

DVD-S2300

DVD AUDIO/VIDEO SACD PLAYER
LECTEUR DE DVD AUDIO/VIDEO SACD







IMPORTANT SAFETY INSTRUCTIONS



CAUTION

RISK OF ELECTRIC SHOCK DO NOT OPEN



CAUTION: TO REDUCE THE RISK OF ELECTRIC SHOCK, DO NOT REMOVE COVER (OR BACK). NO USER-SERVICEABLE PARTS INSIDE. REFER SERVICING TO QUALIFIED SERVICE PERSONNEL.

• Explanation of Graphical Symbols



The lightning flash with arrowhead symbol, within an equilateral triangle, is intended to alert you to the presence of uninsulated "dangerous voltage" within the product's enclosure that may be of sufficient magnitude to constitute a risk of electric shock to persons.



The exclamation point within an equilateral triangle is intended to alert you to the presence of important operating and maintenance (servicing) instructions in the literature accompanying the appliance.

WARNING

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

IMPORTANT

Please record the serial number of this unit in the space below.

MODEL:

Serial No.:

The serial number is located on the rear of the unit. Retain this Owner's Manual in a safe place for future reference.

WARNING

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

- 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 the cart, stand, tripod, bracket, or table specified by the manufacturer, or sold with the apparatus. When a cart is used, use 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.

FCC INFORMATION (for US customers only)

1. IMPORTANT NOTICE: DO NOT MODIFY THIS

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

- IMPORTANT: When connecting this product to accessories and/or another product use only high quality shielded cables. Cable/s supplied with this product MUST be used. Follow all installation instructions. Failure to follow instructions could void your FCC authorization to use this product in the USA.
- 3. NOTE: This product has been tested and found to comply with the requirements listed in FCC Regulations, Part 15 for Class "B" digital devices. Compliance with these requirements provides a reasonable level of assurance that your use of this product in a residential environment will not result in harmful interference with other electronic devices.

This equipment generates/uses radio frequencies and, if not installed and used according to the instructions found in the users manual, may cause interference harmful to the operation of other electronic devices.

Compliance with FCC regulations does not guarantee that interference will not occur in all installations. If this product is found to be the source of interference, which can be determined by turning the unit "OFF" and "ON", please try to eliminate the problem by using one of the following measures:

Relocate either this product or the device that is being affected by the interference.

Utilize power outlets that are on different branch (circuit breaker or fuse) circuits or install AC line filter/s.

In the case of radio or TV interference, relocate/reorient the antenna. If the antenna lead-in is 300 ohm ribbon lead, change the lead-in to coaxial type cable.

If these corrective measures do not produce satisfactory results, please contact the local retailer authorized to distribute this type of product. If you can not locate the appropriate retailer, please contact Yamaha Electronics Corp., U.S.A. 6660 Orangethorpe Ave, Buena Park, CA 90620.

The above statements apply ONLY to those products distributed by Yamaha Corporation of America or its subsidiaries.

CAUTION - WISBLE AND / OR INVISIBLE LASER RADIATION WHEN DEEN, ANDID EXPOSURE TO BEAM.

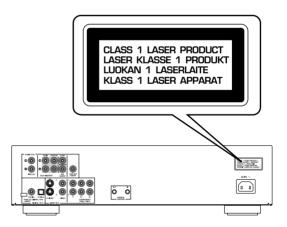
VARNING - SYNLE COH / ELLER GISTINLE LASESTRÄLANING NAR DEINNA DEL AR OPPIANG. STRIKER NAR FARBLE.

VARDI - ANATTAESSA QUET ALTTINA NARVYALLE NA / TAI
NARVAMATRIANILE LASESTRÄLIVILLE NA KANTSO SATESSERN.

VARNING - SYNLE COH / ELLER GISTINLE DIESESTRÄLANING NAR DEENNA DEL AR OPPIAN. DETRIKTA EL STRÄLEN.

VORSIOHT I SOHTIAGE UND / DOER UNBOTTRIBLE LASESTRÄLANING NAR DEENNA DEDENNA DEOPRIEN. COHET DER STRIALA LASESTEN.

ATTENTION - ROUNTON WISBLE ET / OU MINISTRE LORGIGE VALLAGEL EST OLIVERT. ENTITEZ TOLITE EMPOSITION AU FAISCEAU.



CAUTION: READ THIS BEFORE OPERATING YOUR UNIT.

- 1 To assure the finest performance, please read this manual carefully. Keep it in a safe place for future reference.
- 2 Install this sound system in a well ventilated, cool, dry, clean place Å\ away from direct sunlight, heat sources, vibration, dust, moisture, or cold. In a cabinet, allow about 2.5cm (1 inch) of free space all around this unit for adequate ventilation
- 3 Locate this unit away from other electrical appliances, motors, or transformers to avoid humming sounds.
- 4 Do not expose this unit to sudden temperature changes from cold to hot, nor locate this unit in an environment with high humidity (i.e., a room with a humidifier) to prevent condensation inside this unit, which may cause an electrical shock, fire, damage to this unit, and/or personal injury.
- 5 Avoid installing this unit in a location where foreign objects may fall onto this unit or where this unit may be exposed to liquid dripping or splashing. On the top of this unit, do not place:
 - Other components, as they may cause damage and/or discoloration on the surface of this unit.
 - Burning objects (i.e., candles), as they may cause fire, damage to this unit, and/or personal injury.
 - Containers with liquid in them, as they may fall, spilling the liquid and causing an electrical shock to the user and/ or damage to this unit.
- 6 Do not cover this unit with a newspaper, tablecloth, curtain, etc. in order not to obstruct heat radiation. If the temperature inside this unit rises, it may cause fire, damage to this unit, and/or personal injury.
- 7 Do not plug in this unit to a wall outlet until all connections are complete.
- **8** Do not operate this unit upside-down. It may overheat, possibly causing damage.
- **9** Do not use excessive force on switches, knobs and/or cords.
- 10 When disconnecting the power cord from the wall outlet, grasp the plug; do not pull the cord.
- 11 Do not clean this unit with chemical solvents; this might damage the finish. Use a clean, dry cloth.

- 12 Use only the voltage specified on this unit. Using this unit with a higher voltage than specified is dangerous and may cause fire, damage to this unit, and/or personal injury. YAMAHA will not be held responsible for any damage resulting from use of this unit with a voltage other than as specified.
- 13 To prevent damage by lightning, disconnect the power cord from the wall outlet during an electrical storm.
- 14 Do not attempt to modify or fix this unit. Contact qualified YAMAHA service personnel when any service is needed. The cabinet should never be opened for any reason.
- 15 When not planning to use this unit for long periods of time (i.e., vacation), disconnect the AC power plug from the wall outlet.
- 16 Be sure to read the "TROUBLESHOOTING" section on common operating errors before concluding that this unit is faulty.
- 17 Before moving this unit, press STANBY/ON to set the unit in standby mode, then disconnect the AC power plug from the wall outlet.

FOR CANADIAN CUSTOMERS

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

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

DANGER

This unit emits visible laser radiation when open. Avoid direct eye exposure to beam.

When this unit is plugged into a wall outlet, do not place your eyes close to the opening of the disc tray and other openings tolook inside.

The laser component in this product is capable of emitting radiation exceeding the limit for Class 1.

We Want You Listening For A Lifetime

YAMAHA and the Electronic Industries Association's Consumer Electronics Group want you to get the most out of your equipment by playing it at a safe level, one that lets the sound come through loud and clear without annoying, blaring or distorting – and, most importantly, without damaging your sensitive hearing.

Since hearing damage from loud sounds is often undetectable until it is too late, YAMAHA and the Electronic Industries Association's Consumer Electronics Group recommend that you avoid prolonged exposure to excessive volume levels.



CONTENTS

About this manual

described in this manual.

ોં indicates an operational tip.

tioned otherwise.

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Illustrations in this manual are U.S.A. model unless men-

You can perform some operations using the buttons on

This manual is printed prior to production. Design and

specifications are subject to change, in part to improve

operational functions. In this case, the product has prior-

Some illustrations, as well as the names assigned to package contents, that appear in this manual may differ from

the names that appear on actual products or in the packag-

operations performed using the remote control are

either the main unit or the remote control. In these cases,

INTRODCTION FEATURES......2 CHECKING THE ACCESSORIES......3 INSTALLING BATTERIES IN THE REMOTE CON-TROL......3 CONTROLS AND FUNCTIONS......4 Front panel display 6 PREPARATION CONNECTIONS7 **PLAYING A DISC** PLAYING A DISC...... 10 USING MULTIPLE FUNCTIONS...... 13 ON-SCREEN MENU 20 DETAILED SETTINGS CHANGING THE DVD MODE SETTINGS24 CHANGING THE SACD MODE SETTINGS 31 **APPENDIX** TROUBLESHOOTING.......33 GLOSSARY 35

English

FEATURES

- ◆ Built-in high-performance video D/A converter
- Output connectors support all kinds of audio and home theater component combinations.

Video out:

Component connectors (one channel) (U.S.A. and Australia models) S Video connector (two channels) RGB SCART terminal (U.K. and Europe models)

Video (Composite) connector (two channels)

Audio out:

Analog: (L/R) jacks

6ch discrete jacks

Digital: Coaxial connector (one channel)

Optical connector (one channel)

- Equipped with a high-end D/A converter for SACD on all eight channels
- Equipped with a D/A converter that supports192kHz 24-bit DVD-Audio/Video discs
- Optimum picture and sound quality due to independent circuits for SACD and DVD, and individual tuning
- ◆ Equipped with a Dolby Digital and DTS decoder
- ◆ DCDi Progressive output
- ◆ Supports MP3 multi-session



Manufactured under license from Dolby Laboratories.

"Dolby" and the double-D symbol are trademarks of Dolby Laboratories.



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

(U.S.A. and Canada models)



"DCDi" is a trademark of Faroudja, a division of Sage Inc.

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

Compatible disc formats

The DVD-S2300 is designed for use with only the following types of discs. Never attempt to load any other type of disc into this unit because it may damage the unit.

• DVD mode

• SACD mode







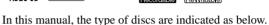












DVD-Video	DVD-Audio	Video CD	Audio CD
DVD-A	DVD-V	VCD	CD

Super Audio CD
SACD

Note

- The DVD-S2300 does not support playback of the following discs: Photo CD, CD-ROM, DVD-ROM, DVD-RAM, SVCD, CDV
- Use discs from reliable manufacturers to record data. Some discs may not play due to recording conditions or disc characteristics.
- DVD-RW discs will play only if they are recorded in video format.
- CD-R/RW, DVD-R/RW, and DVD+R discs will play only if they are finalized.
- Do not use non-standard shaped discs (heart-shaped, etc.).
- Some DVD and VCD features described in this manual may vary in function due to differences in software design from various manufacturers. Check the instructions for each disc.
- This unit cannot play the video portion of a disc whose video signal type is PAL. (U.S.A. and Canada models only)

■ Region management information

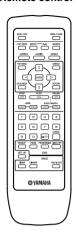
The DVD-S2300 is designed to meet the DVD standard that supports the region management system. Check the regional code number marked on the disc package. If the number does not match the unit's region number (see the table shown below or on the back of the unit), the DVD-S2300 will be unable to play that disc.

Model	Region number of this unit	Discs can be played
U.S.A. and Can- ada models		"1", "ALL" or a mark that includes the region number "1".
U.K. and Europe models	2	"2", "ALL" or a mark that includes the region number "2".
Australia model	(4)	"4", "ALL" or a mark that includes the region number "4".

CHECKING THE ACCESSORIES

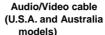
Check your package to make sure it contains the following items.

Remote control



Batteries (x2) (AA, R6, UM-3)



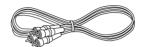




Power cable

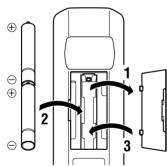


Audio pin cable (U.K. and Euope models)



INSTALLING BATTERIES IN THE REMOTE CONTROL

Insert the batteries in the correct direction by aligning the + and - marks on the batteries with the polarity markings (+ and -) inside the battery compartment.



- 1 Slide off the battery compartment cover.
- Insert the two batteries (AA, R06, UM-3 type) with + and oriented properly.
- Slide the cover back on so that it snaps into place.

Replace worn batteries

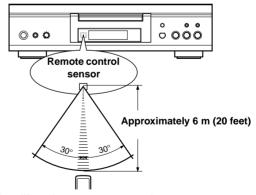
If the batteries are worn out, the operating range of the remote control decreases. In this case, replace all batteries with new ones at the same time.

Note

- Change all of the batteries if you notice a decrease in the operating range of the remote control.
- · Do not use old batteries together with new ones.

- Do not use different types of batteries (such as alkaline and manganese batteries) together. Read the packaging carefully as these different types of batteries may have the same shape and color
- If the batteries have leaked, dispose of them immediately.
 Avoid touching the leaked material or letting it come into contact with clothing, etc. Clean the battery compartment thoroughly before installing new batteries.

■ Using the remote control

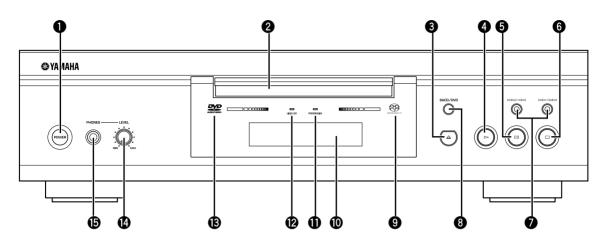


Handling the remote control

- Do not spill water or other liquids on the remote control.
- Do not drop the remote control.
- Do not leave or store the remote control in the following types of conditions:
 - high humidity or temperature, such as near a heater, stove or bath;
 - dusty places; or
 - in places subject to extremely low temperatures.

CONTROLS AND FUNCTIONS

Front panel / Remote control



SAOD/DVO
OPEN/CLOSE

RAY MODE REPEAT—A-B MARKET

SUBSTITLE AUDIO
ON SOREEN
O

POWER

Turns the power to the unit on and off.

2 Disc tray

Load a disc you wish to play in this tray.

③ △ (Front panel),

OPEN/CLOSE (Remote control) Press to open or close the disc tray.

 $\mathbf{A} \triangleright$

Press to start playback.

A 22

Press to pause.

A -

Press to stop playback.

1 Ma/aa. DD/DD

Each time you press one of these buttons, the top of the next or previous track or chapter is located. Press and hold down one of the buttons to fast forward or fast reverse.

3 SACD/DVD

Press to switch between DVD mode and SACD mode.

SACD mode indicator

Lights up in SACD mode.

Front panel display

Shows information about the operational status of the unit.

PROGRESSIVE indicator (U.S.A. model only)

Lights up during progressive output.

VIDEO OFF indicator

Lights up when the VIDEO OFF function is working.

B DVD mode indicator

Lights up in DVD mode.

1 PHONES LEVEL control

Press to adjust the headphone level.

PHONES

Connect headphones here.

6 From left:

PLAY MODE

Press to switch among random play, program play, and normal playback.

REPEAT

Press to repeat playback.

A-B

Press to repeat a section specified by two points.

MARKER

Press to mark and store the points you wish to view or listen.

From left:

SUBTITLE

Press to select a subtitle language.

AUDIO

Switches the DVD audio language.

ANGLE

Press to change the camera angle on discs recorded with multiple camera angles.

(B) From top left:

TOP MENU

Press to display the top-level disc menu screen.

MENU

Press to display a menu screen.

$\Lambda, \nabla, \triangleleft, \triangleright / ENTER$

Press to select and execute an item on a menu screen, etc.

ON SCREEN

Press to turn the on-screen icons on or off on the video monitor.

RETURN

Press to display the previous screen when navigating the menus.

From left:

⋈⊲ ⋈ (skip)

Press repeatedly to locate the top of the previous or subsequent tracks.

Press to fast reverse or fast forward.

Numeric buttons

Press numeric buttons to enter numbers.

CANCEL

Press CANCEL to cancel a specific mode or a setting.

2 From left:

GROUP

Press to select a DVD audio group.

PAGE

Press to select a DVD audio still picture.

PROGRESSIVE button (U.S.A. model only)

Press repeatedly to toggle between progressive video output and interlaced video output in DVD mode.

VIDEO OFF

Press to switch video output on and off during DVD audio playback.

2 From left:

TIMER

Press to switch the time display in SACD mode.

DIMMER

Press to adjust the brightness of the front panel display in SACD mode.

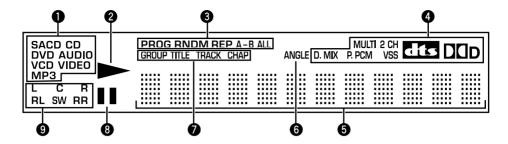
MULTI/2CH

Press to toggle between stereo playback and multichannel playback in SACD mode during playback of a super-audio CD that contains both stereo (two channels) and multi-audio channel data.

SETUP

Press to display the setup menu screen.

Front panel display



Disc type indicators

The indicator of a disc type being played lights up.

SACD: Super audio CD
CD: Audio CD
DVD AUDIO: DVD-Audio
DVD VIDEO: DVD-Video
VCD: Video CD

MP3: MP3-format CD-R or CD-RW

2 Playback indicator

Lights up during playback. Blinks while resume function is working.

Play mode indicators

The indicator for current playback mode lights up.

PROG: Programmed play
RNDM: Random play
REP: Repeat play
REP A-B: Repeat A-B
REP ALL: Repeat All

Audio format indicators

The indicator for an audio format recorded on the disc lights up. If multiple audio formats are recorded on the disc, the indicator for the format selected by the disc menu or by operation of the unit lights up.

dts

DD (Dolby Digital)

PCM (Linear PCM)

P.PCM (Packed PCM)

MULTI CH (Multi-channel)

2 CH (2-channel)

D.MIX (Down Mix):

This indicator lights up during playback of a DVD audio track with multiple audio channel signals (that can be down-mixed; that is, integrated into two channels).

VSS:

Lights up in virtual surround mode.

6 Multi-information display

Shows various information such as title, chapter or track number, elapsed playing time etc.

6 ANGLE indicator

Lights up during playback of a scene that contains multiple camera angles on the DVD.

Multi-information display mode indicators

GROUP: The display indicates a group number.

TITLE: The display indicates a title number.

TRACK: The display indicates a track number.

CHAP: The display indicates a chapter number.

8 Pause indicator

Lights up when you freeze a picture or pause disc playback.

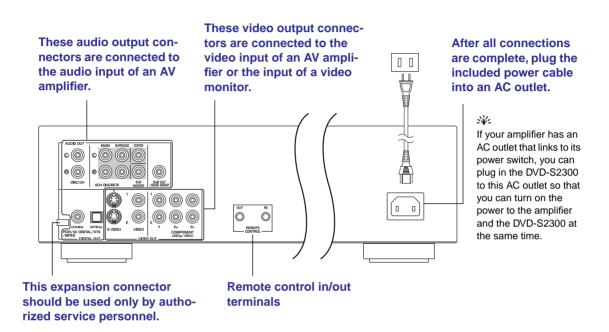
Speaker channel indicators

The indicators for the current audio channel signals light up.

L: left main, C: center, R: right main, RL: left rear, SW: superwoofer, RR: right rear

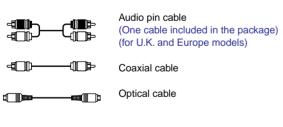
Before you make connections, unplug the power cable for the DVD-S2300 and all other components. Do not plug in the power cables until all connections are complete.

Type of connectors

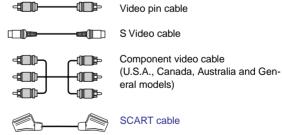


Use a commercially-available cable specified for connecting each type of jack.





For video Component



For A/V component



Connectors for playing video

To play video, you can connect the unit's video output directly to a video monitor. Alternatively, you can connect the video output to an AV amplifier's video input, then connect the amplifier to a video monitor. If you connect an AV amplifier between the unit and a video monitor, you can switch audio and video simultaneously using only the input selector on the amplifier. You can also set up the amplifier using the OSD (on-screen display).

The DVD-S2300 features different types of video output connectors. Determine which connection is most suitable for the connectors on your video monitor. You need to use the same type of connectors to connect the unit to the AV amplifier and the amplifier to the monitor.

1 S VIDEO connectors (S1/S2, S1)

The S VIDEO connectors transmit C and Y signals separately to reproduce higher-quality pictures than normal composite video signals. Connect one of these connectors to the S Video input connector on the component using an optional S Video cable.

 For more information on the S1 and S1/S2 connectors, refer to the glossary. You can assign output to S1 or S2 using the Setup menu in DVD mode.

2 VIDEO connectors (1, 2)

The VIDEO connectors transmit normal composite video signals. Connect one of these connectors to the video input connector on the component using the yellow plug of the audio/video cable.

Identical signals are output from VIDEO 1 and VIDEO 2. Connect these to other components (e.g., monitor or AV amplifier).

3 COMPONENT OUTPUT connectors

(U.S.A. and Australian models only)

These connectors transmit two types of C signals and a Y signal separately, and reproduce higher-quality pictures than those by S Video connection.

(U.S.A. model only)

The DVD-S2300 features a DCDi circuit (the latest contour correction technology), as well as progressive output, which enables you to enjoy very smooth and natural high-quality pictures, even on a big screen. Connect these connectors to the component video input connector using an optional component video cable.

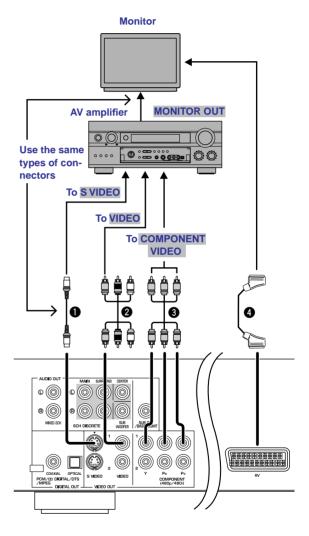
4 AV connector

(U.K. and Europe models only)

If your monitor has only terminal for video input, and you want to connect it directly to this unit, you can use this unit's SCART output jack. This connection provides the best picture quality.

Note

Ensure that the "TV" indication on SCART cable is connected to the TV set and "DVD" indication on SCART cable is connected to this unit.



Connectors for playing audio

Select appropriate connectors that suit your application and the connectors on your amplifier.

5 DIGITAL OUT connector

Using AV amplifier's 6.1 channel decoding (DVD-Video) and surround effects:

Connect either the OPTICAL connector or COAXIAL connector to the amplifier's digital input connector using an optional fiber optic cable or coaxial digital cable respectively.

Note

 No audio signal is output from DIGITAL OUT during SACD playback. Use connection 2 or 3 described below.

6 MIXED 2CH jacks

Use the included audio/video pin cable to connect to analog stereo input jacks on your amplifier. Connect the white plug to the L jack and red plug to the R jack. (The yellow plug is for the video signal.)

7 6CH DISCRETE jacks

Playing SACD or DVD multi-channel audio:

Using an optional audio pin cable, connect these jacks to the corresponding channel input jacks (such as MAIN L/R, CENTER) for an external decoder on the amplifier (these jacks are usually labelled as "6CH INPUT").

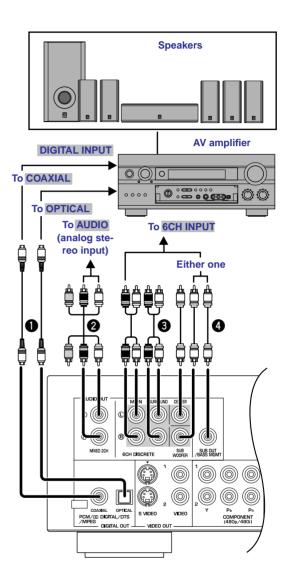
3 SUB OUT/BASS MGMT jack

Using this jack, instead of the 6CH DISCRETE SUB WOOFER jack, will boost the low range and make the sound more powerful.

Using an optional audio pin cable, connect this jack to the superwoofer input jack for an external decoder on the amplifier.

14

On the other hand, using the 6CH DISCRETE SUB WOOFER jack will produce a more natural low-range sound that is close to the original. Select either one according to your preference.



Remote control in/out terminal

These terminals are used for custom installation system that transmits remote control signals via cables. Connect this unit's REMOE CONTROL IN to the remote control output of the control unit of your system.

By connecting this unit's REMOTE CONTROL UT to another piece of equipment's Remote control input terminal, you can also operate that equipment with the system remote control.

PLAYING A DISC

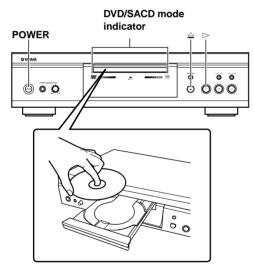
Before starting playback

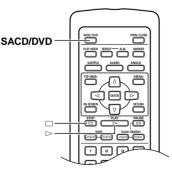
To play a disc properly, you need to set the parameters for audio and video output on the DVD-S2300 to suit the connected components and your system environment. (See pages 9, 8.)

Note

If your AV amplifier does not have a DTS decoder and you
have connected the DVD-S2300 to the amplifier via its digital
connector, be sure to set "DTS DIGITAL SURROUND" in the
Audio menu screen under the Setup menu to "PCM (factory
setting)." Otherwise, the noise of unprocessed digital signals
will be output and may damage your hearing or your speakers.

Basic operation





- 1 Press POWER to turn the power on.
- 3 Load a disc.

4 If necessary, press SACD/DVD to change the mode

For more information, refer to "Switching disc play mode" below.

5 Press ⊳.

The disc tray closes and playback starts.

`\<u>\</u>'

- When a menu screen appears DVD-A DVD-V VCD:
 See "Switching disc play mode" on this page.
- When the unit finishes playing a DVD, it stops playback or displays a menu screen.

Note

- The DVD-S2300 cannot play a CD-R or CD-RW disc unless the disc has been finalized. Please be sure to finalize the disc on a CD recorder before playing it in this unit.
- * "Finalize" means to process audio CD-Rs or CD-RWs so that they can be played on a supporting player.

Switching disc play mode

While the unit is stopped or the disc tray is open, press SACD/DVD.

The DVD-S2300 has an independent playback circuit for SACDs and DVDs respectively so that the unit will make the best use of the different features of these discs. To play an SACD, switch to SACD mode. To play other types of discs, switch to DVD mode.

Use SACD mode to play SACD.

The SACD mode indicator lights up.

Use DVD mode to play [DVD-A], [DVD-V], [VCD], and

CD

The DVD mode indicator lights up.

 If you are playing a hybrid disc that contains SACD format data and conventional CD format data, select SACD mode to play back the SACD format data, and switch to DVD mode to play the CD format data.

■ To stop playback

Press □.

■ Resume function

The DVD-S2300 memorizes where □ was pressed as long as the unit is turned on (▶ indicator flashes on the display). When you press ▷ under this status, playback resumes from the stop point.

To clear the memory, press □ once more so that the ► indicator disappears. (When a DVD-Video disc is played, a chapter review screen appears.)

Note

• Opening the disc tray cancels the resume function.

■ Chapter review function DVD-V

This function plays the first few seconds of each chapter from the beginning of the title up to the memorized point so that you can review previous chapters.

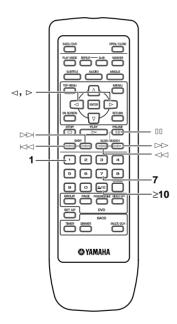
Press ▷ while the message for chapter review is displayed on the screen.

Notes

- This function may not work with some DVDs.
- Canceling the resume function also clears the chapter review function.

■ After operation

Press \triangleq to open the disc tray. Remove the disc. Then press POWER.



■ Skip

Press $\bowtie \bowtie$ (or $\bowtie \bowtie$) on the remote control to skip forward (or backward).

or

Press ⋈ on the remote control or ⋈ on the front panel once for each chapter (track) you wish to skip.

Note

 When playing a VCD with playback control (p.38), the skip operation may not function as described above.

■ To select a specific track

SACD VCD CD

Enter the desired track number using the numeric buttons.

Example (to select track 17):

1 Press >10.

Press 1.

3 Press 7.

■ Search

Press $\triangleright \triangleright$ (or $\triangleleft \triangleleft$) on the remote control to search forward (or backward).

or

Press and hold $\triangleright\triangleright/\triangleright\triangleright$ (or $\triangleleft<\!\!\!\triangleleft<\!\!\!\triangleleft$) on the front panel to search forward (or backward).

`\o':

To increase the speed, continue to press r, e on the remote control repeatedly or continue to press ▷▷/▷▷, ▷▷/□□ on the front panel.

■ Pause

Press ^{III} during playback.

To resume playback, press ▷.

■ Frame advance/reverse

DVD-A DVD-V VCD

To advance or reverse frames, while the picture is still or in pause mode, press the cursor buttons $(\triangleleft, \triangleright)$.

- To return to normal playback, press ▷.
- Each time you press the cursor buttons (<, >), or when you continue to press them, frames continue to advance or reverse.
- Frames also advance when you press II.
- With some DVD-Audio discs, frames advance or reverse only during video portions.

Note

· Video CDs do not permit you to navigate backward.

■ Slow DVD-A DVD-V VCD

To play a disc slowly, while the picture is still or in pause mode, press <⋈ or ▷▷ on the remote control.

or

Press and hold $\triangleright / \triangleright \bowtie$ (or $\bowtie < / < \bowtie$) on the front panel.

- To return to normal playback, press ▷.
- To increase the speed, press repeatedly (or continue to press) ▷▷, ▷▷ on the remote control, or continue to press ▷▷/▷▷, ▷▷▷, ▷▷▷ on the front panel.

Note

· Video CDs do not permit you to navigate backward.

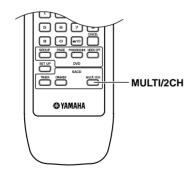
Playing a super audio CD

A super audio CDs come in three categories: a 2-channel disc that contains stereo audio; a multi-channel disc that contains up to 6-channel data: a combination disc that includes a 2-channel data area and a multi-channel data area.



Switching between different channel areas

You can switch between the two areas.



While the unit is stopped, press MULTI/2CH.

When the multi-channel area is selected, the MULTI indicator lights up on the display. When the 2-channel area is selected, the 2CH indicator lights up on the display.

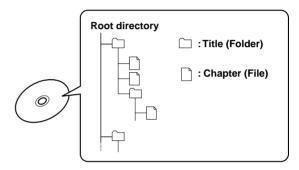
MP3 playback

The DVD-S2300 can play MP3 format audio recorded by a computer onto CD-R or CD-RW. Playback may not be possible in some cases due to the condition of the recording

Discs recorded using MP3 differ from CDs in the following ways:

Structure of the disc (example)

Since the MP3 format can store several albums on a disc, a folder is assigned to a "Title," and a file is assigned to a "Chapter."



Starting playback from a selected chapter

Select a chapter using the numeric buttons (see "To select a specific track" on page 11), then press ENTER.

Repeat play

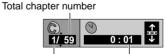
You can use chapter repeat or title repeat. (See page 18.)

Notes

- You can play MP3 discs that are recorded at bit rates of 32kbps

 320kbps and sampling frequencies of 44.1kHa and 48kHz. (A sampling frequency of 32kHz is not supported.)
- Program play and random play are unavailable on MP3 discs.
- Chapters might not play in the order that you arranged them when recording.

On-screen icons for disc information during play-back



Current chapter

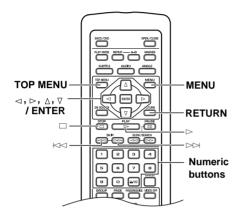
Elapsed play time (for display only; you cannot use the "time index" feature.)

English

USING MULTIPLE FUNCTIONS

Using a disc's menu

Discs may contain multiple audio tracks, subtitles, an index and bonus materials such as movie trailers and cast information, etc. Many discs feature menu screens that enable you to control these features. This section provides general instructions on operating these screens. However, the operation methods may differ depending on the disc.



DVD-A DVD-V

1 Press TOP MENU or MENU during playback to display the menu screen.

A menu screen appears on the video monitor.

 With some discs, a menu screen appears automatically when you start playback.

Press the cursor buttons (△, ▽, ≺, ▷) to select the desired item, then press ENTER. (If the subsequent menu screen appears, repeat Step 2.)

■ Video CD's playback control VCD

The term "playback control" on a Video CD disc or jacket indicates that particular scenes or information can be selected for viewing interactively by using the menu screen. This unit can play Video CDs that feature playback control.

Using menus to control playback of a Video CD is called "menu play" in these operating instructions.

Numeric buttons: Press to select the desired item.

RETURN: Press to display the previous screen.

▷ (PLAY): Press to play the selected item.

▷ : Press to show the next screen.

▷ : Press to show the previous screen.

☐ (STOP):

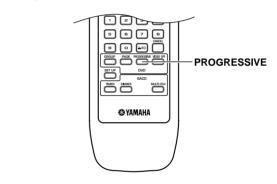
Press while a menu screen appears on the video monitor to cancel the playback control.

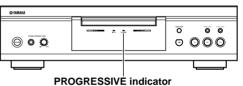
Note

 Playback control is automatically canceled during program play or random play.

Enhancing video quality (U.S.A. model only)

This unit's component video outputs are capable of outputting progressive signals. You can enjoy an even higher quality picture if you connect the unit to a monitor that can receive progressive signals.





Press PROGRESSIVE on the front panel.

The PROGRESSIVE indicator lights up. To cancel this feature, press PROGRESSIVE again.

Notes

- If the screen shifts off center when you use progressive output, see "Adjusting the screen position," described below.
- When playing 4:3 aspect video with a 16:9 aspect wide-screen
 monitor using progressive output, the picture may stretch horizontally to fill the screen. In that case, change the aspect ratio
 to the correct one for your monitor. If the monitor cannot
 change the aspect ratio, it is recommended that you turn the
 progressive feature off. (The progressive output will switch to
 interlace output.)
- When the PROGRESSIVE function is working, video signals are output only from the component video connectors.

Adjusting the screen position (when using progressive output) (U.S.A. and Canada models)

With some video monitors, the screen may shift off center with progressive signals output from the DVD-S2300. To adjust the position, follow the method described below using the remote control.

- 1 Press to pause playback.
- Follow step 1 under "Operating the menu bar" on page 20 to display the video menu.
- 3 Press > to select the rightmost icon (₽).
- 4 Adjust the position.

To move to the left, press numeric button 1. To move to the right, press numeric button 3.

Example:







Press 3 to move to the right.

- Pressing numeric button 2 after pressing 1 or 3 sets the screen back to the original position.
- You can check whether the picture is in the center or not by switching to normal output (press PRO-GRESSIVE to turn the indicator off).

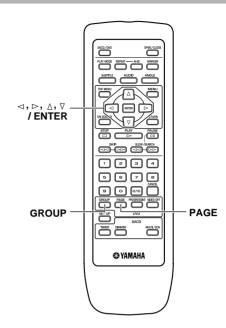
5 Save the adjusted position.

First press \square , then press SETUP to display the setup menu. Then press SETUP once again (or RETURN) to save the position. Even if you skip this procedure, the position will be saved until you turn the power off

CONSUMERS SHOULD NOTE THAT NOT ALL HIGH DEFINITION TELEVISION SETS ARE FULLY COMPATIBLE WITH THIS PRODUCT AND MAY CAUSE ARTIFACTS TO BE DISPLAYED IN THE PICTURE. IN CASE OF 525 PROGRESSIVE SCAN PICTURE PROBLEMS, IT IS RECOMMENDED THAT YOU SWITCH THE CONNECTION TO THE "STANDARD DEFINITION" OUTPUT. IF THERE ARE QUESTIONS REGARDING YOUR VIDEO MONITOR COMPATIBILITY WITH THIS UNIT, PLEASE CONTACT OUR CUSTOMER SERVICE CENTER.

This unit is compatible with YAMAHA Digital Cinema Projector DPX-1 Home Cinema Projector

DVD-Audio features DVD-A



■ To play a track on a specific group

1 Press GROUP.

The group and track icons appear on the video monitor.

- Press the cursor buttons (∆, ∇) to select a group number and press ENTER.
- Press the cursor buttons (∆, ∇) to select a track number and press ENTER.

 The selected track starts to play.

`\o':

• You can also use the numeric buttons to select a group and a track.

■ To play a bonus group

Some discs contain bonus groups. If access to these bonus groups requires four-digit password, consult the disc jacket, etc.

- While the unit is stopped, press GROUP.

 The group and track icons appear on the video monitor.
- Press the cursor buttons (∆, ∇) to select a bonus group, then press ENTER or the cursor button (▷).
- Enter a four-digit password using the numeric buttons, then press ENTER.
- 4 Press the cursor buttons (\triangle, ∇) to select a track, then press ENTER.

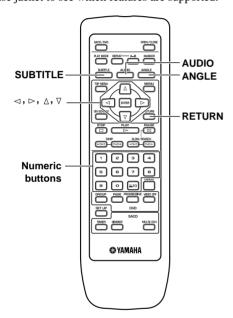
■ To change pages

DVD-Audio discs may contain some information screens called "pages" that show photo galleries, artist biographies, lyrics, etc.

When these pages appear, you can navigate to another page by pressing PAGE. (The page number appears on the display when you change pages.)

Switching audio tracks, subtitles and angles DVD-A DVD-V VCD

Some discs are encoded with several audio tracks, multilingual subtitles or multiple camera angles. Refer to the disc jacket to see which features are supported.



■ Audio tracks

You can select different audio track languages and/or formats if they are available on the disc.

Press AUDIO during playback.



This icon appears on the video monitor.

 Pressing the button repeatedly toggles through all audio tracks recorded on the disc. You can also use the cursor buttons (△, ▽) or the numeric buttons to change tracks.

`\ó\'

- If you change audio tracks while playing a DVD-Audio disc, playback resumes from the beginning of the current track. (Does not apply to video portion of discs.)
- On a DVD-Audio disc, track number 2 may appear even if the disc does not support multiple audio tracks.

 You can also use the button to turn the vocals on or off on karaoke discs. See the disc instructions.

■ Subtitles

Press SUBTITLE during playback.



This icon appears on the video monitor.

 Pressing the button repeatedly toggles through all subtitles recorded on the disc. You can also use the cursor buttons (△, ▽) or the numeric buttons to change subtitles.

`\oʻ:

• "--" appears if a disc does not include a subtitle.

Note

Subtitles may not change immediately after you press the button

To turn on/off the subtitles:

- Press SUBTITLE.
- 2 Press the cursor button (▷).

(DVD-A , DVD-V ONLY)

Press the cursor buttons (\triangle, ∇) to select ON or OFF.

■ Angles

Press ANGLE.



This icon appears on the video monitor.

 Pressing ANGLE repeatedly toggles through all angles recorded on the disc. You can also use the cursor buttons (△, ▽) or the numeric buttons to change angles.

■ To turn the icon off

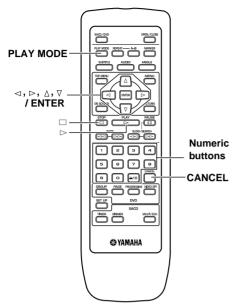
Press RETURN.

Notes

- With some discs, you cannot change audio tracks, subtitles or angles in the way described above. In this case, access the disc menu to execute the change.
- · You cannot change the viewing angle on certain discs.

Program play SACD DVD-A VCD CD

You can enjoy listening to your favorite tracks on a disc in any order.



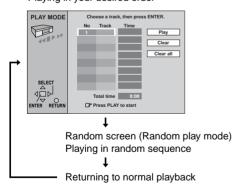
- 1 Press □ to stop play.
- Press PLAY MODE repeatedly to select the program screen.

DVD-A VCD CD

Each time you press PLAY MODE, the screen changes as follows:

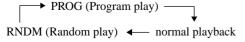
Indication on the video monitor (example)

Program screen (Program play mode)
Playing in your desired order



SACD

Pressing the button repeatedly causes the following indicators to light up in this order:



Note

- With a combination disc that includes a 2-channel area and a multi-channel area, you can program only the tracks in the selected area.
- 3 Press numeric buttons to select the track.
- 4 Press ⊳ to start playback.

`\o':

• You can also use the numeric buttons to select a track.

- The "All group play" screen is added to step 2.
- In step 4, press the cursor buttons (△, ▽) to select a group and press ENTER. Then, press the cursor buttons (△, ▽) again to select a track and then press ENTER.
- To change or add to the program during programmed play
- Press □ repeatedly to stop program play.
- Press the cursor buttons $(\underline{\Lambda}, \nabla)$ to select the order of the tracks you want to play.
- Press the numeric buttons to enter a track number.
- **■** To cancel the programmed tracks
- 1 Press □ repeatedly to stop program play.
- Press the cursor buttons $(\underline{\wedge}, \overline{\vee})$ to select the track you want to cancel.
- 3 Press CANCEL.

Note

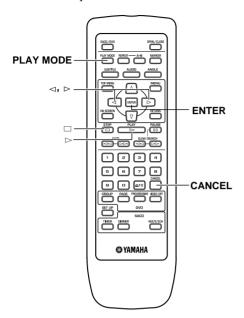
- When you program a track of a Video CD (ver. 2.0), playback control is canceled during program play.
- To move up and down the pages on the program screen

Press $\triangleleft \triangleleft$ to move up the page, or press $\triangleright \triangleright$ to move down the page.

- To exit programming mode
- Press □ repeatedly to stop program play.
- 2 Press PLAY MODE twice.
 - When you turn the power off, open the disc tray, or switch the input source, all programs are canceled.

Random play SACD DVD-A VCD CD

When you select this mode, the unit plays all tracks on the disc in random sequence.



- 1 Press □ to stop playback.
- 2 Press PLAY MODE repeatedly.

The "RNDM" indicator lights up on the front panel display.

- 3 Press ⊳ to start random play.
- To cancel random mode
- Press □ repeatedly to stop playback during random play.
- 2 Press PLAY MODE.

The "RNDM" indicator goes off.

• Opening the disc tray also cancels this mode.

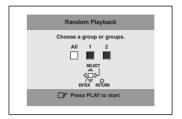
Note

 When the unit is in random mode, playback control is canceled during random play.

■ Random play (DVD-Audio)

In step 2 of "Random play," press the cursor buttons $(\triangleleft, \triangleright)$ to select a group and press ENTER.

Eg) DVD-Audio (The disc that has 2 groups.)



`\\\

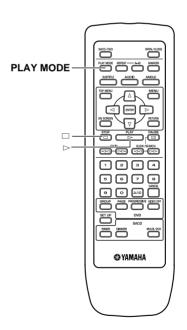
- · You can select more than one group.
- You can use the numeric buttons to select a group.

If you want to cancel a selection, press the cursor buttons $(\triangleleft, \triangleright)$ to select the group(s), then press CANCEL or ENTER.

`\\\\

 You can also cancel a group by entering its group number using the numeric buttons.

All group play DVD-A



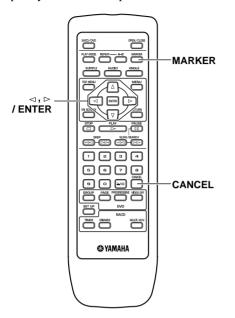
- 1 Press □ to stop playback.
- 2 Press PLAY MODE.

The "All group play" screen appears.

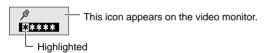
3 Press ⊳.

Bookmarks DVD-A DVD-V VCD CD

This feature allows you to mark up to five points, enabling you to quickly return to those points.



1 Press MARKER.



Press the cursor buttons (<, ▷) to select one of five asterisks.

The selected asterisk is highlighted.

3 Press ENTER.

The selected asterisk changes to the bookmark number.



■ To play from the marked point

Press the cursor buttons $(\triangleleft, \triangleright)$ to select a bookmark number, then press ENTER.

■ To clear a bookmark

Press the cursor buttons $(\triangleleft, \triangleright)$ to select a bookmark number, then press CANCEL.

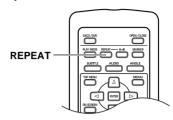
Note

 When you open the disc tray or turn the unit off, all bookmarks are cleared.

Repeat play

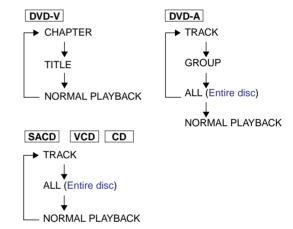
SACD DVD-A DVD-V VCD CD

This function allows you to play a chapter, track or disc repeatedly.



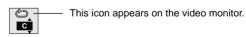
To select Repeat mode, during playback, press REPEAT.

Each time you press this button, repeat mode changes as follows.



During repeat play, the following indicators light up:

	Indicators on the monitor	Indicators on the DVD- S2300 display
CHAPTER	C C	REP, CHAP
TITLE	Т	REP, TITLE
TRACK	Т	REP, TRACK
ALL	A	REP, ALL
GROUP	G	REP GROUP



Notes

- Repeat play may not work properly with some DVD-Video
 diego.
- Repeat play does not work with an interactive DVD-Video discs or during menu play of a VCD that features playback control.
- With super audio CDs, the indicators light up only on the DVD-S2300 display.
- If you select "All" repeat for a disc that has a 2-channel area and a multi-channel area, only the tracks in the selected area will repeat.

■ Program repeat

SACD DVD-A VCD CD

During program play, press REPEAT.

Each time you press REPEAT, the repeat mode changes as follows:



• The selected repeat mode is indicated on the monitor (with DVD-Audio, video CD, and audio CD) and on the unit's display.

■ Random-sequence repeat

SACD DVD-A VCD CD

During random play, press REPEAT.

Each time you press REPEAT, the repeat mode changes as follows:

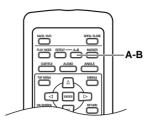


• The selected repeat mode is indicated on the monitor (with DVD-Audio, video CD, and audio CD) and on the unit's display.

Repeat A-B

SACD DVD-A DVD-V VCD CD

This function allows you to specify two points and play between them repeatedly.



During playback, press A-B at the point at which you want to start A-B repeat.



This icon appears on the video monitor.

- "REP" and "A-" light up on the front panel display.
- Press A-B at the point at which you want to end A-B repeat.



This icon appears on the video monitor.

 "B" is added to the front panel display. The section between points A and B starts playing repeatedly (looping).

■ To cancel A-B repeat

Press A-B.



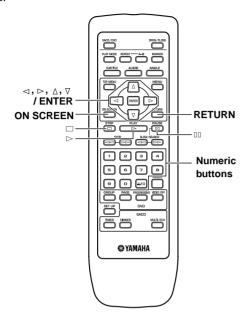
This icon appears on the video monitor.

Notes

- This function may not be available on some DVD-Video discs.
- · This function works only within a title or track.
- With super audio CDs, the icon appears only on the unit's display.

ON-SCREEN MENU

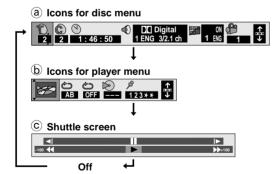
You can control certain items using the on-screen menu



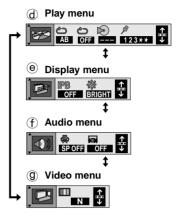
Operating the menu bar

1 Press ON SCREEN.

Each time ON SCREEN is pressed, the menu bar changes as below.



Icons for the player menu include four menu bars, as illustrated below. To switch menu bars, press the cursor buttons (Δ, ∇) .



Press the cursor buttons (<, ▷) to select the item you wish to adjust.

The selected item is highlighted.

- Press the cursor buttons $(\triangle, \nabla, \triangleleft, \triangleright)$ to change the setting.
 - With some items, you need to press ENTER or

 to execute the setting.
 - You can also use the numeric buttons when entering numbers to select a chapter, etc.

■ To turn the screen off

Press RETURN repeatedly.

Note

 Some items cannot be accessed when playback is stopped.

■ To change the menu bar position

When the menu bar does not appear properly, you can adjust its position.

- Press the cursor buttons (◄, ▷) to select the rightmost icon (▮).
- Press the cursor buttons (<, ▷) to move the menu bar.



Disc menu icons

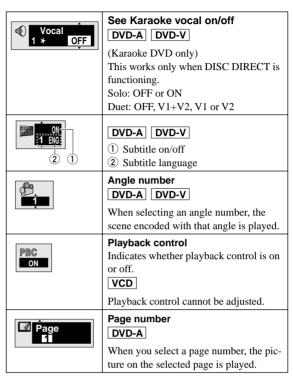
Example: DVD-Video



2	Title number DVD-V Track number DVD-A VCD CD Chapter number DVD-V
	Group number DVD-A
1:46:50	Time index (hour:minute:second) DVD-A DVD-V You can start playback from the desired point by specifying the elapsed time. For example, if you start playback from 1:46:50 (1 hr 46 min 50 sec), press in the following order. [1]→[4]→[6]→[5]→[0]→[ENTER] Changing the time display DVD-A VCD Track elapsed time ↑ Track remaining time ↑ Disc remaining time
L,R	Audio mode VCD When you select a channel, sound is output from that channel. LR L R
DO Digital 1 ENG: 3/2.1 ch	DVD-A DVD-V 1 Audio track number 2 Audio track language: See A for language abbreviations. 3 Audio signal type: See B for details.

Notes

- Display may differ in accordance with the disc's specification.
- Time remaining on the disc does not appear during program or random play.
- · When playing a video-CD disc using playback control, no track number or time is displayed.



A Language

ENG: English	SVE: Swedish	CHI: Chinese
FRA: French	NOR: Norwegian	KOR: Korean
DEU: German	DAN: Danish	MAL: Malay
ITA: Italian	POR: Portuguese	VIE: Vietnamese
	RUS: Russian	THA: Thai
NLD: Dutch	JPN: Japanese	*: Others

B Signal type/data

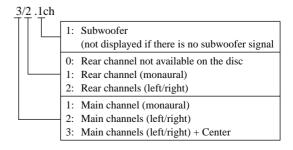
LPCM/PPCM/DDolbyDigital/DTS/MPEG: Signal type

k (kHz): Sampling frequency

b (bit): Number of bits

ch (channel): Number of channels

Example:



Player menu icons

■ Play menu

Example: DVD-Video

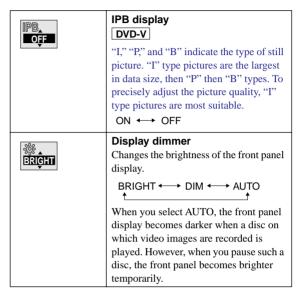


AB	A-B repeat (→ P.19) DVD-A DVD-V VCD CD [ENTER] (start point) → [ENTER] (finish point) To cancel [ENTER]
OFF	Repeat play (→ P.18) DVD-V C: Chapter, T: Title, OFF: Normal playback, T: Track, A: All, G: Group, OFF: Normal playback DVD-A VCD CD C: Chapter, A: All, G: Group, OFF: Normal playback
	Play mode display DVD-A VCD CD The play modes cannot be adjusted. RNDM: Random play, PROG: Program play,: Normal playback, ALL: All groups DVD-A
£ 123××	Bookmarks (→ P.18) DVD-A DVD-V VCD CD You can mark the places you want to play again. (up to 5 points) To mark a point [✓, ▷]→[ENTER] (at the desired point) To recall a bookmark [✓, ▷]→[ENTER] To erase a bookmark [✓, ▷]→[CANCEL]

■ Display menu

Example: DVD-Video

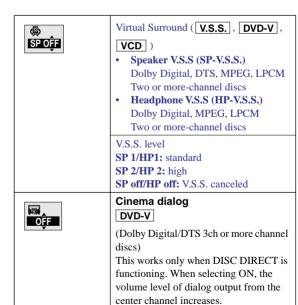




■ Audio menu

Example: DVD-Video





■ Video menu



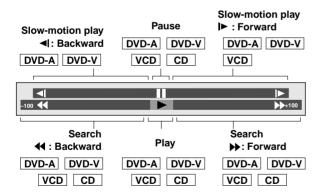
Ŷ.	Digital picture mode DVD-A DVD-V VCD N: Normal C: Cinema image (suited for movie viewing) U: User mode To change the User mode setting ① Select User mode. ② Press (△, ▷) to select the item you wish to change. ③ Press (△, ∇) to change the setting. The following items are displayed when you select "U."	
Ô	U Contrast (-7 to +7) Adjusts the contrast between the light and dark parts of the picture.	
Ô	Brightness (0 to +15) Adjusts the brightness of the picture.	
ģ	Sharpness (-6 to +6) (U.K., Europe, Australia and General models) Adjusts the horizontal resolution of the picture.	
Ô	Color (-7 to +7) Adjusts the shade of the picture's color.	

When PROGRESSIVE is on (U.S.A. model)



Ņ	Digital picture mode DVD-A DVD-V VCD N: Normal C: Cinema image (suited for movie viewing)
Aulo	Transfer MODE Selects the method of converting film material (recorded with 24 frames/sec) or video material (recorded with 30 frames/sec) into progressive output. Auto (normal): for viewing film material Video: for video material

■ Shuttle screen



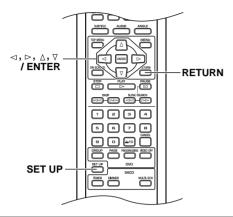
Note

 Slow-motion works only on the video portion of a DVD-Audio disc.

CHANGING THE DVD MODE SETTINGS

With the setup menu, you can change this unit's system defaults to suit your preference.

Operating the Setup menu

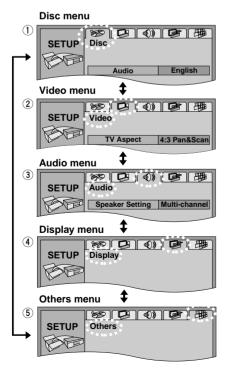


Press SETUP.

The menu screen appears on the video monitor.

Press the cursor buttons (<, ▷) to select a menu group.</p>

There are five menu groups. The screen shows the items that belong to the menu group of the selected tab.



a Tab (menu items)

This default menu items include Disc, Video, Audio, Display, and Others. Select one of these options to display the desired parameter setting panel.

(b) Parameter

The parameter selected in the tab is displayed here.

© Parameter value

This section displays the parameter value.

- Press the cursor buttons (△, ▽) to select the desired item, then press ENTER.
- Press the cursor buttons $(\underline{\wedge}, \nabla)$ to change the setting, then press ENTER.

Press ENTER to return to the screen in step 2.

■ To return to the previous screen

Press RETURN.

■ To exit Setup menu mode

Press SFTUP

Note

- When you display the setup menu screen, the DISC DIRECT function turns on automatically. When you exit the setup menu, the setting of the function is automatically returned to the previous setting.
- To return all the settings on the setup menu to the factory default settings

While playback is stopped, repeatedly press
□ and □ on the front panel simultaneously until "Initialized" appears on the video monitor.

Summary of settings

The following chart shows the menu groups and each items. In the "Options" column, the factory default settings are underlined.

Menu groups	Items	Options
Disc	Audio DVD-A DVD-V Select the preferred audio track language.	(U.S.A. and Canada models) English French Spanish Original* Other**
		(Australia model) English French German Italian Spanish Original* Other** (U.K. and Europe models) English French German Italian
		Spanish Original* Other** (General model) English Chinese Original* Other** (U.S.A. and Canada models)
	Subtitle DVD-A DVD-V Select the preferred subtitle language.	Automatic English French Spanish Other** (Australia model)
		Automatic English French German Italian Spanish Other** (U.K. and Europe models)
		Automatic English French German Italian Spanish Other** (General model) Automatic English Chinese Other**
	Menus DVD-A DVD-V Select the preferred disc menu language.	(U.S.A. and Canada models) English French Spanish Other** (Australia model)
		English French German Italian Spanish Other** (U.K. and Europe models) English French German Italian Spanish Other** (General model)
	Ratings DVD-V	English Chinese Other** Setting ratings (When level 8 is selected) 8 No Limit 1 to 7 0 Lock All
	Set a ratings level to limit DVD-Video playback. See p.51 for details.	Changing ratings (When level 0 – 7 is selected) Unlock Player Change Level Change Password Temporary Unlock
Video	TV Aspect If you connect to a 4:3 conventional-type monitor, select "4:3 Pan&Scan" (left and right sides trimmed when playing 16:9 video) or "4:3 Letterbox" (black areas appear at the top and bottom when playing 16:9 video). Select "16:9" if you connect to a widescreen monitor.	4:3 Pan&Scan 4:3 Letterbox 16:9
	AV Output Choose the video signal format to be output from the AV1 SCART terminal.	Video S-Video RGB

CHANGING THE DVD MODE SETTINGS

Menu groups	Items	Options
Video	Still Mode Specify the type of picture shown in pause mode. First select "Automatic". If a still picture jitters, select "Field." If details are not clear, select "Frame."	Automatic Field Frame Frames are the still pictures that go together to make a moving picture. A field still is not blurred, but it has only half the information of a frame still so picture quality is lower. A frame still is made up of two alternating fields, so the picture may appear blurred, but overall quality is high. Normally, set this to "auto."
	Black Level Control (U.S.A. and Canada models) Change the black level of the picture. Select "Lighter" when you connect to the monitor using the VIDEO or S VIDEO connector. Select "Darker" when using COMPO- NENT connectors.	Lighter Darker
	NTSC Disc Output (U.K., Europe, Australia and General models) Select video signal format (PAL 60 or NTSC) to be output when playing NTSC disc.	(U.K., Europe and Australia models) PAL 60 NTSC (General model) PAL 60 NTSC
Audio	Speaker Setting DVD-A DVD-V Select the analog audio output (6CH DISCRETE or MIXED 2CH) to suit your speaker system.	Multi-channel: When 6CH DISCRETE output is selected. (Also, select the speakers, speaker size, delay time, and channel balance. See page 29.) 2-channel: When MIXED 2CH output is selected.
	PCM Down Conversion DVD-A DVD-V Select how to output the high sampling-frequency audio signals on a disc that is not copyright-protected. See p.51 for details.	No Yes
	Dolby Digital DVD-A DVD-V Specify the signal type that is output from this unit's digital outputs. Select "Bitstream" when the connected device features a Dolby Digital decoder. Select "PCM" otherwise.	Bitstream PCM
	DTS Digital Surround DVD-A DVD-V Specify the signal type that is output from this unit's digital outputs. Select "Bitstream" when the connected device features a DTS decoder. Select "PCM" otherwise.	Bitstream PCM
	MPEG DVD-A DVD-V (U.K., Europe and Australia models) Specify the signal type that is output from this unit's digital outputs. Select "Bitstream" when the connected device features an MPEG decoder. Select "PCM" otherwise.	Bitstream PCM
	D. Range Compression DVD-A DVD-V (Dolby Digital only) Change the dynamic range for late night viewing. Select "On" to make it easier to hear dialog etc., even at low volume level.	Off On
	Audio during Search DVD-A DVD-V VCD Select whether to have sound during search. Select "Off" if sound is distorted when searching with Dolby Digital or DTS material. With DVD-Audio, the sound may be heard even if you select "Off."	On Off

Menu groups	Items	Options
Display	Menu Language Select the preferred language for on-screen messages and the setup menu.	(U.S.A. and Canada models) English Français Español (Australia model) English Français Deutsch Italiano Español (U.K. and Europe models) English Français Deutsch Italiano Español (General model) English
	On-Screen Messages Select whether or not to show on-screen messages.	On Off
Others	DVD-Video Mode Some DVD-Audio discs contain DVD-Video content that can be played only by a DVD-Video player.	Off On If you want to play the content, select "On." If you want to play a normal DVD-Audio disc, select "Off."
	Demo A demonstration of the unit's on-screen displays starts when you select "On". The demonstration stops when you press the □ button, etc. The setting reverts to "Off".	Off On

Notes

- * If you set Audio to "Original," the original language of each disc is selected.
- ** If you set Audio, Subtitle, or Menus to "Other," you need to select a four-digit number associated with the desired language from the language code list and enter it with numeric buttons.
- When the audio you selected for "audio language" is not recorded on the disc but the subtitle of the same language is recorded, the subtitle is displayed on the screen. However, if the audio is recorded on the disc, the subtitle is not displayed.

■ Language selection and language code list

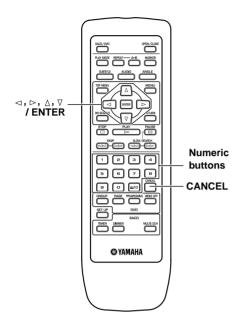
Lang	uage code list						
6565:	Afar	7079:	Faroese	7678:	Lingala	8375:	Slovak
6566:	Abkhazian	7082:	French	7679:	Laotian	8376:	Slovenian
6570:	Afrikaans	7089:	Frisian	7684:	Lithuanian	8377:	Samoan
6577:	Ameharic	7165:	Irish	7686:	Latvian, Lettish	8378:	Shona
6582:	Arabic	7168:	Scots Gaelic	7771:	Malagasy	8379:	Somali
6583:	Assamese	7176:	Galician	7773:	Maori	8381:	Albanian
6588:	Aymara	7178:	Guarani	7775:	Macedonian	8382:	Serbian
6590:	Azerbaijani	7185:	Gujarati	7776:	Malayalam	8385:	Sundanese
6665:	Bashkir	7265:	Hausa	7778:	Mongolian	8386:	Swedish
6669:	Byelorussian	7273:	Hindi	7779:	Moldavian	8387:	Swahili
6671:	Bulgarian	7282:	Croatian	7782:	Marathi	8465:	Tamil
6672:	Bihari	7285:	Hungarian	7783:	Malay	8469:	Telugu
6678:	Bengali; Bangla	7289:	Armenian	7784:	Maltese	8471:	Tajik
6679:	Tibetan	7365:	Interlingua	7789:	Burmese	8472:	Thai
6682:	Breton	7378:	Indonesian	7865:	Nauru	8473:	Tigrinya
6765:	Catalan	7383:	Icelandic	7869:	Nepali	8475:	Turkmen
6779:	Corsican	7384:	Italian	7876:	Dutch	8476:	Tagalog
6783:	Czech	7387:	Hebrew	7879:	Norwegian	8479:	Tonga
6789:	Welsh	7465:	Japanese	7982:	Oriya	8482:	Turkish
6865:	Danish	7473:	Yiddish	8065:	Punjabi	8484:	Tatar
6869:	German	7487:	Javanese	8076:	Polish	8487:	Twi
6890:	Bhutani	7565:	Georgian	8083:	Pashto, Pushto	8575:	Ukrainian
6976:	Greek	7575:	Kazakh	8084:	Portuguese	8582:	Urdu
6978:	English	7576:	Greenlandic	8185:	Quechua	8590:	Uzbek
6979:	Esperanto	7577:	Cambodian	8277:	Rhaeto-Romance	8673:	Vietnamese
6983:	Spanish	7578:	Kannada	8279:	Romanian	8679:	Volapük
6984:	Estonian	7579:	Korean	8285:	Russian	8779:	Wolof
6985:	Basque	7583:	Kashmiri	8365:	Sanskrit	8872:	Xhosa
7065:	Persian	7585:	Kurdish	8368:	Sindhi	8979:	Yoruba
7073:	Finnish	7589:	Kirghiz	8372:	Serbo-Croatian	9072:	Chinese
7074:	Fiji	7665:	Latin	8373:	Singhalese	9085:	Zulu

Note

• Selecting audio, subtitle or disc menu language is a disc-dependent matter. The language selected on the setup menu is not effective if a disc does not contain the selected language.

Ratings DVD-V

The rating can be set from level 0 to level 8. (The lower the number, the greater the restriction.)



■ Setting method (Level 8)

You can set the DVD-S2300 so that it will not play DVD videos that should not be viewed by children. To play these videos or change the restriction, you will need to enter the password.

When you select any level from 0 through 7, the password screen appears.

1 Press SETUP.

The menu screen appears on the video monitor.

- Enter a 4-digit number using the numeric buttons, then press ENTER.

Press CANCEL if you want to enter a different number.

A password confirmation screen appears.

Do not forget your password.



4 Press ENTER.

When you select a disc that exceeds the rating you have set, a message appears on the video monitor. In this case, follow the procedure that appears on the screen. You can return to the previous screen by pressing ENTER.

■ To change settings (Level 7 to 0)

When you select "Ratings" in the setup menu, the password screen appears.

1 Enter a 4-digit number using the numeric buttons, then press ENTER.

Unlock Player: Unlocks the rating and returns to level 8.

Change Password: Changes the password.
Change Level: Changes the rating level.
Temporary Unlock: Temporarily unlocks the rating level. It will remain unlocked until you switch the input source, turn the power off, or open the disc tray.

Press the cursor buttons (△, ∇) to select the desired item, then press ENTER.

■ If you forget your password

Return to the factory default setting. See page 31.

Note

· All settings will return to the factory default settings.

PCM down conversion DVD-A DVD-V

You can select how you wish to output high-quality digital signals (sampling frequencies of 88.2kHz and 96kHz) that are not copyright-protected.

Select an option depending on whether the connected amplifier or other components support these signals.

Connected component supports 88.2kHz or higher signals.	PCM down conversion	Digital output
Yes	Yes	Output as is.
No	No	Convert to 48kHz or 44.1kHz.

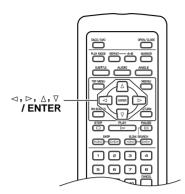
If a digital signal is input to a component that does not support 88.2kHz or higher signals, select "Yes." (If you select "No," audio signals of 88.2kHz or higher sampling frequencies will not be output.)

Note

 If a disc is copyright-protected or has a sampling frequency of 176.4 kHz or more, signals are automatically converted to either 48 kHz or 44.1 kHz.

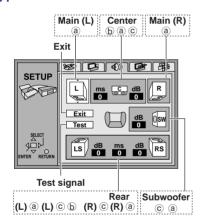
Speaker settings DVD-A DVD-V

Set the 6CH DISCRETE output according to the speaker system.



When you select "Multi-channel" from the Setup menu, you need to set the following ⓐ, ⓑ, and ⓒ parameters according to the speaker system.

Setting panel



a Output mode

- Press the cursor buttons (∆, √, ≺, ▷) to select a speaker and press ENTER.
 - appears above and below the speaker icons.
- 2 Press the cursor buttons $(\underline{\Lambda}, \nabla)$ to select the setting, then press ENTER.
 - Speaker size options:

L: Large, Small

R: Large, Small

C: Large, Small, None

SW: Used, Not used

LS: Large, Small, None

RS: Large, Small, None

The size of the left (L) speaker is automatically assigned to the right (R) speaker. Therefore, if you select Large for L, the size of R is automatically set to Large. This also applies to the sizes of LS and RS.

• Example: Rear left speaker



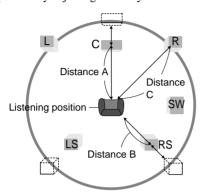
- 1 When the speaker is not used.
- 2 When using a large speaker capable of low-frequency (under 100 Hz) output
- When using a small speaker that is not capable of low-frequency output
- Factory default speaker-size settings:

L/R: Large C/LS/RS: Large SW: Used

b Delay time

(Only center/rear channels of DVD-Video discs recorded in Dolby Digital format)

To obtain the maximum effect of a Dolby Digital 5.1 channel source, all speakers should be located at same distance from the listening position. However, in many cases the center speaker is placed in line with the front speakers, etc. You can virtually increase the distance of the center and rear speakers by adjusting the delay time.



- Press the cursor buttons $(\Delta, \nabla, \lhd, \triangleright)$ to select a "ms" box, then press ENTER.
- Press the cursor buttons $(\underline{\Lambda}, \nabla)$ to adjust the delay time, then press ENTER.
 - Settings
 Distance A, Distance B => Distance C: 0 ms
 Distance A, Distance B < Distance C:</p>
 Make the following adjustments:

Center speaker

Difference	Setting
Approx. 50 cm (1 1/2 feet)	1.3 ms
Approx. 100 cm (3 feet)	2.6 ms
Approx. 150 cm (5 feet)	3.9 ms
Approx. 200 cm (6 feet)	5.3 ms

Rear speakers

Difference	Setting
Approx. 200 cm (6 feet)	5.3 ms
Approx. 400 cm (12 feet)	10.6 ms
Approx. 600 cm (18 feet)	15.9 ms

© Speaker balance

You can adjust the output level of each effect speaker (center, rear L/R) using the test tone.

Press the cursor buttons (∆, √, ≺, ▷) to select "Test," then press ENTER.

The test tone plays through one speaker at a time in the following order, starting with the left front speaker.

$$\underset{\uparrow}{\mathsf{L}} \longrightarrow \mathsf{C} \longrightarrow \mathsf{R} \longrightarrow \mathsf{RS} \longrightarrow \underset{\mid}{\mathsf{LS}}$$

Listening to the test tone, press the cursor buttons (Δ, ∇) to adjust the volume of the effect speakers, then press ENTER.

The value in the "dB" box changes.

Note

 The superwoofer cannot output the test tone. Play a recording and return to this screen to adjust the output level of the superwoofer.

■ To exit the speaker setting mode

Press the cursor buttons $(\triangle, \nabla, \triangleleft, \triangleright)$ to select "EXIT," then press ENTER.

Notes

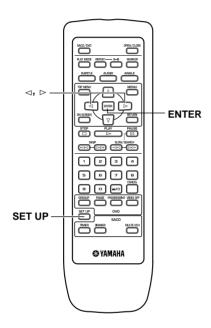
- You need to make other settings for SACD mode. (See page 31.)
- These adjustments may not be effective when the disc's original sound design is protected. In this case, the P.PCM indicator lights up or the D.MIX indicator turns off.

CHANGING THE SACD MODE SETTINGS

The DVD-S2300 features independent playback circuits for DVD mode and SACD mode. The DVD mode settings are not valid in SACD mode. You need to adjust the settings for SACD mode.

Speaker settings

To play multi-channel super audio CD data more effectively, set the speaker parameters in SACD mode according to your speaker setup and playback component. You need to set the speaker mode and adjust the speaker balance.



■ Setting speaker mode

Set the speaker mode according to your speaker size and setup.

1 Press SETUP.

The unit displays "SPK MODE."

2 Press ENTER.

The unit displays the current setting.

3 Press the cursor button or to change the setting.

Each time you press the cursor button, the speaker mode setting (indicated on the display) changes as follows:

Speaker mode chart

Speaker mode	Main speakers	Center speaker	Rear speakers	Super- woofer
MLTCH DIRECT	Audio signals	are output as rec	orded.	
5-LRG	Large	Large	Large	None
5-SML +SW	Small	Small	Small	Used
MAIN-LRG +SW	Large	Small	Small	Used
MAIN-LRG	Large	Small	Small	None
NON-C +SW	Large	None	Large	Used
NON-C	Large	None	Large	None

How to select a speaker mode:

Select a mode according to your speaker setup and performance.

Speakers marked "Large" output all signals including a low range of 90Hz and lower. If you are using a large speaker that has a large capacity for low-range playback (i.e., a diameter of the woofer is 16cm or more), select a mode for which the corresponding speaker is marked "Large."

The low range of speakers marked "Small" is output to the superwoofer or main speakers (marked "Large"). If you feel that the low range playback is not sufficiently powerful, or if the sound is clipping, select a mode for which the corresponding speaker is marked "Small"

4 Press ENTER to confirm the selected mode.

5 Press SETUP.

The unit displays the standard screen.

■ Adjusting the speaker balance

If each speaker's volume level is different, use the test tone to adjust the level so that all speakers sound at the same level as the main speakers.

Press SETUP.

Press the cursor button ⊲ or ⊳ to select "SPK BALANCE."

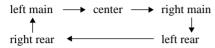
Pressing the cursor button repeatedly toggles between "SPK MODE" and "SPK BALANCE."

3 Press ENTER.

The unit displays "TEST TONE." If the unit displays another indication, press the cursor button < or > to select "TEST TONE."

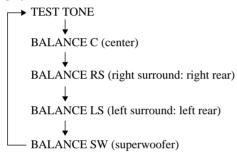
4 Press ENTER

Two seconds of test tone are output from each speaker in the following order.



Press the cursor button < or > to select a speaker for which you wish to adjust the level, then press ENTER.

Pressing the cursor button ⊲ or ⊳ toggles the display indication as follows:



Example: Adjusting the right rear speaker level

Select BALANCE RS and press ENTER. The unit displays the following indication, and the left and right main speakers and the right rear speaker output a test tone at the same time.

Notes

- You cannot select the main speakers to adjust the level, since you adjust the level of the center, left and right rear speakers based on the level of the main speakers.
- The superwoofer does not output the test tone. Adjust the level while playing a disc.
- Test tone is not output from the speakers marked "No" in the selected speaker mode (see the speaker mode chart on the previous page).

6 Press the cursor button < or > to adjust the level balance.

Each time you press the cursor button, "+" moves one step.

Pressing the < button increase the main speakers' level balance, and pressing the ▷ button increases the level balance of the selected speaker.

• One step equals 0.5dB.

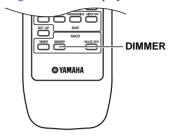
7 Press ENTER to confirm the setting.

8 Press SETUP.

The unit displays the standard screen.

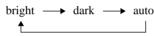
Adjusting the brightness of the display

You can adjust brightness of the display.



Press DIMMER.

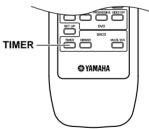
Each time you press DIMMER, the brightness changes as follows:



 When "auto" is selected, the display becomes dark during disc playback. When you pause the disc or operate the unit, the display becomes bright temporarily.

Changing the time indication

You can select a time indication style for super audio CD playback.



Press TIME during playback.

Each time you press TIME, the time indication changes as follows:



Note

The unit does not display the disc's remaining time during program play or random play.

TROUBLESHOOTING

Refer to the chart below when the DVD-S2300 does not function properly. If the problem you are having is not listed below or if the instructions do not help, turn off the power to the unit, disconnect the power cord, and contact the nearest authorized YAMAHA dealer or service center.

■ General

Problem	Cause	Remedy	Refer to page
No response when buttons pressed.	Some operations may be prohibited by the disc.		_
Playback does not start.	The disc is damaged.	Check the disc carefully; replace it if necessary.	_
	There is moisture on the laser pickup.	Wait one to two hours after switching the unit on before try- ing to play a disc.	_
	The disc has been loaded upside down.	Reload the disc with the label side facing up.	_
	The disc is dirty.	Clean the disc.	36
Audio or video is not played or is abnormal.	Connections or settings are not correct.	Check the connections and input/output settings.	9, 8, 24–32
"No Play" appears on the unit's display.	A disc this unit cannot play is loaded.		_
The unit does not recognize disc ("No disc" appears on the display, or the display indicates that no disc is loaded).	The disc is not placed properly.	Place the disc properly.	_

■ DVD mode

Problem	Cause	Remedy	Refer to page
No subtitles.	The disc does not have subtitles.		_
	Subtitle is turned off.	Show subtitles by pressing SUB- TITLE or using on-screen menu.	15
Alternative languages cannot be selected.	An alternative language cannot be selected on discs that do not contain more than one language.		_
	In the case of some discs, the alternative lan- guage cannot be selected with AUDIO or SUB- TITLE. Try selecting it from the disc's menu if one is available.		_
Angle cannot be changed.	The disc or the scene being played does not support multi-angle.		_
No sound. Distorted sound.	If the "D.MIX" indicator on the front panel display turns off during multi-channel DVD-Audio disc playback, sound will be output only from speakers specified by the disc.		_
Sound "skips".	The disc is dirty.	Clean the disc.	36
Noise from inside of the unit.	The disc may be warped.	Replace the disc.	_
Picture distorted during SEARCH.	Some distortion is normal during SEARCH.		_

TROUBLESHOOTING

Problem	Cause	Remedy	Refer to page
No picture.	(U.S.A and Canada models) If you play PAL system DVD-Audio, the message "This disc is PAL system. The output is sound only" may appear on the monitor. No picture is available because the disc's video signal system is different.		_
Video cannot be recorded.	Most DVD-Audio/Video discs are copy-protected and cannot be recorded.		_
Picture appears incorrectly.	Incorrect "TV aspect" setting under the Video menu (in Seup menu).	Select the right position. How- ever, it may be difficult to adjust many DVD-Videos' widescreen format to fit perfectly in your 4:3 video monitor.	27
	(U.S.A model) PROGRESSIVE is turned on even though the connected monitor cannot receive progressive signals.	Turn off the PROGRESSIVE feature.	13
	(U.S.A model) Due to the editing method or material used on a DVD, ghosting may occur with progressive output.	Turn off the PROGRESSIVE feature.	13
(U.S.A. model) Part of the picture doubles during progressive output.	This symptom derives from the video's material condition and how it has been edited. (Video will be played correctly via interlace output.)	Set the progressive output to Off to output interlaced video signals to a video monitor.	
No on-screen display.		Go to Display on the SETUP menu, and select "On" for "On- Screen Messages".	23
On-screen menu icons not displayed or only partially displayed on the television.		Press the cursor buttons $[\Delta, \nabla]$ while the rightmost icon is highlighted to change the menu bar position.	20
There is a lot of ghosting.		Use the on-screen menu icons to adjust the picture quality.	23

■ SACD mode

Problem	Cause	Remedy	Refer to page
The Setup menu settings are not effective.	The Setup menu settings are not effective in SACD mode.	Set the parameters for SACD mode, instead of using the Setup menu. Some parameters may not be available.	31, 32
No digital signal is output from the digital output connector.	Digital signals cannot be output from a super audio CD.		_

■ Remote control

Problem	Cause	Remedy	Refer to page
The remote control does not work nor function properly.	Wrong distance or angle.	The remote control will function within a maximum range of 6 m (20 feet) and no more than 30 degrees off-axis from the front panel.	3
	Direct sunlight or lighting (from an inverter type of fluorescent lamp, etc.) is striking the remote control sensor of the unit.	Reposition the unit.	_
	The batteries are weak.	Replace all batteries with new ones.	3

GLOSSARY

Bitstream

This is the digital form of multiple channel audio data (e.g., 5.1 channel) before it is decoded into its various channels.

CINEMA DSP

Since the Dolby Surround and DTS systems were originally designed for use in movie theaters, their effect is best felt in a theater having many speakers and designed for acoustic effects. Since home conditions, such as room size, wall material, number of speakers, and so on, can differ so widely, it's inevitable that there are differences in the sound heard as well. Based on a wealth of measured data, YAMAHA CINEMA DSP uses YAMAHA original sound field technology to combine Dolby Pro Logic, Dolby Digital and DTS systems to provide the visual and audio experience of movie theater in the listening room of your own home.

Decoder

A decoder restores the coded signals on DVDs to normal. This is called decoding.

Dolby Digital

This is a method of coding digital signals developed by Dolby Laboratories. Apart from stereo (2-channel) audio, these signals can also be 5.1-channel audio. A large amount of audio information can be recorded on one disc using this method.

Dolby Pro Logic

A surround system where a 4-channel audio track is recorded as 2 channels, then restored to 4 channels for playback. The surround channel is monaural and can reproduce up to 7 kHz.

Dolby Pro Logic II

Dolby Pro Logic II is an improved technique used to decode data encoded via existing Dolby Surround software. This new technology enables a discrete 5-channel playback with 2 front channels, 1 center channel, and 2 rear channels (instead of only 1 rear channel for conventional Pro Logic technology). A music mode is also available for 2-channel sources in addition to the movie mode.

Frame still and field still

A still is shown when you pause a moving picture. A frame still is made up of two alternating fields, so the picture may appear blurred, but overall quality is high. A field still is not blurred, but it has only half the information of a frame still so picture quality is lower. Frames are the still pictures that go together to make a moving picture.

About 30 frames are shown each second.

One frame is composed of two interlaced fields. A regular television shows these fields one after the other to create frames.

Group DVD-A

A DVD audio disc is divided into large sections called "groups" and smaller sections called "tracks." The numbers allocated to these sections are called "group numbers" and "track numbers."

Interlaced and progressive output

NTSC, the video signal standard, has 525 interlaced (i) scan lines, whereas progressive scanning uses twice that number of scan lines.

This is called 525p. The 525i video signals output from the DVD-S2300's COMPONENT VIDEO OUT connectors (Y, PB /CB, PR/CR) allow you to enjoy higher quality pictures than if the signals were output from the video output connector or S VIDEO OUT connector. The COMPONENT VIDEO OUT connectors are also able to handle 525p (progressive) video signals, which are of even greater resolution.

LFE 0.1 channel

This channel is for the reproduction of low bass signals. The frequency range for this channel is 20 Hz to 120 Hz. This channel is counted as 0.1 because it enforces only a low frequency range compared to the full-range reproduced by the other 5 channels in a Dolby Digital or DTS 5.1 channel systems.

PCM

PCM is the usual digital method used for music CDs. DVDs feature greater volume so they use linear PCM, which has a higher sampling rate. Compressed PCM signals are called packed PCM (PPCM).

Matrix 6.1

The unit incorporates a Matrix 6.1 decoder for Dolby Digital and DTS multi-channel software that enables 6.1-channel reproduction by adding the rear center channel to an existing 5.1-channel format. (The rear center channel is created from rear left and right channels, and output from a virtual rear center speaker.) With this additional channel, you can experience more dynamic and realistic moving sound, especially with scenes with "fly-over" and "fly-around" effects.

Pan&Scan/Letterbox

In general, DVD-Video discs are produced with the intention of being viewed on a widescreen television with an aspect ratio of 16:9. This means you can view most material with the intended aspect ratio on a widescreen television.

Material with this ratio will not fit onto a standard television with an aspect ratio of 4:3. Two styles of picture, "Pan&Scan" and "Letterbox," deal with this problem.

Pan&Scan: The sides are cut off so the picture fills the

screen.

Letterbox: Black bands appear at the top and bottom of

the picture so the picture itself appears in an

aspect ratio of 16:9.

Playback control (PBC)

If a Video CD has "playback control" written on it or its jacket, it means that particular scenes or information can be selected for viewing interactively with the television using the menu screen. This unit can play Video CDs with playback control.

Sampling frequency and number of quantized bits

When digitizing an analog audio signal, the number of times the signal is sampled per second is called the sampling frequency, while the degree of fineness when converting the sound level into a numeric value is called the number of quantized bits.

SILENT CINEMA

YAMAHA has developed a natural, realistic sound effect DSP algorithm for headphones.

Parameters for headphones have been set for each sound field so that you can enjoy accurate representations of all sound field programs.

Title/Chapter DVD-V

DVD-Video discs are divided into large sections (titles), and smaller sections (chapters). The numbers allocated to these sections are called title numbers and chapter numbers.

Track SACD DVD-A VCD CD

This is the smallest division on DVD-Audio, CD, and Video CD discs, and usually equates to a single song.

Virtual CINEMA DSP

YAMAHA has developed a virtual CINEMA DSP algorithm that allows you to enjoy DSP sound field surround effects even without center or rear speakers by using virtual rear speakers.

NOTES ON HANDLING DISCS

· Hold discs by touching only the edges or center hole.



- Store discs in an appropriate case.
- Do not use any disc that has had its surface printed by a commercially-available label printer.
- Do not expose discs to direct sunlight, high temperature or high humidity for a long period of time, because these environments might warp or otherwise damage the disc.

 Playback of discs is generally not affected by small particles of dust or fingerprints on their playing surface. Even so, they should be kept clean. Wipe discs using a clean, dry cloth. Do not wipe with a circular motion; wipe straight outward from the center.



 Do not try to clean the disc's surface by using any type of disc cleaner, record spray, anti-static spray or liquid, or any other chemical-based liquid, because such substances might irreparably damage the disc's surface.

AUDIO SECTION

• Minimum RMS Output Power FRONT L/R, CENTER, REAR L/R 1 kHz, 0.9% THD, 6 Ω
[U.S.A. and Canada models] 20 Hz to 20 kHz, 0.9% THD, 6 Ω
 Maximum Power (EIAJ) FRONT L/R, CENTER, REAR L/R (1 kHz, 10% THD, 6 Ω) 40 W
SUBWOOFER (100 Hz, 10% THD, 5 W)
Total Harmonic Distortion FRONT L/R (20 W, 1 kHz)0.05 %
• Signal to Noise Ratio (IHF-A Network, shorted)95 dB
Input Sensitivity VIDEO 1, VIDEO 2, VCR, MD/CD-R200 mV/47 kW
Output Level (when 200 mV is input.) PRE OUT (FRONT L/R, CENTER, REAR L/R) max. 1 V PRE OUT (SUBWOOFER) max. 4 V REC OUT

VIDEO SECTION

Video Signal Level
Video1 Vp-p/75Ω
S Video (Y/C)
[U.S.A., Canada and General models]
1 Vp-p/0.286 Vp-p/75 Ω
[Australia, U.K. and Europe models]
1 Vp-p/0.3 Vp-p/75 Ω
Component $(Y/P_B, P_R)$
[U.S.A and Australia models]
1 Vp-p/0.7 Vp-p/75Ω
AV (RGB SCART)
[U.K. and Europe models]
1 Vp-p/0.7 Vp-p/75 Ω
Signal to Noise Ratio 50 dB

GENERAL

SPECIFICATIONS

•	Power Supply
	[U.S.A. model]AC 120 V/60 Hz
	[Australia model]AC 240 V/50 Hz
	[U.K. and Europe models]AC 230 V/50 Hz
•	Power Consumption
•	Dimensions (W X H X D)
	435 X 116 X 350 mm (17-1/8" X 0-0/0" X 0-0/0")
•	Weight
•	Usable temperature range $5^{\circ}C$ to $35^{\circ}C$
•	Usable humidity range
	5% to 90% (There should be no condensation.)
•	Accessories

