

CD/DVD Player

Operating Instructions



DVP-NS700P

WARNING

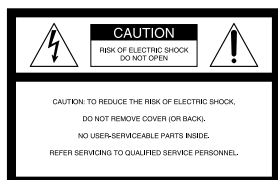
To prevent fire or shock hazard, do not expose the unit to rain or moisture.

To avoid electrical shock, do not open the cabinet. Refer servicing to qualified personnel only.

CAUTION

The use of optical instruments with this product will increase eye hazard. As the laser beam used in this player is harmful to eyes, do not attempt to disassemble the cabinet.

Refer servicing to qualified personnel only.



This symbol is intended to alert the user to the presence of uninsulated “dangerous voltage” within the product’s enclosure that may be of sufficient magnitude to constitute a risk of electric shock to persons.



This symbol is intended to alert the user to the presence of important operating and maintenance (servicing) instructions in the literature accompanying the appliance.

CAUTION

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

For customers in the U.S.A

Owner's Record

The model and serial numbers are located at the rear of the unit. Record the serial number in the space provided below. Refer to them whenever you call upon your Sony dealer regarding this product.

Model No. DVP-NS700P

Serial No. _____

CAUTION

You are cautioned that any change or modifications not expressly approved in this manual could void your authority to operate this equipment.

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

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

Welcome!

Thank you for purchasing this Sony CD/DVD player. Before operating the player, please read this manual thoroughly and retain it for future reference.

Precautions

On safety

- Caution – The use of optical instruments with this product will increase eye hazard.
- Should any solid object or liquid fall into the cabinet, unplug the player and have it checked by qualified personnel before operating it any further.

On power sources

- The player is not disconnected from the AC power source as long as it is connected to the wall outlet, even if the player itself has been turned off.
- If you are not going to use the player for a long time, be sure to disconnect the player from the wall outlet. To disconnect the AC power cord, grasp the plug itself; never pull the cord.
- Should the AC power cord need to be changed, have it done at a qualified service shop only.

On placement

- Place the player in a location with adequate ventilation to prevent heat build-up in the player.
- Do not place the player on a soft surface such as a rug that might block the ventilation holes on the bottom.
- Do not place the player in a location near heat sources, or in a place subject to direct sunlight, excessive dust, or mechanical shock.

On operation

- If the player is brought directly from a cold to a warm location, or is placed in a very damp room, moisture may condense on the lenses inside the player. Should this occur, the player may not operate properly. In this case, remove the disc and leave the player turned on for about half an hour until the moisture evaporates.
- When you move the player, take out any discs. If you don't, the disc may be damaged.

On adjusting volume

Do not turn up the volume while listening to a section with very low level inputs or no audio signals. If you do, the speakers may be damaged when a peak level section is played.

On cleaning

Clean the cabinet, panel, and controls with a soft cloth slightly moistened with a mild detergent solution. Do not use any type of abrasive pad, scouring powder, or solvent such as alcohol or benzine.

If you have any questions or problems concerning your player, please consult your nearest Sony dealer.

On cleaning discs

Do not use a commercially available CD/DVD cleaning disc. It may cause a malfunction.

IMPORTANT NOTICE

Caution: This player is capable of holding a still video image or on-screen display image on your television screen indefinitely. If you leave the still video image or on-screen display image displayed on your TV for an extended period of time you risk permanent damage to your television screen. Projection televisions are especially susceptible to this.





Table of Contents

WARNING	2
Welcome!	2
Precautions	3
About this Manual	6
This Player Can Play the Following Discs	6
Notes about the Discs	7
Index to Parts and Controls	8
Guide to the Control Menu Display	12
<hr/>	
Getting Started	15
Quick Overview	15
Step 1: Unpacking	15
Step 2: Inserting Batteries into the Remote	15
Step 3: TV Hookups	16
Step 4: Playing a Disc	17
<hr/>	
Hookups	18
Hooking Up the Player	18
Step 1: Connecting the Video Cords	18
Step 2: Connecting the Audio Cords	20
Step 3: Connecting the Power Cord	25
Step 4: Quick Setup	25
<hr/>	
Playing Discs	29
Playing Discs	29
Resuming Playback from the Point Where You Stopped the Disc (Resume Play)	31
Using the DVD's Menu	32
Playing VIDEO CDs with PBC Functions (PBC Playback)	33
Various Play Mode Functions (Program Play, Shuffle Play, Repeat Play, A-B Repeat Play)	34
<hr/>	
Searching for a Scene	39
Searching for a Particular Point on a Disc (Search, Scan, Slow-Motion Play, Freeze Frame)	39
Searching for a Title/Chapter/Track/Index/Scene (Search mode)	41
Searching by Scene (VIEWER)	43




Viewing Information About the Disc	45
Viewing the Playing Time and Remaining Time on the Front Panel Display	45
Checking the Playing Time and Remaining Time	46
Checking the Play Information (ADVANCED)	48
Sound Adjustments	49
Changing the Sound	49
TV Virtual Surround Sound Settings (TVS)	51
Enjoying Movies	53
Changing the Angles	53
Displaying the Subtitles	54
Adjusting the Picture Quality (BNR)	55
Adjusting the Playback Picture (VIDEO EQUALIZER)	56
Enhancing the Playback Picture (DIGITAL VIDEO ENHANCER)	58
Using Various Additional Functions	59
Locking Discs (CUSTOM PARENTAL CONTROL, PARENTAL CONTROL)	59
Operation Sound Effects (Sound Feedback)	63
Controlling Your TV or AV Amplifier (Receiver) with the Supplied Remote . . .	64
Settings and Adjustments	67
Using the Setup Display	67
Setting the Display or Sound Track Language (LANGUAGE SETUP)	68
Settings for the Display (SCREEN SETUP)	69
Custom Settings (CUSTOM SETUP)	72
Settings for the Sound (AUDIO SETUP)	74
Additional Information	76
Troubleshooting	76
Self-diagnosis Function (When letters/numbers appear in the display)	78
Glossary	79
Specifications	81
Language Code List	82
List of Setup Display Items	83
Index	85

About this Manual

- Instructions in this manual describe the controls on the remote. You can also use the controls on the player if they have the same or similar names as those on the remote.
- The meaning of the icons used in this manual is described below:

Icon	Meaning	Icon	Meaning
	Functions available in DVD video mode		Functions available in music CD mode
	Functions available in VIDEO CD mode		More convenient features

This Player Can Play the Following Discs

Format of discs	
DVD VIDEO	
VIDEO CD	
Music CD	

The “DVD VIDEO” logo is a trademark.

Region code

Your player has a region code printed on the back of the unit and will only play DVDs labeled with identical region codes.

DVDs labeled  will also play on this player.

If you try to play any other DVD, the message “Playback prohibited by area limitations.” will appear on the TV screen. Depending on the DVD, no region code indication may be labeled even though playing the DVD is prohibited by area restrictions.



Example of discs that the player cannot play

The player cannot play the following discs:

- CD-ROMs (PHOTO CDs included)
- All CD-Rs other than music and VCD format CD-Rs
- Data part of CD-Extras
- DVD-ROMs
- DVD Audio discs
- HD layer on SACDs

Also, the player cannot play the following discs:

- A DVD with a different region code (page 79).
- A disc recorded in a color system other than NTSC, such as PAL or SECAM (this player conforms to the NTSC color system).
- A disc that has a non-standard shape (e.g., card, heart).
- A disc with paper or stickers on it.
- A disc that has the adhesive of cellophane tape or a sticker still left on it.

Note

Some CD-Rs or CD-RWs cannot be played on this player depending upon the recording quality or physical condition of the disc, or the characteristics of the recording device.

Furthermore, the disc will not play if it has not been correctly finalized. For more information, see the operating instructions for the recording device.

Note on playback operations of DVDs and VIDEO CDs

Some playback operations of DVDs and VIDEO CDs may be intentionally set by software producers. Since this player plays DVDs and VIDEO CDs according to the disc contents the software producers designed, some playback features may not be available. Also, refer to the instructions supplied with the DVDs or VIDEO CDs.

Copyrights

This product incorporates copyright protection technology that is protected by method claims of certain U.S. patents, 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.

Notes about the Discs

On handling discs

- To keep the disc clean, handle the disc by its edge. Do not touch the surface.



- Do not expose the disc to direct sunlight or heat sources such as hot air ducts, or leave it in a car parked in direct sunlight as the temperature may rise considerably inside the car.
- After playing, store the disc in its case.

On cleaning

- Before playing, clean the disc with a cleaning cloth.
- Wipe the disc from the center out.

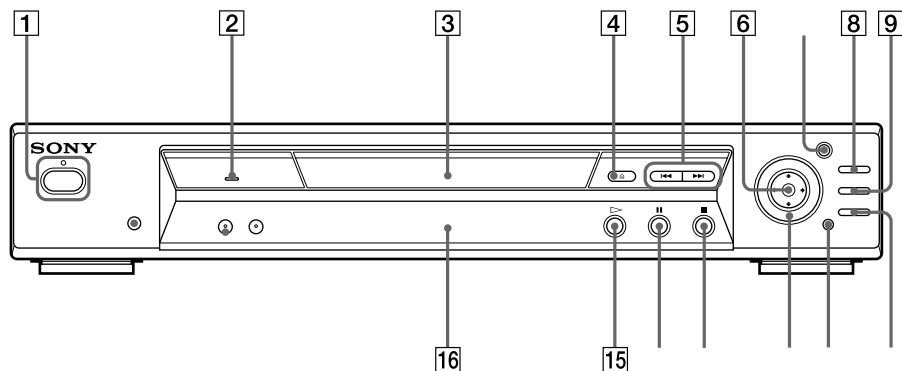


- Do not use solvents such as benzene, thinner, commercially available cleaners, or anti-static spray intended for vinyl LPs.

Index to Parts and Controls

For more information, refer to the pages indicated in parentheses.

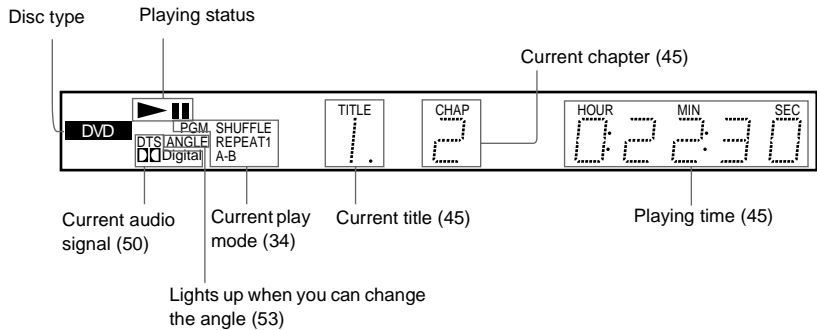
Front Panel



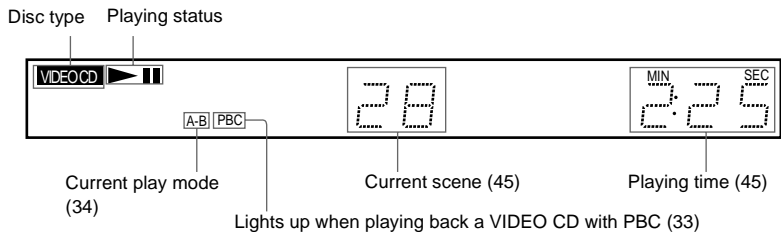
- | | |
|---|---|
| 1 POWER switch/indicator (29) | 10 RETURN button (33) |
| 2 PROGRESSIVE indicator (70) | 11 DISPLAY button (12) |
| 3 Disc tray (29) | 12 Click shuttle (40) |
| 4 (open/close) button (29) | 13 (stop) button (29) |
| 5 (previous/next) buttons (30) | 14 (pause) button (30) |
| 6 (left/up/down/right)/ ENTER buttons (25) | 15 (play) button (29) |
| 7 JOG button/indicator (40) | 16 Front panel display (9) |
| 8 TITLE button (32) | 17 SURROUND button/indicator (51) |
| 9 DVD MENU button (32) | 18 BNR (Block Noise Reduction) button/indicator (55) |
| | 19 (remote sensor) (15) |

Front Panel Display

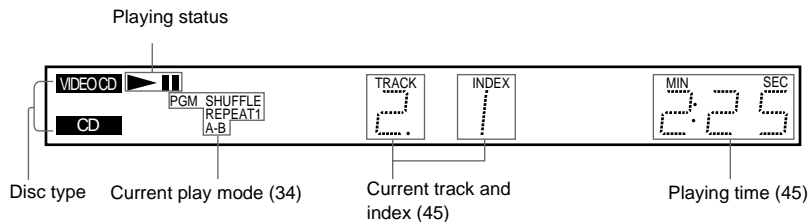
When playing back a DVD



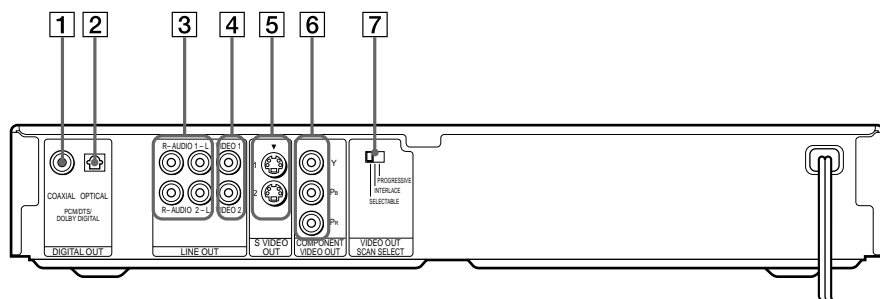
When playing back a VIDEO CD (PBC)



When playing back a CD or VIDEO CD (without PBC)

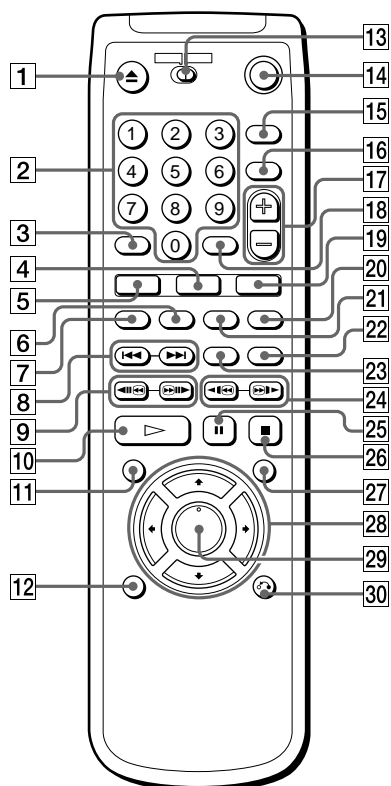


Rear Panel



- 1** DIGITAL OUT (COAXIAL) jack (22) (23) (24)
- 2** DIGITAL OUT (OPTICAL) jack (22) (23) (24)
- 3** LINE OUT L/R (AUDIO) 1/2 jacks (16) (21) (22) (23)
- 4** LINE OUT (VIDEO) 1/2 jacks (16) (18)
- 5** S VIDEO OUT 1/2 jacks (18)
- 6** COMPONENT VIDEO OUT jacks (18)
- 7** VIDEO OUT SCAN SELECT switch (70)

Remote

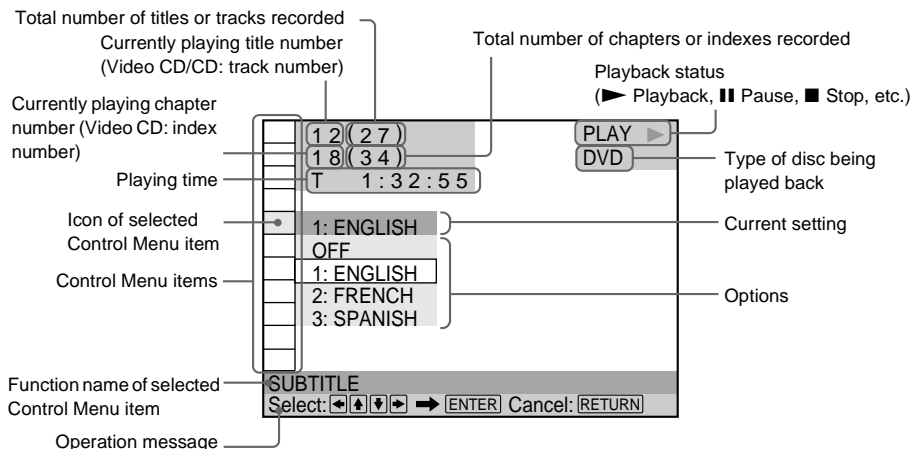


- 1** ▲ OPEN/CLOSE button (30)
- 2** Number buttons
- 3** CLEAR button (34)
- 4** ANGLE button (53)
- 5** AUDIO button (49)
- 6** PROGRAM button (34)
- 7** SHUFFLE button (36)
- 8** ◀◀/▶▶ PREV/NEXT buttons (30)
- 9** ◀◀◀/▶▶▶ SEARCH/STEP buttons (39)
- 10** ▷ PLAY button (29)
- 11** TITLE button (32)
- 12** DISPLAY button (34)
- 13** TV/DVD switch (64)
- 14** I/⏻ (on/standby) button (29)
- 15** BNR (Block Noise Reduction) button (55)
- 16** TV/VIDEO button (64)
- 17** VOL +/- buttons (64)
- 18** ENTER button
- 19** SUBTITLE button (54)
- 20** TIME/TEXT button (45)
- 21** REPEAT button (36)
- 22** INSTANT REPLAY button (30)
- 23** SURROUND button (51)
- 24** ◀◀◀/▶▶▶ SCAN/SLOW buttons (39)
- 25** || PAUSE button (30)
- 26** ■ STOP button (29)
- 27** DVD MENU button (32)
- 28** ⬅/⬆/⬇/➡ buttons (25)
- 29** ENTER button (25)
- 30** ↻ RETURN button (33)

Guide to the Control Menu Display













Use the Control Menu to select a function that you would like to use. The Control Menu display appears when the DISPLAY button is pressed. For details, please refer to the page in parentheses.

Control Menu

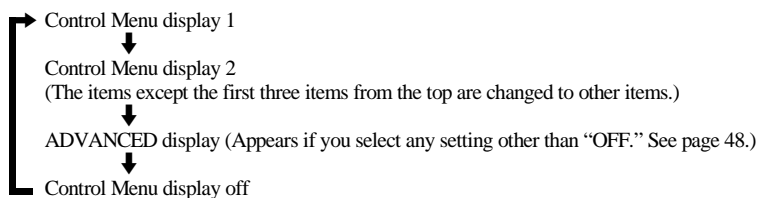


List of Control Menu Items




	TITLE (DVD only) (page 41)/ SCENE (only VIDEO CD in PBC playback) (page 41)/TRACK (VIDEO CD only) (page 41)	Selects the title (DVD), the scene (VIDEO CD in PBC playback) or the track (VIDEO CD) to be played.
	CHAPTER (DVD only) (page 41)/INDEX (VIDEO CD only) (page 41)	Selects the chapter (DVD) or the index (VIDEO CD) to be played.
	TRACK (CD only) (page 41)	Selects the track (CD) to be played.
	INDEX (CD only) (page 41)	Selects the index (CD) to be played.
	TIME/TEXT (page 41)	Checks the elapsed time and the remaining playback time. Input the time code for picture and music searching. Displays the DVD or the CD text.
	AUDIO (page 49)	Changes the audio setting.
	SUBTITLE (DVD only) (page 54)	Displays the subtitles. Changes the subtitle language.
	ANGLE (DVD only) (page 53)	Changes the angle.

 TVS (TV Virtual Surround Sound) (page 51)	Lets you enjoy surround sound effects by using sound imaging to create virtual rear speakers from the sound of your stereo TV's internal speakers.
 ADVANCED (DVD only) (page 48)	Checks the information (bit rate or layer) on the disc while playing a DVD.
 CUSTOM PARENTAL CONTROL (page 59)	Sets the disc to prohibit playing.
 SETUP (page 67)	<p>QUICK Setup (page 25) Use Quick Setup to choose the desired language of the on screen display, the shape of the TV screen, and the audio output.</p> <p>CUSTOM Setup In addition to the Quick Setup setting, you can adjust the image and sound quality, Parental Control, and other various settings.</p> <p>RESET Returns the settings in "SETUP" to the default setting.</p>
 PROGRAM (page 34)	Selects the title, the chapter, or the track to play a disc in the order you want.
 SHUFFLE (page 36)	Plays the title, the chapter, or the track in random order.
 REPEAT (page 36)	Plays the entire disc (all titles/all tracks) repeatedly or one title/chapter/track repeatedly.
 A-B REPEAT (page 37)	Specifies the parts you want to play repeatedly.
 BNR (page 55)	Adjusts the picture quality by reducing the "block noise" or mosaic like patterns that appear on your TV screen.
 VIDEO EQUALIZER (DVD/VIDEO CD only) (page 56)	Adjusts the video signal of the DVD or VIDEO CD from the player. You can adjust each element of the picture, such as the HUE and BRIGHTNESS.
 DIGITAL VIDEO ENHANCER (DVD/VIDEO CD only) (page 58)	Exaggerates the outline of the image to produce a sharper picture.
 VIEWER (DVD/VIDEO CD only) (page 43)	Divides the screen into 9 sub-screens to help you find the scene you want quickly.

 Each time you press DISPLAY, the Control Menu display changes as follows:



You can display the Control Menu display 1 only during CD playback. The Control Menu items are different depending on the disc.

 The Control Menu icon indicator lights up in green  →  when you select any item except “OFF.” (“TVS,” “PROGRAM,” “SHUFFLE,” “REPEAT,” “A-B REPEAT,” “BNR,” “DIGITAL VIDEO ENHANCER” only). The “ANGLE” indicator lights up in green only when the angles can be changed. The “VIDEO EQUALIZER” indicator lights up in green when any setting other than “STANDARD” is selected.

Quick Overview

A quick overview presented in this chapter will give you enough information to start using the player for your enjoyment. To use the surround sound features of this player, refer to “Hookups” on page 18.

Note


You cannot connect this player to a TV that does not have a video input jack.
Be sure to turn off the power of each component before connecting.

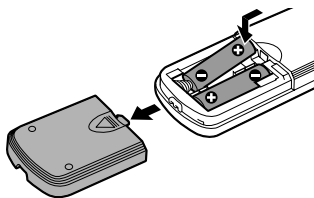
Step 1: Unpacking

Check that you have the following items:

- Audio/video cord (pinplug × 3 ↔ pinplug × 3) (1)
- Remote commander (remote) RMT-D129A (1)
- Size AA (R6) batteries (2)
- Component video cord (pinplug × 3 ↔ pinplug × 3) (1)

Step 2: Inserting Batteries into the Remote

You can control the player using the supplied remote. Insert two size AA (R6) batteries by matching the ⊕ and ⊖ ends on the batteries to the markings inside the compartment. When using the remote, point it at the remote sensor  on the player.

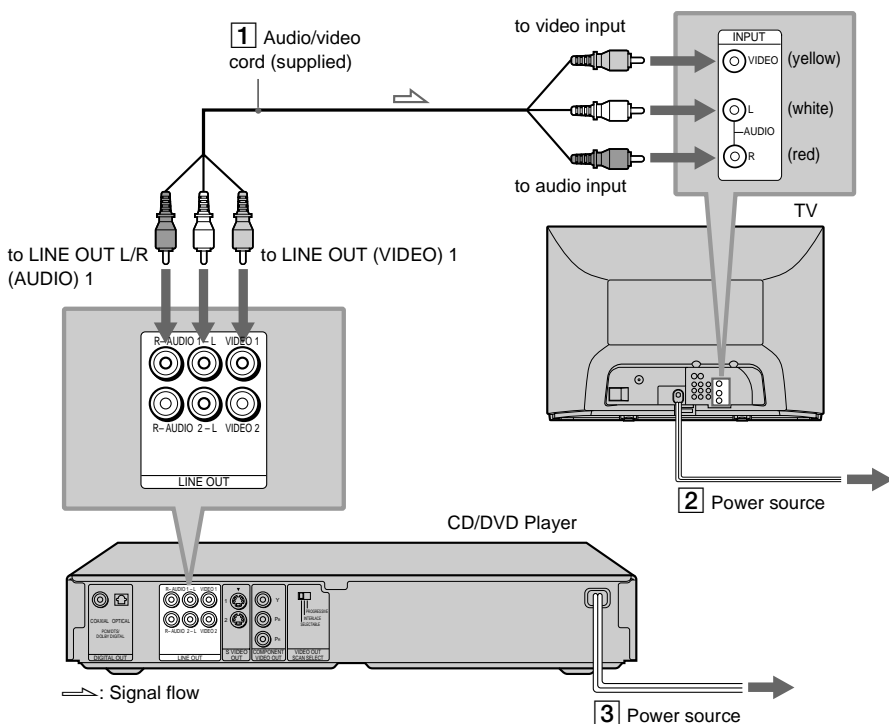


Notes

- Do not leave the remote in an extremely hot or humid place.
- Do not drop any foreign object into the remote casing, particularly when replacing the batteries.
- Do not expose the remote sensor to direct light from the sun or a lighting apparatus. Doing so may cause a malfunction.
- If you do not use the remote for an extended period of time, remove the batteries to avoid possible damage from battery leakage and corrosion.

Step 3: TV Hookups

Connect the supplied audio/video cord and power cord in the order (1~3) shown below. Be sure to connect the power cord last.



When connecting to a wide screen TV

Depending on the disc, the image may not fit your TV screen.

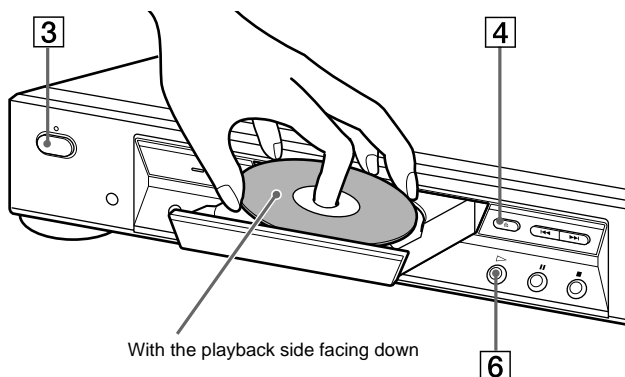
If you want to change the aspect ratio, please refer to page 69.

When connecting to a TV that accepts progressive (480p) format signals

You need to use the COMPONENT VIDEO OUT jacks to view progressive signals. Hook up your TV using pattern **C** on page 18, and then run Quick Setup on page 25.

Step 4: Playing a Disc

- 1 Turn on the TV.
- 2 Switch the input selector on the TV to the player.



- 3 Press **POWER** on the player.
- 4 Press \triangle on the player to open the disc tray.
- 5 Place the disc on the tray with the playback side facing down.
- 6 Press \triangleright .
The disc tray closes and the player begins playing the disc.

After Step 6

Depending on the disc, a menu may be displayed on the TV screen. If so, select the item you want from the menu and play the DVD (page 32) or VIDEO CD disc (page 33).

To stop playing

Press \blacksquare .

To take out the disc

Press \triangle .

To turn off the player

Press $\text{I/}\odot$ on the remote. The player is set to standby mode and the power indicator lights up in red. Press **POWER** on the player to turn off completely.

Hooking Up the Player

Follow Steps 1 to 4 to hook up and adjust the settings of the player.

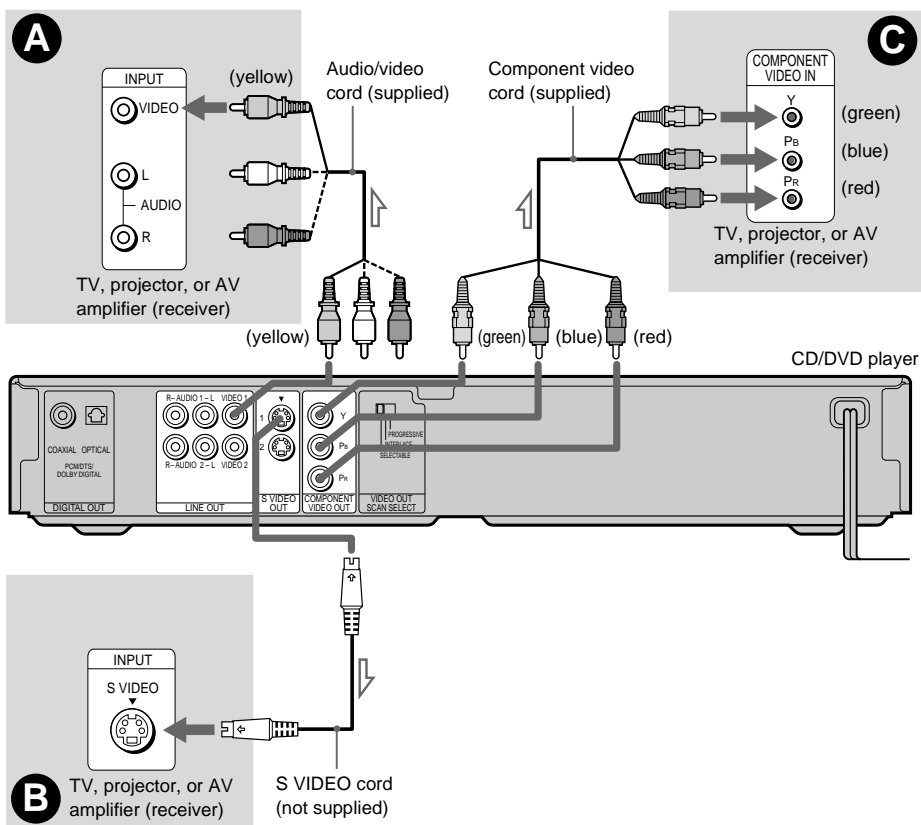
Before you start, turn off the power, check that you have all of the supplied accessories, and insert the batteries into the remote (page 15).

Notes

- Plug cords securely to prevent unwanted noise.
- Refer to the instructions supplied with the components to be connected.

Step 1: Connecting the Video Cords

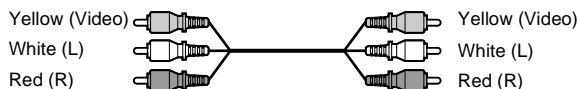
Connect this player to your TV monitor, projector, or AV amplifier (receiver) using a video cord. Select one of the patterns **A** through **C**, according to the input jack on your TV monitor, projector, or AV amplifier (receiver). In order to view progressive signal (480p) pictures with a compatible TV, projector, or monitor, you must use connection **C**.



→ : Signal flow

A If you are connecting to a video input jack

Connect the yellow plug of the audio/video cord (supplied) to the yellow (video) jacks. You will enjoy standard quality images.



Use the red and white plugs to connect to the audio input jacks (page 21).

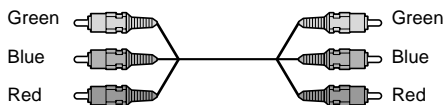
B If you are connecting to an S VIDEO input jack

Connect the S VIDEO cord (not supplied). You will enjoy standard quality images.



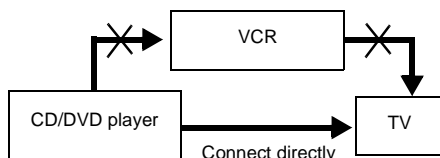
C If you are connecting to a monitor, projector, or AV amplifier (receiver) having component video input jacks (Y, P_B, P_R)

Connect the component via the COMPONENT VIDEO OUT jacks using the component video cord (supplied) or three video cords (not supplied) of the same kind and length. You will enjoy accurate color reproduction and high quality images. If your TV accepts progressive (480p) format signals, you must use this connection and set “COMPONENT OUT” to “PROGRESSIVE” in “SCREEN SETUP” (page 69).



Notes

- Do not connect the player to a VCR. If you pass the player signals via the VCR, you may not receive a clear image on the TV screen.



- 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 the case of 480 progressive scan picture problems, it is recommended that the user switch the connection to the standard definition output. If there are questions regarding your Sony TV set's compatibility with this model 480p DVD player, please contact our customer service center.

Step 2: Connecting the Audio Cords

Refer to the chart below to select the connection that best suits your system. The surround effects you will enjoy depend on the connections and components you use.

Select a connection

Select one of the following connections, **A** through **D**.

Connection	Components to be connected
A (page 21)	<ul style="list-style-type: none">• TV (stereo)
B (page 22)	<ul style="list-style-type: none">• Stereo amplifier (receiver) (having L and R audio input jacks only, or having a digital input jack)• 2 speakers (front L and R)
B (page 22)	<ul style="list-style-type: none">• MD deck/DAT deck
C (page 23)	<ul style="list-style-type: none">• AV amplifier (receiver) with a Dolby[*] Surround (Pro Logic) decoder (having L and R audio input jacks only, or having a digital input jack)• 3 speakers (front L and R, and rear (monaural))• 6 speakers (front L and R, center, rear L and R, and subwoofer)
D (page 24)	<ul style="list-style-type: none">• AV amplifier (receiver) having a Dolby Digital or DTS^{**} decoder and a digital input jack• 6 speakers (front L and R, rear L and R, center, and subwoofer)

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

** "DTS" is a registered trademark of Digital Theater Systems, Inc.

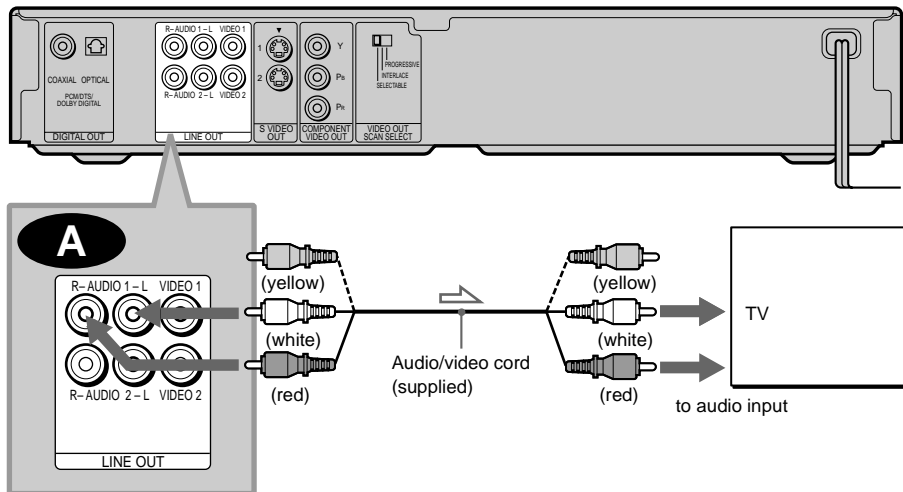
A Connecting to your TV

This connection will use your TV speakers for sound.

■ Recommended surround sound effects for this connection

- TVS DYNAMIC (page 51)
- TVS WIDE (page 51)

CD/DVD player



— : Signal flow

The yellow plug is used for video signals (page 18).

B Connecting to a stereo amplifier (receiver) and 2 speakers/Connecting to an MD deck or DAT deck

This connection will use your 2 front speakers connected to your stereo amplifier (receiver) for sound. If the stereo amplifier (receiver) has audio input jacks L and R only, use **B-1**. If the amplifier (receiver) has a digital input jack, use **B-2**. When connecting to an MD deck or a DAT deck, use **B-2**. In this case, you can also connect the player directly to the MD deck or DAT deck without using your stereo amplifier (receiver).

■ Recommended surround sound effects for the **B-1** connection only

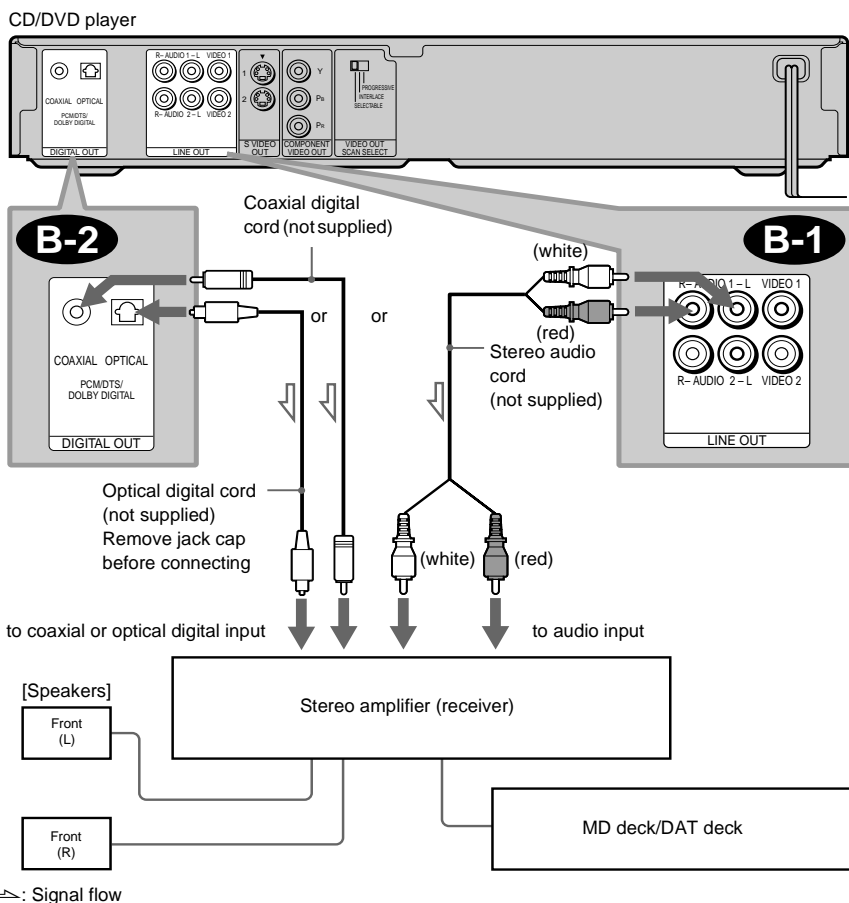
- TVS STANDARD (page 51)

💡 In connection **B-1**, you can use the supplied audio/video cord instead of using a separate audio cord.

💡 To realize better surround sound effects, make sure that your listening position is in between your speakers.

Note

If you select one of the TVS effects while playing a disc, no sound will come from your speakers with the **B-2** connection.



C Connecting to a Dolby Surround (Pro Logic) decoder amplifier (receiver) and 3 to 6 speakers

This connection will allow you to enjoy the surround effects of the Pro Logic decoder on your amplifier (receiver). If you have an AV amplifier (receiver) equipped with a Dolby Digital, or DTS decoder, refer to page 24.

You can enjoy the Dolby Surround effects only when playing Dolby Surround audio or multi-channel audio (Dolby Digital) discs.

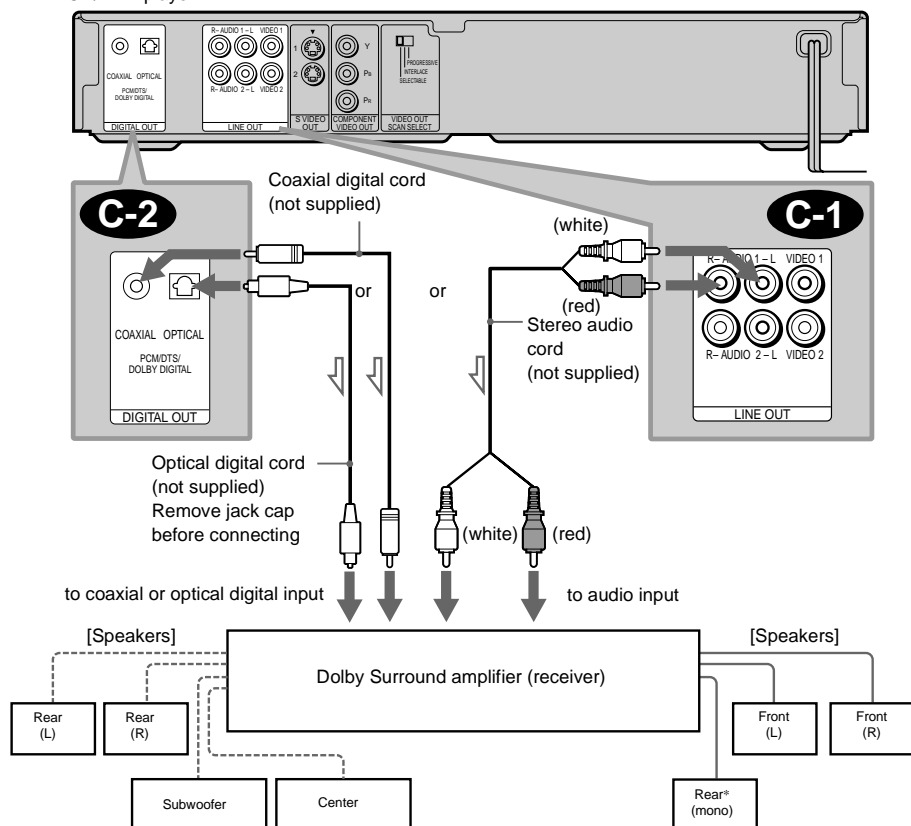
Pro Logic uses a minimum of 3 speakers (front L and R, and rear (monaural)). The surround effects are enhanced if 6 speakers (front L and R, center, rear L and R, and subwoofer) are used. If your amplifier (receiver) has R and L audio input jacks only, use **C-1**. If your amplifier (receiver) has a digital input jack, use **C-2**.

■ Recommended surround sound effects using this connection with your amplifier (receiver)

- Dolby Surround (Pro Logic) (page 79)

💡 For correct speaker setting location, please refer to the operating instructions of the amplifier (receiver).

CD/DVD player



—: Signal flow

*When connecting 6 speakers, replace the monaural rear speaker with a center speaker, 2 rear speakers and a subwoofer.

continued

D Connecting to an AV amplifier (receiver) with a digital input jack having a Dolby Digital, or DTS decoder, and 6 speakers

This connection will allow you to use the Dolby Digital, or DTS decoder function of your AV amplifier (receiver). You are not able to enjoy the TVS sound effects of the player.

■ Recommended surround sound effects using this connection with your amplifier (receiver)

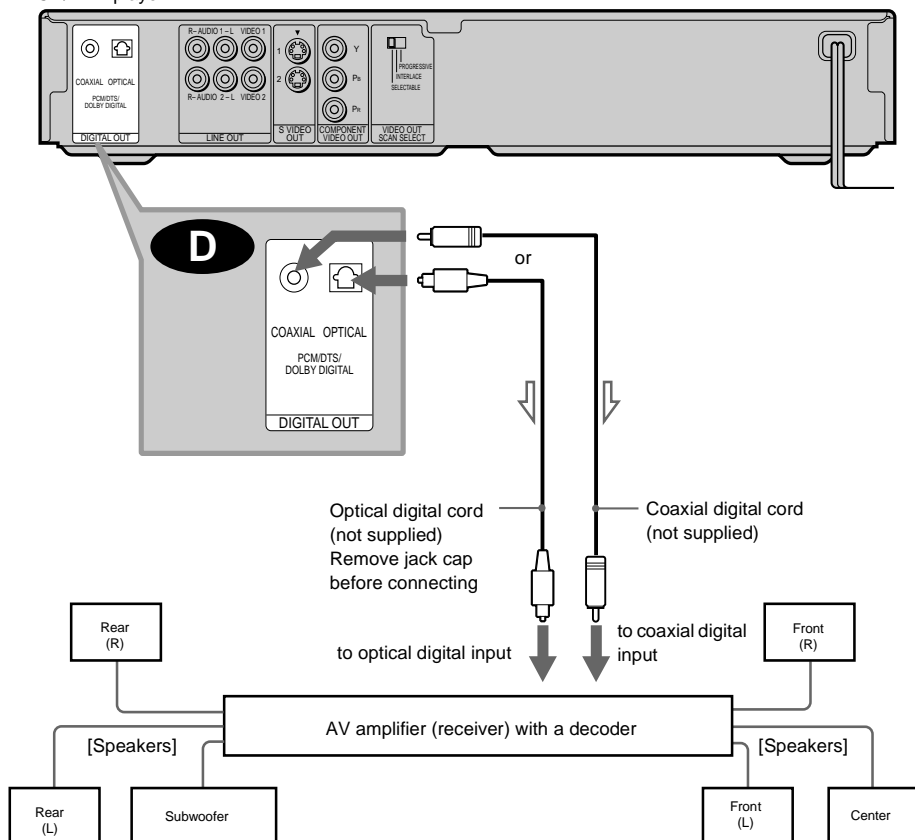
- Dolby Digital (5.1ch) (page 79)
- DTS (5.1ch) (page 79)

💡 To enhance the surround sound effects, refer to the operating instructions of the amplifier (receiver) for correct speaker setting location.

Note

After you have completed the connection, be sure to set “DOLBY DIGITAL” to “DOLBY DIGITAL”(page 25). If your AV amplifier (receiver) has a DTS decoder, set “DTS” to “ON” (page 25). Otherwise, no sound or a loud noise will come from the speakers.

CD/DVD player



→: Signal flow

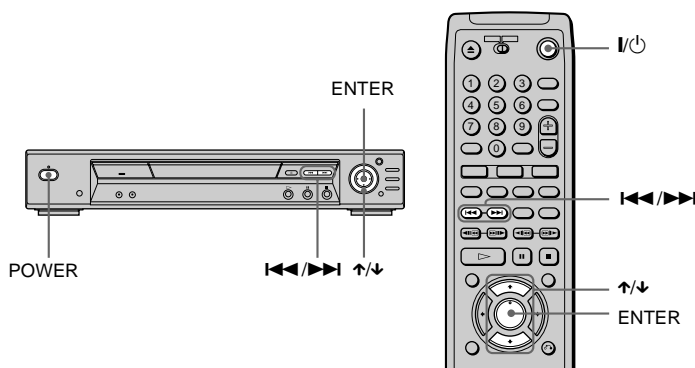
Step 3: Connecting the Power Cord

Plug the player and TV power cords into an AC outlet.

Do not connect the power cord of your player to the “switched” power socket of an amplifier (receiver). When you turn off the power of your amplifier (receiver), the menu setting for the player such as Playback Memory may be lost.

Step 4: Quick Setup

Follow the steps below to make the minimum number of basic adjustments for using the player. To skip an adjustment, press **▶▶**. To return to the previous adjustment, press **◀◀**.

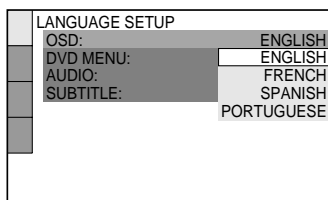


- 1 Turn on the TV.**
- 2 Switch the input selector on the TV to the player.**
- 3 Press POWER on the player and press I/⏻ on the remote.**

“Press [ENTER] to run QUICK SETUP” appears at the bottom of the screen. If this message does not appear, select “QUICK” under “SETUP” in the Control Menu to run Quick Setup (page 67).

- 4 Press ENTER without inserting a disc.**

The Setup Display for selecting the language used in the on-screen display appears.

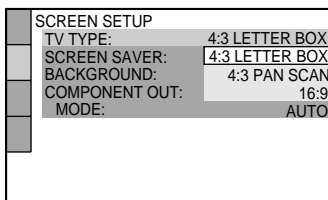


5 Press ↑/↓ to select a language.

The player uses the language selected here to display the DVD menu and subtitles as well.

6 Press ENTER.

The Setup Display for selecting the aspect ratio of the TV to be connected appears.

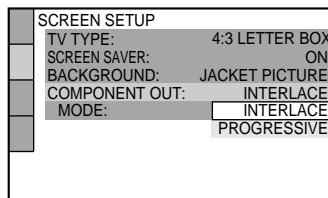


7 Press ↑/↓ to select the item.


TV Type	You select	Page
4:3 standard TV	4:3 LETTER BOX or 4:3 PAN SCAN	69
A wide-screen TV or 4:3 standard TV with a wide-screen mode	16:9	69

8 Press ENTER.

The Setup Display for selecting the type of video signal appears.



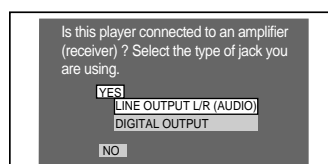
9 Press ↑/↓ to select the item.

Select PROGRESSIVE only if you have made video connection  (page 18) and wish to view progressive video signals.

TV Type	You select	Page
Interlace format TV (standard TV)	INTERLACE	70
Progressive format TV	PROGRESSIVE	70

10 Press ENTER.

The Setup Display for selecting the type of jack used to connect your amplifier (receiver) appears.

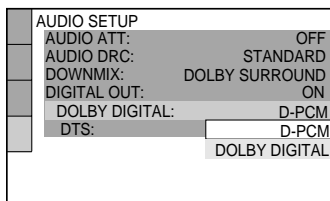


11 Press **↑/↓** to select the item, then press **ENTER**.

- When “NO” or “LINE OUTPUT L/R (AUDIO)” is selected, Quick Setup is finished and connections are complete.
- When “DIGITAL OUTPUT” is selected, the Setup Display for “DOLBY DIGITAL” appears. Proceed to Step **12**.

12 Press **↑/↓** to select the item.

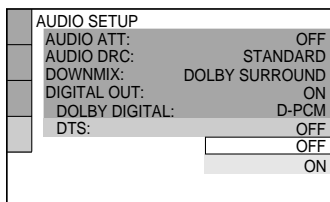
Choose the item that matches the audio connection you selected in page 22 to 24 (**B** through **D**).



Audio Cord Connection Type	You select	Page
B-2 C-2	D-PCM	75
D	DOLBY DIGITAL (only if the amplifier/receiver has a Dolby Digital decoder)	75

13 Press **ENTER**.

DTS is selected.



14 Press **↑/↓** to select the item.

Choose the item that matches the audio connection you selected in page 22 to 24 (**B** through **D**).

Audio Cord Connection Type	You select	Page
B-2 C-2	OFF	75
D	ON (only if the amplifier/receiver has a DTS decoder)	75

15 Press **ENTER**.

Quick Setup is finished. All connections and setup operations are complete.

Note

You can directly start Quick Setup only when you run it for the first time.
To run Quick Setup a second time, select “QUICK” under “SETUP” in the Control Menu (page 67).

continued

Enjoying the surround sound effects

To enjoy the surround sound effects of this player or your amplifier (receiver), the following items must be set as described below for the audio connection you selected in page 20 to 24 (**B** through **D**). Each of these are the default settings and do not need to be adjusted when you first connect the player. Refer to page 67 for using the Setup Display.

Audio Connection (page 20 to 24)

A

No additional settings are needed.

B-1

C-1

Item	You select	Page
DOWNMIX	DOLBY SURROUND	74

- If the sound distorts even when the volume is turned down, set “AUDIO ATT” to “ON” (page 74).

B-2

C-2

D

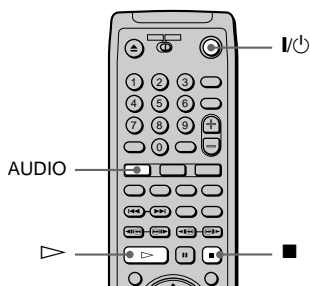
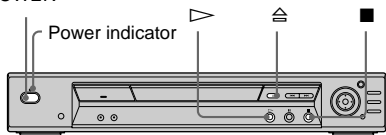
Item	You select	Page
DOWNMIX	DOLBY SURROUND	74
DIGITAL OUT	ON	75

Playing Discs



Depending on the DVD or VIDEO CD, some operations may be different or restricted. Refer to the operating instructions supplied with your disc.

POWER



1 Turn on your TV.

2 Switch the input selector on the TV to the player.

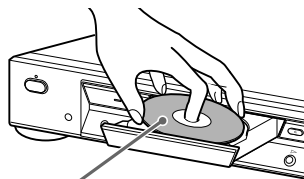
When using an amplifier (receiver)

Turn on the amplifier (receiver) and select the appropriate channel.

3 Press **POWER** on the player.
The player enters standby mode and the power indicator lights up in red.

4 Press **⏮** on the player, and place a disc on the disc tray.

The player automatically turns on and the power indicator lights up in green.



With the playback side facing down

5 Press **▶**.

The disc tray closes, and the player starts playback (continuous play). Adjust the volume on the TV or the amplifier (receiver).

After following Step 5

Depending on the disc, a menu may appear on the TV screen. You can play the disc interactively by following the instructions on the menu. DVD (page 32), VIDEO CD (page 33).

To turn on the player

Press **POWER** on the player. The player enters standby mode and the power indicator lights up in red. Press **I/O** on the remote. The player turns on and the power indicator lights up in green. In standby mode, the player also turns on by pressing **⏮** on the player or by pressing **▶**.

To turn off the player

Press **I/O** on the remote. The player enters standby mode and the power indicator lights up in red. To turn off the player completely, press **POWER** on the player. While playing a disc, do not turn off the player by pressing **POWER**. Doing so may cancel the menu settings. When you turn off the player, first press **■** to stop playback and then press **I/O** on the remote.

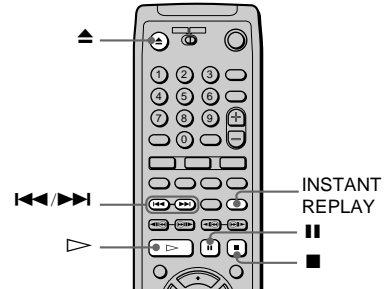
Notes on playing DTS sound tracks on a CD

- When playing DTS-encoded CDs, excessive noise will be heard from the analog stereo jacks. To avoid possible damage to the audio system, the consumer should take proper precautions when the analog stereo jacks of the player are connected to an amplification system. To enjoy DTS Digital Surround™ playback, an external 5.1-channel decoder system must be connected to the digital jacks of the player.
- Set the sound to “STEREO” using the AUDIO button when you play DTS sound tracks on a CD (page 49).
- Do not play DTS sound tracks without first connecting the player to an audio component having a built-in DTS decoder. The player outputs the DTS signal via the DIGITAL OUT (OPTICAL and COAXIAL) jacks even if “DTS” in “AUDIO SETUP” is set to “OFF” in the Setup Display (page 75), and may affect your ears or cause your speakers to be damaged.

Notes on playing DVDs with a DTS sound track

- DTS audio signals are output only through the DIGITAL OUT (OPTICAL and COAXIAL) jacks.
- If you connect the player to audio equipment without a DTS decoder, do not set “DTS” to “ON” in “AUDIO SETUP” (page 75). A loud noise may come out from the speakers, affecting your ears or causing the speakers to be damaged.
- When you play a DVD with DTS sound tracks, set “DTS” to “ON” in “AUDIO SETUP” (page 75).

Additional operations



To	Operation
Stop	Press ■
Pause	Press
Resume play after pause	Press or ▷
Go to the next chapter, track or scene in continuous play mode	Press ►►
Go back to the preceding chapter, track or scene in continuous play mode	Press ◄◄
Stop play and remove the disc	Press ▲
Replay a previous scene (DVD only)	Press INSTANT REPLAY

💡 The Instant Replay function is useful when you want to review a scene or dialog that you missed.

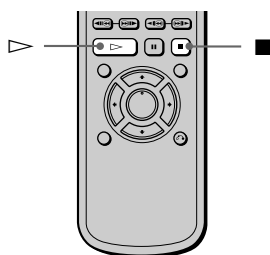
Note

You may not be able to use the Instant Replay function with some scenes.

Resuming Playback from the Point Where You Stopped the Disc (Resume Play)



When you stop the disc, the player remembers the point where you pressed ■ and “RESUME” appears on the front panel display. As long as you do not open the disc tray, Resume Play works even if the player enters standby mode by pressing I/⏻.



1 While playing a disc, press ■ to stop playback.

“RESUME” appears on the front panel display and you can restart the disc from the point where you stopped the disc.

If “RESUME” does not appear, Resume Play is not available.

2 Press ▷.

The player starts playback from the point where you stopped the disc in Step 1.

Notes

- Depending on where you stopped the disc, the player may not resume playback from exactly the same point.
- The point where you stopped playing is cleared when:
 - you turn the power off by pressing POWER on the player.
 - you change the play mode.
 - you change the settings on the Setup Display.

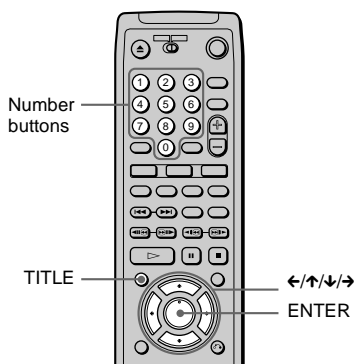
💡 To play from the beginning of the disc, press ■ twice, then press ▷.

Using the DVD's Menu


Some discs have a “title menu” or a “DVD menu.” On some DVDs, this may simply be called a “menu” or “title.”

Using the title menu

A DVD is divided into long sections of a picture or a music feature called “titles.” When you play a DVD which contains several titles, you can select the title you want using the title menu.

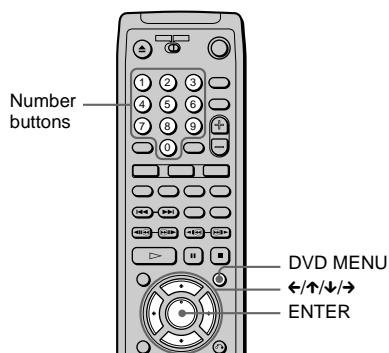


- 1 Press TITLE.**
The title menu appears on the TV screen. The contents of the menu vary from disc to disc.
- 2 Press $\leftarrow/\uparrow/\downarrow/\rightarrow$ or the number buttons to select the title you want to play.**
- 3 Press ENTER.**
The player starts playing the selected title.


 You can also display the title menu by pressing TITLE on the player.

Using the DVD menu

Some DVDs allow you to select the disc contents using a menu. When you play these DVDs, you can select items such as the language for the subtitles and the language for the sound using the DVD menu.



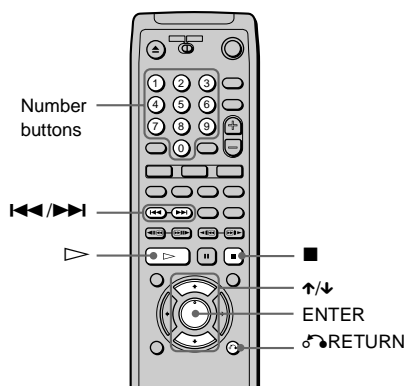
- 1 Press DVD MENU.**
The DVD menu appears on the TV screen. The contents of the menu vary from disc to disc.
- 2 Press $\leftarrow/\uparrow/\downarrow/\rightarrow$ or the number buttons to select the item you want to change.**
- 3 To change other items, repeat Step 2.**
- 4 Press ENTER.**

 You can also display the DVD menu by pressing DVD MENU on the player.

Playing VIDEO CDs with PBC Functions (PBC Playback)

VIDEO CD

With PBC (Playback Control) functions, you can enjoy simple interactive operations, search functions, and other such operations. PBC playback allows you to play VIDEO CDs interactively by following the menu on the TV screen.



To play without using PBC, press **◀◀/▶▶** or the number buttons while the player is stopped to select a track, then press **▷** or ENTER.

“Play without PBC” appears on the TV screen and the player starts continuous play. You cannot play still pictures such as a menu.

To return to PBC playback, press **■** twice then press **▷**.

Note

Depending on the VIDEO CD, “Press ENTER” in Step 3 may appear as “Press SELECT” in the instructions supplied with the disc. In this case, press **▷**.

- 1** Start playing a VIDEO CD with PBC functions.
The menu for your selection appears.
- 2** Select the item number you want by pressing **↑/↓** or the number buttons.
- 3** Press ENTER.
- 4** Follow the instructions in the menu for interactive operations.
Refer to the instructions supplied with the disc, as the operating procedure may differ according to the VIDEO CD.

To go back to the menu

Press **↶** RETURN.

Various Play Mode Functions (Program Play, Shuffle Play, Repeat Play, A-B Repeat Play)



You can set the following play modes:

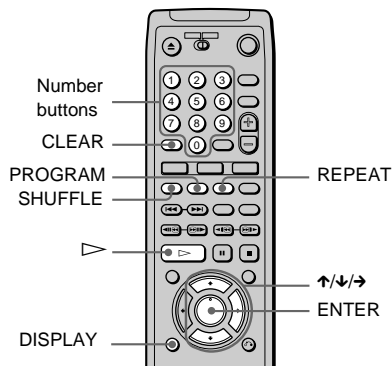
- Program Play (page 34)
- Shuffle Play (page 36)
- Repeat Play (page 36)
- A-B Repeat Play (page 37)

Notes

- The play mode is canceled when:
 - you open the disc tray.
 - the player enters standby mode by pressing **I/⏻** on the remote.
 - you turn the power off by pressing **POWER** on the player.
- If you are playing a VIDEO CD with PBC, you must first cancel PBC playback before you can set a play mode (except when you want to set A-B Repeat Play for moving pictures).

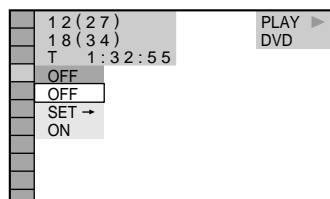
Creating your own program (Program Play)

You can play the contents of a disc in the order you want by arranging the order of the titles, chapters, or tracks on the disc to create your own program. You can program up to 99 titles, chapters, and tracks.



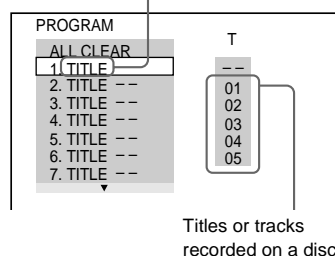
- 1 Press **DISPLAY** twice (when playing a CD, press once).
The Control Menu appears.

- 2 Press **↑/↓** to select **PROGRAM**, then press **ENTER**.
The options for PROGRAM appear.

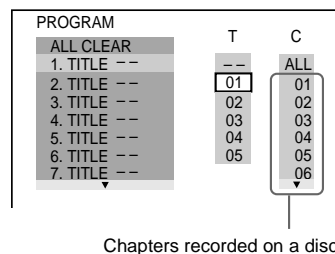


- 3 Press **↑/↓** to select "SET →," then press **ENTER**.
The display for programming appears.

"TRACK" is displayed when you play a VIDEO CD or a CD.



- 4 Press **→**.
The cursor moves to the title or track (in this case, "01").



- 5** Select the title, chapter, or track you want to program.

■ When playing a DVD

For example, select chapter “03” of title “02.” Press \uparrow/\downarrow or the number buttons to select “02” under “T,” then press ENTER.

PROGRAM		
ALL CLEAR	T	C
1. TITLE --	--	ALL
2. TITLE --	01	01
3. TITLE --	02	02
4. TITLE --	03	03
5. TITLE --	04	04
6. TITLE --	05	05
7. TITLE --		06

Next, press \uparrow/\downarrow or the number buttons to select “03” under “C,” then press ENTER.

Selected title and chapter

PROGRAM	
ALL CLEAR	T
1. TITLE 02-03	--
2. TITLE --	01
3. TITLE --	02
4. TITLE --	03
5. TITLE --	04
6. TITLE --	05
7. TITLE --	

■ When playing a VIDEO CD or CD

For example, select track “02.” Press \uparrow/\downarrow or the number buttons to select “02” under “T,” then press ENTER.

Selected track

PROGRAM	
ALL CLEAR	0:15:30
1. TRACK 02	T
2. TRACK --	--
3. TRACK --	01
4. TRACK --	02
5. TRACK --	03
6. TRACK --	04
7. TRACK --	05

Total time of the programmed tracks

- 7** Press \triangleright to start Program Play.

Program Play begins.

When the program ends, you can restart the same program again by pressing \triangleright .

To return to normal play

Press CLEAR, or select “OFF” in Step 3.

To play the same program again, select “ON” in Step 3 and press \triangleright .

To turn off the Control Menu

Press DISPLAY repeatedly until the Control Menu is turned off.


To change the program

- 1 In Step 4, select the program number of the title, chapter, or track you want to change using \uparrow/\downarrow or the number buttons, and press \rightarrow .

- 2 Follow Step 5 for new programming.

To cancel the programmed order

To cancel all the titles, chapters, or tracks in the programmed order, press \uparrow , and select “ALL CLEAR” in Step 4. To cancel the selected program, select the program using \uparrow/\downarrow in Step 4, then press CLEAR, or select “--” in Step 5, then press ENTER. To cancel the program directly, select the program using the number buttons, followed by ENTER.

 You can do Repeat Play or Shuffle Play of the programmed titles, chapters, or tracks. Press REPEAT or SHUFFLE on the remote, or set “REPEAT” or “SHUFFLE” to “ON” in the Control Menu display during Program Play.

 You can select “PROGRAM” directly by pressing PROGRAM.

Note

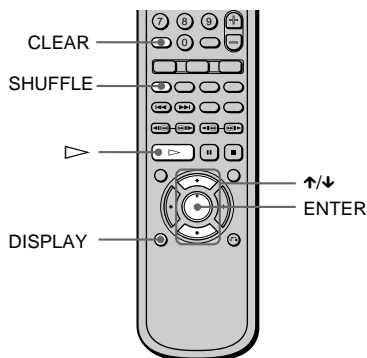
The number of titles, chapters, or tracks displayed is the same as the number of titles, chapters, or tracks recorded on a disc.

- 6** To program other titles, chapters, or tracks, repeat Steps 4 to 5.

The programmed titles, chapters, and tracks are displayed in the selected order.

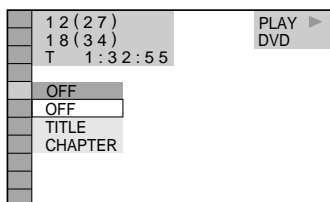
Playing in random order (Shuffle Play)

You can have the player “shuffle” titles, chapters, or tracks and play them in a random order. Subsequent “shuffling” may produce a different playing order.



1 Press **DISPLAY** twice during playback (when playing a CD, press once). The Control Menu appears.

2 Press **↑/↓** to select **SHUFFLE**, then press **ENTER**. The options for SHUFFLE appear.



3 Press **↑/↓** to select the item.

■ When playing a DVD (Program Play is set to OFF)

- **TITLE:** shuffles titles and plays them in a random order.
- **CHAPTER:** shuffles chapters and plays them in a random order.

■ When playing a VIDEO CD or CD (Program Play is set to OFF)

- **TRACK:** shuffles tracks and plays them in a random order.

■ When playing a VIDEO CD, CD, or DVD (Program Play is set to ON)

- **ON:** shuffles titles or tracks selected in Program Play and plays them in a random order.

4 Press **ENTER**. Shuffle Play starts.

To return to normal play

Press **CLEAR** or select “OFF” in Step 3.

To turn off the Control Menu

Press **DISPLAY** repeatedly until the Control Menu is turned off.

You can set Shuffle Play while the player is stopped. After selecting the “SHUFFLE” option, press **▷**. Shuffle Play starts.

You can select “SHUFFLE” directly by pressing **SHUFFLE**.

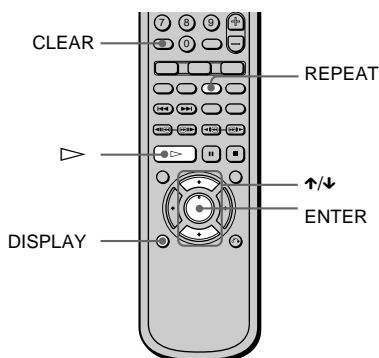
Note

Up to 200 chapters in a disc can be played in random order when “CHAPTER” is selected.

Playing repeatedly (Repeat Play)

You can play all of the titles or tracks on a disc, or a single title, chapter, or track repeatedly.

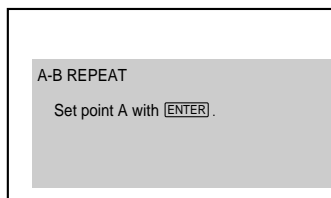
You can use a combination of Shuffle or Program Play modes.



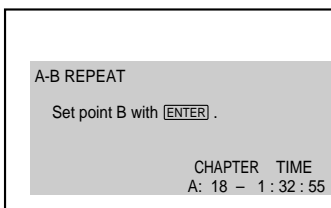
-
- 1** Press DISPLAY twice during playback (when playing a CD, press once).
The Control Menu appears.
-

- 2** Select

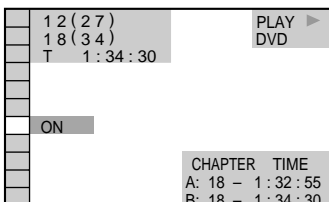
- 3** Press **↑/↓** to select “SET →,” then press **ENTER**.
The A-B REPEAT setting display appears.



- 4** During playback, when you find the starting point (point A) of the portion to be played repeatedly, press **ENTER**.
The starting point (point A) is set.



- 5** When you reach the ending point (point B), press **ENTER** again.
The set points are displayed and the player starts repeating this specific portion.
“A-B” appears in the front panel display during A-B Repeat Play.



To turn off the Control Menu

Press **DISPLAY** repeatedly until the Control Menu is turned off.

Notes

- You can set A-B Repeat Play for only one specific section.
- When you set A-B Repeat Play, the settings for Shuffle Play, Repeat Play, and Program Play are canceled.

To return to normal play

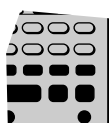
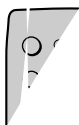
Press **CLEAR**, or select “OFF” in Step 3.

Searching for a Particular Point on a Disc (Search, Scar

Slow-Motion Play, Freeze Frame)



You can quickly locate a particular point on a disc by monitoring the picture and moving the play head back slowly.



Not

Dependable

On DVD/VIDEO CD, you may not be able to perform the operations described.

Find a Particular Point Quickly (Search)

To find a particular point quickly, keep pressing **FF1** to move in the forward direction at the normal speed, or keep pressing **FR1** to move in the reverse direction at the normal speed. When you find the point, press the **STOP** button to return to the normal speed.

The playback speed is the same as the normal speed described.

The **FF2**/**FR2** playback speed is about twice the normal speed. The **FF2**/**FR2** playback speed is faster than **FF1**/**FR1**.

You can use this function only for DVDs or VIDEO CDs. Press **FF1** or **FR1** when the player is in the pause mode. To return to the normal speed, press **STOP**.

Each time you press the **FF1** or **FR1** button during Slow-motion play, the playback speed changes. Two speeds are available. With each press the indication changes as follows:

Playback direction

SLOW 2 **FF1** ↔ **SLOW 1** **FF1**

Opposite direction (DVD only)

SLOW 2 ↔ **SLOW 1**

The **SLOW2**/**FF1** playback speed is slower than **SLOW1**/**FF1**.

Playing one frame at a time



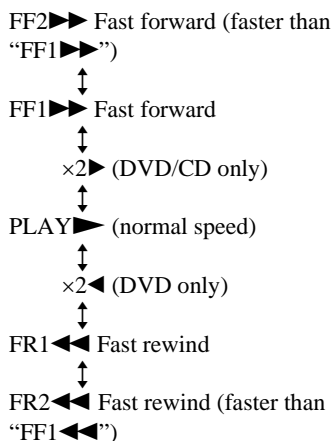
You can use this function only for DVDs or VIDEO CDs. When the player is in the pause mode, press **⏮** to go to the next frame. Press **⏭** to go to the preceding frame (DVD only). If you hold the button down, you can view the frames in succession. To return to normal playback, press **▶**.

Using the click shuttle on the player (Shuttle mode)



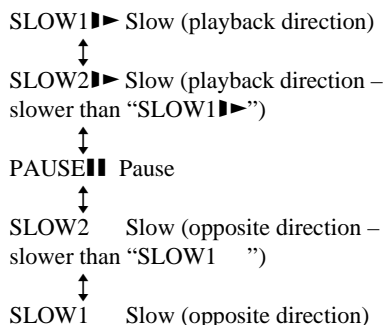
Turn the click shuttle on the player. The playback speed changes depending on the turning direction and degree of rotation as follows:

During playback

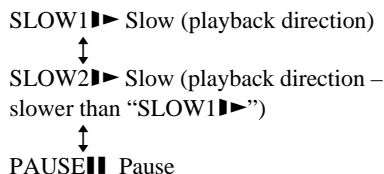


If you turn the click shuttle quickly, the playback speed goes to FF2▶▶ or FR2◀◀ at once.

During pause mode (DVD only)



During pause mode (VIDEO CD only)



To return to continuous play

Press **▶**.

To manually play the disc frame by frame using the click shuttle (Jog mode)  

- 1 Press JOG.
The player enters pause mode.
- 2 Turn the click shuttle.
Depending on the turning speed, playback goes to frame-by-frame playback in the direction that the click shuttle is turned (turn clockwise to go forward, counter clockwise to rewind). If you turn the click shuttle at a constant speed for a while, the playback speed goes to slow or normal.

To return to Continuous Play

Press .

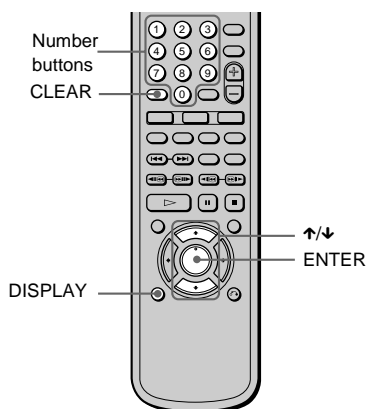
To turn off the Jog mode


Press JOG again so that the indicator turns off.

Searching for a Title/Chapter/Track/Index/Scene (Search mode)




  

You can search a DVD disc by title or chapter, and you can search a VIDEO CD or CD by track, index, or scene. As titles and tracks are assigned unique numbers on the disc, you can select the desired one by entering its number. Or, you can search for a scene using the time code (Time search).





- 1 Press DISPLAY.
The Control Menu appears.
- 2 Press  to select the search method.

■ When playing a DVD

 (TITLE), 
(CHAPTER), or  (TIME/TEXT)
Select "TIME/TEXT" for "Time search" (see below).

■ When playing a VIDEO CD

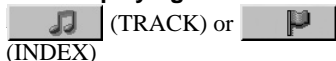
 (TRACK) or 
(INDEX)

■ When playing a VIDEO CD with PBC Playback



(SCENE)

■ When playing a CD



(TRACK) or



(INDEX)

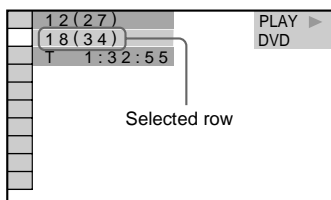
Example: when you select



(CHAPTER)

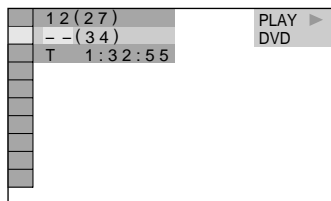
“**(**)” is selected (** refers to a number).

The number in parentheses indicates the total number of titles, chapters, tracks, indexes, or scenes.



3 Press ENTER.

“** (**)” changes to “-- (**).”



4 Select the number of the title, track, scene, time code, etc. you want by pressing ↑/↓ or the number buttons to select the digit.

If you make a mistake

Cancel the number by pressing CLEAR, then select another number.

5 Press ENTER.

The player starts playback from the selected number.

To turn off the Control Menu

Press DISPLAY repeatedly until the Control Menu is turned off.

To search for a scene using the time code (Time search) (DVD only)

1 In Step 2, select (TIME/TEXT).

“T ***:***:***” (playing time of the current title) is selected.


2 Press ENTER.

“T ***:***:***” changes to

“T --:--:--.”

3 Input the time code using the number buttons, then press ENTER.

For example, to find the scene at 2 hours, 10 minutes, and 20 seconds after the beginning, just enter “2:10:20.”

 You can display the first scene of titles, chapters or tracks recorded on the disc on a screen divided into 9 scenes. You can start playback directly by selecting one of the scenes. For details, see page 43.

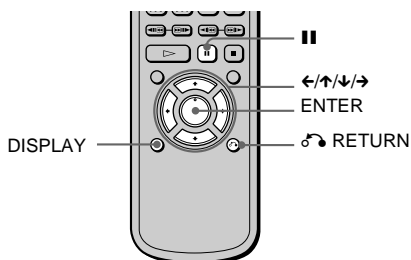
Note

The title, chapter, or track number displayed is the same number recorded on the disc.

Searching by Scene (VIEWER)

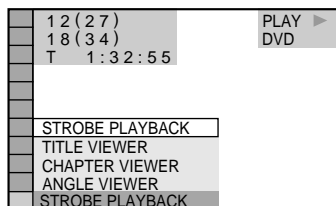


You can divide the screen into 9 sub-screens and find the desired scene quickly.



1 Press **DISPLAY** twice during playback.
The Control Menu appears.

2 Press **↑/↓** to select (VIEWER), then press **ENTER**.
The options for VIEWER appear.



3 Press **↑/↓** to select the item.
Refer to the explanations given for each item in the following sections.

- STROBE PLAYBACK
- TITLE VIEWER (for DVD only)
- CHAPTER VIEWER (for DVD only)
- TRACK VIEWER (for VIDEO CD only)
- ANGLE VIEWER (for DVD only)

4 Press **ENTER**.

To return to the normal play

Press **RETURN**.

To turn off the Control Menu

Press **DISPLAY** repeatedly until the Control Menu is turned off.

Notes

- Depending on the disc, you may not be able to select all functions.
- The sound is muted when using this function.

Dividing a track into 9 sections (STROBE PLAYBACK) DVD VIDEO CD

You can display 9 consecutive moving pictures on the screen. When you press **||**, the moving pictures pause.

Select “STROBE PLAYBACK” in Step 3, then press **ENTER** in Step 4.

Scanning the title, chapter, or track DVD VIDEO CD

You can divide the screen into 9 subscreens and display the first scene of titles, chapters, or tracks. You can also play back from the selected title, chapter, or track.

Select the item you want in Step 3, then press **ENTER** in Step 4.

■When playing a DVD

Select “TITLE VIEWER” or “CHAPTER VIEWER.”

■When playing a VIDEO CD

Select “TRACK VIEWER.”

The initial scenes of titles, chapters, or tracks appear.

To start playback from the selected scene

Select the scene using ←/↑/↓/→, then press ENTER. The playback starts from the selected scene.

💡 If there are more than 9 titles, chapters, or tracks, ▼ is displayed at the bottom right.

To display the additional titles, chapters, or tracks, select the bottom right scene (the position 9) and press ↓. To return to the previous scene, select the top left scene (the position 1), then press ↑.

1	2	3	▼
4	5	6	
7	8	9	

Displaying different angles simultaneously

If various angles (multi-angles) for a scene are recorded on the DVD, you can display all of the angles recorded on the disc on the same screen, and start playback in continuous mode at the chosen angle. The angles are displayed on a screen divided in 9 sections.

Select “ANGLE VIEWER” in Step 3, then press ENTER in Step 4.

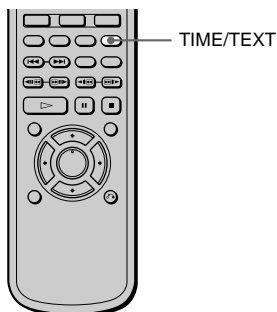
To return to the normal play

Press ⏮ RETURN.

Viewing the Playing Time and Remaining Time on the Front Panel Display

DVD **VIDEO CD** **CD**

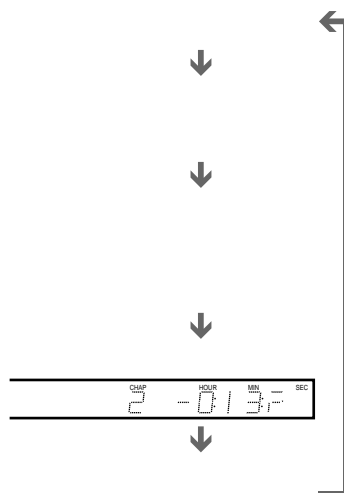
You can check information about the disc, such as the remaining time, total number of titles of a DVD, or tracks of a CD or VIDEO CD, using the front panel display (page 9).



Press TIME/TEXT.

Each time you press TIME/TEXT while playing the disc, the display changes as shown in the following charts.

When playing a DVD



When playing a VIDEO CD (without PBC functions) or CD

When playing VIDEO CDs with PBC functions, the scene number and the playing time are displayed.

💡 The playing time and remaining time of the current chapter, title, track, scene, or disc will also appear on your TV screen. See the following section “Checking the Playing Time and Remaining Time” for instructions on how to read this information.

Note

■ When playing a DVD

- T **:':**
Playing time of the current title
- T- **:':**
Remaining time of the current title
- C **:':**
Playing time of the current chapter
- C- **:':**
Remaining time of the current chapter

■ When playing a VIDEO CD (with PBC functions)

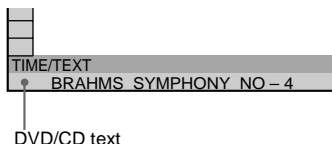
- **:':**
Playing time of the current scene

■ When playing a VIDEO CD (without PBC functions) or CD

- T **:':**
Playing time of the current track
- T- **:':**
Remaining time of the current track
- D **:':**
Playing time of the current disc
- D- **:':**
Remaining time of the current disc

Checking the DVD/CD text

Press TIME/TEXT repeatedly in Step 2 to display the text recorded on the DVD/CD. The DVD/CD text appears only when text is recorded in the disc. You cannot change the text. If the disc does not contain text, “NO TEXT” appears.



💡 If the DVD/CD text does not fit on a single line, you can see the entire text by watching it scroll across the front display.

💡 You can select the time and text by pressing TIME/TEXT.

Notes

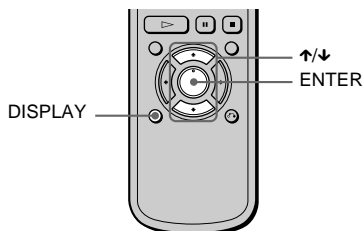
- Only letters of the alphabet can be displayed.
- This player can only display the first level of DVD/CD text, such as the disc name or title.

To turn off the Control Menu


Press DISPLAY repeatedly until the Control Menu is turned off.

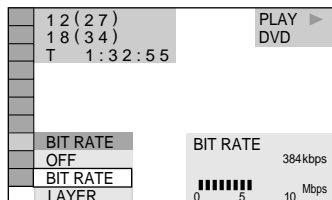
Checking the Play Information (ADVANCED)

You can check information such as the bit rate or the disc layer that is being played. While playing a disc, an approximate bit rate of the playback picture is always displayed as Mbps (Mega bit per second) and the audio as kbps (kilo bit per second).



1 Press **DISPLAY** during playback.
The Control Menu is displayed.

2 Press **↑/↓** to select  (ADVANCED), then press **ENTER**.
The options for ADVANCED appear.



3 Press **↑/↓** to select items.
For each item, please refer to “Displays of each item.”

- BIT RATE: displays the bit rate.
- LAYER: displays the layer and the pick-up point.

4 Press **ENTER**.

To close the ADVANCED window

Select “OFF” in Step 3.

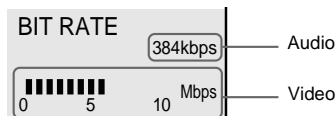
To turn off the Control Menu

Press **DISPLAY** repeatedly until the Control Menu is turned off.

Displays of each item

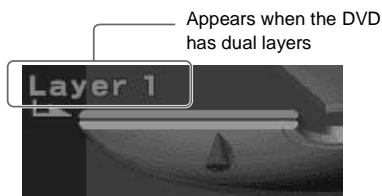
By pressing **DISPLAY** repeatedly, you can display either “BIT RATE” or “LAYER,” whichever was selected in “ADVANCED.”

BIT RATE



Bit rate refers to the amount of video/audio data per second in a disc. The higher the bit rate, the larger the amount of data. When the bit rate level is high, there is a large amount of data. However, this does not always mean that you can get higher quality pictures or sounds.

LAYER



Indicates the approximate point where the disc is playing.

If it is a dual-layer DVD, the player indicates which layer is being read (“Layer 0” or “Layer 1”).

For details on the layers, see page 79 (DVD).

Changing the Sound

DVD

VIDEO
CD

CD

If the DVD is recorded with multilingual tracks, you can select the language you want while playing the DVD.

If the DVD is recorded in multiple audio formats (PCM, Dolby Digital, or DTS), you can select the audio format you want while playing the DVD.

With stereo CDs or VIDEO CDs, you can select the sound from the right or left channel and listen to the sound of the selected channel through both the right and left speakers. (In this case, the sound loses its stereo effect.) For example, when playing a disc containing a song with the vocals on the right channel and the instruments on the left channel, you can select the left channel and hear the instruments from both speakers.



1 Press **DISPLAY** during playback.
The Control Menu is displayed.

2 Press **↑/↓** to select **(AUDIO)**, then **ENTER**.
The options for AUDIO appear.

3 Press **↑/↓** to select the desired audio signal.

■ When playing a DVD

Depending on the DVD, the choice of language varies.

When 4 digits are displayed, they represent the language code. Refer to the language code list on page 82 to see which language the code represents. When the same language is displayed two or more times, the DVD is recorded in multiple audio formats.

■ When playing a VIDEO CD or CD


The default setting is underlined.

- STEREO: The standard stereo sound
- 1/L: The sound of the left channel (monaural)
- 2/R: The sound of the right channel (monaural)

4 Press **ENTER**.

To turn off the Control Menu

Press **DISPLAY** repeatedly until the Control Menu is turned off.

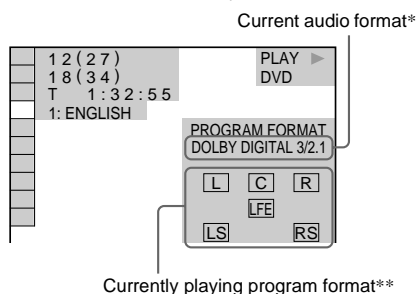
 You can select "AUDIO" directly by pressing **AUDIO**. Each time you press the button, the item changes.

Notes

- For discs not in multiple audio format, you cannot change the sound.
- While playing the DVD, the sound may change automatically.

Displaying the audio information of the disc

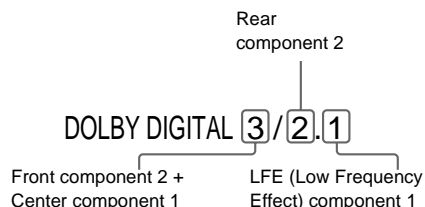
When you select “AUDIO,” the channels being played are displayed on the screen. For example, in Dolby Digital format, multiple signals ranging from monaural to 5.1 channel signals can be recorded on a DVD. Depending on the DVD, the number of the recorded channels may differ.



*“PCM,” “DTS,” or “DOLBY DIGITAL” is displayed.

In the case of “DOLBY DIGITAL,” the channels in the playing track are displayed by numbers as follows:

For Dolby Digital 5.1 ch:



**The letters in the program format display mean the following sound component:

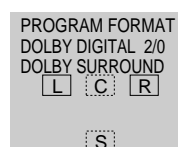
- L: Front (left)
- R: Front (right)
- C: Center
- LS: Rear (left)
- RS: Rear (right)
- S: Rear (monaural): The rear component of the Dolby Surround processed signal or the Dolby Digital signal.
- LFE: Low Frequency Effect signal

The display examples are as follows:

- PCM (stereo)

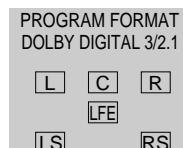


- Dolby Surround



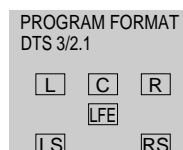
- Dolby Digital 5.1ch

“LFE” is always enclosed in a solid line regardless of the LFE signal component being output.



- DTS

“LFE” is always enclosed in a solid line regardless of the LFE signal component being output.



Notes

- When the signal contains rear signal components such as “LS,” “RS” or “S,” the surround effect is enhanced (page 51).
- If “DTS” is set to “OFF” in “AUDIO SETUP” (page 75), the DTS track selection option will not appear on the screen even if the disc contains DTS tracks.

TV Virtual Surround Sound Settings (TVS)

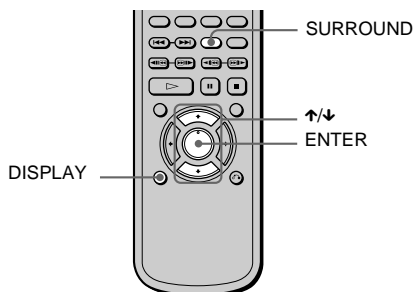
DVD

VIDEO CD


CD

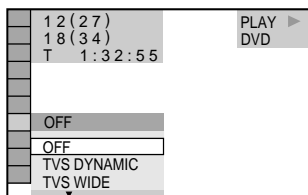
When you connect a stereo TV or 2 front speakers, TV Virtual Surround lets you enjoy surround sound effects by using sound imaging to create virtual rear speakers from the sound of the front speakers (L: left, R: right) without using actual rear speakers. This function is designed to work with the LINE OUT L/R (AUDIO) 1/2 jacks.

Note that if you select one of the TVS settings while playing a DVD, the player does not output Dolby Digital signals from the DIGITAL OUT (COAXIAL and OPTICAL) jacks (when you set “DOLBY DIGITAL” in “AUDIO SETUP” to “D-PCM”) (page 75).



1 Press **DISPLAY** during playback.
The Control Menu appears.

2 Press **↑/↓** to select  (TVS), then press **ENTER**.
The options for “TVS” appear.



3 Press **↑/↓** to select one of the TVS (TV Virtual Surround) sounds.
Refer to the following explanations given for each item.

- TVS DYNAMIC
- TVS WIDE
- TVS NIGHT
- TVS STANDARD

4 Press **ENTER**.

To reset the TVS setting

Select “OFF” in Step 3.

To turn off the Control Menu

Press **DISPLAY** repeatedly until the Control Menu is turned off.

TVS (TV Virtual Surround) DYNAMIC

Uses sound imaging to create virtual rear speakers from the sound of the front speakers (L/R) without using actual rear speakers (shown below). The sound imaging effect is distinct and clearly reproduces each aural element of the audio track.

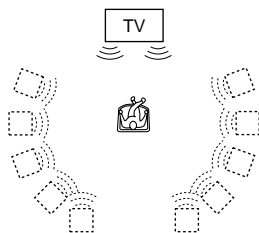
This mode is effective when the distance between the front L and R speakers is short, such as with built-in speakers on a stereo TV.



TVS (TV Virtual Surround) WIDE

Uses sound imaging to create virtual rear speakers from the sound of the front speakers (L/R) without using actual rear speakers. The virtual speakers are reproduced as shown in the illustration below. This gives the sound an expanded effect that fills the area surrounding the listener.

This mode is effective when the distance between the front L and R speakers is short, such as with built-in speakers on a stereo TV.

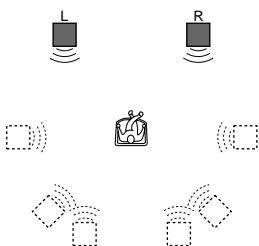


TVS (TV Virtual Surround) NIGHT


Large sounds, such as explosions, are suppressed, but the quieter sounds are unaffected. This feature is useful when you don't want to disturb other people but still want to hear the dialog and enjoy the surround sound effects of TVS WIDE.

TVS (TV Virtual Surround) STANDARD

Uses sound imaging to create virtual rear speakers from the sound of the front speakers (L/R) without using actual rear speakers. The virtual speakers are reproduced as shown in the illustration below. Use this setting when you want to use TVS with 2 separate speakers and retain the sound quality.



L : Front speaker (left)
R : Front speaker (right)
□ : Virtual speaker

 You can select "TVS" directly by pressing SURROUND on the remote or player. Each time you press the button, the item changes. If you select any TVS setting other than "OFF," the indicator on the player lights up.

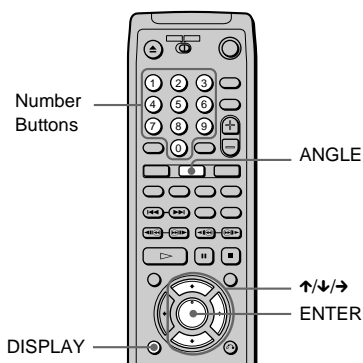
Notes

- When you select an effect, the sound cuts off for a moment.
- When the playing signal does not contain a signal for the rear speakers (page 50), the surround effects may be difficult to hear.
- When you select one of the TVS modes, turn off the surround setting of the connected TV or amplifier (receiver).
- Make sure that your listening position is between and at an equal distance from your speakers, and that the speakers are located in similar surroundings. Otherwise, the TVS effect may be hard to discern.
- TVS NIGHT only works with Dolby Digital discs. However, not all discs will respond to the TVS NIGHT function in the same way.
- If you use the DIGITAL OUT (OPTICAL or COAXIAL) jacks, the sound output from your speakers will not have the TVS effect.


Changing the Angles

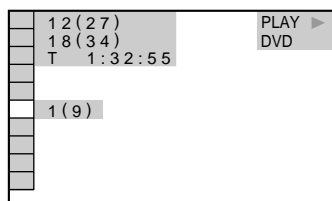
If various angles (multi-angles) for a scene are recorded on the DVD, “ANGLE” appears in the front panel display. This means that you can change the viewing angle.

For example, while playing a scene of a train in motion, you can display the view from either the front of the train, the left window of the train, or from the right window without having the train’s movement interrupted.

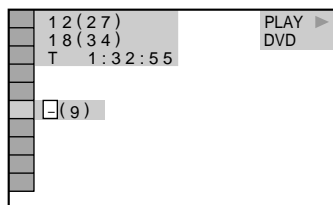


- 1 Press DISPLAY during playback.**
The Control Menu appears.

- 2 Press \uparrow/\downarrow to select  (ANGLE).**
The number of the angle appears.
The number in parentheses indicates the total number of angles.




- 3 Press \rightarrow or ENTER.**
The number of the angle changes to “-.”




- 4 Select the angle number using the number buttons or \uparrow/\downarrow , then press ENTER.**
The angle changes to the selected angle.

To turn off the Control Menu

Press DISPLAY repeatedly until the Control Menu is turned off.

 You can select the angle directly by pressing ANGLE. Each time you press the button, the angle changes.

 You can display all the angles recorded on the disc on the same screen, and start playback directly in continuous mode from the chosen angle. The angles are displayed on a screen divided in 9 sections. For details, see page 43.

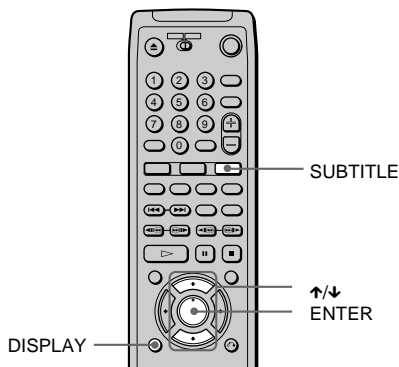
Note

Depending on the DVD, you may not be able to change the angles even if multi-angles are recorded on the DVD.

Displaying the Subtitles

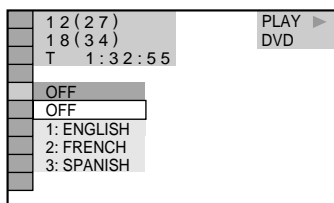


If subtitles are recorded on the discs, you can turn the subtitles on and off whenever you want while playing. If multilingual subtitles are recorded on the disc, you can change the subtitle language while playing, and turn it on or off whenever you want. For example, you can select the language you want to practice and turn the subtitles on for better understanding.



- 1 Press DISPLAY during playback.**
The Control Menu appears.

- 2 Press \uparrow/\downarrow to select (SUBTITLE), then press ENTER.**
The options for SUBTITLE appear.



- 3 Press \uparrow/\downarrow to select the language.**
Depending on the DVD, the choice of language varies.
When 4 digits are displayed, they indicate the language code. Refer to the language code list on page 82 to see which language the code represents.

- 4 Press ENTER.**

To cancel the SUBTITLE setting

Select "OFF" in Step 3.

To turn off the Control Menu

Press DISPLAY repeatedly until the Control Menu is turned off.

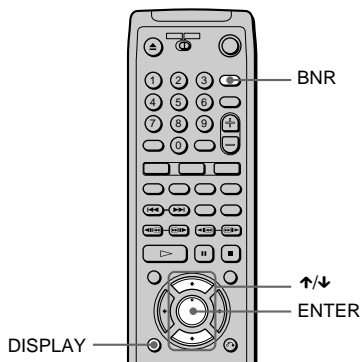
You can select SUBTITLE directly by pressing SUBTITLE. Each time you press the button, the item changes.

Note

Depending on the DVD, you may not be able to change the subtitles even if multilingual subtitles are recorded on the DVD.

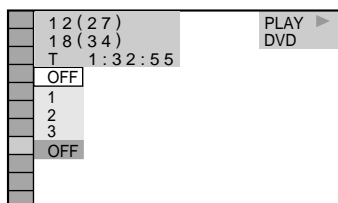
Adjusting the Picture Quality (BNR) DVD VIDEO CD

The Block Noise Reduction (BNR) function adjusts the picture quality by reducing the “block noise” or mosaic like patterns that appear on your TV screen.



1 Press **DISPLAY** twice during playback.
The Control Menu appears.

2 Press **↑/↓** to select **BNR**, then press **ENTER**.
The options for BNR appear.



3 Press **↑/↓** to select a level.
As the value increases, the mosaic like patterns on your TV screen will decrease.

- 1: reduces the “block noise.”
- 2: reduces the “block noise” more than 1.
- 3: reduces the “block noise” more than 2.

4 Press **ENTER**.
The disc plays with the setting you selected.

To cancel the BNR setting

Select “OFF” in Step 3.

To turn off the Control Menu

Press **DISPLAY** repeatedly until the Control Menu is turned off.

You can set BNR while the player is stopped.

You can select BNR directly by pressing BNR on the remote or player. Each time you press the button, the item changes. If you select any setting other than “OFF,” the indicator on the player lights up.

Notes

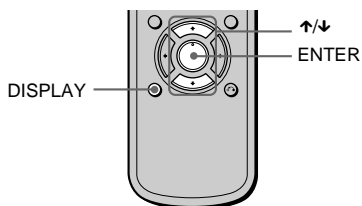
- If the outlines of the images on your screen should become blurred, set “BNR” to “OFF.”
- Depending on the disc or the scene being played, the BNR effect may be hard to discern.

Adjusting the Playback Picture (VIDEO EQUALIZER)



You can adjust the video signal of the DVD or VIDEO CD from the player, not from the TV, to obtain the picture quality you want. Choose the video mode that suits the program you are watching.

When you select “MEMORY →,” you can make further adjustments to each element of the picture (color, brightness, etc.).

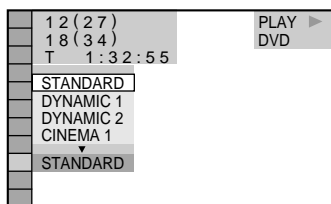


1 Press DISPLAY twice during playback.

The Control Menu appears.

2 Press ↑/↓ to select (VIDEO EQUALIZER), then press ENTER.

The options for VIDEO EQUALIZER appear.



3 Press ↑/↓ to select the setting you want.

- **STANDARD:** displays a standard picture.
- **DYNAMIC 1:** produces a bold dynamic picture by increasing the picture contrast and the color

intensity.

- **DYNAMIC 2:** produces a more dynamic picture than DYNAMIC 1 by further increasing the picture contrast and the color intensity.
- **CINEMA 1:** enhances details in dark areas by increasing the black level.
- **CINEMA 2:** White colors become brighter and black colors become richer, and the color contrast is increased.
- **MEMORY →:** adjusts the picture in greater detail.

4 Press ENTER

To turn off the Control Menu

Press DISPLAY repeatedly until the Control Menu is turned off.

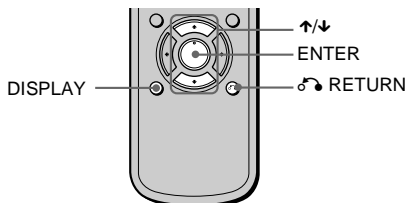
💡 When you watch a movie “CINEMA 1” or “CINEMA 2” is recommended.

💡 You can set VIDEO EQUALIZER while the player is stopped.


Adjusting the picture items in “MEMORY”

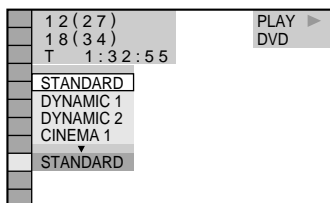
You can adjust each element of the picture individually.

- **PICTURE:** changes the contrast
- **BRIGHTNESS:** changes the overall brightness
- **COLOR:** makes the colors deeper or lighter
- **HUE:** changes the color balance

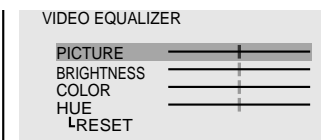


- 1 Press **DISPLAY** twice during playback.
The Control Menu appears.

- 2 Press **↑/↓** to select  (VIDEO EQUALIZER), then press **ENTER**.



- 3 Press **↑/↓** to select “MEMORY →,” and press **ENTER**.
The video equalizer display appears.



- 4 Select the picture item you want to adjust using **↑/↓**, then press **ENTER**.
The adjustment bar of the selected item appears.

- 5 Adjust the selected picture item using **←/→**, then press **ENTER**.
The setting is stored in memory.


To cancel adjusting the picture

Press **↶** RETURN before pressing **ENTER** to return to Step 2.

- 6 To adjust other items, repeat Steps 4 and 5.

To turn off the video equalizer memory display

Press **↶** RETURN.

 To reset all of the picture items, select “RESET” in Step 4.

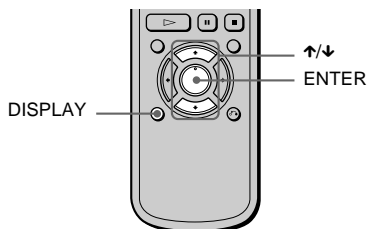
Note

Only one set of “MEMORY →” adjustments can be stored. When you adjust the items again, the new setting erases the previous setting.

Enhancing the Playback Picture (DIGITAL VIDEO ENHANCER)




The Digital Video Enhancer function makes the picture appear clear and crisp by enhancing the outlines of images on your TV screen. Also, this function can soften the images on the screen.

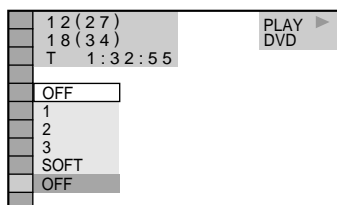


1 Press DISPLAY twice during playback.

The Control Menu appears.

2 Press \uparrow/\downarrow to select  (DIGITAL VIDEO ENHANCER), then press ENTER.

The options for DIGITAL VIDEO ENHANCER appear.



3 Press \uparrow/\downarrow to select a level.

As the value increases, the outlines of images on your TV screen will become crisper.

- 1: enhances the outline.
- 2: enhances the outline more than 1.
- 3: enhances the outline more than 2.
- SOFT: softens the image (DVD only).

4 Press ENTER.

The disc plays with the setting you selected.

To cancel the DIGITAL VIDEO ENHANCER setting

Select "OFF" in Step 3.

To turn off the Control Menu

Press DISPLAY repeatedly until the Control Menu is turned off.

 You can set DIGITAL VIDEO ENHANCER while the player is stopped.

Note

Depending on the DVD/VIDEO CD disc or the scene being played, noise found in the disc may become more apparent. If this happens, reduce the Digital Video Enhancer level.

Locking Discs (CUSTOM PARENTAL CONTROL, PARENTAL CONTROL)

You can set two kinds of playback restrictions for the desired disc.

- Custom Parental Control

You can set the playback restrictions so that the player will not play inappropriate discs.

- Parental Control

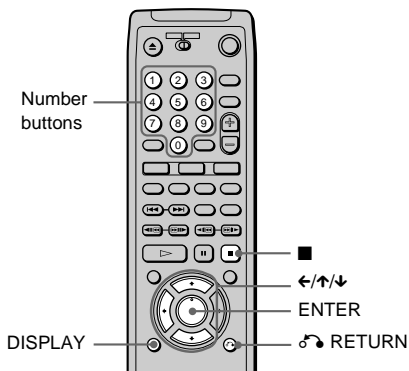
Playback of some DVDs can be limited according to a predetermined level such as the age of the users.

The same password is used for both Parental Control and Custom Parental Control.

Custom Parental Control

DVD VIDEO CD

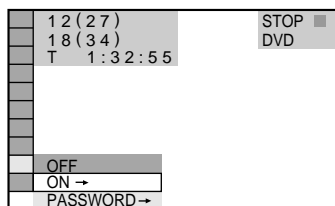
You can set the same Custom Parental Control password for up to 50 discs. When you set the fifty-first-disc, the first disc is canceled.



1 Insert the disc you want to lock.
If the disc is playing, press ■ to stop playback.

2 Press DISPLAY while the player is in stop mode.
The Control Menu appears.

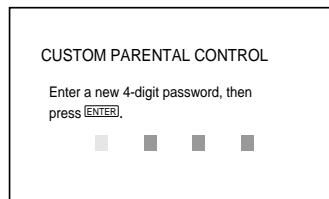
3 Press \uparrow/\downarrow to select (CUSTOM PARENTAL CONTROL), then press ENTER.
“CUSTOM PARENTAL CONTROL” is selected.



4 Press \uparrow/\downarrow to select “ON →,” then press ENTER.

■ If you have not entered a password

The display for registering a new password appears.



Enter a 4-digit password by using the number buttons, then press ENTER.
The display for confirming the password appears.

■ When you have already registered a password

The display for entering the password appears.



-
- 5** Enter or re-enter your 4-digit password by using the number buttons, then press ENTER.

“Custom parental control is set.” appears and then the screen returns to the Control Menu.

If you make a mistake entering your password

Press ← before you press ENTER and input the correct number.

If you make a mistake

Press ↶ RETURN, then repeat from Step 3 again.

To turn off the Control Menu

Press ↶ RETURN, then press DISPLAY repeatedly until the Control Menu is turned off.

To turn off the Custom Parental Control function

- 1** In Step 4, select “OFF →,” then press ENTER.
- 2** Enter your 4-digit password using the number buttons, then press ENTER.

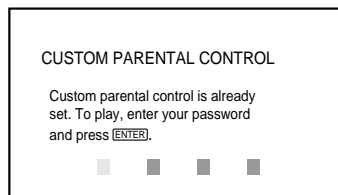
To change the password

- 1** In Step 4, press ↑/↓ to select “PASSWORD →,” then press ENTER. The display for entering the password appears.
- 2** Enter your 4-digit password using the number buttons, then press ENTER.
- 3** Enter a new 4-digit password using the number buttons, then press ENTER.
- 4** To confirm your password, re-enter it using the number buttons, then press ENTER.

Playing the disc for which Custom Parental Control is set

- 1** Insert the disc for which Custom Parental Control is set.

The CUSTOM PARENTAL CONTROL display appears.



- 2** Enter your 4-digit password using the number buttons, then press ENTER.

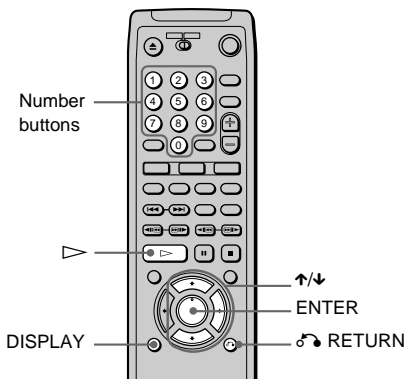
The player is ready for playback.

💡 If you forget your password, enter the 6-digit number “199703” using the number buttons when the CUSTOM PARENTAL CONTROL display asks you for your password, then press ENTER. The display will ask you to enter a new 4-digit password.

Limiting playback by children (Parental Control) DVD

Playback of some DVDs can be limited according to a predetermined level such as the age of the users. The Parental Control function allows you to set a playback limitation level.

A scene that is limited is not played, or it is replaced by a different scene.



- 1 Press DISPLAY while the player is in stop mode.

The Control Menu appears.

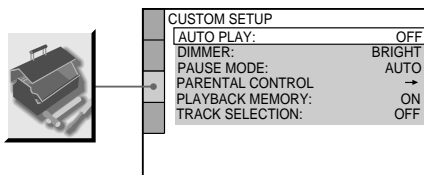
- 2 Press \uparrow/\downarrow to select  (SETUP), then press ENTER.

- 3 Press \uparrow/\downarrow select "CUSTOM," then press ENTER.

The Setup Display appears.

- 4 Press \uparrow/\downarrow to select "CUSTOM SETUP," then press ENTER.

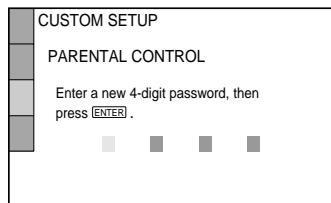
CUSTOM SETUP is displayed.



- 5 Press \uparrow/\downarrow to select "PARENTAL CONTROL →," then press ENTER.

■ If you have not entered a password

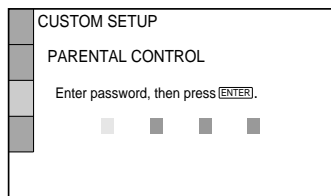
The display for registering a new password appears.



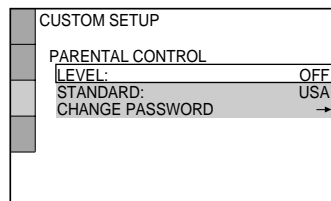
Enter a 4-digit password using the number buttons, then press ENTER. The display for confirming the password appears.

■ When you have already registered a password

The display for entering the password appears.

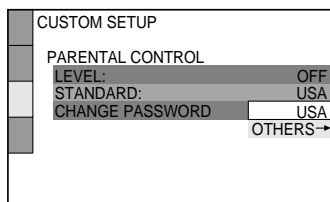


- 6 Enter or re-enter your password using the number buttons, then press ENTER. The display for setting the playback limitation level and changing the password appears.



- 7 Press \uparrow/\downarrow to select "STANDARD," then press ENTER.

The selection items for "STANDARD" are displayed.



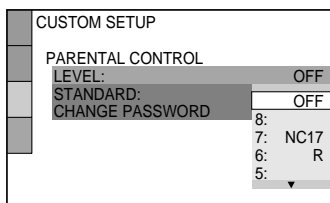
- 8** Press \uparrow/\downarrow to select a geographic area as the playback limitation level, then press ENTER.

The area is selected.

When you select “OTHERS \rightarrow ,” select and enter the standard code in the table on page 63 using the number buttons.

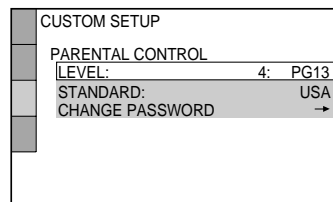
- 9** Press ENTER.

The selection items for “LEVEL” are displayed.



- 10** Select the level you want using \uparrow/\downarrow , then press ENTER.

Parental Control setting is complete.



The lower the value, the more strict the limitation.

If you make a mistake

Press \leftarrow RETURN to go back to the previous screen.

To turn off the Setup Display

Press DISPLAY repeatedly until the Setup Display is turned off.

To turn off the Parental Control function and play the DVD after entering your password

Set “LEVEL” to “OFF” in Step 10.

To change the password

- 1** In Step 7, select “CHANGE PASSWORD \rightarrow ” using \downarrow , then press ENTER.


The display for entering the password appears.

- 2** Follow Step 6 to enter a new password.

Playing a disc for which Parental Control is set

- 1** Insert the disc and press \triangleright .
The PARENTAL CONTROL display appears.

- 2** Enter your 4-digit password using the number buttons, then press ENTER.
The player starts playback.

 If you forget your password, remove the disc and repeat Step 1 to 5 of “Limiting playback by children.” When you are asked to enter your password, enter “199703” using the number buttons, then press ENTER. The display will ask you to enter a new 4-digit password. After you enter a new 4-digit password in Step 6, replace the disc in the player and press \triangleright . When the PARENTAL CONTROL display appears, enter your new password.

Notes

- When you play DVDs which do not have the Parental Control function, playback cannot be limited on this player.
- Depending on the DVD, you may be asked to change the parental control level while playing the disc. In this case, enter your password, then change the level. If the Resume Play mode is canceled, the level returns to the original level.

Area Code

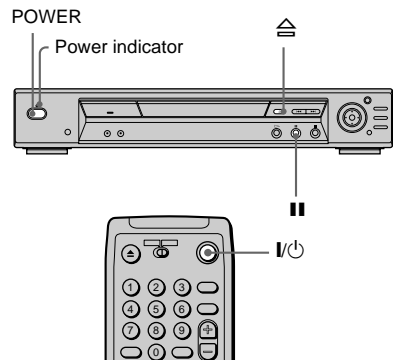
Standard	Code number	Standard	Code number
Argentina	2044	Malaysia	2363
Australia	2047	Mexico	2362
Austria	2046	Netherlands	2376
Belgium	2057	New Zealand	2390
Brazil	2070	Norway	2379
Canada	2079	Pakistan	2427
Chile	2090	Philippines	2424
China	2092	Portugal	2436
Denmark	2115	Russia	2489
Finland	2165	Singapore	2501
France	2174	Spain	2149
Germany	2109	Sweden	2499
Hong Kong	2219	Switzerland	2086
India	2248	Taiwan	2543
Indonesia	2238	Thailand	2528
Italy	2254	United Kingdom	2184
Japan	2276		
Korea	2304		

Operation Sound Effects (Sound Feedback)

The player beeps when the following operations are performed.
The default setting of the Sound Feedback function is set to off.

Operation	Operation sound
Power is turned on	One beep
Power is turned off	Two beeps
▷ is pressed	One beep
is pressed	Two beeps
Playback is stopped	One long beep
Operation is not possible	Three beeps

To set Sound Feedback



- 1 Press **POWER** on the player, then press **I/⏻** on the remote.

The power indicator lights up in green.
When there is a disc in the player, press **⏻** and remove the disc. Then press **⏻** again to close the disc tray.

- 2 Press and hold **||** on the player for more than two seconds.

You will hear one beep and the Sound Feedback function is turned on.

To turn off the Sound Feedback function

When there is no disc in the player, press and hold **II** on the player for more than two seconds. You will hear two beeps and the Sound Feedback function is turned off.

Controlling Your TV or AV Amplifier (Receiver) with the Supplied Remote

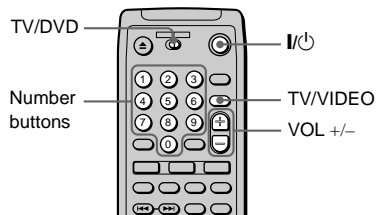
By adjusting the remote signal, you can control your TV or AV amplifier (receiver) with the supplied remote. The default signal (01) will control Sony TVs.

If you connect the player to an AV amplifier (receiver), you can control the volume with the supplied remote.

Notes

- Depending on the units being connected, you may not be able to control your TV or AV amplifier (receiver) using some of the buttons below.
- If you enter a new code number, the code number previously entered will be erased.
- When you replace the batteries of the remote, the code number you have set may be reset to the default setting. Set the appropriate code number again.

Controlling TVs with the remote



1 Slide the TV/DVD switch to TV.

2 Hold down **I/II**, and enter your TV's manufacturer's code (see the table below) using the number buttons.

3 Release **I/II**.

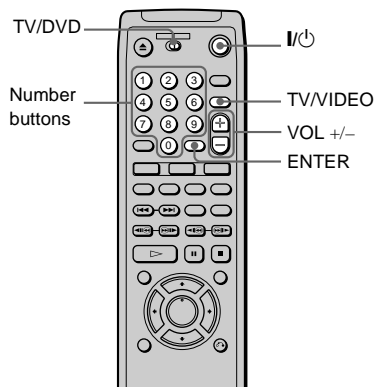
Code numbers of controllable TVs

If more than one code number is listed, try entering them one at a time until you find the one that works with your TV.

Manufacturer	Code number	Manufacturer	Code number
Sony (default)	01	Panasonic	06,19
Akai	04	Philco	03,04
AOC	04	Philips	08,21
Centurion	12	Pioneer	16
Coronado	03	Portland	03
Curtis-Mathes	12	Quasar	06,18
Daytron	12	Radio Shack	05,14
Emerson	03,04,14	RCA	04,10
Fisher	11	Sampo	12
General Electric	06,10	Samsung	20
Gold Star	03,04,17	Sanyo	11
Hitachi	02,03	Scott	12
J.C.Penney	04,12	Sears	07,10,11
JVC	09	Sharp	03,05,18
KMC	03	Sylvania	08,12
Magnavox	03,08,12	Teknika	03,08,14
Marantz	04,13	Toshiba	07
MGA/ Mitsubishi	04,12,13, 17	Wards	03,04,12
NEC	04,12	Yorx	12
		Zenith	15

Controlling the TV

When you set the TV/DVD switch to TV, you can control the sound level, input source, channel selection and power switch of your TV with the supplied remote.



By pressing	You can
I/⏻	Turn the TV on or off
VOL (volume) +/-	Adjust the volume of the TV
TV/VIDEO	Switch the TV's input source between the TV and other input sources
Number buttons and ENTER	Select the channel of the TV

Controlling the volume of your AV amplifier (receiver) with the remote



- 1 Slide the TV/DVD switch to DVD.
- 2 Hold down I/⏻, and enter your AV amplifier (receiver)'s manufacturer's code (see the table below) using the number button.
- 3 Release I/⏻.

Code numbers of controllable AV amplifier (receiver)

If more than one code number is listed, try entering them one at a time until you find the one that works with your AV amplifier (receiver).

Manufacturer	Code number
Sony	91, 89
Denon	84, 85, 86
Kenwood	92, 93
Onkyo	81, 82, 83
Pioneer	99
Sansui	87
Technics	97, 98
Yamaha	94, 95, 96

Controlling the AV amplifiers (receivers)

When you set the TV/DVD switch to DVD, you can control the volume of the AV amplifier (receiver) using VOL +/-.

Note

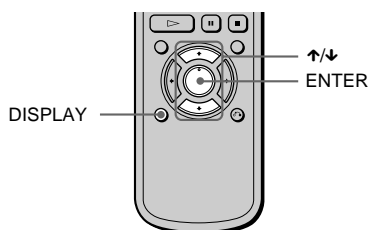
Depending on the AV amplifier (receiver), you may not be able to control your AV amplifier (receiver).

Using the Setup Display



By using the Setup Display, you can make various adjustments to items such as picture and sound. You can also set a language for the subtitles and the Setup Display, among other things. For details on each Setup Display item see page 68. For an overall list of Setup Display items, see page 83.

How to use the Setup Display

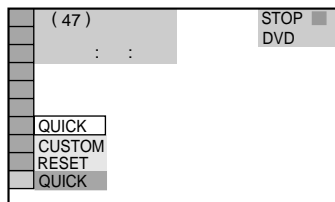


- 1 Press **DISPLAY** when the player is in stop mode.

The Control Menu appears.

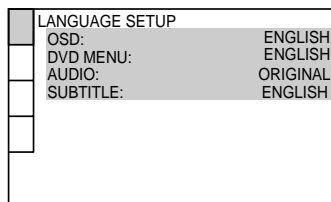
- 2 Press \uparrow/\downarrow to select  (SETUP), then press **ENTER**.

The options for SETUP appear.



- 3 Press \uparrow/\downarrow to select "CUSTOM," then press **ENTER**.

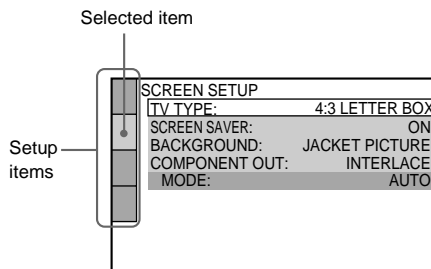
The Setup Display appears.



- 4 Press \uparrow/\downarrow to select the setup item from the displayed list: "LANGUAGE SETUP," "SCREEN SETUP," "CUSTOM SETUP," or "AUDIO SETUP." Then press **ENTER**.

The selected setup item appears.

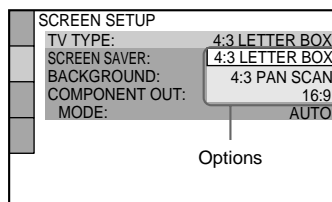
Example: SCREEN SETUP



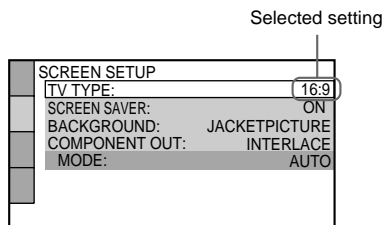
- 5 Select an item using \uparrow/\downarrow , then press **ENTER**.

The options for the selected item appear.

Example: TV TYPE






- 6** Select a setting using \uparrow/\downarrow , then press ENTER.
The setting is selected and setup is complete.
Example: 16:9



To turn off the Setup Display

Press DISPLAY repeatedly until the Setup Display is turned off.

 If you select “QUICK” in Step 3, you will enter the Quick Setup mode (page 25). Follow from Step 5 of the Quick Setup explanation to make basic adjustments.

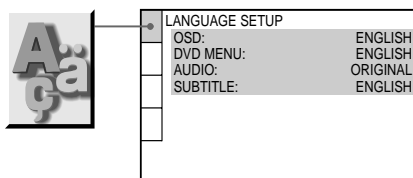
 If you select “RESET” in Step 3, you can reset all of the “SETUP” settings on page 83 and 84 (except for “PARENTAL CONTROL”) to the default settings. After you select “RESET” and press ENTER, select “YES” and press ENTER to reset the settings (it takes a few seconds to complete), or select “NO” and press ENTER to return to the Control Menu. Do not press POWER or  when resetting the player.

Setting the Display or Sound Track Language (LANGUAGE SETUP)



“LANGUAGE SETUP” allows you to set various languages for the on-screen display or sound track.

Select “LANGUAGE SETUP” in the Setup Display. For details on using the display, see “Using the Setup Display” (page 67).



■ OSD (On-Screen Display)

Switches the display language on the screen. Select the language from the displayed list.

■ DVD MENU (DVD only)

You can select the desired language for the DVD menu.

■ AUDIO (DVD only)

Switches the language of the sound track. Select the language from the displayed list. When you select “ORIGINAL,” the language given priority in the disc is selected.

■ SUBTITLE (DVD only)

Switches the language of the subtitle recorded on the DVD. Select the language from the displayed list. When you select “AUDIO FOLLOW,” the language for the subtitles changes according to the language you selected for the sound track.

💡 If you select “OTHERS →” in “DVD MENU,” “SUBTITLE,” and “AUDIO,” select and enter a language code from the language code list (page 82) using the number buttons.
After you have made a selection, the language code (4 digits) is displayed the next time you select “OTHERS →.”

Note

When you select a language that is not recorded on the DVD, one of the recorded languages will be automatically selected (except for the “OSD”).

Settings for the Display

(SCREEN SETUP)

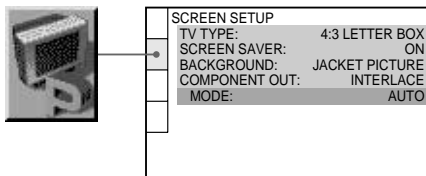
DVD

VIDEO
CD

CD

Choose settings according to the TV to be connected.

Select “SCREEN SETUP” in the Setup Display. For details on using the display, see “Using the Setup Display” (page 67).
The default settings are underlined.



■TV TYPE (DVD only)

Selects the aspect ratio of the connected TV (4:3 standard or wide).

<u>4:3</u> <u>LETTER</u> <u>BOX</u>	Select this when you connect a 4:3 screen TV. Displays a wide picture with bands on the upper and lower portions of the screen.
4:3 PAN SCAN	Select this when you connect a 4:3 screen TV. Automatically displays the wide picture on the entire screen and cuts off the portions that do not fit.
16:9	Select this when you connect a wide-screen TV or a TV with a wide mode function.

4:3 LETTER BOX



4:3 PAN SCAN



16:9



Note

Depending on the DVD, “4:3 LETTER BOX” maybe selected automatically instead of “4:3 PAN SCAN” or vice versa.

■ SCREEN SAVER

Turns on and off the screen saver so that the screen saver image appears when you leave the player in pause or stop mode for 15 minutes, or when you play back a CD for more than 15 minutes. The screen saver will help prevent your display device from becoming damaged (ghosting). Press \blacktriangleright to turn off the screen saver.

<u>ON</u>	Turns on the screen saver.
OFF	Turns off the screen saver.

■ BACKGROUND

Selects the background color or picture on the TV screen in stop mode or while playing a CD.

<u>JACKET PICTURE</u>	The jacket picture (still picture) appears in the background, but only when the jacket picture is already recorded on the disc (CD-EXTRA, etc.). If the disc does not contain a jacket picture, the “GRAPHICS” picture appears.
GRAPHICS	A preset picture stored in the player appears in the background.
BLUE	The background color is blue.

BLACK	The background color is black.
-------	--------------------------------

■ COMPONENT OUT

This will change the type of signal output from the COMPONENT VIDEO OUT jacks on the player. See page 71 for more information about the different types.

<u>INTERLACE</u>	This outputs the signal in interlace format. Select this when you are connected to a standard (interlace format) TV.
PROGRESSIVE	This outputs the signal in progressive (480p) format. Select this when you have a TV that can accept progressive signals.

 When the player outputs a Progressive video signal, the PROGRESSIVE indicator lights up.

Note

If you select “PROGRESSIVE” when you connect the player to a TV that cannot accept the signal in progressive format (480p), the image quality will deteriorate. In this case, set the VIDEO OUT SCAN SELECT switch on the back panel of the player to INTERLACE. Then set “COMPONENT OUT” to “INTERLACE” when you can see the TV screen correctly, and reset VIDEO OUT SCAN SELECT to SELECTABLE.

When “PROGRESSIVE” is selected in “COMPONENT OUT”

You can fine-tune the Progressive (480p) video signal output when you select “PROGRESSIVE” in “COMPONENT OUT” of the “CUSTOM SETUP” display and connect the player to the TV that is able to accept the video signal in progressive format (480p).

■ MODE (Conversion Modes)

DVD software can be divided into two types: film based software and video based software. Video based software is derived from TV, such as dramas and sit-coms, and displays images at 30 frames/60 fields per

second. Film based software is derived from film and displays images at 24 frames per second. In order for these images to appear natural on your screen when output in PROGRESSIVE mode (60 frames per second), the progressive video signal needs to be converted to match the type of DVD software that you are watching. For more information about conversion modes, see “Progressive Conversion Methods of Film Based and Video Based Software.”

AUTO	This will automatically detect if you are playing Film based or Video based software and convert the signal to the appropriate conversion mode. Normally select this position.
VIDEO	This will set the conversion mode for Video based software, regardless of the type of software that you are playing.

Notes

- Some DVD software contains both Video and Film. For instance, DVDs of movies may contain the movie taken on film, and a “Making of” sequence taken on video.
- When you play video based software with progressive signals, sections of some types of images may appear unnatural due to the conversion process when output through the COMPONENT VIDEO OUT jacks. Images from the S VIDEO OUT and LINE OUT (VIDEO) 1/2 jacks are unaffected as they are output in the interlace format.

Progressive Conversion Methods of Film Based and Video Based Software

This player converts video based software and film based software in the following manner.

Video based software conversion

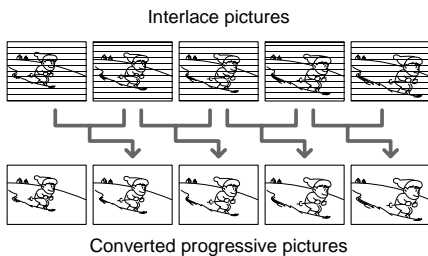
Video shows an image by alternately displaying every other line of an image (field) at 30 frames (60 fields) per second (Interlace format).



The Interlace format displays 30 frames (60 fields) per second by displaying every other line of the image, causing scanning lines to appear across the image. Furthermore, since only half of the image is shown at once, the amount of information contained in an image is limited.



The Progressive format displays 60 entire frames per seconds. The player accomplishes this by converting each field into a frame by using either a field-based conversion method or a frame-based conversion method. The appropriate method is automatically selected by the player according to the movement of the images on the screen. If the movement on the screen is slow, the frame-based conversion method borrows adjacent field information to fill in the missing information. If the movement on the screen is rapid, the field-based conversion method creates the missing information by predicting the movement of the images on the screen from field to field. The end result is an image that is higher in quality when compared to the Interlace format.



Film based software conversion

Film shows an image by displaying an entire image at 24 frames per second. When you watch a film on television, the television displays every other line of the frame as a field, thus reducing information level and the clarity of the film image.



This player solves this problem by increasing the speed at which the frames are displayed, consecutively showing 3 identical frames followed by 2 identical frames in the time that it normally takes to show 2 consecutive frames. The end result is that the 24 frames per second are increased to 60 frames per second, which is the speed at which Progressive video signals are shown.

This not only allows film to be shown in a frame based format, it also increases the clarity and sharpness which is unique to Progressive format images.

Custom Settings (CUSTOM SETUP)

Allows setting up Parental Control and other settings.

Select “CUSTOM SETUP” in the Setup Display. For details on using the display, see “Using the Setup Display” (page 67). The default settings are underlined.

■ AUTO PLAY

Select the Auto Play setting when you turn on the player.

■ DIMMER

Adjusts the lighting of the front panel display.

■ PAUSE MODE (DVD only)

Selects the picture in pause mode.

<u>AUTO</u>	The picture, including subjects that move dynamically, is output with no jitter. Normally select this position.
FRAME	The picture, including subjects that do not move dynamically, is output in high resolution.

■ PARENTAL CONTROL → (DVD only)

Set a password and playback limitation level for DVDs with playback limitation for children. For details, see “Limiting playback by children (Parental Control)” (page 60).

■ PLAYBACK MEMORY

The player can store the SUBTITLE and other settings of each disc for up to 50 discs (Playback Memory).

Set the Playback Memory function ON or OFF.

<u>ON</u>	Stores the settings in memory when you eject the disc.
OFF	Does not store the settings in memory.

The following settings are stored in memory by the Playback Memory function.

- AUDIO (page 49)*
- BNR (page 55)
- DIGITAL VIDEO ENHANCER (page 58)
- SUBTITLE (page 54)*
- SURROUND (page 51)
- VIDEO EQUALIZER (page 56)

*DVD only

Notes

- The player can store the settings of up to 50 discs. When you store the setting of disc number 51, the first disc setting is canceled.
- Depending on the DVD, the information stored in the disc takes priority over the Playback Memory settings and the function does not work.
- During playback, do not turn off the player by pressing POWER on the player. Doing so may cancel the settings. When you turn off the player, press **■** first to stop playback and then press **⏮** on

the remote. After the power indicator lights up in red and the player enters standby mode, press POWER on the player.

■ TRACK SELECTION (DVD only)

Gives the sound track which contains the highest number of channels priority when you play a DVD on which multiple audio formats (PCM, DTS, or Dolby Digital format) are recorded.

<u>OFF</u>	No priority given.
AUTO	Priority given.

Notes

- When you set the item to “AUTO,” the language may change. The “TRACK SELECTION” setting has higher priority than the “AUDIO” settings in “LANGUAGE SETUP” (page 68).
- If you set “DTS” to “OFF” (page 75), the DTS sound track is not played even if you set “TRACK SELECTION” to “AUTO”.
- If PCM, DTS, and Dolby Digital sound tracks have the same number of channels, the player selects PCM, DTS, and Dolby Digital sound tracks in this order.
- Depending on the DVD, the audio channel with priority may be predetermined. In this case, you cannot give priority to the DTS or Dolby Digital format by selecting “AUTO.”

Settings for the Sound

(AUDIO SETUP)

“AUDIO SETUP” allows you to set the sound according to the playback and connection conditions.

Select “AUDIO SETUP” in the Setup Display. For details on using the display, see “Using the Setup Display” (page 67).

The default settings are underlined.

■ AUDIO ATT (attenuation)

If the playback sound is distorted, set this item to “ON.” The player reduces the audio output level.

This function affects the output of the following jacks:

— LINE OUT (AUDIO) 1/2 jacks

■ DOWNMIX (DVD only)

Switches the mixing down methods when you play a DVD on which rear signal components such as LS, RS, or S are recorded in Dolby Digital format. For details on the rear signal components, see “Changing the Sound” (page 49). This function affects the output of the following jacks:

—

■ AUDIO DRC (Dynamic Range Control) (DVD only)

Makes the sound clear when the volume is turned down when playing a DVD that has the AUDIO DRC function. This affects the output from the following jacks:

— LINE OUT L/R (AUDIO) 1/2 jacks

— DIGITAL OUT (OPTICAL or COAXIAL) jacks only when “DOLBY DIGITAL” is set to “D-PCM” (page 75).

■ DIGITAL OUT

Selects if DTS signals are output via the DIGITAL OUT (OPTICAL or COAXIAL) jacks.

ON	Normally, select this position. When you select "ON," set "DOLBY DIGITAL" and "DTS." For details on setting these items, see "Setting the digital output signal."
OFF	The player does not output the audio signals via the DIGITAL OUT (OPTICAL and COAXIAL) jacks. The influence of the digital circuit upon the analog circuit is minimal.

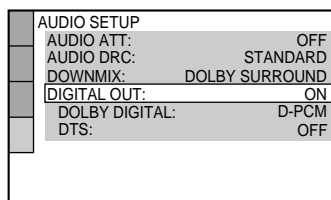
Setting the digital output signal

Switches the method of outputting audio signals when you connect the following component using an optical or a coaxial digital cord via the DIGITAL OUT (OPTICAL or COAXIAL) jacks.

- Amplifier (receiver) with digital input jack
- Amplifier (receiver) with a built-in DTS or DOLBY DIGITAL decoder
- MD or DAT deck

For connection details, see page 20.

Select "DOLBY DIGITAL" and "DTS" after setting "DIGITAL OUT" to "ON."



■ DOLBY DIGITAL

Selects the Dolby Digital signals output via the DIGITAL OUT (OPTICAL or COAXIAL) jacks.

D-PCM	Select this when the player is connected to an audio component lacking a built-in Dolby Digital decoder. You can select whether the signals conform to Dolby Surround (Pro Logic) or not by making adjustments to the "DOWNMIX" item in "AUDIO SETUP" (page 74).
DOLBY DIGITAL	Select this when the player is connected to an audio component with a built-in Dolby Digital decoder. If the player is connected to an audio component lacking a built-in Dolby Digital decoder, do not set this. Otherwise, when you play the Dolby Digital sound track, a loud noise (or no sound) will come out from the speakers, affecting your ears or causing the speakers to be damaged.

Note

If you select one of the TVS settings while playing a DVD, the player does not output Dolby Digital signals from the DIGITAL OUT (COAXIAL and OPTICAL) jacks (when you set "DOLBY DIGITAL" in "AUDIO SETUP" to "D-PCM").

■ DTS

Selects if DTS signals are output via the DIGITAL OUT (OPTICAL or COAXIAL) jacks.

OFF	Select this when the player is connected to an audio component lacking a built-in DTS decoder. Note, however, that the DTS signals contained in a CD are output even if "OFF" is selected.
ON	Select this when the player is connected to an audio component having a built-in DTS decoder. If the player is connected to an audio component lacking a built-in DTS decoder, do not set this. Otherwise, when you play the DTS sound track, a loud noise (or no sound) will come out from the speakers, affecting your ears or causing the speakers to be damaged.

Troubleshooting

If you experience any of the following difficulties while using the player, use this troubleshooting guide to help remedy the problem before requesting repairs. Should any problem persist, consult your nearest Sony dealer.

Power

The power is not turned on.

- ➔ Check that the AC power cord is connected securely.

Picture

There is no picture.

- ➔ The connecting cords are not connected securely.
- ➔ The connecting cords are damaged.
- ➔ The player is not connected to the correct TV input jack (page 18).
- ➔ The video input on the TV is not correctly set.

Picture noise appears.

- ➔ The disc is dirty or flawed.
- ➔ If the picture output from your player goes through your VCR to get to your TV, the copy-protection signal applied to some DVD programs could affect picture quality. If you still experience problems even when you connect your player directly to your TV, please try connecting your player to your TV's S video input (page 18).
- ➔ You have selected "PROGRESSIVE" in "COMPONENT OUT" even though your TV cannot accept the signal in progressive format. In this case, set the VIDEO OUT SCAN SELECT switch on the back panel of the player to INTERLACE. Then set "COMPONENT OUT" to "INTERLACE" after you can see the TV screen correctly and reset VIDEO OUT SCAN SELECT to SELECTABLE.

- ➔ Even if your TV is compatible with progressive format (480p) signals, the image may be affected when you set "COMPONENT OUT" to "PROGRESSIVE." In this case, set "COMPONENT OUT" to "INTERLACE."

Even though you set the aspect ratio in "TV TYPE" or "SCREEN SETUP," the picture does not fill the screen.

- ➔ The aspect ratio of the disc is fixed on your DVD.

Sound

There is no sound.

- ➔ The connecting cord is not connected securely.
- ➔ The connecting cord is damaged.
- ➔ The player is connected to the wrong input jack on the amplifier (receiver) (page 22, 23, 24).
- ➔ The amplifier (receiver) input is not correctly set to the player.
- ➔ The player is in pause mode or in Slow-motion play mode.
- ➔ The player is in fast forward or fast reverse mode.
- ➔ If the audio signal does not come through the DIGITAL OUT (OPTICAL or COAXIAL) jacks, check the audio settings (page 75).

Sound is noisy.

- ➔ The disc is dirty or flawed.
- ➔ When playing a CD with DTS sound tracks, noise will come from the LINE OUT L/R (AUDIO) 1/2 jacks (page 30).

Sound distortion occurs.

- ➔ Set "AUDIO ATT" in "AUDIO SETUP" to "ON" (page 74).

Operation

The remote does not function.

- ➔ There are obstacles between the remote and the player.
- ➔ The distance between the remote and the player is too far.
- ➔ The remote is not pointed at the remote sensor on the player.
- ➔ The batteries in the remote are weak.

The disc does not play.

- ➔ There is no disc inside.
- ➔ The disc is turned over.
Insert the disc with the playback side facing down on the disc tray.
- ➔ The disc is skewed.
- ➔ The player cannot play CD-ROMs, etc. (page 6).
- ➔ The region code on the DVD does not match the player.
- ➔ Moisture has condensed inside the player.
Remove the disc and leave the player turned on for about half an hour. Turn on the power again before playing the disc (page 3).

The disc does not start playing from the beginning.

- ➔ Program Play, Shuffle Play, Repeat Play, or A-B Repeat Play has been selected (page 34).
Press CLEAR to cancel these functions before playing a disc.
- ➔ Resume Play has been selected.
During stop, press ■ on the player or the remote and then start playback (page 31).
- ➔ The title, DVD, or PBC menu automatically appears on the TV screen.

The player starts playing the disc automatically.

- ➔ The DVD features an auto playback function.
- ➔ "AUTO PLAY" in "CUSTOM SETUP" is set to "TIMER" (page 72).

Playback stops automatically.

- ➔ Some discs may contain an auto pause signal.
While playing such a disc, the player stops playback at the auto pause signal.

You cannot perform some functions such as Stop, Search, Slow-motion Play, Repeat Play, Shuffle Play, or Program Play.

- ➔ Depending on the disc, you may not be able to do some of the operations above. See the operating manual that comes with the disc.

Messages do not appear on the screen in the language you want.

- ➔ In the Setup Display, select the desired language for the on-screen display in "OSD" under "LANGUAGE SETUP" (page 68).

The language for the sound track cannot be changed.

- ➔ Multilingual tracks are not recorded on the DVD being played.
- ➔ The DVD prohibits the changing of the language for the sound track.

The subtitle language cannot be changed.

- ➔ Multilingual subtitles are not recorded on the DVD being played.
- ➔ The DVD prohibits the changing of the subtitles.

The subtitle cannot be turned off.

- ➔ The DVD prohibits the subtitles being turned off.

The angles cannot be changed.

- ➔ Multi-angles are not recorded on the DVD being played. The angle can only be changed when the “ANGLE” indicator lights up on the front panel display (page 9).
- ➔ The DVD prohibits changing of the angles.

The player does not operate properly.

- ➔ When static electricity, etc., causes the player to operate abnormally, press POWER on the player to turn the player off and then on again.

Nothing is displayed on the front panel display.

- ➔ “DIMMER” in “CUSTOM SETUP” is set to “OFF.” Set “DIMMER” to “BRIGHT” or “DARK” (page 72).

5 numbers or letters are displayed on the screen and on the front panel display.

- ➔ The self-diagnosis function was activated. (See the table on page 78.)

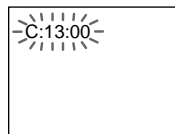
The disc tray does not open and “LOCKED” appears on the front panel display.

- ➔ Contact your Sony dealer or local authorized Sony service facility.
-

Self-diagnosis Function

(When letters/numbers appear in the display)

When the self-diagnosis function is activated to prevent the player from malfunctioning, a five-character service number (e.g., C 13 00) with a combination of a letter and four digits appears on the screen and the front panel display. In this case, check the following table.



First three characters of the service number	Cause and/or corrective action
C 13	The disc is dirty. ➔ Clean the disc with a soft cloth (page 7).
C 31	The disc is not inserted correctly. ➔ Re-insert the disc correctly.
E XX (xx is a number)	To prevent a malfunction, the CD/DVD player has performed the self-diagnosis function. ➔ Contact your nearest Sony dealer or local authorized Sony service facility and give the 5-character service number. Example: E 61 10

Glossary

Chapter (page 9)

Sections of a picture or a music feature that are smaller than titles. A title is composed of several chapters. Depending on the disc, no chapters may be recorded.

Dolby Digital (page 24, 75)

Digital audio compression technology developed by Dolby Laboratories. This technology conforms to 5.1-channel surround sound. The rear channel is stereo and there is a discrete subwoofer channel in this format. Dolby Digital provides the same 5.1 discrete channels of high quality digital audio found in Dolby Digital cinema audio systems. Good channel separation is realized because all of the channel data is recorded discretely and little deterioration is realized because all channel data processing is digital.

Dolby Surround (Pro Logic) (page 23)

Audio signal processing technology that Dolby Laboratories developed for surround sound. When the input signal contains a surround component, the Pro Logic process outputs the front, center, and rear signals. The rear channel is monaural.

DTS (page 24, 75)

Digital audio compression technology that Digital Theater Systems, Inc. developed. This technology conforms to 5.1-channel surround sound. The rear channel is stereo and there is a discrete subwoofer channel in this format. DTS provides the same 5.1 discrete channels of high quality digital audio.

Good channel separation is realized because all of the channel data is recorded discretely and little deterioration is realized because all channel data processing is digital.

DVD (page 6)

A disc that contains up to 8 hours of moving pictures even though its diameter is the same as a CD.

The data capacity of a single-layer and single-sided DVD is 4.7 GB (Giga Byte), which is 7 times that of a CD. The data capacity of a double-layer and single-sided DVD is 8.5 GB, a single-layer and double-sided DVD is 9.4 GB, and double-layer and double-sided DVD is 17GB.

The picture data uses the MPEG 2 format, one of the worldwide standards of digital compression technology. The picture data is compressed to about 1/40 (average) of its original size. The DVD also uses a variable rate coding technology that changes the data to be allocated according to the status of the picture. Audio information is recorded in Dolby Digital as well as in PCM, allowing you to enjoy a more real audio presence. Furthermore, various advanced functions such as the multi-angle, multilingual, and Parental Control functions are provided with the DVD.

Film based software (page 71)

DVDs can be classified as Film based or Video based software. Film based DVDs contain the same images (24 frames per second) that are shown at movie theaters.

Interlace format (page 70)

Interlace format shows every other line of an image as a single "field" and is the standard method for displaying images on television. The even number field shows the even numbered lines of an image, and the odd numbered field shows the odd numbered lines of an image.

Index (CD)/Video Index (VIDEO CD) (page 9)

A number that divides a track into sections to easily locate the point you want on a VIDEO CD or CD. Depending on the disc, no index may be recorded.

Parental Control (page 60)

A function of the DVD used to limit playback of the disc according to the age of the user and the limitation level in each country. The limitation varies from disc to disc; when it is activated, or playback is completely prohibited, violent scenes are skipped or replaced with other scenes, etc.

Progressive format (page 70)

Compared to the Interlace format that alternately shows every other line of an image (field) to create one frame, the Progressive format shows the entire image at once as a single frame. This means that while the Interlace format can show 30 frames (60 fields) in one second, the Progressive format can show 60 frames in one second. The overall picture quality increases and still images, text, and horizontal lines appear sharper. This player is compatible with the 480 progressive format.

Region Code (page 6)

This system is used to protect the copyrights. A region number is allocated on each DVD player or DVD disc according to the sales region. Each region code is shown on the player as well as on the disc packaging. The player can play the discs that match its region code. The player can also play discs with the “ ” mark. Even when the region code is not shown on the DVD, the region limit may still be activated.

Scene (page 9)

On a VIDEO CD with PBC (playback control) functions, the menu screens, moving pictures and still pictures are divided into sections called “scenes.”

Title (page 9)

The longest section of a picture or music feature on a DVD, movie, etc., in video software, or the entire album in audio software.

Track (page 9)

Sections of a picture or a music feature on a VIDEO CD or CD (the length of a song).

TV Virtual Surround (TVS) (page 51)

Technology from Sony developed to produce surround sound for home use P n2.4(e4(.),5.9aC.0060

Specifications

System

Laser	Semiconductor laser
Signal format system	NTSC

Audio characteristics

Frequency response	DVD (PCM 96 kHz): 2 Hz to 44 kHz (±1.0 dB) DVD (PCM 48 kHz): 2 Hz to 22 kHz (±0.5 dB) CD: 2 Hz to 20 kHz (±0.5 dB)
Signal-to-noise ratio (S/N ratio)	115 dB (LINE OUT L/R (AUDIO) 1/2 jacks only)
Harmonic distortion	0.003 %
Dynamic range	DVD: 103 dB CD: 99 dB
Wow and flutter	Less than detected value (±0.001% W PEAK)

The signals from LINE OUT L/R (AUDIO) 1/2 jacks are measured. When you play PCM sound tracks with a 96 kHz sampling frequency, the output signals from the DIGITAL OUT (COAXIAL and OPTICAL) jacks are converted to 48 kHz sampling frequency.

Outputs

Jack name	Jack type	Maximum output level	Load impedance
LINE OUT L/R (AUDIO) (1/2)	Phono jack	2 Vrms (at 50 kilohms)	Over 10 kilohms
DIGITAL OUT (OPTICAL)	Optical output jack	−18 dBm	Wave length: 660 nm
DIGITAL OUT (COAXIAL)	Phono jack	0.5 Vp-p	75 ohms terminated
LINE OUT (VIDEO) (1/2)	Phono jack	1.0 Vp-p	75 ohms, sync negative
S VIDEO OUT (1/2)	4-pin mini DIN	Luminance signal: 1.0 Vp-p Color signal: 0.286 Vp-p	75 ohms, sync negative 75 ohms terminated
COMPONENT VIDEO OUT(Y, Pb, Pr)	Phono jack	Y: 1.0 Vp-p Pb, Pr: 0.7 Vp-p	75 ohms, sync negative 75 ohms

General

Power requirements	120V AC, 60 Hz
Power consumption	15 W
Dimensions (approx.)	430 × 74 × 256 mm (17 × 3 × 10 ¹ / ₈ in.) (w/h/d) incl. projecting parts
Mass (approx.)	2.7 kg (5 lb)
Operating temperature	5 °C to 35 °C (41 °F to 95 °F)
Operating humidity	25 % to 80 %

Supplied accessories

See page 15.

Specifications and design are subject to change without notice.

ENERGY STAR® is a U.S. registered mark. As an ENERGY STAR® Partner, Sony Corporation has determined that this product meets the ENERGY STAR® guidelines for energy efficiency.

Language Code List

For details, see page 49, 54, 68.

The language spellings conform to the ISO 639: 1988 (E/F) standard.

Code Language	Code Language	Code Language	Code Language
1027 Afar	1183 Irish	1347 Maori	1507 Samoan
1028 Abkhazian	1186 Scots Gaelic	1349 Macedonian	1508 Shona
1032 Afrikaans	1194 Galician	1350 Malayalam	1509 Somali
1039 Amharic	1196 Guarani	1352 Mongolian	1511 Albanian
1044 Arabic	1203 Gujarati	1353 Moldavian	1512 Serbian
1045 Assamese	1209 Hausa	1356 Marathi	1513 Siswati
1051 Aymara	1217 Hindi	1357 Malay	1514 Sesotho
1052 Azerbaijani	1226 Croatian	1358 Maltese	1515 Sundanese
1053 Bashkir	1229 Hungarian	1363 Burmese	1516 Swedish
1057 Byelorussian	1233 Armenian	1365 Nauru	1517 Swahili
1059 Bulgarian	1235 Interlingua	1369 Nepali	1521 Tamil
1060 Bihari	1239 Interlingue	1376 Dutch	1525 Telugu
1061 Bislama	1245 Inupiak	1379 Norwegian	1527 Tajik
1066 Bengali; Bangla	1248 Indonesian	1393 Occitan	1528 Thai
1067 Tibetan	1253 Icelandic	1403 (Afan)Oromo	1529 Tigrinya
1070 Breton	1254 Italian	1408 Oriya	1531 Turkmen
1079 Catalan	1257 Hebrew	1417 Punjabi	1532 Tagalog
1093 Corsican	1261 Japanese	1428 Polish	1534 Setswana
1097 Czech	1269 Yiddish	1435 Pashto; Pushto	1535 Tonga
1103 Welsh	1283 Javanese	1436 Portuguese	1538 Turkish
1105 Danish	1287 Georgian	1463 Quechua	1539 Tsonga
1109 German	1297 Kazakh	1481 Rhaeto- Romance	1540 Tatar
1130 Bhutani	1298 Greenlandic		1543 Twi
1142 Greek	1299 Cambodian	1482 Kirundi	1557 Ukrainian
1144 English	1300 Kannada	1483 Romanian	1564 Urdu
1145 Esperanto	1301 Korean	1489 Russian	1572 Uzbek
1149 Spanish	1305 Kashmiri	1491 Kinyarwanda	1581 Vietnamese
1150 Estonian	1307 Kurdish	1495 Sanskrit	1587 Volapük
1151 Basque	1311 Kirghiz	1498 Sindhi	1613 Wolof
1157 Persian	1313 Latin	1501 Sangho	1632 Xhosa
1165 Finnish	1326 Lingala	1502 Serbo-Croatian	1665 Yoruba
1166 Fiji	1327 Laothian	1503 Singhalese	1684 Chinese
1171 Faroese	1332 Lithuanian	1505 Slovak	1697 Zulu
1174 French	1334 Latvian; Lettish	1506 Slovenian	
1181 Frisian	1345 Malagasy		
			1703 Not specified

List of Setup Display Items

The default settings are underlined.



LANGUAGE SETUP (page 68)

OSD	<u>ENGLISH</u> FRENCH SPANISH PORTUGUESE
DVD MENU	<u>ENGLISH</u> FRENCH SPANISH PORTUGUESE GERMAN ITALIAN DUTCH CHINESE JAPANESE DANISH SWEDISH FINNISH NORWEGIAN RUSSIAN OTHERS →
AUDIO	<u>ORIGINAL</u> (All other selections are the same as the DVD MENU language.)
SUBTITLE	<u>AUDIO FOLLOW</u> (All other selections are the same as the DVD MENU language.)



SCREEN SETUP (page 69)

TV TYPE	<u>4:3 LETTER BOX</u> 4:3 PAN SCAN 16:9		
SCREEN SAVER	<u>ON</u> OFF		
BACKGROUND	<u>JACKET PICTURE</u> GRAPHICS BLUE BLACK		
COMPONENT OUT	<u>INTERLACE</u>		
	PROGRESSIVE	MODE	<u>AUTO</u> VIDEO

**CUSTOM SETUP (page 72)**

AUTO PLAY	<u>OFF</u> TIMER DEMO1 DEMO2
DIMMER	<u>BRIGHT</u> DARK OFF
PAUSE MODE	AUTO FRAME
PARENTAL CONTROL →	
PLAYBACK MEMORY	<u>ON</u> OFF
TRACK SELECTION	<u>OFF</u> AUTO

**AUDIO SETUP (page 74)**

AUDIO ATT	<u>OFF</u> ON		
AUDIO DRC	<u>STANDARD</u> TV MODE WIDE RANGE		
DOWNMIX	<u>DOLBY SURROUND</u> NORMAL		
DIGITAL OUT	<u>ON</u>	DOLBY DIGITAL	D-PCM DOLBY DIGITAL
		DTS	<u>OFF</u> ON
	OFF		

Index

Numerics

- 16:9 69
- 4:3 LETTER BOX 69
- 4:3 PAN SCAN 69
- 5.1 Channel Surround 24

A

- A-B REPEAT 37
- ADVANCED 48
- ANGLE 53
- ANGLE VIEWER 43
- AUDIO 49, 68
- AUDIO ATT 74
- AUDIO DRC 74
- AUDIO SETUP 74
- AUTO PLAY 72

B

- BACKGROUND 70
- Batteries 15
- BNR 55

C

- CD 29
- CHAPTER 41
- Chapter 79
- CHAPTER VIEWER 43
- CLICK SHUTTLE 40
- COMPONENT OUT 70
- Connecting 18
- Continuous play
 - CD/VIDEO CD 29
 - DVD 29
- Control Menu 12
- CUSTOM 67
- CUSTOM PARENTAL CONTROL 59
- CUSTOM SETUP 72

D

- DIGITAL OUT 75
- Digital output 75
- DIGITAL VIDEO ENHANCER 58
- DIMMER 72

Display

- Control Menu display 12
- Front panel display 9
- Setup Display 67
- DOLBY DIGITAL 23, 51, 75, 79
- DOWNMIX 74
- DTS 24, 75, 79
- DVD 29, 79
- DVD MENU 68
- DVD menu 32

F

- Fast forward 39
- Fast reverse 39
- Front Panel Display 9

H

- Handling discs 7
- Hooking up 18

I

- INDEX 41
- Index 79
- INSTANT REPLAY 30
- INTERLACE 70

J

- JOG 40
- Jog mode 41

L

- LANGUAGE SETUP 68
- LEVEL 62
- Locating
 - a specific point 39
 - by watching the TV screen 39

M

- MODE
 - AUTO 70
 - VIDEO 70

O

- On-screen display
 - Control Menu display 12
 - Setup Display 67

OSD 68

P

- PARENTAL CONTROL 60, 73
- PAUSE MODE 73
- PBC Playback 33
- PLAYBACK MEMORY 73
- PRO LOGIC 79
- PROGRAM 34
- Program Play 34
- PROGRESSIVE 70

Q

- QUICK 68
- Quick Setup 25, 68

R

- Remote 15, 64
- REPEAT 36
- Repeat Play 36
- RESET 68
- Resume Play 31

S

- S VIDEO output 18
- SCENE 42
- Scene 80
- SCREEN SAVER 70
- SCREEN SETUP 69
- Searching See Locating
- SETUP 67
- Setup Display 67
- SHUFFLE 36
- Shuffle Play 36
- Shuttle mode 40
- Slow-motion Play 39
- Speakers
 - hooking 22
- STROBE PLAYBACK 43
- SUBTITLE 54, 68
- SURROUND 51

T

- Time search 41
- TIME/TEXT 41, 45, 46
- TITLE 32, 41
- Title 80

continued

Title menu 32
TITLE VIEWER 43
TRACK 41
Track 80
TRACK SELECTION 73
TRACK VIEWER 43
Troubleshooting 76
TV TYPE 69
TVS (TV Virtual Surround) 80

U

Usable discs 6

V

VIDEO CD 29
VIDEO EQUALIZER 56
VIEWER 43

