SONY

3-067-827-**11**(1)

CD/DVD Player

Operating Instructions

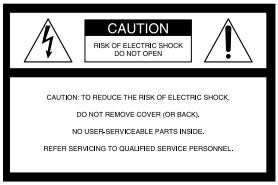
DVP-NC600

© 2001 Sony Corporation

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 CD/DVD player is harmful to eyes, do not attempt to disassemble the cabinet.
Refer servicing to qualified personnel only.
The following caution label is on the side of the player.



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-NC600
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!

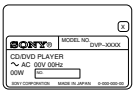
Thank you for purchasing this Sony CD/DVD Player. Before operating this player, please read this manual thoroughly and retain it for future reference.

Precautions

On safety

- The power requirements and power consumption of this player are indicated on the back of the player. Check that the player's operating voltage is identical with your local power supply.

Power requirements and power consumption ➡



- 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

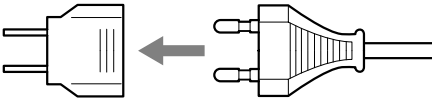
Do not use a commercially available CD/DVD cleaning disc. It may cause a malfunction.

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.

For the model supplied with the AC plug adaptor

If the AC plug of your player does not fit into the wall outlet, attach the supplied AC plug adaptor.



On transporting the player

Before transporting the player, follow the procedure below to return the internal mechanisms to their original positions.

1. Remove all the discs from the disc tray.
2. Press ≜ to close the disc tray.
   Make sure that “NO DISC’ appears on the front panel display.
3. Wait for 10 seconds, then press I/⏻ on the remote, followed by POWER on the player.
   This will safely turn off the player.

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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 icons used in this manual are described below:

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

This Player Can Play the Following Discs

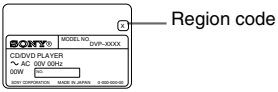
Format of discs	
DVD VIDEO	DVD VIDEO
VIDEO CD	COMPACT disc DIGITAL VIDEO
Music CD	COMPACT disc DIGITAL AUDIO

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 2 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 72).
- 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

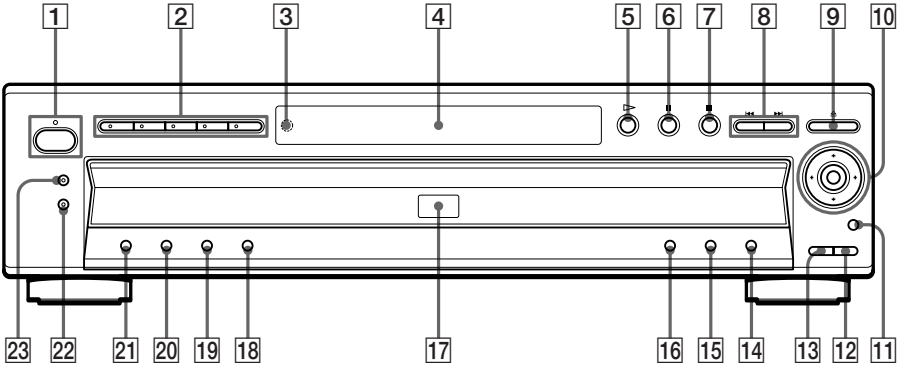
- Before playing, clean the disc with a cleaning cloth.
  Wipe the disc from the center out.

- Do not use solvents such as benzine, 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.

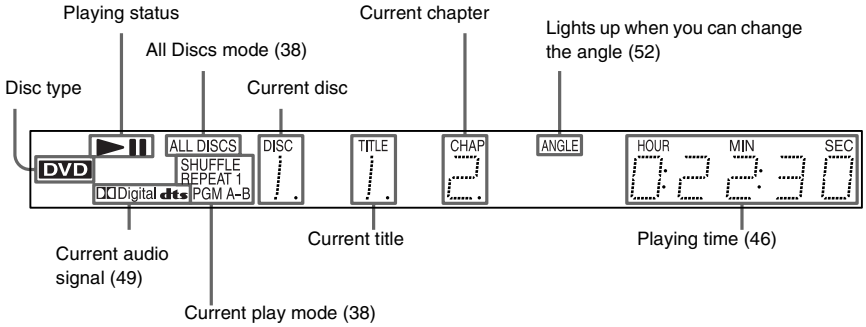
Front panel



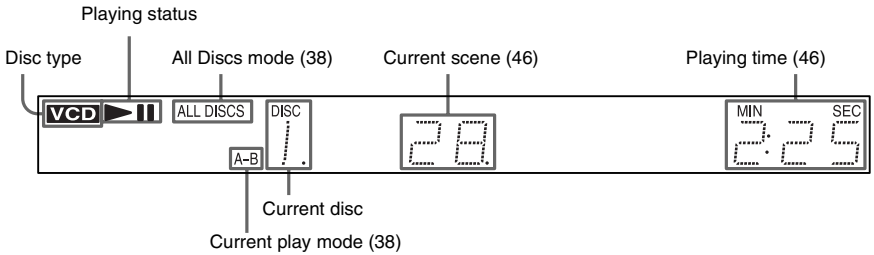
1 POWER switch/indicator (32)
2 DISC SELECT 1 - 5 buttons/indicators (34)
3 (remote sensor) (15)
4 Front panel display (10)
5 ▷ (play) button (32)
6 ❚❚ (pause) button (34, 59)
7 ■ (stop) button (32)
8 ⏮/⏭ (previous/next) buttons (34)
9 ⏏ (open/close) button (32)
10 ←/↑/↓/→/ENTER buttons (28)
11 DISPLAY button (13)
12 DISC SKIP button (32)
13 EXCHANGE button (34)
14 RETURN button (37)
15 DVD MENU button (37)
16 TITLE button (36)
17 Disc tray (32)
18 LOAD button (34)
19 ONE/ALL button (38)
20 REPEAT button (42)
21 SHUFFLE button (41)
22 BNR (Block Noise Reduction) button/indicator (53)
23 SURROUND button/indicator (50)

Front Panel Display

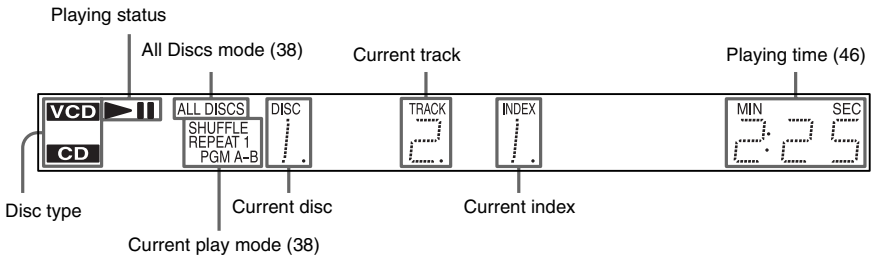
When playing back a DVD



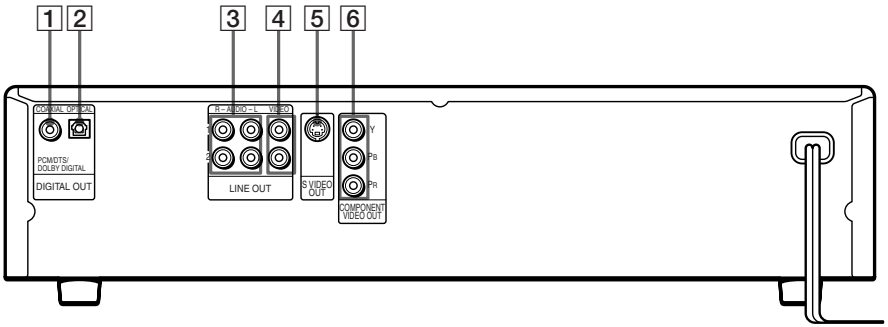
When playing back a VIDEO CD (PBC)



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

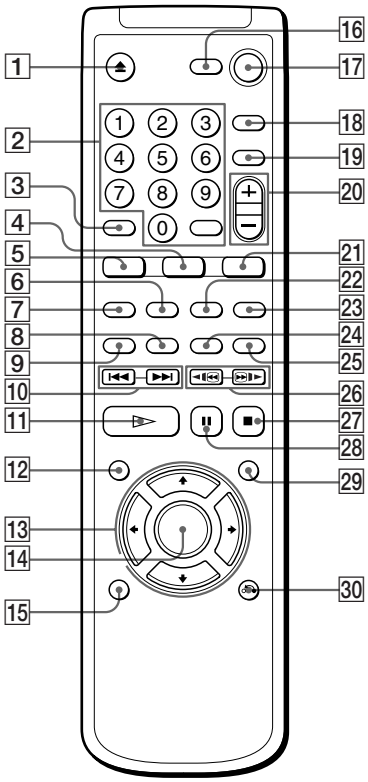


Rear Panel



1 DIGITAL OUT (COAXIAL) jack (22, 24, 26)
2 DIGITAL OUT (OPTICAL) jack (22, 24, 26)
3 LINE OUT L/R (AUDIO) 1/2 jacks (16, 20, 21)
4 LINE OUT (VIDEO) 1/2 jacks (16, 21)
5 S VIDEO OUT jack (18, 21)
6 COMPONENT VIDEO OUT jacks (18)

Remote



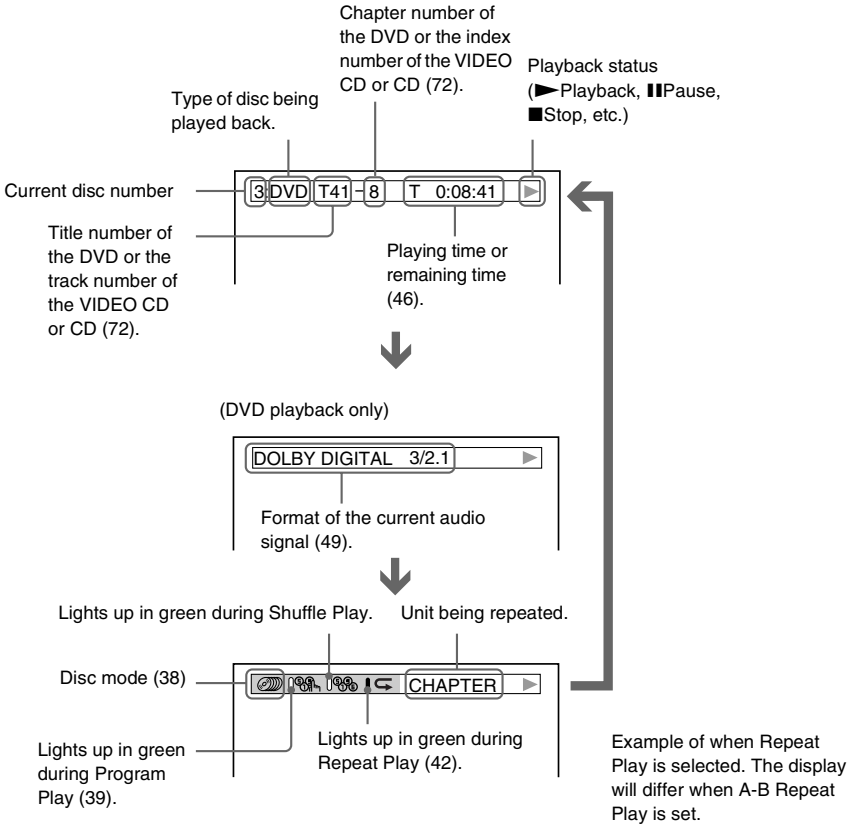
1 ⏏ OPEN/CLOSE button (32)
2 Number and ENTER buttons
3 CLEAR button (40)
4 ANGLE button (52)
5 AUDIO button (49)
6 PROGRAM button (39)
7 SHUFFLE button (41)
8 DISC SKIP button (32)
9 TIME/TEXT button (46)
10 ⏮/⏭ PREV (previous) /NEXT buttons (34)
11 ▷ PLAY button (32)
12 TITLE button (36)
13 ←/↑/↓/→ buttons (28)
14 ENTER button (28)
15 DISPLAY button (62)
16 TV I/⏻ (on/standby) button (60)
17 I/⏻ (on/standby) button (32)
18 BNR (Block Noise Reduction) button (53)
19 TV/VIDEO button (60)
20 VOL (volume) +/– buttons (60)
21 SUBTITLE button (52)
22 REPEAT button (42)
23 ONE/ALL DISCS button (38)
24 A-B button (43)
25 INSTANT REPLAY button (34)
26 ◄I⏪/⏩I► SCAN/SLOW buttons (44)
27 ■ STOP button (34)
28 II PAUSE button (34, 59)
29 DVD MENU button (37)
30 ↶ RETURN button (37)

Guide to On-Screen Displays (Status Bar, Control Bar, Control Menu)

The following explains the three types of on-screen displays used with this player:
Status Bar, Control Bar, and Control Menu.

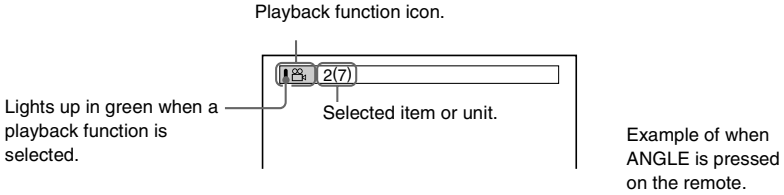
Status Bar

Displays the current playing status.
This display appears when the DISPLAY button is pressed repeatedly during playback.
The numbers in parentheses indicate reference pages.



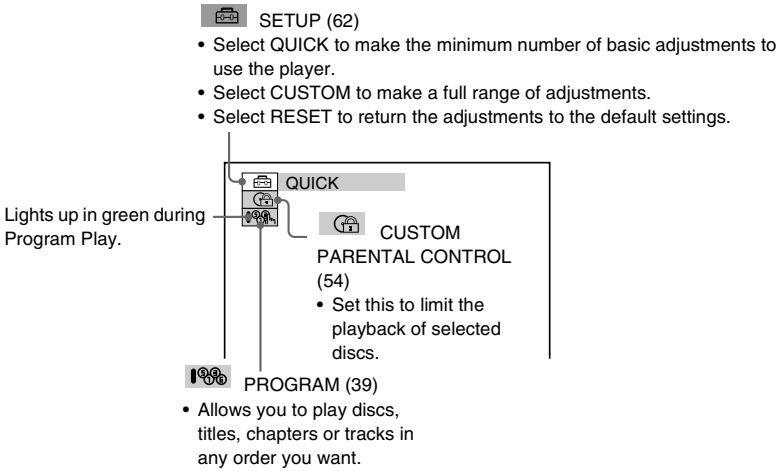
Control Bar

The Control Bar appears when a playback function is selected by pressing the function's button on the remote.



Control Menu

The Control Menu appears when the DISPLAY button is pressed when the player is in stop mode. The number in parenthesis indicate reference pages.



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

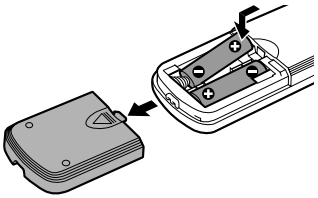
You cannot connect this player to a TV that does not have a video input jack.
Be sure to turn off the power of each component before connecting.

Step 1: Unpacking

Check that you have the following items:
- Audio/video cord (pinplug × 3 ⟷ pinplug × 3) (1)
- Remote commander (remote) RMT-D130A (1)
- Size AA (R6) batteries (2)
- A plug adaptor is included with some models.

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.

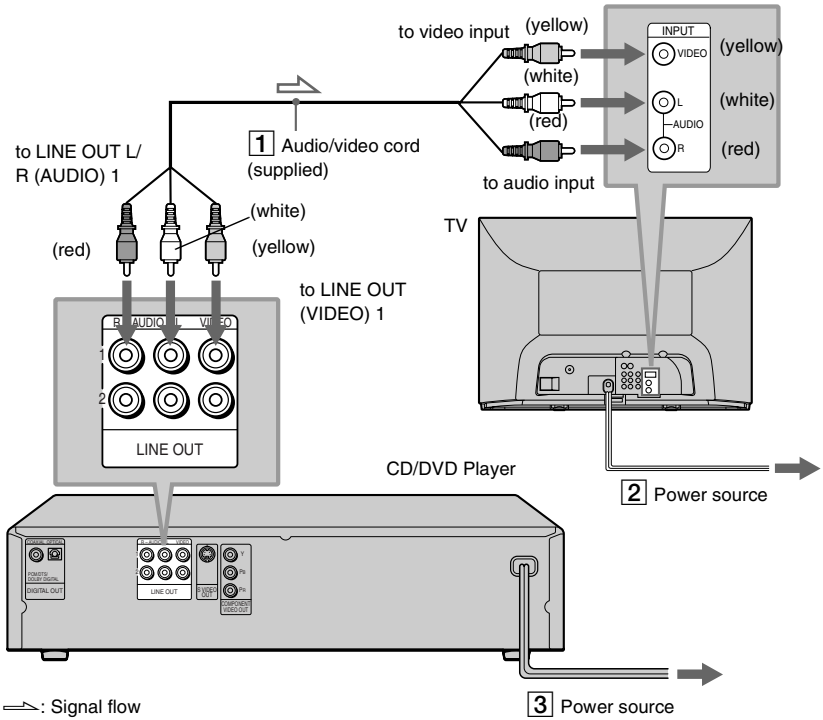


Notes

- 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 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.



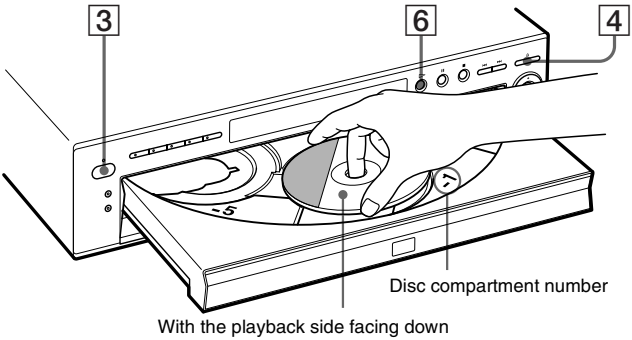
When connecting to a wide screen TV

Depending on the disc, the image may not fit your TV screen.
If you want to change the aspect ratio, please refer to page 64.

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 ≜ on the player to open the disc tray.

5 Place the disc on the tray with the playback side facing down.

6 Press ▷.

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 37) or VIDEO CD disc (page 37).

To stop playing

Press ■.

To take out the disc

Press ≜.

To turn off the player

Press I/⏻ 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

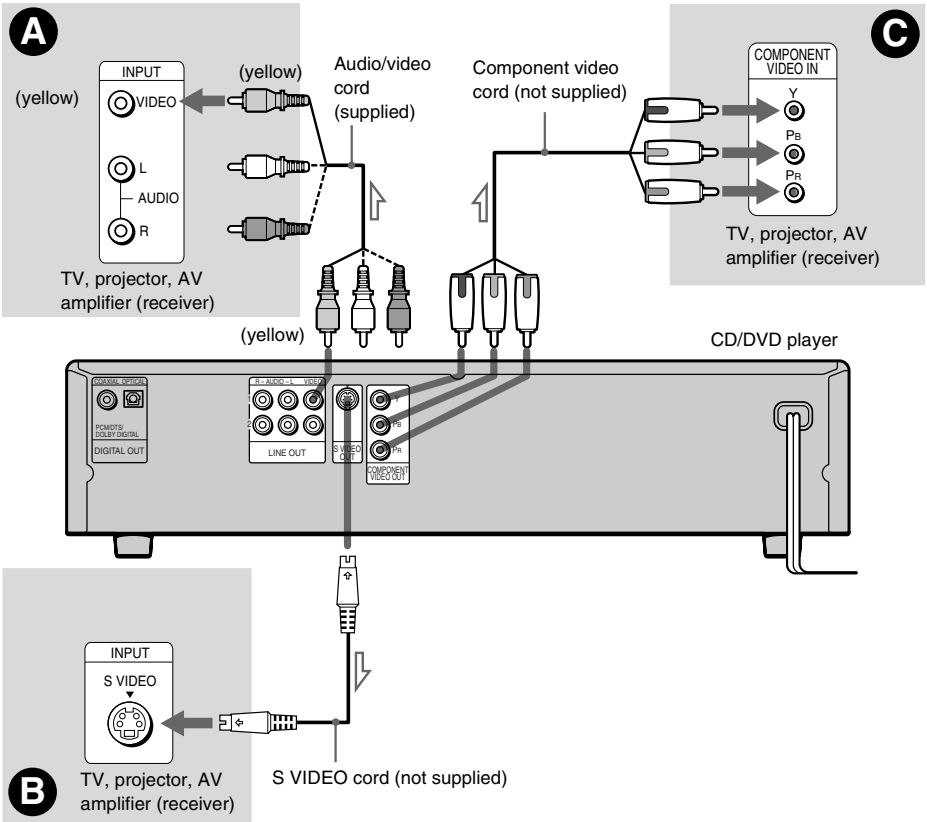
Follow Steps 1 to 4 to hook up and adjust the settings of the player.
Before you start, turn off the power, check that you have all of the supplied accessories, and insert the batteries into the remote (page 15).

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

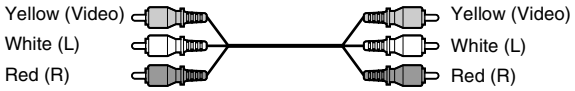
Connect this player to your TV monitor, projector, or AV amplifier (receiver) using a video cord. Select one of the patterns A through C, according to the input jack on your TV monitor, projector, or AV amplifier (receiver).



: Signal flow

Ⓐ If you are connecting to a video input jack

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



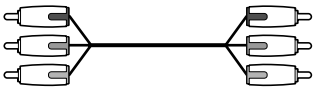
Use the red and white plugs to connect to the audio input jacks (page 20).

Ⓑ If you are connecting to an S VIDEO input jack

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

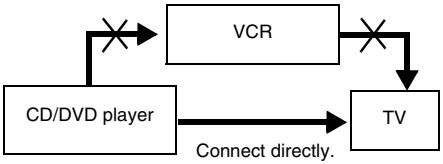
Ⓒ If you are connecting to a monitor, projector or AV amplifier (receiver) having component video input jacks (Y, PB, PR)

Connect the component via the COMPONENT VIDEO OUT jacks using component video cords (not supplied) or three video cords (not supplied) of the same kind and length. You will enjoy accurate color reproduction and high quality images.



Note

Do not connect your player to a VCR. You may not receive a clear image on the TV screen if you pass the player signals via the VCR.



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)	• TV (stereo)
B (page 22)	• 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)	• MD deck/DAT deck
C (page 24)	• 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, subwoofer)
D (page 26)	• AV amplifier (receiver) having a Dolby Digital or DTS** decoder, and a digital input jack • 6 speakers (front L and R, center, rear L and R, 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.

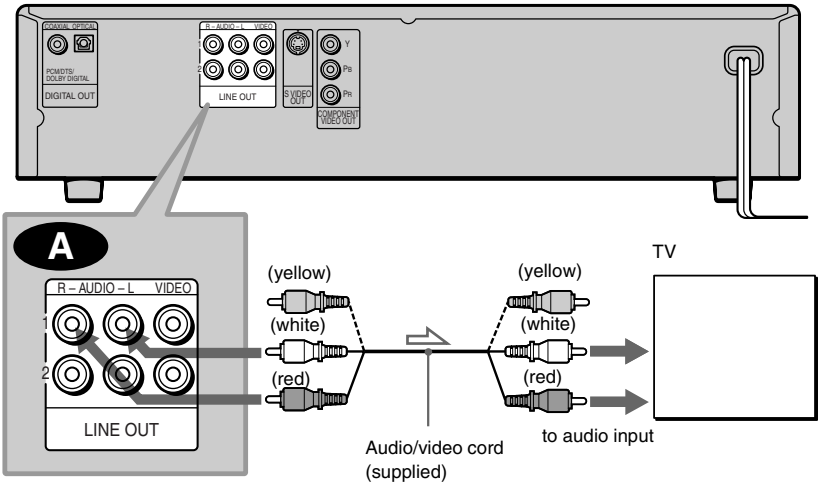
A Connecting to your TV

This connection will use your TV speakers for sound.

■ Recommended surround sound effects for this connection.

- TVS DYNAMIC (page 50)
- TVS WIDE (page 50)

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, 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 50)

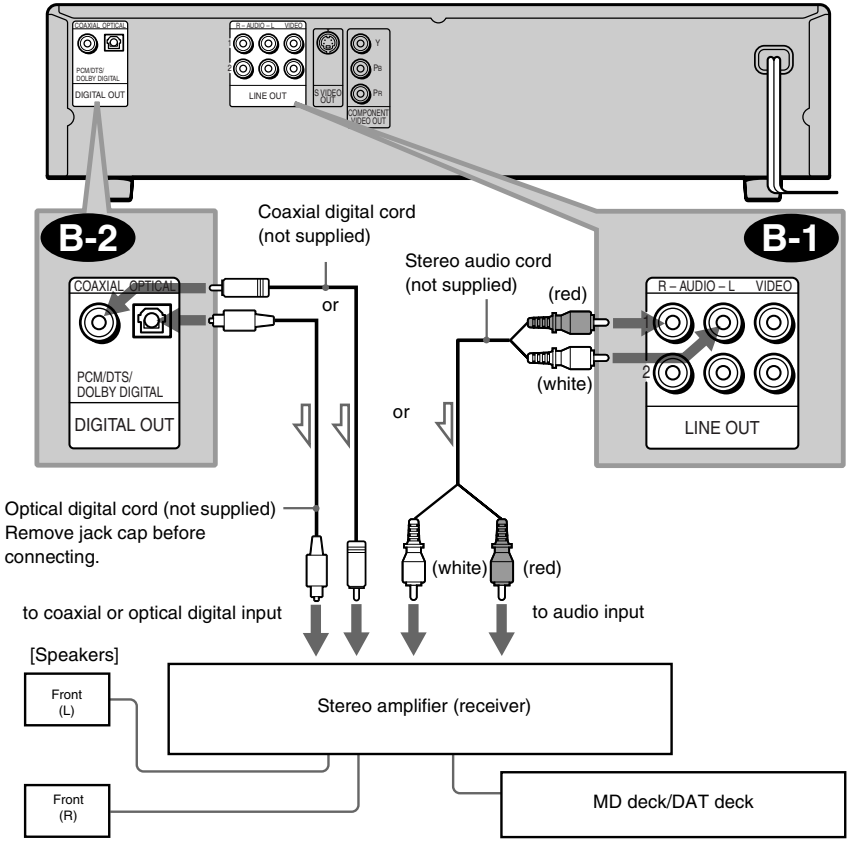
In connection B-1, you can use the supplied audio/video cord instead of using a separate audio cord.

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.

CD/DVD player



: Signal flow

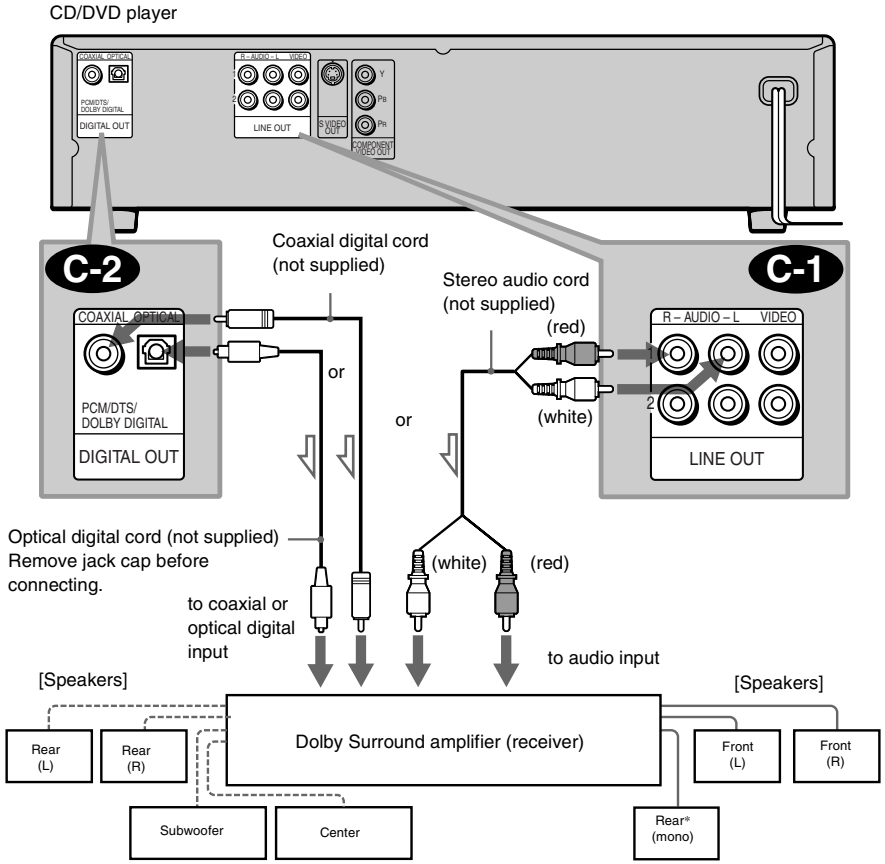
C Connecting to a Dolby Surround (Pro Logic) decoder amplifier (receiver) and 3 to 6 speakers

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 26.
You can enjoy the Dolby Surround effects only when playing Dolby Surround audio or multichannel 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 66)

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



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

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).

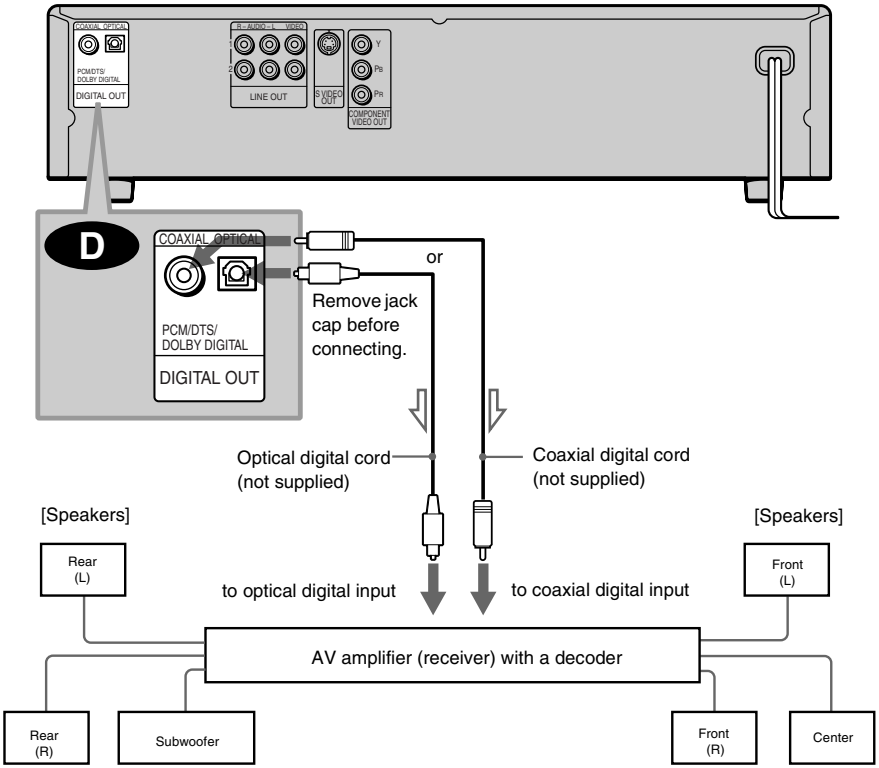
- Dolby Digital (5.1ch) (page 66)
- DTS (5.1ch) (page 66)

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 30). If your AV amplifier (receiver) has a DTS decoder, set “DTS” to “ON” (page 30). Otherwise, no sound or a loud noise will come from the speakers.

CD/DVD player



: Signal flow

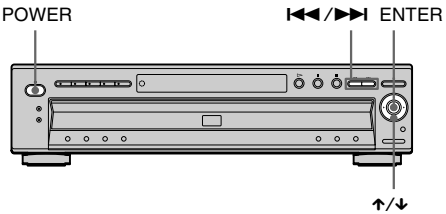
Step 3: Connecting the Power Cord

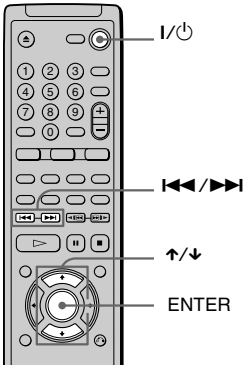
Plug the player and TV power cords into an AC outlet.

Do not connect the power cord of your player to the "switched" power socket of an amplifier (receiver). Otherwise, when you turn off the power of your amplifier (receiver), the settings for the player may be lost.

Step 4: Quick Setup

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





1 Turn on the TV.

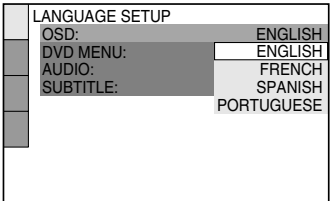
2 Switch the input selector on the TV to the player.

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 (page 14) to run Quick Setup.

4 Press ENTER without inserting a disc.

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

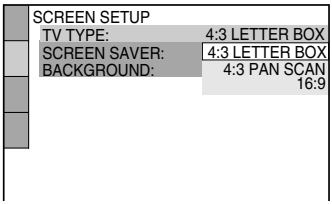


5 Press ↑/↓ to select a language.

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.

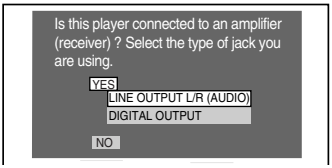


7 Press ↑/↓ to select the item.

TV Type	You select	Page
4:3 standard TV	4:3 LETTER BOX or 4:3 PAN SCAN	64
A wide-screen TV or 4:3 standard TV with the wide-screen mode	16:9	64

8 Press ENTER.

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



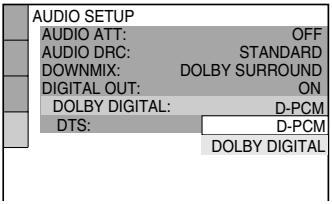
continued ➡

9 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 10.

10 Press ↑/↓ to select the item.

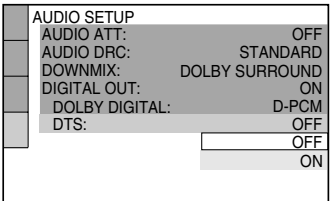
Choose the item that matches the audio connection you selected in pages 22 to 26 (B through D).



Audio Cord Connection Type	You select	Page
B-2 C-2	D-PCM	68
D	DOLBY DIGITAL (only if the amplifier/receiver has a Dolby Digital decoder)	68

11 Press ENTER.

DTS is selected.



12 Press ↑/↓ to select the item.

Choose the item that matches the audio connection you selected in pages 22 to 26 (B through D).

Audio Cord Connection Type	You select	Page
B-2 C-2	OFF	68
D	ON (only if the amplifier/receiver has a DTS decoder)	68

13 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 62).

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 pages 22 to 26 (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 62 for using the Setup Display.

Audio Connection (pages 21 to 26)

A

No additional settings are needed.

B-1 C-1

Item	You select	Page
DOWNMIX	DOLBY SURROUND	67

- If the sound distorts even when the volume is turned down, set "AUDIO ATT" to "ON" (page 66).

B-2 C-2 D

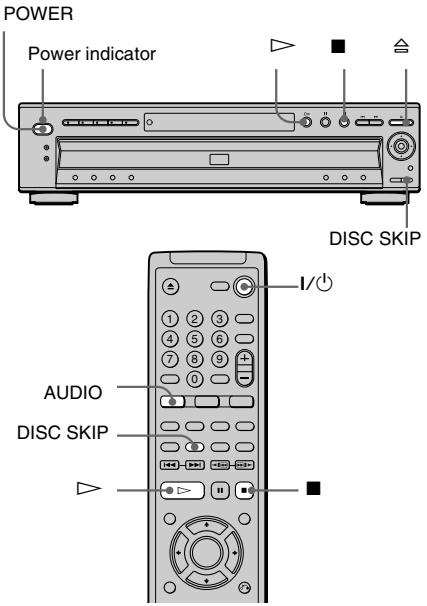
Item	You select	Page
DOWNMIX	DOLBY SURROUND	67
DIGITAL OUT	ON	67

Playing Discs

DVD VIDEO CD CD

Depending on the DVD or VIDEO CD, some operations may be different or restricted.

Refer to the operating instructions supplied with your disc.



1 Turn on your TV.

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

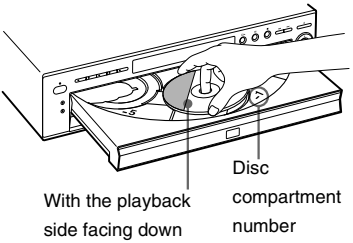
When using an amplifier (receiver)
Turn on the amplifier (receiver) and select the appropriate channel.

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.
To place other discs on the tray, press DISC SKIP and place the discs in the order you want to play them.
Each time you press DISC SKIP, the disc tray turns so you can place the discs on the empty compartments. The player plays from the last disc placed on the tray.



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 36), VIDEO CD (page 37).

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/⏻ 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/⏻ 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/⏻ on the remote.

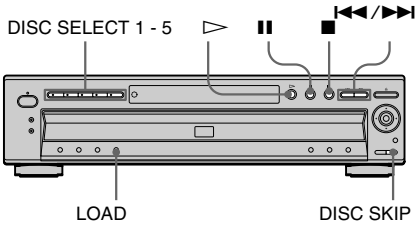
Notes on playing DTS sound tracks on a CD

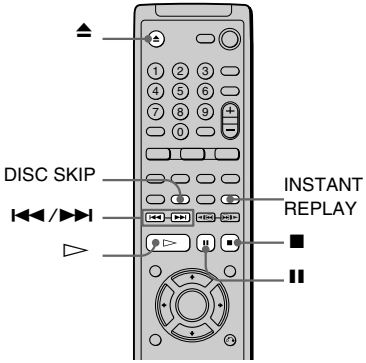
- When playing DTS-encoded CDs, excessive noise will be heard from the analog stereo jacks. To avoid possible damage to the audio system, the consumer should take proper precautions when the analog stereo jacks of the player are connected to an amplification system. To enjoy DTS Digital Surround™ playback, 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 (COAXIAL or OPTICAL) jack even if "DTS" in "AUDIO SETUP" is set to "OFF" in the Setup Display (page 68), 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 (COAXIAL or OPTICAL) jack.
- If you connect the player to audio equipment without a DTS decoder, do not set "DTS" to "ON" in "AUDIO SETUP" (page 68). 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 68).

Additional operations





To	Operation
Select a disc	Press DISC SELECT 1 - 5 on the player
Stop	Press ■
Pause	Press ❚❚
Resume play after pause	Press ❚❚ or ▷
Go to the next disc	Press DISC SKIP
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

To	Operation
Check if a disc is in the disc compartment	Press LOAD on the player. The DISC SELECT indicator for each compartment (1 - 5) containing a disc lights up.

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

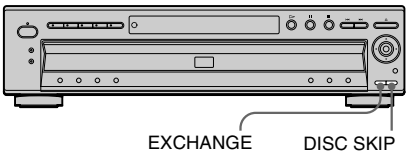
Before loading the discs, a DISC SELECT indicator of an empty compartment may be lit.

Notes

- You may not be able to use the Instant Replay function with some scenes.
- If you turn the power off by pressing POWER on the player, the loading information will be reset.

Replacing discs while playing a disc (EXCHANGE)

You can open the disc tray while playing a disc so that you can check which discs are to be played next and replace discs without interrupting playback of the current disc.



1 Press EXCHANGE.
The disc tray opens and two disc compartments appear. Even if the player is playing a disc, it doesn't stop playing.

2 Replace the discs in the compartments with new ones.

3 Press DISC SKIP.
The disc tray turns and another two disc compartments appear.

4 **Replace the discs in the compartments with new ones.**

5 **Press EXCHANGE.**
The disc tray closes.

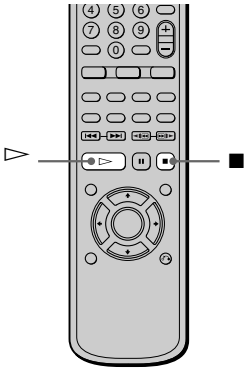
While the disc tray is open,
– If the playback of the current disc ends, the player stops playing. If the disc is played in ONE DISC Repeat Play mode, the current disc starts playing again.
– In ALL DISCS Shuffle Play mode (page 41), titles/tracks/chapters are reshuffled only on the current disc.
– In Program Play mode (page 39), the titles/tracks/chapters only on the current disc are played.

Note

Do not push the disc tray to close in Step 5, as you may damage the player.

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

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/⏻ on the remote.



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.

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

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.
  – you load disc information by pressing LOAD on the player.

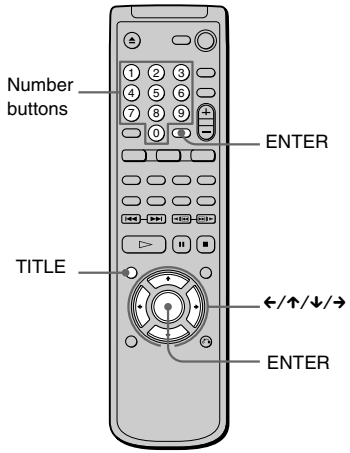
Using the DVD's Menu

DVD

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.

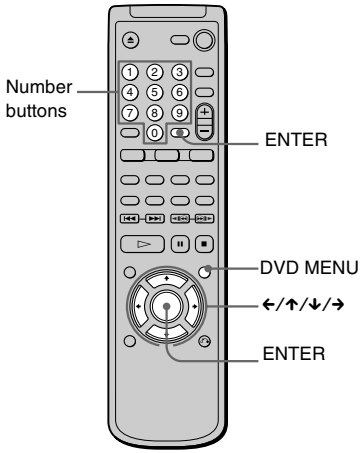
2 Press ←/↑/↓/→ or the number buttons to select the title you want to play.

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 ←/↑/↓/→ or the number buttons to select the item you want to change.

3 To change other items, repeat Step 2.

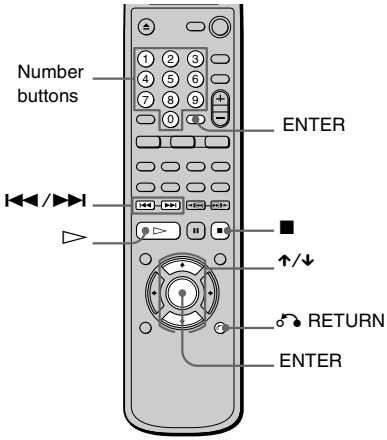
4 Press ENTER.

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 operations.
PBC playback allows you to play VIDEO CDs interactively by following the menu on the TV screen.



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.

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 ▷.

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

DVD VIDEO CD CD

You can set the following play modes:
- Program Play (page 38)
- Shuffle Play (page 41)
- Repeat Play (page 42)
- A-B Repeat Play (page 43)

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).

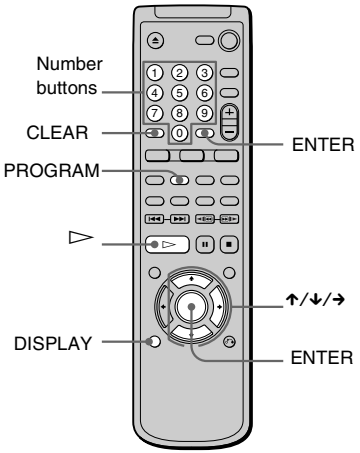
Selecting the disc mode (One Disc or All Discs)

You can play one disc or all of the discs in the player. Before setting Program Play, Shuffle Play, or Repeat Play, you must select whether to set those play mode on one disc or all of the discs.

Press ONE/ALL DISCS on the remote, or ONE/ALL on the player to select (ONE DISC mode) or (ALL DISCS mode).

Creating your own program (Program Play)

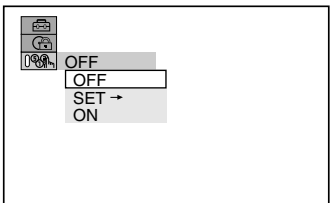
You can play the contents of the discs in the order you want by arranging the order of the discs, titles, chapters, or tracks to create your own program. You can program up to 99 titles, chapters, and tracks. By selecting ALL DISCS mode, you can create a program for all of the discs in the player.



1 Press DISPLAY while the player is in stop mode.

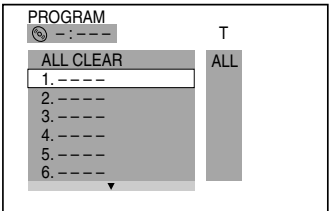
The Control Menu is displayed.

2 Press ↑/↓ to select (PROGRAM) and press ENTER.



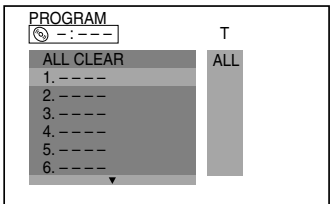
3 Press ↑/↓ to select "SET→" and press ENTER.

The display for programming appears.



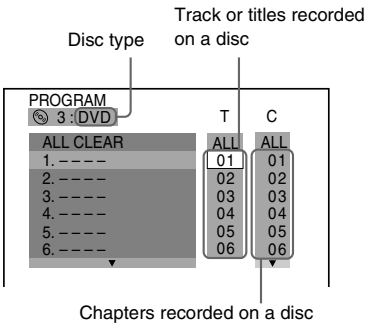
4 Press →.

It is ready to set the first disc for the program.



5 Select the disc you want to program using the number buttons or ↑/↓, then press ENTER.

The cursor moves to the title or track (in this case, "01").



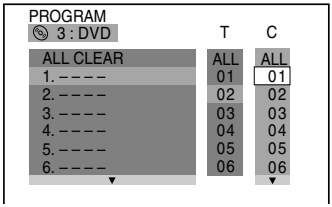
"?" appears when the player has not played a disc.

continued ➡

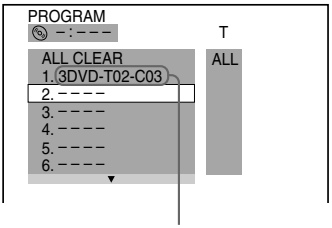
6 Select the title, chapter, or track you want to program.

■When playing a DVD

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



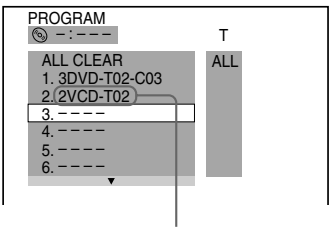
Next, press ↑/↓ or the number buttons to select “03” under “C,” then press ENTER.



Selected disc, title and chapter

■When playing a VIDEO CD or CD

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



Selected disc and track

7 To program other discs, titles, chapters, or tracks, repeat Steps 4 to 6.

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

8 Press ▷ to start Program Play.

Program Play begins.
When the program ends, you can restart the same program again by pressing ▷.

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 ▷.

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 disc, title, chapter, or track you want to change using ↑/↓ or the number buttons, and press →.
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 ↑, and select “ALL CLEAR” in Step 6. To cancel the selected program, select the program using ↑/↓ in Step 6, then press CLEAR.

You can do Repeat Play or Shuffle Play of the programmed discs, titles, chapters, or tracks by pressing REPEAT or SHUFFLE during Program Play.

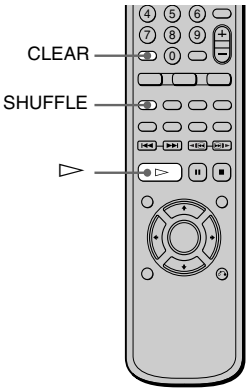
You can select “PROGRAM” directly by pressing PROGRAM.

Note

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

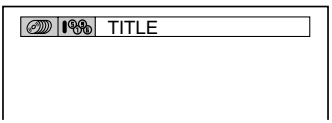
Playing in random order (Shuffle Play)

You can have the player "shuffle" discs, titles, chapters, or tracks and play them in a random order. Subsequent "shuffling" may produce a different playing order. By selecting ALL DISCS mode (page 38), you can shuffle all of the discs in the player.



1 Press SHUFFLE during playback.

The Control Bar is displayed.



2 Press SHUFFLE repeatedly to select the item you want to set.

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

- DISC*: Shuffles discs and plays them in random order.
- TITLE: Shuffles titles and plays them in random order.
- CHAPTER: Shuffles chapters and plays them in random order.

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

- DISC*: Shuffles discs and plays them in random order.
- TRACK: Shuffles tracks and plays them in random order.

*Appears only when you select ALL DISCS mode.

■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 random order.

To return to normal play

Press CLEAR or select "OFF" in Step 2.

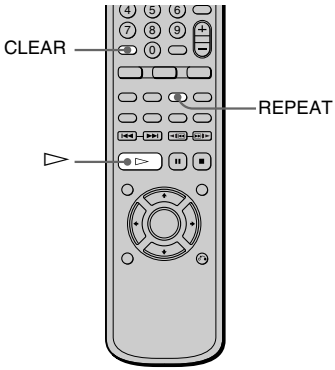
You can set the player to "shuffle" in stop mode as well. After pressing SHUFFLE to select the item you want to set, press ▷. Shuffle Play starts.

Note

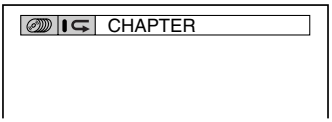
Up to 96 chapters in a disc can be played in random order when "CHAPTER" is selected.

Playing repeatedly (Repeat Play)

You can play all discs, or 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. By selecting ALL DISCS mode (page 38), you can repeat all of the discs in the player.



1 Press REPEAT during playback.
The Control Bar appears.



2 Press REPEAT repeatedly to select the item you want to set.

■When playing a DVD (Program Play and Shuffle Play are set to OFF)

- DISC: Repeats all of the titles on the disc when you select ONE DISC mode, or all of the titles on all of the discs when you select ALL DISCS.
- TITLE: Repeats the current title on a disc.
- CHAPTER: Repeats the current chapter.

■When playing a VIDEO CD or CD (Program Play and Shuffle Play are set to OFF)

- DISC: Repeats all of the tracks on a disc when you select ONE DISC mode, or all of the tracks on all of the discs when you select ALL DISCS mode.
- TRACK: Repeats the current track.

■When Program Play or Shuffle Play is on

- ON: Repeats Program Play or Shuffle Play.

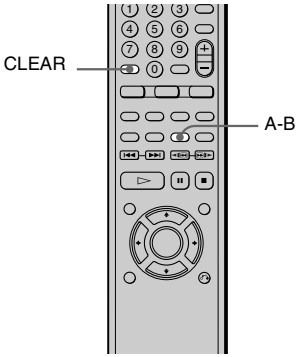
To return to normal play

Press CLEAR or select “OFF” in Step 2.

You can set the player to “repeat” in stop mode as well. After pressing REPEAT to select the item you want to set, press ▷. Repeat Play starts.

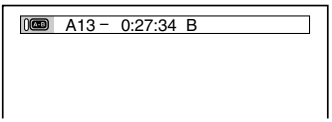
Repeating a specific portion (A-B Repeat Play)

You can play a specific portion of a title, chapter, or track repeatedly. (This function is useful when you want to memorize lyrics, etc.)



1 During playback, when you find the starting point (point A) of the portion to be played repeatedly, press A-B.

The Control Bar appears.
The starting point (point A) is set.



2 When you reach the ending point (point B), press A-B again.

The set points are displayed and the player starts repeating this specific portion.
"A-B" appears on the front panel display during A-B Repeat Play.

To return to normal play

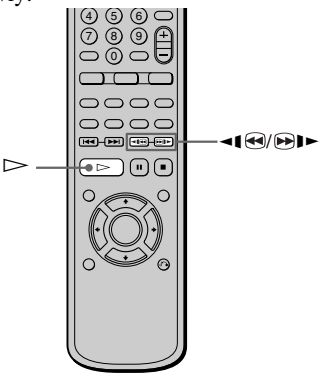
Press CLEAR.

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.
- You cannot set the start point (point A) on one disc and ending point (point B) on other disc.

Searching for a Particular Point on a Disc (Scan, Slow-motion Play) DVD VIDEO CD CD

You can locate a particular point on a disc quickly by monitoring the picture or playing back slowly.



Note

Depending on the DVD/VIDEO CD, you may not be able to do some of the operations described.

Locating a point quickly by playing a disc in fast forward or fast reverse (Scan)

Press ◄❚⏪ or ⏩❚► while playing a disc. When you find the point you want, press ▷ to return to normal speed.
Each time you press ◄❚⏪ or ⏩❚► during scan, the playback speed changes. Three speeds are available. With each press the indication changes as follows:

Playback direction
x2► (DVD/CD only) → 1►► → 2►►

Opposite direction
x2◄ (DVD only) → 1◄◄ → 2◄◄

The x2►/x2◄ playback speed is about twice the normal speed. The 2►►/2◄◄ playback speed is faster than 1►►/1◄◄.

Watching frame by frame (Slow-motion Play) DVD VIDEO CD

You can use this function only for DVDs or VIDEO CDs. Press ◄❚⏪ or ⏩❚► when the player is in pause mode. To return to the normal speed, press ▷.
Each time you press ◄❚⏪ or ⏩❚► during Slow-motion Play, the playback speed changes. Two speeds are available. With each press the indication changes as follows:

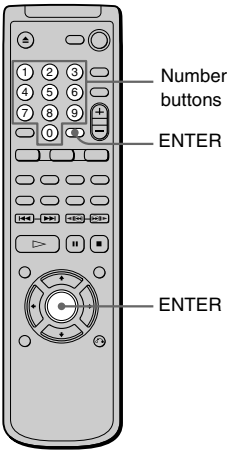
Playback direction
2❚► ⟷ 1❚►

Opposite direction (DVD only)
2◄❚ ⟷ 1◄❚

The 2❚►/2◄❚ playback speed is slower than 1❚►/1◄❚.

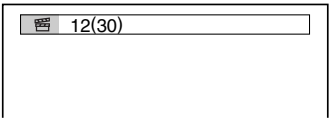
Selecting a Chapter or Track DVD VIDEO CD CD

You can select a chapter or track directly by inputting the chapter or track number.



1 Input the chapter or track number using the number buttons during playback.

For example, to select chapter 12, press 1, then 2.



■When playing a DVD

(CHAPTER)

■When playing a VIDEO CD (without PBC functions)

(TRACK)

■When playing a CD

(TRACK)

If you make a mistake

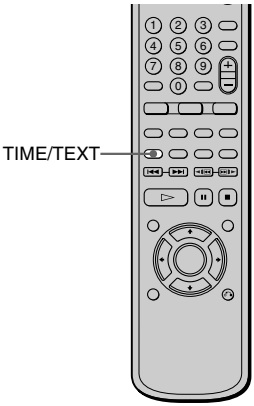
Cancel the number by pressing CLEAR, then press a correct number.

2 Press ENTER.

The player starts playback from the selected chapter or track.

Checking 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 10).

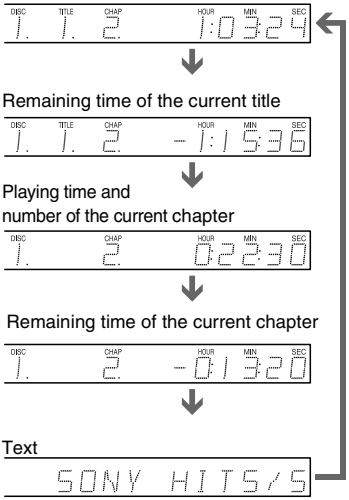


Press TIME/TEXT.

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

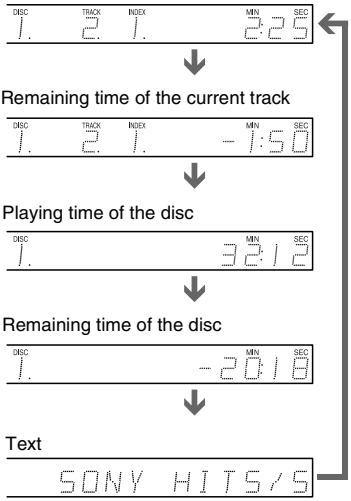
When playing a DVD

Playing time and current disc, title and chapter number



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

Playing time and current disc, track and index number



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

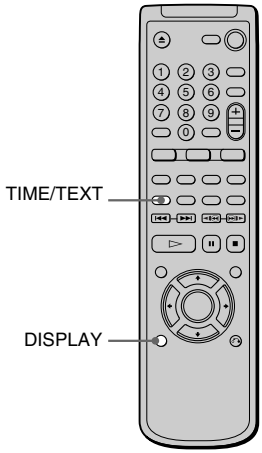
The playing time and remaining time of the current chapter, title, track, scene, or disc will also appear on your TV screen. See the following section "Checking the Playing Time and Remaining Time" for instructions on how to read this information.

Note

Depending on the type of disc being played and the playing mode, the above mentioned disc information may not be displayed.

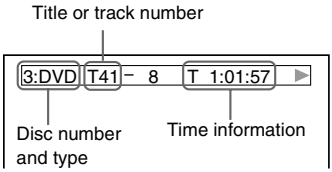
Checking the Playing Time and Remaining Time DVD VIDEO CD CD

You can check the playing time and remaining time of the current title, chapter, or track, and the total playing time or remaining time of the disc. Also, you can check the DVD/CD text recorded on the disc.



1 Press DISPLAY once during playback.

The Status Bar is displayed.



continued ➡

2 Press TIME/TEXT repeatedly to change the time information.

The display and the kinds of time that you can change depend on the disc you are playing.

■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

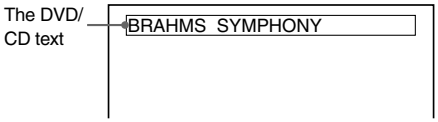
- T ∗∗:∗∗
  Playing time of the current track
- T–∗∗:∗∗
  Remaining time of the current track
- D ∗∗:∗∗
  Playing time of the current disc
- D–∗∗:∗∗
  Remaining time of the current disc

To turn off the Status Bar

Press DISPLAY repeatedly until the Status Bar is turned off.

Checking the DVD/CD text

Press TIME/TEXT repeatedly in Step 2 to display the text recorded on the DVD/CD.



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 panel display.

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

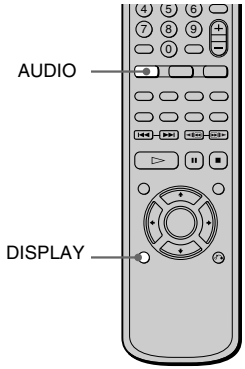
Notes

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

Changing the Sound

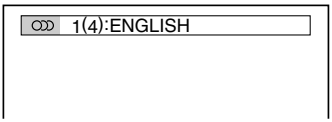
DVD VIDEO CD CD

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 AUDIO during playback.

The Control Bar is displayed.
The number in parentheses indicates the total number of available audio signals.



2 Press AUDIO repeatedly 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 76 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)

Notes

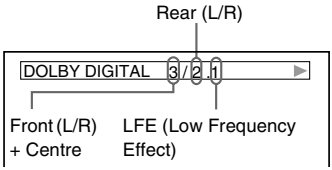
- For discs not in multiple audio format, you cannot change the sound.
- While playing a DVD, the sound may change automatically.

Checking the audio signal format

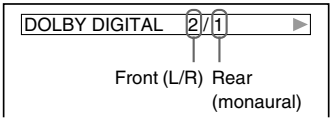
DVD

If you press DISPLAY twice during playback, the format of the current audio signal (Dolby Digital, DTS, PCM, etc.) appears as shown below.

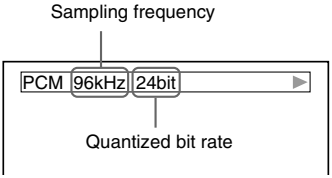
Example
• Dolby Digital 5.1 ch



• Dolby Digital 3 ch



• PCM (Stereo)



About audio signals

Audio signals recorded in a disc contain the sound elements (channels) shown below. Each channel is output from a separate speaker.

- Front (L)
- Front (R)
- Center
- Rear (L)
- Rear (R)
- Rear (Monaural): This signal can be either the Dolby Surround Sound processed signals or the Dolby Digital sound's monaural rear audio signals.
- LFE (Low Frequency Effect) signal

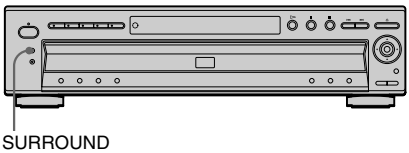
Note

If "DTS" is set to "OFF" in "AUDIO SETUP," the DTS track selection option will not appear on the screen even if the disc contains DTS tracks (page 68).

TV Virtual Surround Sound Settings (TVS)

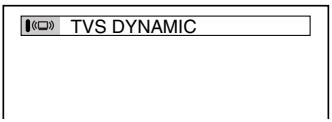
DVD VIDEO CD CD

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 the Dolby Digital signals from the DIGITAL OUT (COAXIAL or OPTICAL) jack (when you set "DOLBY DIGITAL" in "AUDIO SETUP" to "D-PCM") (page 68).



1 Press SURROUND during playback.

The Control Bar is displayed.



2 Press SURROUND repeatedly to select one of the TVS (TV Virtual Surround) sounds.

Refer to the explanations given for each item.

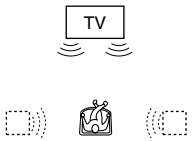
- TVS DYNAMIC
- TVS WIDE
- TVS NIGHT
- TVS STANDARD

To reset the TVS setting

In Step 2, select "OFF."

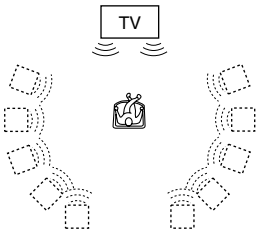
TVS (TV Virtual Surround) DYNAMIC

Uses sound imaging to create virtual rear speakers from the sound of the front speakers (L, R) without using actual rear speakers. The virtual speakers are reproduced as shown in the illustration 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.

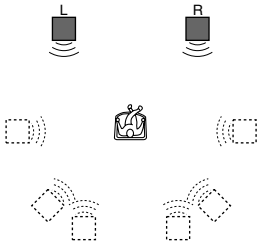


TVS (TV Virtual Surround) NIGHT

The 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: Left front speaker
R: Right front speaker
⬚: Virtual speakers

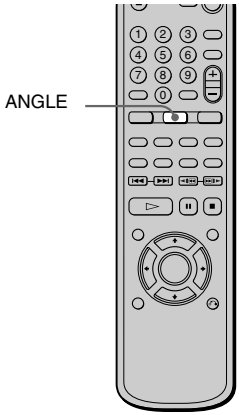
If you select any TVS setting other than "OFF," the indicator on the player lights up.

Notes

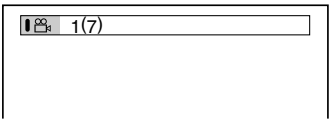
- When you select an effect, the sound cuts off for a moment.
- When the playing signal does not contain a signal for the rear speakers (page 49), the surround effects may be difficult to hear.
- When you select one of the TVS modes, turn off the surround setting of the connected TV or amplifier (receiver).
- 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 (COAXIAL or OPTICAL) jack, sound will come from your speakers but it will not have the TVS effect.

Changing the Angles DVD

If various angles (multi-angles) for a scene are recorded on the DVD, "ANGLE" appears on 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 ANGLE during playback.
The Control Bar is displayed.
The number in parentheses indicates the total number of available angles.



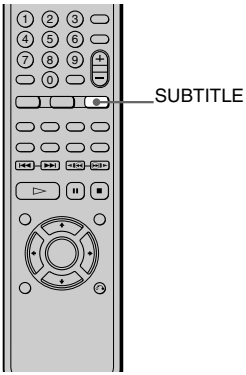
2 Press ANGLE repeatedly to select the angle number.
The scene changes to the selected angle.

Note

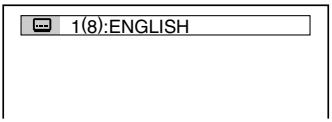
Depending on the DVD, you may not be able to change the angles even if multi-angles are recorded on the DVD.

Displaying the Subtitles DVD

If subtitles are recorded on the disc, 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 SUBTITLE during playback.
The Control Bar is displayed.
The number in parentheses indicates the total number of available subtitles.



2 Press SUBTITLE repeatedly 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 76 to see which language the code represents.

To turn off the subtitles

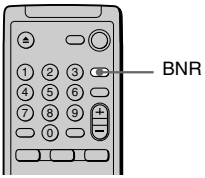
Select “OFF” in Step 2.

Note

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

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 BNR during playback.

The Control Bar is displayed.

2 Press BNR repeatedly 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.

To reset the BNR setting

Select “OFF” in Step 2.

You can also change the BNR value by pressing BNR on the player. 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.

Locking Discs (Custom Parental Control, Parental Control)

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

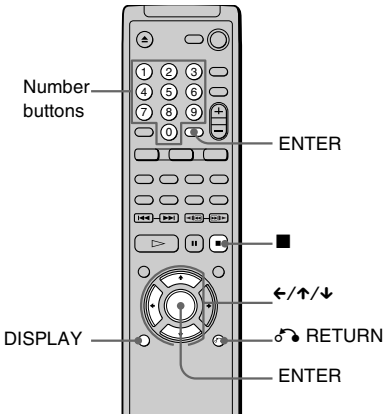
- Custom Parental Control
  You can set the playback restrictions so that the player will not play inappropriate discs.
- Parental Control
  Playback of some DVDs can be limited according to a predetermined level such as the age of the users.

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

Custom Parental Control

DVD VIDEO CD CD

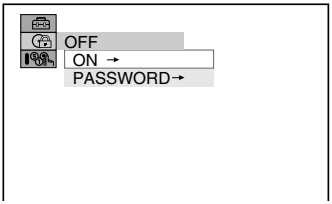
You can set the same Custom Parental Control password for up to 50 discs. When you set the fifty-first disc, the first disc is canceled.



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

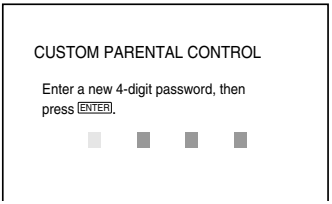
2 Press DISPLAY while the player is in stop mode.
The Control Menu is displayed.

3 Press ↑/↓ to select (CUSTOM PARENTAL CONTROL), then press ENTER.
"CUSTOM PARENTAL CONTROL" is selected.



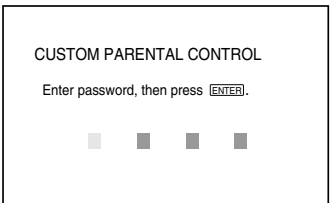
4 Press ↑/↓ to select "ON →," then press ENTER.

■If you have not entered a password
The display for registering a new password appears.



Enter a 4-digit password 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 using the number buttons, then press ENTER.**
"Custom parental control is set." appears and then the screen returns to the Control Menu display.

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 start 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.

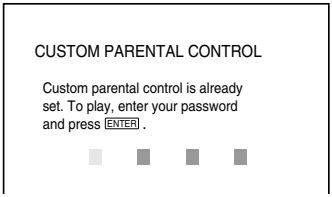
2 Enter your 4-digit password using the number buttons, then press ENTER.

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.

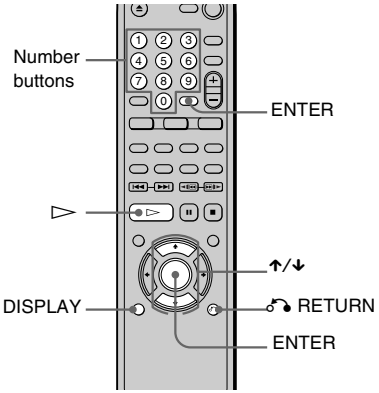


2 **Enter your 4-digit password using the number buttons, then press ENTER.**
The player is ready for playback.

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.

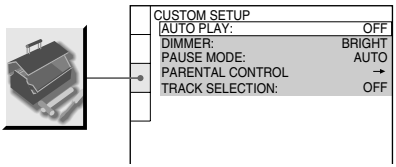


1 Press DISPLAY while the player is in stop mode.

2 Press ↑/↓ to select (SETUP), then press ENTER.
The Control Menu is displayed.

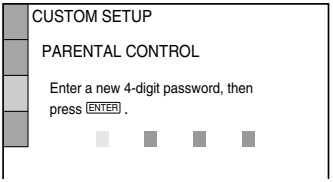
3 Press ↑/↓ to select "CUSTOM," then press ENTER.
The Setup Display appears.

4 Press ↑/↓ to select "CUSTOM SETUP," then press ENTER.
"CUSTOM SETUP" is displayed.



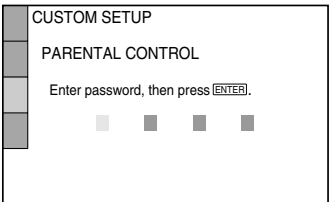
5 Press ↑/↓ to select "PARENTAL CONTROL →," then press ENTER.

■If you have not entered a password
The display for registering a new password appears.

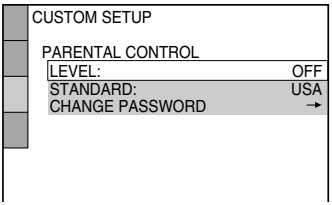


Enter a 4-digit password using the number buttons, then press ENTER.
The display for confirming the password appears.

■When you have already registered a password
The display for entering the password appears.

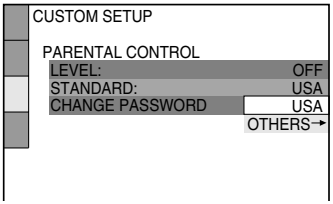


6 Enter or re-enter your password using the number buttons, then press ENTER.
The display for setting the playback limitation level and changing the password appears.



7 Press ↑/↓ to select "STANDARD," then press ENTER.

The selection items for "STANDARD" are displayed.



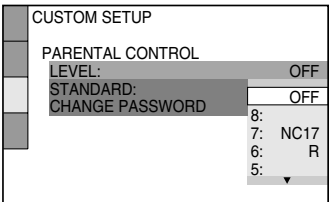
8 Press ↑/↓ to select a geographic area as the playback limitation level, then press ENTER.

The area is selected.

When you select "OTHERS →," select and enter the standard code in the table on page 58 using the number buttons.

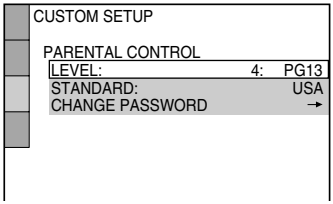
9 Press ENTER.

The selection items for "LEVEL" are displayed.



10 Select the level you want using ↑/↓, then press ENTER.

Parental Control setting is complete.



The lower the value, the more strict the limitation.

If you make a mistake

Press ↶ RETURN to go back to the previous screen.

To turn off the Control Menu

Press DISPLAY repeatedly until the Control Menu is turned off.

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

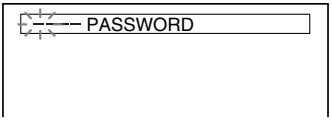
Set "LEVEL" to "OFF" in Step 10.

To change the password

1. In Step 7, select "CHANGE PASSWORD →" using ↓, then press ENTER.
   The display for entering the password appears.
2. Follow Step 6 to enter a new password.

Playing the disc for which Parental Control is set

1 Insert the disc and press ▷.
The Control Bar 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 ▷. When the Control Bar appears, enter your new password.

Note

When you play DVDs which do not have the Parental Control function, playback cannot be limited on this player.

Area Code

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

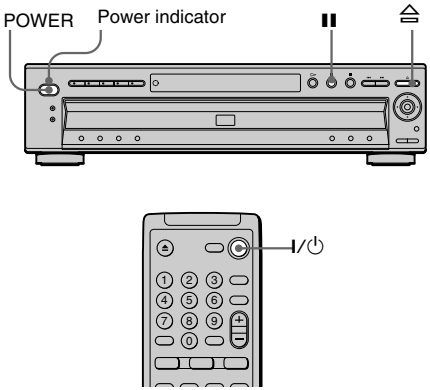
Operation Sound Effects

(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 ❚❚ on the player for more than two seconds. You will hear two beeps and the Sound Feedback function is turned off.

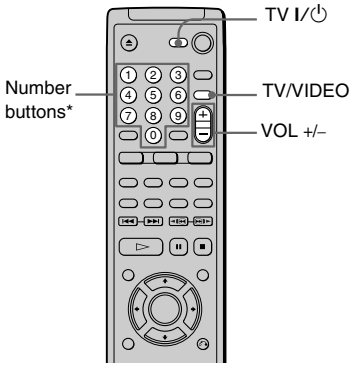
Controlling Your TV or AV Amplifier (Receiver) with the Supplied Remote

By adjusting the remote signal, you can control your TV or AV amplifier (receiver) with the supplied remote.
If you connect the player with 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 may be reset to the default setting. Reset the appropriate code number.

Controlling TVs with the remote



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

2 **Release TV I/⏻.**

Code number 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
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	Sanyo	11
Gold Star	03,04,17	Scott	12
Hitachi	02,03	Sears	07,10,11
J. C. Penney	04,12	Sharp	03,05,18
JVC	09	Sylvania	08, 12
KMC	03	Teknika	03,08,14
Magnavox	03,08,12	Toshiba	07
Marantz	04, 13	Wards	03,04,12
MGA/Mitsubishi	04,12,13,17	Yorx	12
NEC	04, 12	Zenith	15

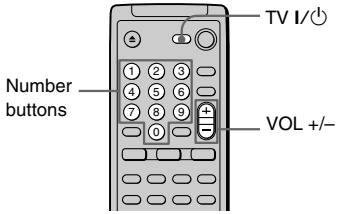
Controlling the TV

You can control your TV using the buttons below.

By pressing	You can
TV 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

* Use the number buttons only to enter the code number of controllable TVs.

Controlling AV amplifiers (receivers) with the remote



1 **Hold down TV I/⏻, and enter your AV amplifier's (receiver's) manufacturer's code (see the table) using the number buttons.**

2 **Release TV I/⏻.**

Code numbers of controllable AV amplifiers (receivers)

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 amplifier (receiver)

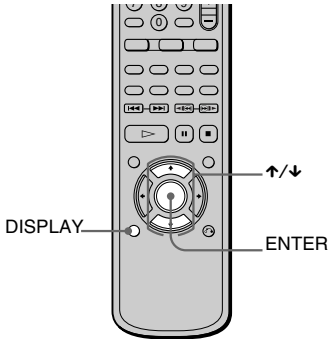
You can change the volume of the AV amplifier (receiver) using VOL +/–.

Using the Setup Display

DVD VIDEO CD CD

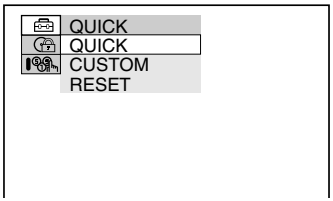
By using the Setup Display, you can make various adjustments to items such as picture and sound. You can also set a language for the subtitles and the Setup Display, among other things. For details on each Setup Display item see page 63 through 68. For an overall list of Setup Display items, see page 77.

How to use the Setup Display

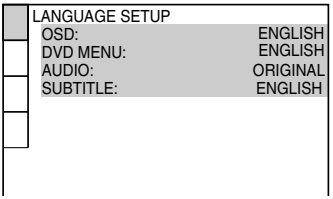


1 Press DISPLAY on the remote when the player is in stop mode.
The Control Menu Appears.

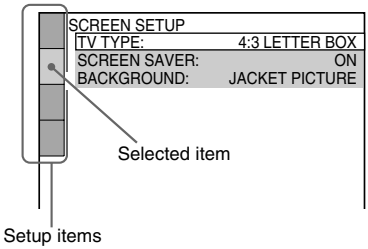
2 Press ↑/↓ to select (SETUP) and press ENTER.
The options for SETUP appear.



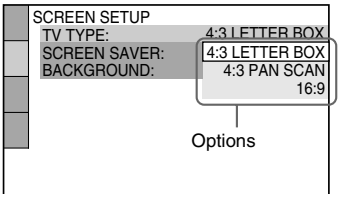
3 Press ↑/↓ to select "CUSTOM" and press ENTER.
The Setup Display appears.



4 Press ↑/↓ 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



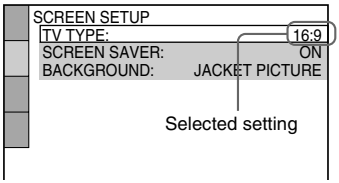
5 Select an item using ↑/↓, then press ENTER.
The options for the selected item appear.
Example: TV TYPE



6 **Select a setting using ↑/↓, 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 28).
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 pages 77 to 78 (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 I/⏻ when resetting the player.

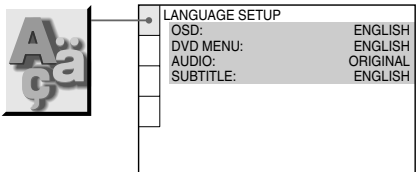
Setting the Display or Sound Track Language

(LANGUAGE SETUP)

DVD VIDEO CD CD

"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 62).



■OSD (On-Screen Display)

Switches the display language on the screen. Selects 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. Selects 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 subtitles 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.

continued ➡

If you select "OTHERS →" in "DVD MENU," "SUBTITLE," and "AUDIO," select and enter the language code from the list using the number buttons (page 76).
After you have made a selection, the language code (4 digits) is displayed the next time you select "OTHERS →."

Note

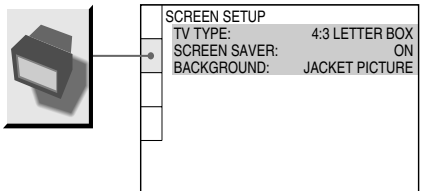
When you select a language that is not recorded on the DVD, one of the recorded languages will be automatically selected (except for the "OSD").

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 62).
The default settings are underlined.



■TV TYPE (DVD only)

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

4:3 LETTER BOX	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" may be 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 ▷ to turn off the screen saver.

ON	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.

JACKET PICTURE	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.

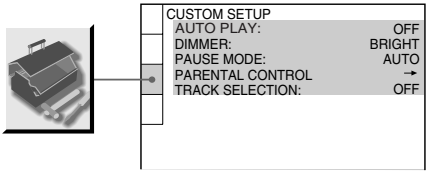
Custom Settings

(CUSTOM SETUP)

DVD VIDEO CD CD

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 62).
The default settings are underlined.



■AUTO PLAY

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

OFF	Does not use "TIMER," "DEMO1," or "DEMO2" to start playback.
TIMER	Starts playing when the player is turned on. The player can be played at any time when connected to a timer (not supplied). Set the timer when the player is in standby mode (the power indicator lights up in red).
DEMO1	Starts playing the first demonstration automatically.
DEMO2	Starts playing the second demonstration automatically.

■DIMMER

Adjusts the lighting of the front panel display.

BRIGHT	Makes the front panel display bright.
DARK	Makes the front panel display dark.
OFF	Turns off the lighting of the front panel display.

continued ➡

■PAUSE MODE (DVD only)

Selects the picture in pause mode.

AUTO	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)

Sets a password and playback limitation level for DVDs with playback limitation for children. For details, see "Limiting playback by children (Parental Control)" (page 56).

■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.

OFF	No priority given.
AUTO	Priority given.

Notes

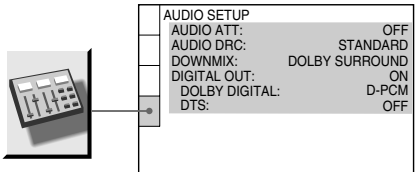
- When you set the item to "AUTO," the language may change. The "TRACK SELECTION" setting has higher priority than the "AUDIO" settings in "LANGUAGE SETUP" (page 63).
- If you set "DTS" to "OFF" (page 68), the DTS sound track is not played even if you set "TRACK SELECTION" to "AUTO."
- If PCM, DTS and 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 62).
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 LINE OUT L/R (AUDIO) 1/2 jacks.

OFF	Turns off the audio attenuation. Normally, select this position.
ON	Reduces the audio output level so that no sound distortion occurs. Select this when the playback sound from the speakers is distorted.

■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 (COAXIAL or OPTICAL) jack only when "DOLBY DIGITAL" is set to "D-PCM" in "DIGITAL OUT" (page 67).

STANDARD	Normally, select this position.
TV MODE	Makes the low sounds clear even if you turn the volume down. It is especially recommended when you listen to the sound using the speakers of the TV.
WIDE RANGE	Gives you the feeling of being at a live performance. When you use high quality speakers, it is even more effective.

■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:
– LINE OUT L/R (AUDIO) 1/2 jacks
– DIGITAL OUT (COAXIAL or OPTICAL) jack when "DOLBY DIGITAL" is set to "D-PCM" in "DIGITAL OUT" (page 67).

DOLBY SUR-ROUND	Select this when the player is connected to an audio component that conforms to Dolby Surround (Pro Logic). The output signals which reproduce the Dolby Surround effect are downmixed to 2 channels.
NORMAL	Select this when the player is connected to an audio component that does not conform to Dolby Surround (Pro Logic). All of the output signals are downmixed to 2 channels without the Dolby Surround (Pro Logic) effect.

■DIGITAL OUT

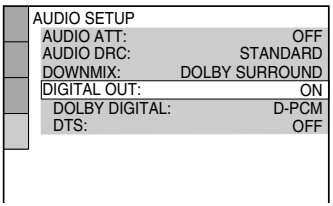
Selects if audio signals are output via the DIGITAL OUT (COAXIAL or OPTICAL) jack.

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 (COAXIAL or OPTICAL) jack. 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 a coaxial digital or optical digital cord via the DIGITAL OUT (COAXIAL or OPTICAL) jack.
– 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."



continued ➡

■DOLBY DIGITAL

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

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 67).
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.

■DTS

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

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.

Note

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

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 set so that you can view pictures on the player.

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).

Even though you set the aspect ratio in "TV TYPE" of "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 20, 22, 24).
➡ The amplifier (receiver) input is not changed so that you can listen 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 (COAXIAL or OPTICAL) jack, check the audio settings (page 66).

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 33).

Sound distortion occurs.

➡ Set "AUDIO ATT" in "AUDIO SETUP" to "ON" (page 66).

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.

continued ➡

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 7).
- ➡ 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 38). 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 35).
- ➡ 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 65).

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, Scan, 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 63).

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 be changed when the "ANGLE" indicator lights up on the front panel display (page 10).
- ➡ 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 65).

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 71.)

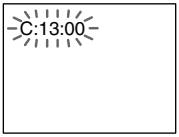
The disc tray does not open and "LOCKED" appears on the front panel display.

➡ 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 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 8).
C 31	The disc is not inserted correctly. ➡ Re-insert the disc correctly.
E XX (xx is a number)	To prevent a malfunction, the 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 10)

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 20, 67)

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 are recorded discretely and little deterioration is realized because all channel data processing is digital.

Dolby Surround (Pro Logic) (page 67)

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 20, 67)

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 7)

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 17 GB.
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.

Index (CD)/Video Index (VIDEO CD) (page 10)

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 56)

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.

Region Code (page 7)

This system is used to protect 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 ALL mark. Even when the region code is not shown on the DVD, the region limit may still be activated.

Scene (page 10)

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 10)

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 10)

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

TV Virtual Surround (TVS) (page 50)

Technology from Sony developed to produce surround sound for home use using just a stereo TV. Designed to work with the sound characteristics of your TV, this technology brings the excitement of surround sound to your home using nothing more than your stereo TV's internal speakers. Furthermore, various TVS modes are available. For example, TVS WIDE uses just two speakers to create a virtual sound environment that makes you feel like you are surrounded by multiple speakers.

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): 2Hz to 22kHz (±0.5dB) 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
DIGITAL OUT (OPTICAL)	Optical output jack	-18 dBm	Wave length 66 nm
DIGITAL OUT (COAXIAL)	Phono jack	0.5 Vp-p	75 ohms terminated
LINE OUT L/R (AUDIO) 1/2	Phono jack	2 Vrms (50 kilohms)	Over 10 kilohms
LINE OUT (VIDEO)	Phono jack	1.0 Vp-p	75 ohms, sync negative
S VIDEO OUT	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, P_B, P_R)	Phono jack	Y: 1.0 Vp-p P_B, P_R: 0.7 Vp-p	75 ohms, sync negative 75 ohms terminated

General

Power requirements	120V AC, 60 Hz 110 to 240V AC, 50/60 Hz See page 3 for further information.
Power consumption	13 W 15 W See page 3 for further information.
Dimensions (approx.)	430 × 108 × 411 mm (17 × 4 3/8 × 16 1/4 in.) (width/height/depth) incl. projecting parts
Mass (approx.)	5.4 kg (11 lb 14 oz)
Operating temperature	5°C to 35°C (41°F to 35°F)
Operating humidity	25% to 80%

Supplied accessories

See page 15.

Specifications and design are subject to change without notice.

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Language Code List

For details, see page 49, 52, 63.
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	1482	Kirundi	1543	Twi
1142	Greek	1299	Cambodian	1483	Romanian	1557	Ukrainian
1144	English	1300	Kannada	1489	Russian	1564	Urdu
1145	Esperanto	1301	Korean	1491	Kinyarwanda	1572	Uzbek
1149	Spanish	1305	Kashmiri	1495	Sanskrit	1581	Vietnamese
1150	Estonian	1307	Kurdish	1498	Sindhi	1587	Volapük
1151	Basque	1311	Kirghiz	1501	Sangho	1613	Wolof
1157	Persian	1313	Latin	1502	Serbo-Croatian	1632	Xhosa
1165	Finnish	1326	Lingala	1503	Singhalese	1665	Yoruba
1166	Fiji	1327	Laothian	1505	Slovak	1684	Chinese
1171	Faroese	1332	Lithuanian	1506	Slovenian	1697	Zulu
1174	French	1334	Latvian; Lettish				
1181	Frisian	1345	Malagasy				

1703	Not specified

List of Setup Display Items

The default settings are underlined.

LANGUAGE SETUP (page 63)

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

SCREEN SETUP (page 64)

TV TYPE	4:3 LETTER BOX 4:3 PAN SCAN 16:9
SCREEN SAVER	ON OFF
BACKGROUND	JACKET PICTURE GRAPHICS BLUE BLACK

CUSTOM SETUP (page 65)

AUTO PLAY	OFF TIMER DEMO1 DEMO2
DIMMER	BRIGHT DARK OFF
PAUSE MODE	AUTO FRAME
PARENTAL CONTROL ➡	
TRACK SELECTION	OFF AUTO

AUDIO SETUP (page 66)

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

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