

JVC

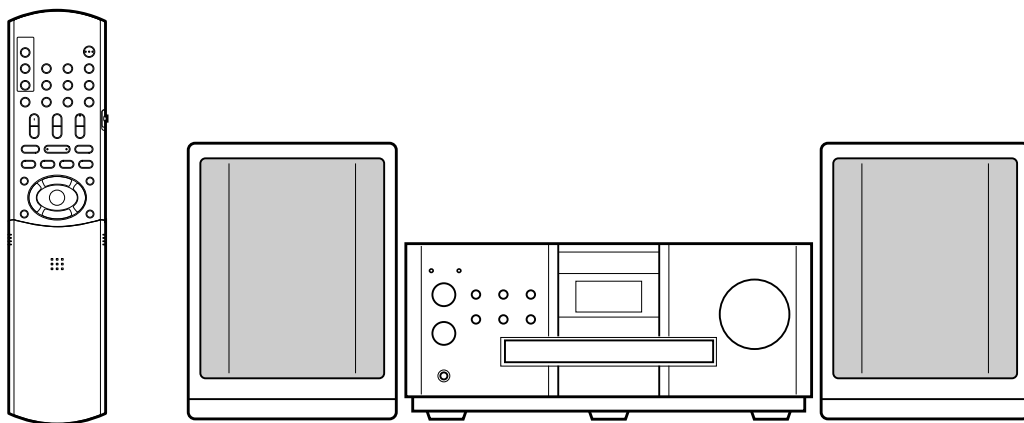


English

COMPACT COMPONENT SYSTEM

EX-AK1

Consists of CA-EXAK1 and SP-EXAK1



WOOD CONE



Hybrid Feedback
Digital Amplifier



INSTRUCTIONS

Warnings, cautions and others

CAUTION

To reduce the risk of electrical shocks, fire, etc.:

1. Do not remove screws, covers or cabinet.
2. Do not expose this appliance to rain or moisture.

CAUTION – \odot/I button!

Disconnect the mains plug to shut the power off completely (the STANDBY lamp goes off). When installing the apparatus, ensure that the plug is easily accessible.

The \odot/I button in any position does not disconnect the mains line.

- When the system is on standby, the STANDBY lamp lights red.
- When the system is turned on, the STANDBY lamp goes off. The power can be remote controlled.

CAUTION

- Do not block the ventilation openings or holes. (If the ventilation openings or holes are blocked by a newspaper or cloth, etc., the heat may not be able to get out.)
- Do not place any naked flame sources, such as lighted candles, on the apparatus.
- When discarding batteries, environmental problems must be considered and local rules or laws governing the disposal of these batteries must be followed strictly.
- Do not expose this apparatus to rain, moisture, dripping or splashing and that no objects filled with liquids, such as vases, shall be placed on the apparatus.

CAUTION

- Excessive sound pressure from earphones or headphones can cause hearing loss.

IMPORTANT FOR LASER PRODUCTS

1. CLASS 1 LASER PRODUCT
2. **CAUTION:** Do not open the top cover or cabinet. There are no user serviceable parts inside the unit; leave all servicing to qualified service personnel.
3. **CAUTION:** Visible and/or invisible class 1M laser radiation when open. Do not view directly with optical instruments.
4. REPRODUCTION OF LABEL: CAUTION LABEL, PLACED INSIDE THE UNIT.

CAUTION VISIBLE AND/OR INVISIBLE CLASS 1M LASER RADIATION WHEN OPEN, DO NOT VIEW DIRECTLY WITH OPTICAL INSTRUMENTS. IEC60825-1:2001 (ENG)	ATTENTION RAYONNEMENT LASER VISIBLE ET/OU INVISIBLE DE CLASSE 1M UNE FOIS OUVERT. NE PAS REGARDER DIRECTEMENT AVEC DES INSTRUMENTS OPTIQUES. (FRA)	AVISO RADIACION LÁSER DE CLASE 1M VISIBLE Y/O INVISIBLE CUANDO ESTA ABIERTO. NO MIRAR DIRECTAMENTE CON INSTRUMENTAL OPTICO. (ESP)	VARNING SYNLIIG OCH/ELLER OSYNLIIG LASERSTRÅLNING, KLAS 1M, NÅR DENNA ÖPPNAD. BETRÄKTA EJ STRÅLEN MED OPTISKA INSTRUMENT. (SWE)	注意 ここを開くと可視 及び/または不可視 のクラス1M レーザー放射が 出ます。 光学装置で直視 しないでください。 (JPN)	CAUTION VISIBLE AND/OR INVISIBLE CLASS I LASER RADIATION WHEN OPEN. DO NOT STARE INTO BEAM. FDA 21 CFR (ENG) LV44603-003A
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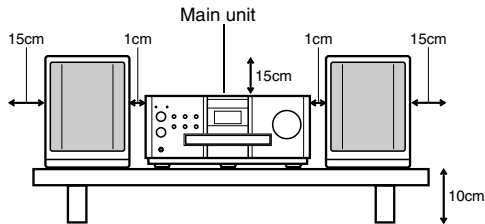
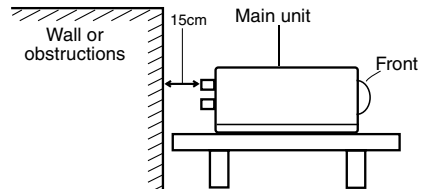
CAUTION – Proper Ventilation

To avoid risk of electric shock and fire and to protect from damage, locate the apparatus as follows:

Top/Front/Back/Sides: No obstructions should be placed in the areas shown by the dimensions below.

Bottom: Place on the level surface. Maintain adequate air path for ventilation by placing on a stand with a height of 10 cm more.

In addition, maintain the best possible air circulation.

Front view**Side view**

[European Union only]

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How to read this manual

- Operations are described by mainly using the remote control buttons. If there are the same marks on the main unit, the buttons on the main unit can also be used.
- The following marks tell you for which type of the discs the operation can be made.



- The illustrations and TV screens may be different between the actual case and the description.
- "VCD" is an abbreviation of "Video CD".
- "SVCD" is an abbreviation of "Super Video CD".

Notes on handling

■ Important cautions

Installation of the system

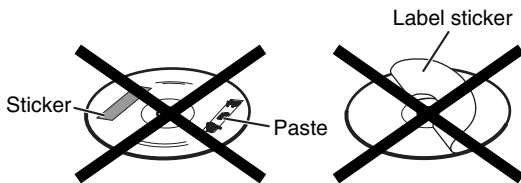
- Select a place which is level, dry and neither too hot nor too cold; between 5°C and 35°C.
- Leave sufficient distance between the system and the TV.
- Do not use the system in a place subject to vibration.

Power cord

- Do not handle the power cord with wet hands!
- A small amount of power is always consumed while the power cord is connected to the wall outlet.
- When unplugging the power cord from the wall outlet, always pull on the plug, not the power cord.

To prevent malfunctions of the system

- There are no user-serviceable parts inside. If anything goes wrong, unplug the power cord and consult your dealer.
- Do not insert any metallic object into the system.
- Do not use any non-standard shape disc (like a heart, flower or credit card, etc.) available on the market, because it may damage the system.
- Do not use a disc with tape, stickers, or paste on it, because it may damage the system.



Note about copyright laws

Check the copyright laws in your country before recording from DVDs, Super Video CDs (SVCDs), VCDs and CDs. Recording of copyrighted material may infringe copyright laws.

Note about copy guard system

DVDs are protected by copy guard system. When you connect the system to your VCR directly, the copy guard system activates and the picture may not be played back correctly.

■ Safety precautions

Avoid moisture, water and dust

Do not place the system in moist or dusty places.

Avoid high temperatures

Do not expose the system to direct sunlight and do not place it near a heating device.

When you are away

When away on travel or for other reasons for an extended period of time, disconnect the power cord plug from the wall outlet.

Do not block the vents

Blocking the vents may damage the system.

Care of the cabinet

When cleaning the system, use a soft cloth and follow the relevant instructions on the use of chemically-coated cloths. Do not use benzene, thinner or other organic solvents including disinfectants. These may cause deformation or discoloring.

If water gets inside the system

Turn the system off and disconnect the power cord plug from the wall outlet, then call the store where you made your purchase. Using the system in this condition may cause fire or electrical shock.

■ When condensation or water drops adhere to the lens

In any of the following cases, condensation or water drops may adhere to the lens to prevent the system from working properly:

- Immediately after room heating starts
- When the system is installed in a steamy or damp space
- When the system is suddenly moved from a cold place to a warm space

In any of these cases, leave the system turned on for 1 or 2 hours before use.

Supplied accessories

Check to be sure you have all of the supplied accessories.

The number in parentheses is the quantity of the pieces supplied. If anything is missing, contact your dealer immediately.

- Remote control (1)
- Batteries (2)
- FM antenna (1)
- AM loop antenna (1)
- Power cord (1)
- Composite video cord (1)
- Speaker cords 3 m (2)
- AC plug adaptor* (1)

NOTE

* The AC plug adaptor is not supplied for Hong Kong and Thailand.

-
- *Manufactured under license from Dolby Laboratories. "Dolby" and the double-D symbol are trademarks of Dolby Laboratories.*
 - *"DTS" is a registered trademark of DTS, Inc. and "DTS 2.0 + Digital Out" is a trademark of DTS, Inc.*
 - *This product incorporates copyright protection technology that is protected by method claims of certain U.S. patents and other intellectual property rights owned by Macrovision Corporation and other rights owners. Use of this copyright protection technology must be authorized by Macrovision Corporation, and is intended for home and other limited viewing uses only unless otherwise authorized by Macrovision Corporation. Reverse engineering or disassembly is prohibited.*

Playable disc/file types

Playable discs *1	DVD VIDEO, DVD AUDIO, DVD VR *2, VCD, SVCD, CD, CD-R *3, CD-RW *3, DVD-R *4, *5, DVD-RW *5, +R, +RW
Playable files recorded on a disc *1	MP3, WMA, WAV, JPEG, MPEG1, MPEG2

- Even though listed above, some types may be unplayable.
- *1 Discs should be finalized before being played back.
- *2 DVD VR means a DVD-R/DVD-RW recorded in Video Recording (VR) format.
- *3 A CD-R/CD-RW recorded in multi-session format (up to 20 sessions) is playable.
- *4 A DVD-R recorded in multi-border format is also playable (except for dual layer discs).
- *5 For files recorded on a DVD-R/DVD-RW, the disc should be formatted with UDF Bridge.

It is possible to play back finalized +R/+RW (DVD Video Format only) discs.

Some discs may not be played back because of their disc characteristics, recording conditions, or damage or stains on them.

Only sounds can be played back from the following discs:

MIX-MODE CD	CD-G
CD-EXTRA	CD TEXT

This system accommodates the NTSC and PAL systems. When you play back an NTSC disc with the video signal type set to "PAL" (refer to page 13), the NTSC video signal is converted to the PAL60 signal and output.

Region code of DVD VIDEO

DVD VIDEO players and DVD VIDEO discs have their own region code numbers. This system can play back a DVD VIDEO whose region code number includes the system's region code, which is indicated on the rear panel.

Examples:



If a DVD VIDEO with an improper region code number is loaded, playback cannot start.

- **On some DVD VIDEOS, DVD AUDIOS, VCDs or SVCDs, their actual operation may be different from what is explained in this manual. This is due to the disc/file programming and disc/file structure, not a malfunction of this system.**

Unplayable discs

- The following discs cannot be played back:
- DVD-ROM (except for MP3/WMA/JPEG/MPEG1/MPEG2 format), DVD-RAM, CD-ROM, CD-I (CD-I Ready), Photo CD, SACD, etc.
- Playing back these discs generates noise and may damage the speakers.

- Damaged discs and discs with an unusual shape (other than a disc of 12 cm or 8 cm in diameter) cannot be played back.
- JVC does not guarantee the operation and sound quality of discs not authorized by CD-DA, which is a CD specification. Before playback, confirm that the disc complies with this CD specification by checking the marks and reading notes printed on the package.

Playable MP3/WMA/WAV/JPEG/MPEG1/MPEG2 discs/files

- CDs recorded in the ISO 9660 format are playable (except CDs recorded in the "packet write" format (UDF format)).
- Files with an extension of ".mp3", ".wma", ".wav", ".jpg", ".jpeg", ".mpg" or ".mpeg" (extensions with mixed cases are also acceptable) are playable.

Notes on MP3/WMA/WAV/JPEG/discs/files

- A disc may not be played back, or reading it may take a long time depending on its recording conditions or properties.
- The time needed for reading varies with the number of groups or tracks (files) recorded on the disc.
- If characters other than single-byte alphanumeric characters are used in the file name of an MP3/WMA/WAV/JPEG file, the track/file name is not displayed correctly.
- The order of tracks/groups displayed on the MP3/WMA/WAV menu screen, and the order of files/groups displayed on the JPEG menu screen may be different from that of files/folders displayed on a computer monitor screen.
- Playing back an MP3/WMA file that contains a still image may take a long time. The elapsed time is not displayed until playback starts. This elapsed time may not be displayed correctly.
- For an MP3/WMA file, a disc with a sampling frequency of 44.1 kHz and transmission rate of 128 kbps is recommended.
- This system is not compatible with an MP3i or MP3PRO file.
- This system can play back a baseline JPEG file, excluding monochromatic JPEG files.
- This system can play back JPEG data taken with a digital camera conforming to the DCF (Design Rule for Camera File System) standard (when a function such as the automatic rotation function of a digital camera is applied, the data may no longer conform to the DCF standard, and the image may not be displayed).

- If data has been processed, edited or restored with computer image editing software, the data may not be displayed.
- This system cannot play back animations such as MOTION JPEG files, still pictures (TIFF etc.) other than JPEG files, or image data with sound.
- The resolution of 640 x 480 pixels is recommended for JPEG files. If a file has been recorded at a resolution of more than 640 x 480 pixels, it may take a long time to display the file. An image with a resolution of more than 8 192 x 7 680 pixels cannot be displayed.
- A WAV file with a sampling frequency of 44.1 kHz and a quantization bit rate of 16 bits is recommended.

Notes on MPEG1/MPEG2 discs/files

- The stream structure of MPEG1/MPEG2 discs and files should conform to MPEG system/program stream.
- 720 x 576 pixels (25 fps)/720 x 480 pixels (30 fps) is recommended for the highest resolution.
- This system also supports the resolutions of 352 x 576/480 x 576/352 x 288 pixels (25 fps) and 352 x 480/480 x 480/352 x 240 pixels (30 fps).
- The profile and level should be MP@ML (Main Profile at Main Level)/SP@ML (Simple Profile at Main Level)/MP@LL (Main Profile at Low Level).
- Audio streams should conform to MPEG1 Audio Layer-2, MPEG2 Audio Layer-2 or Dolby Digital (MPEG2 files only).

Caution for DualDisc playback:

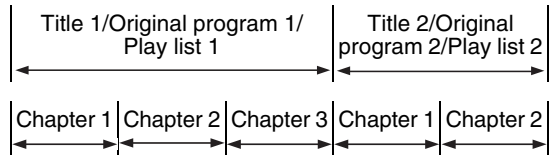
The Non-DVD side of a "DualDisc" does not comply with the "Compact Disc Digital Audio" standard. Therefore, the use of Non-DVD side of a DualDisc on this product is not recommended.

Data hierarchy

DVD VIDEO/DVD VR

A DVD VIDEO consists of "titles" and each title may be divided into "chapters".

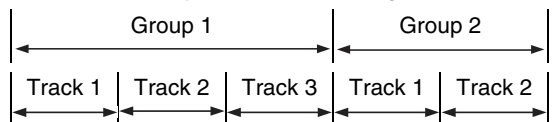
A DVD VR consists of "original programs" or "play lists" and each original program/play list may be divided into "chapters".



DVD AUDIO

A DVD AUDIO consists of "groups" and each group may be divided into "tracks".

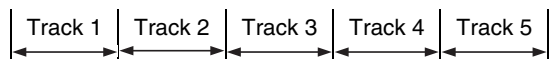
Some discs include a "bonus group" that requires a password for playback. (Refer to page 32.)



VCD/SVCD/CD

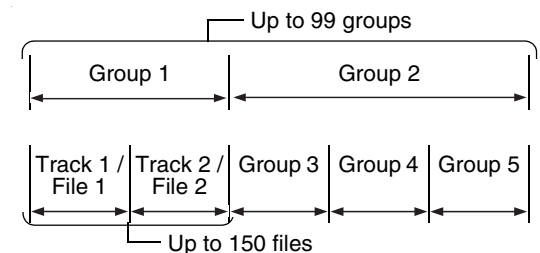
A VCD/SVCD/CD consists of "tracks".

In general, each track has its own track number. (On some discs, each track may also be further divided by indexes.)



MP3/WMA/WAV/JPEG/MPEG1/MPEG2 files

Audio, still pictures and video are recorded as tracks/files on a disc. Tracks/files are usually grouped into a folder. Folders can also include other folders, creating hierarchical folder layers. This system simplifies the hierarchical construction of files and manages folders by "groups".



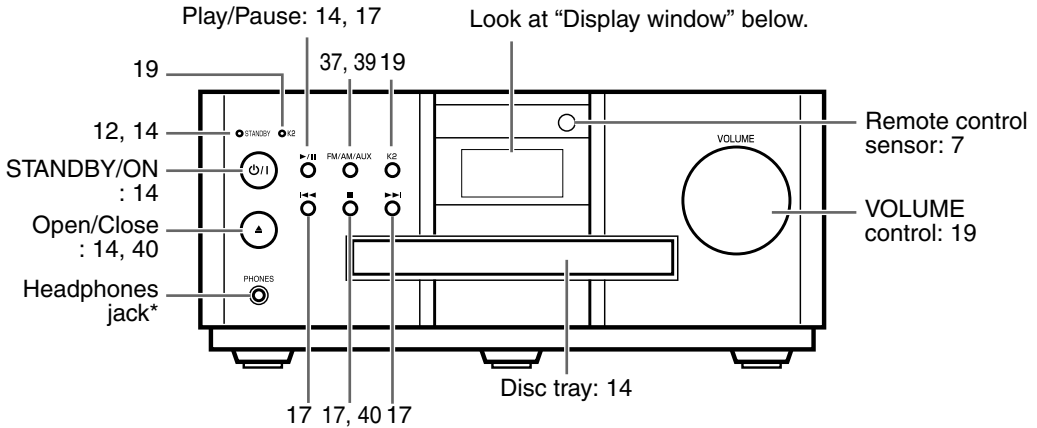
This system can recognize up to 4 000 tracks/files on a disc. Also, the system can recognize up to 150 tracks/files per group and up to 99 groups on a disc. Since the system ignores the tracks/files with numbers exceeding 150 and the groups with numbers exceeding 99, these cannot be played back.

If there are any type of files other than MP3/WMA/WAV/JPEG/MPEG1/MPEG2 files on a disc, those files are also counted in the total number of files.

Description of parts

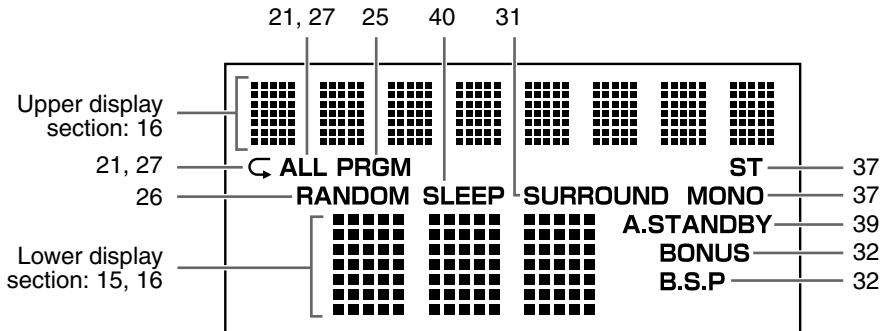
The numbers represent the page numbers.

Front panel

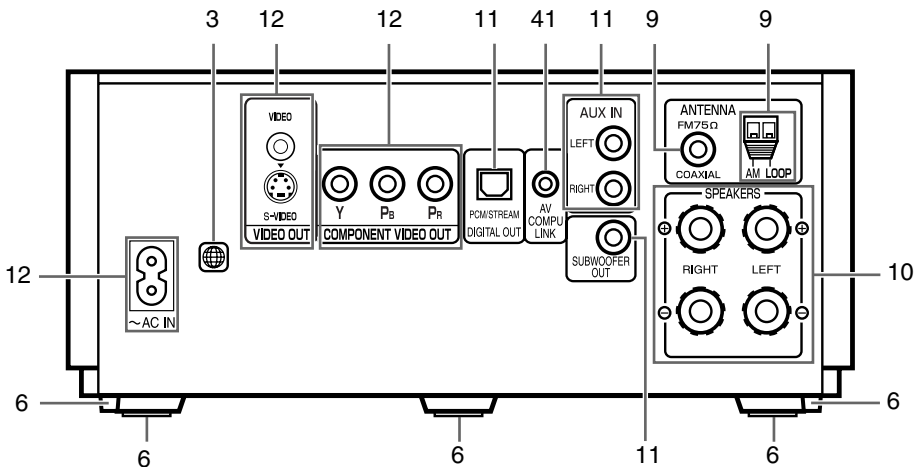


* Connect a pair of headphones (commercially available) with a stereo mini plug. If the headphones are connected, the speakers and subwoofer will not produce any sound.

Display window

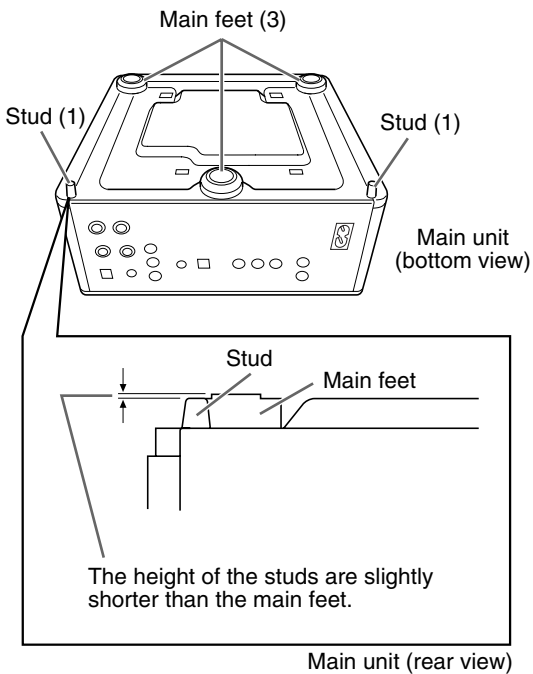


Rear panel

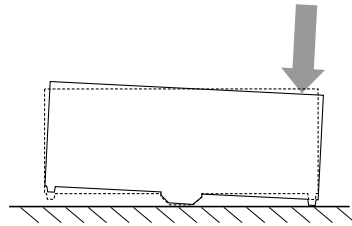


Features of the main feet and studs

The use of three main feet on the bottom of the main unit enables higher sound quality while maintaining the stability of the main unit.

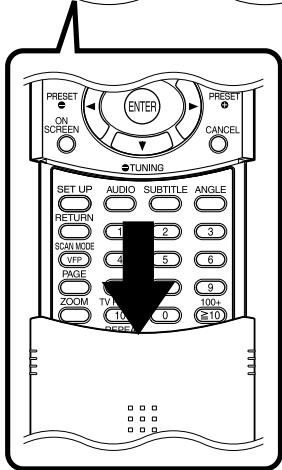
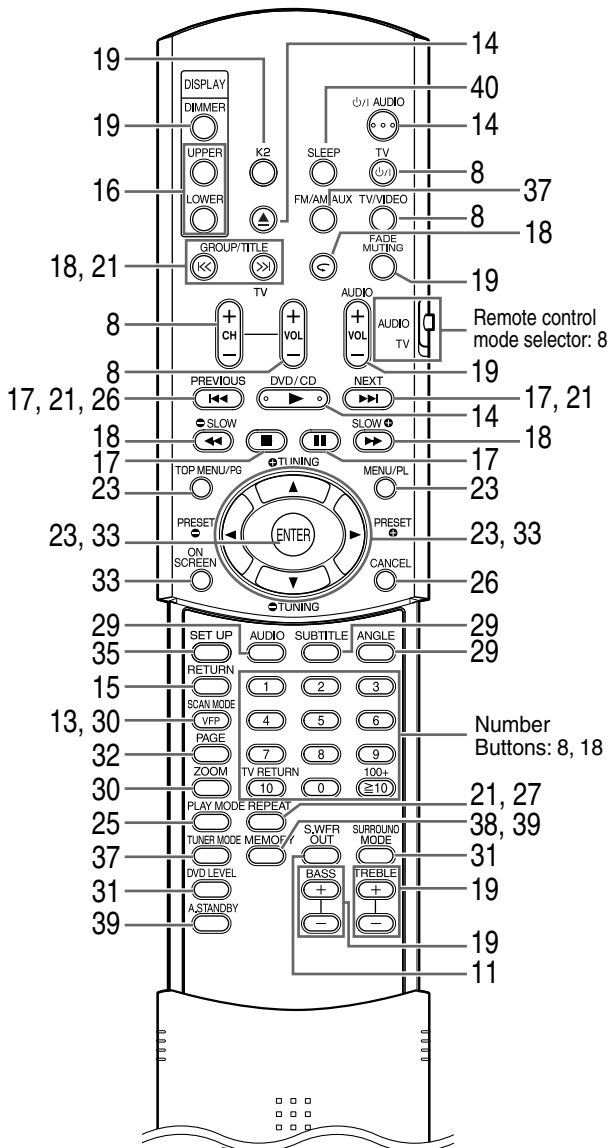


In addition, the two studs on the bottom help stabilize the main unit and prevent it from wobbling or tipping when nudged from above. Because the studs are slightly shorter than the main feet, the studs do not come in contact with the mounted surface, leaving the main feet to support the main unit.



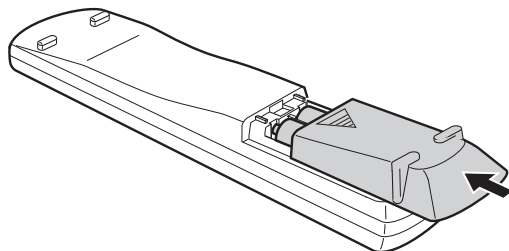
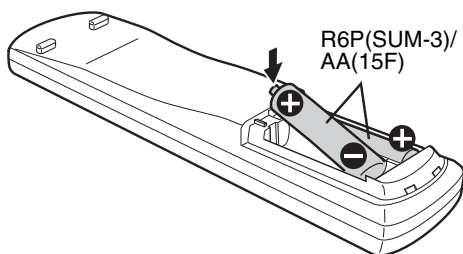
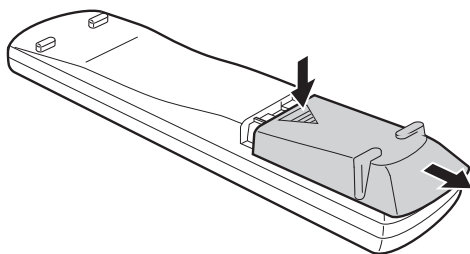
Using the remote control

The numbers represent the page numbers.



Putting the batteries in the remote control

Insert the batteries into the remote control by matching the polarity (+ and -) correctly.



If the range or effectiveness of the remote control decreases, replace both batteries.

CAUTION

Battery shall not be exposed to excessive heat such as sunshine, fire or the like.

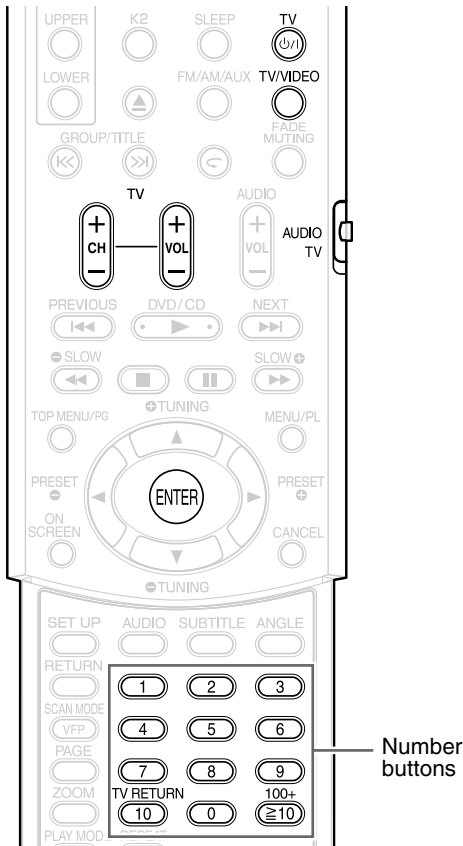
Remote control operation

When operating the remote control, point it towards the front panel of the main unit. If the remote control is operated from a direction that is extremely oblique or when there is an obstacle in the way, signals may not be transmitted.

If the remote control sensor is exposed to a strong light such as direct sunlight, correct operation may not be carried out.

This page is for when operating your TV using the remote control of this product.

Operating the TV using the remote control



Setting the manufacturer's code

1 Slide the remote control mode selector to the TV side.



2 Keep pressing down **TV**.

NOTE

Keep pressing down **TV** until Step 4 is complete.

3 Press **ENTER** and release.

4 Press number buttons (1-9, 0).

Examples:

For a Hitachi TV: Press 1, then 0.

For a Toshiba TV: Press 0, then 8.

If there are more than one manufacturer's codes, try them in turn and select the one that causes the product to work properly.

Manufacturer	Code	Manufacturer	Code
JVC	01	Samsung	12
Hitachi	10	Sanyo	13
Magnavox	02	Sharp	06
Mitsubishi	03	Sony	07
Panasonic	04, 11	Toshiba	08
Philips	14	Zenith	09
RCA	05		

NOTE

Manufacturer's codes may be changed without notice. You may not be able to operate a TV produced by the manufacturer shown above.

5 Release **TV**.

For TV operation

Operate the remote control by pointing it towards the TV.

	Turn ON/OFF the power.
	Change channels.
	Adjust volume.
	Select channels. *1
	Alternates between the previously selected channel and the current channel.
	Switch TV and video input.

*1 Make sure to slide the remote control mode selector to the TV side in advance.

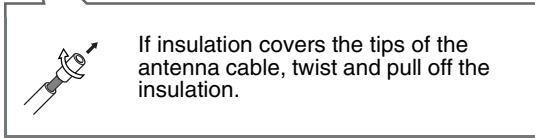
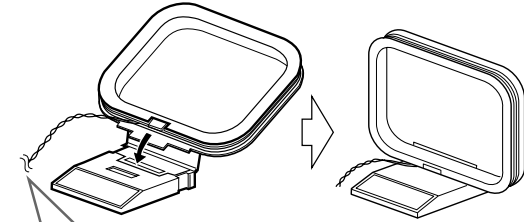
NOTE

When the batteries are replaced, perform the manufacturer's code setting again.

Connecting antennas

Connecting AM loop antenna (supplied)

Setting up the AM loop antenna

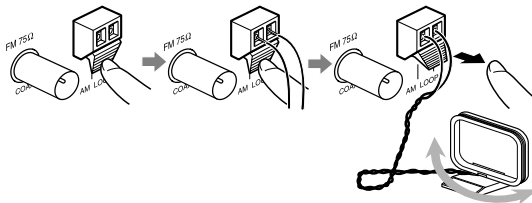


NOTE

- Keep the AM loop antenna cable wrapped around the AM loop antenna frame, otherwise the effectiveness and sensitivity of the AM loop antenna may be reduced.

Connecting the AM loop antenna

Main unit (rear view)



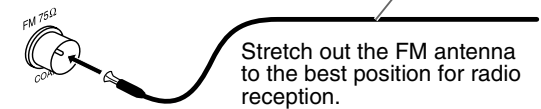
Turn the AM loop antenna to find the best position for radio reception.

NOTE

- Make sure that the antenna conductors do not touch any other terminals. This could cause poor reception.

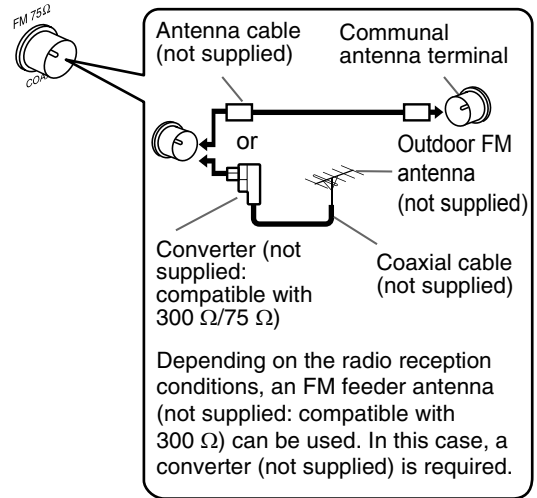
Connecting FM antenna (supplied)

Main unit (rear view)



When radio reception with the supplied FM antenna is poor, or when using a communal antenna

Main unit (rear view)

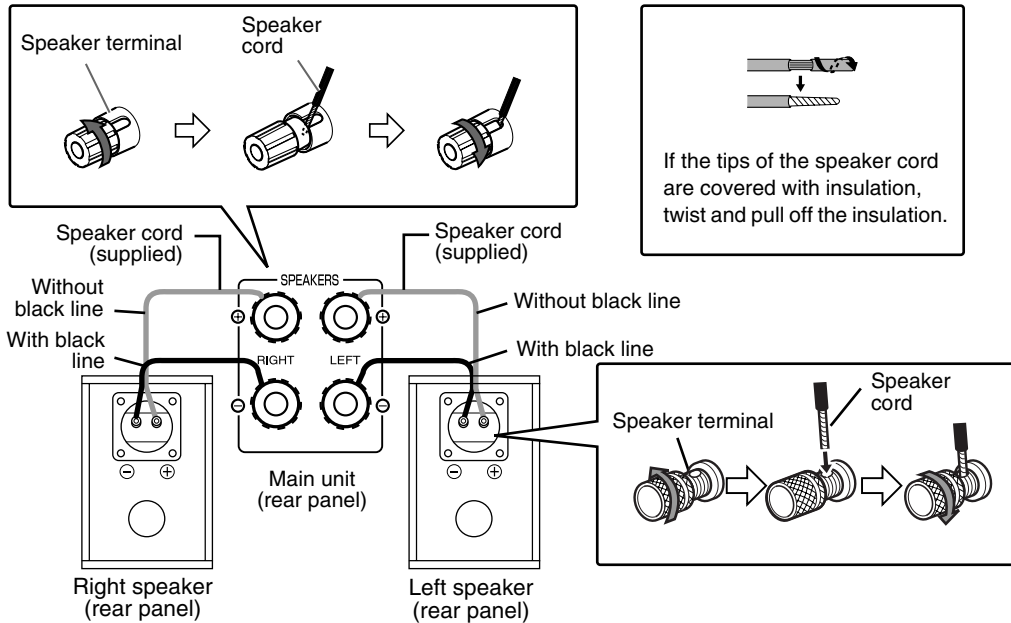


When using an antenna other than those supplied with this system, refer to the operation manuals for the antenna and converter for details of connection.

When positioning the antennas, find the best position for reception while listening to an actual radio program (refer to "Listening to a radio broadcast" on page 37).

Connecting speakers

There is no difference between the left and right speakers.

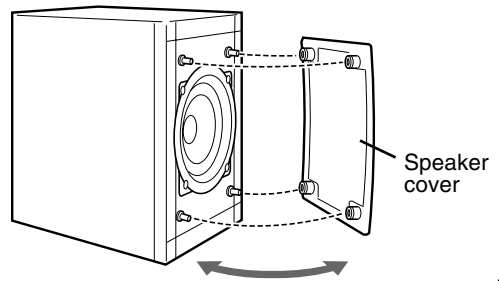


CAUTION

- **DO NOT** connect more than one speaker to one speaker terminal.
- The supplied speakers are not magnetically shielded. If placing the speakers near a TV, leave sufficient distance between the speaker and the TV so that color irregularity does not occur on the TV.

The speakers employ natural wood for the diaphragm and the cabinet in order to reproduce the original sound faithfully. The appearance therefore differs for each system.

Speaker cover can be detached.



NOTE

- Impedance of speaker that can be connected to the main unit is within a range of 4Ω to 16Ω .
- In order to have a sufficient cooling effect, leave a space of more than 1cm between the main unit and the speakers or other objects.

Connecting other devices

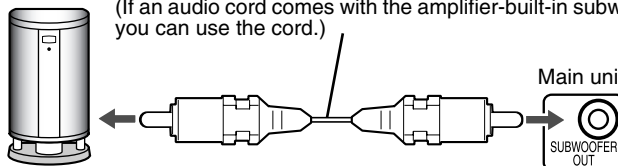
This page is for when connecting the main unit with other devices.

Connecting subwoofer

With an amplifier-built in subwoofer (sold separately), you can enjoy a more dynamic bass sound. Refer to the manual of the subwoofer for details.

Amplifier-built-in subwoofer (sold separately)

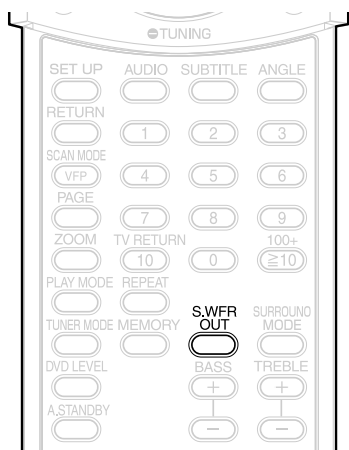
Audio cord (sold separately)
(If an audio cord comes with the amplifier-built-in subwoofer, you can use the cord.)



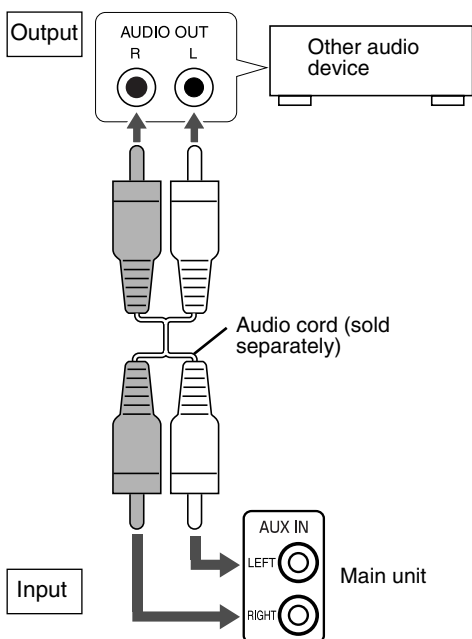
When you want to hear sound from the subwoofer, press **S.WFR OUT** on the remote control to display "SUB WFR ON" (Sub Woofer ON) on the display window on the main unit. Each time you press the button, the display toggles between "ON" and "OFF".

NOTE

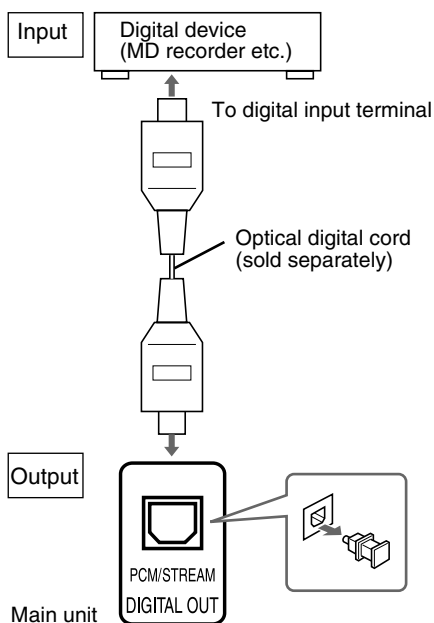
When "SUB WFR ON" is selected, bass sound from the left and right speakers will be automatically lowered and the bass sound will be emitted mainly from the subwoofer.



Connecting with other audio device

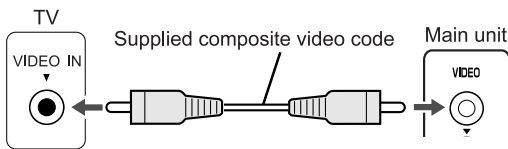


Connecting with a digital device

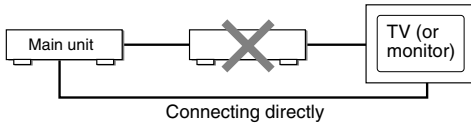


CAUTION

- For details of signals to be output, refer to page 36.
- If the main unit is connected to equipment with a Dolby Digital decoder, the “D. RANGE COMPRESSION” setting of “AUDIO” (☞ page 36) is disabled for sound from the digital audio output of the main unit.
- You can output the audio signal from the **DIGITAL OUT** terminal when a loaded disc is selected as the source.
- Pressing **SURROUND MODE** while the audio signal is being output from the **DIGITAL OUT** terminal may cause intermittent sound output.

Connecting with TV**CAUTION**

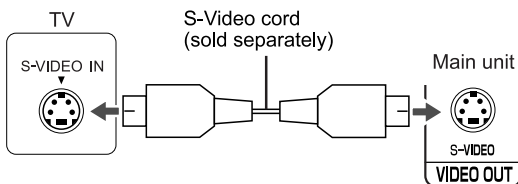
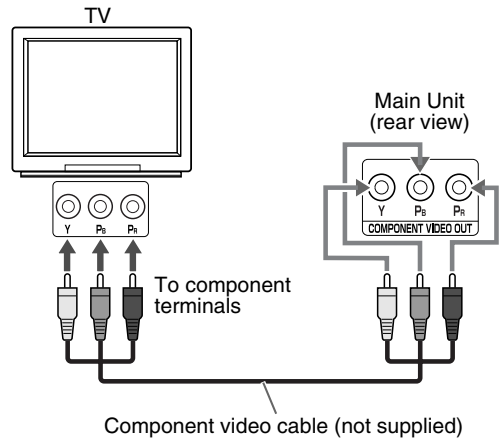
Connect the main unit directly with a TV (or a monitor) without routing through a VCR. Otherwise it may cause picture distortion while playing.



Also, when connecting the main unit to a TV with a VCR built in, there may be picture distortion while playing.

When a clearer picture is desired

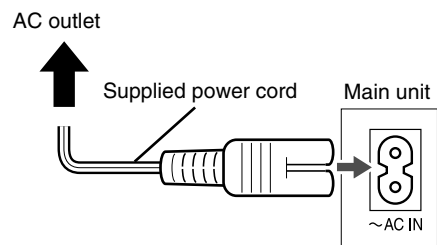
You can enjoy pictures of better quality using the following cord instead of the supplied video cord.

Connecting by using the S-Video cord**Connecting a TV with the COMPONENT VIDEO OUT terminals****CAUTION**

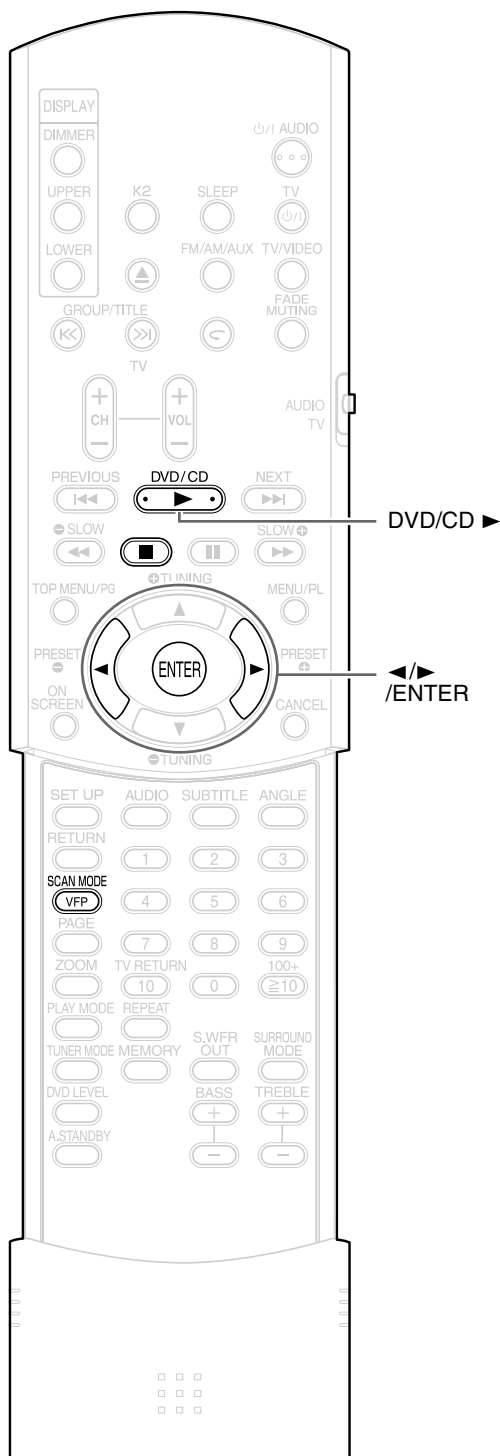
Use one of either the S-Video cord or the component video cord. If both cords are used, pictures may not be played properly.

NOTE

- In order to enjoy pictures with Progressive mode (☞ page 13), the TV is required to have Progressive video input.
- If the component video input jacks of your TV are BNC type, use a plug adapter (not supplied) to convert the plugs.

Connecting the power cord

- Connect the power cord after all other connections are complete.
- The STANDBY lamp (on the front panel) will be lit.



Selecting the video signal type

To view an image on the TV screen, select the video signal type correctly according to the TV after connecting the main unit to the TV.

1 Turn on the main unit.

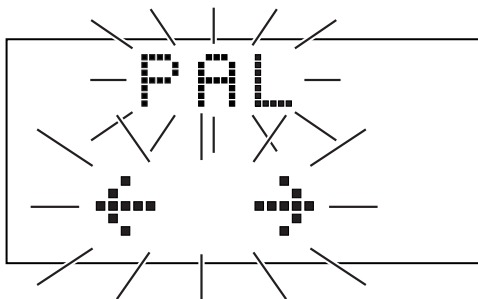
- Refer to “Connecting the power cord.” on page 12 and “Playback” on page 14.

2 Press DVD/CD ▶.

- When a disc is loaded, press ■ to stop playback.

3 Hold down SCAN MODE.

- The current video signal type flashes.



4 Press ◀ or ▶ to select the video signal type suitable for the TV.

- You can select “PAL”, “PAL PRO”, “NTSC” or “NTSC PRO”. You can obtain better picture quality in “PAL PRO” or “NTSC PRO” mode than in “PAL” or “NTSC” mode.
- Select “PAL” when connecting to a TV that is only compatible with PAL interlaced video signals.
- Select “PAL PRO” when connecting to a TV that is equipped with a component terminal and is compatible with PAL progressive video signals.
- Select “NTSC” when connecting to a TV that is only compatible with NTSC interlaced video signals.
- Select “NTSC PRO” when connecting to a TV that is equipped with a component terminal and is compatible with NTSC progressive video signals.

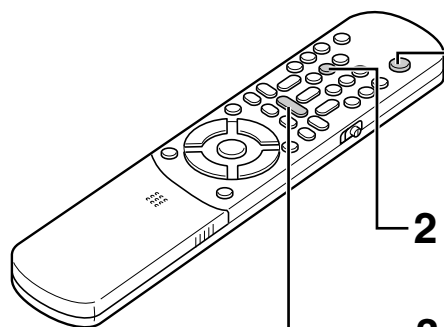
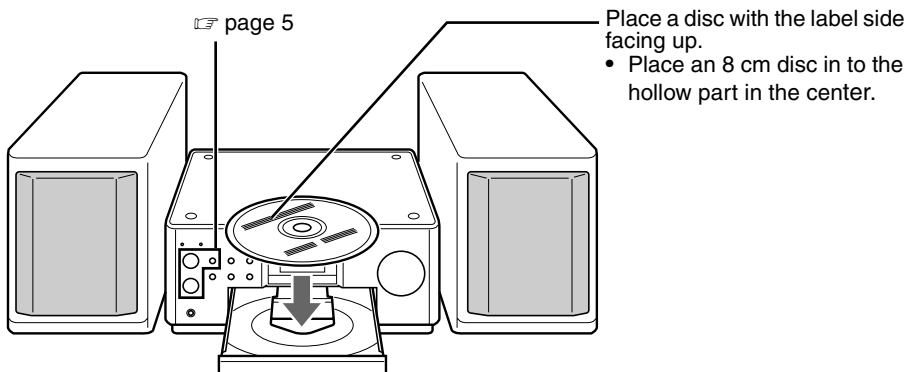
5 Press ENTER.

NOTE

- To check the compatibility of your TV, contact your local JVC customer service center.
- All JVC-manufactured progressive TVs and high-definition TVs are fully compatible with this system.
- Even if the power cable of the main unit is disconnected from the AC outlet or the power is interrupted, the video signal type setting is stored.

Playback

DVD VIDEO **DVD AUDIO** **DVD VR** **VCD SVCD** **CD** (Refer to page 20 for playing MP3/WMA/WAV/JPEG/MPEG1/MPEG2 file.)



1 Press AUDIO.

- The power will be turned on and the STANDBY lamp will go off.
- Press AUDIO again to turn off the power.

2 Press to open the disc tray to load a disc.

3 Press DVD/CD .

The disc tray will close and playback will start.

- The power will be turned on when any of , , or on the main unit and , , or on the remote control is pressed while the power is off.

If any button other than or is pressed, the source will also be changed (if there is a disc loaded, playback will start).

NOTE

- A menu screen may be displayed after starting playback of a DVD. In this case, select a desired item to playback by using the following buttons on the remote control.
 - Select a desired item using and press .
 - Select a desired item using the number buttons.
 - Depending on the disc/file, actual operation may be different from the description.

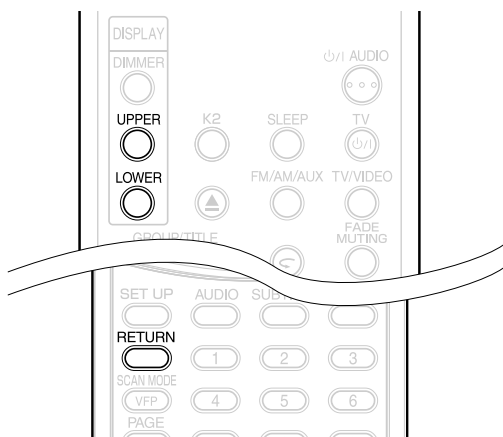
JVC

Screens displayed on the TV when the power is turned ON.

The following messages appear depending on the status of the system. (These messages only appear when a loaded disc is selected as the source.)

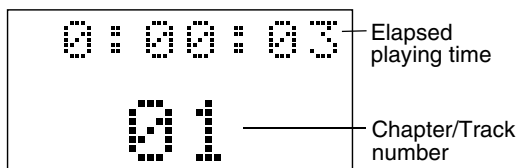
NOW READING	Appears when the system is reading the disc/file information. Wait for a while.
REGION CODE ERROR!	Appears when the Region Code of the DVD does not match the code the system supports. (page 3)
NO DISC	Appears when no disc is loaded.
OPEN	Appears when opening the disc tray.
CLOSE	Appears when closing the disc tray.
CANNOT PLAY THIS DISC	Appears when trying to play back an unplayable disc.

Playing discs/files (continued)



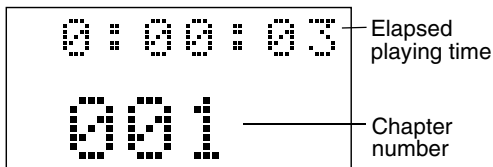
Display window during disc/file playback

Example: When a DVD VIDEO or DVD AUDIO is played

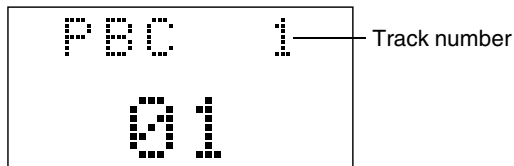


If "BONUS" or "B.S.P" is displayed during a DVD AUDIO playback, refer to page 32.

Example: When a DVD VR is played

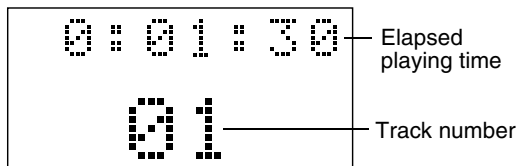


Example: When a SVCD or VCD is played

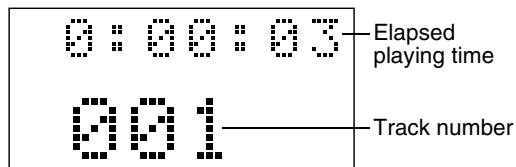


- PBC (Play Back Control): A signal recorded in a VCD (version 2.0) for controlling playback. It is possible to enjoy interactive software or software with a search function using a menu screen recorded in a PBC compatible VCD. To play a disc with the PBC function OFF, carry out the following operations.
 - Designate the track number using the number buttons while the disc is stopped.
 - Designate the track number using **◀◀** or **▶▶** while the disc is stopped, and then press **DVD/CD ▶**.
- Press **RETURN** to go back to the upper layer during the PBC playback of a VCD or SVCD.

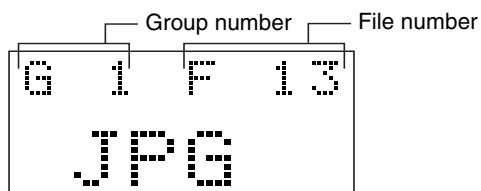
Example: When a CD is played



Example: When an MP3/WMA/WAV/MPEG1/MPEG2 file is played



Example: When a JPEG file is played



To switch the display

Press **UPPER** or **LOWER**. Each time you press the button, the display will be alternated.

Display examples

DVD VIDEO

UPPER: →0:00:03 (Elapsed playing time) → T1 C3 (Title and Chapter number)
 No display ←

LOWER: →03 (Chapter number) → T1 (Title number) → DVD

DVD AUDIO

UPPER: →0:00:03 (Elapsed playing time) → G1 T3 (Group and Track number)
 No display ←

LOWER: →03 (Track number) → G1 (Group number) → DVD

DVD VR*1

UPPER: →0:00:03 (Elapsed playing time) → PG1 C3 (Program and Chapter number)
 No display ←

LOWER: →001 (Chapter number) → G1 (Program number) → VR

VCD/SVCD

UPPER: →0:00:03 (Elapsed playing time) → No display
 PBC 2 (PBC and Track number appear only when PBC function is played) ←

LOWER: →02 (Track number) → VCD

CD

UPPER: →0:00:03 (Elapsed playing time) → No display

LOWER: →02 (Track number) → CD

MP3/WMA/WAV/MPEG1/MPEG2 file

UPPER: →0:00:03 (Elapsed playing time)*3 → G1 T3 (Group and Track number)
 No display ←

LOWER: →G1 (Group number) → MP3*2 → 003 (Track number)

JPEG disc

UPPER: →G1 F3 (Group number and File number) → No display

LOWER: JPG

*1 When a DVD VR is played, "PG" and "G" (Original program) or "PL" and "L" (Play list) are displayed.

*2 "MP3", "WMA", "WAV", or "MPG" appears when an MP3, WMA, WAV, MPEG1, or MPEG2 is played.

*3 The file name and text are displayed temporarily before the elapsed playing time is displayed.

NOTE

Abbreviations

G: Group

Original Program (DVD VR)

T: Title (DVD VIDEO)

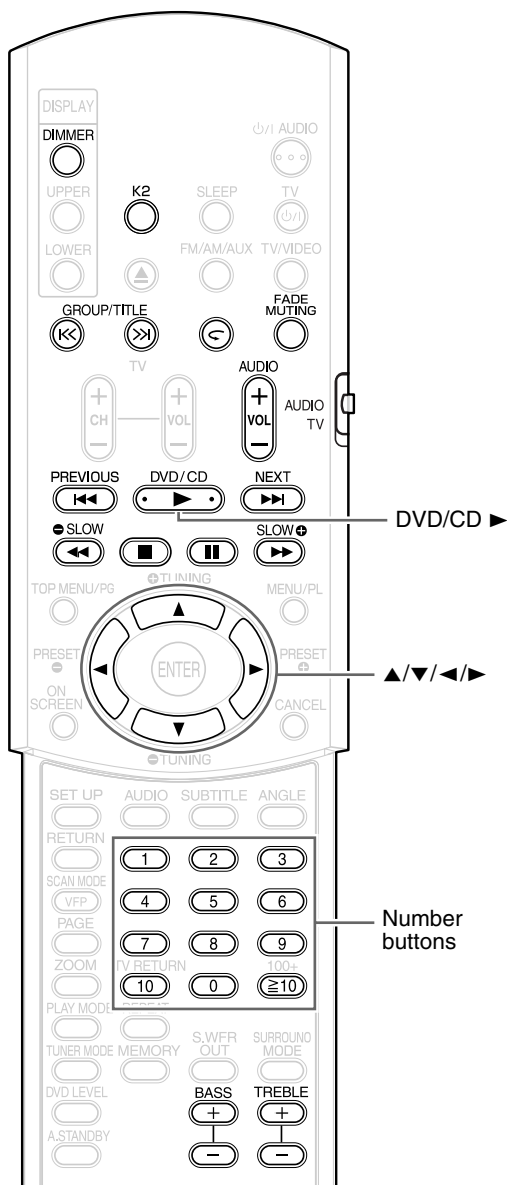
Track

C: Chapter

F: File

PG: Original Program


PL, L: Play list



Select what you want to play by using the number buttons



NOTE

- Set the remote control mode selector to **AUDIO** before using the number buttons. 
- For a VCD or SVCD, this operation can be carried out when the disc is stopped, or during playback without the PBC function.
- For a DVD AUDIO, CD, MP3 or JPEG, this operation can also be carried out when the disc/file is stopped.
- This operation may not be carried out for some discs.

Designate the chapter number or track number to play during playback.

Refer to "How to use the number buttons" on page 18.

To stop playback



Press **■** during playback.

To pause playback



Press **⏸** during playback.

To resume normal playback, press DVD/CD ▶.

- Press **⏸** to pause during JPEG file slide-show. Press DVD/CD ▶ to start playback from the next file.

To advance picture frame-by-frame



Press **⏮** during pause.

Each time you press the button, picture will be advanced frame-by-frame.

Fast reverse/Fast forward search



There are two methods.

- Press **⏮** or **⏭** during playback.

Each time you press the button, the speed increases. To restore the normal speed, press DVD/CD ▶.

- Hold down **⏮** or **⏭**.

Fast reverse/Fast forward search can be carried out only while the button is pressed.

NOTE

- For some discs/files, sound is intermittent or no sound is produced during fast reverse/fast forward search.
- The selectable speeds and displays vary by the disc/file type.

Playing back from a position 10 seconds before (One Touch Replay)



Press **◀** during playback.

NOTE

- You cannot go back to the previous title and original program (play list).

Slow Motion Playback



DVD AUDIO (only for moving images)

Press **⊖ SLOW** or **SLOW ⊕** during pause.

- Each time you press the button, the speed increases.
- Press **⏏** to pause playback, and press **DVD/CD ▶** to resume normal playback.

NOTE

- No sound will be produced.
- The picture motion in the reverse direction may not be smooth.
- For a VCD, SVCD or DVD VR, Slow Motion Playback can be carried out in the forward direction only.

Skip to the beginning of the selection



Press **PREVIOUS ◀◀** or **NEXT ▶▶** during playback.

- Press **GROUP/TITLE ◀/▶** to select the title or group.

NOTE

- You cannot skip to the previous track even by pressing **PREVIOUS ◀◀** during random playback. (Refer to page 26.)

Skipping at approximately 5 minute intervals



You can skip within a file at approximately 5 minute intervals. This is useful especially when you want to skip within a long file.

Press **◀** or **▶** during playback.

- Each time you press **◀** or **▶**, the playback position skips to the beginning of the previous or next interval. Each interval is approximately 5 minutes.

NOTE

- Intervals are automatically assigned from the beginning of a file.
- You can use this function only within the same file.

How to use the number buttons

Examples:

5: **5** 15: **≧10** → **1** → **5**
 20: **≧10** → **2** → **0** 25: **≧10** → **2** → **5** 125: **≧10** → **≧10** → **1** → **2** → **5**



Guide icons displayed on the TV screen (On-screen guide)



: Play



: Pause



: Fast reverse/Fast forward search



: Slow Motion Playback (reverse/forward directions)



: Containing multi-angle views (☞ page 29)



: Containing multi-audio languages (☞ page 29)



: Containing multi-subtitle languages (☞ page 29)

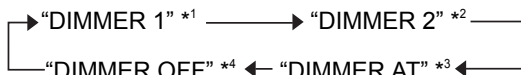


: The disc/file cannot accept the operation you have attempted.

To change the brightness of the display window (DIMMER)

Press DIMMER repeatedly.

- Each time you press **DIMMER**, the setting in the display window changes as follows.



*1 The display window becomes darker than the normal display brightness.

*2 The display window becomes darker than "DIMMER 1".

*3 When a video disc/file is played back, the display window becomes darker automatically.

*4 The normal display brightness is restored.

Adjusting the volume

Press AUDIO VOL +/-.

NOTE

The volume can be adjusted by turning the **VOLUME** control on the main unit.

Adjusting sound quality

Bass: Press **BASS +/-**.

Treble: Press **TREBLE +/-**.

Turning off the sound temporarily (FADE MUTING)

Press FADE MUTING.

- Press **FADE MUTING** again or **AUDIO VOL +** to restore the sound. The sound is also restored when the main unit is turned off once and turned on.

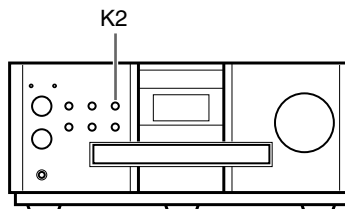
Enhancing the playback sound (K2)

The K2 function is designed to provide natural sound by improving the playback sound from low-bit-rate digital sources.

The function compensates for sound waves dissipated during digital recording compression to approximate the original analog sound. Sound is reproduced with more bits (24 bit) and a wider range of frequency (128 kHz, 176.4 kHz or 192 kHz).

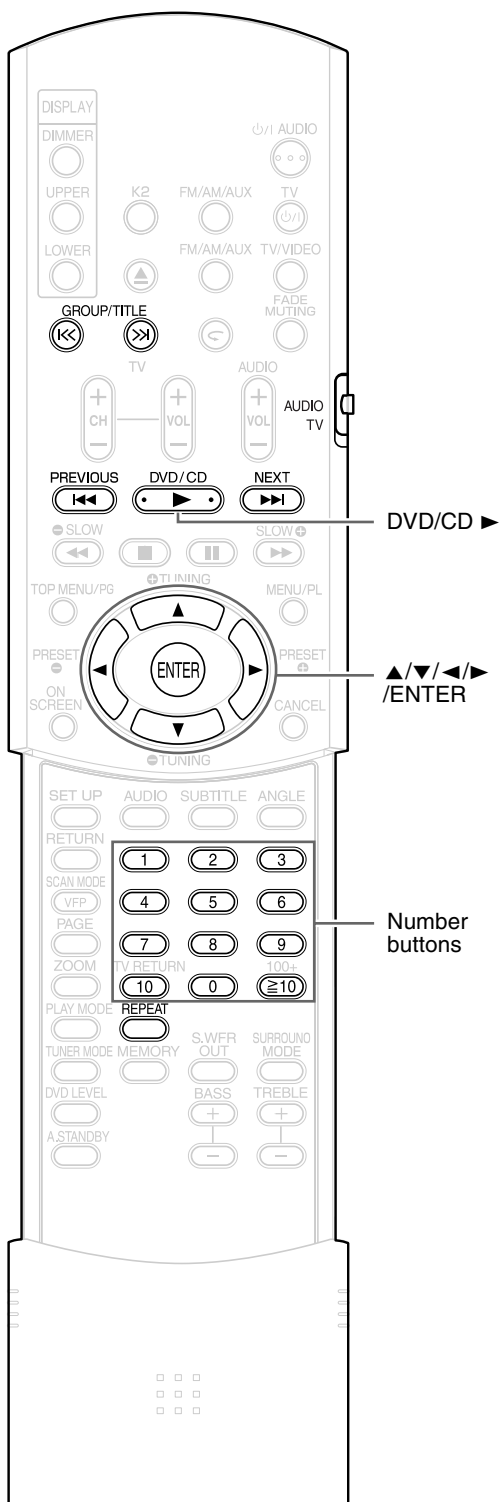
Press K2 on the remote control or on the main unit.

- When the K2 function is activated, the K2 lamp on the main unit lights up.
- Each time you press **K2**, the display changes as follows.
 - "K2 Mode 1":
Plays back a digital source with non-compressed sound signals (linear PCM).
 - "K2 Mode 2":
Plays back a digital source with compressed sound signals (Dolby digital, DTS, MP3 or WMA).
 - "K2 OFF":
Cancels the K2 function.



NOTE

- The initial setting is "K2 Mode 1".
- If **K2** is pressed when the headphone surround mode function or **SURROUND MODE** is activated, these functions are turned off and the K2 function is activated.
- If **K2** is pressed when an AM/FM broadcast, an analog audio device connected to the **AUX IN** terminal or **TV SOUND** is selected as the source, "NO OPE K2" is displayed in the display window, and the K2 function is not activated. The K2 function is activated when a loaded disc is selected as the source.
- The original range of frequency is automatically detected and extended to a specific range. When the original range is 32 kHz, 44.1 kHz or 48 kHz, the range is extended to 128 kHz, 176.4 kHz or 192 kHz respectively.
- This function is available when "PCM ONLY" is selected for "DIGITAL AUDIO OUTPUT" (refer to page 36). "NO OPE K2" appears in the display window and the K2 function cannot be used when "DOLBY DIGITAL/PCM" or "STREAM/PCM" is selected.



NOTE
Set the remote control mode selector to **AUDIO** before using the number buttons.



Playback

MP3 **WMA** **JPEG** **MPEG1**
WMA **MPEG2**

Display of an MP3 file is described here as an example.

NOTE

When files of different types (audio/still picture/video) are recorded on a loaded disc, select the file type before playback.

(Refer to "FILE TYPE" on page 36.)

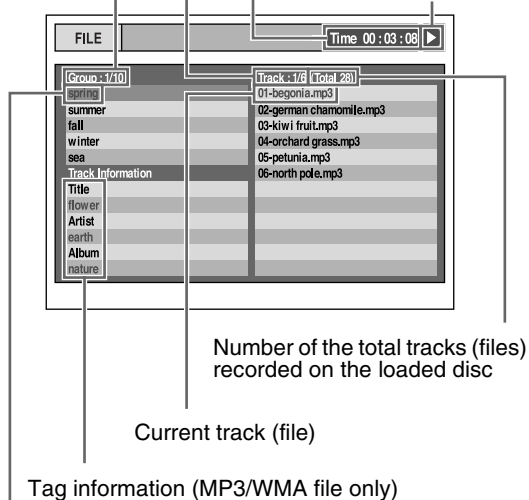
1 Load a disc.

Numbers of the current group and total groups recorded on the loaded disc

Numbers of the current track (file) and total tracks (files) included in the current group

Elapsed playback time of the current track (MP3/WMA/WAV file only)

Playback status



Current group

2 Press ▲ or ▼ to select a group.

3 Press ▶ to move to the track list.

- Press ◀ to go back to the group list.

4 Press ▲ or ▼ to select a track.

(Continued on the next page)

5 Press DVD/CD ► or ENTER.

NOTE

- **GROUP/TITLE** ◀◀, ▶▶ can also be used in Step 2.
- The number buttons can also be used in Step 4. In this case, Steps 3 and 5 are not needed. (For how to use the number buttons, refer to page 18).
- **PREVIOUS** ◀◀ or **NEXT** ▶▶ can also be used in Step 4. In this case, Step 3 is not needed.

Slide-show playback






- JPEG files are continuously played back beginning with the selected file.
- Display time for a file in slide-show playback is approximately 3 seconds.
- Press **ENTER** to view only the selected file.

Repeat playback

MP3 WMA WAV JPEG MPEG1 MPEG2

1 Press REPEAT while the disc/file is stopped.

Each time you press the button, the Repeat type will be alternated.

Repeat types	Display on the TV screen	Indicator on the display window on the main unit
Repeats the current track (except JPEG).	REPEAT TRACK	
Repeats the current group.	REPEAT GROUP	
Repeats the entire disc.	REPEAT ALL	
Cancels repeat.	No display	No display
Repeats the current track during Program or Random Playback (except JPEG and MPEG1/2).	REPEAT STEP	 PRGM or RANDOM
Repeats all programmed tracks or the all tracks for Random play (except JPEG and MPEG1/2).	REPEAT ALL	 ALL PRGM or RANDOM

*  represents blinking.

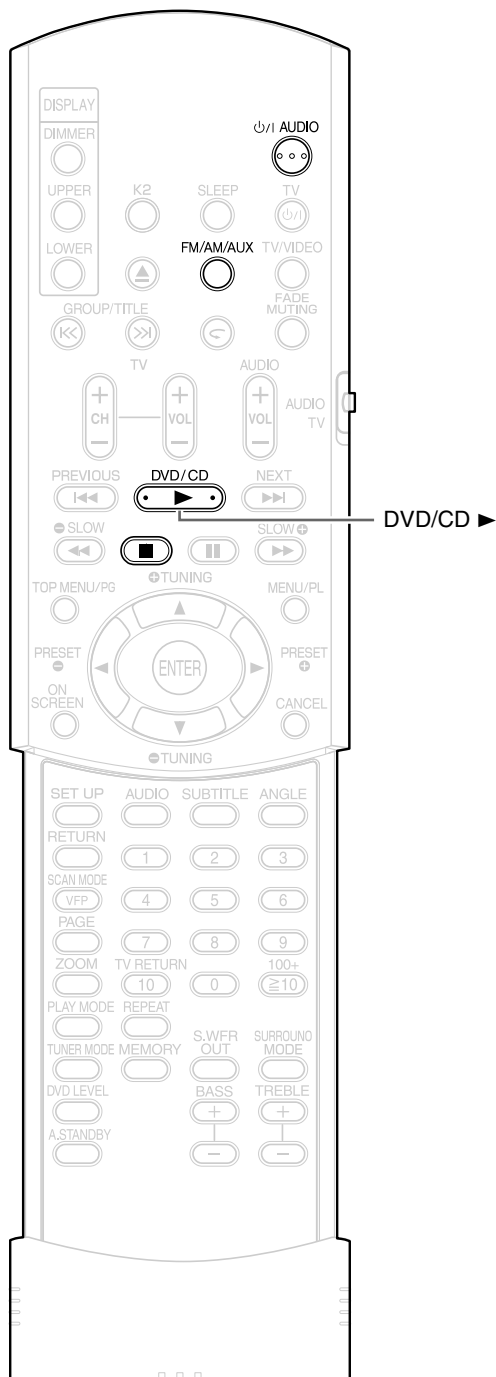
2 Press DVD/CD ►.

NOTE

- The Repeat types can be changed during playback.
- The Repeat mode will be automatically cancelled if there is a file that cannot be played (☞ page 3).



When playback is stopped in the middle, playback can be started from the stopped scene. This is called Resume function.



How to suspend playback

Perform any of the following operations during playback.

Press ■ once.*
Press / AUDIO to turn off the power.
Change the source to FM, AM or AUX.*

* Even if the power is turned off by pressing / **AUDIO** after this, the position where playback has been stopped will be stored.



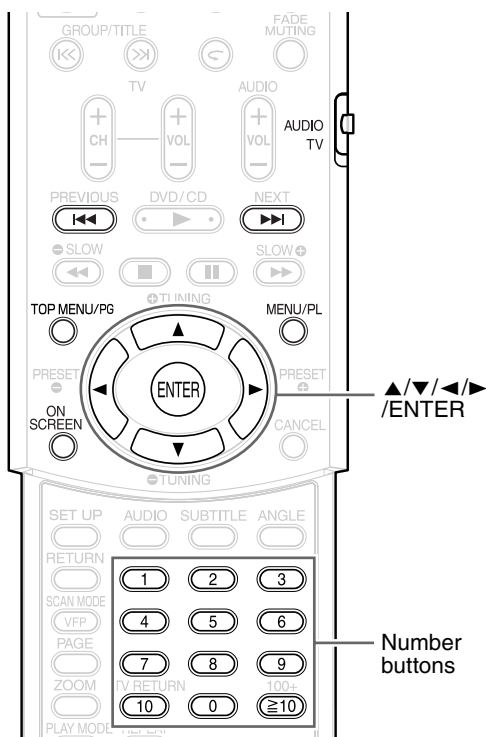
To start playback from the stored position

Press DVD/CD ►.

NOTE

- This function does not work in Program Playback or Random Playback.
- The position where playback starts again may be a little different from the stopped position.
- When a disc menu is displayed, the Resume function may not work.
- The audio language, the subtitle language and the angle at that time are stored as well as the stopped position.
- The stored position will be cleared if the disc tray is opened. Further, if ■ is pressed during playback, "RESUME" will be displayed. If ■ is pressed at this time, "RESUME OFF" will be displayed and the stored information will be cleared.
- At the time of purchase, Resume is set to ON. Resume can be set to OFF (see page 36).

Select the scene to be played



NOTE

Set the remote control mode selector to **AUDIO** before using the number buttons.



- 1 Press **TOP MENU/PG** to display the original program or press **MENU/PL** to display the play list while the disc is stopped or during playback.

Original program

ORIGINAL PROGRAM				
No	Date	Ch	Time	Title
1	03/12/04	L 1	12:15	La fleur
2	09/12/04	L 1	23:05	The last struggle
3	18/12/04	L 1	08:17	free flyer
4	20/12/04	L 1	07:47	BOOM!
5	25/12/04	L 1	19:38	Mr. Lawrence
6	28/12/04	L 1	14:20	Satisfy U

Recording date

Channel information

Starting time for the title recording

Title name

Play list

PLAY LIST				
No	Date	Chap	Length	Title
1	03/12/04	2	0:23:24	Nebula G.
2	15/12/04	4	1:04:39	CDJ
3	24/12/04	13	0:41:26	Secret Garden
4	27/12/04	17	0:09:08	S. Walker

Recording date

Number of chapters included in the title

Total playback time for the title

- The play list does not appear when a play list has not been recorded to the disc.

- 2 Press **▲** or **▼** to select the desired title.

- 3 Press **ENTER**.

- When you have selected the original program by pressing **TOP MENU/PG** in step 1, playback starts from the selected title to the following titles.
- When you have selected the play list by pressing **MENU/PL** in step 1, only the selected title is played back.

Select from the menu



- 1 Press **MENU/PL** or **TOP MENU/PG** while the disc is stopped or during playback*1.

- The disc menu screen will be displayed.

- 2 Press **▲**, **▼**, **◀** or **▶** (only for a DVD VIDEO or DVD AUDIO) or the number buttons to select the scene to be played.

- Refer to "How to use the number buttons" (page 18).
- When the menu screen has a couple of pages, press **◀◀** or **▶▶** to change the page (only for a VCD and SVCD).

- 3 Press **ENTER**.

NOTE

*1 For a VCD and SVCD, this operation can be carried out only when the PBC function is off.

- This operation cannot be carried out for a disc without a menu screen.
- Playback may start for some discs without pressing **ENTER**.

Designate the time (Time search)

DVD VIDEO DVD AUDIO DVD VR CD VCD SVCD (PBC off)

1 Press ON SCREEN twice during playback*1.






The menu bar will be displayed (☞ page 33).

2 Press ◀ or ▶ to select .

3 Press ENTER.

4 Input the time*2 using the number buttons (1-9, 0).

Example: When you want to play a DVD VIDEO from the position of (0 hour) 23 minutes 45 seconds, press the buttons in the order:

 →  →  →  → 

“minutes” and “seconds” can be omitted.

- If you input wrong numbers, press ◀ to delete the numbers and re-input.

5 Press ENTER.

To delete the menu bar, press ON SCREEN.

NOTE

- This function does not work during program playback or random playback.
- Time search for a DVD VIDEO is from the beginning of the title.
- Time search for a DVD AUDIO is from the beginning of the track being played back.

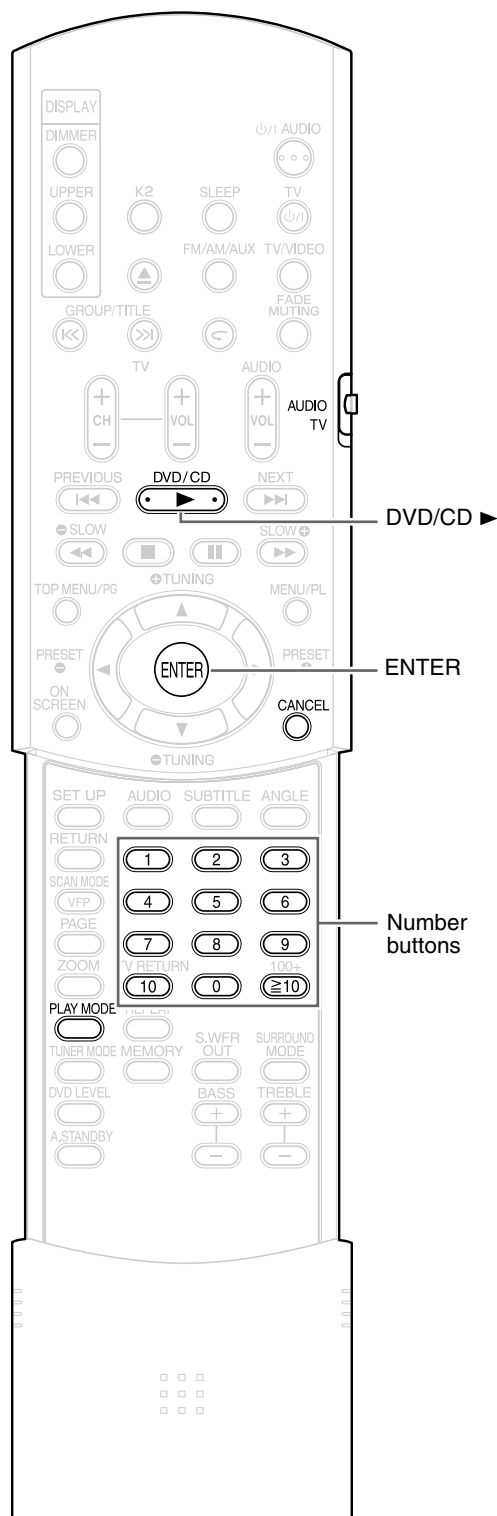
*1 For a CD, you can use this function any time.

*2 Time search for a VCD, an SVCD and a CD is as follows:

- When the disc is stopped, time search is from the beginning of the disc.
- When the disc is played back, time search is within the track currently being played back.

Program Playback/Random Playback

DVD VIDEO DVD AUDIO VCD SVCD CD MP3 WMA WAV



Play the disc/file in the desired order (Program Playback)

It is possible to program a maximum of 99 tracks or chapters. The same track or chapter can be programmed more than once.

1 While the disc/file is stopped, press **PLAY MODE** repeatedly to display “PROGRAM” on the display window on the main unit.

Example: For DVD VIDEO

PROGRAM			TV screen
No.	Group/Title	Track/Chapter	
1			Program screen
2			
3			
4			
5			
6			
7			
8			

2 Create a program following the description on the TV screen.

Refer to “How to use the number buttons” (page 18).

- The input content varies depending on the disc/file type.
 - DVD VIDEO: Titles and chapters
 - VCD, SVCD, CD: Tracks
 - DVD AUDIO, MP3/WMA/WAV: Groups and tracks
- To select a DVD AUDIO bonus group, carry out the operations of “Playing the Bonus Group” on page 32 in advance to erase the display “BONUS”.
- If the number of tracks or chapters input is greater than 99, “FULL” will be displayed.
- In the case of a CD, SVCD or VCD, when the total playback time reaches 9 hours 59 minutes 59 seconds, “-:-:--” will be displayed on the display window (It is possible to continue programming).

NOTE

Set the remote control mode selector to **AUDIO** before using the number buttons.



To program on the display window on the main unit, operate as follows.

- (1) Select a group/title using the number buttons.
Display example of the upper display window: T2 C--
- (2) Designate a track/chapter number using the number buttons.
Display example of the upper display window: T2 C3
 - Refer to "How to use the number buttons" (☞ page 18).
 - The program number will be displayed on the lower display window (Example: "P2").
- (3) Repeat the above operations (1) and (2) to complete the program. Then, advance to Step 3.

NOTE

(Only for a DVD VIDEO, a DVD AUDIO or an MP3/WMA/WAV)

If you press **ENTER** instead of designating a track/chapter number, "ALL" is displayed and all of the tracks/chapters included in the selected group/title are programmed.

3 Press DVD/CD ►.

- To resume normal playback, press **PLAY MODE** repeatedly to display "NORMAL" on the display window on the main unit while the disc/file is stopped. The program content will not be erased.
- The following operations erase the program content.
 - Hold down **CANCEL** until "CLEAR!" appears on the display window with the program preference screen displayed (if **CANCEL** is pressed and released quickly, programs will be erased one by one).
 - Open the disc tray
 - Turn off the power

Playing the disc/file in a random order (Random Playback)

1 Press PLAY MODE repeatedly to display "RANDOM" on the display window on the main unit while the disc/file is stopped.

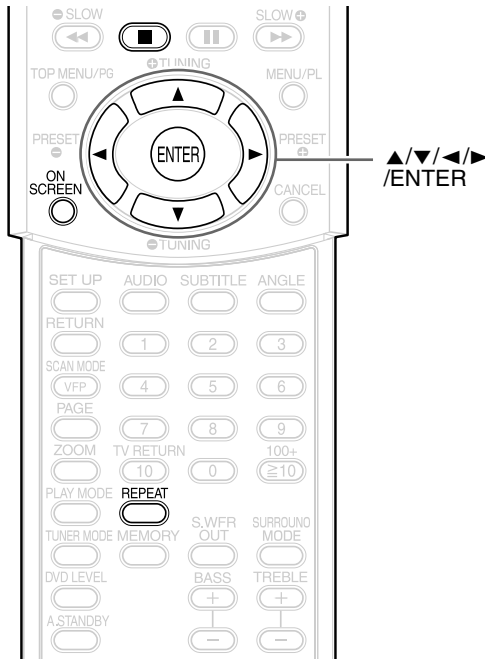
- "RANDOM" will also be displayed on the TV screen.

2 Press DVD/CD ►.

- The same chapter or track will not be played twice.
- To resume normal playback, press **PLAY MODE** repeatedly to display "NORMAL" on the display window on the main unit while the disc/file is stopped.
- Random Playback will also be cancelled by carrying out the following operations.
 - Open the disc tray
 - Turn off the power
- The previous track will not be returned to even if **PREVIOUS** ◀◀ is pressed repeatedly during Random Playback (the beginning of the current chapter or track will be returned to).

Repeat Playback

Refer to page 21 for Repeat Playback of MP3/WMA/WAV/JPEG/MPEG1/MPEG2 file.



Playing the title/chapter/group/track/all tracks repeatedly (REPEAT)

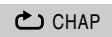
DVD VIDEO DVD AUDIO DVD VR VCD SVCD CD

1 Press REPEAT during playback.

Each time you press the button, the Repeat type will be alternated.

Example:

TV screen



Indicator on the display window on the main unit



For DVD VIDEO

Repeat types	Display on the TV screen	Indicator on the display window on the main unit
Repeats the current chapter	▶ CHAP	↻
Repeats the current title	▶ TITLE	↻ ALL *
Cancels repeat	▶ OFF	No display

For DVD AUDIO

Repeat types	Display on the TV screen	Indicator on the display window on the main unit
Repeats the current track	▶ TRACK	↻
Repeats the current group	▶ GROUP	↻ ALL *
Cancels repeat	▶ OFF	No display

* represents blinking.

For DVD VR

Repeat types	Display on the TV screen	Indicator on the display window on the main unit
Repeats the current chapter	▶ CHAP	↻
Repeats the current program	▶ PG	↻ ALL *
Repeats the current play list	▶ PL	↻ ALL *
Repeats all chapters	▶ ALL	↻ ALL
Cancels repeat	▶ OFF	No display

* represents blinking.

For CD/VCD/SVCD

Repeat types	Display on the TV screen	Indicator on the display window on the main unit
Repeats the current track	▶ TRACK	↻
Repeats all tracks	▶ ALL	↻ ALL
Cancels repeat	▶ OFF	No display

NOTE

- For a DVD AUDIO and CD, this operation can always be carried out, while, for a VCD and SVCD, the operation can be carried out when the disc is stopped or during playback without the PBC function.
- It is possible to set Repeat on the menu bar. For how to operate, refer to "Playing the designated part repeatedly (A-B Repeat Playback)" (page 28).
- The abbreviations displayed on the main unit are as follows.
 - TRK : Track
 - CHP : Chapter
 - TI. : Title
 - GR. : Group
 - PG : Original Program
 - PL : Play list
- For a DVD VIDEO and DVD VR, if the loaded disc is not selected as the source, the Repeat mode will be cancelled.

Repeat Playback during Program or Random Playback

Repeat playback cannot be performed for a DVD VR.

Repeat types	Display on the TV screen	Indicator on the display window on the main unit
Repeats the current chapter or track	▶ STEP or REPEAT STEP	↻ PRGM or RANDOM
Repeats all programmed tracks or all the tracks in Random Playback	▶ ALL or REPEAT ALL	↻ ALL PRGM or RANDOM
Cancels repeat	▶ OFF or No display	PRGM or RANDOM

Playing the designated part repeatedly (A-B Repeat Playback)

DVD VIDEO DVD AUDIO DVD VR VCD SVCD CD

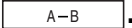
1 Press ON SCREEN twice during playback.

The menu bar (☞ page 33) will be displayed.

2 Press ◀ or ▶ to select .

3 Press ENTER.

4 Press ▲ or ▼ to display





.

Other Repeat modes can be selected here. For other Repeat modes, refer to “Playing the title/chapter/group/track/all tracks repeatedly (REPEAT)” (☞ page 27).

5 Press ENTER at the start point of the part to be repeated (designating A point).

- The icon on the menu bar will be .

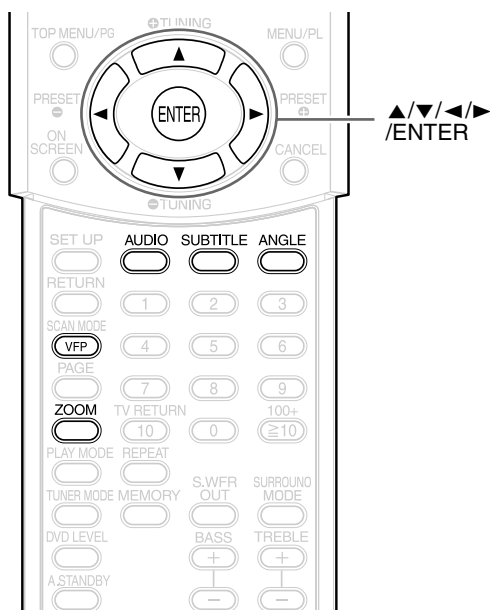
6 Press ENTER at the end point of the part to be repeated (designating B point).

- The icon on the menu bar will be .  will appear blinking on the display window on the main unit and the part between A and B points will be played repeatedly.
- A-B Repeat Playback will be cancelled by carrying out the following operations.
 - Press .
 - Select  and press **ENTER** twice.

NOTE

A-B Repeat Playback is possible only within the same title or track. A-B Repeat Playback cannot be carried out during PBC playback, Program Playback, Random Playback and Repeat Playback.

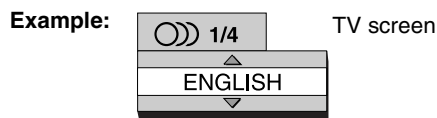
Other convenient functions



Selecting the audio language

DVD VIDEO DVD AUDIO DVD VR VCD SVCD

1 Press AUDIO during playback of a disc containing several audio languages.



- Each time you press the button, the audio language will be alternated. Also, the audio language can be changed by pressing ▲ or ▼.
- For a language code such as “AA”, refer to “Language codes” (☞ page 44).
- “ST”, “L” and “R” displayed when playing a VCD, SVCD or DVD VR respectively represent “Stereo”, “left sound” and “right sound”.

2 Wait for a few seconds or press ENTER.

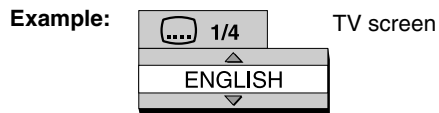
NOTE

It is possible to operate by using the menu bar (☞ page 33).

Selecting the subtitles

DVD VIDEO DVD VR SVCD DVD AUDIO (only for moving image)

1 Press SUBTITLE during playback of a disc containing subtitles in several languages.



- Each time you press the button, the subtitle will be alternated between ON/OFF.

2 Press ▲ or ▼ to select a subtitle language.

- For a language code such as “AA”, refer to “Language codes” (☞ page 44).
- The manner of displaying subtitle languages may be different depending on the disc.

3 Wait for a few seconds or press ENTER.

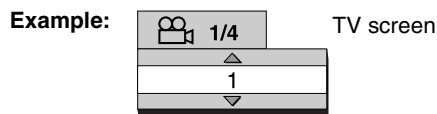
NOTE

- It is possible to operate by using the menu bar (☞ page 33).
- For a SVCD, each time you press SUBTITLE in Step 1, the subtitle type and ON/OFF will be alternated.

Selecting a view angle

DVD VIDEO DVD AUDIO (only for moving image)

1 Press ANGLE during playback of a scene containing multi-view angles.



- Each time you press the button, the angle will be alternated. Also, the angle can be changed by pressing ▲ or ▼.

2 Wait for a few seconds or press ENTER.

NOTE

It is possible to operate by using the menu bar (☞ page 33).

Enlarging the picture (ZOOM)

DVD VIDEO DVD VR VCD SVCD JPEG MPEG1 MPEG2

DVD AUDIO —(only for moving image)

1 Press ZOOM during playback or while paused.

- Each time you press the button, the picture magnification will be changed.
- (For a JPEG file) You cannot change the picture magnification during slide-show playback.

2 Select the portion you want to see by using ▲, ▼, ◀ or ▶.

- To resume normal playback, select "OFF" in Step 1.

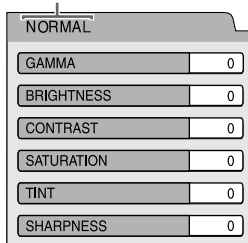
Adjusting the picture quality (VFP)

DVD VIDEO DVD AUDIO DVD VR VCD SVCD JPEG MPEG1 MPEG2

1 Press VFP during playback or while paused.

The current setting will be displayed on the TV screen.

Selected VFP mode



2 Press ◀ or ▶ to select VFP mode.

- It is recommended to select "NORMAL" usually, or "CINEMA" in a dark room. When either "NORMAL" or "CINEMA" is selected, go to Step 7.
- When either "USER 1" or "USER 2" is selected, the adjustment can be carried out in detail in the operations after Step 3.

3 Press ▲ or ▼ to select an item to be adjusted.

- "GAMMA"
Controls the brightness of neutral tints while maintaining the brightness of dark and light portions.
(Setting range: -3 to +3)
- "BRIGHTNESS"
Controls the brightness of the display. (Setting range: -8 to +8)
- "CONTRAST"
Controls the contrast of the display.
(Setting range: -7 to +7)
- "SATURATION"
Controls the saturation of the display.
(Setting range: -7 to +7)
- "TINT"
Controls the tint of the display.
(Setting range: -7 to +7)
- "SHARPNESS"
Controls the sharpness of the display. (Setting range: -8 to +8)

4 Press ENTER.

Example:



5 Press ▲ or ▼ to change the value.

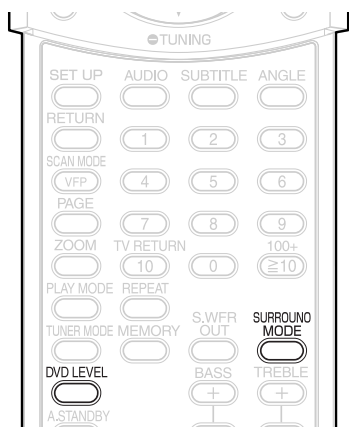
6 Press ENTER.

To adjust other items, go back to Step 3.

7 Press VFP.

NOTE

- If no operation is made for several seconds during the procedure, the settings made so far will be automatically stored.
- "VFP" is an abbreviation of "Video Fine Processor".



Creating realistic sound (SURROUND MODE)

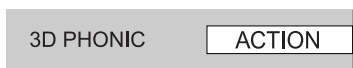


The two speakers produce an effect resembling surround-sound.

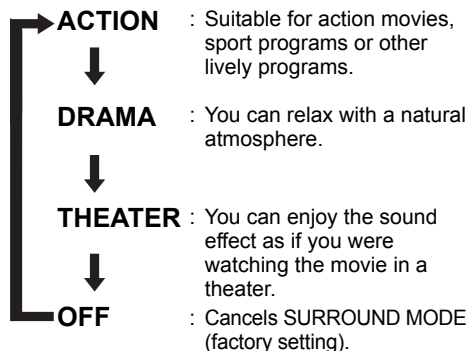
- This function is activated when a loaded disc is selected as the source.

1 Press SURROUND MODE during playback.

Example: TV screen



- Each time you press the button, the display toggles as follows.



- While SURROUND MODE is activated, "SURROUND" appears on the display window.

NOTE

- SURROUND MODE is effective for the speakers.
- When noise is produced or sound is distorted, set SURROUND MODE to "OFF".
- If the SURROUND MODE is activated when the K2 function has already been activated, the K2 function turns off automatically and the SURROUND MODE turns on.

Selecting the headphone surround mode



You can listen to surround sound via headphones connected to the PHONES terminal.

- This function is activated when a loaded disc is selected as the source.

■ When headphones are connected to the PHONES terminal

1 Press SURROUND MODE.

- Each time you press SURROUND MODE, the setting toggles between "SURROUND ON" and "SURROUND OFF" in the display window.
- If the headphone surround mode function is activated when the K2 function has already been activated, the K2 function turns off automatically and the headphone surround mode function turns on.

NOTE

- The PHONES terminal is for connecting a pair of headphones equipped with a stereo mini plug (not supplied). When headphones are connected, no sound is output from the speakers.
- "SURROUND ON" is displayed in the display window for a short time when headphones are disconnected from the PHONES terminal and then connected to the PHONES terminal while the headphone surround mode function is on.

Adjusting playback level (DVD LEVEL)



The audio of a DVD VIDEO and DVD AUDIO may be recorded at a lower level (volume) than for other types of disc. If the difference is not to your liking, adjust the DVD Level.

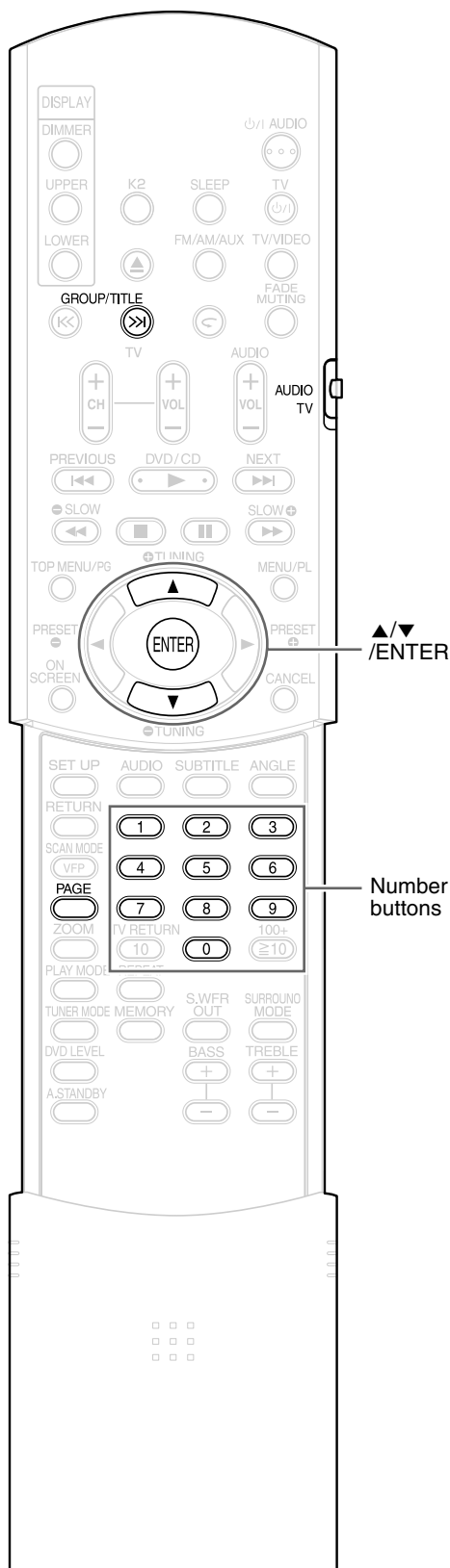
1 Press DVD LEVEL during playback.

- Each time you press the button, the level will be alternated among "NOR" (Normal), "MID" (Middle) and "HIG" (High).
- Select the level while listening to the sound played.

NOTE

- DVD Level is effective only for playback of a DVD.
- Even if the DVD Level is changed, the output level from the digital audio output terminal will not be changed.
- This operation can be carried out while the disc is stopped or paused.

**DVD
AUDIO**



NOTE

Set the remote control mode selector to **AUDIO** before using the number buttons.



Playing the Bonus Group

There are some DVD AUDIO discs with a special group, called "Bonus Group", recorded.

NOTE

This operation can be carried out when "BONUS" is lit on the display window on the main unit.

1 Press GROUP/TITLE >> repeatedly during playback to select a bonus group.

"KEY_ _ _ _" appears on the TV screen, and on the display window on the main unit.

2 Press the number buttons to enter a pin code (4 digits).

The method of getting a pin code may be different depending on the disc.

3 Press ENTER.

- When a correct pin code is entered, "BONUS" disappears and the playback of the bonus group starts.
- If an incorrect pin code is entered, try entering a correct pin code again.

Browsable Still Pictures (B.S.P.)

There are some DVD AUDIO discs with still pictures recorded. Among the still pictures, there are pictures called B.S.P. (Browsable Still Pictures). With these pictures, it is possible to switch a picture as if turning over pages.

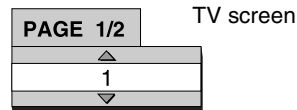
NOTE

This operation can be carried out when "B.S.P." is lit on the display window on the main unit.

1 Press PAGE during playback.

Each time you press the button, the still picture will be switched over. It is also possible to switch the picture using cursor ▲/▼.

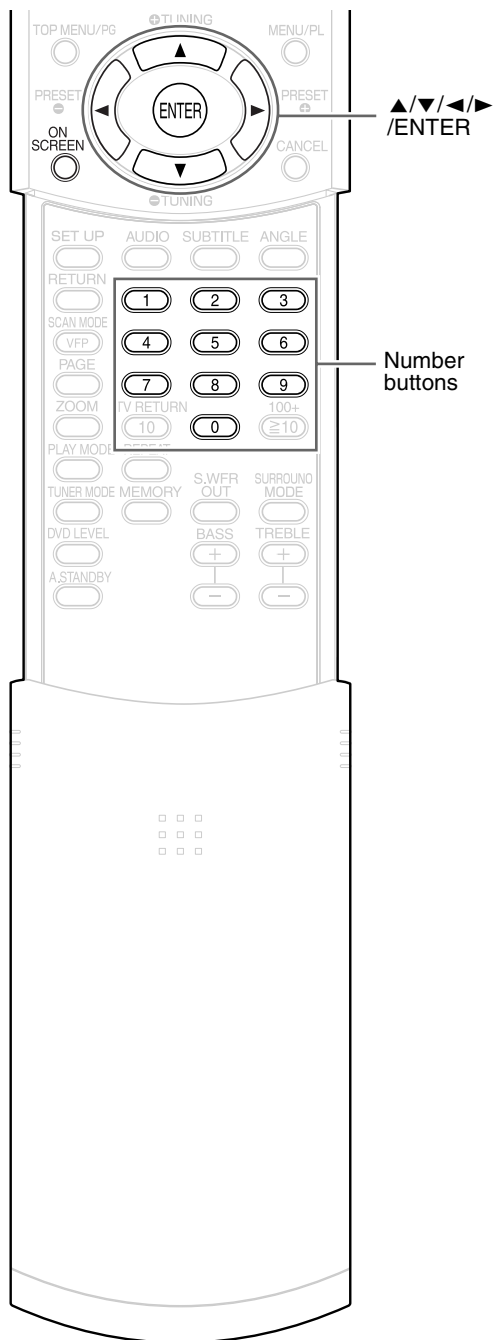
Example:



2 Wait for a few seconds or press ENTER.

Using the status bar and the menu bar

DVD VIDEO DVD AUDIO DVD VR VCD SVCD CD MPEG1 MPEG2



NOTE

- Set the remote control mode selector to **AUDIO** before using the number buttons.
- This operation can be carried out when there is a disc loaded. There are some functions that may not work while the disc is stopped.



1 Press ON SCREEN twice.

The status bar and the menu bar will appear on the TV screen.



Status bar

Menu bar

The above is an example for a DVD VIDEO.










2 Press ◀ or ▶ to select an item to be operated.

3 Press ENTER.

- The selected function can be set. For the setting content, refer to the following "Functions list".
- The indicator for the currently active function lights up.
- To delete the menu bar, press **ON SCREEN**.

Functions list

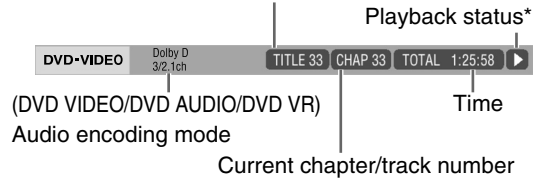
For the functions with no special description for the operations, press ▲ or ▼ to select, and press ENTER to determine.

<p>TIME</p> <p>Time display selection</p>	<p>Changes the time information in the display window and the status bar. Each time ENTER is pressed, the display changes on the menu bar.</p> <p>DVD VIDEO/DVD AUDIO (operating during playback) TOTAL: Elapsed playback time of the current title/group. T.REM: Remaining time of the current title/group. TIME : Elapsed playback time of the current chapter/track. REM : Remaining time of the current chapter/track.</p> <p>DVD VR (operating during playback) TOTAL: Elapsed playback time of the current original program/play list. T.REM: Remaining time of the current original program/play list.</p> <p>CD (operating during playback)/VCD/SVCD TIME : Elapsed playback time of the current track. REM : Remaining time of the current track. TOTAL: Elapsed playback time of the disc. T.REM: Remaining time of the disc.</p>
<p> OFF</p> <p>Repeat mode</p>	<p>Refer to page 27. (For A-B repeat playback, refer to page 28.)</p>
<p></p> <p>Time search</p>	<p>Refer to page 24.</p>
<p>CHAP </p> <p>Chapter search/ track search</p>	<p>DVD VIDEO/DVD VR (chapter search)/ DVD AUDIO (track search) Selects a chapter/track. Press the number buttons to enter the chapter/track number and press ENTER.</p> <p>Examples: 5:  24:  → </p>
<p> 1/3</p> <p>Audio language</p>	<p>DVD VIDEO/DVD AUDIO/DVD VR/VCD/ SVCD Refer to page 29.</p>
<p> 1/5</p> <p>Subtitle language</p>	<p>DVD VIDEO/DVD AUDIO/DVD VR/SVCD Refer to page 29.</p>
<p> 1/3</p> <p>View angle</p>	<p>DVD VIDEO/DVD AUDIO Refer to page 29.</p>
<p>PAGE -/-</p> <p>Page selection</p>	<p>DVD AUDIO Refer to page 32.</p>

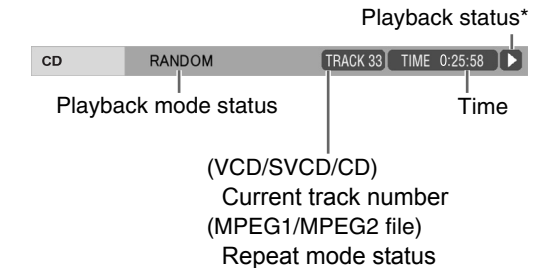
Information displayed on the status bar

DVD VIDEO/DVD AUDIO/DVD VR (the example below is for a DVD VIDEO)

(DVD VIDEO/DVD AUDIO)
 Current title/group number
 (DVD VR)
 Current original program number (PG)/
 current play list number (PL)



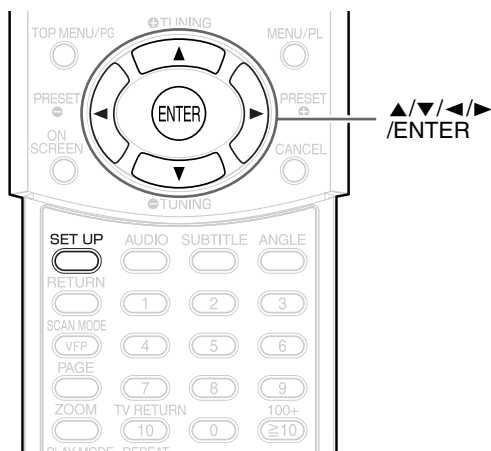
VCD/SVCD/CD/MPEG1/MPEG2 (the example below is for a CD)



NOTE

* The playback status mark has the same meaning of the mark on the On-screen guide (page 18).

Preferences



The initial settings of the system can be changed according to the environment the system is used in.

NOTE

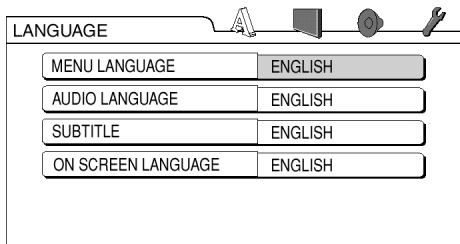
- Set the remote control mode selector to **AUDIO** before using the number buttons.
- The top and bottom of the preference screen may not be displayed on a widescreen TV. Adjust the picture size on the TV.



Basic operations

1 Press **SET UP** while the disc/file is stopped or no disc is loaded (“NO DISC” is displayed).

- The following screen will be displayed on the TV.



- Proceed with operations by following the description on the TV screen.



LANGUAGE




NOTE


- If the selected language is not recorded on the disc/file, the optimum language set for the disc/file will be displayed.
- For a language code such as “AA”, refer to the “Language codes” (page 44).


Items	Contents
MENU LANGUAGE	Select the language for the DVD VIDEO menu.
AUDIO LANGUAGE	Select the audio language for the DVD VIDEO.
SUBTITLE	Select the subtitle language for the DVD VIDEO.
ON SCREEN LANGUAGE	Select the language displayed on the preference screens.



PICTURE


Items	Contents (: initial setting)
MONITOR TYPE	<p>Select a display method suitable for your TV. 16 : 9 NORMAL: Select this when the aspect ratio of your widescreen TV is fixed to 16:9 (when playing a DVD VIDEO recorded at 4:3, the system automatically adjusts the screen width of the output signal).</p> <p>16 : 9 AUTO: Select this when using a conventional widescreen TV that automatically detects the aspect ratio of the input screen picture.</p>  <p>4 : 3 LB (Letter Box) : Select this when the aspect ratio of your TV is conventional 4:3. While viewing a wide screen picture, the black bars appear on the top and bottom of the screen.</p>  <p>4 : 3 PS (Pan Scan): Select this when the aspect ratio of your TV is conventional 4:3. While viewing a wide screen picture, the left and right edges of the picture will not be shown on the screen. (If the disc/file is not compatible with Pan Scan, the picture will be displayed at the Letter Box ratio.)</p>  <p>4 : 3 MULTI PS (Pan Scan) : 4 : 3 MULTI LB (Letterbox) : 16 : 9 MULTI NORMAL : 16 : 9 MULTI AUTO : These “MULTI” options should be selected when you connect the system to a TV compatible with multiple video signal types. If you select one of these options, the system outputs a PAL or NTSC video signal according to the disc, regardless of the video signal type setting. (Refer to page 13.)</p>
PICTURE SOURCE	<p>Select an item suitable to the video source. AUTO: The video source type (a video or film) is automatically selected. FILM: Select this item when you want to view a film or video recorded with the progressive scan method. VIDEO: Select this item when you want to view a normal video.</p>
SCREEN SAVER	<p>Select the Screen Saver mode between ON / OFF (Screen Saver activates when there is no operation made for about 5 minutes since a still picture was last displayed).</p>

Items	Contents ( : initial setting)
FILE TYPE	When files of different types are recorded on a loaded disc, you can select which files to play. When the preference has been changed, open/close the tray and turn on the power again. (A disc with files of the same type can be played regardless of this setting.) AUDIO : For MP3/WMA/WAV files. STILL PICTURE : For JPEG files. VIDEO : For MPEG1/MPEG2 files.

Items	Contents ( : initial setting)
D (Dynamic) RANGE COMPRESSION	To make adjustments for the difference between a high volume and a low volume when playing back with low volume (only for a DVD recorded with Dolby digital). AUTO : D. Range Compression automatically works. ON : D. Range Compression always works.




AUDIO

Items	Contents ( : initial setting)
DIGITAL AUDIO OUTPUT	Select an output signal type from the following in accordance with the device connected to the digital audio output terminal (AV amplifier, etc.). (See the list below for the preference items and output signal.) PCM ONLY : Device corresponding only to linear PCM. DOLBY DIGITAL/PCM : Dolby digital decoder or a device having the same function. STREAM/PCM : DTS/Dolby digital decoder or a device having the same function.
DOWN MIX	Switch signal from the digital output terminal of the DVD VIDEO according to the connected device. Select this when Digital Audio Output is set to "PCM ONLY". DOLBY SURROUND : A Dolby Pro Logic decoder-built-in device. STEREO : An ordinary device. • When SURROUND MODE is ON, Down Mix does not work.



OTHERS

Items	Contents ( : initial setting)
RESUME	Select ON /OFF. (☞ page 22)
ON SCREEN GUIDE	Select ON /OFF. (☞ page 18)
AV COMPU LINK MODE	When you want to control the main unit and the connected TV or other devices at the same time, select a setting according to the type of terminal on the device connected to the main unit. (Refer to "Using the AV COMPU LINK function" on page 41.) DVD1 : When connecting to the video 3 or DVD input terminal on the TV. DVD2 : When connecting to the video 1 input terminal on the TV. DVD3 : When connecting to the video 2 input terminal on the TV.

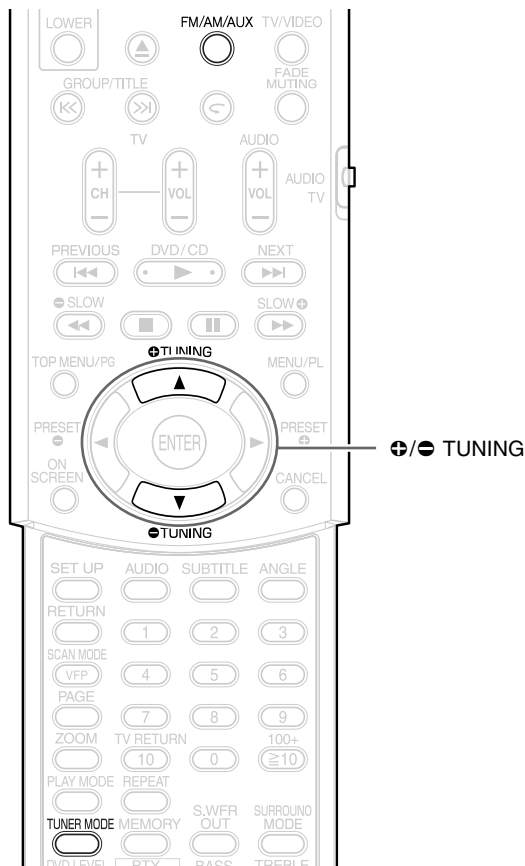
List of relationships of DIGITAL AUDIO OUTPUT preference items and output signal

Playback disc/file	DIGITAL AUDIO OUTPUT preference		
	STREAM/PCM	DOLBY DIGITAL/PCM	PCM ONLY
48 kHz, 16/20/24 bits linear PCM DVD VIDEO 96 kHz linear PCM DVD VIDEO	48 kHz, 16 bits stereo linear PCM		
48/96/192 kHz, 16/20/24 bits linear PCM DVD AUDIO	48 kHz, 16 bits stereo linear PCM		
44.1/88.2/176.4 kHz, 16/20/24 bits linear PCM DVD AUDIO	44.1 kHz, 16 bits stereo linear PCM		
DTS DVD VIDEO/DVD AUDIO	DTS bit stream	48 kHz, 16 bits stereo linear PCM	
DOLBY DIGITAL DVD VIDEO/DVD AUDIO	DOLBY DIGITAL bit stream		48 kHz, 16 bits stereo linear PCM
CD/VCD/SVCD	44.1 kHz, 16 bits stereo linear PCM/48kHz, 16 bits linear PCM		
DTS CD	DTS bit stream	44.1 kHz, 16 bits linear PCM	
MP3/WMA/WAV file	32/44.1/48 kHz, 16 bits linear PCM		

NOTE

- For a DVD VIDEO without content protection set, there is a 20 bit or 24 bit output at the digital audio output terminal.

Listening to a radio broadcast



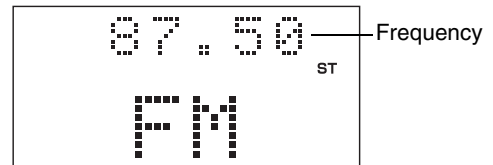
You can tune in to FM or AM.

Selecting a station

1 Press FM/AM/AUX to select “FM” or “AM” on the display window on the main unit.

Each time you press the button, the source will be alternated among “FM”, “AM” and “AUX”.

Example:



2 Press **⊖ TUNING** or **⊕ TUNING** to select the station (frequency).

Automatic tuning:

Hold down **⊖ TUNING** or **⊕ TUNING** until the system starts searching, and then release the button.

When a station of sufficient signal strength is tuned in to, the system stops searching automatically.

To stop searching manually, press **⊖ TUNING** or **⊕ TUNING**.

Manual tuning:

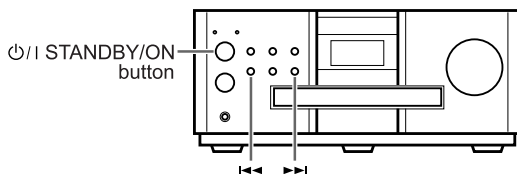
Each time you press **⊖ TUNING** or **⊕ TUNING**, the frequency changes.

- When an FM stereo program is received, the “ST” (Stereo) indicator lights.

Setting the AM tuner interval spacing

Some countries space AM stations 9 kHz apart, and other countries use 10 kHz spacing.

On the main unit ONLY:



■ When the main unit is turned off To select 10 kHz intervals, while holding down **▶▶** on the main unit, press **⊖/I STANDBY/ON** on the main unit to turn on the power. “10 kHz SP” appears on the display window.

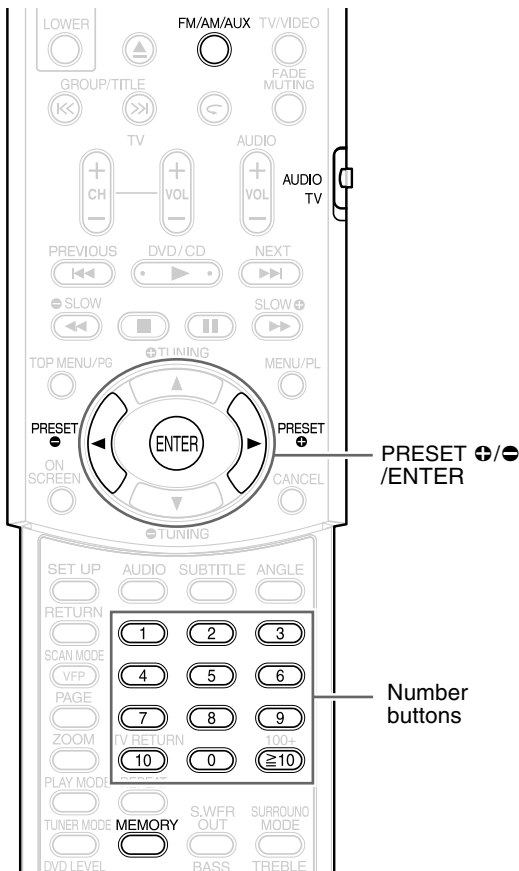
To select 9 kHz intervals, while holding down **◀◀** on the main unit, press **⊖/I STANDBY/ON** on the main unit to turn on the power. “9 kHz SP” appears on the display window.

NOTE

If the interval spacing is switched, the memory in which the radio stations were stored will be erased.

NOTE

- If the stereo FM program currently tuned in to is noisy, you can improve the reception by pressing **TUNER MODE** to switch to the monaural mode (“MONO” lights). If you press **TUNER MODE** again, or tune in to another station, the receiving mode returns automatically to the stereo mode.
- If a beeping sound disturbs your AM broadcast, you can reduce the noise. Pressing **TUNER MODE** displays “BEAT CUT AM” on the display window for a short time and reduces the noise.



Presetting stations in the system allows you to easily tune in to a station.

NOTE

Set the remote control mode selector to **AUDIO** before using the number buttons.



3 Select the number you want to store by pressing **PRESET -** or **PRESET +** while the memory number is blinking.

- You can also select the number by using the number buttons.
- Refer to “How to use the number buttons” (page 18).

4 Press **MEMORY** or **ENTER** while the selected number is blinking.

“STORED” will be displayed and the selected station will be stored.

NOTE

Storing a new station to a used number erases the previously stored station.

Tuning in to a preset station

1 Press **FM/AM/AUX** repeatedly to select either **FM** or **AM**.

2 Press the number buttons to select the memory number of a station you want to tune in to.

Refer to “How to use the number buttons” (page 18).

You can also select by pressing **PRESET -** or **PRESET +**.

Presetting stations

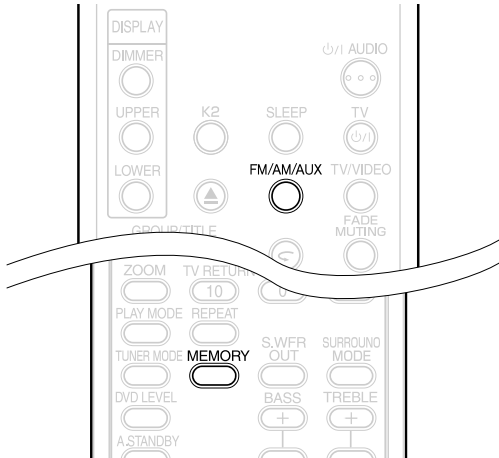
The system stores up to 30 FM stations and up to 15 AM stations.

1 Select a station you want to store (page 37 for how to select a station).

2 Press **MEMORY**.

Figures (memory number) blink on the display window for about 5 seconds.

Listening to the sound of other audio devices



Connect other audio devices to this system in advance (☞ page 11).

1 Press FM/AM/AUX to select “AUX” on the display window on the main unit.

- Each time you press **FM/AM/AUX**, the display changes in the display window as follows.
 - “AUX” when selecting the device connected to the **AUX IN** terminals
 - “AM” or “FM” when selecting AM or FM as the source.

2 Play other audio devices.

For details, refer to the manual of the device connected.

3 Adjust the volume and the sound quality of the system (☞ page 19).

Adjust the sound input level of the audio device

You can adjust the sound input level of another audio device connected to the **AUX IN** jacks.

1 Press FM/AM/AUX to select “AUX” on the display window on the main unit.

2 Hold down MEMORY until an input level is displayed.

Each time you hold down the button, it switches as follows:

LEVEL 1: Select this normally.



LEVEL 2: Select this when the input level from the other device is too high and the sound is distorted.

The initial setting is “LEVEL1”.

Auto Standby



If there is no operation for 3 minutes while the disc is stopped, the power will be automatically turned off.

You cannot use this function when a radio broadcast or a device connected to the **AUX IN** terminals is selected as the source.

1 Press A.STANDBY.

“A.S.ON” (Auto Standby On) and “A.STANDBY” will be lit on the display window on the main unit.

When a stopped state is entered (after playback is finished, for example), “A.STANDBY” starts blinking.

This means that the power will be turned off automatically if there is no operation for 3 minutes. And, 20 seconds before the power is turned off, “A.S.” will appear blinking.

Releasing Auto Standby

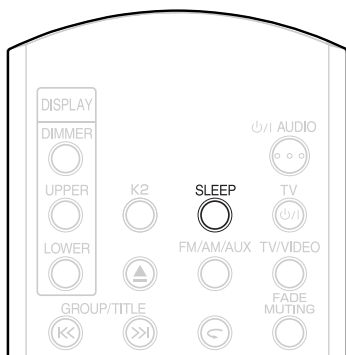
Press **A.STANDBY**.

“A.S.OFF” (Auto Standby Off) will appear and “A.STANDBY” will be turned off on the display window on the main unit.

NOTE

When the source is other than the disc, Auto Standby does not work.

Sleep Timer

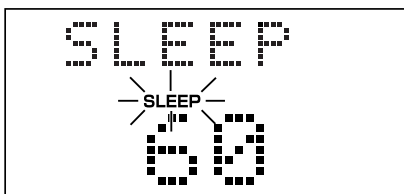


When the time you specify elapses, the system will be turned off by itself.

Press SLEEP.

Each time you press the button, the time indicated on the display window on the main unit changes (in minutes).

Example: When Sleep Timer is set to 60 minutes



Sleep Timer will be automatically set in a few seconds, and the display will disappear. The "SLEEP" indicator remains on.

NOTE

When Sleep Timer is set, the display window darkens automatically.

Changing the time

Reselect the time by pressing **SLEEP** repeatedly.

Confirming the time

Press **SLEEP** once while Sleep Timer is set.

Releasing

Press **SLEEP** repeatedly until "SLEEP OFF" appears.

NOTE

Sleep Timer will also be released when the power is turned off.

Tray Lock

You can lock the disc tray to prevent the disc from being ejected.

Setting

Turn off the power. And while holding down ■ on the main unit, press ▲.

"LOCKED" appears on the display window on the main unit.

Releasing

Carry out the same operations as those for setting. "UNLOCKED" appears on the display window on the main unit.

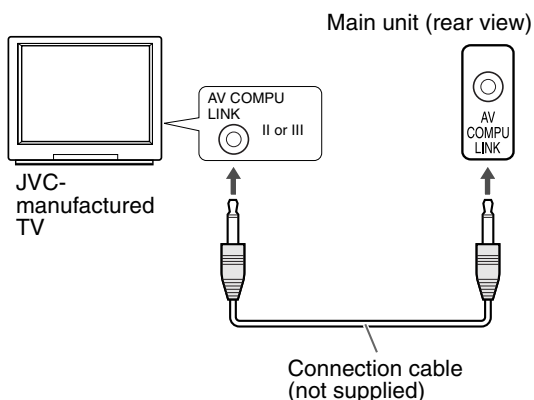
Using the AV COMPU LINK function

When a JVC-manufactured TV with AV COMPU LINK II or III terminals is connected to the main unit using these terminals, operating either the TV or the main unit controls the other device at the same time.

Preparation for the AV COMPU LINK function

NOTE

- Some JVC-manufactured TVs have terminals labeled "AV COMPU LINK". These terminals are the same as the AV COMPU LINK terminal on the main unit of this system or, the "AV COMPU LINK I/II" or "AV COMPU LINK" terminal on other JVC-manufactured systems.
- Refer to "OTHERS" on page 36 for determining the "AV COMPULINK MODE" setting.
- Also refer to the manual of the TV to be connected to the main unit.



Input terminal on the TV	"AV COMPULINK MODE" setting
Video 1	DVD2
Video 2	DVD3
Video 3	DVD1

- The AV COMPU LINK function may not work for some TVs when the main unit is connected to the TV via the video 2 or video 3 terminal on the TV.

Operating the AV COMPU LINK function

- 1 Turn on the main power of the TV.
- 2 Play back a disc/file.
 - Refer to pages 14 and 20.
 - The power of the TV is turned on.
 - The input mode on the TV changes to either the video 1, video 2 or video 3 (DVD) input.

Troubleshooting

■ General

Problem	Possible cause	Possible solution	Reference page
Power does not come on.	The power cable is not connected to an AC outlet.	Connect the power cable correctly.	12
You cannot operate any button.	Some specific operations are restricted.	This is not a malfunction.	–
The remote control does not work.	The batteries are running low.	Replace the batteries.	7
You cannot operate the main unit using the remote control.	The remote control mode selector on the remote control is slid to TV .	Slide the remote control mode selector to AUDIO .	8
A whirring noise can be heard.	The main unit is located close to a TV, computer, or other electric appliance.	Place the main unit away from a TV, computer, or other electric appliance.	–
No picture is produced.	Improper connection.	Connect all cables properly.	12
The picture is distorted.	A video cassette recorder is connected between the main unit and the TV.	Connect the main unit directly to the TV.	12
	The video signal type setting is not appropriate.	Select the video signal type suitable for your TV.	13
The screen size is abnormal.	The screen size setting is not appropriate.	Select the display method suitable for your TV.	35
The TV screen darkens.	The screen saver setting is activated.	Press any button.	35
No sound is produced.	The speakers are not connected correctly.	Connect the speakers correctly.	10
	Headphones are connected.	Disconnect the headphone plug.	31
	The sound is muted.	Restore the sound.	19
	If "NO AUDIO" is displayed in the display window, the disc may have been produced through illegal copying.	Check the disc at the store where it was purchased.	–
The sound is weak and can hardly be heard.	The audio level of the disc is low. (only for a DVD VIDEO/DVD AUDIO)	Select the audio level.	31
The sound is distorted.	The volume is too high.	Turn down the volume.	19
No sound comes out of the subwoofer.	The subwoofer setting is not appropriate.	Select "SUB WFR ON".	11
A radio broadcast has interference from noise.	The antennas are not connected correctly.	Connect the antennas correctly.	9
A radio broadcast cannot be received.			

■ For a loaded disc

Problem	Possible cause	Possible solution	Reference page
A disc cannot be played back.	If "REGION CODE ERROR!" appears on the TV screen, the region code number of a disc is not compatible with this system. (only for a DVD VIDEO)	Confirm the region code number compatible with this system.	3
	If "CANNOT PLAY THIS DISC" appears on the TV screen, the disc cannot be played back with this system.	Confirm the disc type playable with this system.	3
	The disc is upside down.	Place the disc on the disc tray with the printed surface facing up.	14
	Moisture has condensed on the lens.	Leave the main unit turned on, wait for approximately 1 or 2 hours, and then operate the main unit.	2
You cannot change the audio language/subtitle language/view angle.	The disc/file does not contain multiple audio languages/subtitle languages/view angles.	If only one audio language/subtitle language/view angle is recorded on the disc, you cannot change the setting.	29
No subtitles are displayed.	The disc/file contains no subtitles.	If no subtitles are recorded on the disc/file, you cannot display subtitles.	29
	You have not selected the subtitle language.	Select the subtitle language.	29
"LR ONLY" is displayed in the display window. (only for a DVD AUDIO)	When you play back a track for which down-mixing is prohibited and with multi-channel sound, the left and right sounds are output directly as they are.	This is not a malfunction.	–
A certain point on the disc cannot be played back properly.	The disc is scratched or dirty.	Clean or replace the disc.	–
MP3, WMA, WAV, JPEG, MPEG1 or MPEG2 file cannot be played back.	The loaded disc may include files of different types (MP3, WMA, WAV, JPEG, MPEG1 or MPEG2).	Select "FILE TYPE". You can play back only the files of the types selected with "FILE TYPE". If the main unit has read the file before you make the "FILE TYPE" setting, reset "FILE TYPE" to the desired file type, and then reload the disc.	36
The disc cannot be ejected.	Disc ejection is locked.	Unlock the disc ejection.	40

If this system does not work properly despite the above "Possible solution"

Many functions of this system are controlled by microprocessors that can be reset by recycling the power supply. If pressing any button does not result in the normal action, disconnect the power cable from the outlet, wait for a while, and connect the power cable again.

Language codes

Code	Language	Code	Language
AA	Afar	MI	Maori
AB	Abkhazian	MK	Macedonian
AF	Afrikaans	ML	Malayalam
AM	Ameharic	MN	Mongolian
AR	Arabic	MO	Moldavian
AS	Assamese	MR	Marathi
AY	Aymara	MS	Malay (MAY)
AZ	Azerbaijani	MT	Maltese
BA	Bashkir	MY	Burmese
BE	Byelorussian	NA	Nauru
BG	Bulgarian	NE	Nepali
BH	Bihari	NL	Dutch
BI	Bislama	NO	Norwegian
BN	Bengali, Bangla	OC	Occitan
BO	Tibetan	OM	(Afan) Oromo
BR	Breton	OR	Oriya
CA	Catalan	PA	Panjabi
CO	Corsican	PS	Pashto, Pushto
CY	Welsh	PT	Portuguese
DA	Danish	QU	Quechua
DZ	Bhutani	RM	Rhaeto-Romance
EL	Greek	RN	Kirundi
EO	Esperanto	RO	Rumanian
ET	Estonian	RW	Kinyarwanda
EU	Basque	SA	Sanskrit
FA	Persian	SD	Sindhi
FI	Finnish	SG	Sangho
FJ	Fiji	SH	Serbo-Croatian
FO	Faroese	SI	Singhalese
FY	Frisian	SL	Slovenian
GA	Irish	SM	Samoan
GD	Scots Gaelic	SN	Shona
GL	Galician	SO	Somali
GN	Guarani	SQ	Albanian
GU	Gujarati	SR	Serbian
HA	Hausa	SS	Siswati
HI	Hindi	ST	Sesotho
HR	Croatian	SU	Sundanese
HY	Armenian	SV	Swedish
IA	Interlingua	SW	Swahili
IE	Interlingue	TA	Tamil
IK	Inupiak	TE	Telugu
IN	Indonesian	TG	Tajik
IS	Icelandic	TH	Thai
IW	Hebrew	TI	Tigrinya
JI	Yiddish	TK	Turkmen
JW	Javanese	TL	Tagalog
KA	Georgian	TN	Setswana
KK	Kazakh	TO	Tonga
KL	Greenlandic	TR	Turkish
KM	Cambodian	TS	Tsonga
KN	Kannada	TT	Tatar
KO	Korean (KOR)	TW	Twi
KS	Kashmiri	UK	Ukrainian
KU	Kurdish	UR	Urdu
KY	Kirghiz	UZ	Uzbek
LA	Latin	VI	Vietnamese
LN	Lingala	VO	Volapuk
LO	Laothian	WO	Wolof
LT	Lithuanian	XH	Xhosa
LV	Latvian, Lettish	YO	Yoruba
MG	Malagasy	ZU	Zulu

Specifications

General

Power source
(Hong Kong and Thailand): AC 220 V~, 50 Hz
Power source
(other countries/areas): AC 110 V – 240 V~,
50 Hz/60 Hz
24 W (in operation)
0.9 W (on standby)
3.1 kg

Power consumption:

Weight:

External dimensions
(W × H × D): 232 mm × 100 mm ×
269 mm

DVD player

Playable discs/files: DVD VIDEO, DVD AUDIO, DVD
VR, VCD, SVCD, CD, CD-R/RW
(CD, VCD, MP3, WMA, WAV,
JPEG, MPEG1, MPEG2 format),
DVD-R/RW (video format)

Video output

Color system: PAL/NTSC selectable
Horizontal resolution: 500 lines
Composite × 1: 1.0 V (p-p)/75 Ω,
synchronization negative
S-video × 1: Y output: 1.0 V (p-p)/75 Ω,
synchronization negative
C output: 0.286 V (p-p)/75 Ω
Component × 1: Y output: 1.0 V (p-p)/75 Ω
P_B/P_R output: 0.7 V (p-p)/75 Ω

Audio output

Analog sound output:
Speakers × 2
Output power
(IEC 268-3): 60 W (30 W + 30 W)
at 4 Ω (1 kHz/10% THD)
4 Ω to 16 Ω
Headphones × 1: 11 mW/32 Ω
Fitting impedance:
16 Ω to 1 kΩ
Subwoofer × 1: 500 mVrms/10 kΩ
Digital sound output:
Optical × 1: –21 dBm to –15 dBm

Other output

AV COMPU LINK × 1 (ø3.5)

Audio input

Sound input:
Level 1: 250 mV/50 kΩ
Level 2: 500 mV/50 kΩ

Tuner

FM tuner:
Receiving frequency: 87.50 MHz to 108.00 MHz
Antenna: 75 Ω- unbalanced type
AM tuner:
Receiving frequency: 531 kHz to 1710 kHz
(at 9 kHz interval space)
530 kHz to 1710 kHz
(at 10 kHz interval space)
Antenna: External antenna jack (loop
antenna)

Speaker

Type: 1-way bass-reflex type
Speaker: 8 cm cone × 1
Power handling capacity: 30 W
Impedance: 4 Ω
Sound pressure level: 81 dB/W·m
Dimension (W × H × D): 120 mm × 161 mm ×
239 mm
Weight (1 unit): 1.7 kg

Designs and Specifications are subject to change
without notice.

JVC

