

Mini Hi-Fi Component System

Operating Instructions



SUPER AUDIO CD



MHC-WZ88D

WARNING

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

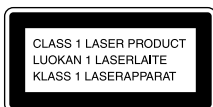
To prevent fire, do not cover the ventilation of the apparatus with newspapers, table-cloths, curtains, etc. And don't place lighted candles on the apparatus.

To prevent fire or shock hazard, do not place objects filled with liquids, such as vases, on the apparatus.

To avoid electrical shock, do not open the cabinet.

Refer servicing to qualified personnel only.

Do not install the appliance in a confined space, such as a bookcase or built-in cabinet.



This appliance is classified as a CLASS 1 LASER product. This label is located on the rear exterior.



Don't throw away the battery with general house waste, dispose of it correctly as chemical waste.

For Australian model only



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

The following caution label is located inside the apparatus.

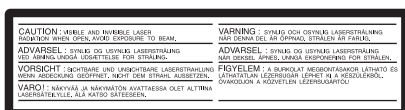


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About this manual

- This manual mainly explains operations using the remote, but the same operations can also be performed using the buttons on the unit having the same or similar names.
- The English on-screen display is used for illustration purposes only.
- The items in Control Menu may be different depending on the disc.
- The items in Setup Menu may be different depending on the area.
- The following symbols are used in this manual.

Symbol	Meaning
	Functions available for DVD VIDEOS (including DVD-Rs/ DVD-RWs/DVD+Rs/ DVD+RWs in DVD VIDEO format)
	Functions available for DVD-RWs in VR (Video Recording) mode
	Functions available for VIDEO CDs (including Super VCDs or CD-Rs/CD-RWs in VIDEO CD format or Super VCD format)
	Functions available for Super Audio CDs
	Functions available for AUDIO CDs or CD-Rs/CD-RWs in AUDIO CD format
	Functions available for DATA CDs (CD-ROMs/CD-Rs/CD-RWs) containing MP3 ¹⁾ audio tracks, JPEG image files, and DivX ²⁾³⁾⁴⁾ video files
	Functions available for DATA DVDs (DVD-Rs/DVD-RWs/ DVD+Rs/DVD+RWs) containing DivX ²⁾³⁾⁴⁾ video files

- ¹⁾ MP3 (MPEG1 Audio Layer 3) is a standard format defined by ISO/MPEG which compresses audio data.
- ²⁾ DivX[®] is a video file compression technology, developed by DivXNetworks, Inc.
- ³⁾ DivX, DivX Certified and associated logos are trademarks of DivXNetworks, Inc. and are used under license.
- ⁴⁾ Except for Latin American models.

Playable discs

You can play back the following discs on this system. Other discs cannot be played back.


List of playable discs

Format of discs	Disc logo
DVD VIDEO	
DVD-RW	
VIDEO CD	
Super Audio CD	
AUDIO CD	
CD-R/CD-RW	

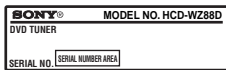
The “DVD VIDEO” and “DVD-RW” logos are trademarks.

continued

Region code of DVD VIDEOS you can play back on this system

Your system has a region code printed on the back of the unit and will only play back DVD VIDEOS labeled with identical region code. DVD VIDEOS labeled  will also be played back on this system.

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



Region code

Example of discs that this system cannot play back

The system cannot play back the following disc:

- CD-ROMs/CD-Rs/CD-RWs other than those recorded in the following formats:
 - AUDIO CD format
 - VIDEO CD format
 - DATA CD format which contains MP3 audio tracks¹⁾, JPEG image files²⁾ and DivX video files³⁾⁷⁾ of format conforming to ISO 9660⁴⁾ Level 1, Level 2 or Joliet in expansion format
- CD-ROMs recorded in PHOTO CD format
- Data part of CD-Extras⁵⁾
- Data part of Mixed CDs⁶⁾
- Audio side of a DualDisc
- DVD Audio discs
- DVD-RAMs
- DVD-ROMs/DVD-Rs/DVD-RWs/DVD+Rs/DVD+RWs recorded in Multi Session

- DVD-Rs/DVD-RWs/DVD+Rs/DVD+RWs other than those recorded in the following formats:
 - DVD VIDEO format
 - DATA DVD format which contains DivX video files³⁾⁷⁾ of format conforming to UDF (Universal Disk Format)
 - VR (Video Recording) format (DVD-RWs only)

The system also cannot play back the following disc:

- A DVD VIDEO with a different region code
- A disc that has a non-standard shape (e.g., heart, square, star).
- A disc that has the adhesive cellophane tape or a sticker still left on it.

- 1) MP3 audio tracks must be in MPEG 1 Audio Layer 3 format.
- 2) JPEG image files must conform to the DCF* image file format.

* “Design rule for Camera File System”: Image standards for digital cameras regulated by Japan Electronics and Information Technology Industries Association (JEITA).

- 3) DivX video files must be recorded in DivX format with the extension “.AVI” or “.DIVX”.
- 4) ISO 9660 Format
A logical format or files and folders on CD-ROMs, defined by ISO (International Organization for Standardization).
- 5) CD-Extra: This format records audio (AUDIO CD data) on the tracks in session 1 and data on the tracks in session 2.
- 6) Mixed CD: This format records data on the first track and audio (AUDIO CD data) on the second and subsequent tracks of a session.
- 7) Except for Latin American models.

Notes about CD-R/CD-RW/ DVD-R/DVD-RW/DVD+R/ DVD+RW

- In some cases, CD-Rs, CD-RWs, DVD-Rs, DVD-RWs, DVD+Rs or DVD+RWs cannot be played back on this system depending upon the recording quality or physical condition of the disc, or the characteristics of the recording device. Furthermore, the disc may not be played back if it has not been correctly finalized. For more information, see the operation instructions for the recording device.
- A disc created in Packet Write format cannot be played back.

Note on DualDiscs

A DualDisc is a two sided disc product which mates DVD recorded material on one side with digital audio material on the other side. However, since the audio material side does not conform to Compact Disc (CD) standard, playback on this product is not guaranteed.

Note on PBC (Playback Control) (VIDEO CDs)

This system conforms to Ver. 1.1 and Ver. 2.0 of VIDEO CD standards. You can enjoy two kinds of playback depending on the disc type.

Disc type	Meaning
VIDEO CDs without PBC functions (Ver. 1.1 discs)	Enjoy video playback (moving pictures) as well as music.
VIDEO CDs with PBC functions (Ver. 2.0 discs)	Play interactive software using menu screens displayed on the TV screen (PBC playback), in addition to the video playback functions of Ver. 1.1 discs. Moreover, you can play high-resolution still pictures, if they are included on the disc.

Note on playback operations of DVD VIDEOS and VIDEO CDs

Some playback operations of DVD VIDEOS and VIDEO CDs may be intentionally set by software producers. Since this system play back DVD VIDEOS 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 DVD VIDEOS or VIDEO CDs.

Music discs encoded with copyright protection technologies

This product is designed to play back discs that conform to the Compact Disc (CD) standard. Recently, various music discs encoded with copyright protection technologies are marketed by some record companies. Please be aware that among those discs, there are some that do not conform to the CD standard and may not be playable by this product.

About Multi Session disc

- This system can play back Multi Session discs when an MP3 audio track is contained in the first session. Any subsequent MP3 audio tracks recorded in later sessions can also be played back.
- This system can play back Multi Session discs when a JPEG image file is contained in the first session. Any subsequent JPEG image files recorded in later sessions can also be played back.
- If the first session is recorded in AUDIO CD or VIDEO CD format, only the first session will be played back.
- The system will recognize a Multi Session disc as an AUDIO CD if there is a session recorded in AUDIO CD format on the disc. However, the system will only play back the disc if the first session is recorded in AUDIO CD format.

continued

- CD-Rs/CD-RWs recorded in Multi Session that have not ended by “closing the session” are not supported.
- With DATA CD or DATA DVD, the system will only play back DivX video files even if it contains MP3 audio tracks or JPEG image files.

About the Super Audio CD

Super Audio CD is a new high-quality audio disc standard where music is recorded in the DSD (Direct Stream Digital) format (conventional AUDIO CDs are recorded in the PCM format). The DSD format, using a sampling frequency 64 times higher than that of a conventional AUDIO CD, and with 1-bit quantization, achieves both a wide frequency range and a wide dynamic range across the audible frequency range, and so provides music reproduction extremely faithful to the original sound.

Types of Super Audio CDs

There are two types of discs, depending on the Super Audio CD layer and CD layer combination.

- Super Audio CD layer: A high-density signal layer for Super Audio CD
- CD layer¹⁾: A layer that is readable by a conventional CD player

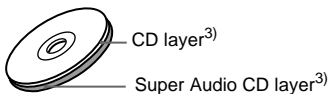
Single layer disc

(a disc with a single Super Audio CD layer)



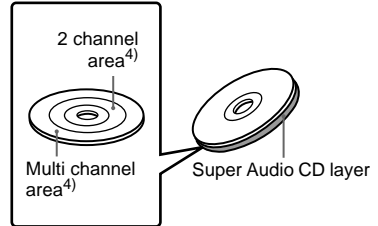
Hybrid disc²⁾

(a disc with a Super Audio CD layer and a CD layer)



A Super Audio CD layer consists of the 2 channel area and/or the multi-channel area.

- 2 channel area: An area in which 2 channel stereo tracks are recorded
- Multi-channel area: An area in which multi-channel (up to 5.1 channels) tracks are recorded



- 1) You can play back the CD layer on a conventional CD player.
- 2) Since both layers are on one side, it is not necessary to turn over the disc.
- 3) To select a layer, see “Selecting a playback area for Super Audio CD” (page 26).
- 4) To select an area, see “Selecting a playback area for Super Audio CD” (page 26).

Copyrights

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

This system incorporates Dolby* Digital, Dolby Pro Logic (II) adaptive matrix surround decoder, and the DTS** Digital Surround System.

* Manufactured under license from Dolby Laboratories.

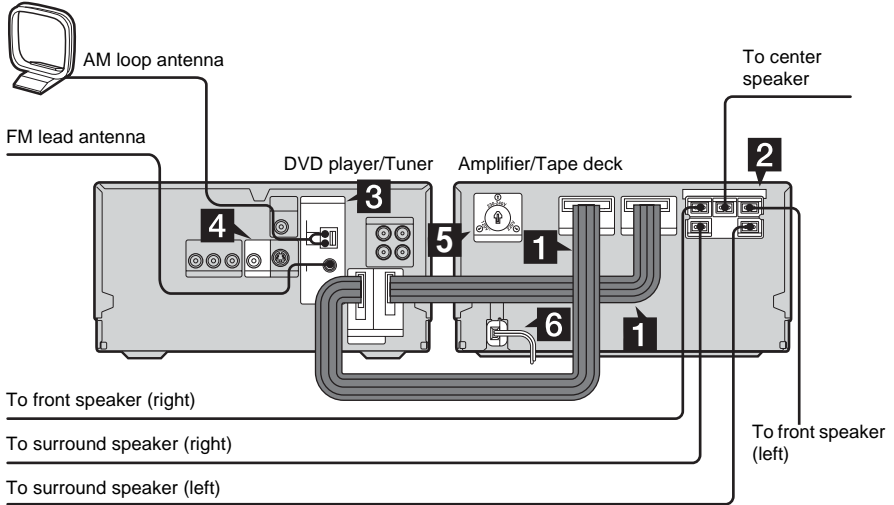
“Dolby”, “Pro Logic”, and the double-D symbol are trademarks of Dolby Laboratories.

** Manufactured under license from Digital Theater Systems, Inc.

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

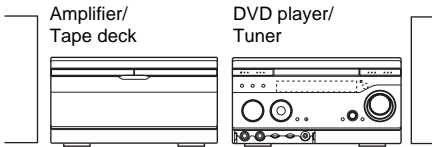
Hooking up the system

Do the following procedures **1** to **7** to hook up your system using the supplied cords and accessories.

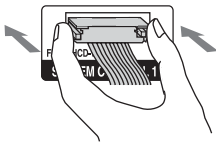


Preparation

Place the components as shown below.



- 1 Connect the system control cables from the DVD player/Tuner component to the appropriate (same numbered) SYSTEM CONTROL connectors on the Amplifier/Tape deck component.**



Note

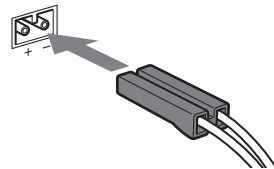
The system control cables are used to send audio and electrical signals between the components for interlinked operation.

Be sure to insert the connector horizontally until it clicks into place. Otherwise the system will not operate correctly.

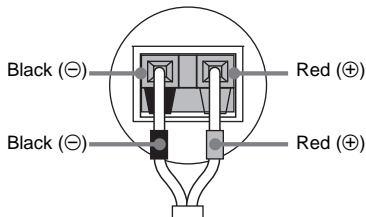
- 2 Connect the speakers.**

Be sure to match the appropriate speaker cords from the speaker terminals to the corresponding SPEAKER terminals on the Amplifier/Tape deck component as shown below.

Amplifier/Tape deck

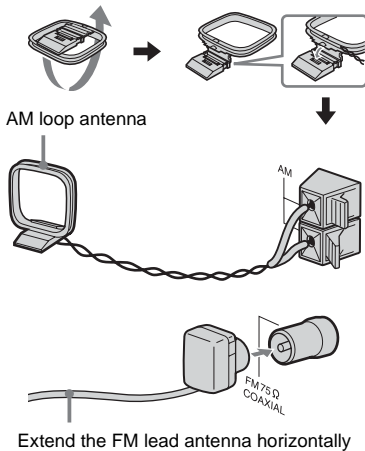


Speakers

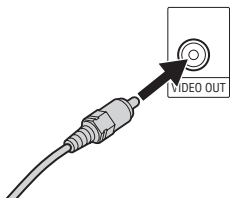


3 Connect the FM and AM antennas.

Set up the AM loop antenna, then connect it.



4 Connect the video input jack of your TV to the VIDEO OUT jack with the supplied video cord.

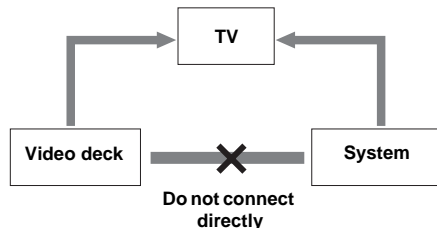


When using a TV

Turn on the TV and select the video input so that you can view the pictures from this system.

When connecting a video deck

Connect the video deck to the TV using a video cord (not supplied). However, do not connect this system to the TV through the video deck. Otherwise, you may experience video leakage when watching video images from this system. Connect this system directly to the TV as shown below.



Tip

For higher quality video images:

- Use the optional component video cords to connect the COMPONENT VIDEO input jacks on your TV to the COMPONENT VIDEO OUT jacks of this unit. If your TV is compatible with progressive format file signals, use this connection and press PROGRESSIVE on the unit repeatedly until “P AUTO” or “P VIDEO” appears in the display.
- You can use an optional S Video cord to connect the S VIDEO input jack on your TV to the S VIDEO OUT jack of this unit.

5 For models equipped with a voltage selector, set VOLTAGE SELECTOR to the position of your local power line voltage.

Depending on the model, the VOLTAGE SELECTOR may differ.



* Saudi Arabian model : 120 - 127V

6 Connect the power cord to a wall outlet.

The demonstration appears in the display. When you press I/⏻, the system turns on and the demonstration automatically ends. If the supplied adaptor on the plug does not fit your wall outlet, detach it from the plug (only for models equipped with an adaptor).

7 (Except for Latin American and Russian models) Set the color system to PAL or NTSC depending on the color system of your TV.

The color system is factory set to NTSC for region code 3 models, and PAL for other region code models. Each time you perform the procedure below, the color system changes as follows:

NTSC ↔ PAL

Use the buttons on the unit for the operation.

1 Press I/⏻ to turn off the system.

2 Press I/⏻ while holding down III.

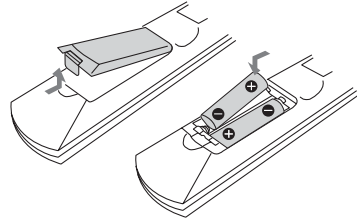
The system turns on automatically and the color system is changed. “COLOR NTSC” or “COLOR PAL” appears in the display.

Notes

- Keep the speaker cords away from the antennas to prevent noise.
- Be sure to connect the speakers securely and correctly.
- You cannot set the color system in Power Saving Mode (see “Power Saving Mode” on page 76).
- When you play back a VIDEO CD recorded in a different color system from the one you set to the system, the picture image may be distorted.

To connect optional components

For details, see “Hooking up optional components” on page 80.

Inserting two R6 (size AA) batteries into the remote**Operating a Sony TV**

You can use the following buttons to operate a Sony TV. These buttons have been marked in orange. To use these buttons, hold down TV before pressing the button you want.

To	Hold down TV and press
Turn the TV on or off	TV I/⏻
Switch the TV's input source between the TV and other input sources	TV/VIDEO
Change the TV channels	TV CH +/- or numeric buttons*
Adjust the volume of the TV speaker(s)	TV VOL +/-

* For double digit number, hold down TV and press -/-, then press the number. (For example, hold down TV, press -/-, then 2 and 5 for entering 25.)

Note

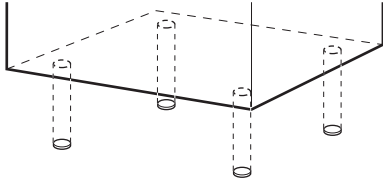
If you do not use the remote for a long period of time, remove the batteries to avoid possible damage from battery leakage and corrosion.

Tip

With normal use, the batteries should last for about six months. When the remote no longer operates the system, replace both batteries with new ones.

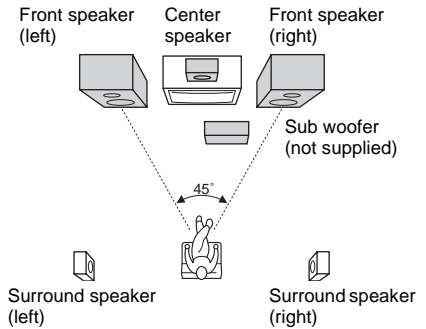
Attaching the speaker pads

Attach the supplied speaker pads to the bottom of the speakers to stabilize the speakers and to prevent them from slipping.

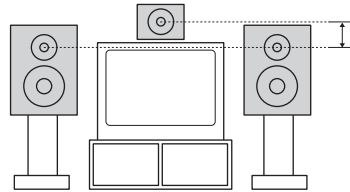


Positioning the speakers

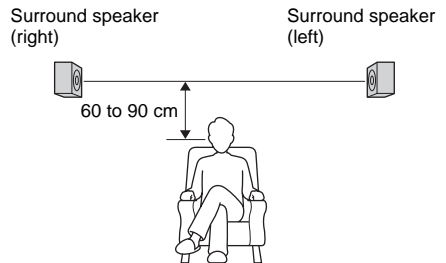
- 1 Place the front speakers at an angle of 45 degrees from your listening position.**



- 2 Place the center speaker at about the same height as the front speakers.**
Align the center speaker with the front speakers or place it slightly behind the front speakers.



- 3 Place the surround speakers facing each other at about 60 to 90 cm above your listening position.**



4 Place the sub woofer if you have connected an optional sub woofer.

To obtain a better bass reproduction, we recommend you to place the sub woofer on a solid floor where resonance is unlikely to occur.

Notes

- Do not place the surround speakers on top of a TV. This may cause distortion of the colors in the TV screen.
- If you place the center speaker on the unit, be sure to place it at the front side of the unit.
- Always place the sub woofer vertically, keeping it a few centimeters away from the wall.
- If the sub woofer is placed in the center of a room, the bass could be extremely weakened. This is due to the influence of the standing wave of the room. If this happens, move the sub woofer away from the center of the room or eliminate the cause of the standing wave, by placing a bookshelf against the wall, etc.

Speaker settings

To enjoy DVD VIDEOS and other discs with multi-channel sound and Dolby surround effects, the speakers need to be adjusted. Set the distance from the listening position to the speakers, and the speaker level. Then, use the test tone to adjust the volume of each speaker to the same level.

For details, see “Setting the speakers” on page 54.

Setting the clock

- 1 Press I/⏻ to turn on the system.
- 2 Press **TIMER MENU**.
The hour indication flashes in the display.
- 3 Press **▲** or **▼** repeatedly to set the hour.
- 4 Press **ENTER**.
The minute indication flashes in the display.
- 5 Press **▲** or **▼** repeatedly to set the minute.
- 6 Press **ENTER**.
The clock starts functioning.

To adjust the clock

- 1 Press **TIMER MENU**.
- 2 Press **▲** or **▼** repeatedly to select “**CLOCK SET?**”, then press **ENTER**.
The hour indication flashes in the display.
- 3 Do the same procedure as steps 3 to 6 above.

Notes

- The clock settings are canceled when you disconnect the power cord or if a power failure occurs.
- You cannot set the clock in Power Saving Mode (page 76).

Performing QUICK SETUP

Before using the system, you can make the minimum basic adjustments (LANGUAGE SETUP, SCREEN SETUP, SPEAKER SETUP) in QUICK SETUP. After performing QUICK SETUP, the system is ready for playback. To perform further speakers settings, see “Setting the speakers” on page 54.

1 Turn on your TV and select the video input.

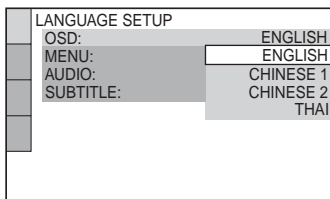
2 Press I/⏻ to turn on the system.

3 Press FUNCTION +/- repeatedly until “DVD” appears in the display (or press DVD on the unit).

The guide message appears at the bottom of the on-screen display.

4 Press ENTER.

The “LANGUAGE SETUP” display appears in the on-screen display.



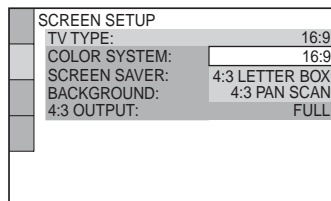
5 Press ↑ or ↓ repeatedly to select a language.

Tips

- The selected language is for “OSD”, “MENU” and “SUBTITLE”.
- The selectable language is different depending on the area.

6 Press ENTER.

The setting is selected and the “SCREEN SETUP” display appears in the on-screen display.



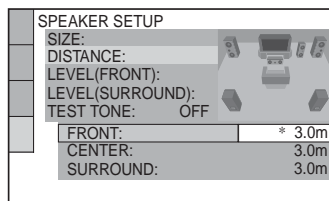
7 Press ↑ or ↓ repeatedly to select the setting that matches your TV type.

■ **If you have a 4:3 standard TV**
4:3 LETTER BOX or 4:3 PAN SCAN
(page 52)

■ **If you have a wide-screen TV or a 4:3 standard TV with a wide-screen mode**
16:9 (page 52)

8 Press ENTER.

The setting is selected and the “SPEAKER SETUP” display appears in the on-screen display.



- 9** Press **↑** or **↓** repeatedly to select the front speaker distance from the listening position, then press **ENTER**.

You can set from 1.0 to 7.0 meters.

- 10** Press **↑** or **↓** repeatedly to select the center speaker distance from your listening position, then press **ENTER**.

You can set from 0.0 to 7.0 meters. The setting range changes depending on the front speaker setting.

- 11** Press **↑** or **↓** repeatedly to select the surround speaker distance from your listening position.

You can set from 0.0 to 7.0 meters. The setting range changes depending on the front speaker setting.

- 12** Press **ENTER**

The setting is selected and “QUICK SETUP is complete.” appears in the on-screen display.


To quit QUICK SETUP

Press **⏏** DISPLAY.

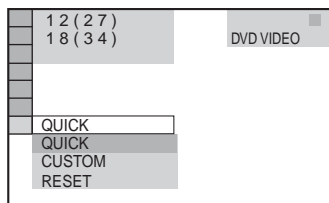
To change the settings of QUICK SETUP

- 1** Press **⏏** DISPLAY once or twice when playback is stopped.

The Control Menu appears in the on-screen display.

- 2** Press **↑** or **↓** repeatedly to select  (SETUP), then press **ENTER**.

The options for “SETUP” appear in the on-screen display.



- 3** Press **↑** or **↓** repeatedly to select “QUICK”, then press **ENTER**.

The “LANGUAGE SETUP” display appears in the on-screen display.

- 4** Do the same procedure as steps 5 to 12 of “Performing QUICK SETUP”.

Notes

- The guide message appears at the bottom of on-screen display when you turn on the system for the first time or after performing “RESET” (page 89).
- When there is a disc in the unit, the guide message does not appear in the on-screen display. To perform QUICK SETUP, press **▲** on the unit to remove the disc and press again to close the disc tray.
- If you do not want to perform QUICK SETUP, press **CLEAR** in step 3. The guide message will disappear from the on-screen display.
- If you want to change each setting individually, see “Using the DVD setup menu” on pages 50 to 57.
- Before you perform QUICK SETUP, disconnect the headphones and microphones. Otherwise, you cannot perform SPEAKER SETUP.

Using the THEATRE SYNC function

THEATRE SYNC allows you to turn on your Sony TV and this system, changes the system's function to "DVD," and then switches the TV's input source you have set with just one button.

Preparing for the THEATRE SYNC function

Hold down **SLEEP** and press the numeric buttons, **CLEAR** or **ALBUM +/-** to register the TV's input source.

The TV's input source is selected.
For details, refer to the following table.

Hold down SLEEP and press	To select the following TV's input source
0	No input source (Default)
1	VIDEO 1
2	VIDEO 2
3	VIDEO 3
4	VIDEO 4
5	VIDEO 5
6	VIDEO 6
7	VIDEO 7
8	VIDEO 8
9*	COMPONENT 1
CLEAR *	COMPONENT 2
ALBUM - *	COMPONENT 3
ALBUM + *	COMPONENT 4

* Except for North American models.

Operating the THEATRE SYNC function

Point the remote to the direction of the TV and this system, then press **THEATER SYNC** once.

If this function does not work, change the transmission time. The transmission time varies depending on the TV.

To change the transmission time

Hold down **▶▶I** and press the numeric buttons to change the transmission time.

The transmission time from the remote is selected. For details, refer to the following table.

Hold down ▶▶I and press	To select the following transmission time
1	0.5 (Default)
2	1
3	1.5
4	2
5	2.5
6	3
7	3.5
8	4

Notes

- This function can only be performed with Sony TV series.
- If the distance between the TV and this system is too far, this function may not work. Install the system near the TV.
- Keep the remote pointed in the direction of the TV until the TV is turned on and the input source is changed correctly.

Changing the format of video signals from COMPONENT VIDEO OUT jacks

Progressive is the method for displaying TV images which reduces flickering and sharpens the image. To use this method, you need to connect to a TV that can accept progressive signals.

You can output signals from COMPONENT VIDEO OUT jacks in INTERLACE or PROGRESSIVE format.

- 1 Press FUNCTION +/- repeatedly to select "DVD" (or press DVD on the unit).**
- 2 Press PROGRESSIVE on the unit repeatedly.**

Each time you press the button, the display changes cyclically as follows:

P AUTO → P VIDEO → INTERLACE

■ P AUTO (PROGRESSIVE AUTO)

Select this when your TV accepts progressive signals and the TV is connected to the COMPONENT VIDEO OUT jacks. The system automatically detects the software type and selects the appropriate conversion method.

■ P AUTO (PROGRESSIVE VIDEO)

Select this when your TV accepts progressive signals and the TV is connected to the COMPONENT VIDEO OUT jacks. The system fixes the conversion method to PROGRESSIVE VIDEO for video-based software.

Select this if the image is not clear when you select "P AUTO".

■ INTERLACE

Select this when your TV does not accept progressive signals or your TV is connected to the VIDEO OUT jack or S VIDEO OUT jack.

About DVD VIDEO software types and the conversion method

The DVD VIDEO software can be divided into 2 types:

- **Film-based software**
Film-based software is derived from film and displays the images at 24 frames per second.
- **Video-based software**
Video-based software is derived from TV, such as dramas and sitcoms and displays images at 30 frames or 60 fields per second.

Some DVD VIDEO contains both types of software. In order for these images to appear in your TV naturally when video output is in progressive format, the progressive signals need to be converted to match your DVD VIDEO software.

Notes

- When you play back video-based software in progressive signal format, some section of images may appear unnatural due to the conversion process when you connect your TV to the COMPONENT VIDEO OUT jacks.
- The image from VIDEO OUT and S VIDEO OUT jacks are always output in INTERLACE format even if you select "P AUTO" or "P VIDEO".
- There may be no image on your TV or the image may not be clear if your setting does not match your TV or connection.
- "PROGRESSIVE" lights up in the display when you select "P AUTO" or "P VIDEO".

Disc – Playback

Loading a disc

Use the buttons on the unit for the operation.

1 Press **▲**.

The disc tray slides out.

2 Load a disc with the label side facing up on the disc tray.

When you play back an 8 cm disc such as a CD single, place it on the inner circle of the disc tray



3 Press **▲** to close the disc tray.

Notes

- Do not forcibly push the disc tray to close it as this may cause a malfunction. Press **▲** to close the disc tray.
- When you eject a disc, handle the disc by its edge. Do not touch the surface of the disc.
- Do not place two discs on the disc tray.

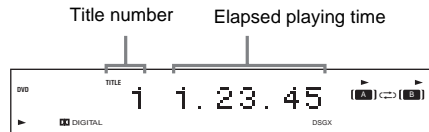
Playing a disc

— Normal play

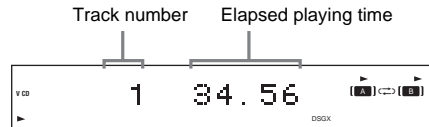
DVD-V**DVD-RW****VIDEO CD****Super Audio CD****C D****DATA-CD****DATA DVD**

Before playing a DVD VIDEO, a VIDEO CD, JPEG image files or DivX video files, turn on your TV and select the video input. Depending on the DVD VIDEO or VIDEO CD, some operations may be different or restricted. Refer to the operating instructions supplied with the disc.

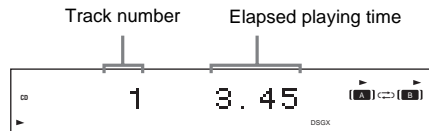
When playing a DVD VIDEO or DVD-RW in VR (Video Recording) mode:



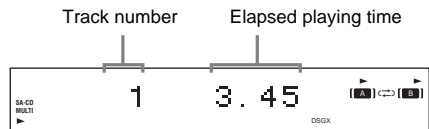
When playing a Super Video CD or a VIDEO CD (playback without PBC function):

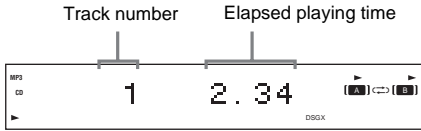
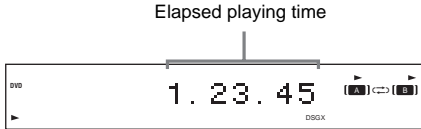


When playing an AUDIO CD:



When playing a Super Audio CD (MULTI area of Super Audio CD layer):



When playing an MP3 audio track:**When playing a DivX video file on a DATA DVD (except for Latin American models):**

1 Press FUNCTION +/- repeatedly until "DVD" appears in the display (or press DVD on the unit).

2 Press \triangleright (or \triangleleft on the unit).

Additional operations

To	Do this
Stop playback	Press ■
Pause playback	Press II . Press II again or press \triangleright (or \triangleleft on the unit) to resume playback.
Select a track, chapter or video file	Press \lll or \ggg (or $\lll\lll$ or $\ggg\ggg$ on the unit repeatedly) during playback.
Replay the previous scene (Instant Replay) ¹⁾²⁾	Press REPLAY $\leftarrow \bullet$ during playback.
Briefly fast forward the current scene (Instant Advance) ¹⁾²⁾	Press ADVANCE $\bullet \rightarrow$ during playback.
Select an album ³⁾	Press ALBUM +/- during playback.

¹⁾ DVD VIDEOS and DVD-RW in VR mode only.

²⁾ This function is only available when "REPEAT" is set to "OFF".

³⁾ Only for DATA CD which contains MP3 audio tracks, JPEG image files and DivX video files and for DATA DVD which contains DivX video files.

Tips

- The Instant Replay function is useful when you want to review a scene or dialogue that you missed.
- The Instant Advance function is useful when you want to pass over a scene that you do not want to watch.
- You may not be able to use the Instant Replay or Instant Advance function with some scenes.
- If you press DVD on the unit while the system is turned off, the system turns on automatically and DVD is selected as the function except during Power Saving Mode.

Playing a track, chapter or file by entering the track, chapter or file number

(DVD VIDEO, VIDEO CD, AUDIO CD, Super Audio CD and DivX video files only)

Press the numeric button(s) to enter the track, chapter or file number that you want to play back when the Control Menu is not turned on. Then, press ENTER.

To enter a track, chapter or file number over 10

1 Enter the corresponding digits.

2 Press ENTER.

Example:

To play back a track, chapter or file number 30, press 3 and 0, then press ENTER.

Resuming playback from the point where you stopped the disc

— Resume Play



This system memorizes the point where you stopped the disc so you can resume playback from that point. Resume Play is not canceled when you turn off the system except for MP3 audio tracks, JPEG image files and DivX video files.

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

“Resume” appears in the display.

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

2 Press ▷ (or ◀▷ on the unit).

The system starts playback from the point where you stopped the disc in step 1.

Notes

- Resume Play is canceled when:
 - you open the disc tray (except for DVD VIDEOS and VIDEO CDs when “MULTI-DISC RESUME” in “CUSTOM SETUP” is set to “ON”).
 - you disconnect the AC power cord (mains lead).
 - you press ■ when playback is stopped.
 - you turn off the system (for MP3 audio tracks, JPEG image files and DivX video files only).
 - you change the function (except for DVD VIDEOS and VIDEO CDs when “MULTI-DISC RESUME” in “CUSTOM SETUP” is set to “ON”).
 - you set “MULTI-DISC RESUME” in “CUSTOM SETUP” to “ON” (page 53).
- You cannot perform Resume Play during Shuffle Play and Program Play.
- This function may not work with some discs.
- Depending on where you stop the disc, the system may resume playback from a different point.

Tip

To playback from the beginning of the disc, press ■ twice, then press ▷ (or ◀▷ on the unit).

Resuming playback of the disc that has been played back

— Multi-disc Resume

(DVD VIDEO and VIDEO CD only)

This system can store the point where you stopped the playback of the disc for up to 40 discs and resumes playback when you insert the same disc again. When you store the playback resume point for the 41st disc, the playback resume point for the first disc will be deleted.

To use this function, set “MULTI-DISC RESUME” in “CUSTOM SETUP” to “ON”. For details, see page 53.

Note

If you set “MULTI-DISC RESUME” in “CUSTOM SETUP” to “ON” and you play back a recorded disc such as DVD-RW, the system may play back other recorded discs from the same playback resume point. To playback from the beginning of the disc, press ■ twice, then press ▷ (or ◀▷ on the unit).

Creating your own program

— Program Play

VIDEO CD Super Audio CD CD

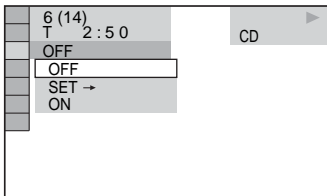
You can make a program of up to 99 steps in the order you want them to be played back.

1 Press DISPLAY once or twice.

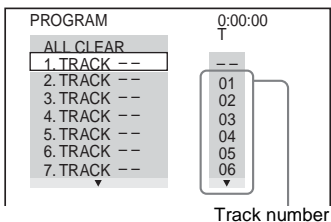
The Control Menu appears in the on-screen display.

2 Press or repeatedly to select (PROGRAM), then press ENTER.

The options for “PROGRAM” appear in the on-screen display.

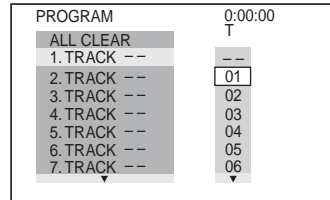


3 Press or repeatedly to select “SET ->”, then press ENTER.





4 Press .

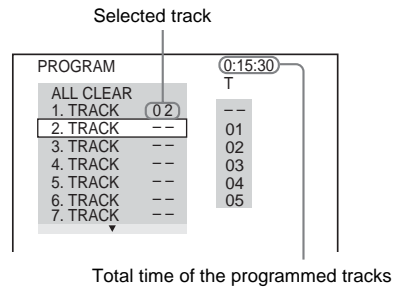
The cursor moves to the track row “T” (in this case, “01”).



5 Select the track you want to program.

For example, select track “02”.

Press  or  repeatedly to select “02” under “T”, then press ENTER.





6 To program other tracks, repeat steps 4 to 5.

The programmed tracks are displayed in the selected order.

7 Press (or on the unit).

Program Play starts.

“PGM” lights up in the display.

When the program ends, you can restart the same program again by pressing  (or  on the unit).

To return to normal playback

Press CLEAR, or select “OFF” in step 3. To play back the same program again, select “ON” in step 3 and press ENTER.

To change a program step

- 1 Follow steps 1 to 3 of “Creating your own program (Program Play)”.
- 2 Press **▲** or **▼** repeatedly to select the program step you want to change. Then, press **▶**.
- 3 Follow step 5 to program a new track.

To delete a program step

- 1 Follow steps 1 to 3 of “Creating your own program (Program Play)”.
- 2 Press **▲** or **▼** repeatedly to select the program step number you want to delete. Then, press **CLEAR**.
The step is deleted. The following step is shifted up.

To delete all of the steps in the program list

- 1 Follow steps 1 to 3 of “Creating your own program (Program Play)”.
- 2 Press **▲** to select “ALL CLEAR”.
- 3 Press **ENTER**.

To turn off the Control Menu

Press **DISPLAY** repeatedly until the Control Menu disappears from the on-screen display.

Notes

- You can only program the tracks of the current disc.
- You cannot use this function with VIDEO CDs and Super VCDs during PBC playback.
- Program Play is canceled and the program list is cleared when:
 - you open the disc tray.
 - you turn off the system.
 - you disconnect the AC power cord (mains lead).
 - you change the function.
 - you press **CLEAR**.
 - you perform CD Synchro Recording.

Tip

You can perform Repeat Play or Shuffle Play of the programmed steps. During Program Play, follow the steps of Repeat Play (page 23) or Shuffle Play (page 22).

Playing in random order

— Shuffle Play



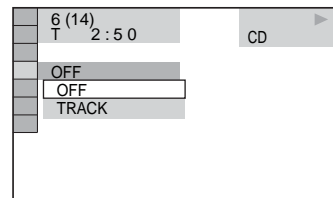
You can play back the tracks on the current disc in random order. Each time you start Shuffle Play, the playing order may be different.

- 1 Press **DISPLAY** once or twice during playback.

The Control Menu appears in the on-screen display.

- 2 Press **▲** or **▼** repeatedly to select **SHUFFLE**, then press **ENTER**.

The options for “SHUFFLE” appear in the on-screen display.



- 3 Press **▲** or **▼** repeatedly to select the setting you want.

■ When Program Play is off

- **TRACK**: all tracks on the current disc is played back randomly.

■ When Program Play is activated

- **ON**: all tracks in the program list is played back randomly.

- 4 Press **ENTER**.

Shuffle Play starts.

“SHUF” lights up in the display.

To return to normal playback

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

To turn off the Control Menu

Press **DISPLAY** repeatedly until the Control Menu disappears from the on-screen display.

Notes

- You cannot use this function with VIDEO CDs and Super VCDs during PBC playback.
- Shuffle Play is canceled when:
 - you open the disc tray.
 - you turn off the system.
 - you disconnect the AC power cord (mains lead).
 - you change the function.
 - you perform Track/Index Search.
 - you perform CD Synchro Recording.

Tip

You can also change the Shuffle Play setting when playback is stopped.

Playing repeatedly

— Repeat Play



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

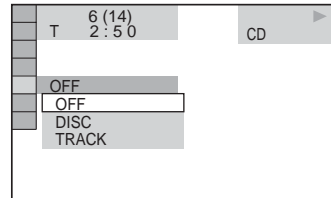
You can select Shuffle Play and Program Play at the same time.

1 Press DISPLAY once or twice during playback.

The Control Menu appears in the on-screen display.

2 Press or repeatedly to select (REPEAT), then press ENTER.

The options for “REPEAT” appear in the on-screen display.



3 Press or repeatedly to select the setting you want.

The default setting is underlined.

■ When playing a DVD VIDEO or DVD-RW in VR (Video Recording) mode

- OFF: does not play repeatedly.
- DISC: repeats all titles on the current disc. (When playing a DVD-RW in VR mode, “DISC” repeats all titles according to the “ORIGINAL/PLAY LIST” setting).
- TITLE: repeats the current title.
- CHAPTER: repeats the current chapter.

■ **When playing a VIDEO CD, AUDIO CD or Super Audio CD when Program Play is off**

- **OFF**: does not play repeatedly.
- **DISC**: repeats all tracks on the current disc.
- **TRACK**: repeats the current track.

■ **When playing a VIDEO CD, AUDIO CD or Super Audio CD when Program Play is activated**

- **OFF**: does not play repeatedly.
- **ON**: repeats the contents of the program list.

■ **When playing MP3 audio tracks or JPEG image files on a DATA CD**

- **OFF**: does not play repeatedly.
- **DISC**: repeats all albums on the current disc.
- **ALBUM**: repeats the current album.
- **TRACK**: repeats the current MP3 audio track.

■ **When playing DivX video files on a DATA CD or DATA DVD (except for Latin American models)**

- **OFF**: does not play repeatedly.
- **DISC**: repeats all albums on the current disc.
- **ALBUM**: repeats the current album.
- **FILE**: repeats the current DivX video file.


4 Press ENTER.

Repeat Play starts.

To return to normal playback

Press CLEAR, or select "OFF" in step 3.

To turn off the Control Menu

Press  DISPLAY repeatedly until the Control Menu disappears from the on-screen display.

Notes

- You can also change the Repeat Play setting by pressing REPEAT repeatedly.
- "REP" lights up in the front panel display when "DISC", "ALBUM" or "ON" is selected.
- "REP1" lights up in the front panel display when "TITLE", "CHAPTER", "TRACK" or "FILE" is selected.
- Depending on the DVD VIDEO, you cannot perform Repeat Play.
- You cannot use this function with VIDEO CDs and Super VCDs during PBC playback.
- When playing a DATA CD which contains MP3 audio tracks and JPEG image files, the audio sound will not match the image if their playing time are not the same.
- When "MODE (MP3, JPEG)" is set to "IMAGE (JPEG)" (page 33), you cannot select "TRACK".

Tip

You can also change the Repeat Play setting when playback is stopped.

Playing DVD VIDEOS using the menu

DVD-V

Some DVD VIDEOS have menus to help you enjoy the DVD VIDEOS. You can play back DVD VIDEOS using these menus on the TV screen.

Using TOP MENU

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

Using MENU

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

1 Press TOP MENU or MENU.

The menu appears on the TV screen. The contents of the menu vary from disc to disc.

2 Press **↑** and **↓** or **←** and **→** or the numeric buttons to select the title or item you want to play back or change.

3 Press ENTER.

Selecting “ORIGINAL” or “PLAY LIST” on a DVD-RW

DVD-RW

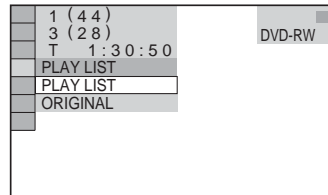
You can play back DVD-RWs in VR (Video Recording) mode either according to the originally recorded sequence or play list created on the disc. This function is only available for DVD-RWs in VR mode with a play list created.

1 Press **DISC** **DISPLAY** once or twice when playback is stopped.

The Control Menu appears in the on-screen display.

2 Press **↑** or **↓** repeatedly to select **ORIGINAL/PLAY LIST**, then press ENTER.

The options for “ORIGINAL/PLAY LIST” appear in the on-screen display.



3 Press **↑** or **↓** repeatedly to select the setting you want.

- PLAY LIST: play back according to the play list created on the disc.
- ORIGINAL: play back according to the originally recorded sequence.

4 Press ENTER.

Selecting a playback area for Super Audio CD






Selecting a playback area on a 2 channel and multi-channel Super Audio CD

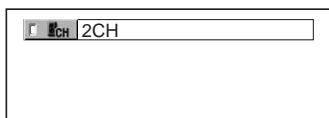
Some Super Audio CDs consist of a 2 channel playback area and a multi-channel playback area. You can select the playback area you want to listen to.



1 Press  **DISPLAY** once or twice when playback is stopped.

The Control Menu appears in the on-screen display.

2 Press  or  repeatedly to select  (**MULTI/2CH**), then press **ENTER**.

The options for “MULTI/2CH” appear in the on-screen display.



3 Press  or  repeatedly to select the setting you want.

- MULTI: play back a multi-channel playback area.
- 2CH: play back a 2 channel playback area.

4 Press **ENTER**.

The playback area is selected.

Note

“MULTI” lights up in the display when the multi-channel playback area is played back.

Selecting a playback layer on a hybrid Super Audio CD

Some Super Audio CDs consist of a Super Audio CD layer and a CD layer. You can select the play back layer you want to listen to.

Press **SA-CD/CD** on the unit repeatedly when playback is stopped to select the Super Audio CD or CD layer.

When you select the Super Audio CD layer, “SA-CD” lights up in the display. Likewise, “CD” lights up in the display when you select the CD layer.

Notes

- For details on Super Audio CD discs, see page 8.
- The Program Play, Shuffle Play and Repeat Play setting only functions within the selected layer and playback area.

Playing VIDEO CDs with PBC functions (Ver. 2.0)

— PBC Playback

VIDEO CD

You can use the PBC (Playback Control) menu on your TV screen to enjoy the disc's interactive software. The menu format and structure may differ depending on each disc.

1 Press \triangleright (or \triangleleft on the unit) to start playing a VIDEO CD with PBC functions.

The PBC menu appears on the TV screen.

2 Press the numeric buttons to select the item number you want.

3 Press ENTER.

4 Continue playback according to the instructions on the menus to enjoy interactive playback.

Refer to the operating instructions supplied with the disc, as the operating procedure may differ depending on the disc.

To go back to the previous menu

Press \curvearrowright RETURN.

Notes

- Depending on the VIDEO CD, the menu may not appear in step 1.
- Depending on the VIDEO CD, "Press ENTER" in step 3 may appear as "Press SELECT" in the operating instructions supplied with the disc. In this case, press \triangleright (or \triangleleft on the unit).
- PBC playback is canceled when Program Play, Shuffle Play and Repeat Play is activated.

To cancel playback with PBC functions

1 Press \lll or \ggg (or $\lll\lll$ or $\ggg\ggg$ on the unit) repeatedly or press the numeric buttons to select a track when playback is stopped.

2 Press \triangleright (or \triangleleft on the unit) or ENTER.

"Play without PBC." appears on the TV screen and playback starts from the selected track. Still images, such as the menu screens, will not be shown.

To return to PBC playback, press \blacksquare twice, then press \triangleright (or \triangleleft on the unit).

About MP3 audio tracks and JPEG image files

DATA-CD

What is MP3/JPEG?

MP3 is an audio compression technology that satisfies the ISO/MPEG regulations. JPEG is an image compression technology.

Discs that the system can play back

For details on DATA CDs (CD-ROMs/CD-Rs/CD-RWs) that the system can play back, see “Example of discs that this system cannot playback” (page 6) and “About Multi Session disc” (page 7).

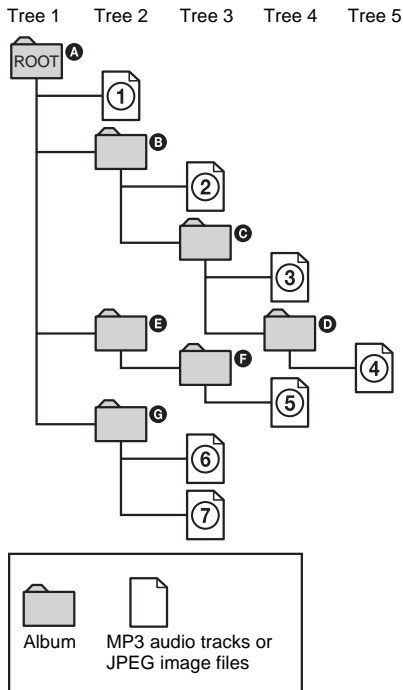
MP3 audio track or JPEG image file that the system can play back

The system can play back MP3 audio tracks which have the extension “.MP3” and JPEG image files which have the extension “.JPG” or “.JPEG”.

Playback order of MP3 audio tracks or JPEG image files

The playback order of MP3 audio tracks or JPEG image files recorded on a DATA CD is as follows:

Structure of disc contents



When you insert a DATA CD and press \blacktriangleright (or \blacktriangleleft on the unit), the tracks (or files) are played back sequentially, from ① to ⑦. Any sub-albums in the selected album take priority over the next album in the same tree. (Example: C contains D so ④ is played back before ⑤.)

When you press MENU and the list of album names appears (page 30), the album names are arranged in the following order: A → B → C → D → F → G. Albums that do not contain tracks (or files) (such as album E) do not appear in the list.

Notes

- Depending on the software you use to create the DATA CD, the playback order may differ from the illustration above.
 - The playback order above may not be applicable if there are more than 200 albums and 300 files in each album.
 - The system can recognize up to 200 albums (including albums that do not contain MP3 audio tracks and JPEG image files). The system will not play back any albums beyond the 200th album.
 - The system may take a longer time to start playback when the tracks or files in another album has just been played back.
 - An album that does not contain an MP3 audio track or JPEG image file is skipped.
 - The system will play back any data with the extension “.MP3,” “.JPG,” or “.JPEG” even if they are not in MP3 or JPEG format. Playing back this data may generate a loud noise which could damage your speaker system.
 - The system does not support MP3PRO format.
 - The system can only play back MP3 audio tracks in MPEG 1 Audio Layer 3 format.
 - The maximum number of MP3 audio tracks or JPEG image files in an album which this system can recognize is:
 - 600 when “MODE (MP3, JPEG)” is set to “AUDIO (MP3)” or “IMAGE (JPEG)”.
 - 300 when “MODE (MP3, JPEG)” is set to “AUTO”.
 - Depending on the encoding/writing software, recording device or the recording media used to record an MP3 audio track, you may encounter problems such as cannot play back, sound interruptions and noise.
 - The following discs take a longer time to start playback:
 - a disc recorded with complicated tree structure.
 - a disc recorded in Multi Session.
 - a disc to which data can be added (non-finalized disc).
 - Some CD-Rs/CD-RWs/DVD-Rs/DVD-RWs/DVD+Rs/DVD+RWs cannot be played back on the system depending on the file format.
- To play back a DATA CD (CD-ROMs/CD-Rs/CD-RWs) containing both MP3 audio tracks and JPEG image files, select “MODE (MP3, JPEG)” from the Control Menu after the disc’s TOC reading is complete. If you want to play back
 - both MP3 audio tracks and JPEG image files, set “MODE (MP3, JPEG)” to “AUTO”.
 - MP3 audio tracks only, set “MODE (MP3, JPEG)” to “AUDIO (MP3)”.
 - JPEG image files only, set “MODE (MP3, JPEG)” to “IMAGE (JPEG)”.
 - The system can play back to a depth of 8 folders only.

Tips

- If you add numbers (01, 02, 03, etc.) to the front of the track or file names when you store the tracks or files in a disc, the tracks and files will be played back in that order.
- Since a disc with many trees takes a longer time to start playback, it is recommended that you create albums with no more than two trees.

Playing DATA CDs with MP3 audio tracks and JPEG image files

DATA-CD

MP3 audio tracks and JPEG image files recorded on DATA CDs (CD-ROMs/CD-Rs/CD-RWs) can be played back on this system.

Playing an album of MP3 audio tracks or JPEG image files

1 Load a DATA CD on the disc tray.

The list of albums appears in the on-screen display.



2 Press **↑** or **↓** repeatedly to select the album you want and press **▷** (or **◀▷** on the unit).

The system starts playing the first MP3 audio track or JPEG image file of the selected album.

To stop playback

Press **■**.

To play back the next or previous MP3 audio track

Press **◀◀** or **▶▶** (or **◀◀◀◀** or **▶▶▶▶** on the unit) repeatedly during playback.

To play back the next album of MP3 audio tracks

You can select the next album by pressing **▶▶** (or **▶▶▶▶** on the unit) repeatedly until the last track of the current album. Then press **▶▶** (or **▶▶▶▶** on the unit) once. The first track of the next album is selected. However, you cannot select the previous album by pressing **◀◀** (or **◀◀◀◀** on the unit) repeatedly. To select the previous album, select the album from the album list.

To play back the next or previous JPEG image file

Press **◀** or **▶** repeatedly during the slide show.

To play back the next album of JPEG image files

You can select the next album by pressing **▶** repeatedly until the last file of the current album. Then press **▶** once. The first file of the next album is selected. However, you cannot select the previous album by pressing **◀** repeatedly. To select the previous album, select the album from the album list.

To display the next or previous album list page

Press **◀** or **▶** repeatedly when the album list display is on.

To turn off or turn on the album list display

Press **MENU**.

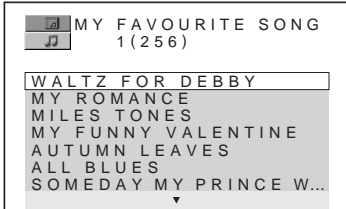
Playing an MP3 audio track

- 1 Load a DATA CD with MP3 audio tracks on the disc tray.

The list of albums appears in the on-screen display.

- 2 Press **↑** or **↓** repeatedly to select the album you want, then press **ENTER**.

The list of MP3 audio tracks of the selected album appears in the on-screen display.



- 3 Press **↑** or **↓** repeatedly to select the MP3 audio track you want, then press **ENTER**.

The system starts playing the selected MP3 audio track.

To stop playback

Press **■**.

To play back the next or previous MP3 audio track

Press **⏪** or **⏩** (or **⏮** or **⏭**) on the unit) repeatedly during playback.

To play back the next album of MP3 audio tracks

You can select the next album by pressing **⏩** (or **⏭** on the unit) repeatedly until the last track of the current album. Then press **⏩** (or **⏭** on the unit) once. The first track of the next album is selected. However, you cannot select the previous album by pressing **⏪** (or **⏮** on the unit) repeatedly. To select the previous album, select the album from the album list.

To display the next or previous track list page or album list page

Press **⏪** or **⏩** repeatedly when the track list display or album list display is on.

To return to the album list display when the track list is displayed

Press **↶** RETURN.

To turn off or turn on the track list or album list display

Press MENU.

Playing a JPEG image file

- 1 Load a DATA CD with JPEG image files on the disc tray.

The list of albums appears in the on-screen display.

- 2 Press **↑** or **↓** repeatedly to select the album you want, then press **PICTURE NAVI**.

The thumbnail picture for the first 16 JPEG image files of the selected album is displayed in the on-screen display.

1	2	3	4	
5	6	7	8	
9	10	11	12	
13	14	15	16	

If there is more than 16 image files on the selected album, the scroll bar appears at the right. Press **↓** repeatedly until the last row of the thumbnail picture. Then, press **↓**. The on-screen display will show the thumbnail picture of the next 16 image files. To return to the thumbnail picture of the previous 16 image files, press **↑** repeatedly until the first row of the thumbnail picture. Then, press **↑**.

- 3** Press **←/↑/↓/→** to select the image you want to view and press **ENTER**.



To play back the next or previous JPEG image file

Press **←** or **→** repeatedly during the slideshow.

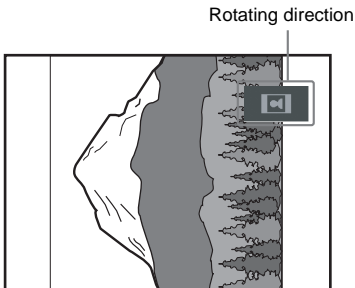
To play back the next album of JPEG image files

You can select the next album by pressing **→** repeatedly until the last file of the current album. Then press **→** once. The first file of the next album is selected. However, you cannot select the previous album by pressing **←** repeatedly. To select the previous album, select the album from the album list.

To rotate a JPEG image file

When a JPEG image file is displayed in the on-screen display, you can rotate the image by 90 degrees.

Press **↑** or **↓** repeatedly while viewing an image. Each time you press **↑**, the image rotates counterclockwise by 90 degrees and vice-versa. Example of when you press **↑** once:



Press **CLEAR** to return to the original view.

To stop playback

Press **■**.

To turn off or turn on the album list display

Press **MENU**.

Notes

- When you press **←** or **→** to select the next or previous image, the image returns to the original view even if you have rotated the image previously.
- The slideshow stops when you press **↑** or **↓**.
- The **PICTURE NAVI** button does not work when “MODE (MP3, JPEG)” is set to “AUDIO (MP3)”.

Tip

You can also change the slideshow speed (page 34) and effect (page 34) while playing JPEG image files.

Playing MP3 audio tracks and JPEG image files as a slideshow with sound

DATA-CD

You can play back a slideshow with sound by first placing both MP3 audio tracks and JPEG image files in the same album on a DATA CD.

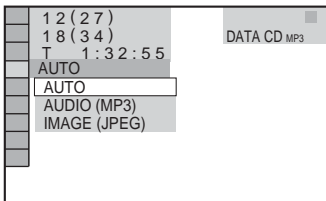
1 Load a DATA CD on the disc tray.

The list of albums appears in the on-screen display.

2 Press DISPLAY repeatedly until Control Menu for MP3 audio track appears in the on-screen display.

3 Press or repeatedly to select (MODE (MP3, JPEG)), then press ENTER.

The options for “MODE (MP3, JPEG)” appear in the on-screen display.



The default setting is underlined.

- AUTO: play back both the JPEG image files and MP3 audio tracks in the same album as a slide show.
- AUDIO (MP3): play back MP3 audio tracks only.
- IMAGE (JPEG): play back JPEG image files only as a slideshow.

4 Press or repeatedly to select “AUTO” and press ENTER.

5 Press MENU.

The list of albums appears in the on-screen display.

6 Press or repeatedly to select the album you want and press (or on the unit).

The slideshow starts.

To stop playback

Press .

To cancel slideshow with sound

Select “AUDIO (MP3)” or “IMAGE (JPEG)” in step 4.

To turn off or turn on the display

Press MENU.

Notes

- You cannot play back JPEG image files and MP3 audio tracks at the same time if they are not contained in the same album.
- When the playback duration of the JPEG image files is longer than the playback duration of the MP3 audio tracks, the slideshow continues without sound.
- When the playback duration of the MP3 audio tracks is longer than the playback duration of the JPEG image files, the MP3 audio tracks are played back without the slideshow.
- If there are no MP3 audio tracks on the DATA CD and “MODE (MP3, JPEG)” is set to “AUDIO (MP3)”, “No audio data” appears in the on-screen display and the disc cannot be played back.
- If there are no JPEG image files on the DATA CD and “MODE (MP3, JPEG)” is set to “IMAGE (JPEG)”, “No image data” appears in the on-screen display and the disc cannot be played back.
- The PICTURE NAVI button does not work when “MODE (MP3, JPEG)” is set to “AUDIO (MP3)”.
- If you play back a large data size of MP3 audio tracks and JPEG image files at the same time, the sound may skip. We recommend that you reduce the data size of MP3 audio tracks by creating the MP3 audio tracks in 128 kbps or lower bit rate. If the sound still skips, then reduce the data size of JPEG image files by creating the JPEG image files in smaller size or lower resolution.

continued





Tips

- You can also change the slideshow speed (page 34) and effect (page 34) while playing JPEG image files.
- If you want to play back a slideshow to the same audio track, set the track to Repeat Play (page 23).

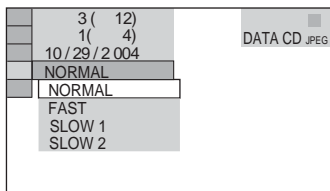
Specifying the slideshow speed



(JPEG image files only)

When you play back JPEG image files as slideshow, you can specify the duration for an image to appear in the on-screen display.

- 1 Press  **DISPLAY** repeatedly until the Control Menu for JPEG image files appears in the on-screen display.
- 2 Press  or  repeatedly to select  (INTERVAL), then press **ENTER**.

The options for “INTERVAL” appear in the on-screen display.



- 3 Press  or  repeatedly to select the setting you want.

The default setting is underlined.

- NORMAL: sets the duration to about 6 to 9 seconds. (Images that are 4,000,000 pixels or more will lengthen the duration.)
- FAST: sets the duration shorter than NORMAL.
- SLOW 1: Sets the duration longer than NORMAL.
- SLOW 2: Sets the duration longer than SLOW 1.

- 4 Press **ENTER**.

The selected setting takes effect.





Note

Some JPEG image files (especially progressive JPEG image files or JPEG image files with 3,000,000 pixels or more) may take a longer time to display than others, which may make the duration seem longer than the option you selected.

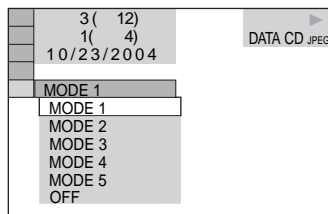
Selecting the image transition effect for the slideshow

(JPEG image files only)

When you play back JPEG image files, you can select the image transition effect to be used when viewing the slide show.

- 1 Press  **DISPLAY** repeatedly until the Control Menu for JPEG image files appears in the on-screen display.
- 2 Press  or  repeatedly to select  (EFFECT), then press **ENTER**.

The options for “EFFECT” appear in the on-screen display.



3 Press **↑** or **↓** repeatedly to select the setting you want.

The default setting is underlined.

- MODE 1: The image sweeps in from top to bottom of the screen.
- MODE 2: The image sweeps in from left to right of the screen.
- MODE 3: The image stretches out from the center of the screen.
- MODE 4: The images change with MODE 1, MODE 2 and MODE 3 randomly.
- MODE 5: The next image slides over the current image.
- OFF: Turns off this function.

4 Press **ENTER**.

The selected setting takes effect.

Enjoying DivX[®] Videos

(Except for Latin American models)

DATA-CD

DATA DVD

About DivX Video Files

DivX[®] is a video file compression technology, developed by DivXNetworks, Inc. This product is an official DivX[®] Certified product. You can play back DATA CDs and DATA DVDs that contain DivX[®] video files.

DATA CDs and DATA DVDs that the system can play back

Playback of DATA CDs (CD-ROMs/CD-Rs/CD-RWs) and DATA DVDs (DVD-ROMs/DVD-Rs/DVD-RWs/DVD+Rs/DVD+RWs) on this system is subject to certain conditions:

- With DATA CDs that contain DivX video files in addition to MP3 audio tracks or JPEG image files, the system only play back the DivX video files.
- With DATA DVDs, the system only play back DivX video files. MP3 audio tracks and JPEG image files that are contained in DATA DVDs are not played back.

However, the system only play back DATA CDs that conform to ISO 9660 Level 1, Level 2 or Joliet in expansion format and DATA DVDs that conforms to Universal Disk Format (UDF). The system can play back DATA CDs in Multi Session but cannot play back DATA DVDs in Multi Session.

Refer to the instructions supplied with the disc drives and the recording software for details on the recording format.

DivX video files that the system can play back

The system can play back files which have the extension “.AVI” or “.DivX” that contain data in DivX format.

Notes

- The system may not play back a DivX video file when the file has been combined from two or more DivX video files.
- The system cannot play back a DivX video file size of more than 720 (width) x 576 (height)/2 GB.
- Depending on the DivX video file, the picture may be unclear or the sound may skip.
- The system cannot play back some DivX video files that are longer than 3 hours.



Playing DATA CDs and DATA DVDs with DivX video files

(Except for Latin American models)

DATA-CD DATA DVD

You can play back DivX video files on DATA CDs (CD-ROMs/CD-Rs/CD-RWs) and DATA DVDs (DVD ROMs/DVD-Rs/DVD-RWs/DVD+Rs/DVD+RWs).

Notes

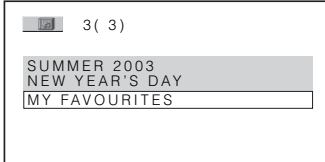
- If there are no DivX video files recorded on a DATA DVD, a message appears in the on-screen display to indicate that the disc is not playable.
- Depending on the DivX video file, the picture may pause or be unclear. In this case, we recommend that you create the file at a lower bit rate. If the sound is still noisy, MP3 is the recommended audio format. However, note that the system does not conform to WMA (Windows Media Audio) format.
- Due to the compression technology used for DivX video files, it may take some time after you press  (or  on the unit) for the picture to appear.
- Depending on the DivX video file, the sound may not synchronize with the pictures on the screen.

Playing an album of DivX video files

- 1 Load a DATA CD or DATA DVD with DivX video files on the disc tray.

The list of the albums appears in the on-screen display.

During playback of an album, the album title is shaded.



- 2 Press **↑** or **↓** repeatedly to select the album you want and press **▷** (or **◀▷** on the unit).

The system starts playing the first DivX video file of the selected album.

To stop playback

Press **■**.

To display the next or previous album list page

Press **◀** or **▶** repeatedly when the album list display is on.

To turn off or turn on the album list display

Press MENU.

Playing a DivX video file

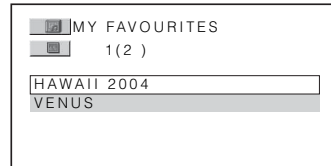
- 1 Load a DATA CD or DATA DVD with DivX video files on the disc tray.

The list of the albums appears in the on-screen display.

During playback of an album, the album title is shaded.

- 2 Press **↑** or **↓** repeatedly to select the album you want, then press ENTER.

The list of files of the selected album appears in the on-screen display.



- 3 Press **↑** or **↓** repeatedly to select the file you want, then press ENTER.

The system starts playing the selected file.

To stop playback

Press **■**.

To display the next or previous track list page or album list page

Press **◀** or **▶** repeatedly when the track list display or album list display is on.

To return to the album list display when the track list is displayed

Press **↶** RETURN.

To turn off or turn on the track list or album list display

Press MENU.

To play back the next or previous DivX video file

Press **⏪** or **⏩** (or **⏪⏪** or **⏩⏩** on the unit) repeatedly during playback.

To play back the next album of DivX video files

You can select the next album by pressing **⏩** (or **⏩⏩⏩** on the unit) repeatedly until the last file of the current album. Then press **⏩** (or **⏩⏩⏩** on the unit) once. The first file of the next album is selected. However, you cannot select the previous album by pressing **⏪** (or **⏪⏪⏪** on the unit) repeatedly. To select the previous album, select the album from the album list.

Tip

You can only play back the DivX video files as many times as the preset number if you have preset the number of viewing times. The following occurrences are counted:

- when the system is turned off.
- when the disc tray is opened.
- when another DivX video file is played back.

Searching for a particular point on a disc

— *Scan, Slow-motion Play, Freeze Frame*



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

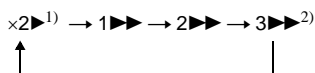
Locating a point quickly by playing a disc in fast forward or fast reverse

— *Scan*

(except for JPEG image files)

Press **⏪** or **⏩** while playing a disc. When you find the point you want, press **◁▷** (or **◁▷** on the unit) to return to normal playback. Each time you press **⏪** or **⏩** during scan, the playback speed changes cyclically as follows:

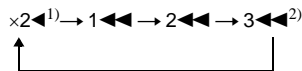
Playback direction



1) x2▷ (DVD VIDEO/AUDIO CD/Super Audio CD only)

2) 3▷▷ (DVD VIDEO/DVD-RW in VR (Video Recording) mode/VIDEO CD/DivX video files only)

Opposite direction



1) x2◁ (DVD VIDEO only)

2) 3◁◁ (DVD VIDEO/DVD-RW in VR mode/VIDEO CD/DivX video files only)

Notes

- For DATA CDs, you can search for a particular point only on an MP3 audio track.
- Depending on the DVD VIDEO/VIDEO CD, you may not be able to do some of the operations described.
- Depending on the disc, the actual speed may differ.

Tips

- The “×2▶”/“×2◀” playback speed is about twice the normal speed.
- The “3▶▶”/“3◀◀” playback speed is faster than “2▶▶”/“2◀◀”.
- The “2▶▶”/“2◀◀” playback speed is faster than “1▶▶”/“1◀◀”.

Watching frame by frame**— Slow-motion play****(DVD VIDEO, DVD-RW in VR mode, VIDEO CD, DivX video files only)**

Press SLOW ◀◀ or SLOW ▶▶ when playback is paused. To return to the normal playback, press ▷ (or ◀▷ on the unit).

Each time you press SLOW ◀◀ or SLOW ▶▶ during Slow-motion play, the playback speed changes as follows:

Playback direction

2 ▶▶ ↔ 1 ▶▶

Opposite direction (DVD VIDEO/DVD-RW in VR mode only)

2 ◀◀ ↔ 1 ◀◀

Tip

The “2 ▶▶”/“2 ◀◀” playback speed is slower than “1 ▶▶”/“1 ◀◀”.

Playing one frame at a time**— Freeze Frame****(DVD VIDEO, DVD-RW in VR mode, VIDEO CD, DivX video files only)**

Press STEP II▶ to go to the next frame when playback is paused. Press ◀II STEP to go to the previous frame when playback is paused (DVD VIDEO/DVD-RW in VR mode only). To return to normal playback, press ▷ (or ◀▷ on the unit).

Notes

- You cannot search for a still picture on a DVD-RW in VR mode.
- With DATA CDs, you can only use this function for DivX video files.

Searching for a title/ chapter/track/scene/ index/album/file



You can search a title (DVD VIDEO, DVD-RW in VR (Video Recording) mode), chapter (DVD VIDEO, DVD-RW in VR mode), track (AUDIO CD, VIDEO CD, MP3 audio track), scene (VIDEO CD), index (VIDEO CD, Super Audio CD), album (MP3 audio track, JPEG image file, DivX video file) and file (JPEG image file, DivX video file).

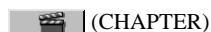
As titles, chapters, tracks, scenes, indexes, albums and files are assigned unique numbers on the disc, you can select the number you want from the Control Menu in the on-screen display. You can also search for a particular point using the time code (Time Search).

- 1 Press **DISPLAY**. (When playing a DATA CD with JPEG image files, press **DISPLAY** twice.)

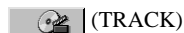
The Control Menu appears in the on-screen display.

- 2 Press or repeatedly to select the search method.

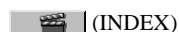
■ When playing a DVD VIDEO or DVD-RW in VR mode



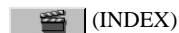
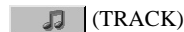
■ When playing a VIDEO CD or Super VCD without PBC Playback



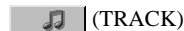
■ When playing a VIDEO CD or Super VCD with PBC Playback



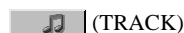
■ When playing a Super Audio CD



■ When playing an AUDIO CD



■ When playing a DATA CD (MP3 audio track)



■ When playing a DATA CD (JPEG image file)



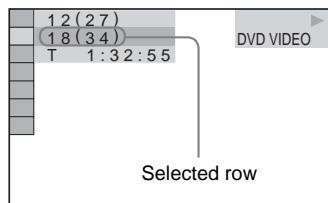
■ When playing a DATA CD or DATA DVD (DivX video file) (except for Latin American models)



Example: when you select (CHAPTER)

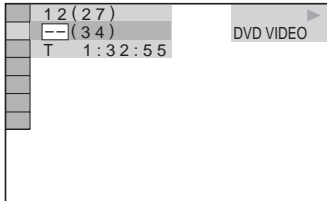
“** (**)” is selected (** refers to a number).

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



3 Press ENTER.

“** (**)” changes to “-- (**)”.


**4 Press ↑ or ↓ repeatedly or the numeric buttons to select the title, chapter, track, scene, index, album or file number you want to search for.****If you make a mistake**

Press CLEAR to cancel the number, then select another number.

5 Press ENTER.

The system starts playback from the selected title, chapter, track, scene, index, album or file.

To turn off the Control Menu

Press  DISPLAY repeatedly until the Control Menu disappears from the on-screen display.

To search for a particular point using the time code**— Time Search****(DVD VIDEO, DVD-RW in VR mode only)****1 Press  DISPLAY.**

The Control Menu appears in the on-screen display.

2 Press ↑ or ↓ repeatedly to select “TIME/TEXT”.

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

3 Press ENTER.

“T **: **: **” changes to “T --:--:--”.

4 Input the time code using the numeric buttons, then press ENTER.

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


If you make a mistake

Press CLEAR to cancel the number, then select another number.

Note

Depending on the DVD VIDEO, you cannot perform Time Search.

To turn off the Control Menu

Press  DISPLAY repeatedly until the Control Menu disappears from the on-screen display.

Searching by scene

— Picture Navigation

DVD-V VIDEO CD

You can view the first scene of each track of a VIDEO CD or each chapter or title of a DVD VIDEO so that you can find the track, chapter or title you want quickly.

1 Press PICTURE NAVI once to select “TRACK VIEWER” for VIDEO CD. For DVD VIDEO, press PICTURE NAVI repeatedly to select “CHAPTER VIEWER” or “TITLE VIEWER”.

- TRACK VIEWER (VIDEO CD only): displays the first scene of each track.
- CHAPTER VIEWER (DVD VIDEO only): displays the first scene of each chapter.
- TITLE VIEWER (DVD VIDEO only): displays the first scene of each title.

2 Press ENTER.

The first scene of the first 9 chapter, title, or track appears in the on-screen display as follows:

1	2	3	
4	5	6	
7	8	9	▼

3 Press ↑/↓/←/→ to select a chapter, title, or track, then press ENTER.

Playback starts from the selected scene.

To cancel searching

Press ⏪ RETURN or 🖨 DISPLAY.

Notes

- Depending on the disc, you may not be able to select some items.
- During Picture Navigation, “VIEWER” appears in the display.

Tips

- If there are more than 9 titles, chapters, or tracks, “▼” is displayed at the bottom right of the screen.
- To display the remaining titles, chapters, or tracks, select a scene at the last row and press ↓. To return to the previous scene, select a scene at the first row and press ↑.

Selecting the audio format

DVD-V

DVD-RW

VIDEO CD

C D

DATA-CD

DATA DVD

When playing a DVD VIDEO or a DivX video file recorded in multiple audio formats, you can select the audio format you want. If the DVD VIDEO is recorded with multilingual tracks, you can also change the language.

When playing a VIDEO CD, AUDIO CD or MP3 audio tracks, 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. For example, when playing a track with the vocals on the right channel and the instruments on the left channel, you can hear the instruments from both speakers by selecting the left channel.

Press AUDIO repeatedly during playback to select the audio signal you want.

The default setting is underlined.

■ When playing a DVD VIDEO

Depending on the DVD VIDEO, the choice of language and audio format varies.

When a 4-digit number is displayed, they represent a language code (see “Language code list” on page 102). When the same language is displayed two or more times, the DVD VIDEO is recorded in multiple audio formats.

■ When playing a DVD-RW in VR (Video Recording) mode

The number of audio tracks recorded on a disc are displayed.

Example:

- 1: MAIN (the main sound of the audio track 1)
- 1: SUB (the sub sound of the audio track 1)
- 1: MAIN+SUB (the main and sub sound of the audio track 1)
- 2: MAIN (the main sound of the audio track 2)
- 2: SUB (the sub sound of the audio track 2)
- 2: MAIN+SUB (the main and sub sound of the audio track 2)

■ When playing a DivX video file (except for Latin American models)

The options for audio format differ depending on the DivX video files.

■ When playing a VIDEO CD, AUDIO CD, or MP3 audio track

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

■ When playing a Super VCD

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

Notes

- While playing a Super VCD on which the audio track 2 is not recorded, no sound will come out when you select “2:STEREO”, “2:1/L”, or “2:2/R”.
- You cannot change the sound for Super Audio CDs.
- You also cannot change the sound for DVD VIDEOS or DivX video files that are not recorded in multiple audio format.
- When you play back DVD VIDEOS, the sound may change automatically.

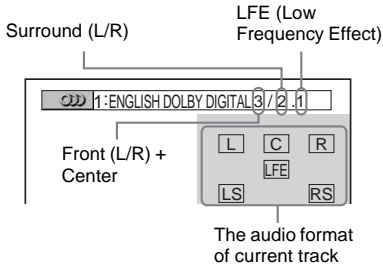
Displaying the audio information of the disc

(DVD VIDEO and DivX videos file only)

When you press AUDIO repeatedly during playback, the audio signal format of the current track is displayed in the on-screen display.

■ When playing a DVD VIDEO

For example, in Dolby Digital format, multiple signals ranging from monaural to 5.1 channel signals can be recorded on a DVD VIDEO. Depending on the DVD VIDEO, the number of recorded channels may differ.

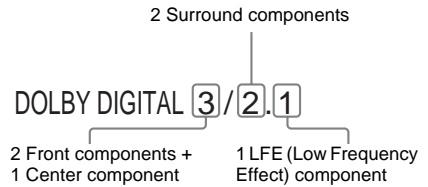


The symbols shown in the on-screen display represent the audio signal channels which are output from different speakers.

- L: Front Left
- R: Front Right
- C: Center
- LS: Surround Left
- RS: Surround Right
- S: Surround signal which is produced from Dolby Surround Sound processing or monaural surround audio signal.
- LFE: Low Frequency Effect

Example:

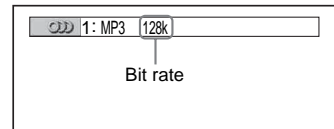
For Dolby Digital 5.1 channel:



■ When playing a DivX video file (except for Latin American models)

Example:

MP3 audio track



Changing the angles

DVD-V

You can change the viewing angle while playing a DVD VIDEO on which various angles (multi-angles) for a scene are recorded.

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

Press ANGLE repeatedly during playback.

Each time you press ANGLE, the angle changes.

Note

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

Displaying the subtitles

DVD-V

DVD-RW

DATA-CD

DATA DVD

You can turn the subtitles on or off while playing a DVD VIDEO, DVD-RW in VR (Video Recording) mode or DivX video files on which subtitles are recorded. You change the language of the subtitles whenever you want with DVD VIDEO, DVD-RW in VR mode or DivX video files on which multilingual subtitles are recorded. For example, you can select the language you want and turn the subtitles on for better understanding.

Press SUBTITLE repeatedly during playback.

Each time you press SUBTITLE, the subtitle language changes or turns off.

Notes

- Depending on the DVD VIDEO, you may not be able to change the subtitles even if multilingual subtitles are recorded on the DVD VIDEO. You also may not be able to turn the subtitles off.
- You can change the subtitles if the DivX video file contains subtitle information within the same file.

Adjusting the delay between the picture and sound

— A/V SYNC

DVD-V DVD-RW VIDEO CD DATA-CD DATA DVD

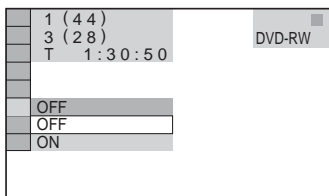
When the sound does not synchronize with the pictures on the screen, you can adjust the delay between the picture and sound.

1 Press DISPLAY once or twice when playback is stopped.

The Control Menu appears in the on-screen display.

2 Press or repeatedly to select (A/V SYNC), then press ENTER.

The options for “A/V SYNC” appear in the on-screen display.



3 Press or repeatedly to select the setting you want.

- OFF: does not adjust.
- ON: adjusts the difference between picture and sound.

Note

Depending on the input stream, this function may not be effective.

Restricting playback of the disc

— CUSTOM PARENTAL CONTROL, PARENTAL CONTROL

DVD-V VIDEO CD CD

You can set 2 kinds of playback restrictions for the disc you want.


- Custom Parental Control
You can set playback restrictions so that the system will not play back inappropriate discs.
- Parental Control
You can limit the playback of some DVD VIDEOS according to a predetermined level such as the age of the users. When a limited scene is played back, that scene may be skipped or replaced with different scenes. The same password is used for both Custom Parental Control and Parental Control.

Preventing playback of specific discs

— CUSTOM PARENTAL CONTROL

You can set the same Custom Parental Control password for up to 40 discs. When you set the 41st-disc, the playback restriction for the first disc is canceled.

1 Insert the disc you want to set the playback restriction.

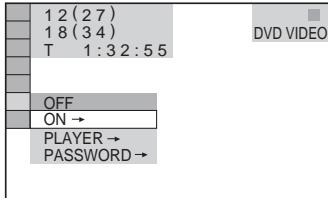
If the disc is playing, press  to stop playback.

2 Press DISPLAY when playback is stopped.

The Control Menu appears in the on-screen display.

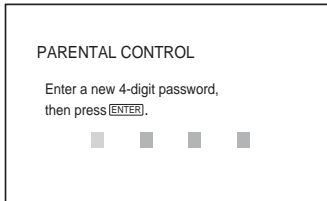
- 3** Press **↑** or **↓** repeatedly to select **PARENTAL CONTROL**, then press **ENTER**.

The options for “PARENTAL CONTROL” appear in the on-screen display.



- 4** Press **↑** or **↓** repeatedly to select **“ON →”**, then press **ENTER**.

■ **If you have not entered a password**
The display for registering a new password appears in the on-screen display.

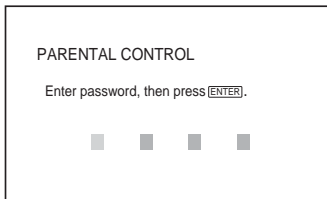


Enter a 4-digit password using the numeric buttons, then press **ENTER**.

The display for confirming the password appears in the on-screen display.

- **When you have already registered a password**

The display for entering the password appears in the on-screen display.



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

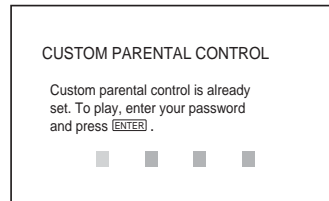
“Custom parental control is set.” appears in the on screen display and the screen returns to the Control Menu.

To turn off the Custom Parental Control function

- 1 Follow steps 1 through 3 of “Preventing playback of specific discs”.
- 2 Press **↑** or **↓** repeatedly to select **“OFF →”**, then press **ENTER**.
- 3 Enter your 4-digit password using the numeric buttons, then press **ENTER**.

To play back a 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 in the on-screen display.



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

Tip

If you forget your password, enter the 6-digit number “199703” using the numeric 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.

If you make a mistake entering your password

Press **←** repeatedly to delete the number you have entered, then re-enter your password again.

Limiting playback for children


— PARENTAL CONTROL

(DVD VIDEO only)

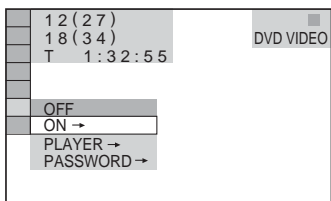
You can limit the playback of some DVD VIDEOS according to a predetermined level such as the age of the users. The “PARENTAL CONTROL” function allows you to set a playback limitation level.

- 1 Press  **DISPLAY** when playback is stopped.

The Control Menu appears in the on-screen display.

- 2 Press **↑** or **↓** repeatedly to select  (**PARENTAL CONTROL**), then press **ENTER**.

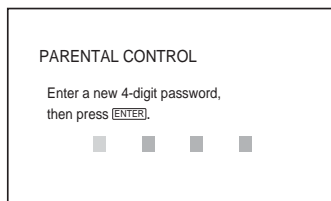
The options for “PARENTAL CONTROL” appear in the on-screen display.



- 3 Press **↑** or **↓** repeatedly to select “**PLAYER →**”, then press **ENTER**.

■ If you have not entered a password

The display for registering a new password appears in the on-screen display.

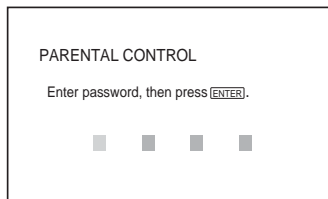


Enter a 4-digit password using the numeric buttons, then press **ENTER**.

The display for confirming the password appears in the on-screen display.

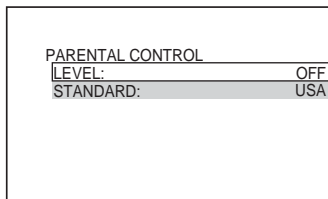
■ When you have already registered a password

The display for entering the password appears in the on-screen display.



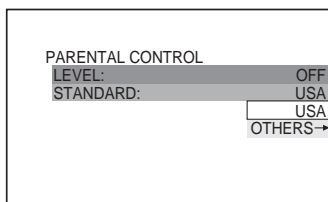
- 4 Enter or re-enter your 4-digit password using the numeric buttons, then press **ENTER**.

The display for setting the playback limitation level appears in the on-screen display.



- 5 Press **↑** or **↓** repeatedly to select “**STANDARD**”, then press **ENTER**.

The options for “STANDARD” are displayed in the on-screen display.



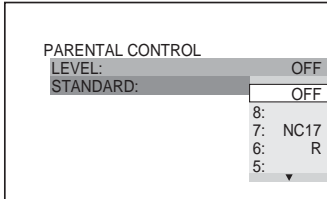
- 6 Press **↑** or **↓** repeatedly to select a geographic area as the playback limitation level, then press **ENTER**.

The area is selected.

When you select “OTHER →”, enter the area code for the geographic area you want according to the Area code table on page 49 by using the numeric buttons.

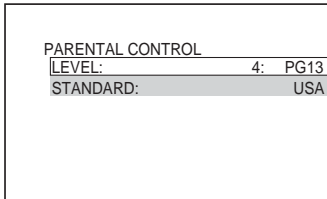
7 Press **↑** or **↓** repeatedly to select “LEVEL”, then press **ENTER**.

The options for “LEVEL” are displayed in the on-screen display.



8 Press **↑** or **↓** repeatedly to select the level you want, then press **ENTER**.

Parental Control setting is completed.



The lower the value, the stricter the limitation.

To turn off the Parental Control function

Set “LEVEL” to “OFF” in Step 8.

To play back a disc for which Parental Control is set

1 Insert the disc and press **▷** (or **◀▷** on the unit).

The display for entering your password appears in the on-screen display.

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

The system starts playback.

Notes

- The Control Menu display will show different items depending on the disc type.
- When you play back DVD VIDEOS which do not have the Parental Control function, playback cannot be limited on this system.
- Depending on the DVD VIDEO, you may be asked to change the parental control level while playing the disc. In this case, enter your password, then change the level. If Resume Play is canceled, the level returns to the original level.

Tip







If you forget your password, remove the disc and repeat steps 1 to 3 of “Limiting playback for children”. When you are asked to enter your password, enter “199703” using the numeric buttons, then press **ENTER**. The display will ask you to enter a new 4-digit password. After you enter a new 4-digit password, reload the disc and press **▷** (or **◀▷** on the unit). When the display for entering your password appears, enter your new password.

Area Code


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

continued

Changing the password

- 1 Press  DISPLAY when playback is stopped.**
The Control Menu appears in the on-screen display.
- 2 Press  or  repeatedly to select  (PARENTAL CONTROL), then press ENTER.**
The options for “PARENTAL CONTROL” appear in the on-screen display.
- 3 Press  or  repeatedly to select “[PASSWORD →]”, then press ENTER.**
The display for entering the password appears in the on-screen display.
- 4 Enter your 4-digit password using the numeric buttons, then press ENTER.**
- 5 Enter a new 4-digit password using the numeric buttons, then press ENTER.**
- 6 To confirm your password, re-enter it using the numeric buttons, then press ENTER.**

If you make a mistake entering your password





Press  repeatedly to delete the number you have entered, then re-enter your password again.

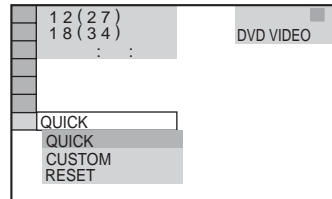
Using the DVD setup menu



By using the DVD setup menu, you can make various adjustments to items such as picture and sound. You can also set a language for the subtitles and on-screen display. For details on each DVD setup menu item, see pages 51 to 57. For an overall list of DVD setup menu items, see pages 100–101.

Note

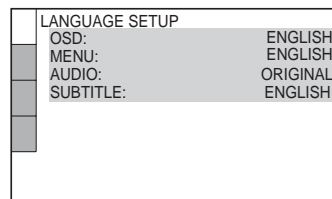
Playback settings stored in the disc take priority over the DVD setup menu settings. Therefore, some of the DVD setup menu settings may not be performed.

- 1 Press  DISPLAY when playback is stopped.**
The Control Menu appears in the on-screen display.
- 2 Press  or  repeatedly to select  (SETUP), then press ENTER.**
The options for “SETUP” appear in the on-screen display.



- 3 Press  or  repeatedly to select “CUSTOM”, then press ENTER.**

The Setup menu appears in the on-screen display.

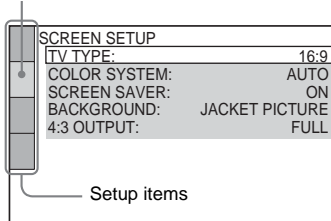


- 4** Press **↑** or **↓** repeatedly to select the setup item from the displayed list: “LANGUAGE SETUP”, “SCREEN SETUP”, “CUSTOM SETUP”, or “SPEAKER SETUP”. Then press **ENTER**.

The setup item is selected.

Example: SCREEN SETUP

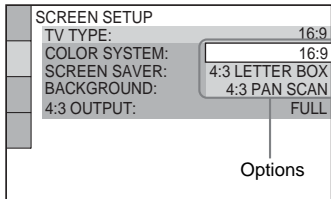
Selected item



- 5** Press **↑** or **↓** repeatedly to select the item you want, then press **ENTER**.

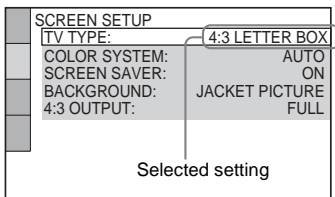
The options for the selected item appear in the on-screen display.

Example: [TV TYPE]



- 6** Press **↑** or **↓** repeatedly to select the setting you want, then press **ENTER**.

The setting is selected and setup is completed.

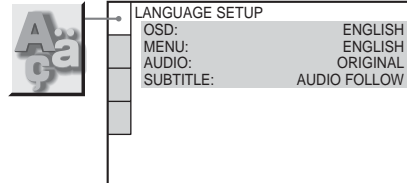


Setting the language

— LANGUAGE SETUP

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

Select “LANGUAGE SETUP” in the Setup menu. For details, see “Using the DVD setup menu” (page 50).



■ OSD (On-Screen Display)

Switches the language of the on-screen display.

■ MENU (DVD VIDEO only)

Select the language for the DVD menu.

■ AUDIO (DVD VIDEO only)

Switches the language of the sound track.

When you select “ORIGINAL”, the language given priority in the disc is selected.

■ SUBTITLE (DVD VIDEO only)

Switches the language of the subtitle .

When you select “AUDIO FOLLOW”, the language for the subtitles changes according to the language you selected for the sound track.

Note

When you select a language in “MENU”, “SUBTITLE”, or “AUDIO” that is not recorded on the DVD VIDEO, one of the recorded language will be automatically selected. However, depending on the disc, the language may not be selected automatically.

Tip

If you select “OTHERS →” in “MENU”, “SUBTITLE”, and “AUDIO”, enter a language code from the “Language code list” (page 102) using the numeric buttons.

continued

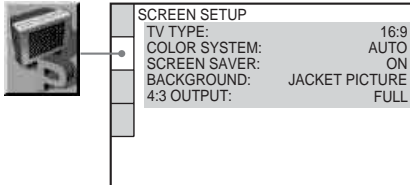
Setting the TV screen

— SCREEN SETUP

Choose the settings according to the TV you connected.

Select “SCREEN SETUP” in the Setup menu. For details, see “Using the DVD setup menu” (page 50).

The default settings are underlined.



■ TV TYPE (DVD VIDEO only)

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

The default setting varies, depending on the country.

16:9	Select this when you connect a wide-screen TV or a TV with a wide mode function.
4:3 LETTER BOX	Select this when you connect a 4:3 screen TV. This setting 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. This setting displays the wide picture on the entire screen and cuts off the portions that do not fit.

16:9



4:3 LETTER BOX



4:3 PAN SCAN



Note

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

■ COLOR SYSTEM (Except for Latin American and Russian models)

Select the color system when you play back a VIDEO CD.

AUTO	Output the video signal according to the color system of the disc, either PAL or NTSC.
PAL	Change the video signal of an NTSC disc and output it in PAL system.
NTSC	Change the video signal of a PAL disc and output it in NTSC system.

■ SCREEN SAVER

Turn on or off the screen saver. If you turn on the screen saver, the screen saver image appears when playback is stopped or paused for 15 minutes or when you play back an AUDIO CD, Super Audio CD or MP3 audio tracks for more than 15 minutes. The screen saver will help prevent your display device from becoming damaged (ghosting). Press \triangleright (or \triangleleft) on the unit) 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 to be displayed on the TV screen. The background color or picture is displayed when playback is stopped or while playing an AUDIO CD, Super Audio CD and MP3 audio tracks.

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

■ BLACK LEVEL (Latin American models only)

Select the black level (setup level) for the video signals output from the video jacks other than COMPONENT VIDEO OUT jacks.

ON	Set the black level of the output signal to the standard level.
OFF	Lower the standard black level. Use this when the picture becomes too white.

■ BLACK LEVEL (COMPONENT OUT) (Latin American models only)

Select the black level (setup level) for the video signals output from the COMPONENT VIDEO OUT jacks. You cannot select “BLACK LEVEL (COMPONENT OUT)” when the system outputs progressive signal.

OFF	Set the black level of the output signal to the standard level.
ON	Raise the standard black level. Use this when the picture becomes too black.

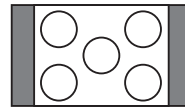
■ 4:3 OUTPUT

This setting is effective only when you set “TV TYPE” in “SCREEN SETUP” to “16:9” (page 52). Change this setting to watch 4:3 aspect ratio progressive signals. If you can change the aspect ratio on your progressive format (525p/625p) compatible TV, change the setting on your TV.

Note

This setting is effective only when “P AUTO” or “P VIDEO” is selected. Press PROGRESSIVE on the unit repeatedly to select “P AUTO” or “P VIDEO”.

FULL	Select this when you can change the aspect ratio on your TV.
NORMAL	Select this when you cannot change the aspect ratio on your TV. Shows a 16:9 aspect ratio signal with black bands on left and right sides of the image.



16:9 aspect ratio TV

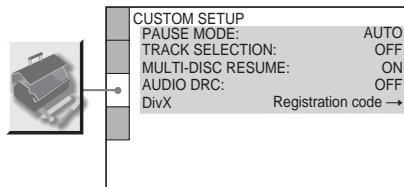
Setting playback options

— **CUSTOM SETUP**

Use this to set up playback related and other settings.

Select “CUSTOM SETUP” in the Setup menu. For details, see “Using the DVD setup menu” (page 50).

The default settings are underlined.



■ PAUSE MODE (DVD VIDEO and DVD-RW in VR (Video Recording) mode only)

Select 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.

■ TRACK SELECTION (DVD VIDEO only)

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

OFF	No priority given.
AUTO	Priority given.

Notes

- When you set “TRACK SELECTION” to “AUTO”, the language may change. The “TRACK SELECTION” setting has higher priority than the “AUDIO” settings in “LANGUAGE SETUP” (page 51). However, depending on the disc, this function cannot be performed.
- If PCM, DTS, Dolby Digital, and MPEG audio sound tracks have the same number of channels, the system selects PCM, DTS, Dolby Digital, and MPEG audio sound tracks in this order.

■ MULTI-DISC RESUME (DVD VIDEO and VIDEO CD only)

Turns on and off the Multi-Disc Resume. The resume playback point can be stored in the system for up to 40 different DVD VIDEOS and VIDEO CDs (page 20).

ON	Stores the resume playback point in the system for up to 40 discs.
OFF	Does not store the resume playback point in the system. Playback starts at the resume playback point only for the current disc in the system.

■ AUDIO DRC (Dynamic Range Compression) (DVD VIDEO and DVD-RW in VR mode only)

Narrows the dynamic range of the sound track. Useful for watching movies at low volume late at night.

OFF	No compression of dynamic range.
STANDARD	Reproduces the sound track with the kind of dynamic range that the recording engineer intended.
MAX	Narrows the dynamic range fully.

Note

AUDIO DRC can only be performed with Dolby Digital sources.

■ DivX (Except for Latin American models)

Display the registration code for this system. For more information, go to <http://www.divx.com> on the Internet.

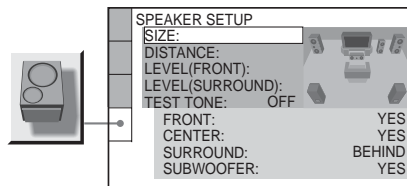
Setting the speakers

— SPEAKER SETUP

To obtain the best possible surround sound, set for the size of the speakers you have connected and their distance from your listening position. Then use the test tone to adjust the level of the speakers to the same level.

Select “SPEAKER SETUP” in the Setup menu. For details, see “Using the DVD setup menu” (page 50).

The default settings are underlined.



To return to the default setting when changing a setting

Press CLEAR before you press ENTER. However, note that you cannot return the setting of “SIZE” to default setting.

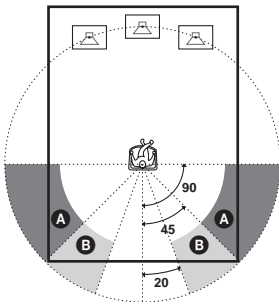
Note

You cannot perform SPEAKER SETUP when you connect headphones or microphones to the unit.

■ SIZE

When you connect or disconnect the center speaker, surround speakers or sub woofer or you move the surround speakers, change the setting for CENTER, SURROUND and SUBWOOFER. Since the front speaker setting is fixed, you cannot change them.

Position diagram



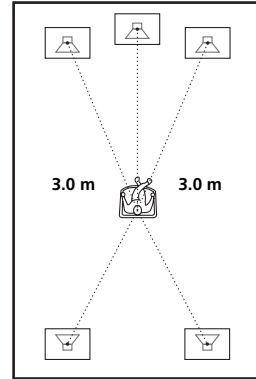
FRONT	<u>YES</u>
CENTER	<u>YES</u> : Normally select this. <u>NONE</u> : Select this if the center speaker is not connected.
SURROUND	<u>BEHIND</u> : Select this if the surround speakers are located in section B . <u>SIDE</u> : Select this if the surround speakers are located in section A . <u>NONE</u> : Select this if the surround speakers are not connected.
SUBWOOFER	<u>YES</u> : Select this if you have connected an optional sub woofer. <u>NONE</u> : Select this if an optional sub woofer is not connected.

Notes

- When you change the setting, the sound cuts off for a moment.
- Depending on the settings of other speakers, the sub woofer may output the excessive sound.

■ DISTANCE

The default distance setting for the speakers in relation to the listening position is shown below. When you set the distance using QUICK SETUP (page 14), the settings are automatically displayed. The items that are set to “NONE” in “SIZE” cannot be selected.



Be sure to change the value in the Setup menu when you move the speakers.

FRONT <u>3.0 m</u> ¹⁾	Front speaker distance from the listening position can be set in 0.2 meter increments from 1.0 to 7.0 meters.
CENTER <u>3.0 m</u> ¹⁾²⁾	Center speaker distance from the listening position can be set in 0.2 meter increments from 0.0 to 7.0 meters.
SURROUND <u>3.0 m</u> ¹⁾²⁾	Surround speaker distance from the listening position can be set in 0.2 meter increments from 0.0 to 7.0 meters.

- 1) When you perform QUICK SETUP (page 14), the default settings are changed.
- 2) The setting range changes depending on the front speaker setting.

Notes

- When you adjust the speaker distance, the sound may cut off for a moment.
- If each front and surround speakers are not placed at an equal distance from your listening position, set the distance according to the closest speaker.
- Do not place the surround speakers further away from your listening position than the front speakers.
- Depending on the input stream, the “DISTANCE” setting may not be effective.

continued

■ LEVEL (FRONT)

You can vary the level of the front speakers, center speaker and sub woofer as follows. Be sure to set “TEST TONE” to “ON” for easy adjustment. The items that are set to “NONE” in “SIZE” cannot be selected.

L 0.0 dB	Set this between -6.0 dB and 0.0 dB in 1.0 dB increments.
R 0.0 dB	Set this between -6.0 dB and 0.0 dB in 1.0 dB increments.
CENTER 0.0 dB	Set this between -6.0 dB and +6.0 dB in 1.0 dB increments.
SUBWOOFER 0.0 dB	Set this between -10.0 dB and +10.0 dB in 1.0 dB increments.

Depending on the sub woofer, the sound output may be smaller compared to other speakers when you adjust the “SUBWOOFER” setting during test tone.

■ LEVEL (SURROUND)

You can vary the level of each surround speakers as follows. Be sure to set “TEST TONE” to “ON” for easy adjustment.

This setting cannot be selected when “SURROUND” is set to “NONE” in the “SIZE” setting.

L 0.0 dB	Set this between -6.0 dB and +6.0 dB in 1.0 dB increments.
R 0.0 dB	Set this between -6.0 dB and +6.0 dB in 1.0 dB increments.

Tip





















To adjust the volume of all speakers at the same time, press VOLUME +/- repeatedly (or turn VOLUME on the unit).

■ TEST TONE

The speakers will emit a test tone to adjust “LEVEL (FRONT)” and “LEVEL (SURROUND)”.

OFF	The test tone is not emitted from the speakers.
ON	The test tone is emitted from each speaker in sequence except for sub woofer. The test tone is emitted from the selected speakers when you select “LEVEL (FRONT)” or “LEVEL (SURROUND)”.

Adjusting the speaker level by using the test tone

- 1** Press  **DISPLAY** when playback is stopped.
The Control Menu appears in the on-screen display.
- 2** Press  or  repeatedly to select  (SETUP), then press ENTER.
The options for “SETUP” appear in the on-screen display.
- 3** Press  or  repeatedly to select “CUSTOM”, then press ENTER.
The Setup menu appears in the on-screen display.
- 4** Press  or  repeatedly to select “SPEAKER SETUP”, then press ENTER or .
- 5** Press  or  repeatedly to select “TEST TONE”, then press ENTER or .
- 6** Press  or  repeatedly to select “ON”, then press ENTER.
You will hear the test tone from each speaker in sequence except for sub woofer.
- 7** Press  or  repeatedly to select “LEVEL (FRONT)”, then press ENTER.
- 8** Press  or  repeatedly to select the speaker, then press ENTER.
The test tone is emitted from the selected speaker.
- 9** Press  or  repeatedly to adjust the level from your listening position.

- 10** Press ENTER when you have finished making the adjustment.
- 11** Repeat steps 8 to 10 to adjust the speaker level for other speakers.
- 12** Press ←.
- 13** Press ↑ or ↓ repeatedly to select “LEVEL (SURROUND)”, then press ENTER.
- 14** Repeat steps 8 to 11 to adjust the speaker level for other speakers.
- 15** Press ←.
- 16** Press ↑ or ↓ repeatedly to select “TEST TONE”, then press ENTER.
- 17** Press ↑ or ↓ repeatedly to select “OFF”, then press ENTER.

Note

When you adjust the speaker settings, the sound may cut off for a moment.

Tip

To adjust the volume of all speakers at the same time, press VOLUME +/- repeatedly (or turn VOLUME on the unit).

Presetting radio stations

You can preset up to 20 FM stations and 10 AM stations. You can then tune in any of those stations simply by selecting the corresponding preset number.

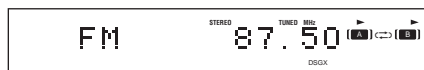
Automatic tuning preset

You can automatically tune in all of the stations that can be received in your area and then store the frequency of your favourite stations manually.

1 Press **FUNCTION +/-** repeatedly until **"TUNER FM"** or **"TUNER AM"** appears in the display (or press **TUNER/BAND** on the unit repeatedly to select **"FM"** or **"AM"**).

2 Press and hold **TUNING +/-** until the frequency indication starts to change. Then, release.

"AUTO" lights up in the display. Scanning stops automatically when a station is tuned in. "TUNED" lights up in the display. When a FM stereo program is tuned in, "STEREO" lights up in the display.



If **"TUNED"** does not light up and the scanning does not stop

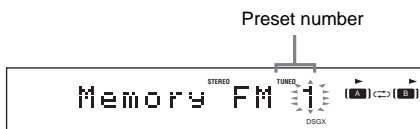
Set the frequency of the radio station you want as described in steps 2 of "Manual tuning preset".

3 Press **MENU**.

"Memory?" flashes in the display.

4 Press **ENTER**.

A preset number flashes in the display. The stations are stored from preset number 1.



5 Press **PRESET +/-** repeatedly to select the preset number you want.

6 Press **ENTER**.

"Complete!" appears in the display. The station is stored.

7 Repeat steps 1 to 6 to store other stations.

Manual tuning preset

You can manually tune in and store the frequency of your favourite stations.

1 Press **FUNCTION +/-** repeatedly until **"TUNER FM"** or **"TUNER AM"** appears in the display (or press **TUNER/BAND** on the unit repeatedly to select **"FM"** or **"AM"**).

2 Press **TUNING +/-** repeatedly to tune in the station you want.



3 Press **MENU**.

"Memory?" flashes in the display.

4 Press ENTER.

A preset number flashes in the display.
The stations are stored from preset number 1.

**5 Press PRESET +/- repeatedly to select the preset number you want.****6 Press ENTER.**

“Complete!” appears in the display. The station is stored.

7 Repeat steps 1 to 6 to store other stations.**Other operations**

To	Do this
Tune in a station with a weak signal	Follow the procedure described in “Manual tuning preset” (page 58).
Stop scanning during automatic tuning	Press ■.
Cancel presetting	Press MENU.

To change the AM tuning interval (except for Saudi Arabian and Russian models)

Use the buttons on the unit for the operation. The factory settings for AM tuning interval is 9 kHz (or 10 kHz for some areas). To change the AM tuning interval, select any AM station first, then turn off the system. While holding down ■, press I/⏻ to turn on the system. “AM 9k Step” or “AM 10k Step” appears in the display. When you change the interval, all the AM preset stations are erased. To reset the interval, repeat the same procedure.

Note

You cannot change the AM tuning interval in Power Saving Mode (page 76).

Tips

- The preset stations are retained for half a day even if you unplug the power cord or if a power failure occurs.
- If you press TUNER/BAND on the unit while the system is turned off, the system turns on automatically and “TUNER” is selected as the function except during Power Saving Mode.

Listening to the radio

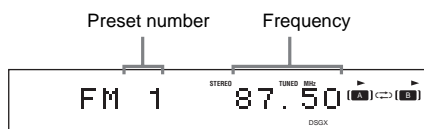
You can listen to a radio station either by selecting a preset station, or by manually tuning in the station.

Listening to a preset radio station

— *Preset Tuning*

Before tuning to preset stations, be sure to preset them first (see “Presetting radio stations” on page 58).

- 1 Press **FUNCTION +/-** repeatedly until “**TUNER FM**” or “**TUNER AM**” appears in the display (or press **TUNER/BAND** on the unit repeatedly to select “**FM**” or “**AM**”).
- 2 Press **PRESET +/-** repeatedly to select the preset station you want.



Listening to a non-preset radio station

— *Manual Tuning*

- 1 Press **FUNCTION +/-** repeatedly until “**TUNER FM**” or “**TUNER AM**” appears in the display (or press **TUNER/BAND** on the unit repeatedly to select “**FM**” or “**AM**”).
- 2 Press **TUNING +/-** repeatedly to tune in the station you want.

Tips

- For preset tuning, you can use the numeric buttons to select a preset station. Press the numeric button(s) to enter the preset number and then press **ENTER**.
- To improve broadcast reception, adjust the supplied antennas or connect a commercially available external antenna.
- When an FM stereo program has static noise, press **FM MODE** repeatedly until “**MONO**” lights up in the display. There will be no stereo effect, but the reception will improve.
- To record the radio programs, see “Recording onto a tape manually” (page 63) or “Timer recording radio programs” (page 74).

Tape – Playback

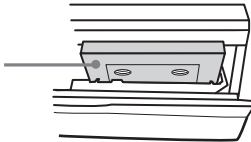
Loading a tape

Use the buttons on the unit for the operation.

1 Press \blacktriangle A or \blacktriangle B.

2 Load a tape into deck A or B.

With the side you want to play back or record facing forward



3 Push the center of the tape lid to close the deck.

Playing a tape

You can use TYPE I (normal) tape.

1 Load a tape.

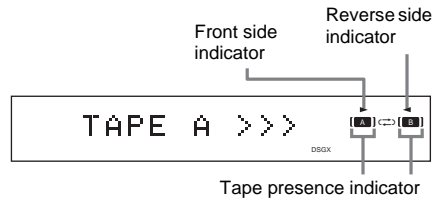
2 Press **FUNCTION +/-** (or **TAPE A/B** on the unit) repeatedly until “TAPE A” or “TAPE B” appears in the display.

3 Press **DIRECTION** on the unit repeatedly to select “ \rightleftarrows ” to play back one side, “ \rightleftarrows ”^{*1} to play back both sides or “RELAY”^{*2} (Relay Play) to play back both decks in succession.

4 Press \triangleright (or \triangleleft on the unit).

The tape starts playing.

Press \triangleright (or \triangleleft on the unit) again to play the reverse side.



^{*1} The playback stops automatically after repeating the sequence five times.

^{*2} Relay Play follows this cyclic sequence up to five times, then stops:

Deck A (front side) → Deck A (reverse side)
→ Deck B (front side) → Deck B (reverse side)

Other operations

To	Do this
Stop playback	Press \blacksquare .
Pause playback	Press \mathbb{I} . Press \mathbb{I} again to resume playback.
Fast-forward or rewind	Press \lll or \ggg (or press \llll or \gggg on the unit when playback is stopped). To return to normal playback, press \triangleright (or \triangleleft on the unit).
Remove a tape	Press \blacktriangle A or \blacktriangle B on the unit when playback is stopped.

Searching for the beginning of a track (AMS*)

During playback, press ◀◀ or ▶▶ (or ◀◀◀◀ or ▶▶▶▶ on the unit) repeatedly for the number of songs you want to skip forward (or backward).

The search direction, + (forward) or - (backward), and the number of songs being skipped (1~9) appears in the display.

Example: searching forward 2 songs



* AMS (Automatic Music Sensor)

Notes

- Do not press ▲ A or ▲ B on the unit while playing a tape, otherwise the tape could be damaged.
- The AMS function may not operate correctly under the following circumstances:
 - when the unrecorded space between songs is less than 4 seconds long.
 - when the unit is placed near a TV.

Tips

- When a tape is inserted, the corresponding presence indicator lights up in the display.
- If you press TAPE A/B on the unit while the system is turned off, the system turns on automatically and “TAPE A” or “TAPE B” is selected as the function except during Power Saving Mode.
- If you press ▷ (or ◀▷ on the unit) when the TAPE A function is selected and there is no tape in deck A, the system automatically switches to the TAPE B function when there is a tape in deck B and vice versa. Then, playback will start.

Tape – Recording

Recording your favorite disc onto a tape

— CD Synchro Recording



You can record a whole disc onto a tape. You can use TYPE I (normal) tape. The recording level is adjusted automatically.

Use the buttons on the unit for the operation.

- 1 Load a recordable tape into deck B.**
- 2 Press DVD and load a disc you want to record.**

For Super Audio CD, press SA-CD/CD to select the CD layer.
- 3 Press CD SYNC.**

“SYNC” lights up in the display.
“REC” flashes in the display.
Deck B stands by for recording.
- 4 Press DIRECTION repeatedly to select “→” to record on one side or “↔” (or “RELAY”) to record on both sides.**
- 5 Press REC PAUSE/START.**

“REC” lights up in the display.
Recording starts.

To stop recording

Press ■.

Notes

- You can only record the tracks on the CD layer of a Super Audio CD when you make CD Synchro Recording.
- You cannot listen to other sources while recording.
- When you press CD SYNC, the sound field is automatically changed to LINK if the headphones are not connected and HP 2CH if the headphones are connected.
- CD Synchro Recording stops when the current disc finishes playback.
- CD Synchro Recording cannot function in the following conditions:
 - during playback of the disc.
 - the on-screen display is showing the password input of parental control display.
 - before the system finishes reading the Table of Contents (TOC) of the disc.
- When CD Synchro Recording starts,
 - the setting for Repeat Play changes to “REPEAT OFF”.
 - Program Play and Shuffle Play is canceled.
- When you record from a VIDEO CD, PBC playback is automatically canceled.
- When you connect or disconnect a microphone or headphones during recording, the sound may cut off for a moment.

Tips

- When recording from the reverse side:

After step 1 of “Recording your favorite disc onto a tape”, press TAPE A/B repeatedly until “TAPE B” appears in the display. Press ◀▶ repeatedly until the TAPE B reverse side indicator lights up to start playback of the reverse side. Press ■ at the point you want to start recording.
- When recording on both sides:

Be sure to start from the front side. If you start from the reverse side, recording stops at the end of the reverse side.

Recording onto a tape manually

— Manual Recording

You can record just the portions you like from a disc, tape or radio program onto a tape. You can also record from the connected components (see “Hooking up optional components” on page 80).

Use the buttons on the unit for the operation.

- 1 Load a recordable tape into deck B.**
- 2 Press DVD, TAPE A/B, TUNER/BAND or VIDEO/SAT to select the source you want to record.**
- 3 Load the disc, tape or tune to the station you want to record. To record from the connected component, connect the external audio sources.**
- 4 Press REC PAUSE/START.**
“REC” flashes in the display.
Deck B stands by for recording.
- 5 Press DIRECTION repeatedly to select “←→” to record on one side or “↔” (or “RELAY”) to record on both sides.**
- 6 Press REC PAUSE/START.**
“REC” lights up in the display.
Recording starts.
- 7 Start playing the source to be recorded.**

To stop recording

Press ■.

Notes

- When you press REC PAUSE/START, the sound field is automatically changed to LINK if the headphones are not connected and HP 2CH if the headphones are connected.
- You cannot listen to other sources while recording.
- When you connect or disconnect a microphone or headphones during recording, the sound may cut off for a moment.

Tips

- When recording from the reverse side:
After step 1 of “Recording onto a tape manually”, press TAPE A/B repeatedly until “TAPE B” appears in the display. Press ◀▶ repeatedly until the TAPE B reverse side indicator lights up to start playback of the reverse side. Press ■ at the point you want to start recording.
- When recording on both sides:
Be sure to start from the front side. If you start from the reverse side, recording stops at the end of the reverse side.
- When recording from the radio:
If noise is heard while recording from the radio, move the respective antenna to reduce the noise.
- When recording from a disc onto a tape manually:
You can press ◀◀◀◀ or ▶▶▶▶ (or ◀◀ or ▶▶ on the remote) repeatedly to select the tracks during recording pause mode (after step 4 and before step 6 of “Recording onto a tape manually”).
- When recording from the tape:
If you set the direction to “↔” (or “RELAY”) when the tapes you use have different lengths, the tape in each deck reverses independently.

Sound Adjustment

Adjusting the sound

You can reinforce the bass and create a more powerful sound.

Use the buttons on the unit for the operation.

Press DSGX repeatedly.

Each time you press the button, the display changes as follows:

DSGX ON* ↔ DSGX OFF

* The volume switches to power mode and the equalizer curve changes.

Tips

- The default setting is “DSGX ON”.
- “DSGX” lights up in the display if “DSGX ON” is selected.

Selecting the sound field

You can take advantage of the surround sound simply by selecting one of the sound fields. They bring the exciting and powerful sound of movie theaters into your home.

1 Press **SOUND FIELD**.

The last selected sound field appears in the display.

2 Press **↑/↓** or **←/→** (**◀◀◀** or **▶▶▶** on the unit) repeatedly when the name of sound field is displayed to select the sound field you want.

The display changes as follows:

When the headphones are not connected

SBS MULTI¹⁾ ↔ A.F.D. AUTO¹⁾²⁾ ↔
PRO LOGIC¹⁾ ↔ PLII MOVIE¹⁾ ↔
PLII MUSIC¹⁾ ↔ V.M.DIM.¹⁾ ↔
LINK ↔ 2CH STEREO

When the headphones are connected

HP 2CH²⁾ ↔ HP VIRTUAL¹⁾

¹⁾These sound fields cannot be selected:

- when the system is in standby for recording or during recording.
- when a microphone is connected.
- when the Karaoke Mode is turned on.

²⁾When the current disc is a Super Audio CD, these sound fields are selected automatically and you cannot change the sound field.

SBS MULTI (Sound Broadcasting System Multi mode): Performs suitable decoding based on the source to maximize the sound field effect. This mode lets you enjoy audio playback of all types of discs from multiple speakers.

A.F.D. AUTO (Auto Format Direct Auto):

The number of sound channels depends on the source. During DVD function, when 2 channel sources such as AUDIO CD, VIDEO CD and MP3 audio tracks are played back, only 2 sound channels would be output. However, the number of sound channels output during DVD VIDEO and DivX video files playback would depend on the audio format selection. During other functions, the system would only output 2 sound channels. This setting is ideal when you want to listen to the original sound from the source. During Super Audio CD playback, the number of sound channels would depend on the layer and area selected (page 26).

PRO LOGIC: Performs Pro Logic decoding.

The source recorded in 2 channels is decoded into 4.1 channels.

PLII MOVIE: Performs Pro Logic II Movie mode decoding. This setting is ideal for movies encoded in Dolby Surround. In addition, this mode can reproduce sound in 5.1 channels when watching videos of overdubbed or old movies.

PLII MUSIC: Performs Pro Logic II Music mode decoding. This setting is ideal for normal stereo sources such as AUDIO CDs.

V.M.DIM.: Performs DCS (Digital Cinema Sound) decoding. The source recorded in 2 channels is decoded into 5.1 channels.

LINK: Reproduces the surround channels from the front channels.

2CH STEREO: Reproduces stereo output from multi channel sources such as DVD VIDEOS and DivX video files during DVD function. The system outputs the original sound during functions other than DVD and during playback of stereo sources such as AUDIO CD.

HP 2CH: The normal sound field for headphones.

HP VIRTUAL: The sound field for headphones with virtual surround effect. This sound field is only effective when you play back multi channel sources.

Notes

- For some discs, the surround effect may not be as much as expected.
- You can also press SOUND FIELD repeatedly to select the sound field you want.

Tips

- “PRO LOGIC” lights up in the display when Pro Logic decoding is performed.
- “PRO LOGIC II” lights up in the display when Pro Logic II Movie mode or Music mode decoding is performed.
- “VIRTUAL” lights up in the display when “HP VIRTUAL” is selected.
- “VIRTUAL” and “DCS” lights up in the display when “V.M.DIM.” is selected.

Selecting the preset effect

Use the buttons on the unit for the operation.

1 Press EQ SELECT.

“PRESET EQ” appears in the display. Then, the last selected preset effect appears in the display.

2 Press ◀◀◀◀ or ▶▶▶▶ repeatedly to select the preset effect you want.

3 Press EQ SELECT repeatedly until the original display returns.

Preset effect options

Effect	Category
ROCK	Standard music sources
POP	
JAZZ	
DANCE	
SOUL	
MP3 EQ	MP3 audio tracks
FLAT	Original music source
USER EQ	User equalizer setting

To cancel the preset effect

Select “FLAT” in step 2.

Adjusting the graphic equalizer and storing the user equalizer setting

You can adjust the sound by raising or lowering the level of specific frequency band, then store it in the user equalizer setting in the memory. Use the buttons on the unit for the operation.

- 1 Press **EQ SELECT**.
“PRESET EQ” appears in the display.
- 2 Press **EQ SELECT** again.
“LOW” appears in the display.
- 3 Press **◀◀◀** or **▶▶▶** repeatedly to adjust the level of the frequency band.
Frequency band Frequency level



- 4 Repeat steps 2 and 3 to adjust the level of the “MID” and “HIGH” frequency bands.
- 5 Press **EQ SELECT** again to return to the original display.
The setting is automatically stored each time you adjust the level of the frequency band as the user equalizer setting.
The previous setting stored in this memory location is erased and replaced by the new setting.

To call up the user equalizer setting

See “Selecting the preset effect” on page 66.

Singing along: Karaoke

DVD-V

DVD-RW

VIDEO CD

C D


DATA-CD

DATA DVD

You can sing along with any multiplex AUDIO CD, multiplex VIDEO CD or DVD VIDEO in Dolby Digital Karaoke format. You need to connect an optional microphone.

Preparing for karaoke

(DVD VIDEO, DVD-RW in VR (Video Recording) mode, VIDEO CD, AUDIO CD, MP3 audio tracks, DivX video files only)

- 1 Press **FUNCTION +/-** repeatedly until “DVD” appears in the display (or press DVD on the unit).
- 2 Turn **MIC LEVEL** on the unit to turn down the microphone volume to “MIN” and **ECHO LEVEL** on the unit to “MIN” to cancel the echo effect.
- 3 Connect an optional microphone to **MIC 1** jack or **MIC 2** jack on the unit.
Connect another optional microphone if you want to sing in duet.
The Karaoke Mode is turned on.
“KARAOKE MODE: ON” appears in the on-screen display and “” lights up in the display.
- 4 Start playing the music and adjust the volume.

When Karaoke Mode is turned on during DVD VIDEO playback, the system outputs the audio format that you have selected. When Karaoke Mode is turned on during AUDIO CD or VIDEO CD playback, the audio setting automatically changes to “1/L” and the system outputs the left channel audio on both front channels. If you want to hear vocal when Karaoke Mode is turned on, press **AUDIO** repeatedly to select another audio channel.

- 5 Start singing along with the music and adjust the microphone volume by turning MIC LEVEL on the unit.**

To adjust the microphone echo

Turn ECHO LEVEL on the unit to adjust the echo effect. To cancel the echo effect, turn ECHO LEVEL on the unit to "MIN".

To turn off the Karaoke Mode

Disconnect all the microphones or press KARAOKE MODE. "KARAOKE MODE: OFF" appears in the on-screen display and "🎤" disappears from the display. You can also turn off the Karaoke Mode by pressing KARAOKE MODE even when the microphones are connected.


Notes

- Karaoke Mode cannot be turned on when:
 - the current disc is a Super Audio CD
 - the headphones are connected
- If acoustic feedback (howling) occurs, move the microphone away from the speakers or change the direction of the microphone.
- Karaoke Mode is turned off automatically when you:
 - turn off the system
 - change the function
 - insert the headphones
 - start the test tone
 - load a Super Audio CD
- When you turn on the Karaoke Mode, the sound field is automatically changed to LINK if the headphones are not connected and HP 2CH if the headphones are connected.

Singing karaoke by reducing the vocal

(DVD VIDEO, DVD-RW in VR mode, VIDEO CD, AUDIO CD, MP3 audio tracks, DivX video files only)

You can enjoy karaoke with any disc, even if it is not a karaoke or multiplex disc, by reducing the sound of the vocal.

- 1 Press  DISPLAY once or twice when Karaoke Mode is turned on while playing a disc.**

The Control Menu appears in the on-screen display.

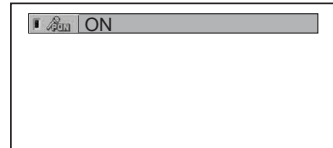
- 2 Press  or  repeatedly to select  (KARAOKE PON), then press ENTER.**

- 3 Press  or  repeatedly to select "ON", then press ENTER.**

The sound of vocal would be reduced.

Notes

- The singer's voice may not be reduced when:
 - only a few instruments are playing
 - a duet is being played back
 - the source has strong echoes or chorus
 - the singer's voice deviates from the center
 - the voice on the source is singing in high soprano or tenor
- To cancel the KARAOKE PON effect, select "OFF" in step 3.
- You can also change the "KARAOKE PON" setting by pressing KARAOKE PON. The following display appears in the on-screen display.




- You can only change the "KARAOKE PON" setting when the Karaoke Mode is turned on.
- The "KARAOKE PON" setting is automatically changed to "OFF" when you:
 - turn off the system
 - change the function
 - turn off the Karaoke Mode
 - open the disc tray
 - set the "VOCAL" setting to "ON"

Adjusting the pitch of the music



(DVD VIDEO, DVD-RW in VR mode, VIDEO CD, AUDIO CD, MP3 audio tracks, DivX video files only)

You can adjust the pitch of the music to suit your vocal range. You can adjust the key higher or lower in 14 halftone steps.

- 1 Press  **DISPLAY** once or twice when Karaoke Mode is turned on while playing a disc.



The Control Menu appears in the on-screen display.

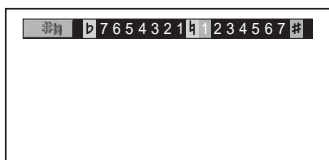
- 2 Press  or  repeatedly to select  (KEY CONTROL), then press ENTER.


- 3 Press  or  repeatedly to select the key you want.

The key is changed.

Notes

- You can also change the “KEY CONTROL” setting by pressing KEY CONTROL  to reduce the key and KEY CONTROL  to increase the key. The following display appears in the on-screen display.




- You can only change the setting for “KEY CONTROL” when Karaoke Mode is turned on.
- To cancel the KEY CONTROL effect, select  in step 3.
- The “KEY CONTROL” setting is automatically changed to default setting when you:
 - turn off the system
 - change the function
 - turn off the Karaoke Mode
 - open the disc tray
 - change the track or title
- Depending on the disc, you may not be able to do the above operation.

Turning on the vocals




(DVD VIDEO, VIDEO CD, AUDIO CD only)



When Karaoke Mode is turned on and a DVD VIDEO in Dolby Digital Karaoke format is played back, you can turn on the guide vocal recorded on the tracks.

When Karaoke Mode is turned on and an AUDIO CD or VIDEO CD is played back, you can turn on the vocal either by selecting STEREO or L+R.

- 1 Press  **DISPLAY** once or twice when Karaoke Mode is turned on while playing a disc.

The Control Menu appears in the on-screen display.

- 2 Press  or  repeatedly to select  (VOCAL), then press ENTER.

- 3 Press  or  repeatedly to select “ON”, then press ENTER.

The vocal is turned on.

■ During playback of a DVD VIDEO

You can listen to the guide vocal recorded in the Dolby Digital Karaoke format.

■ During playback of an AUDIO CD or VIDEO CD

When Karaoke Mode is turned on, the system outputs the left channel (accompaniment channel) from both front speakers. You can listen to the vocal when you set the “VOCAL” setting to “ON”.

Notes

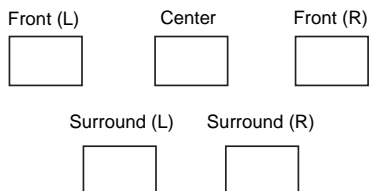
- To turn off the vocal, select “OFF” in step 3.
- You cannot turn on the vocal for DVD VIDEOS without guide vocal recorded.
- When playing a DVD VIDEO, the function only works for Dolby Digital Karaoke format.
- The “VOCAL” setting is automatically changed to “OFF” when you:
 - turn off the system
 - change the function
 - turn off the Karaoke Mode
 - open the disc tray
 - set the “KARAOKE PON” setting to “ON”

Dolby Digital Karaoke Format

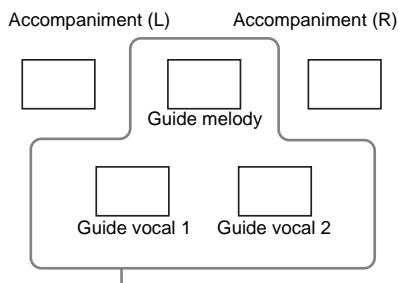
(DVD VIDEO only)

The Dolby Digital format, which reproduces surround sound using 5 channels, can also contain the “Dolby Digital Karaoke” format which is specialized for karaoke. In the Dolby Digital Karaoke format discs, guide melody and guide vocal tracks are recorded in addition to the accompaniment. You can select them when Karaoke Mode is turned on.

Speaker output in normal Dolby Digital format (5.1 channel)



Speaker output in Dolby Digital Karaoke format



You can select any of these. These are output from the front speakers.

You can check the audio information by pressing AUDIO (page 43). When playing a Dolby Digital Karaoke disc, “♪” appears at the current audio format (page 44).

Example:

DOLBY DIGITAL ♪ 3/2

- 2/0: Recorded only with accompaniment.
- 3/0: Recorded with guide melody.
- 3/1: Recorded with guide melody and one guide vocal.
- 3/2: Recorded with guide melody and two guide vocals.

Selecting the vocals

(DVD VIDEO, VIDEO CD, AUDIO CD only)

After setting “VOCAL” to “ON”, you can change the vocal type.

- 1 Press DISPLAY once or twice when Karaoke Mode is turned on while playing a disc.

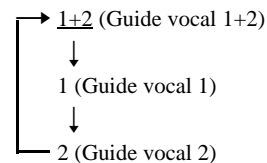
The Control Menu appears in the on-screen display.

- 2 Press or repeatedly to select (VOCAL SELECT), then press ENTER.

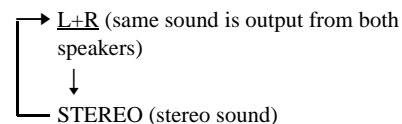
- 3 Press or repeatedly to select the vocal type you want, then press ENTER.

The vocal is changed.

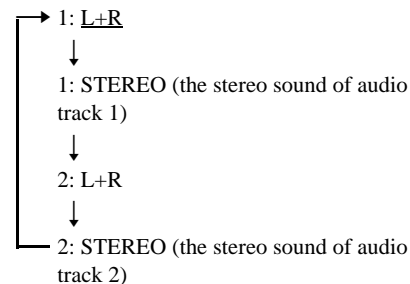
■ When playing a DVD VIDEO



■ When playing a VIDEO CD or AUDIO CD



■ When playing a Super VCD




Notes

- You cannot change the vocal for DVD VIDEOS with 1 guide vocal recorded.
- When playing a DVD VIDEO, the function only works for Dolby Digital Karaoke format.
- The “VOCAL SELECT” setting is automatically changed to default setting when you:
 - turn off the system
 - change the function
 - turn off the Karaoke Mode
 - open the disc tray
- Depending on the disc, you may not be able to do the above operation.



Turning on the guide melody (DVD VIDEO only)

You can turn on the guide melody when singing with DVD VIDEO in Dolby Digital Karaoke format.

- 1** Press  **DISPLAY** once or twice when Karaoke Mode is turned on while playing a disc.

The Control Menu appears in the on-screen display.

- 2** Press  or  repeatedly to select  (GUIDE MELODY), then press **ENTER**.

- 3** Press  or  repeatedly to select “ON”, then press **ENTER**.

The guide melody is turned on.

Notes

- To turn off the guide melody, select “OFF” in step 3.
- When playing a DVD VIDEO, the function only works for Dolby Digital Karaoke format.
- For DVD VIDEOS without guide melody, you cannot hear the guide melody even if you set the setting to “ON”.
- The “GUIDE MELODY” setting is automatically changed to “OFF” when you:
 - turn off the system
 - change the function
 - turn off the Karaoke Mode
 - open the disc tray

Mixing and recording sounds

You can “mix” sounds from any one of the function and singing or speaking into a microphone.

The mixed sound can be recorded onto a tape. Use the buttons on the unit for the operation.

- 1** Turn **MIC LEVEL** to “MIN” to turn down the microphone volume.

- 2** Connect an optional microphone to **MIC 1** or **MIC 2** jack.

- 3** Prepare the music source you want to mix. Then, insert a recordable tape in deck B.



- 4** Press the function button of the source you want to record (e.g., DVD).

If you want to record from TAPE A, press TAPE A/B repeatedly until “TAPE A” is selected.

- 5** Press **REC PAUSE/START**.

“REC” flashes in the display.

Deck B stands by for recording.

- 6** Press **DIRECTION** repeatedly to select “” to record on one side. Select “” (or “RELAY”) to record on both sides.

- 7** Press **REC PAUSE/START**.

“REC” lights up in the display.

Recording starts.

- 8** Start playing the source to be recorded.

Start singing along with the music.

- 9** Adjust the microphone volume by turning **MIC LEVEL**.

To stop recording

Press .

After you have finished

Turn **MIC LEVEL** to “MIN” and disconnect the microphone from **MIC 1** or **MIC 2** jack.

Notes

- During DVD function, the Karaoke Mode is automatically turned on when you connect an optional microphone to the MIC 1 or MIC 2 jack. To sing along with the original source, press KARAOKE MODE once to turn off the Karaoke Mode.
- When you connect the optional microphone, the sound field is automatically changed to LINK if the headphones are not connected or HP 2CH if the headphones are connected.

Tips

- When recording from the reverse side:
After step 3, press TAPE A/B repeatedly to select TAPE B. Press ◀▶ repeatedly until the TAPE B reverse side indicator lights up to start playback of reverse side. Press ■ at the point you want to start recording.
- When recording on both sides:
Be sure to start from the front side. If you start from the reverse side, recording stops at the end of the reverse side.
- If acoustic feedback (howling) occurs, move the microphone away from the speakers or change the direction of the microphone.
- If you want to record your voice through the microphone only, you can do so by selecting the DVD function and not playing a disc.
- When high level sound signals are input, the system automatically adjust the recording level to prevent distortion of the recorded sound signals (Auto Level Control Function).
- You cannot hear the sound output from the microphone when the selected disc is a Super Audio CD.

Falling asleep to music

— Sleep Timer

You can set the system to turn off after a certain time, so that you can fall asleep to music.

Press SLEEP repeatedly.

Each time you press the button, the minute display (the turn-off time) changes cyclically as follows:

90 min → 80 min → 70 min → ... → 10 min → OFF

Other operations

To	Do this
Check the remaining time	Press SLEEP once.
Change the time to turn off	Press SLEEP repeatedly to select the time you want.
Cancel the Sleep Timer	Press SLEEP repeatedly until "SLEEP OFF" appears in the display.

Note

When the Sleep Timer is activated, "SLEEP" lights up in the display.

Tip

You can use the Sleep Timer even if you have not set the clock.

Waking up to music

— Play Timer

You can wake up to music at a preset time. Make sure you have set the clock (see "Setting the clock" on page 13).

1 Prepare the music source you want to playback.

- Disc: Load a disc.
- Tape: Load a tape with the side you want to play back facing forward.
- Radio: Tune in the preset station you want (see "Listening to the radio" on page 60).

2 Press VOLUME +/- (or turn VOLUME on the unit) to adjust the volume.

3 Press TIMER MENU.

4 Press \uparrow or \downarrow repeatedly to select "PLAY SET?", then press ENTER.

"ON" appears and the hour indication flashes in the display.

5 Set the time to start playback.

Press \uparrow or \downarrow repeatedly to set the hour, then press ENTER.

The minute indication flashes in the display.

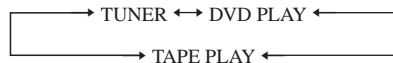
Press \uparrow or \downarrow repeatedly to set the minute, then press ENTER.

"OFF" appears and the hour indication flashes in the display.

6 Set the time to stop playback following the same procedure as step 5.

7 Press \uparrow or \downarrow repeatedly until the music source you want appears in the display.

Each time you press the button, the display changes as follows:



8 Press ENTER.

The type of timer (“PLAY TIMER”), followed by the start time, the stop time and the music source appears in the display in sequence before the original display returns.

9 Press I/⏻ to turn off the system.

Other operations

To	Do this
Check the setting	<ol style="list-style-type: none">1 Press TIMER MENU. “TIMER SEL?” appears in the display.2 Press ENTER.3 Press ▲ or ▼ repeatedly to select “PLAY SELECT?”, then press ENTER.
Change the setting	Start from step 1.
Cancel the Play Timer	<ol style="list-style-type: none">1 Press TIMER MENU. “TIMER SEL?” appears in the display.2 Press ENTER.3 Press ▲ or ▼ repeatedly to select “TIMER OFF?”, then press ENTER.

Notes

- You cannot select the Play Timer and the Timer Recording at the same time.
- If you use the Play Timer and the Sleep Timer at the same time, the Sleep Timer has priority.
- The Play Timer will not be activated if the system is turned on or if “STANDBY” flashes in the display.

Tips

- The system turns on 30 seconds before the preset time.
- When Play Timer is selected, “PLAY” lights up in the display.

Timer recording radio programs

You can record from a preset radio station from a specified time.

To make timer recording, you must first preset the radio station (see “Presetting radio stations” on page 58) and set the clock (see “Setting the clock” on page 13).

1 Tune in the preset radio station (see “Listening to a preset radio station” on page 60).

2 Press TIMER MENU.

3 Press **▲ or **▼** repeatedly to select “REC SET?”, then press ENTER.**

“ON” appears and the hour indication flashes in the display.

4 Set the time to start recording.

Press **▲** or **▼** repeatedly to set the hour, then press ENTER.

The minute indication flashes in the display.

Press **▲** or **▼** repeatedly to set the minute, then press ENTER.

“OFF” appears and the hour indication flashes in the display.

5 Set the time to stop recording following the same procedure as step 4.

The type of timer (“REC”), followed by the start time, the stop time and the preset radio station to be recorded (e.g., “TUNER FM 5”) appears in the display in sequence before the original display returns.

6 Load a recordable tape into deck B.





Make sure the tape is in the front side.

7 Press DIRECTION on the unit repeatedly to select “ When recording from the reverse side, press FUNCTION +/- (or TAPE A/B on the unit) repeatedly until “TAPE B” appears in the display. Then, press (or) on the unit) repeatedly until the TAPE B reverse side indicator lights up to start playback of reverse side. Press at the point where you want to start recording.

When recording on both sides, be sure to start from the front side. If you start from the reverse side, recording stops at the end of the reverse side.

8 Press to turn off the system.

Other operations

To	Do this
Check the setting	<ol style="list-style-type: none"> 1 Press TIMER MENU. “TIMER SEL?” appears in the display. 2 Press ENTER. 3 Press  or  repeatedly to select “REC SELECT?”, then press ENTER.
Change the setting	Start from step 1.
Cancel the Timer Recording	<ol style="list-style-type: none"> 1 Press TIMER MENU. “TIMER SEL?” appears in the display. 2 Press ENTER. 3 Press  or  repeatedly to select “TIMER OFF?”, then press ENTER.

Notes

- You cannot select the Play Timer and the Timer Recording at the same time.
- If you use the Timer Recording and the Sleep Timer at the same time, the Sleep Timer has priority.
- The Timer Recording will not be activated if the system is turned on or if “STANDBY” flashes in the display.
- The volume is reduced to minimum during Timer Recording.
- Do not operate the system from the time the system turns on until the recording starts (about 30 seconds before the preset time).

Tips

- The system turns on 30 seconds before the preset time.
- When Timer Recording is selected, “REC” lights up in the display.

Display

Turning off the display

— Power Saving Mode

The demonstration display and the clock display can be turned off to minimize the amount of power consumed during standby mode (Power Saving Mode).

Press DISPLAY repeatedly while the system is turned off until the demonstration display and the clock display disappears.

To cancel Power Saving Mode

Press DISPLAY repeatedly while the system is turned off.

Each time you press the button, the display changes cyclically as follows:

Demonstration¹⁾ → Clock²⁾ → No display (Power Saving Mode)

¹⁾ The display changes and the indicators flashes even when the system is turned off.

²⁾ “--:--” appears in the display if you have not set the clock.

Note

You cannot perform the following operations during Power Saving Mode:

- setting the clock (page 13)
- changing the AM tuning interval (page 59)
- turning on the system by pressing the function buttons
- changing the color system (page 11)

Tips

- The timer continues to operate in Power Saving Mode.
- The I/⏸ indicator lights up even in Power Saving Mode.

Viewing information about the disc in the front panel display

You can check the elapsed playing time and remaining time of the current track or that of the disc. When a DVD-TEXT disc, CD-TEXT disc, DATA CD or DATA DVD is loaded, you can also check the information recorded on disc, such as the titles.

Press DISPLAY repeatedly.

Each time you press the button, the display changes cyclically as follows:

Disc information → Clock display¹⁾ (for 8 seconds) → Preset effect name (for 8 seconds)

Checking the elapsed playing time, remaining time and titles

Press TIME/TEXT repeatedly during playback.

Each time you press the button, the display changes cyclically as follows:

■ When playing a DVD VIDEO or DVD-RW in VR (Video Recording) mode

- When the menu or the title without a chapter is played back
Elapsed playing time of the menu or the current title → Title of the disc²⁾
- When a title other than the above condition is played back
Elapsed playing time of the current title → Remaining time of the current title → Elapsed playing time of the current chapter → Remaining time of the current chapter → Title of the disc²⁾³⁾

■ When playing an AUDIO CD, Super Audio CD or VIDEO CD without PBC function

Elapsed playing time of the current track → Remaining time of the current track → Elapsed playing time of the current disc⁴⁾ → Remaining time of the current disc⁴⁾ → Title of the disc²⁾⁵⁾

■ When playing a Super VCD without PBC function

Elapsed playing time of the current track →
Title of the disc²⁾⁵⁾

■ When playing a Super VCD or VIDEO CD with PBC function

Elapsed playing time of the current scene →
Title of the disc²⁾⁶⁾

■ When playing MP3 audio tracks on a DATA CD

Elapsed playing time of the current track →
Title of the track

■ When playing DivX video files on a DATA CD or DATA DVD (except for Latin American models)

Elapsed playing time of the current file →
Title of the file⁷⁾

Checking the total playing time and titles

Press TIME/TEXT repeatedly when playback is stopped.

Each time you press the button, the display changes cyclically as follows:

■ DVD VIDEO or DVD-RW in VR mode

Total number of titles on the disc →
Title of the disc²⁾

■ AUDIO CD, Super Audio CD or VIDEO CD without PBC playback

Total number of the tracks on the disc and the total playing time of the disc →
Title of the disc²⁾

■ VIDEO CD with PBC playback

Total number of scenes on the disc →
Title of the disc²⁾

- 1) “- -: -” appears in the display if you have not set the clock.
- 2) “NO TEXT” appears in the display if the DVD VIDEO is not a DVD-TEXT disc, the AUDIO CD is not a CD-TEXT disc or the VIDEO CD or Super Audio CD does not have text information.
- 3) The current chapter number and the current title number is displayed for 2 seconds before the display returns to elapsed playing time when TIME/TEXT is pressed during display of title of the disc.
- 4) When Program Play or Shuffle Play is turned on, the elapsed playing time and the remaining time of the disc would be skipped.
- 5) The current track number and current index number is displayed for 2 seconds before the display returns to elapsed playing time when you press TIME/TEXT during display of the title of disc.
- 6) The current scene number is displayed for 2 seconds before the display returns to elapsed playing time when you press TIME/TEXT during display of title of the disc.
- 7) The current album number and the current file number is displayed for 2 seconds before the display returns to elapsed playing time when TIME/TEXT is pressed during display of title of the file.

Notes

- If you play back a disc containing JPEG image files only, “JPEG” or “No Audio” appears in the display.
- When the selected disc is a DATA CD with MP3 audio tracks and/or JPEG image files or a DATA CD/DATA DVD with DivX video files, the total number of albums on the disc appears in the display when the playback is stopped and the list of album/track/file is not displayed in the on-screen display.
- You cannot use TIME/TEXT to change the disc information when
 - a JPEG image file is played back
 - playback for a DATA CD with MP3 audio tracks and/or JPEG image files is stopped
 - playback for a DATA CD or DATA DVD with DivX video files is stopped
- If the MP3 audio track title contains characters which cannot be displayed, these characters will be displayed as “*”.
- The elapsed playing time of MP3 audio tracks and DivX video files may not be displayed correctly.

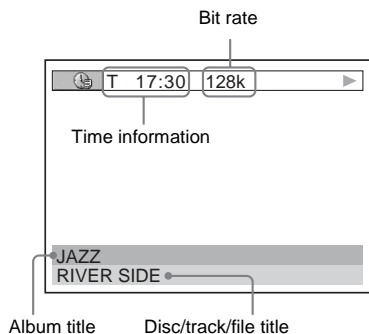
Viewing information about the disc in the on-screen display

You can check the elapsed playing time and remaining time of the current title, chapter, or track, and the total playing time of the disc.

You can also check the DVD-TEXT, CD-TEXT, disc title, album title, track title and file title.

Press **TIME/TEXT** repeatedly during playback to change the time and title information.

The time display and title display that you can view in the on-screen display depends on the disc you are playing.



The time display appears at the top portion of the on-screen display and the title display appears at the bottom portion of the on-screen display.

■ When playing a DVD VIDEO or DVD-RW in VR (Video Recording) mode

- T **: **: **
Elapsed playing time of the current title
- T_ **: **: **
Remaining time of the current title
- C **: **: **
Elapsed playing time of the current chapter
- C_ **: **: **
Remaining time of the current chapter
- **: **: **
Elapsed playing time of the menu or current title without a chapter
- Title of the disc¹⁾

■ When playing a VIDEO CD/Super VCD with PBC function

- **: **: **
Elapsed playing time of the current scene
- Title of the disc¹⁾

■ When playing a Super Audio CD, AUDIO CD or VIDEO CD without PBC function

- T **: **: **
Elapsed playing time of the current track
- T _ **: **: **
Remaining time of the current track
- D **: **: **
Elapsed playing time of the current disc
- D _ **: **: **
Remaining time of the current disc
- Title of the disc¹⁾

■ When playing a Super VCD without PBC function

- T **: **: **
Elapsed playing time of the current track
- Title of the disc¹⁾

■ When playing MP3 audio tracks on a DATA CD

- T **: **: ** **k
Elapsed playing time of the current track and the bit rate of the track
- Title of the track and album

■ When playing JPEG image files on a DATA CD


- Title of the album

■ When playing DivX video files on a DATA CD or DATA DVD

- **: **: **: ** **k
Elapsed playing time of the current file and the bit rate of the track if the audio track is in MP3 format
- Title of the track and album

¹⁾ "NO TEXT" appears in the display if the DVD VIDEO is not a DVD-TEXT disc, the AUDIO CD is not a CD-TEXT disc or the VIDEO CD or Super Audio CD does not have text information.

To turn off the Control Menu


Press  DISPLAY repeatedly until the Control Menu disappears from on-screen display.

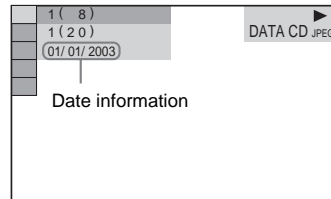
Notes

- Only alphabet letters, numbers and some symbols can be displayed.
- Depending on the type of disc being played back, the system can only display a limited number of characters. Depending on the disc, not all text characters are displayed.
- With format other than ISO 9660 Level 1 and Level 2, album title and track title may not be displayed.

Checking the date information of JPEG image files

You can check the date information during playback when Exif* tag is recorded in the JPEG image files.

Press  DISPLAY repeatedly during playback until the Control Menu for JPEG image files appears in the on-screen display.



* “Exchangeable Image File Format” is a digital camera image format defined by the Japan Electronics & Information Technology Industries Association (JEITA).

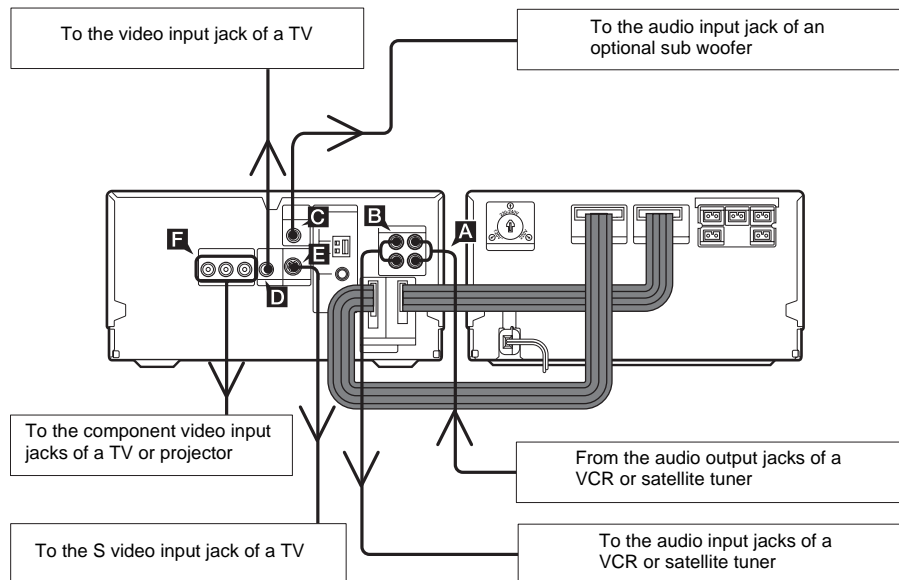
Notes

- If there is no date information or the data is damaged on the disc, the system cannot display the date information.
- The date information format varies depending on the area.

Optional Components

Hooking up optional components

To enhance your system, you can connect optional components. Refer to the operating instructions provided with each component.



A VIDEO/SAT IN L/R jacks

Use audio cords (not supplied) to connect an optional component (such as a VCR or satellite tuner) to these jacks. You can then record from or listen to the component through this system.

B VIDEO/SAT OUT L/R jacks

Use audio cords (not supplied) to connect an optional component (such as a VCR or satellite tuner) to these jacks. You can then output audio to the component from this system.

Note

There is no audio output from these jacks during VIDEO or SAT function.

C SUB WOOFER OUT jack

Use an audio cord (not supplied) to connect an optional sub woofer* to this jack.

* SA-WZ88 is recommended.

In some areas, the SA-WZ88 may not yet be available.

Note

The effects may be limited or noise may occur depending on the connected sub woofer or the type of music being played back. For details, consult your nearest Sony dealer.

D VIDEO OUT jack

Use a video cord (supplied) to connect a TV to this jack. You can then output the video to the TV from this system, and enjoy the video images of DVD VIDEOS, etc.

S VIDEO OUT jack

Use an S video cord (not supplied) to connect a TV to this jack. You can enjoy higher quality video images.

COMPONENT VIDEO OUT jacks

Use component video cords (not supplied) to connect a TV or projector to these jacks. If your TV accept progressive format signals, you must use this connection and press PROGRESSIVE on the unit repeatedly to select "P AUTO" or "P VIDEO".

Listening to audio from a connected component

Listening to a connected VCR or satellite tuner

Use the buttons on the unit for the operation.

1 Connect the audio cords.

See "Hooking up optional components" on page 80.

2 Press VIDEO/SAT.

To switch between the "VIDEO" and "SAT" function

Hold down VIDEO/SAT and press I/⏻ while the system is turned on. Release I/⏻ first, then release VIDEO/SAT. The system switches the function from "VIDEO" to "SAT" and vice versa.

Note

If the sound is distorted or too loud when "VIDEO" function is selected, switch to "SAT" function.

Tip

You can press FUNCTION +/- on the remote repeatedly to select "VIDEO" or "SAT".

Recording audio signal from a connected component

- 1 Connect the audio cords.**
See “Hooking up optional components” on page 80.
- 2 Start recording manually.**
See “Recording onto a tape manually” on page 63.

Recording audio signal on a connected component

Recording the audio signal on a connected component

- 1 Connect the audio cords.**
See “Hooking up optional components” on page 80.
- 2 Start recording.**
Refer to the operating instructions provided with connected component.

Recording the audio and video signals from a VIDEO CD onto a video tape

- 1 Connect optional audio cords from the VIDEO/SAT OUT jacks and the supplied video cord from the VIDEO OUT jack to the audio and video input jacks of your VCR.**
- 2 Start recording.**
Refer to the operating instructions provided with connected component.

Note

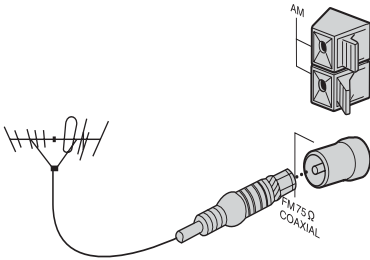
The audio signal from VIDEO/SAT OUT jacks may cut off for a moment during some operations such as when you press SOUND FIELD, AUDIO or KARAOKE MODE.

Connecting external antennas

Connect an external antenna to improve the reception.

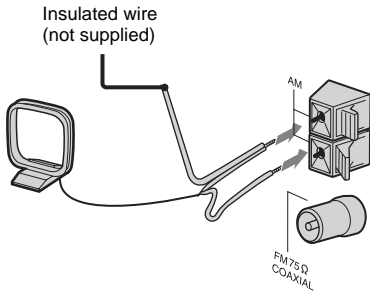
FM antenna

Connect an optional FM external antenna. You can also use the TV antenna instead.



AM antenna

Connect a 6 to 15 meter insulated wire to the AM antenna terminal. Leave the supplied AM loop antenna connected.



Troubleshooting

Problems and remedies

Should you encounter a problem with your system, do the following:

- 1 Make sure the power cord and speaker cords are connected correctly and firmly.
- 2 Find your problem in the troubleshooting checklist below and take the indicated corrective action.

If the problem persists after doing all of the above, consult your nearest Sony dealer.

When the I/⏻ indicator flashes

Immediately unplug the power cord and check the following items.

- Are the system control cables connected correctly?
- Are the + and – speaker cords short-circuited?
- Are you using the supplied speakers?
- Is anything blocking the ventilation holes on the rear of the unit?

After checking the above items and fixing any problems, plug in the power cord again and turn on the system. If the I/⏻ indicator still flashes, or if the cause of the problem cannot be found even after checking all the above items, consult your nearest Sony dealer.

General

The display starts flashing as soon as you plug in the power cord even though you have not turned on the system.

- The demonstration mode started. Press I/⏻ (see step 6 of “Hooking up the system” on page 11).

The clock/timer setting is canceled.

- The power cord is disconnected or a power failure occurred. Redo “Setting the clock” (page 13). If you have set the timer, redo “Waking up to music” (page 73) and “Timer recording radio programs” (page 74).

The radio presetting is canceled.

- The power cord is disconnected or a power failure occurred for longer than half a day. Redo “Presetting radio stations” (page 58).

“- -: -” appears in the display.

- A power failure has occurred. Set the clock (page 13) and timer settings (pages 73 and 74) again.

There is no sound.

- Press VOLUME + repeatedly (or turn VOLUME clockwise on the unit).
- The headphones are connected to the PHONES jack.
- Check the speaker connections (page 9).
- There is no audio output during Timer Recording.
- The system is in pause mode, in slow motion play or in fast forward/reverse mode. Press ▷ (or ◀▷ on the unit) to start playback.

There is no microphone sound.

- Press VOLUME + repeatedly (or turn VOLUME clockwise on the unit) or turn MIC LEVEL clockwise on the unit to adjust the microphone volume.
- Make sure the microphone is connected to the MIC 1 or MIC 2 jack correctly.
- The selected disc is a Super Audio CD.

There is severe hum or noise.

- A TV or VCR is placed too close to the system. Move the system away from the TV or VCR.
- Move the system away from the source of noise.
- Connect the system to a different wall outlet.
- Install a noise filter (commercially available) to the power cord.

The timer does not function.

- Check the timer setting and set the correct time (pages 73 and 74).
- Cancel the Sleep Timer function (page 73).
- You cannot select the Play Timer and the Timer Recording at the same time.

The remote does not function.

- Remove the obstacles between the remote and the unit.
- Move the remote closer to the unit.
- Point the remote at the unit's sensor.
- Replace the batteries (R6/size AA).
- Locate the unit away from the fluorescent light.

There is acoustic feedback.

- Reduce the volume.
- Move the microphone away from the speakers or change the direction of the microphone.

The color irregularity on a TV screen persists.

- Turn off the TV at once, then turn it on after 15 to 30 minutes. If the color irregularity still persists, place the speakers further away from the TV.

The sound from the component connected to the VIDEO/SAT IN jacks is distorted.

- If "VIDEO" appears in the display when you press VIDEO/SAT on the unit, switch to "SAT" function (see "Listening to a connected VCR or satellite tuner" on page 81).

Speakers

Sound comes from one channel or unbalanced left and right volume.

- Place the speakers as symmetrically as possible.
- Check that the speaker are connected securely and correctly.
- The source being played back is monaural.
- Adjust the level of each speaker (page 56).

The sound comes from the center speaker only.

- Depending on the disc, the sound may come from the center speaker only.

There is no sound from the optional sub woofer.

- Set the sub woofer level to the appropriate level.
- No sound is produced from the sub woofer when you play back a DVD VIDEO that does not have sub woofer output recorded.
- The software being played back has limited sound effects.
- Check that the sub woofer is connected securely and correctly.
- Make sure that "SUBWOOFER" is set to "YES" (page 55).

There is no sound from the surround speaker.

- Set the surround speaker level to the appropriate level.
- The software being played back has limited sound effects. Check the volume with the test tone (page 56).
- Check that the surround speakers are connected securely and correctly.
- Make sure the size setting for "SURROUND" is set to "BEHIND" or "SIDE" (page 55).

There is no sound from the center speaker.

- Set the center speaker level to the appropriate level.
- The software being played back has limited sound effects. Check the volume with the test tone (page 56).
- Check that the center speaker is connected securely and correctly.
- Make sure that the size setting for "CENTER" is set to "YES" (page 55).

Sound lacks bass.


- Check that the speaker's + and - terminals are connected correctly.

Disc player



The disc tray does not open and “LOCKED” appears in the display.

- Consult your nearest Sony dealer.
-



The disc tray does not close.

- Load the disc correctly.
 - Always close the tray by pressing  on the unit. Do not forcibly push the disc tray to close it as this may cause a malfunction.
-

The disc does not eject.

- You cannot eject the disc during CD Synchro Recording. Press  to cancel the CD Synchro Recording, then press  on the unit to eject the disc.
 - Consult your nearest Sony dealer.
-




Playback does not start.

- Open the disc tray and check whether a disc is loaded.
 - Wipe the disc clean (page 93).
 - Reload the disc.
 - Load the disc that this system can play back (page 5).
 - Load the disc correctly.
 - Load the disc in the tray with the label side facing up.
 - Remove the disc and wipe away the moisture on the disc, then leave the system turned on for a few hours until the moisture evaporates.
 - Press  (or  on the unit) to start playback.
 - The region code on the DVD VIDEO does not match the system.
 - Cancel the Custom Parental Control function (page 47).
-

The sound skips.

- Wipe the disc clean (page 93).
 - Reload the disc.
 - Try moving the unit to a place without vibration (e.g., on top of a stable stand).
 - Try moving the speakers away from the unit, or placing them on separate stands. When you listen to a track with bass sounds at high volume, the speaker vibration may cause the sound to skip.
-

Playback does not start from the first track.

- The system is in Program Play or Shuffle Play mode. Turn off Program Play and Shuffle Play.
 - Resume Play has been selected. Press . Then, press  (or  on the unit) to start playback (page 20).
 - The title, DVD VIDEO or PBC menu automatically appears on the screen.
-

Playback starts automatically.

- The DVD VIDEO features an auto playback function.
-

Playback stops automatically.

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

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

- Depending on the disc, you may not be able to do some of the operations above. Refer to the operating instructions supplied with the disc.
-

MP3 audio track cannot be played back.

- Recording was not performed according to the ISO 9660 Level 1, Level 2, or Joliet in the expansion format.
 - The MP3 audio track does not have the extension “.MP3”.
 - The data is not stored in MP3 format.
 - The MP3 audio tracks in format other than MPEG 1 Audio Layer 3 and MPEG 2 Audio Layer 3 cannot be played back.
 - The system can play back to a depth of 8 folders only.
 - The “MODE (MP3, JPEG)” setting has been set to “IMAGE (JPEG)” (page 33).
 - The disc contains DivX video files.
 - The system cannot play back MP3 audio tracks recorded on DATA DVDs.
 - The disc contains more than 200 albums.
 - The album contains more than 300 tracks when “MODE (MP3, JPEG)” is set to “AUTO” and more than 600 tracks when “MODE (MP3, JPEG)” is set to “AUDIO (MP3)”.
-

MP3 audio tracks take longer time to play back than others.

- After the system reads all the tracks on the disc, playback may take more time than usual if:
 - the number of albums or tracks on the disc is very large.
 - the album and track organization structure is very complex.

The JPEG image file cannot be played back.

- Recording was not performed according to the ISO 9660 Level 1, Level 2, or Joliet in the expansion format.
- The JPEG image file does not have the extension “.JPG” or “.JPEG”.
- The data is not stored in JPEG format.
- JPEG image files with a high width to length ratio cannot be played back.
- The JPEG image file is larger than 3,072 (width) x 2,048 (height) in normal mode or more than 3,300,000 pixels in Progressive JPEG.
- The system can play back to a depth of 8 folders only.
- The “MODE (MP3, JPEG)” setting has been set to “AUDIO (MP3)” (page 33).
- The disc contains DivX video files.
- The system cannot play back JPEG image files recorded on DATA DVDs.
- The disc contains more than 200 albums.
- The album contains more than 300 files when “MODE (MP3, JPEG)” is set to “AUTO” and more than 600 files when “MODE (MP3, JPEG)” is set to “IMAGE (JPEG)”.

DivX video file cannot be played back.

- Recording was not performed according to the ISO 9660 Level 1, Level 2, or Joliet in the expansion format.
- The DivX video file does not have the extension “.AVI” or “.DIVX”.
- The data is not stored in DivX format.
- DivX video files with a high width to length ratio cannot be played back.
- The system can play back to a depth of 8 folders.
- The disc contains more than 200 albums.
- The album contains more than 600 files.


The disc title, album title, track title, CD-TEXT and DVD-TEXT characters do not appear properly.

- Recording was not performed according to the ISO 9660 Level 1, Level 2, or Joliet in the expansion format.
 - The character code that can be displayed by this system are as follows:
 - Upper cases (A to Z)
 - Lower cases (a to z)
 - Numbers (0 to 9)
 - Symbols (<> * +, - / [] \ _)
- Other characters may not be displayed correctly.

The surround effect is difficult to hear when you are playing a Dolby Digital or MPEG audio sound track.

- Make sure the sound field is set properly (page 65).
- Check the speaker connections and settings (pages 9 and 54).
- Depending on the DVD VIDEO, the output signal may not be the entire 5.1 channel. It may be monaural or stereo, even if the sound track is recorded in Dolby Digital or MPEG audio format.

The sound loses stereo effect when you playback a disc.

- Unplug the microphone or press KARAOKE MODE repeatedly until “” disappears from the display or “KARAOKE MODE: OFF” appears in the on-screen display.
- Make sure the system is connected properly.

Picture

There is no picture.

- Press FUNCTION +/- repeatedly until “DVD” appears in the display (or press DVD on the unit).
- Check that the system is connected securely.
- The video cord is damaged. Replace it with a new one.
- Make sure you connect the unit to the video input jack of your TV (page 10).
- Make sure you turn on the TV and operate the TV correctly.
- Press PROGRESSIVE on the unit repeatedly until “INTERLACE” appears in the display if:
 - you connect your TV to the system’s COMPONENT VIDEO OUT jacks but your TV cannot accept progressive signals.
 - the image is affected even though your TV is compatible with progressive format (525p/ 625p) signals.
- Make sure you select the video input on the TV so that you can view the pictures from the system.
- Make sure you set the color system correctly, according to your TV’s color system (page 11).
- Make sure you connect the unit and your TV using only the supplied video cord.

Picture noise appears.

- Clean the disc.
- If video signal from your system has to go through your VCR to your TV, the copy-protection applied to some DVD VIDEO programs could affect the picture quality. If you still experience problems after checking your connections, connect your unit directly to your TV's S Video input (page 10).
- Set the color system to match your TV (page 11).

The aspect ratio of the TV screen cannot be changed even though you can set "TV TYPE" in "SCREEN SETUP" in the Setup Menu when you play back a wide picture.

- The aspect ratio is fixed on your DVD VIDEO.
- If you connect the unit with the S Video cord, connect directly to the TV. Otherwise, you may not change the aspect ratio.
- Depending on the TV, you may not change the aspect ratio.

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

- Select the language you want for the on-screen display in "OSD" under "LANGUAGE SETUP" in the Setup menu (page 51).

The language for the sound track cannot be changed.

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

The subtitles language cannot be changed.

- Multilingual subtitles are not recorded on the DVD VIDEO being played back.
- The DVD VIDEO prohibits changing the subtitles.

The subtitles cannot be turned off.

- The DVD VIDEO prohibits turning off subtitles.

The angles cannot be changed.

- Multi-angles are not recorded on the DVD VIDEO being played back.
 - The DVD VIDEO prohibits changing the angles.
-

Tuner

There is severe hum or noise ("TUNED" or "STEREO" flashes in the display).

- Set the proper band and frequency (page 58).
- Connect the antenna properly (page 10).
- Find a place and an orientation that provide good reception, then set up the antenna again. If you cannot obtain good reception, we recommend that you connect a commercially available external antenna.
- The supplied FM lead antenna receives signals along its entire length, so make sure you extend it fully.
- Locate the antennas as far away from the speaker cords as possible.
- Try turning off the surrounding electrical equipment.

A stereo FM program cannot be received in stereo.

- Press FM MODE repeatedly until "MONO" disappears from the display.
-

Tape deck

The tape does not record or play back, or there is a decrease in sound level.

- The tape heads are dirty (see "Cleaning the tape heads" on page 93).
- The record/playback heads are magnetized (see "Demagnetizing the tape heads" on page 93).

The tape does not erase completely.

- The record/playback heads are magnetized (see "Demagnetizing the tape heads" on page 93).

There is excessive wow or flutter, or the sound drops out.

- The capstans or pinch rollers are dirty (see "Cleaning the tape heads" on page 93).

Noise increases or the high frequencies are erased.

- The record/playback heads are magnetized (see "Demagnetizing the tape heads" on page 93).

The tape does not record.

- No tape is loaded. Load a tape.
 - The tab has been removed from the tape. Cover the broken tab with adhesive tape (page 93).
 - The tape has reeled to the end.
-

Optional components

There is no sound.

- Refer to General item “There is no sound.” (page 84) and check the condition of the system.
- Connect the component properly (page 80) while checking:
 - if the cords are connected properly.
 - if the cord plugs are firmly inserted all the way.
- Turn on the connected component.
- Refer to the operating instructions supplied with the connected component and start playing.

If the system still does not operate properly after performing the above measures or other troubles does not described above occur, reset the system as follows:

Use the buttons on the unit for the operation.


- 1** Unplug the power cord.
- 2** Plug the power cord back in.
- 3** Press I/⏻ to turn on the unit.
- 4** Press ■, CD SYNC and I/⏻ at the same time.
“COLD RESET” appears in the display.

The system is reset to the factory settings except for DVD settings. You should set the settings you made, such as the preset stations, clock and timer.

To return the DVD settings to the default settings*, perform reset as follows:

- 1** Press  **DISPLAY** when playback is stopped.

The Control Menu appears in the on-screen display.

- 2** Press **↑** or **↓** repeatedly to select  (SETUP), then press **ENTER**.


- 3** Press **↑** or **↓** repeatedly to select “RESET”, then press **ENTER**.

- 4** Press **↑** or **↓** repeatedly to select “YES”, then press **ENTER**

It takes a few seconds to complete. Do not press I/⏻ when resetting the system.

* Except for Parental Control settings

Notes

- If you have connected an optional sub woofer, turn off the sub woofer before you reset the system.
- When you turn the system on after resetting, the guide message appears in the on-screen display. To perform QUICK SETUP, press **ENTER** (page 14). To quit QUICK SETUP, press  **DISPLAY**.

Self-diagnosis function

(When letters/numbers appear in the display)

When the self-diagnosis function is activated to prevent the system from malfunctioning, a 5-character service number (e.g. C 13 50) with a combination of a letter and 4 digits appears in the on-screen display and the front panel display. In this case, check the following table.

First 3 characters of the service number	Cause and corrective action
C 13	The disc is dirty. → Clean the disc with a soft cloth (page 93).
C 31	The disc is not inserted correctly. → Restart the system, then re-insert the disc correctly.
E XX (XX is a number)	To prevent a malfunction, the system 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

Messages

One of the following messages may appear or flash in the front panel display during operation.

Disc

Cannot Play

- A disc that cannot be played back was inserted.
- A DVD VIDEO with unsupported region code was inserted.

No Disc

There is no disc on the disc tray.

Push STOP!

You have pressed the buttons whose operation is only possible when playback is stopped.

Reading

The system is reading information of the disc. Some buttons are not available.

Please Wait

The system is doing initialization process.

Data Error

- The MP3 audio track, JPEG image file and DivX video file you want to play back is damaged.
- The MP3 audio track does not conform to MPEG 1 Audio Layer 3 format.
- The JPEG image file does not conform to DCF format.
- The DivX video file does not conform to DivX Certified profiles.
- The MP3 audio track has the extension “.MP3” but it is not in MP3 format.
- The JPEG image file has the extension “.JPG” or “.JPEG” but it is not in JPEG format.
- The DivX video file has the extension “.AVI” or “.DIVX” but it is not in DivX format.

PASSWORD

Custom Parental Control or Parental Control is set.

Tape

No Tab

You cannot record the tape because the tab has been removed from the tape.

No Tape

There is no tape in the tape deck.

Timer

OFF TIME NG!

The on time and off time of Play Timer or Timer Recording is the same.

Others

Not in Use

You have pressed a button whose operation is not allowed or invalid at that time.

Invalid

You have pressed an invalid button.

Additional Information

Precautions

On operating voltage

Before operating the system, check that the operating voltage of the unit is identical with the voltage of your local power supply.

On safety

- The unit is not disconnected from the AC power source (mains) as long as it is connected to the wall outlet, even if the unit itself has been turned off.
- Unplug the unit from the wall outlet (mains) if it is not to be used for an extended period of time. To disconnect the power cord (mains lead), pull it out by the plug. Never pull the cord itself.
- Should any solid object or liquid fall into the unit, unplug the unit and have it checked by qualified personnel before operating it any further.
- AC power cord must be changed only at the qualified service shop.

On placement

- Do not place the unit in an inclined position.
- Do not place the unit in locations where it is:
 - extremely hot or cold
 - dusty or dirty
 - very humid
 - subject to vibrations
 - subject to direct sunlight.
- Use caution when placing the unit or speakers on surfaces that have been specially treated (with wax, oil, polish, etc.) as staining or discoloration of the surface may result.

On heat build-up

- Although the unit heats up during operation, this is not a malfunction.
- Place the unit in a location with adequate ventilation to prevent heat build-up in the unit.
- If you continuously use this unit at a large volume, the cabinet temperature of the top, side and bottom rises considerably. To avoid burning yourself, do not touch the cabinet.
- To prevent a malfunction, do not cover the ventilation hole for the cooling fan.

In case color irregularity is observed on a nearby TV screen

With the magnetically shielded type of speakers, the speakers can be installed near a TV set. However, color irregularity may still be observed on the TV screen depending on the type of your TV set.

If color irregularity is observed...

Turn off the TV set once, then turn it on after 15 to 30 minutes.

If color irregularity is observed again...

Place the speakers farther away from the TV set.

IMPORTANT NOTICE

Caution: This system 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.

On operation

- If the unit is brought directly from a cold to a warm location, or is placed in a very damp room, moisture may condense on the lens inside the unit.
Should this occur, the system will not operate properly. Remove the disc and leave the unit turned on for about an hour until the moisture evaporates.
- Before you move the unit, make sure that all discs are removed from the unit.

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

Notes on discs

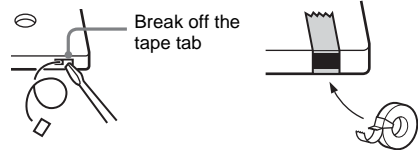
- Before playing, clean the disc with a cleaning cloth. Wipe the disc from the center out.
- Do not use solvents such as benzene, thinner, commercially available cleaners or anti-static spray intended for vinyl LPs.
- Do not expose the disc to direct sunlight or heat sources such as hot air ducts nor leave it in a car parked in direct sunlight.
- Do not use discs encircled with a protection ring. This may cause a malfunction to the system.
- When using discs that have glue or similar tacky substance on the label side of the disc or that used a special ink when the label was printed, there is a chance that the disc or label may become attached to parts inside this unit. When this occurs, it may not be possible to remove the disc, and may also cause this system to malfunction. Be sure to check that the label side of the disc is not sticky before using.
The following types of disc should not be used:
 - rental or used discs with attached seals where the glue extends beyond the seal. The perimeter of the seal on the disc is tacky.
 - discs that have labels printed using a special ink that feels tacky when touched.
- Discs with non-standard shapes (e.g., heart, square, star) cannot be played back on this system. Attempting to do so may damage the system. Do not use such discs.

Cleaning the cabinet

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

To save a tape permanently

To prevent a tape from being accidentally recorded over, break off the tape tab from side A or B as illustrated.



If you later want to reuse the tape for recording, cover the broken tab with adhesive tape.

Before placing a tape in the tape deck

Take up any slack in the tape deck. Otherwise, the tape may get entangled in the parts of the tape deck and become damaged.

When using a tape longer than 90 minutes

The tape is very elastic. Do not change the tape operations such as playback, stop and fast-winding etc. frequently. The tape may get entangled in the tape deck.

Cleaning the tape heads

Clean the tape heads after every 10 hours of use. Be sure to clean the tape heads before you start an important recording or after playing an old tape. Use a separately sold dry-type or wet-type cleaning tape. For details, refer to the instructions of the cleaning tape.

Demagnetizing the tape heads

Demagnetize the tape heads and the metal parts that have contact with the tape after every 20 to 30 hours of use with a separately sold demagnetizing tape. For details, refer to the instructions of the demagnetizing tape.

Specifications

Amplifier section

The following measured at AC 127, 220, 240 V, 50/60 Hz (Saudi Arabian model only)

The following measured at AC 120, 220, 240 V, 50/60 Hz (except for Saudi Arabian model)

DIN power output at stereo mode (rated)
100 + 100 watts (6 ohms at 1 kHz, DIN)

Continuous RMS power output (reference)
Front speaker: 140 + 140 watts (6 ohms at 1 kHz, 10% THD)

Center speaker: 40 watts (6 ohms at 1 kHz, 10% THD)

Surround speaker: 40 + 40 watts (6 ohms at 1 kHz, 10% THD)

Inputs

VIDEO/SAT IN L/R (phono jacks):
Voltage 250 mV/450 mV,
impedance 47 kilohms
MIC 1/2 (phone jack): sensitivity 1 mV,
impedance 10 kilohms

Outputs

VIDEO/SAT OUT L/R (phono jacks):
Voltage 250 mV,
impedance 1 kilohms
SUB WOOFER OUT: Voltage 1 V,
impedance 1 kilohms

VIDEO OUT (phono jacks):
max. output level
1 V_{p-p}, unbalanced, Sync
negative, load impedance
75 ohms

S VIDEO OUT (4-pin/mini-DIN jack):
Y: 1 V_{p-p}, unbalanced,
Sync negative,
C: 0.286 V_{p-p},
load impedance 75 ohms

COMPONENT VIDEO OUT:
Y: 1 V_{p-p}, 75 ohms
P_B/C_B: 0.7 V_{p-p}, 75 ohms
P_R/C_R: 0.7 V_{p-p}, 75 ohms

PHONES (stereo mini jack):
accepts headphones of
8 ohms or more

FRONT L/R: Use only the supplied
speaker SS-WZ88D

SURROUND L/R: Use only the supplied
speaker SS-RS88D

CENTER: Use only the supplied
speaker SS-CTZ88D

Disc player section

System	Compact disc and digital audio and video system
Laser	Semiconductor laser (DVD: $\lambda = 650$ nm, CD: $\lambda = 790$ nm) Emission duration: continuous
Frequency response	DVD (PCM 48 kHz): 2 Hz – 22 kHz (± 1 dB) CD: 2 Hz – 20 kHz (± 0.5 dB)
Video color system format	
Latin American models	NTSC
Russian models	PAL
Other models	NTSC, PAL

Tape deck section

Recording system	4-track 2-channel stereo
Frequency response	50 – 13,000 Hz (± 3 dB), using Sony TYPE I tape $\pm 0.15\%$ W.Peak (IEC) 0.1% W.RMS (NAB) $\pm 0.2\%$ W.Peak (DIN)
Wow and flutter	

Tuner section

FM stereo, FM/AM superheterodyne tuner

FM tuner section

Tuning range 87.5 – 108.0 MHz
Antenna FM lead antenna
Antenna terminals 75 ohms unbalanced
Intermediate frequency 10.7 MHz

AM tuner section

Tuning range
Latin American model: 530 – 1,710 kHz
(with the tuning interval set at 10 kHz)
531 – 1,710 kHz
(with the tuning interval set at 9 kHz)

Russian and Saudi Arabian models:
531 – 1,602 kHz
(with the tuning interval set at 9 kHz)

Other models:
531 – 1,602 kHz
(with the tuning interval set at 9 kHz)
530 – 1,710 kHz
(with the tuning interval set at 10 kHz)

Antenna AM loop antenna
Antenna terminals External antenna terminal
Intermediate frequency 450 kHz

Speaker

Front speaker (SS-WZ88D):

Speaker system 3-way, 3-unit, bass-reflex type, magnetically shielded type
Speaker units
Subwoofer: 15 cm, cone type
Woofer: 15 cm, cone type
Tweeter: 5 cm, cone type
Nominal impedance 6 ohms
Dimensions (w/h/d) Approx. 220 × 415 × 280 mm
Mass Approx. 7.0 kg net per speaker

Surround speaker (SS-RS288D):

Speaker system Full range, 1-unit, bass-reflex type
Speaker units
Full range: 8 cm, cone type
Nominal impedance 6 ohms
Dimensions (w/h/d) Approx. 95 × 235 × 105 mm
Mass Approx. 0.8 kg net per speaker

Center speaker (SS-CTZ88D):

Speaker system Full range, 1-unit, bass-reflex type, magnetically shielded type
Speaker units
Full range: 8 cm, cone type
Nominal impedance 6 ohms
Dimensions (w/h/d) Approx. 235 × 95 × 105 mm
Mass Approx. 1.0 kg net per speaker

General

Power requirements

Argentina models:	220 V AC, 50/60 Hz
Australian model:	230 – 240 V AC, 50/60 Hz
Saudi Arabian model:	120 – 127 V, 220 V or 230 – 240 V AC, 50/60 Hz Adjustable with voltage selector
Thai model:	220 V AC, 50/60 Hz
Other models:	120 V, 220 V or 230 – 240 V AC, 50/60 Hz Adjustable with voltage selector
Power consumption	225 watts

Dimensions (w/h/d)


DVD player/Tuner:	Approx. 255 × 134 × 343 mm
Amplifier/Tape deck:	Approx. 255 × 134 × 332 mm

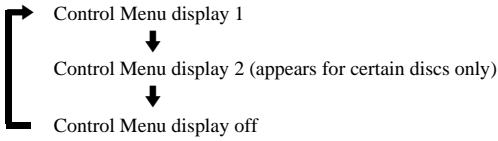
Mass

DVD player/Tuner:	Approx. 3.0 kg
Amplifier/Tape deck:	Approx. 8.5 kg
Supplied accessories:	Remote Commander (1) Batteries (2) AM loop antenna (1) FM lead antenna (1) Speaker pads (20) Speaker cords (5) Video cord (1)

Design and specifications are subject to change without notice.

Guide to the Control Menu display

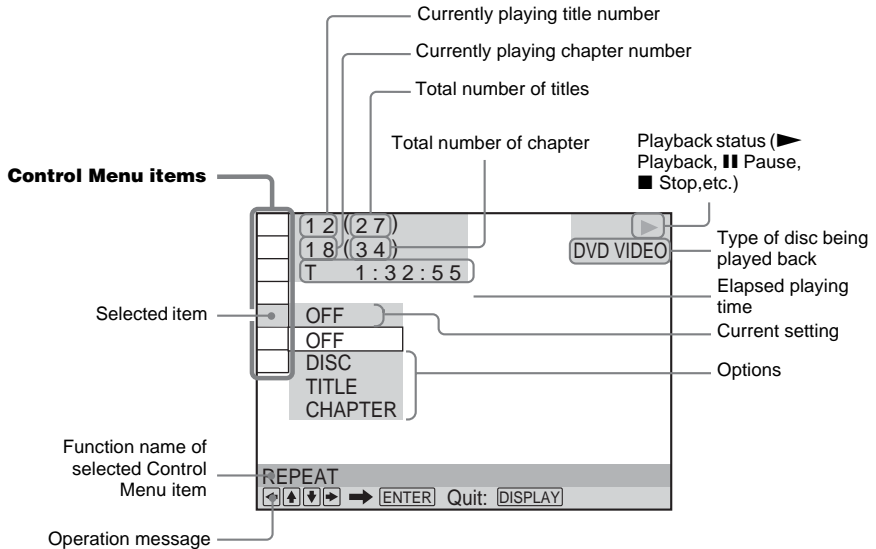
Use the Control Menu to select a function and to view related information. Press  DISPLAY repeatedly to turn on, turn off or change the Control Menu display as follows:















Control Menu display













The Control Menu display 1 and 2 will show different items depending on the disc type.

Example: Control Menu display 1 when playing a DVD VIDEO



List of Control Menu items

Item	Item Name, Function, Relevant Disc Type							
	TITLE/SCENE/TRACK Selects the title, scene, or track to be played.	DVD-V	DVD-RW	VIDEO CD				
	CHAPTER/INDEX Selects the chapter or index to be played.	DVD-V	DVD-RW	VIDEO CD				
	INDEX Displays the index and selects the index to be played.					Super Audio CD		
	TRACK Selects the track to be played.	Super Audio CD	C D	DATA-CD				
	ORIGINAL/PLAY LIST Selects the type of titles (DVD-RW) to be played, the ORIGINAL one, or an edited PLAY LIST.						DVD-RW	
	TIME/TEXT Checks the elapsed time and the remaining playback time. Input the time code for picture and music searching. Displays the DVD/CD text or the MP3 track name.							
		DVD-V	DVD-RW	VIDEO CD	Super Audio CD	C D	DATA-CD	DATA DVD
	MULTI/2CH Selects the playback area on Super Audio CDs when available.						Super Audio CD	
	PROGRAM Selects the title, chapter, or track in random order.	VIDEO CD	Super Audio CD	C D				
	SHUFFLE Plays the title, chapter, or track in random order.	VIDEO CD	Super Audio CD	C D				
	REPEAT Plays the entire disc (all titles/all tracks/all albums) repeatedly or one title/chapter/track/album repeatedly.	DVD-V	DVD-RW	VIDEO CD	Super Audio CD	C D	DATA-CD	DATA DVD
	A/V SYNC Sets the delay time between the sound and display.	DVD-V	DVD-RW	VIDEO CD	DATA-CD	DATA DVD		
	PARENTAL CONTROL Set to prohibit playback on this system.	DVD-V	VIDEO CD	C D				

Item	Item Name, Function, Relevant Disc Type
	<p>SETUP</p> <p>QUICK Setup</p> <p>Use QUICK SETUP to choose the desired language of the on-screen display, the aspect ratio of the TV, the audio output signal, and the size of the speakers you are using.</p> <p>CUSTOM Setup</p> <p>In addition to the Quick Setup setting, you can adjust various other settings.</p> <p>RESET</p> <p>Returns the settings in "SETUP" to the default setting.</p>
	DVD-V DVD-RW VIDEO CD Super Audio CD C D DATA-CD DATA DVD
	<p>ALBUM</p> <p>Selects the album to be played.</p>
	DATA-CD DATA DVD
	<p>FILE</p> <p>Selects the JPEG image file or DivX video file to be played.</p>
	DATA-CD DATA DVD
	<p>DATE</p> <p>Displays the date the picture was taken by a digital camera.</p>
	DATA-CD
	<p>INTERVAL</p> <p>Specifies the duration for which the slides are displayed on the screen.</p>
	DATA-CD
	<p>EFFECT</p> <p>Selects the effects to be used for changing slides during a slide show.</p>
	DATA-CD
	<p>MODE (MP3, JPEG)</p> <p>Selects the data type: MP3 audio track (AUDIO), JPEG image file (IMAGE) or both (AUTO) to be played when playing a DATA CD.</p>
	DATA-CD
	<p>KEY CONTROL</p> <p>Changes the key to suit your vocal range.</p>
	DVD-V DVD-RW VIDEO CD C D DATA-CD DATA DVD
	<p>KARAOKE PON</p> <p>Enjoys karaoke with a stereo-recorded disc by reducing the sound of the vocals.</p>
	DVD-V DVD-RW VIDEO CD C D DATA-CD DATA DVD
	<p>VOCAL</p> <p>Turns on or off the guide vocal for Dolby Digital Karaoke Format disc (DVD VIDEO only). Turns on or off the vocal (VIDEO CD, AUDIO CD only).</p>
	DVD-V VIDEO CD C D
	<p>VOCAL SELECT</p> <p>Selects the guide vocal recorded on the Dolby Digital Karaoke Format disc (DVD VIDEO only). Selects the vocal type recorded on the disc (VIDEO CD, AUDIO CD only).</p>
	DVD-V VIDEO CD C D
	<p>GUIDE MELODY</p> <p>Turns on or off the guide melody for Dolby Digital Karaoke Format disc.</p>
	DVD-V

DVD setup menu item list

You can set the following items with the DVD setup menu.

The default settings are underlined.

LANGUAGE SETUP (page 51)

OSD	Select the language you want to use from the displayed language list.
MENU	Select the language you want to use from the displayed language list.
AUDIO	Select the language you want to use from the displayed language list.
SUBTITLE	Select the language you want to use from the displayed language list.

SCREEN SETUP (page 52)

TV TYPE ¹⁾	16:9 4:3 LETTER BOX 4:3 PAN SCAN
COLOR SYSTEM ²⁾	<u>AUTO</u> PAL NTSC
SCREEN SAVER	<u>ON</u> OFF
BACKGROUND	<u>JACKET PICTURE</u> GRAPHICS BLUE BLACK
BLACK LEVEL ³⁾	<u>ON</u> OFF
BLACK LEVEL (COMPONENT OUT) ³⁾	<u>OFF</u> ON
4:3 OUTPUT	<u>FULL</u> NORMAL

CUSTOM SETUP (page 53)

PAUSE MODE	<u>AUTO</u> FRAME
TRACK SELECTION	<u>OFF</u> AUTO
MULTI-DISC RESUME	<u>ON</u> OFF
AUDIO DRC	<u>OFF</u> STANDARD MAX
DivX ⁴⁾	Registration Code

SPEAKER SETUP (page 54)

SIZE	FRONT	<u>YES</u>
	CENTER	<u>YES</u> NONE
	SURROUND	<u>BEHIND</u> SIDE NONE
	SUBWOOFER	<u>YES</u> NONE
DISTANCE	FRONT	<u>3.0m</u> (1.0 m - 7.0 m)
	CENTER	<u>3.0m</u> (0.0 m - 7.0 m)
	SURROUND	<u>3.0m</u> (0.0 m - 7.0 m)
LEVEL (FRONT)	L	<u>0.0 dB</u> (-6.0 dB - 0.0 dB)
	R	<u>0.0 dB</u> (-6.0 dB - 0.0 dB)
	CENTER	<u>0.0 dB</u> (-6.0 dB - +6.0 dB)
	SUBWOOFER	<u>0.0 dB</u> (-10.0 dB - +10.0 dB)
LEVEL (SURROUND)	L	<u>0.0 dB</u> (-6.0 dB - +6.0 dB)
	R	<u>0.0 dB</u> (-6.0 dB - +6.0 dB)
TEST TONE	<u>OFF</u> ON	

SETUP (page 14, 50, 89)

QUICK

CUSTOM

RESET	YES
	NO

- ¹⁾ The default setting varies depending on the area.
- ²⁾ Except for Latin American and Russian models.
- ³⁾ Latin American models only.
- ⁴⁾ Except for Latin American models.

Language code list

For details, see page 51.

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

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

Glossary

Album

Section of a music or picture piece on a DATA CD or DATA DVD containing MP3 audio tracks, JPEG image files and DivX image files.

Chapter

Subdivision of a title on a DVD VIDEO. A title is composed of several chapters.

DivX®

Digital video technology created by DivXNetworks, Inc. Videos encoded with DivX technology are among the highest quality with a relatively small file size.

Dolby Digital

This sound format for movie theaters is more advanced than Dolby Pro Logic Surround. In this format, the surround speakers output stereo sound with an expanded frequency range and a subwoofer channel for deep bass is independently provided. This format is also called "5.1" because the subwoofer channel is counted as 0.1 channel (since it functions only when a deep bass effect is needed). All six channels in this format are recorded separately to realize superior channel separation.

Futhermore, since all the signals are processed digitally, less signal degradation occurs.

Dolby Pro Logic II

Dolby Pro Logic II creates five full-bandwidth output channels from two-channel sources. This is done using an advanced, high-purity matrix surround decoder that extracts the spatial properties of the original recording without adding any new sounds or tonal colorations.

Movie mode

The Movie mode is for use with stereo television shows and all the programmes encoded in Dolby Surround. The result is enhanced soundfield directionality that approaches the quality of discrete 5.1-channel sound.

Music mode

The Music mode is for use with any stereo music recordings, and provides a wide and deep sound space.

Dolby Surround Pro Logic

As one method of decoding Dolby Surround, Dolby Surround Pro Logic produces four channels from two-channel sound. Compared with the former Dolby Surround system, Dolby Surround Pro Logic reproduces left-to-right panning more naturally and localizes sounds more precisely. To take full advantages of Dolby Surround Pro Logic, you should have one pair of surround speakers and a center speaker. The surround speakers output monaural sound.

DTS

Digital audio compression technology that the Digital Theater Systems, Inc. developed. This technology conforms to 5.1-channel surround. The surround channel is stereo and there is discrete subwoofer channel in this format. DTS provides the same 5.1 discrete channels of high quality digital audio. The good channel separation is realized because the all channel data is recorded discrete and processed in digital.

DVD VIDEO

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

The data capacity of a single-layer and single-sided DVD VIDEO, at 4.7 GB (Giga Byte), is 7 times that of an AUDIO CD. Furthermore, the data capacity of a dual-layer and single-sided DVD VIDEO is 8.5 GB, a single-layer and double-sided DVD VIDEO 9.4 GB, and a dual-layer and double-sided DVD VIDEO 17 GB.

The picture data uses the MPEG 2 format, one of the worldwide standards for digital compression technology. The picture data is compressed to about 1/40 of its original size. The DVD VIDEO also uses variable rate coding technology that changes the data to be allocated according to the status of the picture.

The audio data is recorded in Dolby Digital as well as in PCM, allowing you to enjoy more realistic audio presence.

Furthermore, various advanced functions such as the multi-angle, multilingual, and Parental Control functions are provided with the DVD VIDEO.

DVD-RW

A DVD-RW is a recordable and rewritable disc that is the same size as a DVD VIDEO. The DVD-RW has two different modes: VR mode and VIDEO mode. DVD-RW's created in Video mode have the same format as a DVD VIDEO, while discs created in VR (Video Recording) mode allow the contents to be programmed or edited.

File

A JPEG image file recorded on a DATA CD or a DivX video file recorded on a DATA CD or DATA DVD. A single file consists of a single image or movie.

Film based software, Video based software

DVD VIDEOS can be classified as Film based or Video based software. Film based DVD VIDEOS contain the same images (24 frames per second) that are shown at movie theaters. Video based DVD VIDEOS, such as television dramas or sitcoms, displays images at 30 frames (or 60 fields) per second.

Index (AUDIO CD) / Video Index (VIDEO CD)

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

Interlace format (Interlaced scanning)

The Interlace format displays TV images at 25 or 30 frames per second. Each frame is scanned twice-alternately between the even numbered scanning lines and the odd numbered scanning lines, at 60 times per second.

Menu Playback

Playback using the menu screens recorded on VIDEO CDs with PBC functions. You can enjoy simple interactive software using the menu playback function.

Multi-angle function

Various angles, or viewpoints of the video camera, for a scene are recorded on some DVD VIDEOS.

Multilingual function

Several languages for the sound or subtitles in a picture are recorded on some DVD VIDEOS.

Multi Session

This is a recording method that enables adding of data using the Track-At-Once method. Conventional CDs begin at a CD control area called the Lead-in and end at an area called Lead-out. A Multi Session CD is a CD having multiple sessions, with each segment from Lead-in to Lead-out regarded as a single session.

Parental Control

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

Playback Control (PBC)

Signals encoded on VIDEO CDs (Version 2.0) to control playback. By using menu screens recorded on VIDEO CDs with PBC functions, you can enjoy playing simple interactive programs, programs with search functions, and so on.

This system conforms to Version 1.1 and Version 2.0 of VIDEO CD standards. You can enjoy two kinds of playback depending on the disc type.

VIDEO CDs without PBC functions (Version. 1.1 discs)

Enjoy video playback (moving pictures) as well as music.


VIDEO CDs with PBC functions (Version. 2.0 discs)

Play interactive software using menu screens displayed on the TV screen (PBC Playback), in addition to the video playback function of Version 1.1 discs. Moreover, you can play high-resolution still pictures, if they are included on the disc.

Progressive format (sequential scanning)

Compared to the Interlace format that alternately shows every other line of an image (field) to create one frame, the Progressive format shows the entire image at once as a single frame. This means that while the Interface format can show 25 or 30 frames (50 or 60 fields) in one second, the Progressive format can show 50 or 60 frames in one second. The overall picture quality increases and still images, text, and horizontal lines appear sharper. This unit is compatible with 525 or 625 progressive format.

Region Code

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

Scene

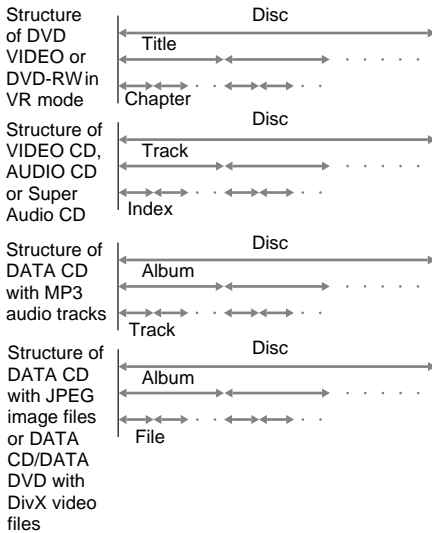
On a VIDEO CD with PBC functions, the menu screens, moving pictures and still pictures are divided into sections called “scenes”. Each scene is assigned a scene number enabling you to locate the scene you want.

Title

The longest section of a picture or a music piece on a DVD; a movie, etc., for a picture piece on video software; or an album, etc., for a music piece on audio software. Each title is assigned a title number enabling you to locate the title you want.

Track

Sections of a picture or a music piece on an AUDIO CD, VIDEO CD or DATA CD. Each track is assigned a track number enabling you to locate the track you want.



VIDEO CD

A compact disc that contains moving pictures. The picture data uses the MPEG 1 format, one of the worldwide standards for digital compression technology. The picture data is compressed to about 1/140 of its original size. Consequently, a 12 cm VIDEO CD can contain up to 74 minutes of moving pictures.

VIDEO CDs also contain compact audio data.

Sound outside the range of human hearing are compressed while the sounds we can hear are not compressed. VIDEO CDs can hold 6 times the audio information of conventional AUDIO CDs.

There are 2 versions of VIDEO CDs.

- Version 1.1: You can play back only moving pictures and sounds.
- Version 2.0: You can play back high-resolution still pictures and enjoy PBC functions.

This system conforms to both versions.

Remote control

ALPHABETICAL ORDER

A - P

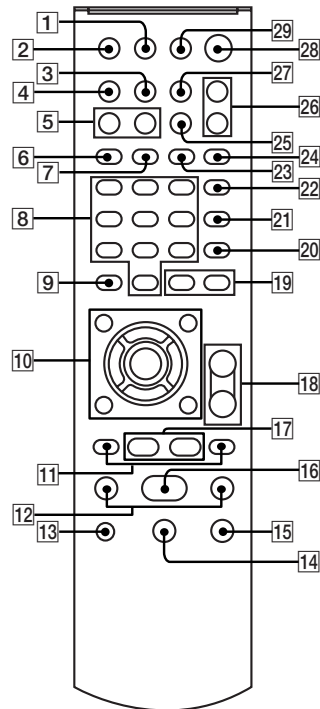
- ADVANCE **➡** **17** (19)
- ALBUM +/- **19** (16, 19)
- ANGLE **20** (45)
- AUDIO **22** (43, 44, 82)
- CLEAR **9** (16, 22, 24, 41, 55)
- DISC SKIP **27**¹⁾
- DISPLAY **4** (76)
- ENTER **10** (13–15, 19, 21–27, 31–35, 37, 41, 42, 46–51, 55, 56–60, 68–71, 73–75, 89)
- FM MODE **23** (60, 88)
- FUNCTION +/- **26** (14, 17, 19, 58, 60, 61, 67, 75, 87)
- KARAOKE MODE **6** (68, 82, 87)
- KARAOKE PON **7** (68)
- KEY CONTROL #/b **5** (69)
- MENU **10** (25, 30–33, 37, 58, 59)
- Numeric Buttons **8**²⁾ (11, 16, 19, 25, 27, 41, 47–51, 60)
- PICTURE NAVI **24** (31, 33, 42)
- PRESET +/- **11** (58–60)

R - Z

- REPEAT **23** (24)
- REPLAY **◀•** **17** (19)
- SLEEP **2** (16, 73)
- SLOW **◀|/▶** **12** (39)
- SOUND FIELD **25** (65, 66, 82)
- STEP **◀||/||▶** **17** (39)
- SUBTITLE **21** (45)
- THEATRE SYNC **29** (16)
- TIMER MENU **1** (13, 73, 74, 75)
- TIME/TEXT **3** (76, 77, 78)
- TOP MENU **10** (25)
- TUNING +/- **12** (58, 60)
- TV **13** (11)
- TV CH +/- **11** (11)
- TV/VIDEO **2** (11)
- TV VOL +/- **18**²⁾ (11)
- TV I/⏻ **28** (11)
- VOLUME +/- **18**²⁾ (56, 57, 73, 84)
- /-- **9** (11)
- 10/0 **8**

SYMBOLS

- I/⏻ (power) **28** (11, 13, 14, 74, 75, 84)
- (stop) **15** (19, 20, 27, 30–33, 37, 46, 59, 61, 75, 86)
- || (pause) **14** (19, 61)
- ▷ (play) **16**²⁾ (19–21, 27, 30, 33, 36–39, 49, 52, 61, 62, 75, 84, 86)
- ◀◀ (go backward) **11** (19, 27, 30, 31, 38, 62, 64)
- ▶▶ (go forward) **11** (16, 19, 27, 30, 31, 38, 62, 64)
- ◀◀ (rewind) **12** (38, 61)
- ▶▶ (fast forward) **12** (38, 61)
- ▲/▼/◀/▶ **10** (13–15, 21–23, 25, 26, 30–35, 37, 40–42, 46–51, 56, 57, 65, 68–71, 73–75, 89)
- ↺ RETURN **10** (27, 31, 37, 42)
- ☐ DISPLAY **10** (15, 21–26, 33, 34, 40–42, 46, 48, 50, 56, 68–71, 79, 89, 97)



¹⁾ This button is not available for this model.

²⁾ The numeric button 5, TV VOL +, VOLUME + and ▷ buttons have a tactile dot. Use the tactile dot as a reference when operating the system.