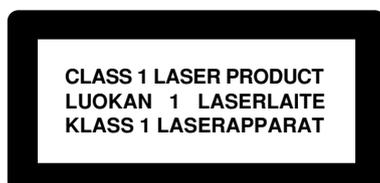


marantz®

Model DV9500 User Guide

Super Audio CD/DVD Player



CONGRATULATIONS ON YOUR PURCHASE OF THIS FINE MARANTZ PRODUCT.

MARANTZ is on the leading edge of Super Audio CD, DVD research for consumer products and this unit incorporates the latest technological developments.

We are sure you will be fully satisfied with the Super Audio CD, DVD player.

Thank you for your support.

Please read through these operating instructions so you will know how to operate your model properly. After you have finished reading the instructions, put them away in a safe place for future reference.

- This player is not suitable for commercial use.

Copy protection

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

This product incorporates copyright protection technology that is protected by methods 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.

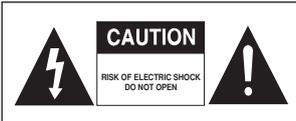
Reverse engineering or disassembly is prohibited.

Important Safety Instructions

- 1) Read these instructions.
- 2) Keep these instructions.
- 3) Heed all warnings.
- 4) Follow all instructions.
- 5) Do not use this apparatus near water.
- 6) Clean only with dry cloth.
- 7) Do not block any ventilation openings, Install in accordance with the manufacturer's instructions.
- 8) Do not install near any heat sources such as radiators, heat registers, stoves or other apparatus (including amplifiers) that produce heat.
- 9) Do not defeat the safety purpose of the polarized or grounding-type plug. A polarized plug has two blades with one wider than the other. A grounding type plug has two blades and a third grounding prong. The wide blade or the third prong are provided for your safety. If the provided plug does not fit into your outlet, consult an electrician for replacement of the obsolete outlet.
- 10) Protect the power cord from being walked on or pinched particularly at plugs, convenience receptacles, and the point where they exit from the apparatus.
- 11) Only use attachments/accessories specified by the manufacturer.
- 12) Use only with cart, stand, tripod, bracket, or table specified by the manufacturer, or sold with the apparatus. When a cart used, caution when moving the cart/apparatus combination to avoid injury from tip-over.
- 13) Unplug this apparatus during lightning storms or when unused for long periods of time.
- 14) Refer all servicing to qualified service personnel. Servicing is required when the apparatus has been damaged in any way, such as power-supply cord or plug is damaged, liquid has been spilled or objects have fallen into the apparatus, the apparatus has been exposed to rain or moisture, does not operate normally, or has been dropped.
- 15) This symbol  indicates off-on position de-energizes only the "hot side" of the mains.



Precautions



TO REDUCE THE RISK OF ELECTRIC SHOCK, DO NOT REMOVE THE COVER (OR BACK).

NO USER-SERVICEABLE

PARTS ARE INSIDE. REFER SERVICING TO QUALIFIED SERVICE PERSONNEL.



This symbol indicates “dangerous voltage” inside the product that presents a risk of electric shock or personal injury.



This symbol indicates important instructions accompanying the product.

Do not install this equipment in a confined space such as a bookcase or similar unit.

Make a space of about 0.1m around the unit.

WARNING: To prevent damage which may result in fire or electric shock hazard, do not expose this appliance to rain or moisture.

CAUTION: DVD PLAYERS USE AN INVISIBLE LASER BEAM WHICH CAN CAUSE HAZARDOUS RADIATION EXPOSURE IF DIRECTED. BE SURE TO OPERATE PLAYER CORRECTLY AS INSTRUCTED.

CAUTIONS

Caution: To prevent electric shock, match wide blade of plug to wide slot, fully insert.

Attention: Pour éviter les chocs électriques, introduire la lame la plus large de la fiche dans la borne correspondante de la prise et pousser jusqu'au fond.

This product satisfies FCC regulations when shielded cables and connectors are used to connect the unit to other equipment. To prevent electromagnetic interference with electric appliances, such as radios and televisions, use shielded cables and connectors for connections.

NOTE:

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

FCC NOTE (for U. S. A):

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 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 this 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.

This class B digital apparatus meets all requirements of the Canadian Interference —

Causing Equipment Regulations.

CLASS 1	LASER PRODUCT
KLASSE 1	LASER PRODUKT
LUOKAN 1	LASER LAITE
KLASS 1	LASER APPARAT
PRODUCTO	LÁSER CLASE 1

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. DO NOT OPEN COVER AND DO NOT REPAIR YOURSELF. REFER SERVICING TO QUALIFIED PERSONNEL.

Note:

- This unit can be used only where the power supply is AC 120V, 60Hz. It cannot be used elsewhere.
- This DVD player is designed and manufactured to respond to the Region Management Information. If the Region number of a DVD disc does not correspond to the Region number of this DVD player, the DVD player cannot play the disc.
- This device is protected by U. S. patent numbers 4,631,603, 4,577,216, 4,819,098 and 4,907,093 and other intellectual property rights. The use of Macrovision's copy protection technology in the device must be authorized by Macrovision and is intended for home and other limited pay-per-view uses only, unless otherwise authorized in writing by Macrovision. Reverse engineering or disassembly is prohibited.

Handling Cautions

- Before connecting other components to this player, be sure to turn them all off.
- Do not move the player while a disc is being played, or the disc may be scratched or broken, and the player's internal parts may be damaged.
- Do not put a flower vase filled with water or any small metal objects on the player.
- Be careful not to put your hand into the disc tray.
- Do not place anything other than the disc in the disc tray.
- Exterior interference such as lightning and static electricity can affect normal operation of this player. If this occurs, turn the player off and on again with the POWER button. The player will operate normally.
- Be sure to remove the disc and turn off the player after use.
- Disconnect the AC power cord from the AC outlet when you don't intend to use the player for long periods of time.
- Clean the disc by wiping in a straight line from the inside to the outside of the disc.
- This product should not be placed in a built-in installation such as a bookcase or rack unless proper ventilation is provided or the manufacturer's instructions have been adhered to.
- To prevent fire or shock hazard, do not place objects filled with liquids, such as vases, on the apparatus.
- Do not insert anything into the equipment through the ventilation holes.
- Do not handle the mains lead with wet hands.
- Do not cover the ventilation with any items such as tablecloths, newspapers, curtains, etc.
- No naked flame sources, such as lighted candles, should be placed on the equipment.
- Make a space of about 0.1 meter around the unit.

Disc Storage

Be careful not to harm the disc because the data on these discs is highly vulnerable to the environment.

- Do not keep under direct sunlight.
- Keep in a cool ventilated area.
- Store vertically.
- Keep in a clean protection jacket.

Maintenance of Cabinet

For safety reasons, be sure to disconnect the AC power cord from the AC outlet.

- Do not use benzene, thinner, or other solvents for cleaning.
- Wipe the cabinet with a soft cloth.

Operating Environment

Operating environment temperature and humidity:

+5°C to +35°C (+41°F to +95°F); less than 85%RH (cooling vents not blocked)

Do not install in the following locations

- Location exposed to direct sunlight or strong artificial light
- Location exposed to high humidity, or poorly ventilated location

This product is for general household purposes. Any failure due to use for other than household purposes (such as long-term use for business purposes in a restaurant or use in a car or ship) and which requires repair will be charged for even during the warranty period.

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Features

An HDCP-compatible HDMI*¹ terminal is provided to ensure the very highest picture and digital sound quality by fully digital transmission.

This unit is equipped with an HDCP-compatible digital image output terminal (HDMI) to provide copyright protection.

Direct digital transmission without analog conversion of DVD image data makes it possible to enjoy real-life images without any image deterioration resulting from AD/DA conversion. The unit has also been designed to make it possible to handle the transmission of both digital video and digital audio with a single connector.

High quality 14-bit/216MHz Video D/A converter*²

The unit uses a Video D/A converter that performs D/A conversion of all video signals in 14-bits and can perform 8X over-sampling to let you enjoy beautiful video possible with DVD. Furthermore, NSV technology suppresses noise during DA conversion.

dts 96kHz/24 bit compatibility

It is equipped with a dts 96/24 decoder that lets you enjoy dts audio with sound quality as high as 96kHz/24bit. This product does not support dts 88.2kHz/24bit.

Dolby Headphone compatibility

It is the world's first single DVD Player equipped with a Dolby Head Phone.

The Head Phone can reproduce the world of Dolby Surround with realistic ambience like that you would experience using a 5.1 ch system (Excluding Super Audio CD) (see page 13).

Lip Sync capability

When it is connected to a plasma display or projector, it corrects the time lag between the video and audio created by the video circuit processing time in units of 10msec up to a maximum of 200msec. It precisely synchronizes the actors' voices and the movements of their mouths (see page 31).

Equipped with a Super Audio CD Distance compensation function

It can perform Distance adjustment of Super Audio CD that was formerly impossible by converting it to PCM (see page 44).

Superlative audio performance with Super Audio CD, DVD-Audio, Dolby*³ Digital and DTS*⁴ software

Logos:     

The DV9500 delivers breathtaking sound quality with Super Audio CD, DVD-Audio, Dolby Digital and DTS discs.

Capture

You can store a photograph of your children as background (see page 29).

SRS TruSurround*⁵

Logo: 

When used with stereo sources, SRS TruSurround creates a realistic surround-sound effect using just two speakers (see page 44).

MP3 compatibility

This player is compatible with CD-R, CD-RW and CD-ROM discs that contain MP3 audio tracks (see pages 9, 28).

JPEG compatibility

This player is compatible with CD-R, CD-RW and CD-ROM discs that contain JPEG data (see pages 9, 29).

*¹ HDMI, the HDMI logo and High-Definition Multimedia Interface are trademarks or registered trademarks of HDMI Licensing LLC.

*² "NSV" is a registered trademark of Analog Device Co. Ltd.

*³ Manufactured under license from Dolby Laboratories. "Dolby" and the double-D symbol are trademarks of Dolby Laboratories. Confidential unpublished works. © 1992-1997 Dolby Laboratories. All rights reserved.

*⁴ "DTS" and "DTS Digital Surround" are registered trademarks of Digital Theater Systems, Inc.

*5 TruSurround, SRS and the  symbol are trademarks of SRS Labs, Inc. TruSurround technology is incorporated under license from SRS Labs, Inc.

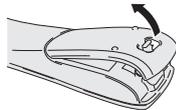
What's in the box

Thank you for buying this MARANTZ product. Please confirm that the following accessories are in the box when you open it.

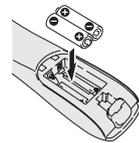
- Remote control
- AA/R6P dry cell batteries x2
- Audio/Video cable (yellow/red/white)
- System control cable
- Power cable
- User Guide (this manual)
- Warranty card

Putting the batteries in the remote control

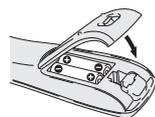
1 Open the battery compartment cover on the back of the remote control.



2 Insert two AA/R6P batteries into the battery compartment following the indications (+, -) inside the compartment.



3 Close the cover.



Note

Incorrect use of batteries can result in hazards such as leakage and bursting. Please observe the following:

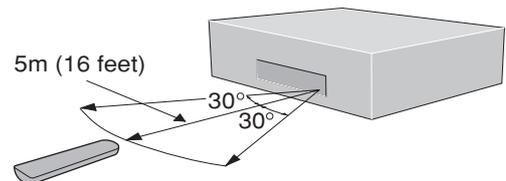
- Don't mix new and old batteries together.
- Don't use different kinds of battery together—although they may look similar, different batteries may have different voltages.
- Make sure that the plus and minus ends of each battery match the indications in the battery compartment.
- Remove batteries from equipment that isn't going to be used for a month or more.

When disposing of used batteries, please comply with governmental regulations or environmental bylaws that apply in your country or area.

Using the remote control

Keep in mind the following when using the remote control:

- Make sure that there are no obstacles between the remote control and the remote sensor on the unit.
- Use within the operating range and angle, as shown.



- Remote operation may become unreliable if strong sunlight or fluorescent light is shining on the unit's remote sensor.
- Remote controllers for different devices can interfere with each other. Avoid using remotes for other equipment located close to this unit.
- Replace the batteries when you notice a fall off in the operating range of the remote control.

Note

When using this player independently, set a **REMOTE CONTROL** switch on the rear panel to **INT. (INTERNAL)** (see page 10).

Discs compatible with this player

Any disc that displays one of the following logos should play in this player. Other formats, including DVD-RAM, DVD-ROM, DVD+RW, DVD+R, CD-ROM (except those that contain MP3/JPEG files) and Photo CD will not play.

DVD-Video compatibility:

- Logos: 
- Single sided or double sided discs
- Single layer or dual layer discs
- Dolby Digital, DTS, MPEG or Linear PCM digital audio
- MPEG-2 digital video

Discs are generally divided into one or more titles. Titles may be further subdivided into chapters.

DVD-Audio compatibility:

- Logos: 
- Single sided discs
- Single layer or dual layer discs
- Linear or packed PCM digital audio
- Some discs may contain MPEG-2 video, and Dolby Digital, DTS or MPEG digital audio

Discs are generally divided into one or more groups. Groups may be further subdivided into tracks.

DVD-R compatibility:

This unit can play DVD-R discs. Please note the following points when using these discs:

- Logo: 
- This unit can play DVD-R discs recorded as DVD-Video format.

DVD-RW compatibility:

This unit can play DVD-RW discs. Please note the following points when using these discs:

- Logo: 
- This unit can play DVD-RW discs recorded as DVD-Video format.
- DVD-RW discs that were recorded with copy-once only permission cannot be played.

Audio CD compatibility:

- Logos: 
- 12cm (5in.) or 8cm (3in.) discs
- Linear PCM digital audio
- Audio CD, CD-R* and CD-RW* formats

CDs are divided into tracks.

*This unit can play CD-R and CD-RW discs recorded in Audio CD or Video CD format, or with MP3 audio files.

*Some copy-controlled CDs may not conform to official CD standards. They are special discs and may not play on the DV9500.

Video CD compatibility:

- Logo: 
- 12cm (5in.) or 8cm (3in.) discs
- MPEG-1 digital audio
- MPEG-1 digital video

Video CDs are divided into tracks.

Super VCD compatibility:

- Logo: 
- 12cm (5in.) or 8cm (3in.) discs
- MPEG-1 digital audio
- MPEG-2 digital video

Super VCDs are divided into tracks.

Super Audio CD compatibility:

- Logo: 
- Single layer, dual layer or Hybrid layer
- 12cm (5in.) or 8cm (3in.) discs
- Digital audio (DSD)

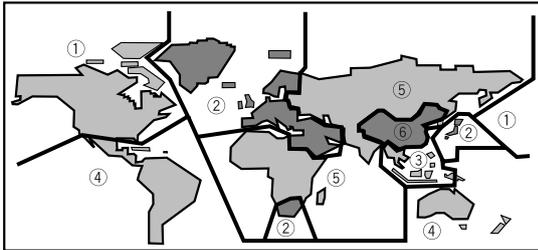
Super Audio CDs are divided into tracks.

Fuji Color CD compatibility: (see page 29)

- Logo: 
- 12cm (5in.) disc
- JPEG

Depending on the data volume, read-in may be time-consuming.

DVD-Video regions



All DVD-Video discs carry a region mark on the case somewhere that indicates which region(s) of the world the disc is compatible with. Your DVD player also has a region mark, which you can find on the rear panel. Discs from incompatible regions will not play in this player. Discs marked **ALL** will play in any player.

MP3 compatibility information

- The CD-ROM must be ISO 9660 compatible.
- Files should be MPEG1 Audio Layer 3 format, 44.1 kHz or 48kHz. Incompatible files will not play.
- This player is not compatible with MP3 PRO, ID3-Tag and packet write.
- When using a variable bit rate, files may be played back at speeds between 32Kbps and 320Kbps.
- This player cannot play DVD-R/RW discs with recorded MP3 music data.
- VBR files may not show play times correctly.
- This player only plays tracks that are named with the file extension “.mp3” or “.MP3”.
- This player is not compatible with multi-session discs. If you try and play a multi-session disc, only the first session will be played.
- Use CD-R or CD-RW media for recording your MP3 files. The disc must be finalized in order to play.
- Audio encoded at 128Kbps should sound close to regular audio CD quality. Although this player will play lower bit-rate MP3 tracks, the sound quality becomes noticeably worse at lower bit-rates.
- Only the first 8 characters of folder and track names (excluding the “.mp3” extension) are displayed.
- This player can recognize about total 600 files/folder.

JPEG compatibility information

- While this player is designed to be able to handle image data recorded in JPEG format, no assurances are given that the player will be able to display image data recorded in all JPEG formats.
- Display is limited to the display of files up to 30MB in size.
- This player cannot display progressive JPEG images.
- When writing JPEG files to CD-R/RW discs, always be sure to set the writing format to ISO 9660 Level 1.
- Always be sure to specify a file extension of “.JPG” or “.JPE” for JPEG files. The file will not be able to be displayed if a file extension other than “.JPG” or “.JPE” is specified or if no file extension is assigned to the file. (Note that this means that JPEG files created on a Macintosh will not be able to be displayed as is.)

Caution!

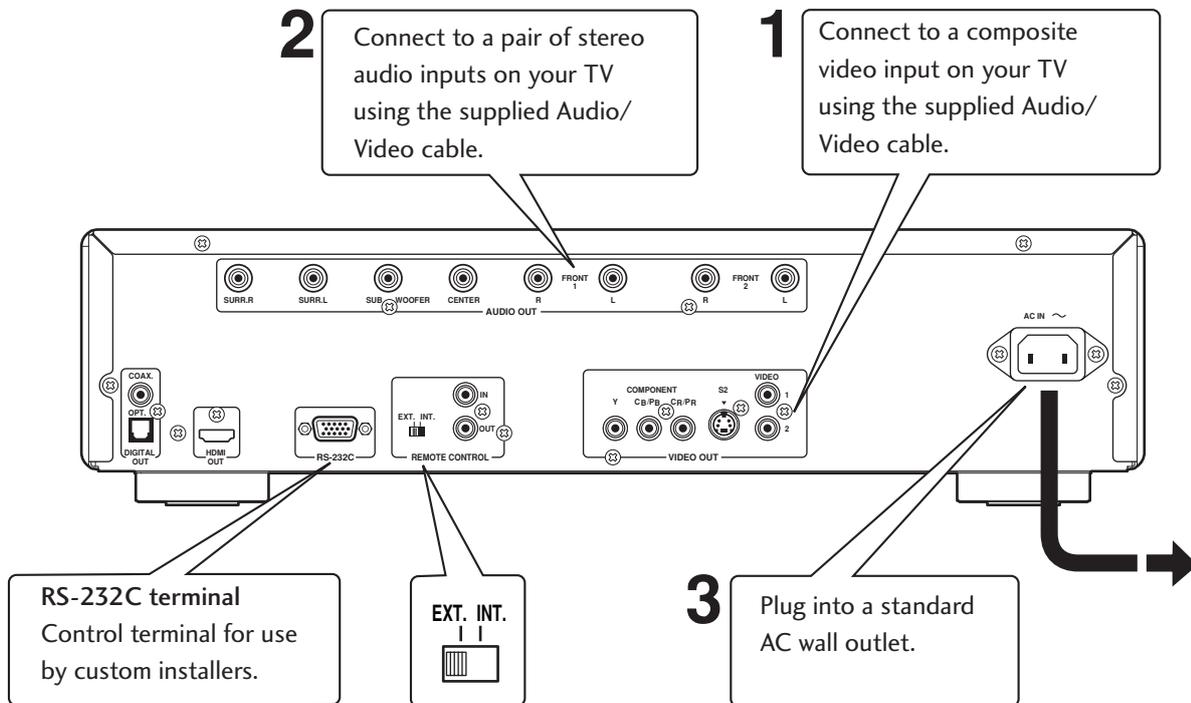
- DVD-R/RW and CD-R/RW discs recorded using a personal computer or a DVD or CD recorder may not play if the disc is damaged or dirty, or if there is dirt or condensation on the player's lens.
- If you record a disc using a personal computer, even if it is recorded in a compatible format, there are cases in which it may not play because of the settings of the application software used to create the disc. (Check with the software publisher for more detailed information.)
- Unfinalized DVD-R/RW discs cannot be played.
- Unfinalized CD-R/RW discs cannot be played.
- For more information on using DVD-R/RW and CD-R/RW discs, see “Handling discs” on **page 55**.
- Never try to replay anything other than a music CD (CDA format) or a CD-R/RW on which MP3 and/or JPEG files have been stored. Depending on the type of file, there may be times when doing so will result in problems or erroneous operation.
- There may be times when it is impossible to replay a CD-R/RW disc because of the characteristics of the disc being used or because of dirt or scratches on the disc.

Easy setup

This easy setup is the minimum set of connections you need to start watching DVD-Video discs. Both sound and picture are fed directly to your TV using the supplied Audio/Video cables. For other possible connections, see pages 11-12.

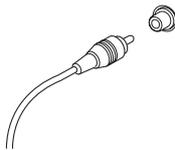
Important

Before making or changing any rear panel connections, make sure that all components are switched off and unplugged from the wall outlet.



Connecting audio/video cables

Be sure to insert each plug fully for the best connection. The plugs and jacks are color-coded to make connection easier.



Connecting system control cables

By connecting this DVD player to another Marantz audio component using a supplied System control cable, you can remotely operate the components as a single system.

- When connecting to component with a remote sensor, be sure to connect the **REMOTE CONTROL IN** jack of this DVD player to the **REMOTE CONTROL OUT** jack of the component with the remote sensor.
- When connecting to component which is not equipped with a remote sensor, be sure to connect the component to the **REMOTE CONTROL OUT** jack of this DVD player.

Note

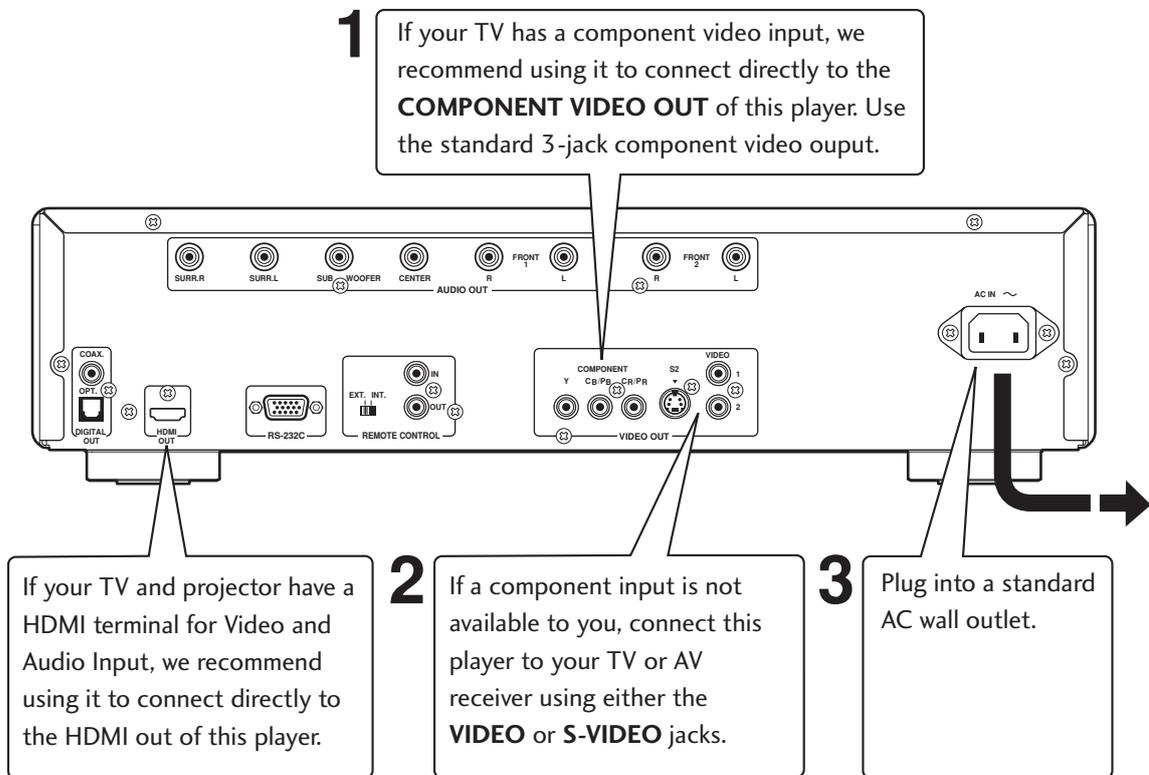
- When connecting to a standard TV, select **4:3 L - Box** or **4:3 Pan Scan** in the TV Aspect setting (see page 45).
- Connect the video output of the player directly to your TV. Because the player is designed to support an Analog Protection System copy card, there are cases when proper playback will be not be possible if the player is connected to the TV through a VCR and images are recorded and played on the VCR.
- The player's video output and S2 output will not be progressive.
- **Remote switch**
When using this DVD player independently, set this switch to **INT. (INTERNAL)**. When using this DVD player in a system with a Marantz receiver equipped with a remote sensor, set the switch to **EXT. (EXTERNAL)**.

Home theater video connections

This player outputs video in a number of different ways. Choose the one most suitable for your system using the guide below.

Important

Before making or changing any rear panel connections, make sure that all components are switched off and unplugged from the wall outlet.



Connecting S-Video cables

S-Video cables will only plug in one way, so make sure the plug is correctly lined up with the jack before inserting. Be sure to fully insert for a good connection.

S-Video or composite video?

S-Video should give a better picture, so if you have an S-Video input, use it. S-Video cables are available from any good audio/visual dealer.

Connecting HDMI cables

With an HDMI cable, both uncompressed video data and digital audio data (e.g., LPCM or bit stream data such as Dolby Digital, DTS, or MPEG data) can be transmitted with just a single connector.

By transmitting DVD image data directly as digital data without it being first converted into analog format, it becomes possible to provide the very finest in image quality (see pages 32, 52).

Note

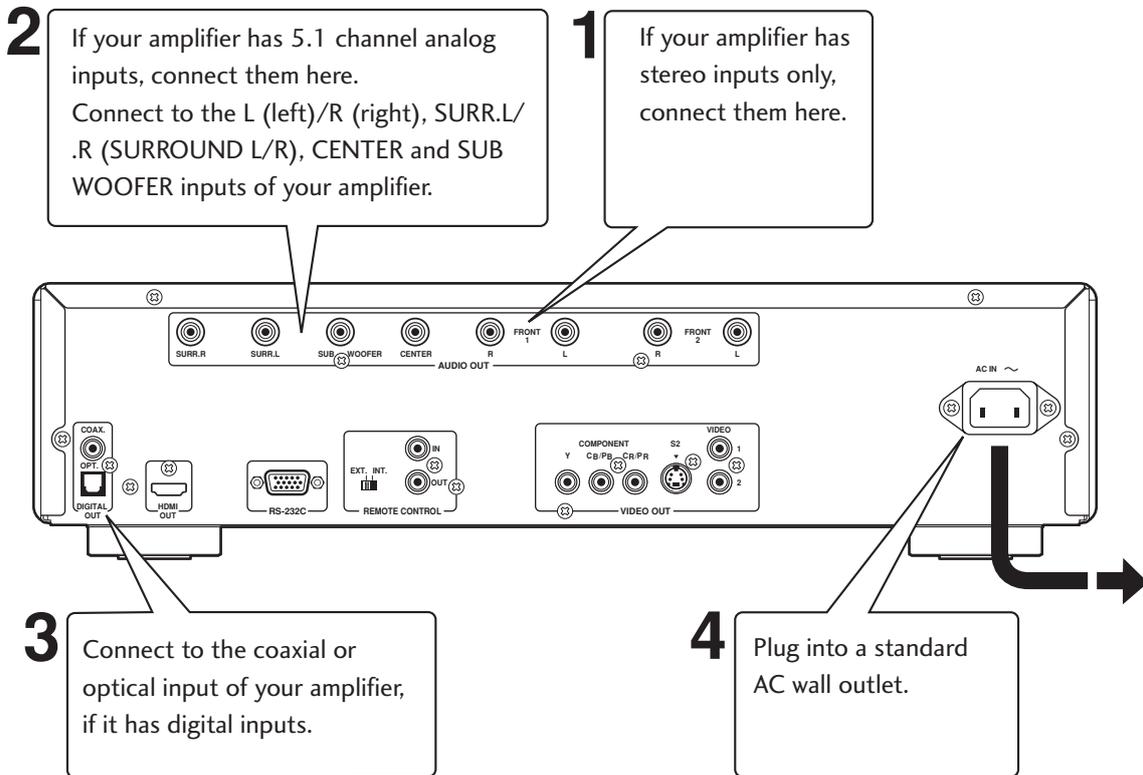
- The HDMI output of this unit can be connected to a DVI jack on a TV or other device using a conversion adapter. In this case, it is necessary to use a TV or display with an HDCP-compatible DVI input. (see page 52)
- There may be no image output if connected to a TV or display that is not compatible with the above format.
- Refer to the instruction manual of the TV or display to be connected to this unit for detailed information regarding the HDMI terminal.
- When connecting a progressive input TV with the component output of the player, select **Progressive** in the Components Out setting (see page 47).

Home theater audio connections

This player outputs multi-channel audio in both analog and digital form. Check the manual for your amplifier/receiver to see what equipment it is compatible with (especially which digital formats—Dolby Digital, DTS, etc.—it can decode).

Important

Before making or changing any rear panel connections, make sure that all components are switched off and unplugged from the wall outlet.

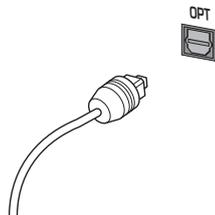


Connecting analog audio cables

Be sure to fully insert each plug for the best connection. The plugs and jacks are color-coded to make connection easier.

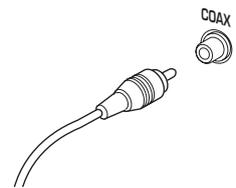
Connecting optical cables

Optical interconnects only plug in one way, so make sure the plug is correctly lined up with the jack before inserting. When inserting the plug, the protective shutter will open and you should hear it click into position when fully inserted. Be careful that you do not force the plug, because this could result in damage to the protective shutter, the cable, or the unit itself.



Connecting coaxial cables

Use an interconnect with a pin-type (also called RCA or phono) plug on each end to connect up digital coaxial-type jacks. Make sure that the plug is pushed fully home.

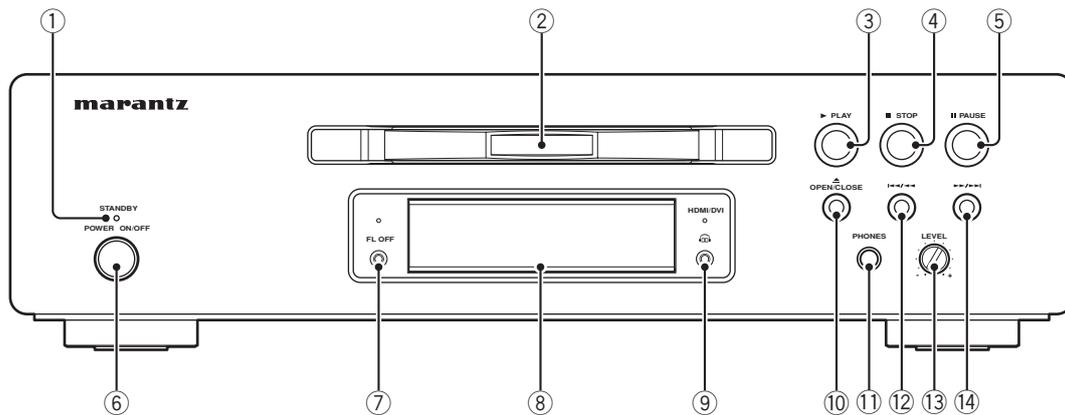


Note

If you listen to multichannel DVD-Audio through one of the digital outputs, it will be downmixed to stereo. Also, high sampling rate DVD-Audio (192kHz or 176.4kHz) will be downsampled to 96kHz, 88.2kHz, 48kHz or 44.1kHz, depending on the disc (see [page 38](#)). Multi channel and high sampling rate DVD-Audio is only available through the analog outputs.

All DVD-Audio and all Super Audio CD audio is output only through the analog outputs (see [page 39](#)).

Front panel



1 STANDBY indicator

- Lights when the unit is in standby.

2 Disc tray

- Place the disc here.

3 ► (PLAY)

- Begin the disc play.

4 ■ (STOP)

- Stops the disc play.

5 || (PAUSE)

- Pausing the disc play.

6 POWER ON/OFF

- Press to turn the power on, and press it again to turn the power off.

7 FL OFF

- Lights when the display is switched off using the **FL OFF** button and **DIMMER** button on the remote control.

8 Display – page 14

- Operation indications are displayed here.

9 HDMI/DVI indicator

- When the connected device is HDMI compatible, the light flashes green. When it is DVI compatible, the light flashes red.

10 ▲ (OPEN/CLOSE)

- Press to open and close the disc tray.

11 Head Phone Jack

- Connect the head phone.

12 ◀◀/◀◀

- Press to skip reverse title/group, chapter, or track. You can also press and hold this button to scan the above.

13 Head Phone Level

- Adjust the output of the head phone.
- When using the Head Phone, Analog audio output and HDMI audio output cannot be output.

Dolby Head Phone Mode

- Each time it is pushed, the operation changes as shown below.

DH 1: Reproduces a room that is small with little reverberation.

DH 2: Reproduces a room with more reverberation than DH1.

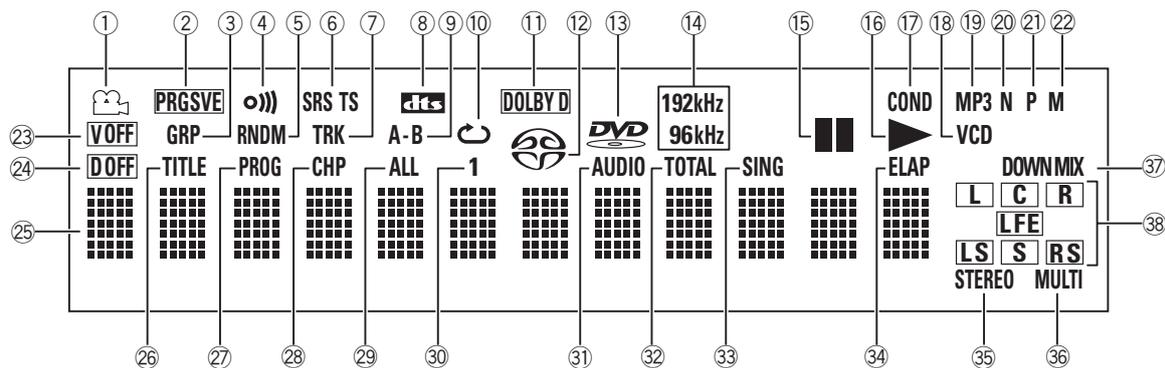
DH 3: Reproduces a larger room than DH1.

Bypass: It outputs normal Audio Sound without Dolby effect.

14 ▶▶/▶▶

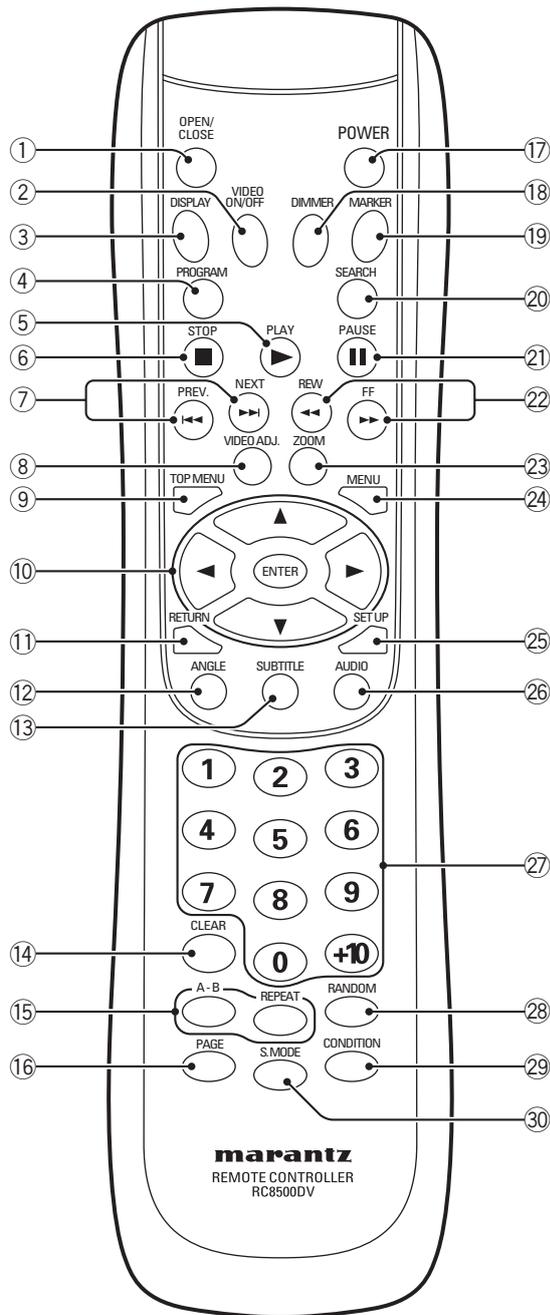
- Press to skip forward title/group, chapter, or track. You can also press and hold this button to scan the above.

Display



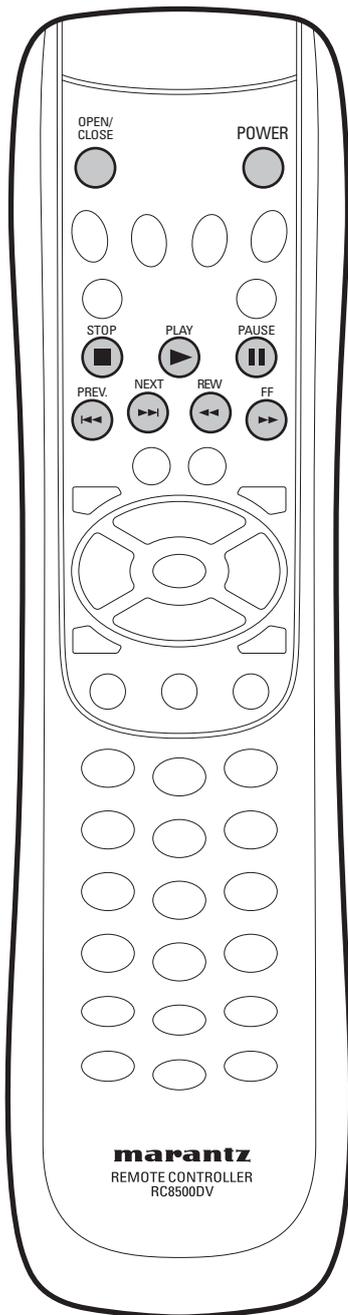
- 1 – Lights during a camera-angle section of a DVD-Video disc
- 2 **PRGSVE** – Lights when unit is outputting progressive scan (non-interlaced) video
- 3 **GRP** – Indicates that the number below in the character display is a DVD-Audio group number
- 4 – Lights when Remote Control Signal is received
- 5 **RNDM** – Lights during random playback
- 6 **SRS TS** – Lights when playing a disc with TruSurround switched on
- 7 **TRK** – Indicates that the number below in the character display is a DVD-Audio, CD, Video CD or MP3 track number
- 8 – Lights when a disc with DTS audio is playing
- 9 **A-B** – Lights when A-B repeat has been selected
- 10 – Lights during repeat play
- 11 **DOLBY D** – Lights when a disc with Dolby Digital audio is playing
- 12 – Lights when a Super Audio CD is loaded
- 13 – Lights when a DVD is loaded
- 14 **192kHz/96kHz** – Indicates a DVD disc containing high-sampling rate (192kHz/96kHz) audio is playing
- 15 – Lights when a disc is paused
- 16 – Lights when a disc is playing
- 17 **COND** – Lights when the disc has had preferences set (see **page 21**)
- 18 **VCD** – Lights when a Video CD is loaded
CD – Lights when a Audio CD is loaded
- 19 **MP3** – Lights when replaying MP3 audio
- 20 **N** – Lights when NTSC has been selected as the TV system
- 21 **P** – Lights when PAL has been selected as the TV system
- 22 **M** – Lights when 'Multi' has been selected as the TV system
- 23 **V OFF** – Indicates that video output is turned off
- 24 **D OFF** – Lights when the unit is set to Digital Out off
- 25 **Character display**
- 26 **TITLE** – Indicates that the number below in the character display is a DVD-Video title number
- 27 **PROG** – Lights when replaying a program
- 28 **CHP** – Indicates that the number below in the character display is a DVD-Video chapter number
- 29 **ALL** – Lights when 'Repeat all' has been selected for VCD, CD or Super Audio CD
- 30 **1** – Lights when track repeat has been selected for VCD, CD, Super Audio CD, or DVD-Audio
- 31 **AUDIO** – Lights when a DVD-Audio disc is playing
- 32 **TOTAL** – Indicates that the time shown in the character display is the total playing time of the disc
- 33 **SING** – Lights when playing VCD, CD, Super Audio CD, DVD-Audio or MP3 and the playback time is being displayed
- 34 **ELAP** – Lights when the elapsed time is being displayed for a title, chapter, or track
- 35 **STEREO** – Lights when a Super Audio CD is playing stereo sounds
- 36 **MULTI** – Lights when a Super Audio CD is playing multi-channel sounds
- 37 **DOWN MIX** – Lights when multi-channel DVD-Audio, Dolby Digital, DTS or MPEG audio is downmixed, such as to two-channel stereo
- 38 **L, C, R, LFE, LS, S, RS** – show which channels are recorded on the disc playing

Remote control



- 1 **OPEN/CLOSE** – Disc tray open/close – page 16
- 2 **VIDEO ON/OFF** – press to turn video output off and on
- 3 **DISPLAY** – page 19
- 4 **PROGRAM** – page 25
- 5 **▶ (PLAY)** – page 16
- 6 **■ (STOP)** – page 16
- 7 **◀◀ (PREV.)/▶▶ (NEXT)**– Skip – page 16
 - Allows you to search forward/backward through a disc. Use to skip the title, chapter or track.
- 8 **VIDEO ADJ.** – Video adjust (pages 30–31)
- 9 **TOP MENU** – page 17
- 10 **Cursor (◀/▶/▲/▼) / ENTER button** – pages 17, 33
- 11 **RETURN** – page 33
- 12 **ANGLE** – page 26
- 13 **SUBTITLE** – page 26
- 14 **CLEAR** – pages 24–25
- 15 **REPEAT** – page 23
 - A–B – page 23
- 16 **PAGE** – page 21
- 17 **POWER** – switches the player on or into standby
- 18 **DIMMER** – Press to change the display brightness – page 13
- 19 **MARKER** – page 24
- 20 **SEARCH** – page 19
- 21 **II (PAUSE)** – page 16
- 22 **◀◀ (REW)/▶▶ (FF)** – Scan – page 16
- 23 **ZOOM** – page 27
- 24 **MENU** – page 17
- 25 **SET UP** – pages 17, 33
- 26 **AUDIO** – page 27
- 27 **Number buttons**
- 28 **RANDOM** – pages 22, 28
- 29 **CONDITION** – page 21
- 30 **S.MODE** – page 42

- This remote control supports two remote control codes: DVD1 and DVD2.
- When the unit is shipped from the factory, the remote control is set to DVD1.
- To set the remote control to DVD2, hold down both **■ (STOP)** button and **2** number button on the remote control for at least five seconds. (If the batteries in the remote control are replaced while the remote control is set to DVD2, the setting will revert to DVD1.)
- To set the remote control back to DVD1, hold down both **■ (STOP)** button and the **1** number button on the remote control for at least five seconds.
- To check which remote control code is set at any time, hold down both the Stop and Pause buttons; the current setting (either “DVD1” or “DVD2”) will be displayed in the display window on the main unit.
- Also set the REMOT CODE on the **FL menu** to the same setting as the remote control. (This setting is set to DVD1 when the unit is shipped from the factory.) (see page 32)
- Audio is not output from HDMI output when Video out is set to **Off** with **VIDEO ON/OFF** button on the remote control.



Playing discs

The basic playback controls for playing discs are covered here. Further functions are detailed in the next chapter.

Note

Throughout this manual, the term 'DVD' means DVD-Video, DVD-Audio and DVD-R/RW. If a function is specific to a particular kind of DVD disc, it is specified.

1 Switch the player on.

If you're playing a DVD or Video CD, also turn on your TV and make sure that it is set to the correct video input.

2 Press OPEN/CLOSE to open the disc tray.

3 Load a disc.

Load a disc with the label side facing up, using the disc tray guide to align the disc (if you're loading a double-sided DVD disc, load it with the side you want to play face down).

4 Playing a DVD automatically.

If you're playing a DVD or Video CD, a menu may appear (see page 17).

Note

For one-sided, two-layer discs containing movies, etc., there may be a short image stoppage at the point where the layers change. This is not a malfunction.

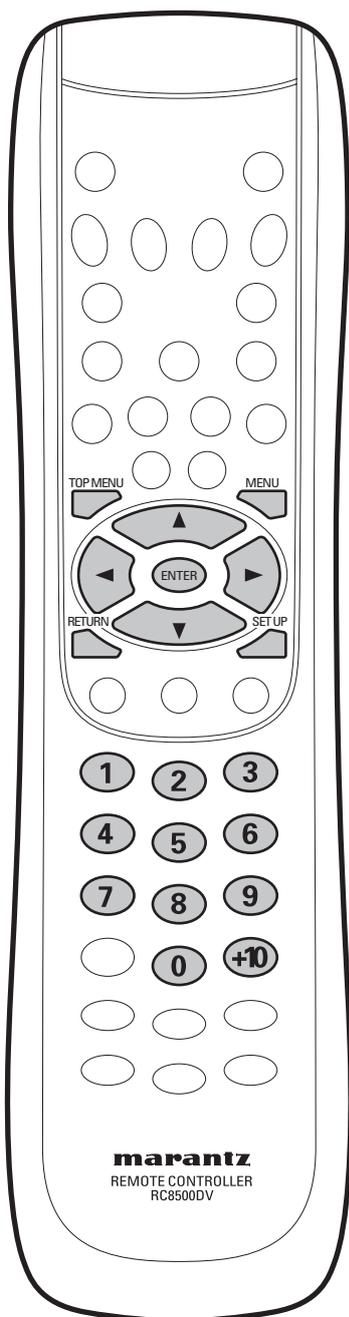
Basic playback controls

Button	What it does
▶	Starts playback. DVD and Video CD: if the display shows RESUME , playback starts from the resume point.
	Pauses a disc that's playing.
■	Stops playback. DVD and Video CD: Display shows RESUME . Press ■ (STOP) again to cancel the resume function.
◀◀	1. Press for fast reverse scanning during play. 2. Press again to increase the scan speed. (Super Audio CD and CD have 4 scan speeds; DVD and Video CD have 7.) Press ▶ (PLAY) to resume normal playback.
▶▶	1. Press for fast forward scanning during play. 2. Press again to increase the scan speed. (Super Audio CD and CD have 4 scan speeds; DVD and Video CD have 7.) Press ▶ (PLAY) to resume normal playback.
◀◀◀	Skips to the start of the current track or chapter, then to previous tracks/chapters.
▶▶▶	Skips to the next track or chapter.

Important

While using the DVD playback controls, you may see the ⓪ mark displayed on-screen. The ⓪ mark means that the operation is not allowed by the player and disc.

Getting Started



Navigating DVD disc menus

Many DVD discs contain menus. Sometimes these are displayed automatically when you start playback; others only appear when you select **Disc Menu** or **Title Menu**.

Note

Some DVD-Audio discs feature a 'Bonus Group'. To access this group you have to input a password, which you can find on the disc's packaging. See **page 50** for more information.

Using the Disc Menu

- 1 During the playback of a DVD disc, press the **SET UP** button on the remote control.
- 2 Select **Disc Menu** using the cursor buttons (**▲/▼**), then press the cursor button (**▶**) or **ENTER** button. And also select **Disc Menu** using the **MENU** button on the remote control.



Disc Menu

1. Audio
2. Subtitle
3. Language

Using the Title Menu

- 1 During the playback of a DVD disc, press the **SET UP** button on the remote control.
- 2 Select **Title Menu** using the cursor buttons (**▲/▼**), then press the cursor button (**▶**) or **ENTER** button. And also select **Title Menu** using the **TOP MENU** button on the remote control.



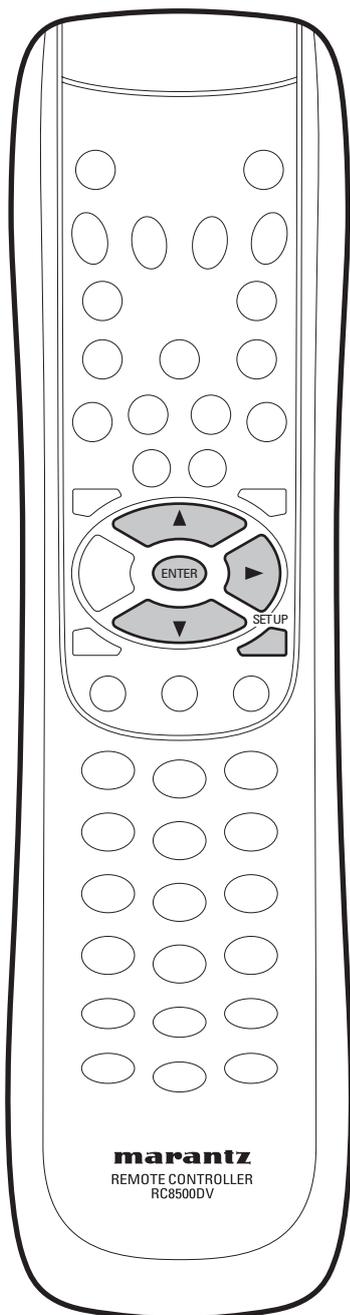
Title Menu

1. Title 1
2. Title 2
3. Title 3

Note

- Depending on the disc, the Title and Disc Menus may not work.
- Title Menu will only be displayed if there are at least two titles in the disc.
- In VCD2.0 and SVCD the **ENTER** button works as a conversion switch between PBC ON and PBC OFF mode when the **Disc Menu** is selected in the Stop mode.

Button	What it does
TOP MENU	Displays the 'top menu' of a DVD disc—this varies with the disc.
MENU	Displays a DVD disc menu—this varies with the disc and may be the same as the 'top menu'.
RETURN	Returns to the previously displayed menu screen.
Cursor (◀▶/▲▼)	Moves the cursor around the screen.
ENTER	Selects the current menu option.
Numbers	Selects a numbered menu option (some discs only).

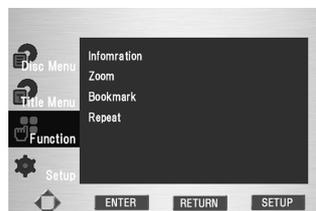


Introduction

- Many of the functions covered in this chapter apply to DVD discs, Video CDs, Super Audio CDs and CDs, although the exact operation of some varies slightly with the kind of disc loaded.
- When playing DVD discs, if the  icon appears on-screen when you try to use a particular function, either the player or the disc doesn't allow the use of that function.

Using the Function Menu

- 1 Press the SET UP button during playback.
- 2 Use the cursor buttons () to highlight **Function**, then press the cursor button () or ENTER button.
- 3 The Function selection screen appears, showing **Information**, **Zoom**, **Bookmark**, and **Repeat**.
 - Information (see page 19)
 - Zoom (see page 27)
 - Bookmark (see page 24)
 - Repeat (see page 23)
- 4 Use the cursor buttons () to highlight one of the 4 functions. Then press the cursor button () or ENTER button to access the function.



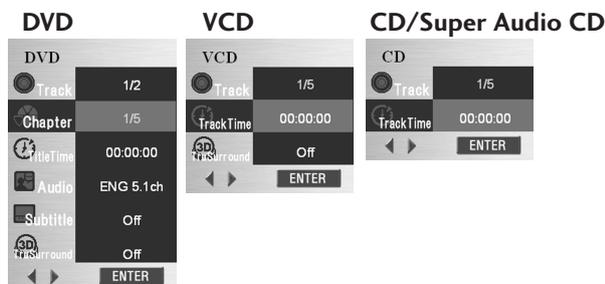
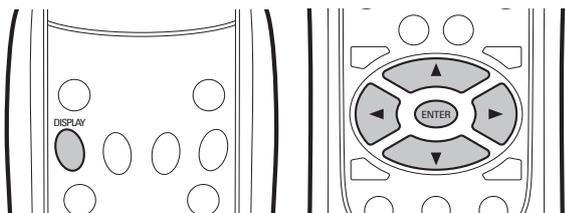
Note

You can also directly select these functions using their respective buttons on the remote control.

Playing Discs

Using the INFO menu

- 1 During play, press the **DISPLAY** button on the remote control.
- 2 Use the cursor buttons (**▲/▼**) to select the desired item.
- 3 Use the cursor buttons (**◀/▶**) to make the desired setup, then press **ENTER**.
 - You may use the number buttons of the remote control to directly access a title, chapter or to start the playback from the desired time.
4. Pressing the **DISPLAY** button again will change the displayed disc time information.
 - DVD-Video: Title time → Chapter time
 - DVD-Audio, Super Audio CD, CD, VCD (PBC OFF): Track time → Group time/Total time
 - The time information of the display changes in the same way.
- 5 To make the screen disappear, press the **DISPLAY** button again.



Title To access the desired title when there is more than one in the disc. For example, if there is more than one movie on a DVD, each movie will be identified.

Chapter Most DVD discs are recorded in chapters so that you can quickly find a specific passage.

TitleTime Allows playback of the film from a desired time. You must enter the starting time as a reference.

Audio Refers to the language of the film soundtrack. In the example, the soundtrack is played in English 5.1 CH. A DVD disc can have up to eight different soundtracks.

Subtitle Refers to the subtitle languages available in the disc. You will be able to choose the subtitles language or, if you prefer, turn them off from the screen. A DVD disc can have up to 32 different subtitles.



A surround sound effect is generated using only two front speakers.

Note

When in VCD 2.0 mode (PBC ON mode) and MP3, this function does not work.

Note

What is a Chapter?

Each title on a DVD is usually divided into chapters (similar to tracks on an audio CD).

What is a Title?

A DVD may contain several different titles. For example, if a disc contains four different movies, each might be considered a title.

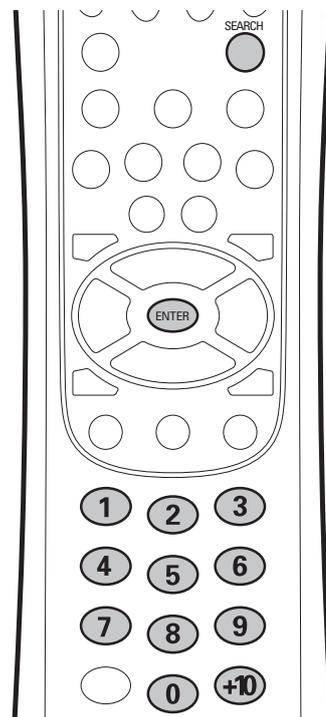
Finding what you want on a disc

DVD Video CD Super Audio CD CD

You can directly access any point on a disc using one of the search modes. Use these search modes while a disc is playing. Playback jumps to the point specified.

- 1 Press **SEARCH** repeatedly to choose between:

- **DVD-Video**
 - Chapter search
 - Title search
 - Time search
- **DVD-Audio**
 - Track search
 - Group search
 - Time search
- **Video CD/CD**
 - Track search
 - Time search
- **Super Audio CD**
 - Track search



- 2 Enter the title/chapter/group/track number or time (minutes & seconds).

For example, for title 4, press **4**.

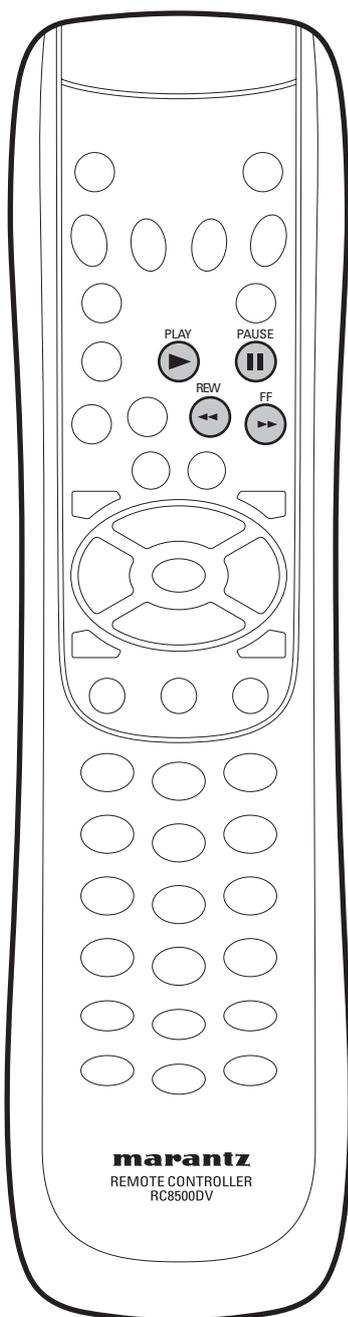
For chapter/track 12, press **1, 2**.

For 45 minutes into the disc, press **4, 5, 0, 0**.

- 3 Press **ENTER** to start/restart playback.

Note

Some discs don't allow the Search mode.



Still Frame/Slow Play/Frame Advance Playback

(DVD-Video) (Video CD)

The video images on DVD and Video CD can be viewed as a still frame, played back at slow speeds and even advanced frame by frame (Forward only).

Viewing a Pausing Picture

Press II (PAUSE).

When viewing a DVD, if the paused picture shakes, select the [Field] setting in the Setup screen **Video Setup** menu [Pause Mode] setting as described on page 47.

To return to normal playback

When the picture playback is paused, pressing ► (PLAY) restores normal playback operation.

Viewing slow playback

With this function, DVDs can be viewed in both forward and reverse direction. **Video CDs can only be moved in the forward direction.**

Press ►► (FF) during pause.

- Slow playback is engaged.
- During slow playback, the speed of playback can be adjusted from 1/8 normal playback speed to 1/2 normal playback speed in 4 steps using ►► (FF). (Note that there are 3 speeds of 1/8, 1/4 and 1/2 for Video CDs.)

1/8 – 1/6 – 1/4 – 1/2
►►

Press ◀◀ (REW) during Pause.

- Slow playback in the reverse direction is engaged.
- During slow playback, the speed of playback can be adjusted from 1/8 normal playback speed to 1/2 normal playback speed in 4 steps using ◀◀ (REW).

1/2 – 1/4 – 1/6 – 1/8
◀◀

To return to normal playback

When the picture is paused or during slow playback, pressing ► (PLAY) restores normal playback operation.

Step Motion playback: Viewing one frame at a time

With this function, DVDs and Video CDs can only be moved in the forward direction.

Press II (PAUSE).

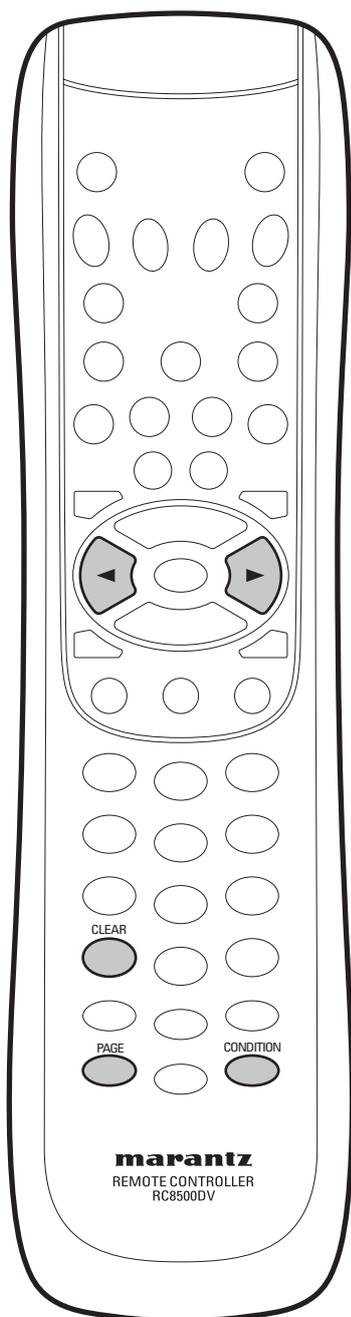
Each time the button is pressed, a new frame will appear.

To return to normal playback

When viewing Step Motion playback, pressing ► (PLAY) restores normal playback operation.

Note

- There is no sound picture playback is paused or during slow playback, or when advancing one frame at a time.
- Pausing picture, slow play, or Step Motion playback may not be possible with certain titles. In this case, the ∅ mark is displayed.
- If a Browsible picture (page 57) is recorded on a DVD-Audio disc, Step Motion playback is possible.
- Depending on the disc, it may automatically return to normal replay at the transition between chapters. And when this happens, it may not fast forward or rewind even if you push the scan (◀◀/►►) button. In this case, push ► (PLAY) button once more, then push the scan button (◀◀/►►) again.



Using the Page

DVD-Audio

Press the PAGE button on the remote control during playback. You may select the image you want by moving the cursor button (◀/▶).

Note

Some discs don't allow the Page function.

Memorizing disc settings (CONDITION MEMORY)

DVD-Video

If you have a particular set of preferences for a disc, you can memorize them using the Condition Memory function. Once memorized, your settings will be recalled automatically whenever you load that disc. The player can store settings for 20 discs; after this, memorizing another replaces the oldest one stored.

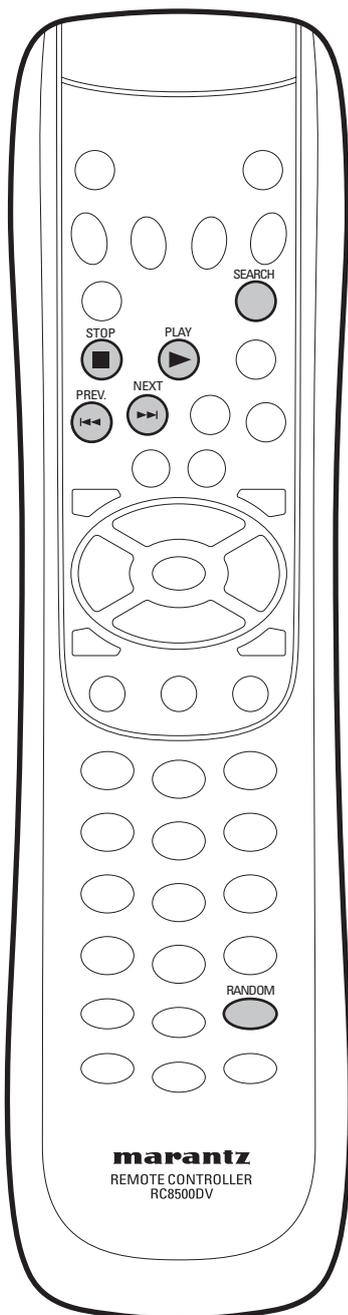
Condition Memory does not work with DVD-Audio and DVD-RW discs.

The settings memorized are:

- Audio Language (page 27)
 - Subtitle Language (page 26)
 - Camera Angle (page 26)
 - On Screen Display (page 50)
- To memorize settings for the current disc, press **CONDITION** during playback.
 - To recall memorized settings, just load the disc.
The COND icons will be displayed and 'CONDITION' appears on-screen.
 - To clear memorized settings, load the disc and press **CLEAR** while 'CONDITION' is displayed on-screen.

Note

Some discs don't allow the Condition Memory function.



Using the Random Play

DVD-Audio Video CD CD Super Audio CD MP3

Use the random play function to play tracks in a random order. You can't use random play with DVD-RW discs, DVD-Video or Video CD playing in PBC mode.

1 Press **RANDOM** during the Stop mode.

2 Press **▶ (PLAY)** to start random play.

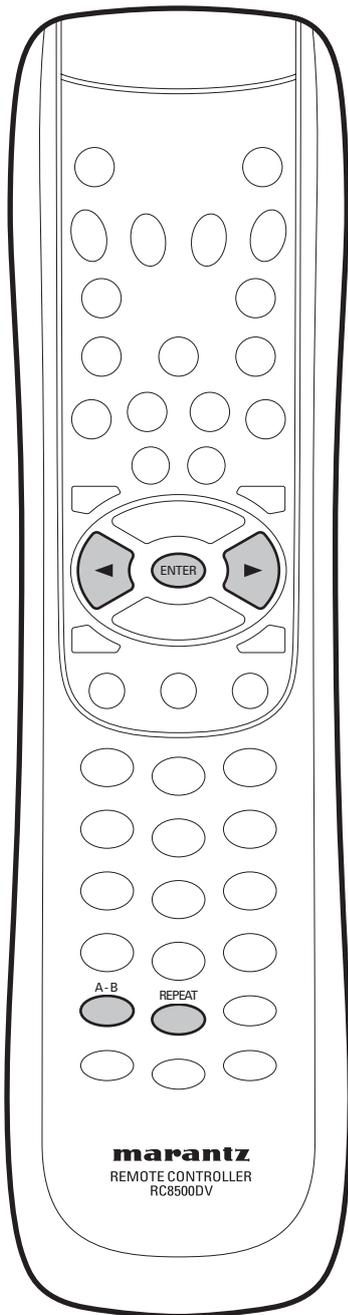
- **Return to normal playback**
Press **■ (STOP)** button to stop random playback and then press the **RANDOM** button.
- When using a DVD-Audio disc, press the **SEARCH** button on the remote control and enter the group number of the track you wish to play using the Number buttons. Pressing the **▶ (PLAY)** button will start random play within the designated group.

Tip

- During random play, the **◀◀ (PREV.)** and **▶▶ (NEXT)** buttons function a little differently to normal: **◀◀ (PREV.)** returns to the beginning of the current track/chapter. You can't go back further than this. **▶▶ (NEXT)** selects another track/chapter at random from those remaining.
- You can't use random play together with program or repeat play.

Note

- Random play will not operate in the Resume Stop mode. Put the player in the Stop mode by repressing **■ (STOP)** button, and press the **RANDOM** button after.
- There are DVD discs that can not be played using the Random Play.



Using the Repeat Play

DVD-Audio DVD-Video Video CD CD Super Audio CD

You can set the player to repeat individual tracks on CDs or Video CDs, Super Audio CDs, chapters/tracks or titles/group on DVD discs, or the whole disc. It's also possible to loop a section of a disc.

You can't use any repeat mode or looped play with a Video CD playing in PBC mode.

Note

- You can't use repeat and random play at the same time.
- If you switch camera angle during repeat play, repeat play is cancelled.
- Some discs don't allow the Repeat function.

1 Press REPEAT during playback.

The Repeat Screen appears:

DVD-Audio



DVD-Video



Video CD, CD, Super Audio CD



2 Select Track/Group/A-B, Chapter/Title/A-B, Track/All/A-B using the cursor buttons (◀/▶).

3 Press ENTER.

4 To return to normal play, press REPEAT again, then press the cursor buttons (◀/▶) to select Off and press ENTER.

Looping a section of a disc

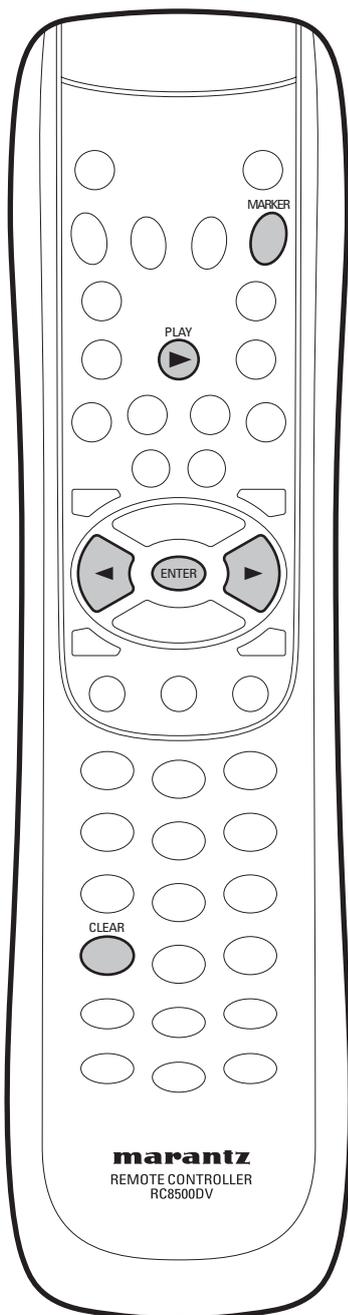
DVD Video CD Super Audio CD

1 Press A-B once at the start of the section you want to repeat, then again at the end.

Playback immediately jumps back to the start point and plays the loop round and round.

- On a DVD disc, the start and end points of the loop must be in the same title/group.

2 To resume normal playback, press A-B again.



Bookmarking a place in a disc

DVD-Video

This feature lets you bookmark sections of a DVD so you can quickly find them at a later time.

Using the Bookmark Function



- 1 During play, press the **MARKER** button on the remote control. The **Bookmark** icons will be displayed.
- 2 Use the cursor buttons (**◀/▶**) to move to the desired bookmark icon.
- 3 When you reach the scene you want to mark, press the **ENTER** button. The icon will change to a number (1, 2, or 3).
- 4 Press the **MARKER** button to turn off the display.

Recalling a Marked Scene



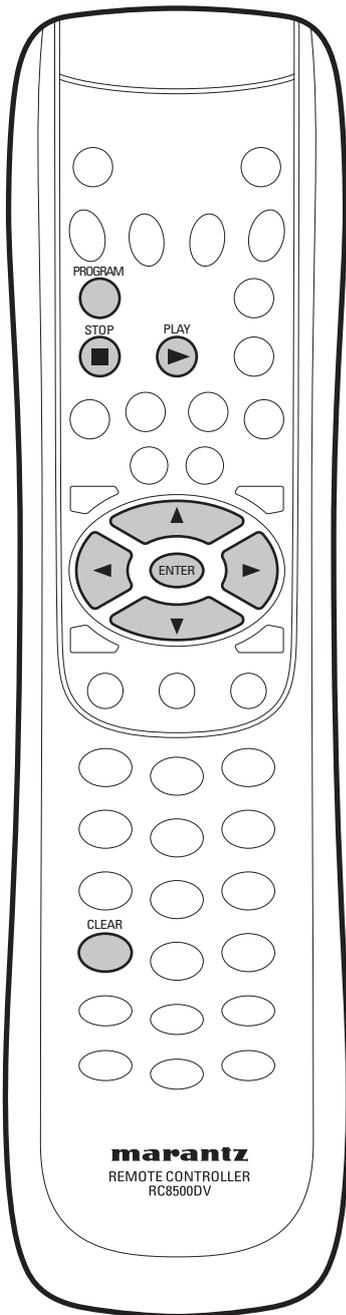
- 1 During play, press the **MARKER** button on the remote control.
- 2 Use the cursor buttons (**◀/▶**) to select a marked scene.
- 3 Press **▶** (**PLAY**) buttons to skip to the marked scene.

Clearing a Bookmark

- 1 During play, press the **MARKER** button on the remote control.
- 2 Use the cursor buttons (**◀/▶**) to select the bookmark number you want to delete.
- 3 Press the **CLEAR** button to delete a bookmark number. Press the **MARKER** button to turn off the display.

Note

- Up to three scenes may be marked at a time.
- Depending on the disc, the Bookmark function may not work.



Making a program list

This feature lets you program the play order of groups/chapters/tracks on a disc. You make a program list via an on-screen display, using the cursor buttons to navigate to enter groups/chapters/tracks.

Note that programmed playback is not available for DVD-Video.

DVD-Audio **Video CD** **CD** **Super Audio CD**

1 Press PROGRAM during the Stop mode.

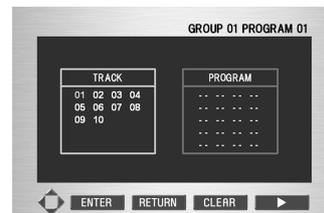
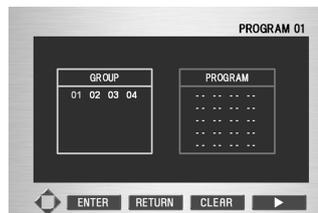


Note

If "RESUME" is displayed in the FL display, press ■ (STOP) to the Stop mode.

2 Use the cursor buttons (◀/▶/▲/▼) to select the first track to add to the program, then press the ENTER button. The selection numbers appear in the program Order Box.

- For DVD-Audio, tracks may be added to be program by specifying group numbers as well. Note, however, that bonus tracks may not be specified in programmed playback.
- A program list can contain up to 20 steps.



3 Press ▶ (PLAY) button.

The disc will be played in programmed order.

1) Return to normal playback

To return to normal playback, press the **CLEAR** button while playback is in progress.

2) Delete programs from list one at a time

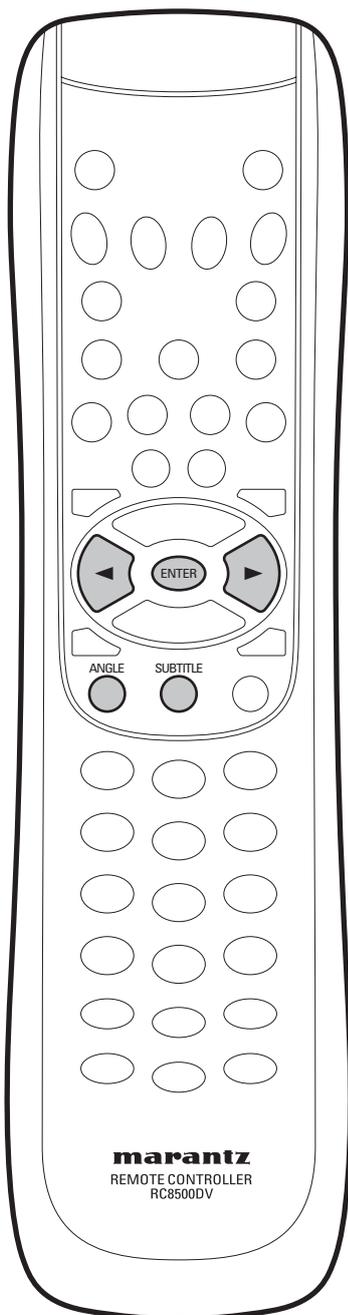
Press ■ (STOP) button to stop program playback and then press the **PROGRAM** button to display the program settings screen. When the program settings screen has been displayed, pressing the **CLEAR** button will cause the last program in the program list to be deleted each time the **CLEAR** button is pressed.

3) Delete all selections from program list

Turn off the power to the player or remove the disc from the player. Press the **CLEAR** button during program playback.

4) View program list

Press the **PROGRAM** button at any time when playback is not in progress.



Switching Camera Angles

DVD-Video

Some DVD-Video discs feature scenes shot from two or more angles—check the disc box for details: it should be marked with a  icon if it contains camera-angle scenes.

- **To display the camera angle, press ANGLE.**
 - To select the camera angle, use the cursor buttons (◀/▶) and then press **ENTER**.
 - To hide the TV angle indicator, choose **Angle Mark > Off** from the **Others** menu (see [page 50](#)).

Note

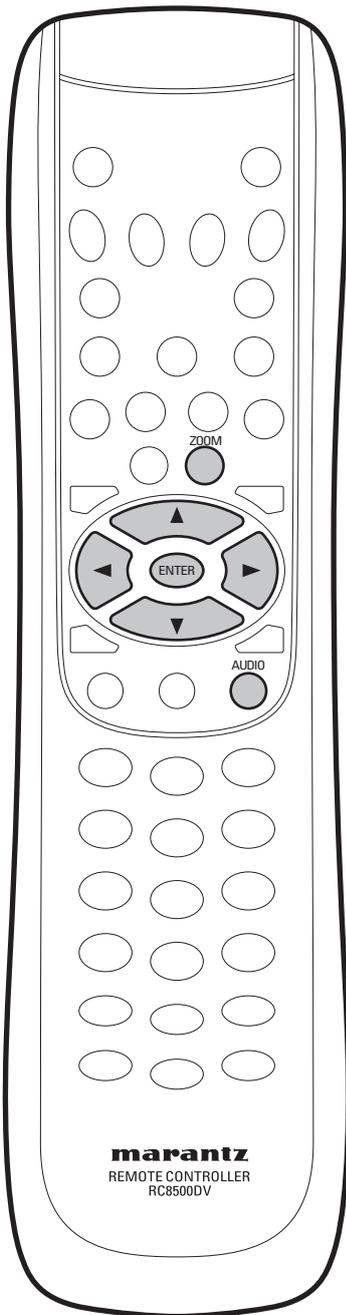
Depending on the disc, this feature may not work.

Switching Subtitle Language

DVD-Video

Many DVD-Video discs have subtitles in one or more languages—the disc box will usually tell you which subtitle languages are available. You can switch subtitle language anytime during playback.

- **To display the subtitle language, press SUBTITLE.**
 - To select the subtitle language, use the cursor buttons (◀/▶).
 - The current subtitle language is shown on-screen.
- **To set subtitle preferences, see [page 36](#).**



Switching Audio Language

DVD-Video

When playing a DVD-Video disc recorded with dialog in two or more languages, you can switch audio language anytime during playback.

- **To display the audio language, press AUDIO.**
The current audio language is shown on-screen.
To select the audio language, use the cursor buttons (◀/▶).
- **To set audio language preferences, see page 35.**



Note

- Depending on the disc, there are cases in which audio language cannot be switched during play. In this case, make changes using the DVD menu.
- Super Audio CD, CD and MP3 cannot be switched.
- When dts is selected, switching may take a long time.

Switching audio channel (DVD-Audio)

DVD-Audio

Depending on the disc, you may be able to switch channels when playing DVD-Audio discs—see the disc box for details.

- **To switch the audio channel, use the cursor buttons (◀/▶).**

Switching audio channel (Video CD)

Video CD

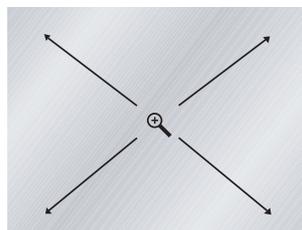
On Video CDs you can switch between stereo, just the left channel or just the right channel.

- **To switch the audio channel, use the cursor buttons (◀/▶).**

Using the Zoom Function

DVD-Video **Video CD**

- 1 **During play or pause mode, press the ZOOM button on the remote control.**
A zoom mark will be displayed on screen.
- 2 **Use the cursor buttons (▲/▼/◀/▶) to select the part of the screen you want to zoom in on.**
- 3 **Press the ENTER button.**
 - During DVD play, press ENTER to zoom in X2/X4/X2/Normal in order.



Note

- Zoom play cannot be used on some discs.
- Zoom will not operate properly for some scenes.
- Zooming may cause image deterioration or shaking.

MP3/JPEG Play

- If MP3 and JPEG files are present, select the media of your choice with the cursor buttons (▲/▼) and then press **ENTER**.
- If no button on the remote control is pressed for 30 seconds, the menu will disappear and the selected item will be played.
- To change the currently playing media, press **■ (STOP)** button twice and then press the **MENU** button.



Playing MP3s

This player can play MP3 files on a CD-ROM disc. MP3 is a popular audio format on computers and the Internet because file sizes are small (compared to uncompressed CD audio), while the sound quality remains surprisingly good.

- 1 When the first song file is playing, the song file menu will appear on the right side of the screen. Up to 6 song files can be displayed at a time. If you have more than 6 files on a disc, press the cursor buttons (◀/▶) to bring them up on the screen.



- 2 Use the cursor buttons (▲/▼) to select the desired song file, then press **ENTER** to begin playback of the song file.



- 3 Press the **RETURN** button, and the music folder menu will appear on the right side of the screen. Use the cursor buttons (▲/▼) to select the desired music folder, then press **ENTER**. Use the cursor buttons (▲/▼) again to select a song file. Press **ENTER** to begin playback of the song file.



Using Random Play

Press the **RANDOM** button during the Stop mode and then press **▶ (PLAY)**.

To cancel the Random Play, press **■ (STOP)** and then press the **RANDOM** (see page 22).

Using Repeat Play

Press the **REPEAT** button during playback.

To cancel Repeat Play, press **REPEAT** again.

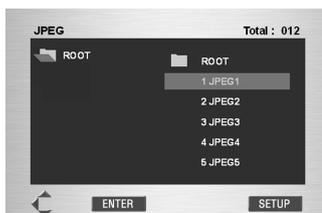
Note

- Depending on the disc, the Random, Repeat and Repeat A-B functions may not work.
- Please refer to “Caution!” on page 9.

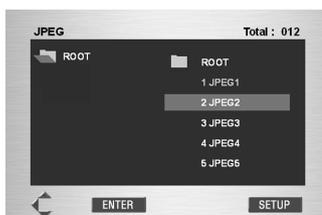
Playing Discs

Playing JPEG

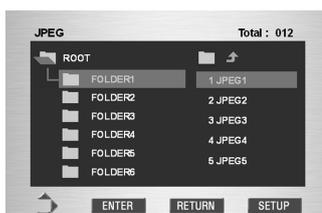
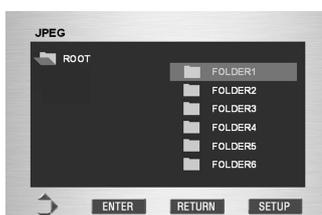
- 1 When the JPEG file is loading, the JPEG file menu will appear on the right side of the screen. (Some discs may start play automatically.)
Up to 6 JPEG files can be displayed at a time. If you have more than 6 files on a disc, press the cursor buttons (◀/▶) to bring them up on the screen.



- 2 Use the cursor buttons (▲/▼) to select the desired JPEG file, then press ENTER to begin playback of the JPEG file.



- 3 Press the RETURN button, and the JPEG folder menu will appear on the right side of the screen.
Use the cursor buttons (▲/▼) to select the desired JPEG folder, then press ENTER.
Use the cursor buttons (▲/▼) again to select a JPEG file. Press ENTER to begin playback of the JPEG file.



1) How to pause the display

Press **II** (PAUSE) button. To start playback, press **▶** (PLAY) button.

2) How to cue a still image to be displayed

Press the **SKIP** (◀◀ (PREV.)) button to proceed to the next still image and press the **SKIP** (▶▶ (NEXT)) button to return to the previous still image.

3) Changing the orientation of a still image

Press the cursor button (▶) to rotate the image clockwise 90 degrees.

Press the cursor button (◀) to rotate the image counter-clockwise 90 degrees.

Press the cursor buttons (▲/▼) to flip the image from top to bottom by 180 degrees.

4) Zoom playback

To zoom, press the **ZOOM** button during playback.

Pressing the **ZOOM** button again causes the display to toggle between **X2** zoom, **X4** zoom and **OFF**.

Use the cursor buttons (▲/▼/◀/▶) to move the zoom display.

Note

- Depending on the JPEG image size, there may be times when the Zoom will not operate correctly.
- When playing Fuji Color CD, depending on the data volume, read-in may be time-consuming.

Capture

You can store a photograph of your children or other image you like as background and use it as your start-up logo.

- 1) Push the **SET UP** button on your remote control during JPEG play.
- 2) The instruction, "When you wish to import an image, press ENTER on the remote control." is displayed on the screen, so push the **ENTER** button.
- 3) The image begins to enter.
- 4) Push the **CLEAR** button on your remote control to stop entry.

Note

- 1) The user can only store 1 screen.
- 2) When a new image has been entered, the old screen is erased.
- 3) If entry fails, the data that was already recorded may also be lost.
- 4) When the entered image is displayed as the start-up logo, select **Capture** on the **Back Ground**. (page 48)

Video Adjust

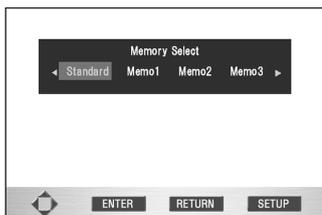
You can set the picture settings you desire and store them in the player's memory.

Selecting a preset

- 1 Press the **VIDEO ADJ.** button on the remote control.
- 2 Select **Memory Select**.
- 3 Select a preset.



Press ENTER



- **Standard** – optimized settings for a standard television set
- **Memo 1, 2, 3** – User presets (see below for more on these)

You can highlight a preset while a disc is playing (before you press **ENTER** to select it) to see the effect on the picture immediately.

Note

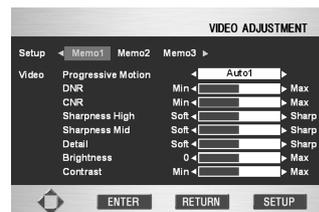
Depending on the disc and your TV/monitor, the effect of these settings may not be clear.

Creating your own setting

- 1 Press the **VIDEO ADJ.** button on the remote control.
- 2 Select **Setup**.



- 3 Use the cursor buttons (**◀/▶**) to select a Memory (Memo1, 2, 3) to change/store a picture quality parameter.
- 4 Use the cursor buttons (**▲/▼**) to select a picture quality parameter, then use the cursor buttons (**◀/▶**) to adjust that parameter.



- **Progressive Motion** – When using progressive scan, this adjusts the motion and still picture quality. There are two modes: Auto and Video. In Auto mode, the player automatically distinguishes film-source material and video-source material. Set to the Video mode when you know the program you are watching is from video-source material (such as animations).
 Auto 1: Standard setting
 Auto 2: Setting for moving images
 Auto 3: Setting for still images
 Video 1: Standard setting
 Video 2: Setting for moving images
 Video 3: Setting for still images
- **DNR** – Adjusts the amount of noise reduction (NR) applied to the Y (brightness) component
- **CNR** – Adjusts the amount of noise reduction (NR) applied to the C (color) component

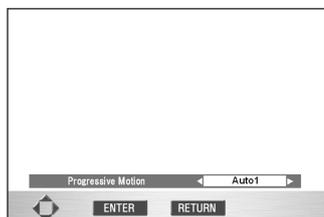
Playing Discs

- **Sharpness High** – Adjusts the sharpness of the high-frequency (finely detailed) elements in the picture
- **Sharpness Mid** – Adjusts the sharpness of the mid-frequency (less detailed) elements in the picture
- **Detail** – Adjusts how sharp edges appear in the picture
- **Brightness** – Adjusts the image brightness
- **Contrast** – Adjusts the image contrast
- **Chroma Level** – Adjusts how saturated colors appear
- **Hue** – Adjusts the overall color balance between red and green
- **Chroma Delay** – Compensates for misalignment of the Y (brightness) and the C (color) components
- **Gamma** – Adjusts the brightness of the darker images in the picture
- **Black Setup** – Corrects floating black color
- **Lip Sync** – Adjusts the time lag between the audio signal and the video signal from 0 to 200 msec in 10 msec steps
- **Initialize** – Returns to the default values

5 Press ENTER to save your changes.

Note

- Pressing **DISPLAY** while the VIDEO ADJUSTMENT screen is displayed shows one adjustment item, as given below, so that you can adjust the item while confirming its effect. Pressing **DISPLAY** again returns to the former setting.



- The Lip Sync only works for analog sound. It does not work for digital output/HDMI output.
- **Chroma Delay** will not operate in **Composite Video out**, **S2 Video out** and **COMPONENT Video out** when **Interlace** is selected.

Using the FL menu

The FL menu has been designed to set “HDMI ON/OFF”, “HDMI RESET” and “REMOT CODE”.

The FL menu cannot be used if a disc is playing.

It is recommended to set the FL menu before loading a DVD.

If a DVD has been loaded, be sure to press ■ (STOP) twice before proceeding.

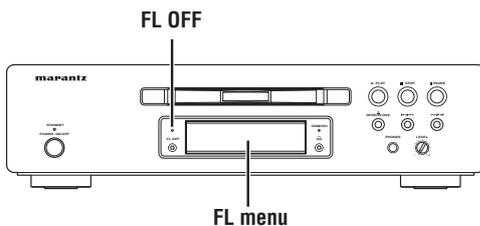
(If “RESUME” is displayed in the FL display, press ■ (STOP).)

Selecting the FL menu

Press **SET UP** for longer than 2 sec.

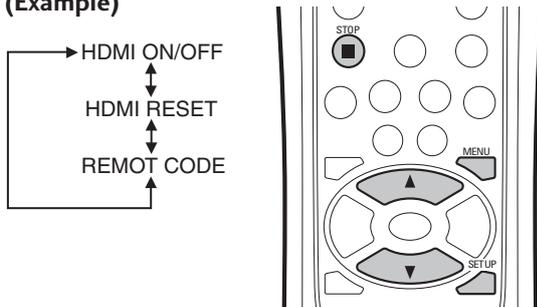
The **FL OFF** indicator on the player turns on and off.

FL menu is displayed in the FL display.



Use the cursor buttons (▲/▼) to select the FL menu you want as follows.

(Example)



To exit the FL menu

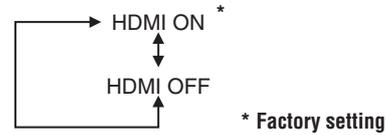
When you have completed setting up the FL menu or if you want to exit the FL menu, press **SET UP** to close the FL menu.

HDMI ON/OFF setting

Select **HDMI ON/OFF**, then press **ENTER**.

Use the cursor buttons (▲/▼) to select **ON** or **OFF** as follows.

(Example)



Press **ENTER** you want to set.

The menu selection is set.

Note

If you want to use HDMI function, set the **HDMI** in the **SETUP** menu. (page 52)

HDMI RESET

Select **HDMI RESET**, then press **ENTER**.

“SURE” is displayed in the FL menu.

Press **ENTER** if you want to **RESET**.

The menu selection is set.

Note

If images are not displayed properly on the TV or projector after making HDMI setting on the Setup menu, reset the set (see page 54).

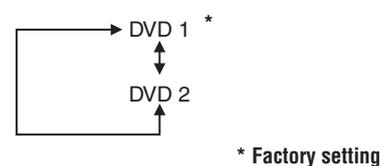
This will return the HDMI setting to the state before the setting was made.

REMOT CODE setting

Select **REMOT CODE**, then press **ENTER**.

Use the cursor buttons (▲/▼) down to select the type of **REMOT CODE** you want to set as follows.

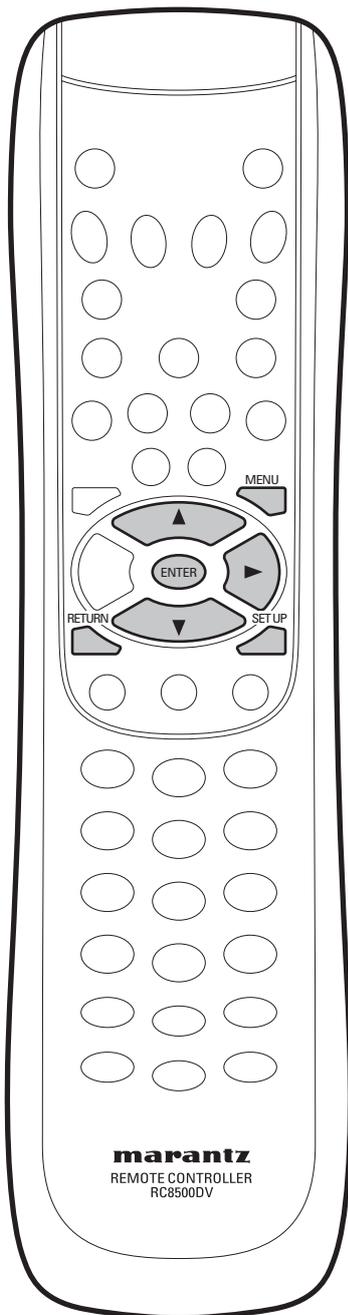
(Example)



Press **ENTER** you want to set.

The menu select is set.

- The DVD player support two remote control codes: DVD 1 and DVD 2.
- Set the remote control code of the Remote Control to the same setting.
- See page 15 for more information.



Using the Setup Menu

Before using the player, you should specify the settings to be used in accordance with the conditions under which the player is to be used.

Note that once changed, the settings will be saved and remain the same even after the power has been turned off until the settings are changed again.

The Setup menu gives you access to all the player's settings. Press **SET UP** to display/leave the menu and the cursor and **ENTER** buttons on the remote control to navigate and select options. In some screens you can press **RETURN** to leave the screen without making any changes. The controls for each menu are shown at the bottom of the screen.



Note

The language options shown in the on-screen display illustrations on the following pages may not correspond to those available in your country or region.

- 1 Press the **SET UP** button on the remote control. Select **Setup** using the cursor buttons (**▲/▼**), then press the cursor (**▶**) or **ENTER** button.



- 1 **Language Setup:** Setup of the Language ([page 35](#))
 - 2 **Audio Setup 1 and 2:** Setup of the Audio Options ([pages 37, 42](#))
 - 3 **Video Setup:** Setup of the Display Options ([page 45](#))
Use to select which type of screen you want to watch and several display options.
 - 4 **Parental Setup:** Setup of the Parental Level ([page 49](#))
Allows users to set the level necessary to prevent children from viewing unsuitable movies such as those with violence, adult subject matter, etc.
 - 5 **Others Setup:** Setup of the Other Options ([page 50](#))
Use to select which type of HDMI you connect and several other options.
- 2 Use the cursor buttons (**▲/▼**) on the remote control to access the different features.
 - 3 Press the **ENTER** button to access the sub features.
To make the setup screen disappear after setting up, press the **SET UP** button again.



Note

Depending on the disc, some Setup Menu selections may not work.

Black dot (●) indicates the default setting

* It can be set only during STOP.

Language Setup (page 35)

OSD Language (page 35)

- English
- Francais
- Deutsch
- Espanol
- Italiano

DVD Menu Language (page 35) *

- English
- Francais
- Deutsch
- Espanol
- Italiano
- Others

Audio Language (page 35) *

- English
- Francais
- Deutsch
- Espanol
- Italiano
- Original
- Others

Subtitle Language (page 36) *

- Auto
- English
- Francais
- Deutsch
- Espanol
- Italiano
- Others
- Off



Audio Setup 1 (page 37)

Digital Out (page 37)

- On
- Off

Dolby Digital Out (page 37)

- Bit Stream
- PCM

DTS Out (page 37)

- Bit Stream
- PCM

MPEG Out (page 37)

- Bit Stream
- PCM

PCM Down Sample (page 38)

- On
- Off

Audio Out (page 39)

- 2 Channel
- 5.1 Channel

Speaker Size (page 40)

- (Large) L/R
- (Large) C
- (Large) LS/RS
- (On) LFE

Distance (page 40)

- (Feet) Unit
- (10ft) L
- (10ft) C
- (10ft) R
- (10ft) RS
- (10ft) LFE
- (10ft) LS

Level (page 41)

- Fix
- Variable
- (Auto) Test Tone
- (0db) L
- (0db) C
- (0db) R
- (0db) RS
- (0db) LFE
- (0db) LS



Audio Setup 2 (page 42)

Super Audio CD Mode (page 42)

- Stereo
- Multi-ch
- CD

Player Mode (page 42)

- DVD Audio
- DVD Video

CD Play Back (page 43)

- CD
- DTS CD

DTS Down Mix (page 43)

- Stereo
- Lt/Rt

Audio DRC (page 44)

- On
- Off

TruSurround (page 44)

- On
- Off

Super Audio CD Play (page 44)

- DSD
- PCM

Video Setup (page 45)

TV Aspect (page 45)

- 4:3 L - Box
- 4:3 Pan Scan
- 16:9 Wide
- 16:9 Squeeze

Components Out (page 47)

- Progressive
- Interlace

Pause Mode (page 47)

- Field
- Frame
- Auto

Back Ground (page 48) *

- Logo
- Blue
- Black
- Capture

Screen Saver (page 48)

- On
- Off

TV System (page 48) *

- NTSC
- PAL
- Multi



Parental Setup (page 49) *

Use Password (page 49)

- No
- Yes

Rating Level (page 49)

- Level 8 (Adult)
- Level 7
- Level 6
- Level 5
- Level 4
- Level 3
- Level 2
- Level 1 (Kids Safe)

Change Password (page 49)



Others (page 50)

On Screen Display (page 50)

- On
- Off

Angle Mark (page 50)

- On
- Off

Bonus Group (page 50)

 Password

Pure Mode (page 51)

- Off
- Mode 1
- Mode 2

Auto Power Off (page 51)

- On 30 Min
- Off

Economy Mode (page 51)

- On
- Off

HDMI (pages 52–54)

 Resolution

 Format

 TV Aspect

 Audio

Setting up the Language Setup

If you set the OSD Language, DVD Menu Language, Audio Language and Subtitle Language in advance, they will come up automatically every time you watch a movie.

Using the OSD Language

- Default setting: English

- 1 Press the **SET UP** button.
- 2 Select **Setup** using the cursor buttons (▲/▼), then press the cursor (▶) or ENTER button.
- 3 Select **Language Setup** using the cursor buttons (▲/▼), then press the cursor (▶) or ENTER button.



- 4 Select **OSD Language** using the cursor buttons (▲/▼), then press the cursor (▶) or ENTER button.



- 5 Use the cursor buttons (▲/▼) to select **English**.



- 6 Press the **ENTER** button.
 - English is selected and the screen returns to the Language Setup menu.
 - To make the SETUP menu disappear, press the **SET UP** button.

Using the DVD Menu Language

- Default setting: English



- 1 Press the **SET UP** button.
- 2 Select **Setup** using the cursor buttons (▲/▼), then press the cursor (▶) or ENTER button.
- 3 Select **Language Setup** using the cursor buttons (▲/▼), then press the cursor (▶) or ENTER button.
- 4 Select **DVD Menu Language** using the cursor buttons (▲/▼), then press the cursor (▶) or ENTER button.
- 5 Use the cursor buttons (▲/▼) to select **English**.
 - Select **Others** if the language you want is not listed.
- 6 Press the **ENTER** button.
 - English is selected and the screen returns to the Language Setup menu.

Note

This Setting can be set only during STOP.

Using the Audio Language

- Default setting: English



- 1 Press the **SET UP** button.
- 2 Select **Setup** using the cursor buttons (▲/▼), then press the cursor (▶) or ENTER button.
- 3 Select **Language Setup** using the cursor buttons (▲/▼), then press the cursor (▶) or ENTER button.
- 4 Select **Audio Language** using the cursor buttons (▲/▼), then press the cursor (▶) or ENTER button.

- 5 Press the cursor buttons (▲/▼) to select **English**.
 - Select **Original** if you want the default soundtrack language to be the original language the disc is recorded in.
 - Select **Others** if the language you want is not listed.
- 6 Press the **ENTER** button.
 - **English** is selected and the screen returns to the Language Setup menu.

 **Note**

This Setting can be set only during STOP.

Using the Subtitle Language

- Default setting: **Auto**



- 1 Press the **SET UP** button.
- 2 Select **Setup** using the cursor buttons (▲/▼), then press the cursor (▶) or **ENTER** button.
- 3 Select **Language Setup** using the cursor buttons (▲/▼), then press the cursor (▶) or **ENTER** button.
- 4 Select **Subtitle Language** using the cursor buttons (▲/▼), then press the cursor (▶) or **ENTER** button.

- 5 Use the cursor buttons (▲/▼) to select **English**.
 - Select **Auto** if you want the subtitle language to be the same as the language selected as the audio preference.
 - Select **Others** if the language you want is not listed.
Some discs may not contain the language you select as your initial language; in that case the disc will use its original language setting.

- 6 Press the **ENTER** button.

- **English** is selected and the screen returns to the Language Setup menu.

 **Note**

- If the selected language is not recorded on the disc, the original pre-recorded language is selected.
- **DVD Menu Language, Audio Language and Subtitle Language** are only selected in the Stop mode.
- This Setting can be set only during STOP.

Setting up the Audio Setup 1

- 1 Press the **SET UP** button.
- 2 Select **Setup** using the cursor buttons (▲/▼), then press the cursor (▶) or **ENTER** button.
- 3 Select **Audio Setup 1** using the cursor buttons (▲/▼), then press the cursor (▶) or **ENTER** button.
- 4 Use the cursor buttons (▲/▼) to select the desired item, then press the cursor (▶) or **ENTER** button.



Note

To make the **SETUP** menu disappear or return to the menu screen during setup, press the **RETURN** or cursor button (◀).

* You only need to make this setting if you connected this system to another component (AV amplifier, etc.) using one of the digital outputs.

Digital Out

- Default setting: **On**

If at any time you need to switch off the digital audio output, set this to **Off**, otherwise leave it **On**. Note that you can't switch on/off the optical and coaxial outputs individually.

Note

Super Audio CD will not output digital sound.

Dolby Digital Out*

- Default setting: **Bit Stream**

If your AV amplifier (or other connected component) is Dolby Digital compatible, set to **Bit Stream**, otherwise set to **PCM**.

DTS Out*

- Default setting: **Bit Stream**

If your AV amplifier (or other connected component) has a built-in DTS decoder, set this to **Bit Stream**, otherwise set to **PCM**. Check the manual that came with the other component if you're unsure whether it is DTS compatible.

Important

If you set to **Bit Stream** with a non-DTS compatible amplifier, noise will be output when you play a DTS disc.

MPEG Out*

- Default setting: **PCM**

If your AV amplifier (or other connected component) is compatible with MPEG audio, set this to **Bit Stream**, otherwise set it to **PCM** (MPEG audio is converted to more compatible PCM audio). Check the manual that came with the other component if you're unsure whether it is MPEG audio compatible.

PCM Down Sample*

- Default setting: **On**

If the digital input of your AV amplifier (or other connected component) is compatible with high sampling rates (96kHz), set this to **Off**, otherwise set it to **On** (96kHz audio is converted to a more compatible 48kHz). Check the manual that came with the other component if you're unsure whether it is 96kHz compatible.

Note

Even when set to **Off**, some discs will only output down sampled audio through the digital outputs. High sampling rate DVD-Audio discs (192kHz or 176.4kHz) always output audio down sampled to 96kHz or 88.2kHz through the digital outputs.

PCM Down Sample

	Audio recording format		PCM Down Sample OFF		ON
			Copyright protected	Not copyright protected	
DVD-Video	PCM	48kHz/16-24-bit	No output produced* ¹	48kHz/16-24-bit PCM	48kHz/16-bit PCM
		96kHz/16-24-bit	No output produced	96kHz/16-24-bit PCM	48kHz/16-bit PCM
DVD-Audio	PCM	44.1kHz/16-24-bit	No output produced* ²	44.1kHz/16-24-bit PCM	44.1kHz/16-bit PCM
		48kHz/16-24-bit	No output produced* ¹	48kHz/16-24-bit PCM	48kHz/16-bit PCM
		88.2kHz/16-24-bit	No output produced	88.2kHz/16-24-bit PCM	44.1kHz/16-bit PCM
		96kHz/16-24-bit	No output produced	96kHz/16-24-bit PCM	48kHz/16-bit PCM
		176.4kHz/16-24-bit	No output produced	88.2kHz/16-24-bit PCM	44.1kHz/16-bit PCM
		192kHz/16-24-bit	No output produced	96kHz/16-24-bit PCM	48kHz/16-bit PCM
Video CD	MPEG1		44.1kHz/16-bit PCM		44.1kHz/16-bit PCM
Audio CD	44.1kHz/16-bit linear PCM		44.1kHz/16-bit PCM		44.1kHz/16-bit PCM
MP3 CD	MP3 (MPEG-1 Audio Layer 3)		44.1, 48kHz/16-bit PCM		44.1, 48kHz/16-bit PCM
Super Audio CD	DSD (Direct Stream Digital)		No output produced* ³		No output produced* ³

*¹: Output will be produced from 48kHz/16-bit source.

*²: Output will be produced from 44.1kHz/16-bit source.

*³: Output will consist of 44.1kHz/16-bit linear PCM output when replaying CD layer.

- When digital output is turned off, no digital audio data will be output from the digital audio output terminal (see [page 37](#)).

DVD Setup Menu

Audio Out

- Default setting: **2 Channel**

If you connected this player to your amplifier using the 5.1 channel analog outputs (front, surround, center and subwoofer outs), set this to **5.1 Channel**; if you connected only the stereo outputs, set to **2 Channel**.

If you connected only the stereo outputs, set to **2 Channel**.

Note

- Even if you set **Audio Out** to **5.1 Channel**, you'll only get sound from all speakers when playing a multi-channel DVD-Audio disc, multi-channel Super Audio CD disc, Dolby Digital or DTS encoded DVD disc.
- If you set to **2 Channel**, Dolby Digital and DTS are mixed down to two channels so you still hear all the audio recorded on the disc.
- Some DVD-Audio discs don't allow down-mixing of audio. These discs always output multi-channel audio regardless of the setting made here.
- Sound recorded on MPEG is outputted on 2 channel even if Audio Out is set to **5.1 CH**.

About source audio output

When the source output mode has been switched between the **5.1 Channel** and **2 Channel** mode settings using the **Audio Out** setting in the Setup screen **Audio Setup 1** menu, audio output for each source will be as shown in the following table.

AUDIO CONTENTS	OUTPUT MODE	AUDIO OUT (2 CH)		AUDIO OUT (5.1 CH)			DIGITAL OUTPUT (S/PDIF)	
		L, R (Front L,R)	Center	Surround L,R	Sub Woofer	PCM	Bit Stream	
DVD	Dolby Digital	5.1 CH	Front Lch, Rch	Center	Surround LS, RS	LFE	2 ch DOWNMIX Lch, Rch	Dolby Digital
		2 CH	2 ch DOWNMIX Lch, Rch	MUTE				
	Dolby Digital Karaoke	5.1 CH	Lch, Rch	MUTE			Lch, Rch	Dolby Digital
		2 CH		MUTE				
	LPCM	5.1 CH/ 2 CH	Lch, Rch	MUTE			Lch, Rch	
	DTS	5.1 CH	Front Lch, Rch	Center	Surround LS, RS	LFE	DTS	
		2 CH	2 ch DOWNMIX Lch, Rch	MUTE				
	MPEG	5.1 CH/ 2 CH	2 ch DOWNMIX Lch, Rch	MUTE			Lch, Rch	MPEG
	DVD -Audio	5.1 CH	Front Lch, Rch	Center	Surround LS, RS	LFE	2 ch DOWNMIX Lch, Rch ²	
		2 CH	2 ch DOWNMIX Lch, Rch ¹	MUTE				
	CD	5.1 CH/ 2 CH	Lch, Rch	MUTE			Lch, Rch	
	Super Audio CD	5.1 CH	Front Lch, Rch	Center	Surround LS, RS	LFE	MUTE	
2 CH		2 ch DOWNMIX Lch, Rch	MUTE					
Video CD	5.1 CH/ 2 CH	Lch, Rch	MUTE			Lch, Rch		
DVD-RW	5.1 CH/ 2 CH	Lch, Rch ³	MUTE			Dolby Digital, MPEG or PCM (Lch, Rch)		

¹: Discs that prohibit downmixing will be output as 5.1 channel even if **2 Channel** is selected.

²: Discs that prohibit downmixing also mute the digital output.

³: If the sound is mono, Lch and Rch audio will be the same.

Speaker Size

- Default setting: **Front L/R: Large | Center: Large | LFE: On | Surround L/R: Large**

You only need to make this setting if you connected this player to your amplifier using the 5.1 channel analog outputs. This setting does not affect digital audio output.

Follow the on-screen displays to describe which speakers are in your system and their sizes and positions.

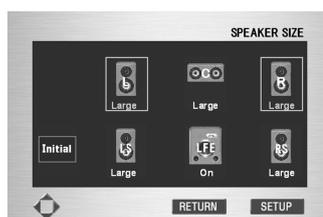
Set the size of your speakers in the Speaker Size screen. The front left/right (L/R), center (C) and surround left/right (LS/RS) speakers can each be set to **Large**, **Small** or **Off**. Set a speaker to **Large** if the main speaker cone is 12cm or more; set to **Small** if it's less than 12cm.

The subwoofer (LFE) can only be set to **On** or **Off**.

The graphic of the screen represents your speaker setup, with the currently selected speaker's name highlighted in yellow.



Press ENTER



Cursor buttons (◀/▶): Speaker Change
Cursor buttons (▲/▼): Size Change

Note

- Selecting **Initial** from on-screen will cause all settings to return to their default settings.
- For DVD-Audio and DTS-CD, if the **C**, **LS** or **RS** speakers is set to **Off**, the audio is automatically down mixed to stereo.

Distance

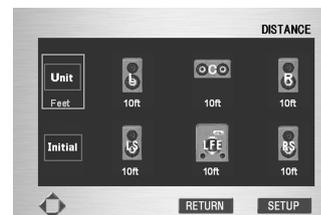
- Default setting: **Unit: Feet | Distance: 10 feet**

Set the distance from your main listening position to each speaker in the Distance screen. The distance setting for any speaker that was set to **Off** in the Speaker Size screen will be disappeared. For the other speakers, enter the distance to the nearest 1 feet (0.3m). You can set the distance for the L/R speakers between 1.0 feet (0.3m) and 40 feet (12m). Note that you must set the **C** and **SW** speakers within 15 feet (4.5m) of the L/R setting. The **LS** and **RS** speakers must be set within -15 feet (-4.5m) and +15 feet (+4.5m) of the L/R setting.

The graphic of the screen represents your speaker setup, with the currently selected speaker's name highlighted in yellow.



Press ENTER



Cursor buttons (◀/▶): Speaker Change
Cursor buttons (▲/▼): Distance Change

Note

- If your subwoofer is placed beyond the adjustment range (L/R+15 feet (4.5m)), set to the nearest setting possible. Surround sound cohesion should not be affected very much.
- Selecting **Initial** from on-screen will cause all settings to return to their default settings.
- It is possible to also set **Distance** for Super Audio CD by setting **Super Audio CD Play** to **PCM** (page 44).

Level

- Default setting: **Fix**

You may want to make this setting if you connected this player to your amplifier using the 5.1 channel analog outputs.

Under the default setting, all channels are output at the relative volumes they were recorded at. Change the setting to **Variable**, if you want to adjust the relative volume levels of any of the speakers. Adjustment is in the range of -6dB to +6dB, in steps of 0.5dB.

- When you set it to **Variable**, the overall output level may sound quieter than when set to **Fix**. This is not a malfunction.

To help you gauge the correct gain levels, set the **Test Tone** to **Manual** (test tone from just that speaker) or **Auto** (test tone from each speaker in turn), then adjust the gain so that all speakers appear to be the same volume from your listening position.

Follow the on-screen displays to select speakers and set the Output Levels.

- Many AV amplifiers allow you to make similar settings at the amplifier stage. In this case, set the output levels at the player or the amplifier, not both.
- As the test tone plays through a speaker, its name is highlighted in yellow on-screen.

Remember

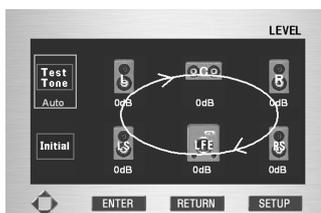
You can't use the test tone function when the **Audio Out** setting is **2 Channel** (see page 39). The test tone will not work with the disc tray open, or while a disc is playing.



Press ENTER



Press ENTER



Cursor buttons (◀/▶): Speaker Change (at manual test tone)

Cursor buttons (▲/▼): Output Level Change

Setting up the Audio Setup 2

- 1 Press the **SET UP** button.
- 2 Select **Setup** using the cursor buttons (**▲/▼**), then press the cursor (**▶**) or **ENTER** button.
- 3 Select **Audio Setup 2** using the cursor buttons (**▲/▼**), then press the cursor (**▶**) or **ENTER** button.
- 4 Use the cursor buttons (**▲/▼**) to select the desired item, then press the cursor (**▶**) or **ENTER** button.



Note

To make the **SETUP** menu disappear or return to the menu screen during setup, press the **RETURN** or cursor button (**◀**).

Super Audio CD Mode

- Default setting: **Stereo**

Super Audio CD discs can be divided up into several different areas – stereo audio, Multi channel audio and, for hybrid Super Audio CDs, standard CD audio. The Super Audio CD Play setting enables you to select which area of the disc you want to play with the cursor buttons (**◀/▶**).



Note

- If you select an area that isn't on the disc loaded, a different area of the disc will play. For example, if you choose standard CD audio but the disc loaded is not a hybrid Super Audio CD, the stereo Super Audio CD audio will play.
- You can also select it using the **S.MODE** button on the remote control.

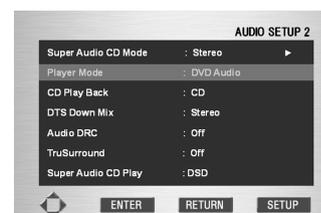
Player Mode

- Default setting: **DVD Audio**

Replay DVD Audio as DVD Video? (DVD replay method)

Use the cursor buttons (**◀/▶**) to select either **DVD Audio** or **DVD Video**.

- **DVD Audio**
Should be selected when the player is to be used as a DVD audio player.
- **DVD Video**
Should be selected when the player is to be used as a DVD video player.



Note

Even when **DVD Video** has been selected, the selected setting will return to **DVD Audio** (i.e., to the default setting) when the disc table is opened or when the power is turned off.

CD Play Back

- Default setting: **CD**

Replay DTS CD? (CD replay settings)

Use the cursor buttons (◀/▶) to select either **CD** or **DTS CD**.

- **CD**
Should be selected whenever listening to a regular music CD.
- **DTS CD**
Should be selected when listening to a DTS CD.



Note

When **DTS CD** has been selected and you try to listen to a regular music CD, no sound will be output from the audio output terminal and digital output.

When **CD** has been selected and you replay a DTS CD, there may be times when noise is the only sound produced at first.

DTS Down Mix

- Default setting: **Stereo**

Specify DTS downmix settings?

Use the cursor buttons (◀/▶) to select either **Stereo** or **Lt/Rt**.

- **Stereo**
Used to specify stereo downmixing as the type of DTS downmixing to be performed. This makes it possible to enjoy ordinary stereo sound.
- **Lt/Rt**
Used to specify that DTS multi-channel input is to be downmixed into a format compatible with the Dolby Surround matrix format. This option may be selected to enjoy surround sound when the player is connected to Dolby Surround-compatible AV amplifier.



Note

- When **DTS Digital Out** has been set to **PCM**, all digital output will be automatically set to stereo output no matter what **DTS Down Mix** setting has been specified.
- When **2 Channel** is selected by **Audio Out**, the DTS multi-channel's down mix method can be selected.

Audio DRC

- Default setting: **Off**

When watching Dolby Digital DVDs at low volume, it's easy to lose the low level sounds completely, including some of the dialog. Switching on Audio DRC (Dynamic Range Compression) can help things by bringing up the low level sounds, while keeping the lid on high level peaks.

The **Off** setting leaves the original dynamics intact; **On** 'squashes' the dynamics; but exactly how much difference you can hear between the settings will depend on the material you're watching.



Remember

- Audio DRC is only effective with Dolby Digital audio sources.
- The effect of Audio DRC depends on your speakers and AV amplifier settings.

TruSurround

- Default setting: **Off**

If you connected your DVD player using only the stereo analog outputs and set **Audio Out** to **2 Channel** (page 39), you can simulate surround sound by setting **TruSurround** to On.



Note

- Works with DVD-Video and VCD only.
- The digital audio output is processed by TruSurround when playing 2 channel Dolby Digital DVDs or Video CDs with TruSurround On. It is recommended that TruSurround be turned **Off** when connecting the player to your amp using a coaxial or optical connection.
- How good the surround effect is varies with the disc.

- When **TruSurround** is **On**, the audio can be output only for the L/R channels on the Front.

SRS TruSurround

SRS TruSurround uses technology that simulates multichannel surround sound using only two speakers.



Super Audio CD Play

- Default setting: **DSD**

Either **DSD** or **PCM** is selected using the cursor button (◀/▶).



- **DSD**

DSD that is the original format of Super Audio CD plays. It is not possible to set the **Distance** in the speaker settings.

- **PCM**

DSD signals are played converted to **PCM**. It is possible to set the **Distance** in the speaker settings.

Setting up the Video Setup

- 1 Press the **SET UP** button.
- 2 Select **Setup** using the cursor buttons (**▲/▼**), then press the cursor (**▶**) or **ENTER** button.
- 3 Select **Video Setup** using the cursor buttons (**▲/▼**), then press the cursor (**▶**) or **ENTER** button.
- 4 Use the cursor buttons (**▲/▼**) to select the desired item, then press the cursor (**▶**) or **ENTER** button.



Note

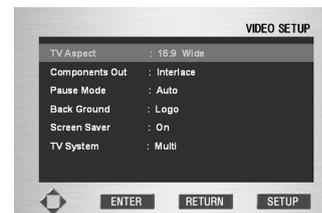
- To make the **SETUP** menu disappear or return to the menu screen during setup, press the **RETURN** or cursor button (**◀**).

TV Aspect

- Default setting: **16:9 Wide**

If you have a widescreen TV, select the **16:9 Wide** setting—widescreen DVD software is then shown using the full screen area. When playing software recorded in conventional (4:3) format, the settings on your TV will determine how the material is presented—see the manual that came with your TV for details on what options are available. If your TV does not have settings for how 4:3 sources look, choose the **16:9 Squeeze** setting. The picture you see on your TV will be determined by the disc. See **page 46** for more information.

If you have a conventional TV, choose either **4:3 L-Box** or **4:3 Pan Scan**. In Letter Box mode, widescreen software is shown with black bars at the top and bottom of the screen. Pan & Scan chops the sides off widescreen material to make it fit the 4:3 screen (so even though the picture looks larger on the screen, you're actually seeing less of the movie).



Press **ENTER**



Note

Some discs will not allow you to change the aspect ratio.

When viewing on a standard TV or monitor

Screen format of disc	Setting	Appearance	Appearance
16:9 	4:3 L - Box		The picture is shown in widescreen with black bars at the top and bottom of the screen.
	4:3 Pan Scan		The sides of the picture are cropped so that the picture fills the whole screen.
	16:9 Wide		The picture is squashed. Set to either Pan & Scan or Letter Box.
4:3 	16:9 Wide 4:3 L - Box 4:3 Pan Scan		The picture is presented correctly on any setting.

When viewing on a widescreen TV or monitor

Screen format of disc	Player Setting	TV Setting	Appearance
16:9 	16:9 Wide	Normal	 The picture is squashed. Set your TV to 'Full'.
		Full	 The picture is presented in widescreen.
4:3 	16:9 Wide	Normal	 The picture is presented with black bars either side.
		Full	 The picture is stretched. Set your TV to 'Normal'.

Choose this setting if you have a progressive scan-compatible TV and the aspect ratio cannot be changed.

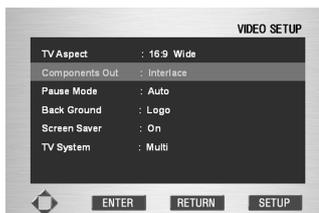
4:3 	16:9 Squeeze (This setting only has any effect with progressive output.)	Full	 The picture is presented with black bars either side.
--	---	------	--

Components Out

- Default setting: **Interlace**

Compared to a standard interlaced TV picture, a progressive scan TV is capable of stable, flicker-free images.

Set only if you connected the **COMPONENT VIDEO OUT** to a progressive scan-compatible TV or monitor.



- **Progressive** – Use this setting with TVs and monitors that have progressive scan component video inputs. Check the TV's instruction manual if you are not sure about this.
- **Interlace** – Use this setting with regular TVs that are not compatible with progressive scan. Check the TV's instruction manual if you are not sure about this.

Tip

If this player is set to output progressive-scan video, it's possible that the picture will appear stretched when playing discs recorded in 4:3 format. This happens when the TV's aspect ratio is set to 'Full'. To see the picture in its correct aspect ratio, change the TV setting to 'Normal'.

If your TV doesn't have settings to change the aspect ratio of the picture, set this player to **16:9 Squeeze**.

Note

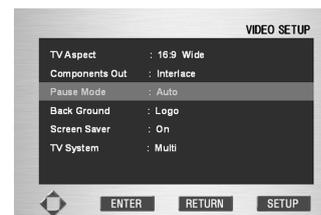
- If you connect a TV that is not compatible with a progressive scan signal and choose one of the progressive scan settings, you will not be able to see any picture at all. With your TV connected using either the composite or S-Video terminals, choose the **Interlace** setting in the **Component Video** menu.
- Compatibility of this unit with progressive-scan TVs:
Note that not all high definition television sets are fully compatible with this unit and may cause artifacts to be displayed in the picture. In case of progressive scan picture problems, try switching the connection to the "STANDARD DEFINITION" output.

Pause Mode

- Default setting: **Auto**

The player uses one of two processes when displaying a still frame from a DVD disc. The default Auto setting automatically chooses the best setting each time.

- **Field** – produces a stable, generally shake-free image.
- **Frame** – produces a sharper image, but more prone to shake than field stills.



Back Ground

- Default setting: **Logo**

This specifies what the screen shows when the player is stopped.



Note

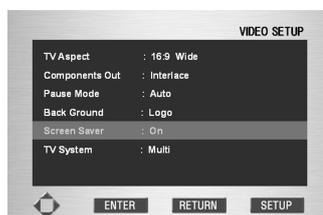
If **Capture** is selected, a picture taken in by **Capture** is displayed. (page 29)



Screen Saver

- Default setting: **On**

If a constant image is displayed on a conventional CRT-type TV, it can “burn in” leaving a ghost image on the screen. Switch to **On** to make sure that a constant image is not displayed for a dangerously long time.



TV System

- Default setting: **Multi**

The default setting of this player is **Multi**, and unless you notice that the picture is distorted when playing some discs, you should leave it set to **Multi**.

If you experience picture distortion with some discs, set the TV system to match your country or region’s system. Doing this, however, may restrict the kinds of disc you can watch. The table below shows what kinds of disc are compatible with each setting (**Multi**, **PAL** and **NTSC**).

Disc		Output format		
Type	Format	Position of TV SYSTEM		
		NTSC	PAL	Multi
DVD	NTSC	NTSC	MOD. PAL	NTSC
	PAL	NTSC	PAL	PAL
Video CD/ Super VCD	NTSC	NTSC	MOD. PAL	NTSC
	PAL	NTSC	PAL	PAL
Super Audio CD		NTSC	PAL	NTSC
CD, No disc		NTSC	PAL	NTSC

MOD. (Modulation) PAL

- **Shrink**

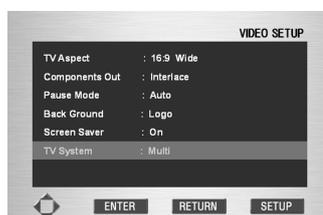
Most models of the newly developed count-down PAL TV system detect 50 Hz (PAL)/60 Hz (NTSC) and automatically switch vertical amplitude, resulting in a display without vertical shrinkage.

- If your PAL TV does not have a V-Hold control, you may not be able to view NTSC discs, because the picture may roll. If the TV has a V-Hold control, adjust it until the picture stops rolling. On some TVs, the picture may shrink vertically, leaving black bands at the top and bottom of the screen. This is not a malfunction; it is caused by the NTSC to PAL conversion.



Note

- When the selected format is changed to a different format from the TV format in which a program was recorded, the picture may become jerky and the upper and lower parts of the screen may disappear. The above setting should be specified to match the format of your own TV.
- Changes can be made only in the Stop mode. When **RESUME** is indicated on the display, put the player in the Stop mode by repressing **■ (STOP)** button.



Setting up the Parental Setup

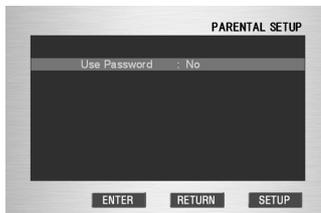
The Parental Control function works in conjunction with DVDs that have been assigned a rating - which helps you control the types of DVDs that your family watches. There are up to 8 rating levels on a disc.

Use Password

- 1 Press the **SET UP** button.
- 2 Select **Setup** using the cursor buttons (▲/▼), then press the cursor (▶) or **ENTER** button.
- 3 Select **Parental Setup** using the cursor buttons (▲/▼), then press the cursor (▶) or **ENTER** button.



- 4 Use the cursor button (▶) or **ENTER** to select **Yes** if you want to use a password. The Enter Password screen appears.



- 5 Enter your password. The Re-enter Password screen appears to confirm the password. Enter your password again. The Parental Control screen appears.

Rating Level

The Rating Level will work only when Use Password is set to Yes. Use the cursor button (▶) or **ENTER** to select **Rating Level**.



- Use the cursor buttons (▲/▼) to select a level (e.g. Level 6) and press **ENTER**. Discs that contain Level 7 will now not play.



- To cancel the rating level, use the cursor button (▶) or **ENTER** to set Use Password to **No**.

Change Password

- Use the cursor buttons (▲/▼) to select **Change Password**. Press **ENTER**. The Change Password screen appears.
- Enter your new password. Re-enter the new password again.

Note

- To make the SETUP menu disappear or return to the menu screen during setup, press the **RETURN** or cursor button (◀).
- If you have forgotten your password, see Resetting the Player on **page 54**.

Setting up the Others Setup

- 1 Press the **SET UP** button.
- 2 Select **Setup** using the cursor buttons (**▲/▼**), then press the cursor (**▶**) or **ENTER** button.
- 3 Select **Others Setup** using the cursor buttons (**▲/▼**), then press the cursor (**▶**) or **ENTER** button.
- 4 Use the cursor buttons (**▲/▼**) to select the desired item, then press the cursor (**▶**) or **ENTER** button.



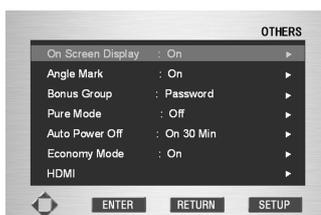
Note

To make the **SETUP** menu disappear or return to the menu screen during setup, press the **RETURN** or cursor button (**◀**).

On Screen Display

- Default setting: **On**

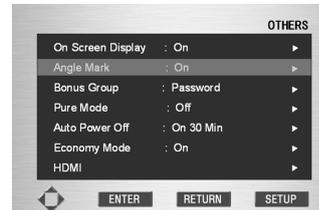
If you prefer not to have the operation displays shown on-screen, change the setting to **Off**.



Angle Mark

- Default setting: **On**

If you prefer not to see the camera icon on-screen during camera-angle scenes on DVD discs, change this setting to **Off**.



Bonus Group

Some DVD-Audio discs have an extra 'bonus' group that requires a 4-digit key number to access. See the disc packaging for details and the key number. When you try and play the bonus group, the key number input screen will automatically appear. Input the number.



Press **ENTER**



Note

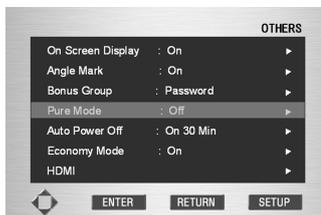
If you eject the disc, switch the power off, or unplug the player, you will need to re-enter the key number.

Pure Mode

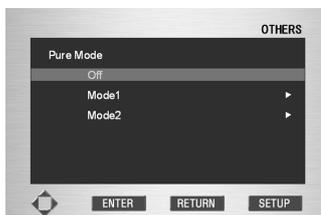
- Default setting: **Off**

If you play a CD or Super Audio CD while **Pure Mode, Mode1** or **Mode2** is selected, then **Display, Video Out** and **Digital Out** shut off automatically. And if you push the **FL OFF** button on the front panel or **DIMMER** button on the remote control during the **Pure Mode ON**, for three seconds, only **Display** is displayed. **Display** and **Video Out** are on, and **Digital Out** is off during **Stop**.

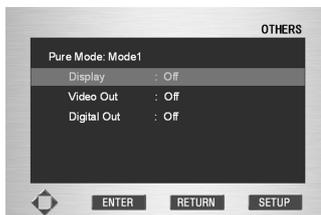
Depending on the disc, it may not operate normally. If this happens, use it after turning off **Pure Mode**.



Press ENTER



Select **Mode1** or **Mode2** using the cursor buttons (▲/▼), then press the cursor button (▶) or **ENTER**.



Select the item you want to set to **Off** when you want to play back a CD or Super Audio CD.

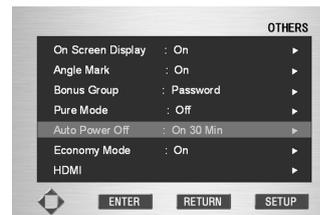
- **Mode1** default settings
Display, Video Out and **Digital Out** are all **Off**.
- **Mode2** default settings
Video Out and **Digital Out** are **Off**.

Note

- When the video output has been set to **Off** in **Pure Mode** and CD or Super Audio CD have been played, audio cannot be output from HDMI.
- During **Pure Mode** operation, part of the functions cannot operate.

Auto Power Off

- Default setting: **On 30 Min**



If **On 30 Min** is selected, the standby mode is automatically selected to save power if the player is left in the **Stop** mode for about 30 minutes.

Economy Mode

- Default setting: **On**

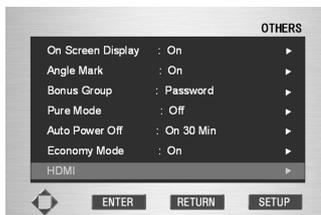


This setting is for customized installation. Please do not touch this setting.

HDMI

This setting is used when the unit is connected by HDMI or DVI with a TV or projector.

This setting is enabled only when the HDMI option of the FL menu is On. (page 32)



Press ENTER



1 Select Resolution



- **VGA <640 X 480>**
- **480p/576p (525p/625p)**
- **720p (750p)**
- **1080i (1125i)**

Select one of the above with the cursor buttons (▲/▼) and then press the **ENTER** button.

Note

- The resolutions available for HDMI outputs depend on the connected TV or projector. For details, see the user's manual of your TV or projector.
- If, after changing the resolution, images are not displayed properly on the TV or projector, press and hold the **MENU** button for two seconds to bring up the FL menu. Then set **HDMI RESET** to reset. (page 32)
- VGA can be outputted only when TV System is set to NTSC.
- When the resolution changes, the image may be corrupted or the output may take longer than normal.

2 Select Format



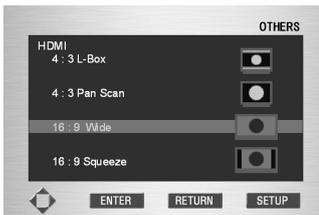
- **RGB-Normal**
- **RGB-Expand**
- **YCbCr-1 (4:4:4)**
- **YCbCr-2 (4:2:2)**

Select one of the above with the cursor buttons (▲/▼) and then press the **ENTER** button.

Note

- Image data values in RGB-Normal format range between 16 (black) and 235 (white).
- Image data values in RGB-Expand format range between 0 (black) and 246 (white).
- The formats available for HDMI outputs depend on the connected TV or projector. For details, see the user's manual of your TV or projector.
- Only RGB-Normal and RGB-Expand can be selected for DVI outputs.
- When black rise to the surface depending on the display, black Setup in the Video Adjustment set to OIRE.

3 Select TV Aspect



- **4:3 L - Box**
- **4:3 Pan Scan**
- **16:9 Wide**
- **16:9 Squeeze**

Select one of the above with the cursor buttons (▲/▼) and then press the **ENTER** button.

Note

- The TV aspect ratios available for HDMI outputs depend on the connected TV or projector. For details, see the user's manual of your TV or projector.
- Only **16:9 Wide** and **16:9 Squeeze** can be selected when the HDMI/DVI resolution is set to 720p or 1080i.
- When this TV Aspect is in effect, it also determines the aspect output of Composite Video, S-Video, and Component Video.

Setup Examples

Resolution (HDMI Setting)	Playback Disc			
	Disc Recorded in Squeeze Ratio		Disc Recorded in 4:3 Ratio	
	Aspect (HDMI Setting)	Monitor Settings	Aspect (HDMI Setting)	Monitor Settings
480p/576p (525p/625p)	16:9 Wide	Full/Squeeze	4:3 16:9 Wide	Standard Normal 4:3 Through
720p/1080i (750p/1125i)		Normal/Through	16:9 Squeeze	

Some monitors may use setting names that are different than those shown here.

4 Select Audio



- **Auto:** Audio is output as a bit stream when the connected device is set to Dolby Digital, DTS, or MPEG. Audio is output as linear PCM when the connected device is set to Linear PCM. If the connected device cannot accept bit streams, audio will be output as linear PCM.
- **PCM:** Audio is converted to linear PCM.

Select one of the above with the cursor buttons (◀/▶).

Note

- Audio is not output from Super Audio CDs or DVD-Audio discs with CPPM protection.
- Audio is not output when the player is connected to a device with an HDCP-compatible DVI jack.
- All of PCM signal from digital out is converted to 44.1 kHz/48kHz.
- If DTS is played when connected equipment is set to **PCM** or **Audio** is set to **PCM**, the output of analog output from the unit is impossible.
- Turn the power on the front panel **OFF** during play or pause. Noise from a television etc. may come out.
- When the video output has been turned off using the **VIDEO ON/OFF** button on the remote control, audio cannot be output (see **page 15**).
- When the video output has been set to **Off** in **Pure Mode** and CD or Super Audio CD have been played, audio cannot be output.

HDMI Audio Output

Audio Formats		HDMI Setting (Audio)	
		Auto	PCM
DVD	Dolby Digital	Dolby Digital* ¹	2 Channel DOWNMIX
	Dolby Digital Karaoke	Dolby Digital* ¹	Left/Right
	Linear PCM	Left/Right	Left/Right
	DTS	DTS* ¹	2 Channel DOWNMIX
	MPEG	MPEG* ¹	Left/Right
DVD-Audio	With CPPM protection	—* ²	—* ²
	Without CPPM protection	2 Channel DOWNMIX* ³	2 Channel DOWNMIX* ³
CD/MP3/Super Audio CD* ⁴		Left/Right	
DTS CD		DTS	
Video CD		Left/Right	

*¹: The player automatically switches to PCM output when the connected device does not support Dolby Digital, DTS, or MPEG bit streams.

*²: Audio is not output from DVD-Audio discs with CPPM copyright protection.

- Audio is not output for sections marked with in the table.

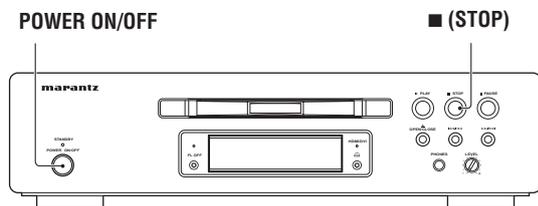
*³: Audio is not output from discs that prohibit 5.1 channel mode or downmixing.

*⁴: Audio is not output from Super Audio CDs. This applies to only play the CD Audio part.

Resetting the Player

Resetting the player returns all menu, picture and password settings to their factory defaults.

To reset the player, press and hold **■ (STOP)** on the front panel when pressing Power switch to turn the power on.



Note

- Static electricity or other external influences may cause malfunctioning of this unit. In this case, unplug the power cord and then plug back in. This will usually reset the unit for proper operation. If this does not correct the problem, please consult your nearest MARANTZ service center.
- If this operation is performed, all memories in which the **Program Memory (page 25)**, **Condition Memory (page 21)**, **Bookmark (page 24)**, **Capture (page 29)** and **Video Adjust's Memory (page 30)** have been entered are simultaneously erased. Be extremely careful before doing this operation.

Additional Information

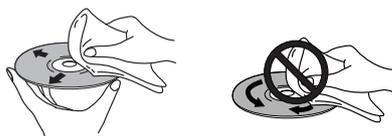
Handling discs

When holding discs of any type, take care not to leave fingerprints, dirt or scratches on the disc surface. Hold the disc by its edge or by the center hole and edge.



Damaged or dirty discs can affect playback performance. Take care also not to scratch the label side of the disc. Although not as fragile as the recorded side, scratches can still result in a disc becoming unusable.

Should a disc become marked with fingerprints, dust, etc., clean using a soft, dry cloth, wiping the disc lightly from the center to the outside edge as shown in the diagram below.



Wipe lightly from the center of the disc using straight strokes.

Don't wipe the disc surface using circular strokes.

If necessary, use a cloth soaked in alcohol, or a commercially available CD/DVD cleaning kit to clean a disc more thoroughly. Never use benzine, thinner or other cleaning agents, including products designed for cleaning vinyl records.

Storing discs

Although CDs and DVD discs are more durable than vinyl records, you should still take care to handle and store discs correctly. When you're not using a disc, return it to its case and store upright. Avoid leaving discs in excessively cold, humid, or hot environments (including under direct sunlight).

Don't glue paper or put stickers onto the disc, or use a pencil, ball-point pen or other sharp-tipped writing instrument. These could all damage the disc.

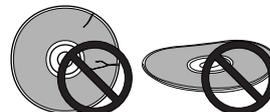


For more detailed care information see the instructions that come with discs.

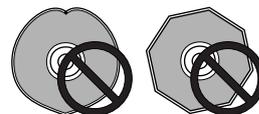
Do not load more than one disc into the player.

Discs to avoid

Discs spin at high speed inside the player. If you can see that a disc is cracked, chipped, warped, or otherwise damaged, don't risk using it in your player—you could end up damaging the unit.



This unit is designed for use with conventional, fully circular discs only. Use of shaped discs is not recommended for this product.



Cleaning the pickup lens

The DVD player's lens should not become dirty in normal use, but if for some reason it should malfunction due to dust or dirt, consult your nearest MARANTZ-authorized service center. Although lens cleaners for CD players are commercially available, we do not recommend using them since some may damage the lens.

Problems with condensation

Condensation may form inside the player if it is brought into a warm room from outside, or if the temperature of the room rises quickly. Although the condensation won't damage the player, it may temporarily impair its performance. For this reason you should leave it to adjust to the warmer temperature for about an hour before switching on and using.

Hints on installation

We want you to enjoy using this unit for years to come, so please bear in mind the following points when choosing a suitable location for it:

Do...

- ✓ Use in a well-ventilated room.
- ✓ Place on a solid, flat, level surface, such as a table, shelf or stereo rack.

Don't...

- ✗ Use in a place exposed to high temperatures or humidity, including near radiators and other heat-generating appliances.
- ✗ Place on a window sill or other place where the player will be exposed to direct sunlight.
- ✗ Use in an excessively dusty or damp environment.
- ✗ Place directly on top of an amplifier, or other component in your stereo system that becomes hot in use.
- ✗ Use near a television or monitor as you may experience interference—especially if the television uses an indoor antenna.
- ✗ Use in a kitchen or other room where the player may be exposed to smoke or steam.
- ✗ Use on a thick rug or carpet, or cover with cloth—this may prevent proper cooling of the unit.
- ✗ Place on an unstable surface, or one that is not large enough to support all four of the unit's feet.

Moving the player

If you need to move the player, first press **POWER ON/OFF** button on the front panel to turn the player off, then unplug the power cord. Never lift or move the unit during playback—discs rotate at a high speed and may be damaged.

Power cord caution

Handle the power cord by the plug part. Do not pull out the plug by tugging the cord, and never touch the power cord when your hands are wet, as this could cause a short circuit or electric shock. Do not place the unit, a piece of furniture, or other object on the power cord or pinch the cord in any other way. Never make a knot in the cord or tie it with other cords. The power cords should be routed so that they are not likely to be stepped on. A damaged power cord can cause a fire or give you an electric shock. Check the power cord once in a while. If you find it damaged, ask your nearest MARANTZ authorized service center or your dealer for a replacement.

Additional Information

Glossary

Analog audio

An electrical signal that directly represents sound. Compare this to digital audio which can be an electrical signal, but is an indirect representation of sound. See also *Digital audio*.

Aspect ratio

The width of a TV screen relative to its height. Conventional TVs are 4:3 (in other words, the screen is almost square); widescreen models are 16:9 (the screen is almost twice as wide as it is high).

Bonus Group (DVD-Audio only)

An 'extra' group on some DVD-Audio discs that requires a key number to access. See also *Group*.

Browsable pictures (DVD-Audio only)

A feature of some DVD-Audio discs in which the user can browse still pictures recorded on the disc as the audio is played. See also *Slideshow*.

Chapter (DVD-Video, DVD-RW)

Just as a book is split up into several chapters, a title on a DVD disc is usually divided into chapters. See also *Title*.

Digital audio

An indirect representation of sound by numbers. During recording, the sound is measured at discrete intervals (44,100 times a second for CD audio) by an analog-to-digital converter, generating a stream of numbers. On playback, a digital-to-analog converter generates an analog signal based on these numbers. See also *Sampling frequency* and *Analog audio*.

Dolby Digital



Using a maximum of 5.1 channels of audio, this high quality surround system is used in many of the finer movie theaters around the world.

DTS



DTS stands for Digital Theater System. DTS is a surround system different from *Dolby Digital* that has become a popular surround sound format for movies.

Dynamic range

The difference between the quietest and loudest sounds possible in an audio signal (without distorting or getting lost in noise). Dolby Digital and DTS soundtracks are capable of a very wide dynamic range, delivering dramatic cinema-like effects.

File extension

A tag added to the end of a filename to indicate the type of file. For example, ".mp3" indicates an MP3 file.

Group (DVD-Audio only)

A collection of tracks on a DVD-Audio disc. Equivalent to a DVD-Video title. See also *Title* and *Track*.

HDCP

HDCP is the acronym for High-bandwidth Digital Content Protection.

It is an encrypting method for DVI-use images and its purpose is the protection of image content against illegal copying. Receiving the encrypted signals requires a display with HDCP-compatible DVI input.

HDMI

HDMI (High-Definition Multimedia Interface) is an interface that expands DVI for next-generation digital audiovisual devices.

HDMI terminals can simultaneously transmit uncompressed digital images and the digital audio signals of Dolby Digital DTS, Linear PCM, etc.

Interlaced video

A method of displaying a picture in which odd-numbered lines are updated in one pass, then even-numbered lines updated in the next. See also *Progressive scan video*.

MP3

MP3 (MPEG1 audio layer 3) is a compressed audio file format. Files are recognized by their file extension ".mp3" or ".MP3".

MPEG audio

An audio format used on Video CDs and some DVD discs. This unit can convert MPEG audio to PCM format for wider compatibility with digital recorders and AV amplifiers. See also *PCM*.

MPEG video

The video format used for Video CDs and DVDs. Video CDs uses the older MPEG-1 standard, while DVD uses the newer and much better quality MPEG-2 standard.

Multi-session

A CD-R/RW that contains two or more 'sessions'. Each session is a complete recording process, so each session is read as a complete disc. This player can only read the first session on a disc.

Optical digital output

A jack that outputs digital audio in the form of light pulses. Connect components with optical digital jacks using a special optical cord, available from good audio dealers.

Packed PCM (DVD-Audio only)

A lossless compression system that enables more PCM audio to be stored on a DVD-Audio disc than would otherwise be possible.

PCM (Pulse Code Modulation)

The most common system of encoding digital audio, found on CDs and DAT. Excellent quality, but requires a lot of data compared to formats such as Dolby Digital and MPEG audio. For compatibility with digital audio recorders (CD, MD and DAT) and AV amplifiers with digital inputs, this unit can convert Dolby Digital, DTS and MPEG audio to PCM. See also *Digital audio*.

PBC (PlayBack Control) (Video CD only)

A system of navigating a Video CD through on-screen menus recorded onto the disc. Especially good for discs that you would normally not watch from beginning to end all at once—karaoke discs, for example.

Progressive scan video

Also called non-interlaced video, this method of displaying a picture updates all the lines in one pass, resulting in a more stable, flicker-free image than interlaced video (for a given scanning rate). See also *Interlaced video*.

Regions (DVD-Video only)

These associate discs and players with particular areas of the world. This unit will only play discs that have compatible region codes. You can find the region code of your unit by looking on the rear panel. Some discs are compatible with more than one region (or all regions).

Sampling frequency

The rate at which sound is measured to be turned into digital audio data. The higher the rate, the better the sound quality, but the more digital information is generated. Standard CD audio has a sampling frequency of 44.1 kHz, which means 44,100 samples (measurements) per second. See also *Digital audio*.

Slideshow (DVD, Video CD)

A feature of some DVD discs in which still pictures recorded on the disc cycle automatically as the audio is played. See also *Browsable pictures*.

Super Audio CDs

This is a high audio quality pure audio standard with more data recorded based on CD standards. There are three different types of super audio CD discs, single layer, dual layer and hybrid. Hybrid discs have the structure of both CD and super audio CD discs.

Title (DVD-Video only)

A collection of chapters on a DVD-Video disc. Equivalent to a DVD-Audio group. See also *Chapter* and *Group*.

Track

Audio CDs, Video CDs and DVD-Audio discs all use tracks to divide up the content of a disc. The DVD-Video equivalent is called a chapter. See also *Chapter* and *Group*.

Additional Information

Troubleshooting

Incorrect operation is often mistaken for trouble or malfunction. If you think that there is something wrong with this unit, check the points below. Sometimes the trouble may lie in another component. Inspect the other components and electrical appliances being used. If the trouble cannot be rectified after checking the items below, ask your nearest MARANTZ authorized service center or your dealer to carry out repair work.

The disc is ejected automatically after loading.

- Dirty or damaged disc.
See **page 55** for disc care information.
- Disc not seated properly in the disc guide.
Align the disc properly.
- Incompatible region number.
If the region number on a DVD-Video disc does not match the number on the player, the disc cannot be used (**page 9**).
- Condensation inside the player.
Allow time for condensation to evaporate. Avoid using the player near an air-conditioning unit.

Playback is not possible.

- Disc is loaded upside down.
Reload the disc with the label side face-up.

Cannot play DVD-RW disc.

- DVD-RW disc with DVD-Video format only can be played.

DVD-Audio playback stops.

- The disc may have been illegally copied.

⊘ mark appears on screen.

- The operation is prohibited by the player.
- The selected function does not operate for that disc.

Picture playback stops and the operation buttons cannot be used.

- Press ■ (STOP), then start playback again ► (PLAY).
- Switch the power off once using the front panel **POWER ON/OFF** and then switch on again using the front panel **POWER ON/OFF**.

New settings made in the Setup screen menus while a disc is playing are ineffective.

- Some settings can be changed while a disc is playing, but are not effective until the disc is stopped then restarted. This is not a malfunction.
Make the same setting when the player is stopped.
Press ■ (STOP), then restart playback ► (PLAY).
Note that making settings in the Setup screen menus may cancel the **RESUME** function.

Settings are canceled.

- When the power is cut due to power failure or by unplugging the power cord, settings will be canceled.
Before unplugging the power cord, press the **POWER** button on the remote control and check that **STANDBY** indicator on the front panel is lit, then press **POWER ON/OFF** on the front panel to turn the player off.

No picture/No color.

- Incorrect video connections.
Check that connections are correct and that plugs are inserted fully.
- TV/monitor or AV amplifier settings are incorrect.
Check the instruction manual of the connected equipment.
- The **Components Out** menu is set to **Progressive** but your TV/monitor is not compatible with progressive scan.
Reconnect the player to your TV using a composite or S-Video cord and set the TV to the appropriate input. Now choose the Interlace setting in the **Components Out** menu, then switch the TV input back to the component input. (**page 47**)
- Check the **VIDEO ON/OFF** button on the remote control (**page 15**).

Screen is stretched or aspect does not change.

- The **TV Screen** setting in the Setup menu is incorrect.
Set the **TV Screen** option to match the TV/monitor you're using (**page 45**).

Picture disturbance during playback or dark.

- This player is compatible with Macro-Vision System copy guard. Some discs include a copy prevention signal, and when this type of disc is played back, stripes etc., may appear on some sections of the picture depending on the TV. This is not a malfunction.
 - Discs respond differently to particular player functions. This may result in the screen becoming black for a brief instant or shaking slightly when the function is executed.

These problems are largely due to differences between discs and disc content and are not malfunctions of this player.
 - When using progressive-scan

If your TV is connected using the **COMPONENT VIDEO OUT** jacks, set the **Components Out** menu to **Interlace** (page 47).
-

When recorded on a VCR or passed through an AV selector, there is disturbance in the playback picture.

- Due to the player's copy protection circuits, connection of this device through a VCR or an AV selector may prevent recording or cause picture problems. This is not a malfunction.
-

The remote control doesn't seem to work.

- The remote control is too far from the player, or the angle with the remote sensor is too wide.

Use the remote control within its operating range (page 7).
 - The batteries are exhausted.

Put in new batteries (page 7).
-

Cannot listen to high-sampling rate audio through the digital output.

- **Linear PCM Out** is set to **PCM Down Sample On**.

Set to **Off**.
 - As a copy-protection measure, some DVDs do not output 96kHz audio.

In this case, even if **Off** is selected, the player automatically outputs the audio at 48kHz. This is not a malfunction.
-

No audio, or audio is distorted.

- Some DVD discs do not output digital audio.

Switch your amplifier to the player's analog outputs.
 - Dirt, dust, etc. on the disc.

Clean the disc (page 55).
 - Interconnects are not fully inserted into the terminals (or are not connected).

Check that all interconnects are firmly inserted.
 - Dirty or oxidized plugs/terminals.

Clean the plugs/terminals.
 - Incorrect audio cable connection.

Check the audio connections (pages 10–12).
 - Player's output is connected to the amplifier's phono (turntable) inputs.

Connect to any set of inputs *except* phono.
 - The disc is paused.

Press ► (**PLAY**) to exit the pause mode.
 - Incorrect amplifier settings.

Check that the volume is turned up, that the speakers are on, the input function set correctly, etc.
 - The **Audio Out** setting is incorrect.

If there is no dialog from the front L/R speakers, set **Audio Out** to **2 Channel**. If there is no output from the rear, center and subwoofer speakers, set **Audio Out** to **5.1 Channel** (page 39).
 - The player is set to 5.1 ch playback, but sound is only 2ch.

Check that 2ch playback is not selected in the disc's menu.
-

The analog audio is OK, but there appears to be no digital audio signal.

- Incorrect **Audio Setup 1** menu settings.

Make sure that the **Digital Out** setting is set to **On** (page 37).

Check that the **Dolby Digital** and **DTS** settings are suitable for your amplifier—check the amp's instruction manual.

Additional Information

Noticeable difference in DVD and CD volume.

- DVDs and CDs use different recording methods. This is not a malfunction.

Cannot play multi-channel audio.

- Make sure that **5.1 Channel** is selected in the **Audio Out** menu (page 39).
- Check that the settings in the **Speaker Setting** screen are correct (page 40).
- Check the audio options available from the disc's menu.

No digital audio output.

- Check that **Digital Out** setting is set to **On** (page 37).
- Some DVD-Audio discs prohibit digital audio output.
- No digital audio is output when playing Super Audio CDs.

Cannot output 192kHz or 176.4kHz digital audio.

The player does not output digital audio at these sampling rates.

Cannot output 96kHz or 88.2kHz digital audio.

- Check that the **PCM Down Sample** setting is not set to **On** (page 38).
- Some discs are digital copy protected and do not output high sampling rate digital audio.

No DTS audio output.

- If this unit is connected to a non-DTS compatible amplifier or decoder using a digital audio cable, set **DTS Digital Out** to **PCM** in the Setup menu. If you do not do this, noise will be output if you try and play a DTS disc.
- If this unit is connected to a DTS-compatible amplifier or decoder using a digital audio cable, check the amplifier settings, and that the cable is properly connected.

Audio mix does not sound right or sounds incomplete (for example, inaudible dialog).

- Incorrect Setup menu settings.
 - Make sure that **2 Channel** output is selected for the **Audio Out** menu option if you've connected to the stereo inputs on your amplifier or TV (page 39).
- If the power is switched off before exiting the Setup menu, the settings are not stored.
 - Make sure that you exit the Setup menu after changing any settings before switching off.

The disc containing the MP3 tracks won't play.

- If the disc is a recordable CD, make sure that the disc is finalized.
 - Check that the track(s) are in the MPEG1 Audio Layer 3 format.
 - Check that the sampling rate of the track(s) are 44.1 or 48kHz.

Some MP3 tracks appear to be missing from a disc.

- If a track name does not end in ".mp3" or ".MP3", this player will not recognize it as an MP3 track.
- This player only recognizes about 600 files on a disc. If there are more titles than this, you will not be able to play them.
- This player is not compatible with multi-session discs. If the disc is multi-session, you will only be able to play tracks recorded onto the first session.

Specifications

General

System

DVD-Video, DVD-Audio, DVD-R/RW, Video CD, Super Audio CD, CD, MP3 files and JPEG files

Power requirements 120 V, 60Hz

Power consumption 29 W

Power consumption in standby mode 0.4W

Weight 8.5 kg (18 lb 11 oz)

Dimensions 440 (W) x 115 (H) x 384 (D) mm
(17.3 (W) x 4.5 (H) x 15.1 (D) in.)

Operating temperature +5°C to +35°C (+41°F to +96°F)

Operating humidity 5% to 85% (no condensation)

S-Video output

Y (luminance) - Output level 1 Vp-p (75 Ω)

C (color) - Output level 286 mVp-p (75 Ω)

Jacks S-VIDEO jack

Video output (2 individual outputs)

Output level 1 Vp-p (75 Ω)

Jacks RCA jack

Component video output (Y, C_B /P_B, C_R/P_R)

Output level Y: 1.0 Vp-p (75 Ω)

C_B/P_B, C_R/P_R: 0.7 Vp-p (75 Ω)

Jacks RCA jacks

HDMI output

Output Terminal 19-pin

Audio output

Output level

During audio output 2 Vrms (1kHz, 0 dB)

Number of channels 2

Jacks RCA jack

Audio output (multi-channel / L, R, C, SW, LS, RS)

Output level

During audio output 2 Vrms (1kHz, 0 dB)

Number of channels 6

Jacks RCA jack

Audio characteristics

Frequency response 4Hz to 44kHz (DVD fs: 96kHz)

4Hz to 88kHz (DVD-Audio fs: 192kHz)

S/N ratio 130 dB

Dynamic range 110 dB

Total harmonic distortion 0.0008 %

Wow and flutter: Limit of measurement (±0.001 % W. PEAK) or lower

Digital output

Optical digital output Optical digital jack

Coaxial digital output RCA jack

Other terminals

Control in/out RCA jack

RS232C 1

Accessories

Remote control 1

AA/R6P dry cell batteries 2

Audio/Video cable (yellow/red/white) 1

System control cable 1

Power cable 1

User Guide (this manual)

Warranty card

Note: The specifications and design of this product are subject to change without notice, due to improvement.

