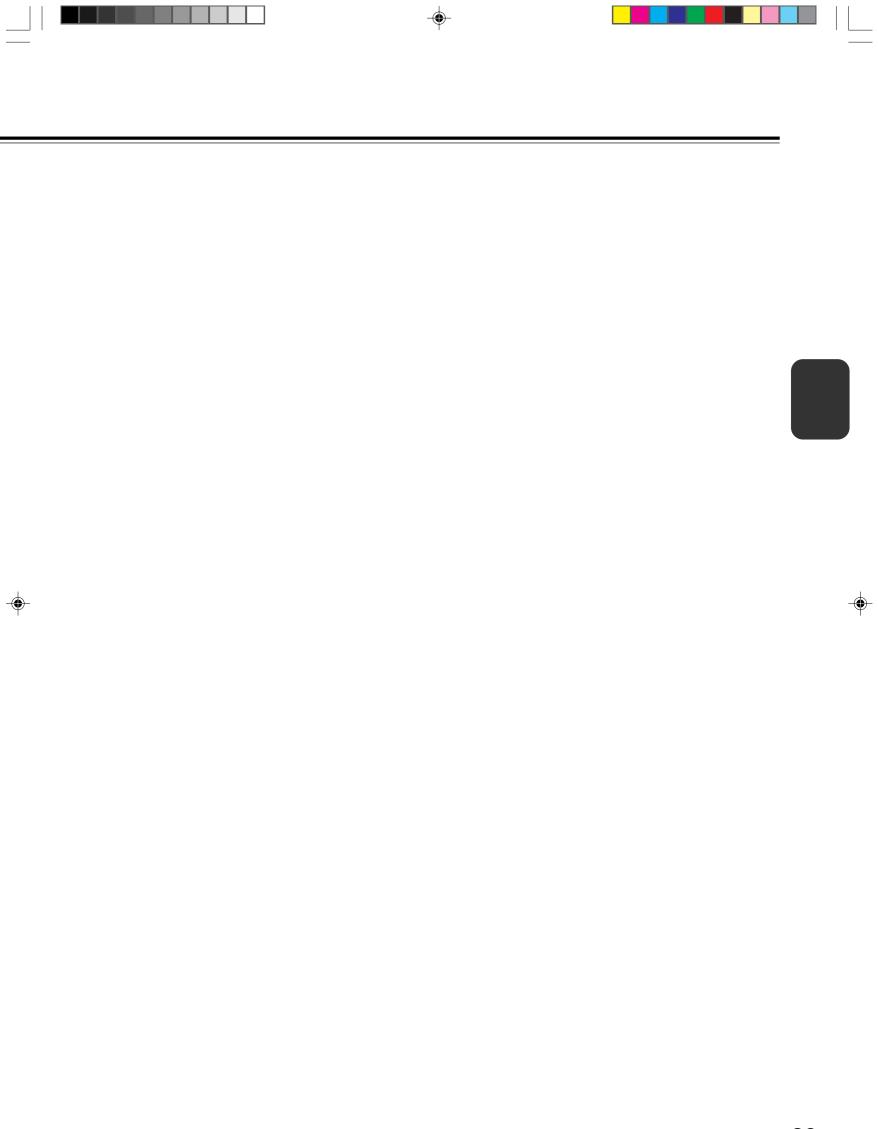
Set "PAL/Auto" to "Auto" using the menu explained in "Customizing the Function Settings" starting from page 44. See page 47 for direct information.

* Not applicable for USA and Canadian models



Playing DVD-Video/Audio, Video CD, and CD



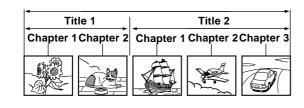


Locating a Specific Title/Group/ Chapter/Track/Location

The structure of the disc content

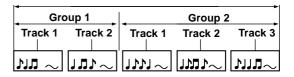
DVD-Video

Normally, the contents of DVD-Video are divided into titles, and the titles are subdivided into chapters.



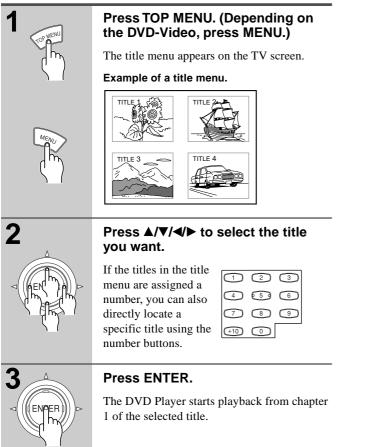
DVD-Audio

The contents of DVD-Audio are divided into groups, and the groups are subdivided into tracks.



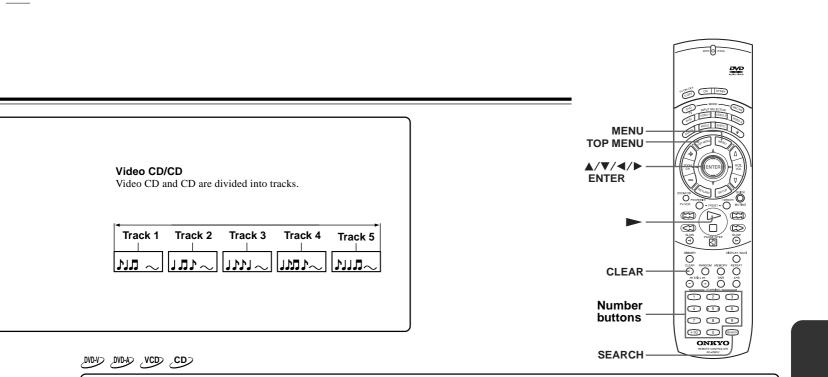
Locating a Title Using the Title Menu

If a DVD-Video contains a title menu, you can locate a specific title using the title menu function.



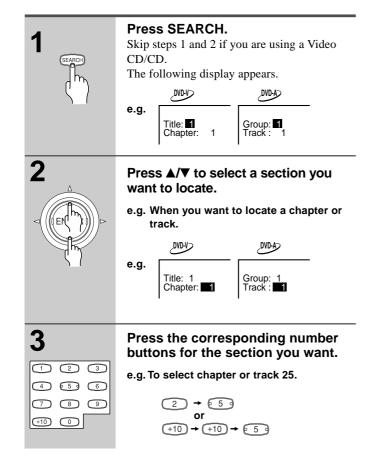
Notes

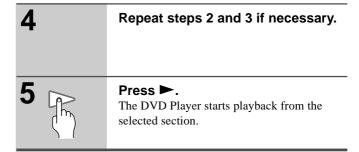
The instructions above describe basic procedures which may vary depending on the contents of the DVD-Video. If different instructions appear on the TV screen, follow those instructions.
If you display the title menu during playback and press **TOP MENU** again without selecting any title, the DVD Player usually resumes playback from the point where you first pressed **TOP MENU**. (There may be exceptional cases depending on the disc.)
This method of locating a title is available only on a disc that contains a top menu.
The name of the button in the instruction notes of discs varies depending on the disc.



Locating a specific title and chapter or group and track by entering the numbers

If a DVD-Video or DVD-Audio contains the numbers corresponding to the titles and chapters, or group and tracks you can locate a specific chapter in a specific title directly by entering the numbers.





Notes

- Pressing **CLEAR** resets the numbers. To clear the display, press **SEARCH** several times.
- This method of locating a title/group is available only on a disc that contains title/group numbers.

■ Playing bonus groups of DVD-Audio

Some DVD-Audio may include an extra content called "Bonus Group".

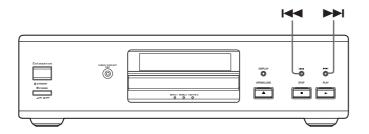
If you select it to play, a display appears to enter a key number. Press the number buttons on the remote control to enter the key number.

When the number is entered correctly, playback of the bonus group starts.

To get key numbers, refer to instruction note of discs.

- A key number may be called in some cases such as when removing the disc. Enter the key number again if necessary.
- When you use a bonus group in a programmed play such as memory playback, enter the key number beforehand.

Locating a Specific Title/ Group/Chapter/Track/Location



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Locating a Specific Chapter or Track Consecutively

You can locate consecutive chapters or tracks.



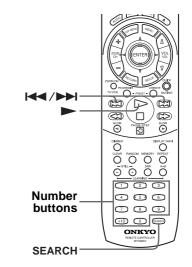
Press I ◄ or ►► (repeatedly) to select the chapter or track you wish to start playing.

Press I a once to start playback from the beginning of the current chapter or track. Press I a repeatedly to select the former chapters or tracks in reverse order. Press I repeatedly to select the next chapter or track in order.

Notes

- Some titles may not display chapter numbers. Some groups may not display track numbers.
- When you set "Title/Group Stop" to "Off" (see page 53), you can locate consecutive chapters in another title or tracks in another group. If you go back to the preceding title or group by pressing I < , the DVD Player locates the first chapter of the title or the first track of the group. When "Title/Group Stop" is set to "On", you can locate consecutive chapters or tracks only within the current title or group.</p>

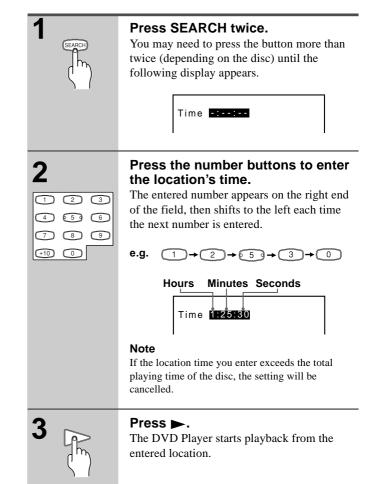
26



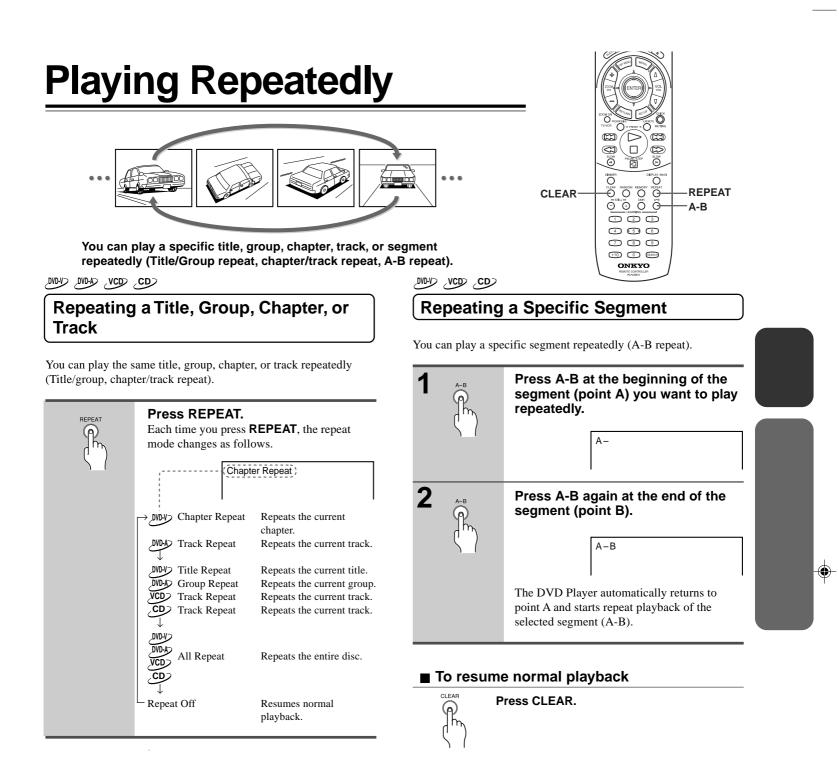
COS CON CHANG

Locating a Specific Location by Entering the Time

You can locate a specific location by entering its corresponding time (hours, minutes, and seconds).



- Some discs may not respond to this procedure.
- · Some scenes may not be located precisely.
- This method for accessing specific locations is available only within the current title of the DVD-Video or within the current track of the Video CD/CD.

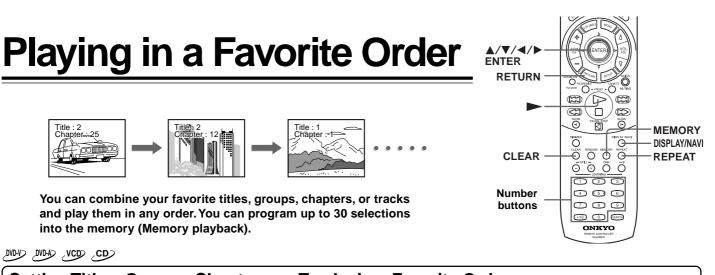


To resume normal playback



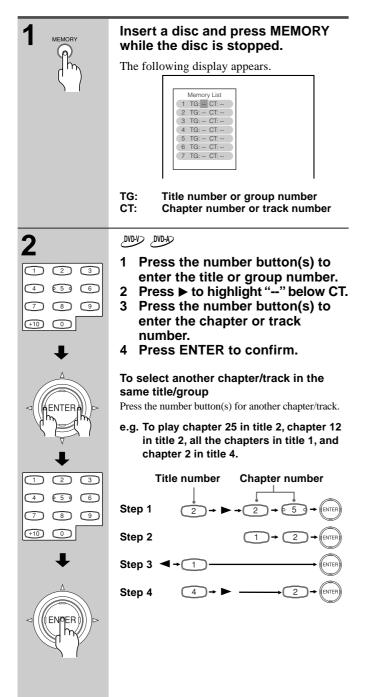
- Some discs may not permit repeat operation.
- When playback is stopped, be sure to press low within about 5 seconds after you select the repeat play mode.

- Some discs may not permit A-B repeat operation.
- You can play a specific segment only within the current title, chapter, or track.
- You cannot set the A-B repeat function for segments that include multiple camera angles.
- There may be a slight difference between point A and the location where playback actually resumes depending on the disc.



Setting Titles, Groups, Chapters, or Tracks in a Favorite Order

The DVD Player automatically plays titles, groups, chapters, or tracks in the order you program.





ଏଦ୍ର ସ୍ଠ

Press the number button(s) to select the track number, then press ENTER to confirm.

Repeat this step to select the next track. The space of "TG" may be showing a number. Neglect this number when using a Video-CD/CD.



While the Memory List is displayed, press >. The DVD Player starts memory playback.

To change the entered step

While the Memory List is displayed, press \blacktriangle / ∇ to highlight the item. To select another title/chapter, group/track, or track, follow step 2.

To cancel the entered step

While the Memory List is displayed, press \blacktriangle / ∇ to highlight the item. To cancel, press CLEAR.

To resume normal playback

Press CLEAR.

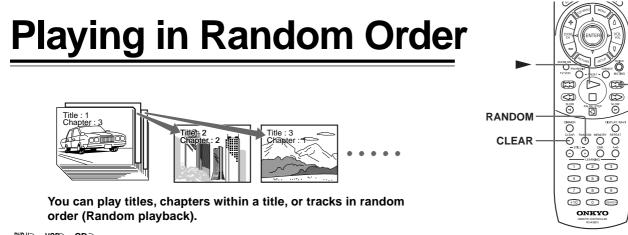
The memory playback indicator disappears.

To program during playback

If you press **MEMORY** during playback, the display to accept your programming appears. To display the Memory List, press QUICK, press \blacktriangle/∇ to select Memory List, then follow steps 2 and 3.

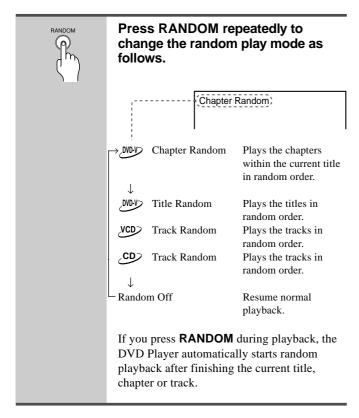
Notes

- You can also use +10 (plus ten button) to add ten to the number.
- · Some discs may not permit memory playback operation.
- If you press REPEAT during memory playback, the DVD Player repeats the current memory playback.
- If you press MEMORY or RETURN while the "Memory List" display appears on the TV screen, the "Memory List" display disappears.
- · The programmed selections will be cleared when you turn off the DVD Player.



Playing Titles, Chapters or Tracks in Random Order

The DVD Player automatically selects the titles in DVD-Video, or tracks in Video-CD, CD, and plays them randomly.



Note

When playback is stopped, be sure to press \blacktriangleright within about 5 seconds after you select the random play mode.

■ To resume normal playback

Press CLEAR.

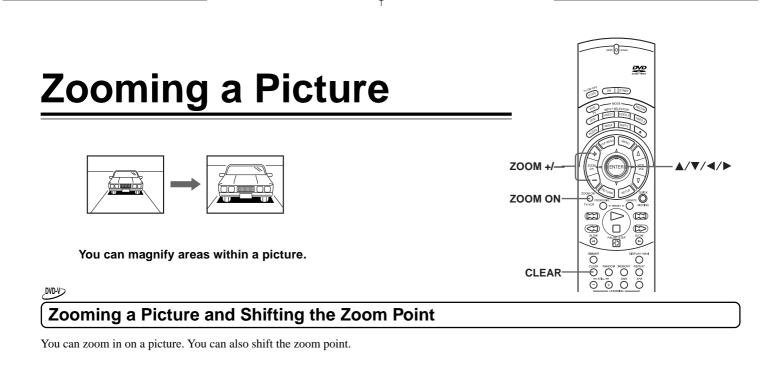


Notes

- Some discs may not permit random playback operation.
- You cannot use the random playback function together with the memory playback function.

• If you press \longrightarrow during random playback, the DVD Player goes to another title or track and continues random playback.

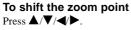
29





Press ZOOM ON during normal, slow, or still playback. Adjust the magnification of the screen using ZOOM + (to enlarge) and ZOOM - (to

[+]



To restore the original zoom point (center of the picture) Press CLEAR.

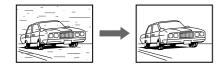
■ To resume normal playback



Press ZOOM ON repeatedly so that "Zoom Off" appears.

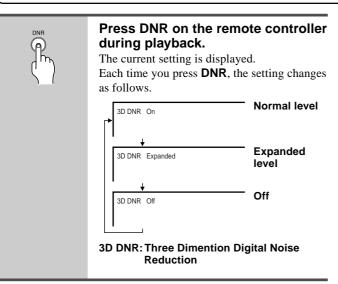
- Some discs may not permit zoom operation.
- During some scenes, the buttons may not work as described above.
- · Zooming does not work on subtitles or menu screens included on DVD-Video.
- While a zoom operation is being performed, it is not possible to select the DVD menu. To select the DVD menu, cancel the zoom operation to resume normal playback, and then select the DVD menu.
- · The magnification level varies depending on the picture size you select (see pages 44 and 46).
- · When using a DVD-Audio disc that includes pictures, this operation may be permitted in some picture segments.

Improving Picture Quality



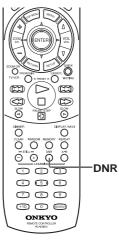
You can view a picture with less video noise.

Selecting DNR Picture Enhancement

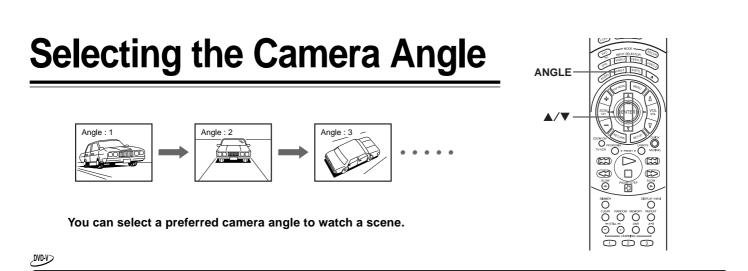


Notes

- Actual picture enhancement may vary depending on the quality of the disc.
- Depending on the DNR setting selected, there may be no improvement in the picture quality. When this is the case, set DNR to "Off".
- Depending on the DNR setting, some kinds of picture details may be lost by the picture enhancement.
- Depending on the disc, some kinds of picture details may be lost by the picture enhancement.
- When using a DVD audio disc that includes pictures, this operation may be permitted in some picture segments.



31



Changing the Camera Angle

If the scene was recorded from multiple angles, you can easily change the camera angle of the scene you are watching.

1	Press ANGLE while playing a scene recorded with multiple angles. While playing a scene recorded with multiple angles, the angle icon (😋) appears in the DVD display and on the TV screen. Press ANGLE while the angle icon is displayed.
	Press ANGLE or ▲ while the angle number is displayed on the TV screen. Each time you press ANGLE or ▲, the camera angle changes.
	Angle: 2/5 ↓ Angle: 3/5 ↓ ✓ : Cycles backwards You can also change the camera angle directly by pressing the number buttons corresponding to the angle number.

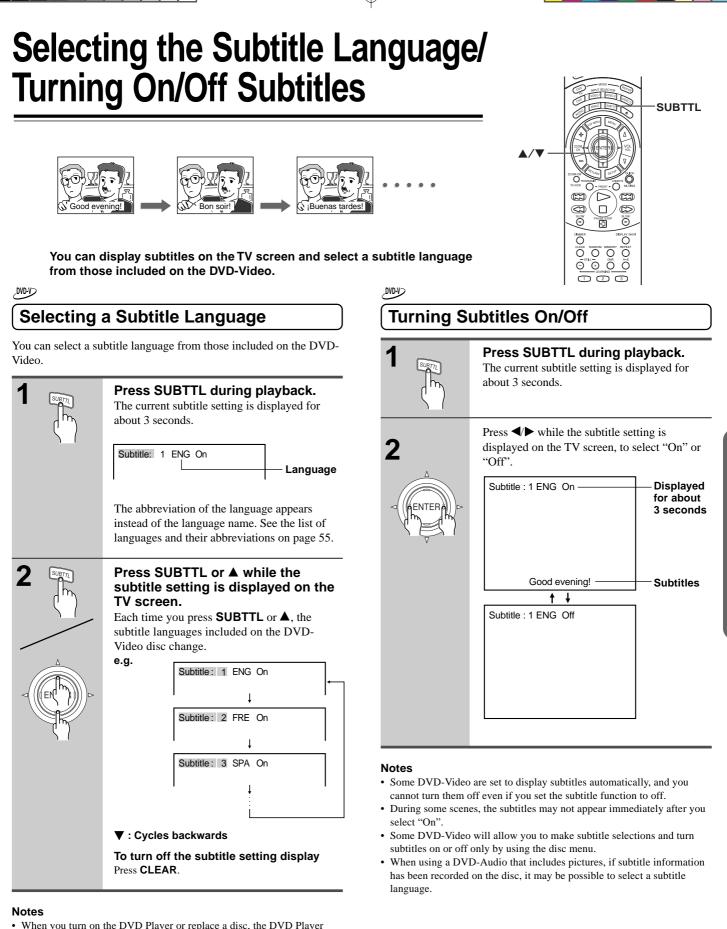
■ To disable the angle icon display on the TV

Set "On-Screen Displays" to "Off" using the setting menu (see pages 44 and 51).

Monitor the DVD display when you want to change the camera angle.

Notes

- You can change the camera angle during still playback. The camera angle changes to the new setting when you resume normal playback.
- If you pause a picture immediately after changing the camera angle, the resumed playback picture may not use the new camera angle.
- When using a DVD-Audio that includes pictures, if there are sections during which multiple angles are recorded, it may be possible to change the camera angle.

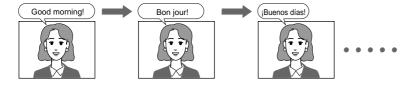


• When you turn on the DVD Player or replace a disc, the DVD Player returns to the automatic setting in the setting menu (see pages 44 and 50).

When you select a subtitle language which is not included on the disc, the DVD Player plays the prior language programmed on the disc.

During some scenes, the subtitles may not appear immediately after you change the subtitle language by pressing ▲/▼.

Selecting the Audio Language

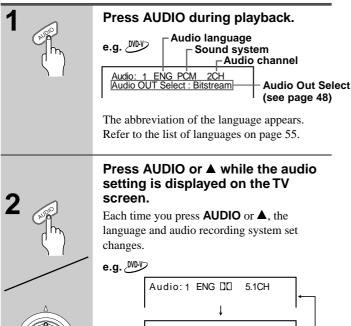


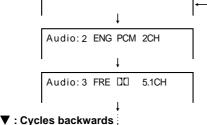
You can select a preferred audio language and sound system.

DVD-V DVD-A

Selecting a Playback Audio Setting

You can select the preferred audio language and sound system as a set from those included on the disc. This function lets you temporarily change the audio language which you selected as the automatic setting in the setting menu (see pages 44 and 50), and choose the sound system if the disc is recorded in more than one sound format.





To turn off the audio setting display Press CLEAR.

Notes

- Dolby Digital 5.1 Channel sound may be displayed as "D 6CH".
- · You can change the "Audio Out Select" setting temporarily by pressing \checkmark
- When using a DVD-Audio, it may not be possible to change the "Audio Out Select" setting.
- · Before changing the setting, read through the explanation on "Audio Out Select" on page 48 and carefully select the setting.

Notes

· Depending on the disc, it may be necessary to select the audio sound track using the DVD menu. When this is the case, press MENU to open the DVD menu and select the appropriate sound track as indicated on the DVD menu screen.

AUDIO MENU

O O

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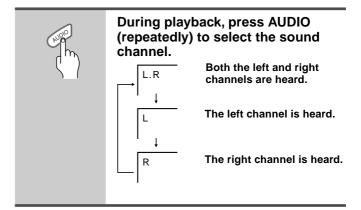
/▼/◀ ENTER

- · When the DVD Player is turned on or when the disc is changed, the audio settings are restored to the presets. In some cases, a language recorded on the disc may be given priority and selected automatically when the disc is loaded regardless of the setting.
- · Depending on the DVD-Audio, the sampling frequency and bitrate may be displayed.
- · When using a DVD-Audio, changing the audio sound track may cause playback to start again from the beginning of the current track.

VCD

Selecting Sound Channels on Video CD

A Video CD may have left and right sound channels which contain sounds or languages on each channel. You can switch these two channels to hear a preferred sound or language.



Output Sound Conversion Table

Audio Output from the DIGITAL OUTPUT and ANALOG OUTPUT Jacks Corresponding to Disc Formats and the DVD Player Settings

	Sound System		Audio Out Select setting and the output jacks							
Disc			Bitstream		Analog 6Ch		Analog 2Ch		РСМ	
Biod			DIGITAL OUTPUT	ANALOG OUTPUT	DIGITAL OUTPUT	ANALOG OUTPUT	DIGITAL OUTPUT	ANALOG OUTPUT	DIGITAL OUTPUT	ANALOG OUTPUT
DVD Video	DOLBY DIGITAL		Bitstream	48 kHz/20 bit	_	48 kHz/20 bit	Bitstream	48 kHz/20 bit	48 kHz/16 bit	48 kHz/20 bit
		48 kHz/16 bit	48 kHz/16 bit	48 kHz/16 bit	48 kHz/16 bit	48 kHz/16 bit	48 kHz/16 bit	48 kHz/16 bit	48 kHz/16 bit	48 kHz/16 bit
		48 kHz/20 bit	48 kHz/16 bit	48 kHz/20 bit	48 kHz/16 bit	48 kHz/20 bit	48 kHz/16 bit	48 kHz/20 bit	48 kHz/16 bit	48 kHz/20 bit
	Linear	48 kHz/24 bit	48 kHz/16 bit	48 kHz/24 bit	48 kHz/16 bit	48 kHz/20 bit	48 kHz/16 bit	48 kHz/24 bit	48 kHz/16 bit	48 kHz/24 bit
	PCM	96 kHz/16 bit	48 kHz/16 bit	48 kHz/16 bit	48 kHz/16 bit	48 kHz/16 bit	—	96 kHz/16 bit	48 kHz/16 bit	48 kHz/16 bit
		96 kHz/20 bit	48 kHz/16 bit	48 kHz/20 bit	48 kHz/16 bit	48 kHz/20 bit	_	96 kHz/20 bit	48 kHz/16 bit	48 kHz/20 bit
		96 kHz/24 bit	48 kHz/16 bit	48 kHz/24 bit	48 kHz/16 bit	48 kHz/20 bit	_	96 kHz/24 bit	48 kHz/16 bit	48 kHz/24 bit
	DTS		Bitstream	—	Bitstream	_	Bitstream	_	_	_
	MPEG2*1		Bitstream	48 kHz/16 bit	—	48 kHz/16 bit	Bitstream	48 kHz/16 bit	48 kHz/16 bit	48 kHz/16 bit
Video CD	MPEG1		44.1 kHz/16 bit	44.1 kHz/16 bit	_	44.1 kHz/16 bit				
CD	Linear PCM 44.1 kHz/16 bit		44.1 kHz/16 bit	44.1 kHz/16 bit	44.1 kHz/16 bit	44.1 kHz/16 bit	44.1 kHz/16 bit	44.1 kHz/16 bit	44.1 kHz/16 bit	44.1 kHz/16 bit
	DTS		Bitstream	(Noise is output)	Bitstream	(Noise is output)	Bitstream	(Noise is output)	Bitstream	(Noise is output)
	44.1 kHz/16 bit		44.1 kHz/16 bit	44.1 kHz/16 bit	—	44.1 kHz/16 bit				
		48 kHz/16 bit	48 kHz/16 bit	48 kHz/16 bit	—	48 kHz/16 bit				
	Linear	44.1 kHz/20 bit	44.1 kHz/16 bit	44.1 kHz/20 bit	—	44.1 kHz/20 bit	44.1 kHz/16 bit	44.1 kHz/20 bit	44.1 kHz/16 bit	44.1 kHz/20 bit
		48 kHz/20 bit	48 kHz/16 bit	48 kHz/20 bit	—	48 kHz/20 bit	48 kHz/16 bit	48 kHz/20 bit	48 kHz/16 bit	48 kHz/20 bit
		44.1 kHz/24 bit	44.1 kHz/16 bit	44.1 kHz/24 bit	—	44.1 kHz/24 bit	44.1 kHz/16 bit	44.1 kHz/24 bit	44.1 kHz/16 bit	44.1 kHz/24 bit
		48 kHz/24 bit	48 kHz/16 bit	48 kHz/24 bit		48 kHz/24 bit	48 kHz/16 bit	48 kHz/24 bit	48 kHz/16 bit	48 kHz/24 bit
		88.2 kHz/16 bit	44.1 kHz/16 bit	44.1 kHz/16 bit	—	88.2 kHz/16 bit	—	88.2 kHz/16 bit	44.1 kHz/16 bit	44.1 kHz/16 bit
		96 kHz/16 bit	48 kHz/16 bit	48 kHz/16 bit	—	96 kHz/16 bit	—	96 kHz/16 bit	48 kHz/16 bit	48 kHz/16 bit
DVD Audio	PCM	88.2 kHz/20 bit	44.1 kHz/16 bit	44.1 kHz/20 bit	_	88.2 kHz/20 bit	_	88.2 kHz/20 bit	44.1 kHz/16 bit	44.1 kHz/20 bit
	or packed PCM *2 *2 *2 *2 *2 *2	96 kHz/20 bit	48 kHz/16 bit	48 kHz/20 bit	—	96 kHz/20 bit	—	96 kHz/20 bit	48 kHz/16 bit	48 kHz/20 bit
		88.2 kHz/24 bit	44.1 kHz/16 bit	44.1 kHz/20 bit	—	88.2 kHz/24 bit	—	88.2 kHz/24 bit	44.1 kHz/16 bit	44.1 kHz/20 bit
		96 kHz/24 bit	48 kHz/16 bit	48 kHz/20 bit	_	96 kHz/24 bit	_	96 kHz/24 bit	48 kHz/16 bit	48 kHz/20 bit
		176.4 kHz/16 bit	—	176.4 kHz/16 bit	_	176.4 kHz/16 bit	—	176.4 kHz/16 bit	_	176.4 kHz/16 bit
		192 kHz/16 bit		192 kHz/16 bit	_	192 kHz/16 bit	_	192 kHz/16 bit	_	192 kHz/16 bit
		176.4 kHz/20 bit		176.4 kHz/20 bit	_	176.4 kHz/20 bit	_	176.4 kHz/20 bit	_	176.4 kHz/20 bit
		192 kHz/20 bit		192 kHz/20 bit	_	192 kHz/20 bit	_	192 kHz/20 bit	_	192 kHz/20 bit
		176.4 kHz/24 bit		176.4 kHz/24 bit	_	176.4 kHz/24 bit	_	176.4 kHz/24 bit	_	176.4 kHz/24 bit
	*2	192 kHz/24 bit		192 kHz/24 bit	—	192 kHz/24 bit	_	192 kHz/24 bit		192 kHz/24 bit

 $^{\ast 1}$ $\,$ Not applicable for USA and Canadian models

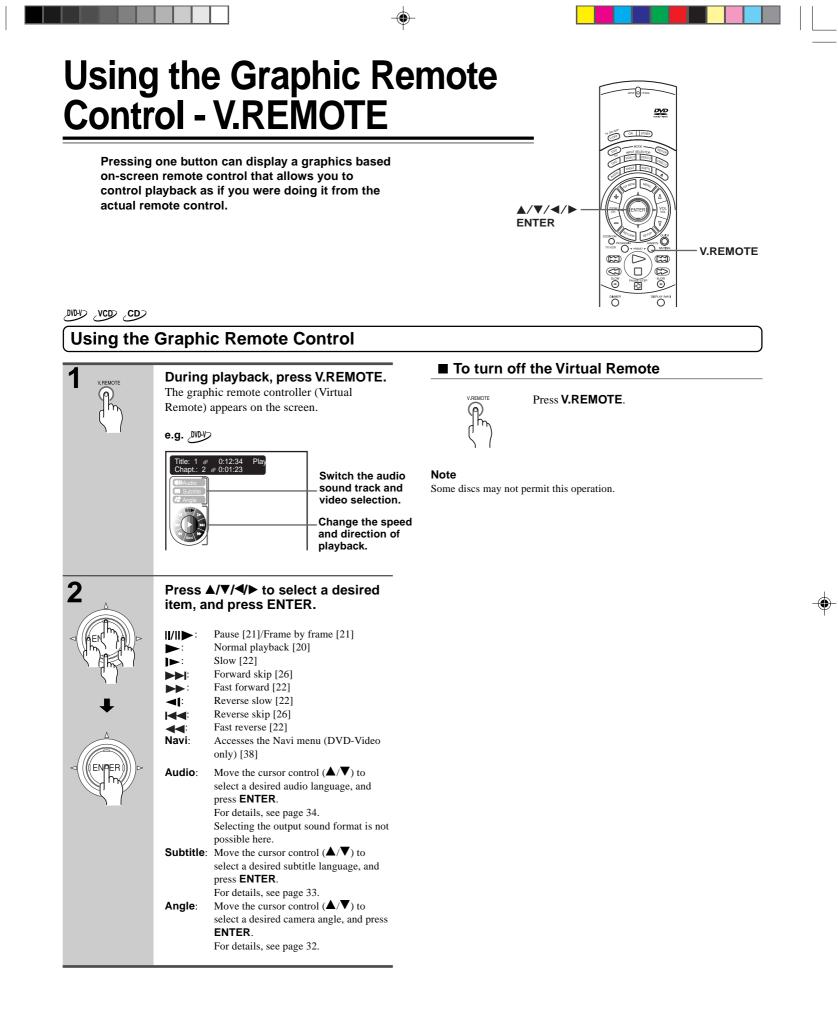
*2 2Ch Audio Output

—: No signal

Notes

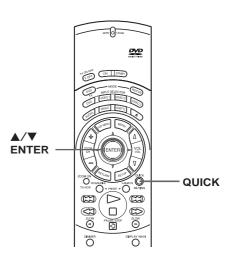
- When using only two speakers for playback and play a multi channel disc that prohibits stereo downmixing, the sound from the right and left speakers will be the right and left channels of the multi channel sound track as recorded on the disc. With these types of discs, it is often possible that a 2-channel stereo sound track may also be recorded. Change the sound track to hear the audio correctly. (For details, refer to the documentation supplied with the disc.)
- During playback of discs recorded with sampling rates higher than 48 kHz (for example 96 kHz), the 48/44.1 sampling rate indicator lights when Audio Out Select is set to either Bitstream or PCM.
- When Audio Out Select is set to Analog 6Ch, two channel audio sources are output with DOLBY PRO LOGIC surround processing (except for DVD-Audio).

35



Selecting the Playback Function - QUICK

Pressing one button can display a list of playback functions which are relevant to your current playback mode. You can check and modify them from the list.



CD CD GOV GOVE CUT

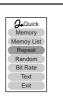
Selecting the Playback Function

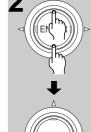


During playback, press QUICK.

The following on-screen display appears. (The actual display will vary depending on the playback status.)

e.g. _____





Press \blacktriangle/ ∇ to select a desired item, and press ENTER.

e.g. To change the repeat mode:



3

Press \blacktriangle/\forall to change the setting.

e.g. To select the chapter repeat mode:

Quick Memory Memoy List Repeat Random Bit Rate	A-B (Set A) Chapter Title All	
Exit		



Press ENTER. The on-screen display disappears and playback will resume according to your selection.

Quick menu

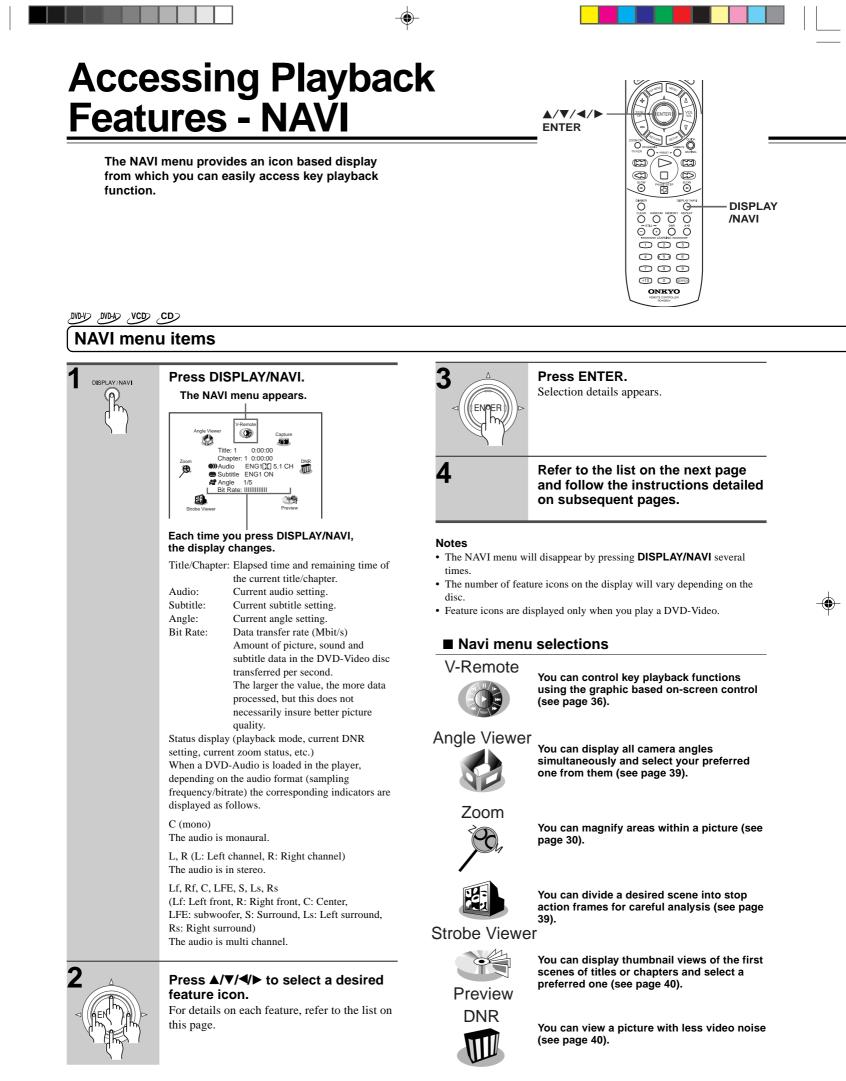
For details, see the respective pages.

Memory:	To program memory playback (see page 28).
Memory List:	To list memory settings (see page 28).
Repeat:	To select the repeat playback mode (see page 27).
Random:	To select the random playback mode (see page 29).
Bitrate:	To activate/disable the bitrate display (see page 38).
Text:	To activate/disable the Text display.
	Text display:
	Displays DVD-Text data or CD-Text data if
	included on the disc.
	With DVD-Audio, Album text data is displayed if it
	is recorded on the disc. Track information is not
	displayed.
	(Some text content recorded on the disc may not be
	displayed properly depending on the disc.)
Exit:	To quit the on-screen display.

Note

Pressing QUICK again also exits the on-screen display.





Capture

You can sample a scene from a playback picture and transform it into a background picture (see page 41).

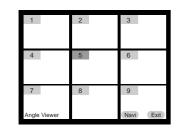
Angle Viewer You can display all camera angles simultaneously and select your preferred one



e.g.

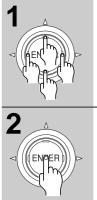
from them.

After selecting this icon and pressing ENTER, the following onscreen display appears:



When the scene contains 9 camera angles:

1-9:



Press $\blacktriangle / \checkmark / \checkmark >$ to select.

To select the camera angle. Navi: To return to the NAVI menu. Exit: To quit the on-screen display.

Press ENTER.

Note

Some discs or scenes may not permit this operation.

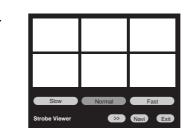


You can divide a desired scene into stop action frames for careful analysis.

Strobe Viewer

After selecting this icon and pressing ENTER, the following onscreen display appears:

e.g.





Press ▲/▼/◀/▶ to select.

Still pictures at shorter intervals. Slow: Normal: Still pictures at normal intervals. Fast: Still pictures at longer intervals. To view the next series of 6 pictures. >>: Navi: To return to the NAVI menu. Exit: To quit the on-screen display.



Press ENTER.

Note

Some discs or scenes may not permit this operation.

Accessing Playback Features - NAVI

NAVI menu items

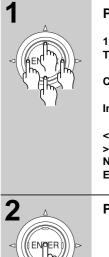


e.g.

You can display thumbnail views of the first scenes of titles or chapters and select a preferred one.

After selecting this icon and pressing ENTER, the following onscreen display appears:





Press ▲/▼/◀/► to select.

1 - 6 :	To locate the scene.
Title:	To display the first scene of titles (1 to
	6).
Chapter:	To display the first scenes of chapters (1
	to 6).
Interval:	To display scenes at intervals of about
	10 minutes apart.
<<:	To go to the previous page.
>>:	To go to the next page.
Navi:	To return to the NAVI menu.
Exit:	To quit the on-screen display.

Press ENTER.

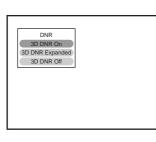
After selecting this icon and pressing ENTER, the following on-

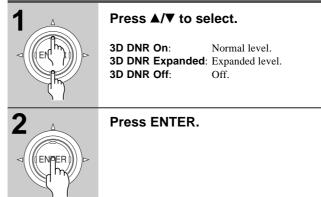
You can view a picture with less video noise.

e.g.

DNR

screen display appears.





Note

For details and notes on the DNR picture enhancement, see page 31.

Notes

- · Some discs or scenes may not permit this operation.
- Some items may not be selected depending on the disc or scene.

40

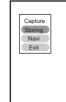
• Some of the first scenes may not be picked up depending on the disc.

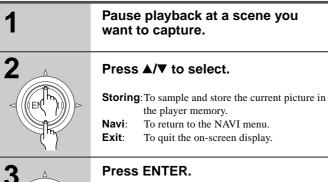


You can sample a scene from a playback picture and transform it into a background picture.

After selecting this icon and pressing **ENTER**, the following onscreen display appears.









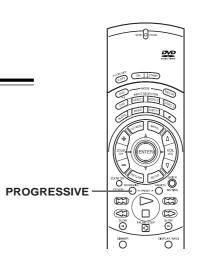
The stored picture will be displayed as a background picture when the player is in the stop mode. It is necessary to confirm this process via the setup menu (see page 51).

Notes

- You can store only one picture. Storing a new picture will erase the old one.
- No operations are permitted during the process of the sampling and storage of background picture.

Selecting Progressive Video Output

The DVD Player is capable of outputting progressive scan video. As its name suggests, progressive scan delivers the video image sequentially across the horizontal lines of the TV or monitor rather than the alternating odd and even delivery of an interlace scan. The result is a picture quality that best reflects the quality digital video recorded on the DVD.



DVD-V

Selecting progressive scan



Press PROGRESSIVE on the remote controller.

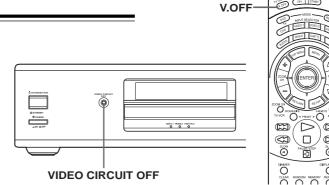
The PROGRESSIVE indicator lights in the front panel. To turn off the progressive scan, press the button again until the PROGRESSIVE indicator disappears.

Notes

- In order for this function to be effective, it is necessary to have made component video connections to a TV or monitor that is compatible with progressive scan.
- This function only works when the color system recorded on the disc is NTSC.

Turning Off the Video Signal Output

The DVD-Player can be set playing audio exclusively. In this case, you can obtain sound of better quality, as the DVD Player does not process video signals. (All the video output jacks send no video signals.)



- A-

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CD CDV CAUR (1400

Switching the video signal off



Press VIDEO CIRCUIT OFF on the DVD Player or V.OFF on the remote controller repeatedly.

The VIDEO OFF indicator appears on the display. To turn on the video circuitry, press the button again.

Notes

- Some discs cannot be played without some on-screen menu interaction. If this is the case, be sure to perform the on-screen procedures as indicated before turning off the video signal processing circuitry.
- The VIDEO CIRCUIT OFF setting is canceled whenever the DVD Player is turned off.

Customizing the Function Settings

When you insert a DVD-Video, DVD-Audio, Video CD, or CD, the various functions of the DVD Player will be set (reset) according to the setting menu. You can customize this setting menu according to your preferences.



COS CON CAUS (VOD

Making Adjustments to Setting

1 () 2	Press I select a category		Press ▲/▼ to change the setting, then press ENTER. e.g. When you change the "TV Shape" setting to "16:9 Widescreen".
THE REPORT	symbol for the setting you want to change. Picture performance settings Output sound settings	5	Further steps may be needed depending on the item or setting. Follow the steps described in the explanation of each item starting from page 46.
	Language settings	6	 To change the setting of other items in the same category, repeat steps 3 to 4. To change the setting of an item
	Display settings	7	in a different category, repeat steps 2 to 4. To close the setting menu, press
	Initial settings	(^m)	SETUP.
3 (Enthing) b	 Press ▲/▼ to select the item you want to change, then press ENTER. e.g. When you select "PICTURE" as the category in step 2, then select "TV Shape" as the item in this step. 	~	to the previously displayed menu ress RETURN.
	Image: Weight of the second	SETUP can function	ay disappears when you press SETUP . on even during normal playback, however some naccessible, and a message will appear. In this case, try k is stopped.

Reference Table of the Setting Menu

	Menu item	Related to*1	Details	Page
	TV Shape	DVD-V	To select a picture size according to the aspect ratio of your TV.	46
	Blacker than Black	DVD-V VCD	To make an adjustment of the black level on your TV using a commercially available test disc that contains adjustment signals.	46
	Setting: Interlaced	DVD-V VCD	To adjust the picture quality.	46
	Setting: Progressive	DVD-VCD	To adjust the picture quality. (Only when connected to a PROGRESSIVE TV.)	47
	Progressive 4:3 Output	NDN VCD	To select the video output of pictures recorded in 4:3 format. (Only when connected to a PROGRESSIVE TV.)	47
	Progressive Conversion	UNDY	To select the system of output signal. (Only when connected to a PROGRESSIVE TV.)	47
	PAL/Auto*2		To select th video system of a disc.	47
	Audio Out Select	NOD CON CAUS CON	To select an output sound format corresponding to your system connection.	48
Cuuu	Dynamic Range Control	UNDU	To turn on or off a function that makes faint sounds easier to hear even if you lower the volume during late hours playback.	49
	Karaoke Vocal	DVD-V	To turn on or off the vocal output during DVD KARAOKE disc playback.	49
200	On-Screen Language		To select a preferred language for on-screen displays.	50
Ab	Disc Menu Language	DVD-V	To select a preferred language for disc menus.	50
	Audio Language	DVD-V>	To select a preferred language for the sound.	50
	Subtitle Language	DVD-V	To select a preferred language for subtitles.	51
	On-Screen Displays	CDS CDVS CAUR CUTS	To turn on or de-activate the operation status display on the TV screen.	51
	Background		To select the background color or background picture.	51
	Screen Saver	DVD-V	To turn the screen saver on or off.	51
21.00	Pause/Still	DVD-V	To select the resolution of still pictures.	52
	Parental Lock	OVD-V	To turn the parental lock function on or off.	52
	Remote Confirmation	COS COS CAMB CAMB	To turn on or off the confirmation beeper announcing when each remote command received.	53
	Title/Group Stop	DVD-A	To turn on or off a feature that automatically stops playback after a title/group has been viewed.	53
	PBC	VCD	To use the menu screen when playing a PBC-controllable Video CD.	53
	Priority Contents	DVD-V DVD-A	To select the playback priority between DVD-Video and DVD-Audio format signals.	53
	On-screen Language		To install the initial system setting.	54



On-screen Language TV Shape To install the initial system setting. DVD-V-Audio Out Select

*1 When using a DVD-Audio disc that includes pictures, some setting marked \underbrace{WW} may be effective. *2 Not applicable for USA and Canadian models

Customizing the Function Setting

Explanation of Each Item in the Picture Category



Picture Picture TV Shape 4:3 LB Blacker than Black Setting : Infraced Setting : Infraced Progressive 4:3 Output Full Progressive Conversion Auto

TV Shape

4:3 Letterbox:

Select when a 4:3 TV is connected. Displays theatrical images with masking bars above and below the picture.

DVD-V

VCD

4:3 Normal:



Select when a 4:3 TV is connected. Displays pictures cropped to fill your TV screen. Either or both sides of the picture are cut off.

16:9 Widescreen: Select when a 16:9 wide TV is connected.

Notes

- The displayable picture size is preset on each DVD-Video. Therefore, the playback picture of some DVD-Video may not conform to the picture size you select.
- When you play a DVD-Video recorded in the 4:3 picture size only, the playback picture always appears in the 4:3 picture size regardless of the TV shape setting.
- If you select "16:9 Widescreen" and you own a 4:3 TV set, the DVD playback picture will be horizontally distorted during playback. Images will appear to be horizontally compressed. Make sure the TV Shape conforms to the actual TV in use.

Blacker than Black	ے حیاتی
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Off: For normal use.

On: Select when you adjust the black level of your TV using a commercially available test disc that contains adjustment signals.

Note

With certain discs, the played picture may be disturbed if this item is set to On. In this case, set this item to Off.

Setting: Interlaced

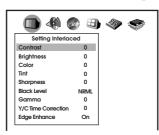
You can fine adjust picture quality and store up to 3 custom picture settings in the memory of the DVD Player.

To select a preset memory setting:

1 Press $\blacktriangle/\blacksquare$ to select a memory number (1 to 3), and press **ENTER**.

) E) 🇇 😎
Picture		
TV Shape	4:3 LB	1
Blacker than Black	Off	2
Setting : Interlaced	1	3
Setting : Progressive	1	
Progressive 4:3 Output	t Full	
Progressive Conversion	1 Auto	

2 Press \blacktriangle/∇ to select the element, and press **ENTER**.



3 Press \checkmark to adjust the value, and press **ENTER**.

(-7) Lower	Contrast	Higher (+7)
(-7) Darke	r Brightness	Brighter (+7)
(-7) Duller	Color	Brighter (+7)
(-7) Redde	r Tint	Greener (+7)
(-7) Softer	Sharpness	Sharper (+7)
Normal	Black Level	Enhanced
(-)	Gamma*1	(+)
(-3)	Y/C Time Correction	*2 (+3)
On	Edge Enhance*3	Off

*1: Adjust when playback pictures are too dark or too whitish.

- *2: Adjust horizontal color deviations. Pictures may shift horizontally during the adjustment.
- *3: Sharpens the edges of images.

Notes

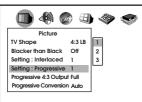
- These adjustments are not available when connecting to a PROGRESSIVE TV.
- The Tint adjustment is not available when connecting to a TV via the component video jacks (Y, PB, PR).

Setting: Progressive

You can fine adjust picture quality and store up to 3 picture setting in the memory of the DVD Player. (Only when connected to a PROGRESSIVE TV.)

To select a preset memory setting:

1 Press ▲/▼ to select a memory number (1 to 3), and press the **ENTER** button.



2 Press \blacktriangle/ ∇ to select the element, and press the **ENTER** button.



3 Press \checkmark to adjust the value, and press the **ENTER** button.

(-7) Lower	Contrast	Higher (+7)
(0) Darker	Brightness	Brighter (+14)
(-7) Duller	Color	Brighter (+7)
(-7) Redder	Tint	Greener (+7)
	Edge Enhance	
To er	nhance picture e	edges.

(Off < On < Expanded1 < Expanded2)

Progressive 4:3 Output

DVD-V CD

Select the video output of pictures recorded in 4:3 format. (Only when connected to a PROGRESSIVE TV.)

- **4:3:** Displays images in 4:3 aspect ratio with masking bars to the left and right of the picture.
- **Full:** Displays pictures expanded horizontally to fill the 16:9 screen.

Progressive Conversion

There are two types of source content in pictures recorded in DVD-Video: film content (pictures recorded from films at 24 frames per second) and video content (video signals recorded at 30 frames per second). Make this selection according to the type of content being viewed.

DVD-V

DVD-VO .VCD

Auto:	Displays this operation normally.
	The DVD Player automatically detects source content,
	film or video, of playback source, and converts it in the
	progressive output format in an appropreate method.
Video:	The DVD Player filters video signal, and converts it in
	the progressive output format appropriately.
	Suitable for playback of video content pictures.
Film:	The DVD Player converts film content pictures in the
	progressive output format appropriated. Suitable for
	playback of film content pictures. The progressive
	output feature will be most effective under this selection.
Note	

Note

PAL/Auto*

Depending on the disc, pictures may be cut off or doubled. In this case, select "Video".

PAL:	Select to play PAL discs. Connect a PAL TV to view pictures.
Auto:	The DVD Player automatically detects PAL and NTSC video systems of discs.
	Connecting a multisystem TV (PAL/NTSC compatible) is needed to view pictures.
Note	

A playback picture may be distorted temporarily when the detected signal changes between PAL and NTSC on the disc.

* Not applicable for USA and Canadian models

Customizing the Function Settings

Explanation of Each Item in the Audio Category



-	Audio	-	-	٦Ť	40
Audio Out	Select	В	itstream	1	
Dynamic R	ange Co	ntrol C	Off		
Karaoke V	/ocal	c	Off		

Audio Out Select



Select the output sound format corresponding to your system connection.

For details of sound recording systems, see "Output Sound Conversion Table" on page 35.

Bitstream: Select when you connected to an amplifier equipped with a Dolby Digital, DTS, MPEG1 or MPEG2* decorder (see page 13). The DVD Player outputs digital audio information in the bitstream format when you play a DVD-Video recorded in the Dolby Digital, DTS, MPEG1 or MPEG2* recording system. Analog 6Ch: Select when connected to an AV amplifier equipped with 5.1ch audio inputs. This DVD Player is equipped with a Dolby Digital and MPEG decoder. The next screen will detail the appropriate settings. Analog 2Ch: Select when connected to a TV, or Dolby Pro Logic or stereo system via the analog audio jacks (see page 12). PCM: Select when connected to a 2 channel digital stereo amplifier (see page 13). The DVD Player outputs sounds in the PCM 2ch

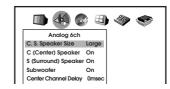
> recording system. * Not applicable for USA and Canadian models

format when you play a DVD-Video disc recorded

on the Dolby Digital, MPEG1 or MPEG2*

When you select "Analog 6Ch":

Make the following setting for the built-in 5.1ch surround decorder.



- 1 Select an item by pressing \blacktriangle/∇ , and press **ENTER**.
- 2 Make the setting (see below) by pressing $(\blacktriangle/ \bigtriangledown / \diamondsuit /)$, and press **ENTER**.

C. S. Speaker Size

Small: When the center speaker or surround speakers cannot reproduce low frequency signals below 120 Hz.

Large: When the center speaker and surround speakers can reproduce low frequency signals below 120 Hz.

C (Center) Speaker

Off: When center speaker is not connected.

On: When you connect center speaker.

S (Surround) Speaker

Off: When surround speakers are not connected.

On: When you connect surround speakers.

Subwoofer

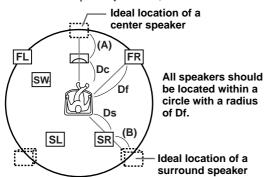
- Off: When a subwoofer is not connected.
- **On:** When you connect a subwoofer.

Note

Depending on the DVD-Audio, the audio may be output based only on the channel information recorded on the disc regardless of the speaker settings.

Adjusting the delay time:

When enjoying 5.1ch surround playback, it is ideal to choose a listening position that is the same distance from each speaker. By adjusting the delay time of center/surround speakers, you can virtually create an ideal listening environment (as if the center/surround speakers were at their ideal locations respectively as below).



Center Channel Delay

- **0 msc:** When Df equals Dc.
- **1 msc:** When (A) is approx. 34 cm (13 inch)
- **2 msc:** When (A) is approx. 68 cm (27 inch)
- **3 msc:** When (A) is approx. 102 cm (40 inch)...
- *(A)=Df Dc

Get your optimum value $(0, 1, 2 \dots 5)$ dividing (A) by 34.

Surround Channels Delay

- **0 msc:** When Df equals Ds.
- **1 msc:** When (B) is approx. 34 cm (13 inch)
- **2 msc:** When (B) is approx. 68 cm (27 inch)
- **3 msc:** When (B) is approx. 102 cm (40 inch)
- *(B)=Df Ds

Get your optimum value $(0, 1, 2 \dots 15)$ dividing (B) by 34.

Note

Depending on the DVD-Audio, the audio may be output with delay times of 0 ms regardless of the setting.

3 Select "Test Tone" and press ENTER.

The DVD Player outputs a test signal to each speaker when it is in stop mode. When playing a DVD-Video, it substitutes the current sound for the test signal.

Press \checkmark to select the receiving speakers, and adjust the volume of each speaker at the same level by pressing \checkmark/\checkmark . If all the volume levels cannot be equalized, adjust them on the amplifier.

Press **ENTER** again to turn off the test tone once adjustments are complete.

Note

Depending on the disc, 6 channel sounds may not be output via the MULTI CHANNEL OUTPUT/ANALOG OUTPUT jacks.

DVD-V-

DVD-V

Dynamic Range Control

- **Off:** Full dynamic range is maintained.
- **On:** Dynamic range is reduced.

Notes

- This function works only during playback of Dolby Digital recorded discs.
- The level of Dynamic Range Reduction may differ depending on the DVD.

Karaoke Vocal

- **Off:** The primary vocal is not output.
- **On:** The primary vocal is output when it is recorded on the disc.

Notes

• The vocal output feature is used during playback of Dolby Digital (multichannel) recorded DVD KARAOKE discs. This feature allows you to turn off vocal audio tracks, or restore them for background accompaniment.

• When playing KARAOKE, connect appropriate audio equipment such as an amplifier to the DVD player.

Customizing the Function Settings

Explanation of Each Item in the Language Category



Language -Screen Language ENG c Menu Language ENG dio Language ENG dio Language ENG bittle Language ---

On-Screen Language www www www

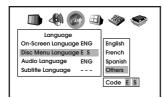
English: To view on-screen displays in English.Français: To view on-screen displays in French.Español: To view on-screen displays in Spanish.

Disc Menu Language

- **English:** To display disc menus in English.
- **French:** To display disc menus in French.
- Spanish: To display disc menus in Spanish.
- **Others:** To make a further choice.

After pressing **ENTER**, follow steps 1 - 4 below.

- 1 Obtain the abbreviation of the preferred language from "Table of Languages" on page 55.
- 2 Select the first character by pressing \blacktriangle/∇ .
- 3 Press ◄/► to shift and select the second character by pressing ▲/▼.



4 Press ENTER.

Note

Some DVD-Video may not include your pre-selected language. In this case, the DVD Player automatically displays disc menus consistent with the disc's initial language setting.

50

Audio Language

English: To play sound tracks in English.

French: To play sound tracks in French.

Spanish: To play sound tracks in Spanish.

Others: To make a further choice.

After pressing **ENTER**, follow steps 1 - 4 below.

DVD-V

- 1 Obtain the abbreviation of the preferred language from "Table of Languages" on page 55.
- 2 Select the first character by pressing \blacktriangle/∇ .
- 3 Press **√** to shift and select the second character by pressing ▲/▼.

🔲 🚸 🎯) 🧇 🗢
Language	
On-Screen Language ENG	English
Disc Menu Language ENG	French
Audio Language E S	Spanish
Subtitle Language	Others
	Code E S

4 Press ENTER.

Note

DVD-V

Depending on the disc, a language recorded on the disc may be given priority and selected automatically when the disc is loaded regardless of the setting.

On-Screen Displays Subtitle Language DVD-V-To display subtitles in English. To display subtitles in French. To display subtitles in Spanish. screen. To disable subtitles.

To make a further choice. After pressing **ENTER**, follow steps 1 - 4 below.

Obtain the abbreviation of the preferred language from "Table of

- 1 Languages" on page 55.
- 2 Select the first character by pressing \blacktriangle/∇ .
- Press \checkmark to shift and select the second character by pressing 3 ▲/▼.

	6) 🧇 🤝
Language]
On-Screen Languag	e ENG	English
Disc Menu Languag	e ENG	French
Audio Language	ENG	Spanish
Subtitle Language	AA	Others

Press ENTER 4

Notes

English:

French:

Spanish:

Others:

No Subtitles:

- Some DVD-Video may be set to display subtitles in a different language than you selected. A prior subtitle language may be programmed on the disc.
- · Some DVD-Video allow you to change subtitle selections only via the disc menu. If this is the case, Press MENU and choose the appropriate subtitle language from the selection on the disc menu.

Explanation of Each Item in the **Display Category**

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NON CON CAUSE CUT

DVD-V

- **Off:** Operational modes (e.g. " \blacktriangleright ", " $\overset{\odot}{\square}$ ") are not displayed .
- **On:** Operational modes (e.g. " \blacktriangleright ", " $\overset{\odot}{\square}$ ") are displayed on-

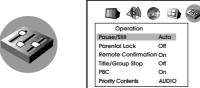
Back	ground	DVD-V	DVD-A	VCD	∞
Blue:	Blue background.				
Gray:	Gray background.				
Capture:	To use a picture you sample and store in the memory				
	using the Capture feature as a back	ackgro	ound (s	see pag	ge 41).
Jacket:	To use the jacket picture include	ed on s	some d	liscs as	s a
	background. If it is not included	l, a gra	y bacl	kgrour	nd will
	be substituted.				

Screen Saver

- Off: The screen saver is disengaged.
- On: The screen saver operates.

Customizing the Function Settings

Explanation of Each Item in the Operation Category



Pause/Still

DVD-V

- For normal use. Still and fast motion images can be Auto: paused.
- Frame: The resolution of still pictures is improved, so that you can make a motionless picture clearer when you pause it.

Parental Lock

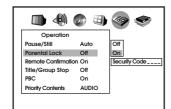
DVD-V

DVD-Video equipped with the parental lock function are rated according to their content. The content allowed by a parental lock level and the way a DVD-Video can be controlled may vary from disc to disc. For example, some discs allow you to edit out violent scenes unsuitable for children and replace them with more suitable scenes, or lock out playback of the disc altogether.

Note

DVD-Video may or may not respond to the parental lock setting. This is not a defect in the DVD Player. Make sure this function works with your DVD-Video.

- Off: The parental lock feature does not function. After pressing ENTER, follow step 1 below.
- **On:** To activate the parental lock feature or change the settings. After pressing ENTER, follow steps 1 - 3 below.



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- 1 Press the number buttons to create a personal 4-digit security code, then press ENTER. If you make a mistake before pressing the ENTER button, press **CLEAR** and enter your 4-digit security code again.
- Enter the code of an area whose standards were used to rate the 2 DVD-Video, referring to the list below.

Area	Code
AUSTRALIA	AU
BELGIUM	BE
CANADA	CA
CHINA	CN
DENMARK	DK
FINLAND	FI
FRANCE	FR
GERMANY	DE
HONG KONG	HK
INDONESIA	ID
ITALY	IT
JAPAN	JP
MALAYSIA	MY
NETHERLANDS	NL
NORWAY	NO
PHILIPPINES	PH
RUSSIAN FEDERATION	RU
SINGAPORE	SG
SPAIN	ES
SWEDEN	SE
SWITZERLAND	CH
TAIWAN	TW
THAILAND	TH
UNITED KINGDOM	GB
UNITED STATES	US

a Select the first character by pressing $\blacktriangle / \bigtriangledown$.

b Press \checkmark to shift and select the second character by pressing \blacktriangle / \checkmark .

c Press ENTER.

3 Press \blacktriangle/ ∇ to select the parental lock level, then press **ENTER**.

•	B		-
Operation			
Pause/Still	Auto	Off	
Parental Lock	Off	On	
Remote Confirmatio	n On	Area Code	US
Title/Group Stop	Off	Level	7
PBC	On		
Priority Contents	AUDIO		

You cannot play DVD Video rated higher than the level you selected unless you cancel the parental lock function. For example, when you select level 7, discs rated higher than level 7 are

For example, when you select level 7, discs rated higher than level 7 are locked out and cannot be played.

The parental lock level is equivalent to the following U.S. movie ratings. Level 7: NC-17

Level 6: R Level 4: PG 13

Level 3: PG

Level 1: G

The parental lock levels for other areas than U.S. are included for future use. Check the appropriate parental lock level when you buy a DVD-Video equipped with the parental lock feature in the future.

■ To change the parental lock level

Follow step 1 - 3.

■ To change your 4-digit security code

1 After selecting "On" or "Off", press ■ four times, then press **ENTER**.

The 4-digit security code is cleared.



2 Press the number buttons to create a new 4-digit security code.

3 Press ENTER.

- Off: The beeper does not sound.
- **On:** The beeper sounds with each remote operation.

Title/Group Stop

DVD-V DVD-A

JCD

- **Off:** The DVD Player continues after playback of a title/group is complete.
- **On:** The DVD Player stops after playback of a title/group is complete.

PBC

- Off: When playing a Video-CD without using the menu.
- **On:** To use the menu when playing a PBC-featured Video-CD.

Priority Contents

DVD-V DVD-A

VCD

Select the playback priority between DVD-Video and DVD-Audio format signals when playing a DVD disc that contains both DVD-Video and DVD-Audio format signals.

- **DVD-AUDIO:** DVD Audio format signals take priority over DVD Video format signals.
- **DVD-VIDEO:** DVD Video format signals take priority over DVD Audio format signals.

Customizing the Function Settings

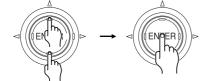
Explanation of Each Item in the Operation Category



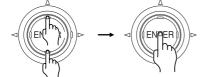
Initial Setup

NON DIDA COD CO

1 Press \blacktriangle/∇ to select "On-Screen Language", then press **ENTER**.



2 Press \blacktriangle/ ∇ to select a language, then press **ENTER**.



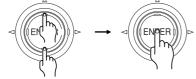
For details, see "On-Screen Language" on page 50.

3 Press $\mathbf{\nabla}$ to select "TV Shape", then press **ENTER**.



4 Press \blacktriangle/\lor to select the aspect ratio of the TV screen, then press **ENTER**.

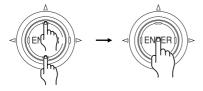
For details, see "TV Shape" on page 46.



5 Press $\mathbf{\nabla}$ to select "Audio Out Select", then press **ENTER**.



6 Press ▲/▼ to select the audio output, then press ENTER.For details, see "Audio Out Select" on page 48.



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7 Finally press **SETUP**.

Table of Languages

Table of Languages and Their Abbreviations

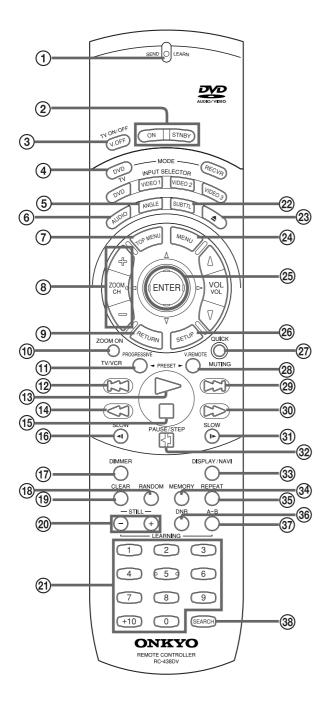
Abbreviation	Language	Abbreviation	Language	Abbreviation	Language	Abbreviation	Language
of the		of the		of the		of the	
Language		Language		Language		Language	
	No alternate	EO	Esperanto	LN	Lingala	SL	Slovenian
	language	ET	Estonian	LO	Laotian	SM	Samoan
CHI (ZH)	Chinese	EU	Basque	LT	Lithuanian	SN	Shona
DUT (NL)	Dutch	FA	Persian	LV	Latvian,Lettish	SO	Somali
ENG (EN)	English	FI	Finnish	MG	Malagasy	SQ	Albanian
FRE (FR)	French	FJ	Fiji	MI	Maori	SR	Serbian
GER (DE)	German	FO	Faroese	MK	Macedonian	SS	Siswati
ITA (IT)	Italian	FY	Frisian	ML	Malayalam	ST	Sesotho
JPN (JA)	Japanese	GA	Irish	MN	Mongolian	SU	Sundanese
KOR (KO)	Korean	GD	Scottish,Gaelic	MO	Moldavian	SV	Swedish
MAY (MS)	Malay	GL	Galician	MR	Marathi	SW	Swahili
SPA (ES)	Spanish	GN	Guarani	MT	Maltese	TA	Tamil
AA	Afar	GU	Gujarati	MY	Burmese	TE	Telugu
AB	Abkhazian	HA	Hausa	NA	Nauru	TG	Tajik
AF	Afrikaans	HI	Hindi	NE	Nepali	TH	Thai
AM	Amharic	HR	Croatian	NO	Norwegian	TI	Tigrinya
AR	Arabic	HU	Hungarian	OC	Occitan	TK	Turkmen
AS	Assamese	HY	Armenian	OM	(Afan) Oromo	TL	Tagalog
AY	Aymara	IA	Interlingua	OR	Oriya	TN	Setswana
AZ	Azerbaijani	IE	Interlingue	PA	Panjabi	TO	Tongan
BA	Bashkir	IK	Inupiak	PL	Polish	TR	Turkish
BE	Belorussian	IN	Indonesian	PS	Pashto,Pushto	TS	Tsonga
BG	Bulgarian	IS	Icelandic	PT	Portuguese	TT	Tatar
BH	Bihari	IW	Hebrew	QU	Quechua	TW	Twi
BI	Bislama	Л	Yiddish	RM	Rhaeto-Romance	UK	Ukrainian
BN	Bengali,Bangla	JW	Javanese	RN	Kirundi	UR	Urdu
BO	Tibetan	KA	Georgian	RO	Rumanian	UZ	Uzbek
BR	Breton	KK	Kazakh	RU	Russian	VI	Vietnamese
CA	Catalan	KL	Greenlandic	RW	Kinyarwanda	VO	Volapük
CO	Corsican	KM	Cambodian	SA	Sanskrit	WO	Wolof
CS	Czech	KN	Kannada	SD	Sindhi	XH	Xhosa
CY	Welsh	KS	Kashmiri	SG	Sango	YO	Yoruba
DA	Danish	KU	Kurdish	SH	Serbo-Croatian	ZU	Zulu
DZ	Bhutani	KY	Kirghiz	SI	Singhalese		•
EL	Greek	LA	Latin	SK	Slovak		

Using the Remote Controller

This section explains how to get the best use out of the supplied remote controller. In addition to being able to operate the DVD Player, it is also equipped to handle a number of the functions of an Onkyo receiver. The remote controller can also be se up to "learn" a number of remote commands to control the components of other manufacturers.

Using the remote controller to operate the DVD player

Before attempting to operate the DVD Player, press DVD to set the remote controller to operate the DVD Player. The following buttons can be used to operate the DVD Player. Refer to the pages in brackets [] for details on each function.



- (1) SEND/LEARN indicator [58]
 - Lights when the remote controller is sending a command to the DVD Player or other preprogrammed component, and when learning the command of another remote control unit.
- (2) ON/STNBY buttons [17] Press ON to turn the DVD Player on and STNBY to put the DVD Player in standby. (The STANDBY indicator lights up.)
 (3) V.OFF (TV ON/OFF) button [43]
- ③ V.OFF (TV ON/OFF) button [43] Press to turn off the video output circuitry for a more dedicated audio performance. This button can also be used to learn the commands to turn your TV or monitor on and off.
- (4) DVD button [58] Press to select the DVD mode. In this mode, the remote controller is set to control the DVD Player.
- (5) ANGLE button [32] Press repeatedly to select a camera angle when a DVD-Video is recorded with multiple angle playback.
- 6 AUDIO button [34] Press repeatedly to select an audio and/or language track recorded on a DVD-Audio/Video.
- (7) TOP MENU button [18]
- Press to select the top menu on a DVD-Audio/Video. This menu may be the same as the DVD menu.
- (8) ZOOM (CH) +/- buttons [30] When the Zoom function is turned on, use these buttons to enlarge and reduce the screen image.
- RETURN button [18]
- Press to go back to a previous menu screen. **ZOOM ON button [30]**
- Press to turn the Zoom function on and off. (1) **PROGRESSIVE button [42]**
- Press to select progressive scan from the DVD Player.

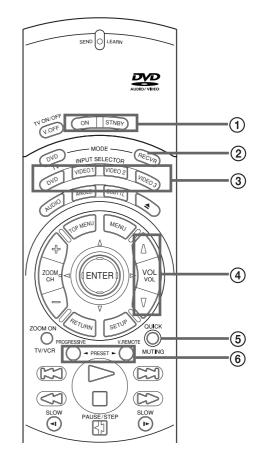
 (2) (skip back) button [26]
- (2) I (skip back) button [26] Press to return to previous titles, groups, chapters, or tracks.
 (3) ▶ (play) button [20]
- Press to start playback.
- (fast reverse) button [22]
- Press to scan rapidly backward through the contents on a disc.
- (15) (stop) button [21]
- Press to stop playback.
 (i) SLOW [button [22]
- Press to perform slow reverse playback of a DVD. (7) **DIMMER button [16]**
- Press repeatedly to change the brightness of the front panel display in four grades (including turning the front panel display off). The dimmer setting is restored to normal brightness whenever the DVD Player is turned off.
- (18 RANDOM button [29]
- Press to start random playback.
- (9) CLEAR button [25-30] Press to clear entered values and settings.
- STILL +/- buttons [22] When still pictures have been recorded on a DVD-Audio, use these buttons to select the picture.

(2) Number buttons [24, 28]

- Use to enter numeric values.
- 2 SUBTTL button [33] Press repeatedly to select one of the subtitle languages recorded on a DVD-Video.
- (2) ▲ button [21]
- Press to open and close the disc tray. (2) **MENU button [18]**
- Press to display the DVD menu. (25) $\land / \checkmark / \checkmark / \land$ and ENTER multi
- Ise to navigate menu screens and enter settings.
- SETUP button [18] Press to display the Setup screen menu.
- QUICK button [37]
- Press to display the Quick list of functions relevant to the current playback mode.
- V.REMOTE button [36] Press to display the Virtual Remote on the screen.
- (3) (skip forward) button [26]
- Press to advance through titles, groups, chapters, or tracks.
 (i) (fast forward) button [22]
- Press to scan rapidly forward through the contents on a disc.
 ③1 SLOW |► button [22]
- Press to perform slow forward playback of a DVD or Video CD.
 2 PAUSE/STEP Dutton [21]
- Press to playback. Pressing repeatedly causes the still video image to be advanced a single frame at a time.
- (3) DISPLAY/NAVI button [38] Press to display the on-screen navigational.
- 34 MEMORY button [28]
- Press to playback titles, chapters, or tracks in a specific order. **BEPEAT button [27]**
- Press to repeat playback
- ③ DNR button [31] Press repeatedly to select one of the digital noise reduction processes
- for a clearer video presentation.
- 37 A-B button [27] Press to repeat a specific section on a disc.
- (38) SEARCH button [25]
 - Press to find the specific section on a disc where you want to start playback.

Remote controller buttons that can be used to control your Onkyo receiver

Press **RECVR** to set the remote controller to operate an Onkyo receiver. The following buttons can be used to operate an Onkyo receiver. Refer to the manual supplied with your receiver for details on each function.



① ON/STNBY buttons

Press **ON** to turn the receiver on and **STNBY** to put the receiver in standby. Depending on the receiver, pressing **ON** may alternately turn the receiver on and put it in standby.

2 RECVR button

Press to select the Receiver mode. In this mode, the remote controller is set to control an Onkyo receiver. This button also can be used in DVD mode.

- ③ Input selector buttons
- Press to select the input. This button also can be used in DVD mode. ④ VOL ▲/▼ buttons

Press to adjust the volume. These buttons can also be programmed to adjust the volume of other components.

- **5** MUTING button
- Press to mute the audio output. **⑥ PRESET √ ▶ buttons**

Press to select the radio presets if the receiver has radio features.

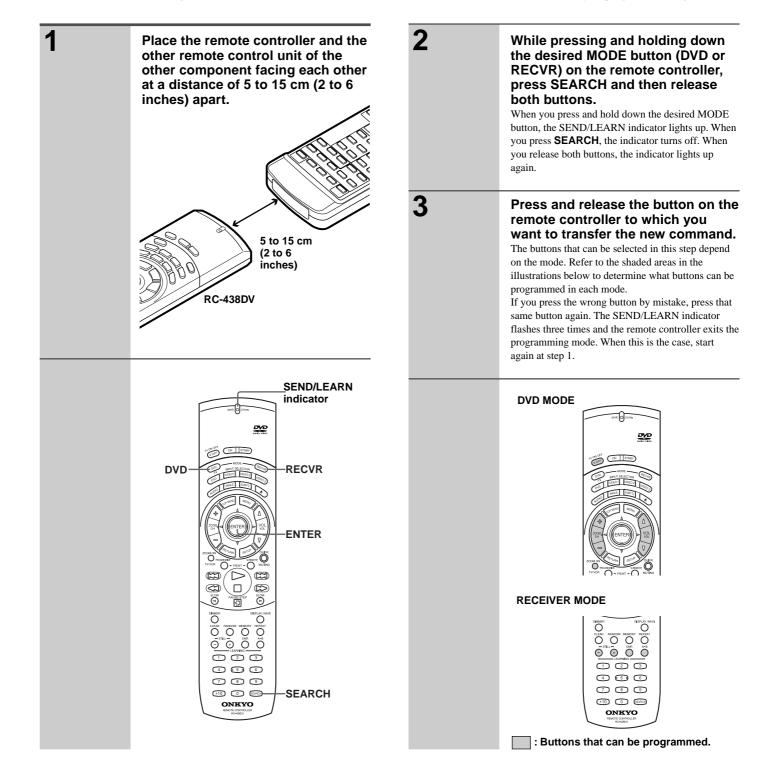
Programming the Commands of Other Remote Control Units into the Remote Controller

This remote controller features a learning function that allows you to program the remote codes of other remote control units for more singular control of your home entertainment system. A number of commands can be programmed for operation for when the remote controller is in DVD mode and when it is in Receiver mode. Please follow the procedure in this section to program your remote controller to your preferences.

Programming procedure

The first step in the procedure is to determine whether the new command is to be learned in the DVD mode or in the Receiver mode. Generally speaking, this should be decided by the command being learned. After deciding which mode is to be used, you will then transfer the individual commands from the other remote control unit to the RC-438DV remote controller one at a time. Each command is then programmed to one of the available buttons on the RC-438DV remote controller.

Even after the commands have been programmed, keep the other remote control unit in a safe place in the case that the programmed commands should be lost (e.g., when the batteries run down). If the commands are lost, it will then be necessary to program them again.

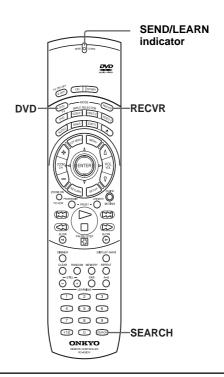


4	Press and hold down the button on the other remote control unit that corresponds to the command you want to program until the SEND/ LEARN indicator flashes twice to indicate that the command has been successfully programmed. After flashing twice, the SEND/LEARN indicator lights up again.		
5	Repeat steps 3 and 4 to program other commands within the same mode. Repeat step 2 to 4 to program commands to the other mode.		
6	Press the MODE button (DVD or RECVR) that you pressed in step 2 to complete the programming.		
7	Use the remote controller to perform the newly learned command to confirm that it was learned correctly.		

Notes

- Some buttons have already been programmed to control functions of an Onkyo receiver. Therefore, it is recommended to program additional functions of the receiver that are not already programmed in the remote controller.
- If no buttons are pressed for more than 30 seconds during the programming, or if you perform an invalid operation, the SEND/LEARN indicator flashes three times quickly and the remote controller exits the programming mode. Resume programming from step 2.
- If you perform an invalid operation during programming, the SEND/ LEARN indicator flashes three times quickly and the remote controller exits the programming mode. Resume from Step 2.
- When you want to program a command to a button to which you have already programmed a command, simply follow the same procedure and programming for that button will be overwritten.
- The remote controller uses infrared rays to send its commands, as do most other remote control units. Though most remote control units can be memorized by the remote controller, be aware that some remote control units use a system that is quite different from the remote controller and therefore may not be able to be programmed.
- Some remote control units have a single button that performs multiple functions (for example, the function may change each time the button is pressed). If this is the case, each function must be programmed to a separate button on the remote controller.
- Once you have programmed the commands from the other remote control unit, refer to the instructions supplied with the other component to operate.
- Make sure that both the remote controller and the other remote control unit have new batteries. If either of them has batteries that are low, you may not be able to program the commands of the other remote control unit properly into the remote controller.
- After programming another function to the ZOOM ON button or ZOOM
 +/- buttons, it is no longer possible to perform the Zoom function. To use the Zoom function again, it is necessary to erase the commands programmed to those buttons. For details, see page 60.
- Removing the batteries from the remote controller for at least 10 minutes erases all of the commands that have been programmed in the remote controller.

Programming the Commands of Other Remote Control Units into the Remote Controller



Erasing the programmed command from one button

You can only erase memorized commands and not preset ones.

1	Press and hold down the desired MODE button for the command, press the SEARCH button, and then release both buttons. When you release the buttons, the SEND/LEARN indicator lights.
2	Press and release the button for the command you wish to erase. When you press the button, the SEND/LEARN indicator turns off. When you release the button, the lamp lights again.
3	Press and release the same button again. The SEND/LEARN lamp flashes twice. The memorized command is erased.

Note

If no button is pressed for more than 30 seconds during the programming, the SEND/LEARN indicator flashes three times quickly, and the remote controller exits the programming mode. Resume from Step 1.

60

Erasing all the commands programmed under a MODE button

1	Press and hold down the desired MODE button, press the SEARCH button twice, and then release both buttons. When you release the buttons, the SEND/LEARN indicator flashes twice slowly and then lights again.
2	Press and release the same MODE button again. When you release the button, the SEND/LEARN indicator flashes twice slowly. This erases all the commands memorized to the MODE button.

Notes

- If no button is pressed for more than 30 seconds, the SEND/LEARN indicator flashes three times quickly and the remote controller exits the programming mode. Resume Step 1.
- If you perform an invalid operation during programming, the SEND/ LEARN indicator flashes three times quickly and the remote controller exits the programming mode. Resume from Step 1.
- If many commands have been programmed to the MODE button, then the SEND/LEARN indicator may remain lit for some time during Step 2. This is not a malfunction.

Troubleshooting

Check the following guide for the possible cause of a problem before contacting service. Refer also to the respective instruction manuals of the connected components and TV.

\searrow	Symptoms	Causes	Remedies	Pages
	The DVD Player doesn't switch on.	 The power cord is disconnected. The main power is set to OFF. There is external noise in the computer circuits of the DVD Player. The AC fuse is blown. 	 Check the connection of the power cord. Turn on the main power. Switch off the main power, then switch it on again. If not recovered, disconnect the power cord, then connect it again. Contact your nearest Onkyo service center. 	17 17 17 -
	The DVD Player doesn't start playback.	 No disc is inserted. The region number of the disc does not match that of the DVD Player. An unplayable disc is inserted. The disc is placed upside down. The disc is not placed within the disc tray guide. The disc is dirty. The parental lock function is activated. 	 Insert a disc. (Check that "DVD," "VCD," or "CD" is lit in the DVD Player's display). See "1. Regional Restriction Codes (Region Number)" on page 4. Check the playable discs. Place the disc with the playback side down. Place the disc within the proper guide on the disc tray. Eject the disc and clean it. Deactivate the parental lock function or change the parental lock level. 	20 4 6 20 20 6 52
lyer	Brightness is unstable or noise is visible on the playback picture.	Copy protection is activated.	• Connect the DVD Player directly to the TV. Avoid connecting the DVD Player to the TV through a VCR.	10
DVD Player	The playback picture is occasionally distorted.	 The disc is dirty. It is in fast forward or fast reverse playback.	 Eject the disc and clean it. Sometimes a small amount of picture distortion may appear. This is not a malfunction. 	6 -
	Playback doesn't follow the course of the disc's programs.	• The DVD Player is in repeat playback mode, memory playback mode, or random playback mode, etc.	Resume normal playback.	27-29
	The picture from the DVD Player doesn't appear on the TV screen.	 The TV is not set to receive the output signals from the DVD Player. The DVD Player is not properly connected. The video output circuitry has been switched off. 	 Set the TV to the DVD Player's input. Check the connections to the DVD Player. Turn the video circuitry on. 	10 10 43
	No sound or inaccurate sound is reproduced.	 A wrong sound signal conversion method (Audio Out Select) is selected. The TV is not set to receive the output signals from the DVD Player. The DVD Player is not properly connected. 	 Check the current sound signal conversion method, and select the right setting for "Audio Out Select". Also refer to "Output Sound Conversion Table" on page 35. Set the TV to the DVD Player's input. Check the connections to the DVD Player. 	35, 48
	The buttons on the remote controller and DVD Player do not operate.	 Power supply fluctuations or other abnormalities such as static electricity may interrupt correct operation. 	 Switch off the main power, then switch it on again. If not recovered, disconnect the power cord, then connect it again. 	17
Remote Controller	The buttons on the DVD Player operate but the buttons on the remote controller do not operate.	 No batteries are inserted in the remote controller. The batteries are worn out. The remote controller is not pointed at the remote sensor of the DVD Player. The remote controller is too far from the DVD Player. 	 Insert new batteries. Replace with new batteries. Point the remote controller at the remote sensor of the DVD Player. Operate the remote controller within 5 m (16 feet). 	9 9 9 9
Remote	Learned functions of the remote controller do not work.	 The remote controller is not aimed at the other component. The mode selection is incorrect.	 Aim the remote controller at the component you wish to operate. Check that the mode is correct for the commend you are attempting. 	58 58
		• Learning was not successful.	command you are attempting.Reprogram the command into the remote controller.	58

Because the unit contains a microcomputer to provide advanced functions, it may malfunction due to external noise or static electricity. If this happens, press the POWER switch on the unit and then press it again after about five seconds.

Specifications

DVD Player

Power supply	AC 120 V, 60 Hz	AC 120 V, 60 Hz		
Power consumption	45 W	45 W		
Weight	11.0 kg, 24.3 lbs			
External dimensions	435 x 122 x 374 mm (W/H/D), 17 ¹ / ₈ " x 4 ¹³ / ₁₆ " x 14 ³ / ₄ " (W/H/D)		
Signal system	NTSC/PAL*	NTSC/PAL*		
Laser	Semiconductor laser, v	Semiconductor laser, wavelength 650/780 nm		
Frequency range (digital audio)	DVD linear sound:	48 kHz sampling 4 Hz to 22 kHz		
		96 kHz sampling 4 Hz to 44 kHz		
		192 kHz sampling 4 Hz to 96 kHz		
Signal-to-noise ratio (digital audio)	More than 112 dB			
Audio dynamic range (digital audio)	More than 106 dB			
Harmonic distortion (digital audio)	Less than 0.002 %			
Wow and flutter	Below measurable lev	Below measurable level (less than ±0.001 % (W.PEAK))		
Operating conditions	Temperature: 5°C to 35	°C (41°F to 95°F), Operation status: Horizontal		

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* Not applicable for USA and Canadian models

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Outputs

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Video output	1.0 V (p-p), 75 Ω , negative sync., pin jack $\times 2$
S-video output	 (Y) 1.0 V (p-p), 75 Ω, negative sync., Mini DIN 4-pin × 2 (C) 0.286 V (p-p), 75 Ω
Component video output	 (Y) 1.0 V (p-p), 75 Ω, negative sync., pin jack × 2 (P_B)/(P_R) 0.7 V (p-p), 75 Ω, pin jack × 4
Audio output (digital output Optical)	Optical connecter $\times 2$
Audio output (digital output Coaxial)	0.5 V (p-p), 75 Ω, pin jack × 2
Audio output (2-Channel Audio)	2.0 V (rms), 320 Ω , pin jack (L, R) \times 2
Audio output (5.1-Channel Surround)	2.0 V (rms), 320 Ω , pin jack × 6 2.0 V (rms), 320 Ω , DB25 × 1

Supplied Accessories

1
1
2
1
1
1
-

Specifications and features are subject to change without notice.

4			Å

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