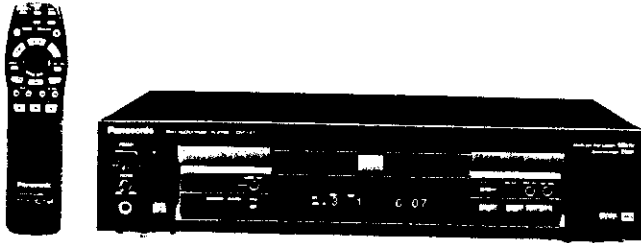


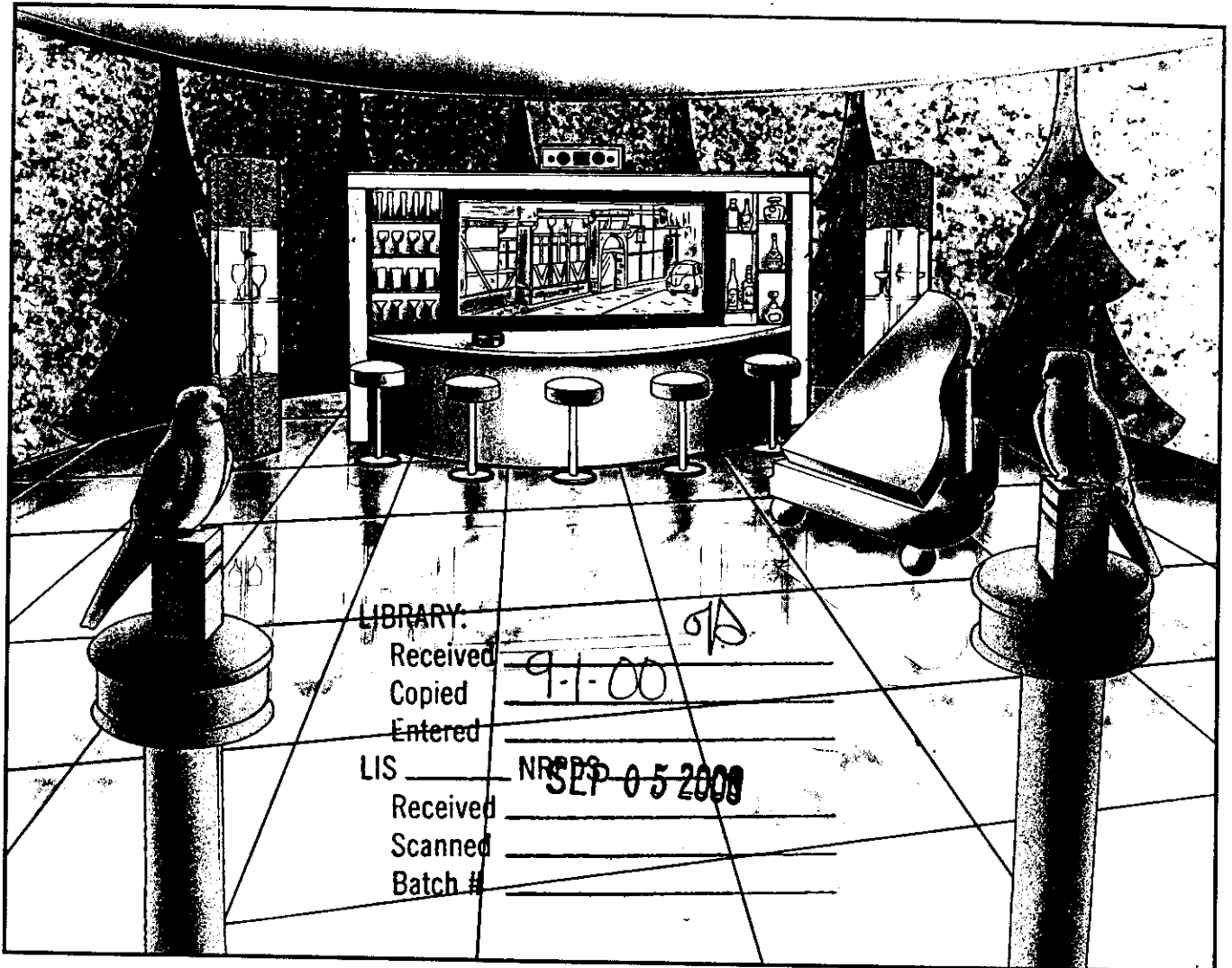
Panasonic



DVD Audio/Video player

Operating Instructions

Model No. **DVD-A7**



Before connecting, operating or adjusting this product,
please read these instructions completely.
Please keep this manual for future reference.

D



This manual was printed with soy based ink.

VQT8354
H0600SM0

Features

High sound quality

This unit includes a 192 kHz/24-bit audio digital-analog convertor to get the best from the high quality sound recorded on DVDs. Virtual battery operation also cuts down on power supply noise, allowing you to enjoy extremely clear sound.

High picture quality

The unit is equipped with a 10-bit video digital-analog convertor and component video output terminals, enabling you to connect to professional class video monitors and to enjoy video with high clarity. By changing the picture mode, you can easily adjust the picture to the optimum settings for the kind of video software you are watching.

A variety of convenient features

This unit is equipped to deal with the variety of convenient features recorded on DVDs, such as multiple soundtrack and subtitle languages and multiple angles.

Surround systems

The unit is equipped with both Dolby Digital and DTS decoders to allow you to experience a full-fledged home theater system.

Disc selection

Use this chart when selecting discs. You can use both 3"(8 cm) and 5"(12 cm) discs. Do not use a disc adaptor for 3"(8 cm) discs.

Disc type	Logo	Region number	Video system	Indication used in Instructions
DVD-Audio			NTSC + PAL	DVD-A
DVD-Video		Example:	NTSC	DVD-V
Video CD			NTSC	VCD
CD				CD

Operations not indicated with these marks apply to all four disc types.

Discs that cannot be played

- PAL system discs (Audio on DVD-Audio can be played.)
- DVD-ROM, DVD-R/DVD-RAM, CD-ROM, VSD, CDV, CD-G, CD-RW, DVD+RW, CVD, SVCD, Divx Video Discs, Photo CD, and CD-R.

The data on photo CDs and CD-R can be damaged if you attempt to play them.

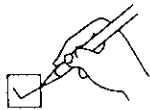
Region Management Information (DVD-Video only)

This unit responds to the Region Management Information recorded on DVDs. This unit's region number is "1". You cannot play the disc if the region number on the DVD does not correspond to the region number on the unit.

You can play discs marked "ALL".

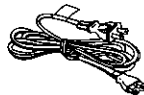
You can play discs with labels containing the region number "1" and "ALL".

Accessories



Please check and identify the supplied accessories.

AC power supply cord (RJA0065-A).....1



Audio/Video cable (VJA0788-D).....1



Use numbers indicated in parentheses when asking for replacement parts.

(Only for U.S.A.)

To order accessories contact 1-800-332-5368 or web site (<http://www.panasonic.com>).

Remote control (VEQ2363).....1



Batteries.....2



Dear customer

Thank you for purchasing this unit.

For optimum performance and safety, please read these instructions carefully.

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SAFETY INFORMATION

Before use

CAUTION!

THIS PRODUCT UTILIZES A LASER.
USE OF CONTROLS OR ADJUSTMENTS OR
PERFORMANCE OF PROCEDURES OTHER THAN THOSE
SPECIFIED HEREIN MAY RESULT IN HAZARDOUS
RADIATION EXPOSURE.
DO NOT OPEN COVERS AND DO NOT REPAIR YOURSELF.
REFER SERVICING TO QUALIFIED PERSONNEL.

WARNING:

TO REDUCE THE RISK OF FIRE, ELECTRIC
SHOCK OR PRODUCT DAMAGE, DO NOT
EXPOSE THIS APPLIANCE TO RAIN,
SPLASHING, DRIPPING OR MOISTURE.

CAUTION:

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

CAUTION	-LASER RADIATION WHEN OPEN. DO NOT STARE INTO BEAM.
ATTENTION	-RAYONNEMENT LASER EN CAS D'OUVERTURE. NE PAS REGARDER DANS LE FAISCEAU.
VORSICHT	-LASERSTRAHLUNG, WENN ABDECKUNG GEÖFFNET. NICHT IN DEN STRAHL BLICKEN.
ADVARSEL	-LASERSTRÅLING VED ÅBNING. SE IKKE IND I STRÅLEN.
ADVARSEL	-LASERSTRÅLING NÅR DEKSEL ÅPNES. STIRR IKKE INN I STRÅLEN.
VARNING	-LASERSTRÅLNING NÅR DENNA DEL ÅR ÖPPNAD. STIRRA EJ IN I STRÅLEN.
VARO!	-AVATTAESSA OLET ALTTIINA LASERSÄTEILYLLE. ÄLÄ TUJOTA SÄTEESEEN.
注意	- 当打开这里会出现激光, 请不要直视激光。
注意	- ここを開くとレーザー光が出ます。 レーザー光をのぞき込まないでください。

(Inside of player)



CAUTION

RISK OF ELECTRIC SHOCK
DO NOT OPEN



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



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



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

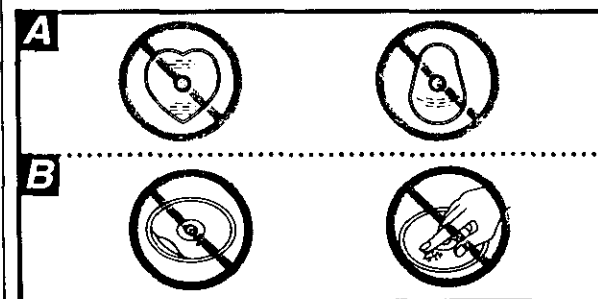
FCC NOTE: (U.S.A. Only)

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

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

FCC Caution: To assure continued compliance, follow the attached installation instructions and use only shielded cables when connecting to other devices. Also, any changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate this equipment.

Disc selection and care



Store the disc in its case when not in use.

Do not;

- use irregularly shaped discs. **(A)**
- attach extra labels and stickers.
- use discs with labels and stickers that are coming off or with adhesive exuding from under labels and stickers. **(B)**
- attach scratch-proof covers or any other kind of accessory.
- write anything on the disc.
- clean discs with liquids. (Wipe with a soft, dry cloth.)

PRECAUTIONS

Before using this unit please read these operating instructions carefully. Take special care to follow the warnings indicated on the unit itself as well as the safety suggestions listed below. Afterwards keep them handy for future reference.

Safety

- 1. Power Source** – The unit should be connected to power supply only of the type described in the operating instructions or as marked on the unit. If you are not sure of the type of power supply to your home, consult your appliance dealer or local power company.
- 2. Polarization** – If the unit is equipped with a polarized AC power plug (a plug having one blade wider than the other), that plug will fit into the AC outlet only one way. This is a safety feature. If you are unable to insert the plug fully into the outlet, try reversing the plug. If the plug should still fail to fit, contact your electrician to replace your obsolete outlet. Do not defeat the safety purpose of the polarized plug.
- 3. Power Cord Protection** – AC power supply cords should be routed so that they are not likely to be walked on or pinched by items placed upon or against them. Never take hold of the plug or cord if your hand is wet, and always grasp the plug body when connecting or disconnecting it.
- 4. Overloading** – Do not overload wall outlets and extension cords as this can result in a risk of fire or electric shock.
- 5. Nonuse Periods** – When the unit is not being used, turn the power off.
When left unused for a long time, the unit should be unplugged from the household AC outlet.
- 6. Attachments** – Do not use attachments not recommended by the unit manufacturer as they may cause hazards.

Installation

Environment

- 1. Water and Moisture** – Do not use this unit near water—for example, near a bathtub, washbowl, swimming pool, or the like. Damp basements should also be avoided.
- 2. Condensation** – Moisture may form on the lens in the following conditions...
 - immediately after a heater has been turned on.
 - in a steamy or very humid room.
 - when the unit is suddenly moved from a cold environment to a warm one.If moisture forms inside this unit, it may not operate properly. To correct this problem, turn on the power and wait about one hour for the moisture to evaporate.
- 3. Heat** – The unit should be situated away from heat sources such as radiators and the like. It also should not be placed in temperatures less than 5° C (41° F) or greater than 35° C (95° F).

The model number and serial number of this product can be found on either the back or the bottom of the unit. Please note them in the space provided below and keep for future reference.

MODEL NUMBER DVD-A7

SERIAL NUMBER _____

Placement

- 1. Ventilation** – The unit should be situated so that its location or position does not interfere with its proper ventilation. Allow 10 cm (4") clearance from the rear of the unit.
- 2. Foreign Material** – Care should be taken so that objects do not fall into and liquids are not spilled into the unit. Do not subject this unit to excessive smoke, dust, mechanical vibration, or shock.
- 3. Carts and Stands** – The unit should be used only with a cart or stand that is recommended by the manufacturer.
The unit and cart combination should be moved with care. Quick stops, excessive force, and uneven surfaces may cause the unit and cart combination to overturn.
- 4. Mounting** – Any mounting of the appliance should follow the manufacturer's instructions, and should use a mounting accessory recommended by the manufacturer.



Before use

Maintenance

Disconnect this unit from the AC outlet before cleaning. Clean the cabinet, panel and controls with a soft cloth lightly moistened with mild detergent solution. Do not use any type of abrasive pad, scouring powder or solvent such as alcohol or benzine.

Service

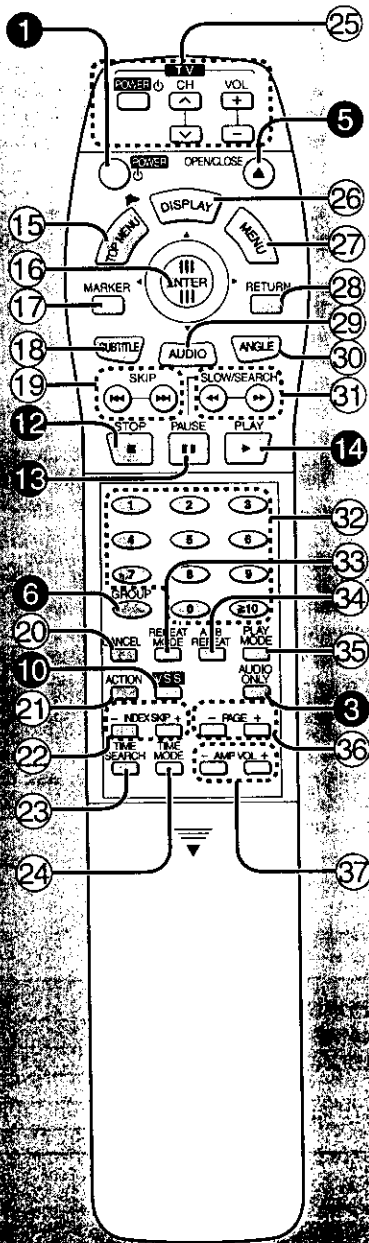
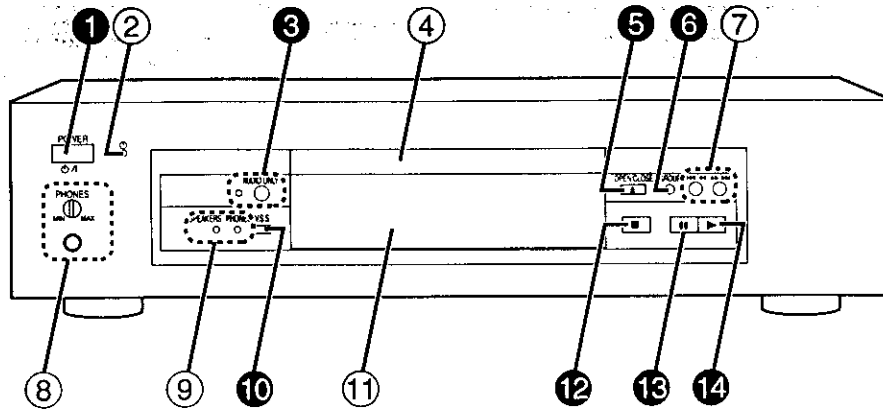
- 1. Damage Requiring Service** – The unit should be serviced by qualified service personnel when:
 - (a) The AC power supply cord or the plug has been damaged; or
 - (b) Objects have fallen or liquid has been spilled into the unit; or
 - (c) The unit has been exposed to water; or
 - (d) The unit does not appear to operate normally or exhibits a marked change in performance; or
 - (e) The unit has been dropped, or the enclosure damaged.
- 2. Servicing** – The user should not attempt to service the unit beyond that described in the operating instructions. All other servicing should be referred to an authorized service personnel.
For the address of an authorized servicenter:
In the U.S.A., call 1-800-211-7262, e-mail consumerproducts@panasonic.com, or visit www.panasonic.com
In Canada, call 1-800-561-5505 or visit www.panasonic.ca
- 3. Replacement parts** – When parts need replacing, ensure the servicer uses parts specified by the manufacturer or parts that have the same characteristics as the original parts. Unauthorized substitutes may result in fire, electric shock, or other hazards.
- 4. Safety check** – After repairs or service, ask the servicer to perform safety checks to confirm that the unit is in proper working condition.

User memo:

DATE OF PURCHASE _____
DEALER NAME _____
DEALER ADDRESS _____
TELEPHONE NUMBER _____

Control reference guide

Before use



No.	Name	Ref. page
-----	------	-----------

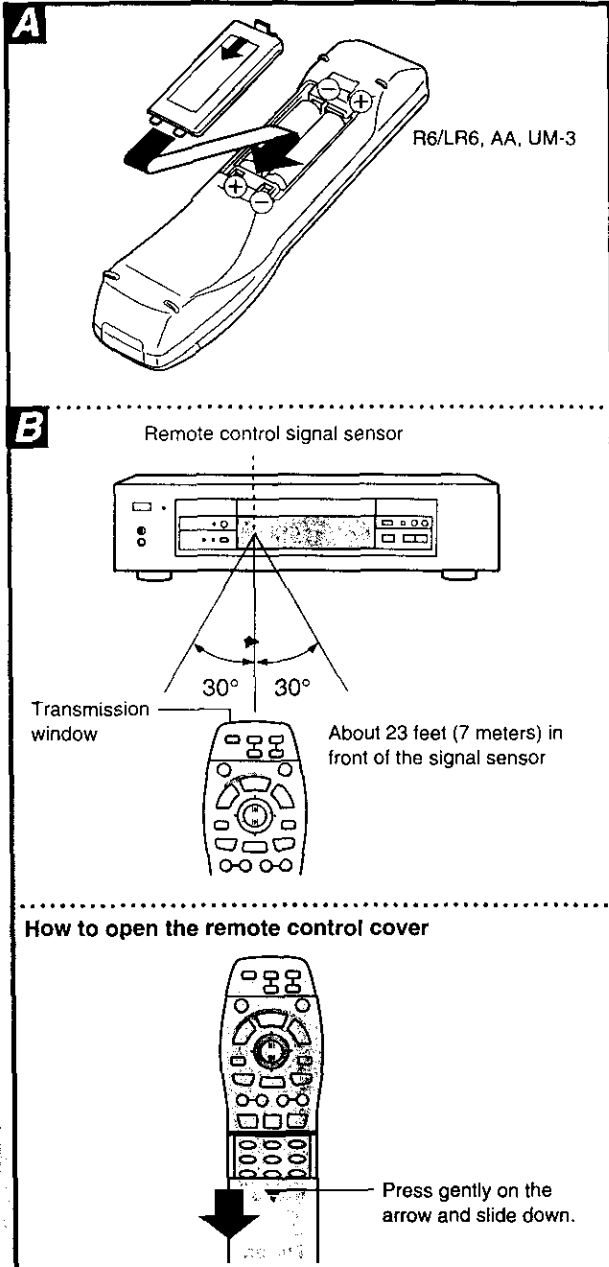
Main unit

- 1 Power "⏻/⏻" switch (POWER, ⏻/⏻).....10
Press to switch the unit from on to standby mode or vice versa.
In standby mode, the unit is still consuming a small amount of power.
- 2 Standby indicator (⏻)
When the unit is connected to the AC power supply, this indicator lights up in standby mode and goes out when the unit is turned on.
- 3 AUDIO ONLY button and indicator13
- 4 Disc tray
- 5 OPEN/CLOSE button (▲)
- 6 GROUP select button14
- 7 Skip and search buttons (◀◀/▶▶, ▶▶/▶▶).....12
- 8 Headphone jack and level control (PHONES)12
- 9 V.S.S. mode Indicator (SPEAKERS, PHONES)16
- 10 V.S.S. (Virtual Surround Sound) button16
- 11 Display
- 12 STOP button (■).....11
- 13 PAUSE button (⏸)11
- 14 PLAY button (▶).....11

Remote control

- Buttons 1, 3, 5, 6, 10 and 12 to 14 function in the same way as the controls on the main unit.
- 15 Top menu display button17
 - 16 Joystick11
 - 17 Marker button.....21
 - 18 Subtitle language button.....18
 - 19 SKIP buttons (◀◀, ▶▶)12
 - 20 Cancel button14
 - 21 Initial settings button10, 26
 - 22 Index skip buttons15
 - 23 Time search button.....15
 - 24 Time mode button.....15
 - 25 Television operation section44
 - 26 Display button.....22
 - 27 Menu display button17
 - 28 Return button11
 - 29 Soundtrack button17
 - 30 Angle button.....18
 - 31 SLOW/SEARCH buttons (◀◀, ▶▶).....12, 13
 - 32 Numbered buttons11
 - 33 Repeat mode button21
 - 34 A-B REPEAT button.....21
 - 35 Play mode button.....15, 19, 20
 - 36 Page skip button15
 - 37 Amplifier volume controls44

The remote control



Battery installation **A**

Use of batteries

- Align the poles (+ and -) properly when inserting the batteries.
- Do not mix old and new batteries or different types of batteries.
- Do not recharge ordinary dry cell batteries.
- Do not heat or disassemble the batteries. Do not allow them to contact flame or water.
- Remove the batteries if the unit is not to be used for a long time.
- Do not keep together with metallic objects such as necklaces.
- Do not use rechargeable type batteries.
- Do not use batteries if the covering has been peeled off.

Mishandling of batteries can cause electrolyte leakage which can damage items the fluid contacts and may cause a fire. If electrolyte leaks from the batteries, consult your dealer. Wash thoroughly with water if electrolyte comes in contact with any part of your body.

Correct method of use **B**

Operation notes

- Do not place obstacles between the remote control signal sensor and remote control unit.
- Do not expose the remote control signal sensor to direct sunlight or to the bright light of a fluorescent light.
- Take care to keep the remote control signal sensor and end of the remote control unit free from dust.
- If this system is installed in a rack with glass doors, the glass doors' thickness or color might make it necessary to use the remote control a shorter distance from the system.

To prevent damage

- Never place heavy items on top of the unit.
- Do not disassemble or reconstruct the unit.
- Do not spill water or other liquids into the unit.

Before use

Simple setup - Connection to a television

These pages explain how to connect the unit to a television and set it up so that you hear the audio through the television's speakers. Connections and procedures that enable you to enjoy the high-quality sound found on DVDs are described beginning on page 34.

Note

The included AC power supply cord is for use with this unit only. Do not use it with other equipment.

Connection

Connect the player to a television equipped with video and audio terminals.

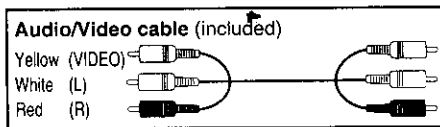
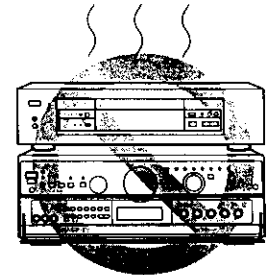
Before connection

Turn off the power to all units. Read the operating instructions of the other equipment carefully.

Connect Your DVD Audio/Video player Directly To Your TV Set.

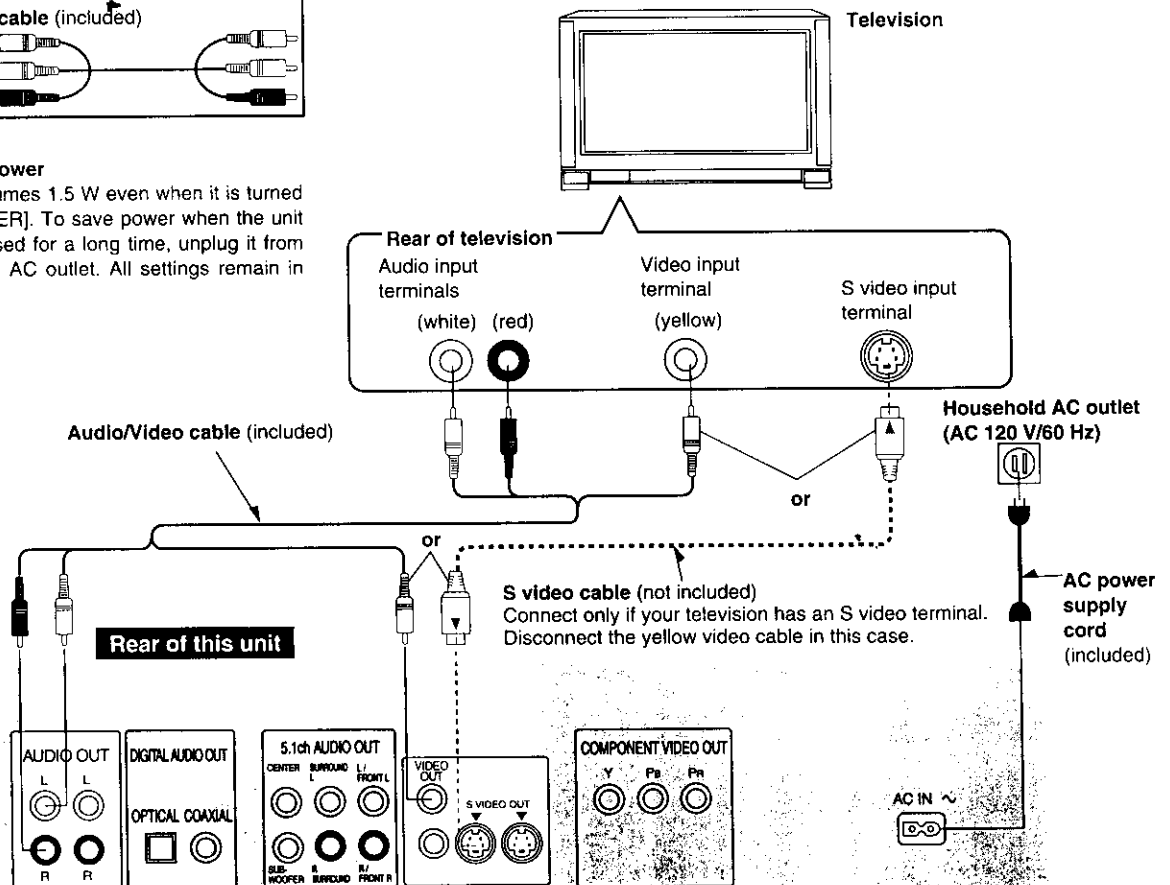
If the DVD Audio/Video player is connected to the TV through a video cassette recorder, the picture may not be played back normally with some DVDs. So we strongly recommend you not to connect the DVD Audio/Video player to your video cassette recorder when setting up your home entertainment system.

Do not place the player on amplifiers or other equipment which may become hot.



Conserving power

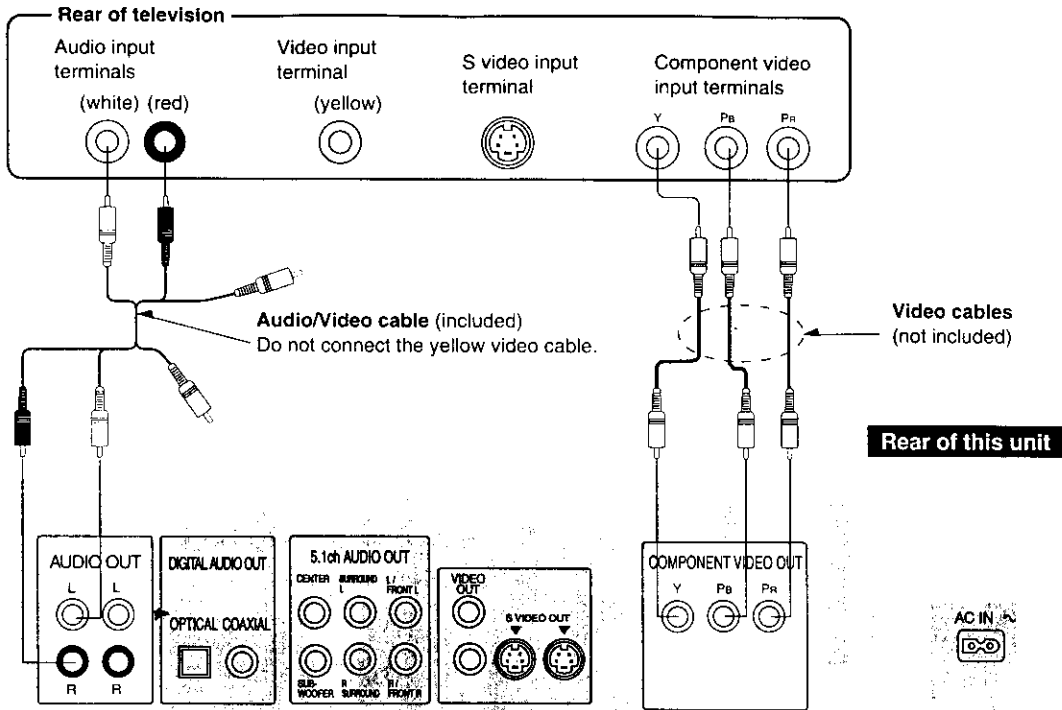
The unit consumes 1.5 W even when it is turned off with [POWER]. To save power when the unit is not to be used for a long time, unplug it from the household AC outlet. All settings remain in memory.



The S video terminals

Connections through these terminals provide higher quality pictures than through the video terminal.

● **Connection to a television with component video input terminals**



The component video terminals

Connections through these terminals provide higher quality pictures than through the S video terminals. The labeling of these terminals differs with the make of television so refer to the operating instructions for details.

Black Level Control

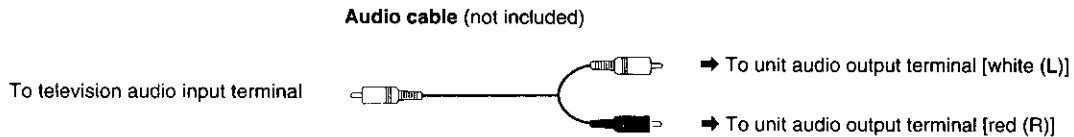
After making this connection, change the black level for a better picture (→ "Black Level Control", page 32).

Note

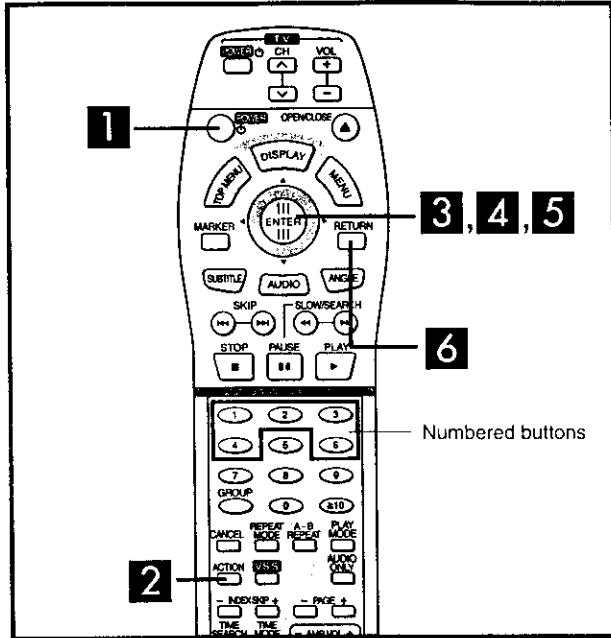
You cannot connect through the component terminals on a high-vision television that isn't equipped to deal with DVD-Video signals.

● **If your television is monaural**

Use a stereo-monaural audio cable instead of the supplied Audio/Video cable. The video part of the cable (yellow) can still be used if required.



Before use



Settings

Carry out the following operation to suit the type of television you are using. The factory setting is for a regular 4:3 television.

Before operation

- Turn the television on.
- Switch the video input mode on the television to suit the type of connection you have made (e.g., VIDEO 1).

- 1 Press [POWER] to turn the unit on.
- 2 Press [ACTION] to display the initial settings screen on the television.
- 3 Operate the joystick to highlight "6 TV Aspect".

Press the joystick to proceed to the next screen.

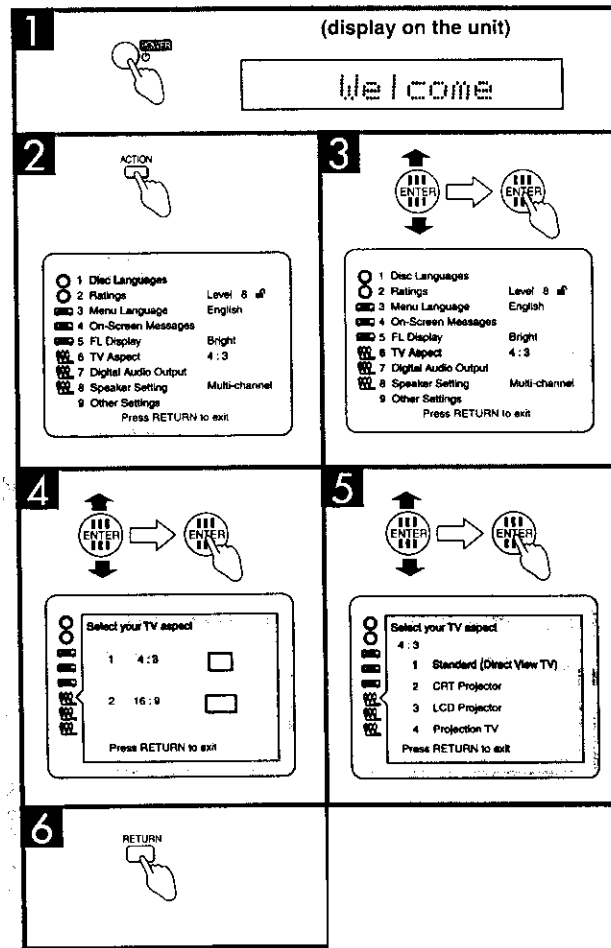
- 4 Operate the joystick to highlight the size of your television.

1. 4:3 (factory setting)
 2. 16:9 (wide-screen television)
- Press the joystick to proceed to the next screen.

- 5 Operate the joystick to highlight the type of television you have connected.

1. Standard (Direct View TV) (factory setting)
 2. CRT Projector
 3. LCD Projector
 4. Projection TV
- Press the joystick to confirm your selection and return to the initial settings screen.

- 6 Press [RETURN] to exit the initial settings screen.



[RETURN] button

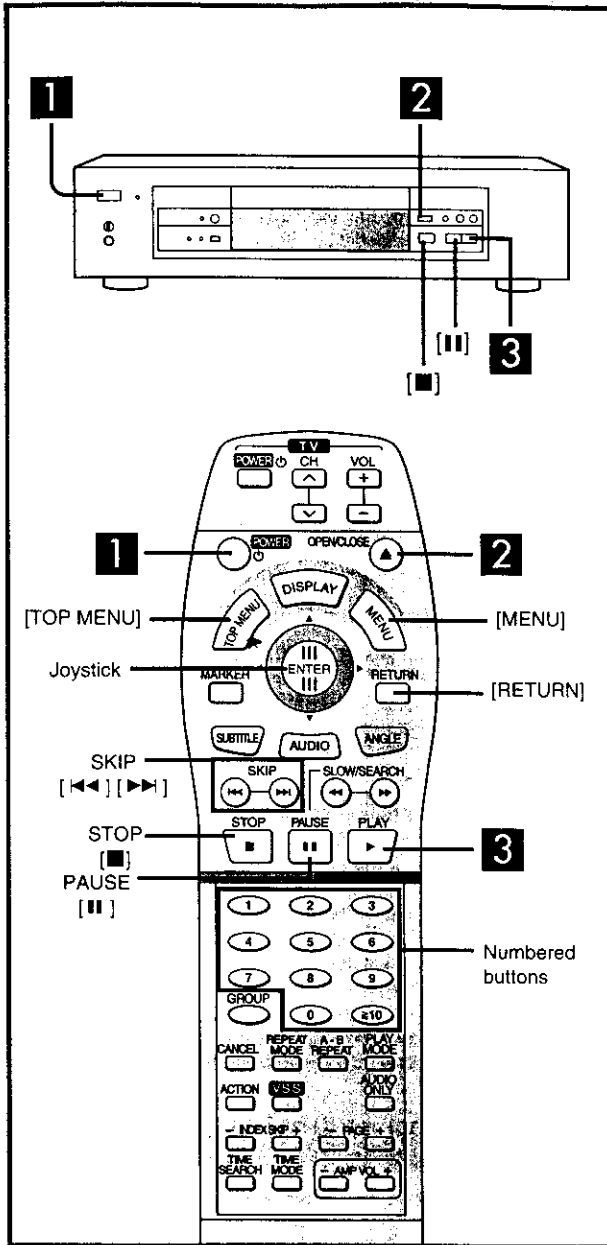
Press to return to the previous screen. Settings are not entered.

Numbered buttons

Press the number corresponding to the menu item to enter a setting.

Note

If you have connected your television through the component video input terminals change the black level for a better picture (➔ "Black Level Control", page 32).



Before play

- Turn the television on.
- Switch the video input mode on the television to suit the type of connection you have made (e.g., VIDEO 1).

1 Press [POWER] to turn the unit on.

2 Press [\blacktriangle] (OPEN/CLOSE) to open the disc tray.

The unit also comes on if you press this button first.

Set a disc label up on the tray.

Most DVDs start automatically when you close the disc tray.

3 Press [\blacktriangleright] to start play.

The disc tray closes automatically.

When play finishes

The unit automatically stops and, depending on the disc, a group selection menu is shown on the television.

To stop play

Press [■] (→ "Resume function", page 12).

To pause play

Press [⏸].

Press [\blacktriangleright] to resume play.

Caution

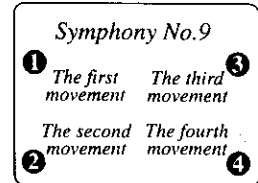
The disc is still spinning if a menu is on the screen or if the picture is frozen. Press [■] when you have finished play.

If a menu screen is shown

DVD-V VCD

(menu example)

A menu screen is shown on your television shortly after starting some DVD-Video and Video CDs. To continue play you must make a selection.



Operate the joystick to highlight an item.

Press the joystick to confirm your selection.

OR

Press the numbered button corresponding to the menu item.

For items numbered 10 and over, press [≥ 10] then the two digits.

e.g. 10: [≥ 10] → [1] → [0]

e.g. 25: [≥ 10] → [2] → [5]

Other buttons used to operate menus

The operation of these buttons differs with the disc so read the instructions that came with the disc for further details.

[SKIP]: Shows the next menu.

[RETURN]: Shows the previous menu.

[MENU]: Shows the menu screen (DVD).

[TOP MENU]: Shows the first menu screen (DVD).

Playing DVD and Video CDs

The producer of the material can control how these discs are played. This means that you may not be able to control play with some of the operations described in these operating instructions. Read the disc's instructions carefully.

The symbol "⊗" appears on the television when you perform an operation to indicate it is not allowed at that time.

Playing karaoke discs

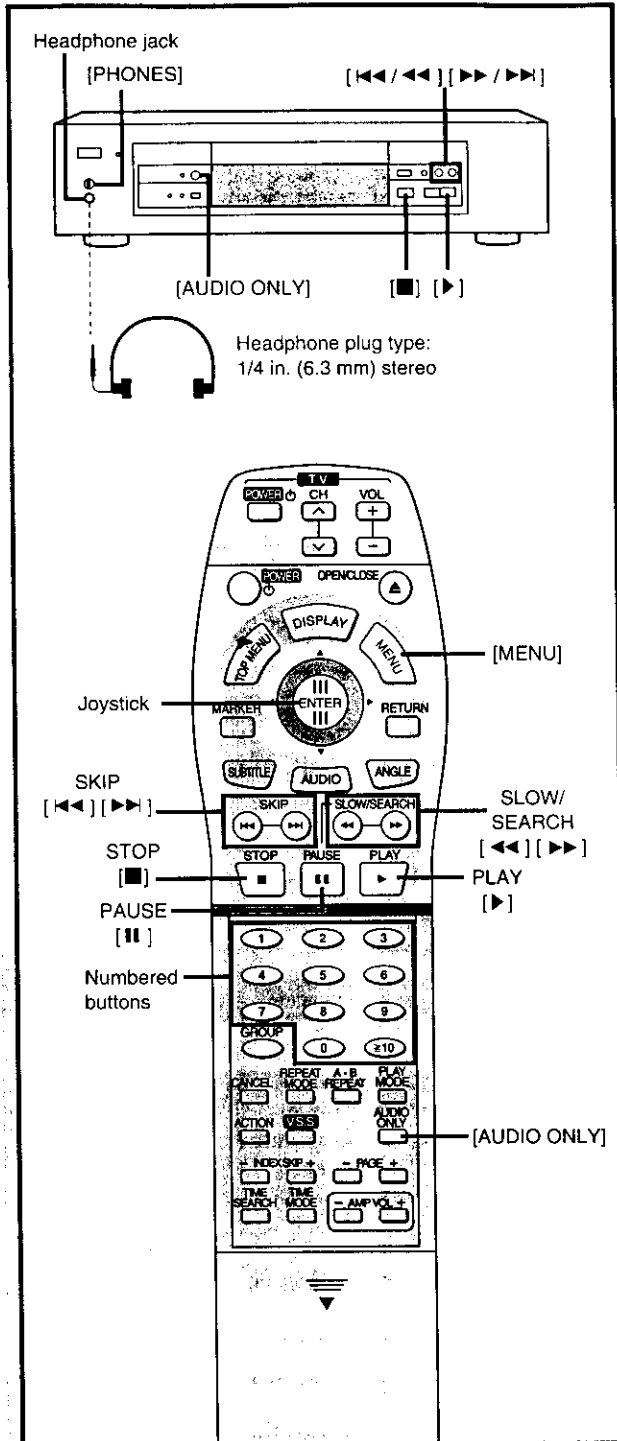
After playing a track, you will normally be shown a menu. Some discs allow you to play all the tracks in succession. Others will play all the tracks in succession automatically.

DVD volume

Volume may be lower when playing DVDs than when playing other discs.

If you turn the volume up on the television or amplifier, ensure you reduce the volume again before playing other sources so that a sudden increase in output does not occur.

Other methods of play



Using headphone

1. Set [PHONES] to "MIN" and connect the headphones (not included).
2. Adjust headphone volume with [PHONES].

Note

Avoid listening for long periods of time to avoid hearing damage.

Resume function

When [■] is pressed.

"▷" flashes to indicate that the resume function is active.

Using the resume function to restart play

While "▷" is flashing, press [▶].

Play starts from where it was stopped.

This function does not work if the disc's play time is not displayed.

[■] is pressed again, the disc tray is opened. This function is available when "▷" is flashing.

If you are playing DVD-Video, you can activate the CHAPTER PREVIEW function while the message, "Press PLAY to Chapter Preview" is shown on your television. This message appears for a few seconds before play is resumed.

Press [▶] while this message is shown on your television and the beginning portions of each chapter up to the current one are played. Full play resumes from the point play was stopped at.

CHAPTER PREVIEW is not possible with some DVD-Video.

Skipping tracks and chapters

Press [◀◀] (backward) or [▶▶] (forward) on the remote control.

OR

[◀◀/▶▶] or [▶▶/▶▶] on the main unit.

Each press increases the number of skips.

The first skip backwards takes you to the beginning of the current track or chapter.

Note

If pressed while a DVD or Video CD menu is on the screen, you may return to the previous menu.

Fast forward and rewind - SEARCH

During play

Press [◀◀] (backward) or [▶▶] (forward) on the remote control.

Each press increases the speed of the search. There are five speeds.

OR

Press and hold [◀◀/▶▶] or [▶▶/▶▶] on the main unit.

The search speed increases in five steps if the button is held down.

Audio will be heard during search.

You can turn off audio output during search with DVD-Video and deo CDs (→ Page 32).

Note

If pressed while a DVD or Video CD menu is on the screen, you may return to the previous menu.

Starting play from a selected track or chapter

While stopped or playing

Press the numbered buttons.

To select a track or chapter numbered 10 and over, press [≥ 10] then the two digits.

e.g. 10: [≥ 10] → [1] → [0]

e.g. 25: [≥ 10] → [2] → [5]

When playing DVD-Audio and you want to start play from a track in a different group, select the group first (➔ Page 14).

Slow motion

DVD-A DVD-V VCD

While paused

Press [◀◀] (backward) or [▶▶] (forward) on the remote control.

Each press increases the speed of the slow motion. There are five speeds.

OR

Press and hold [◀◀/▶▶] or [▶▶/▶▶] on the main unit.

The slow motion speed increases in five steps if the button is held down.

Press [▶] to resume play.

Note

Only the motion picture parts of DVD-Audio are affected.

Frame-by-frame viewing

DVD-A DVD-V VCD

While paused

Move the joystick left (backward) or right (forward).

You can move backward only with DVDs.

The frame changes each time you move the joystick.

The frames change in succession if you hold the joystick in position.

Press [▶] to resume play.

You also can move forward frame-by-frame by pressing [■].

Note

Only the motion picture parts of DVD-Audio are affected.

Canceling the playback control feature on Video CDs

VCD

Canceling playback control allows you to play the disc all the way through from the beginning.

1. Press [■].
The "PBC" indicator on the unit's display goes out.
2. Press the numbered buttons to select the track where you want to start play.
See the disc's jacket for the track numbers.

To restore playback control

1. Press [■] to stop play.
2. Press [MENU] on the remote control.
The "PBC" indicator on the unit's display comes on.

To enjoy even higher quality sound - AUDIO ONLY

Press [AUDIO ONLY].

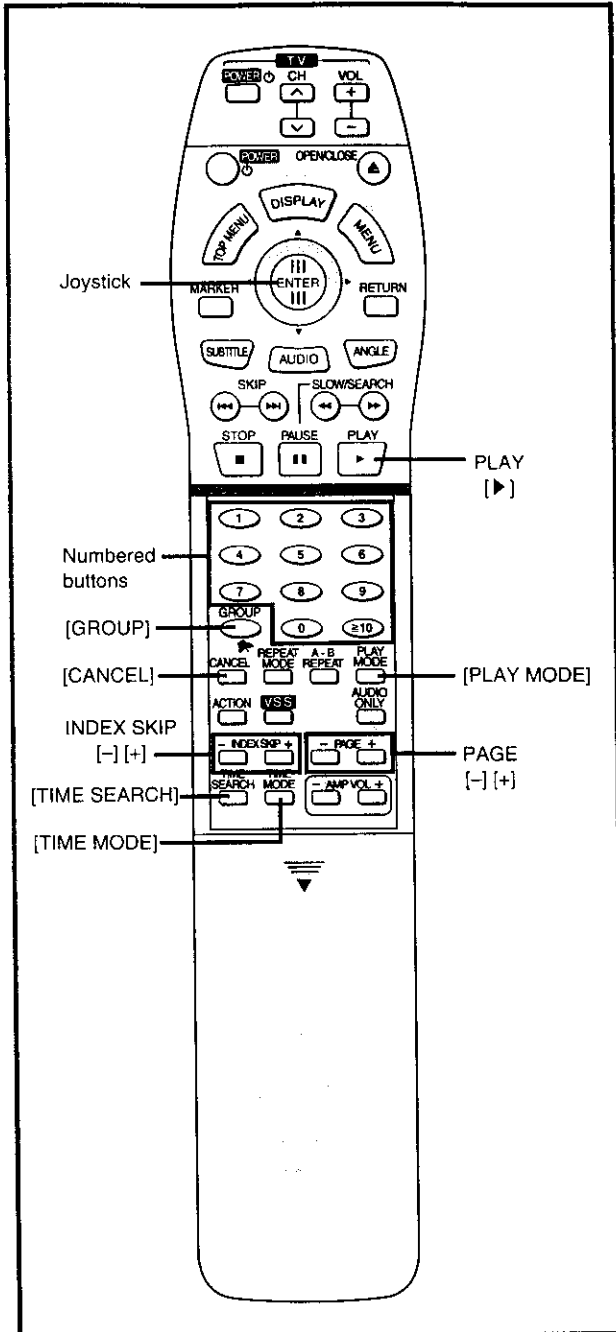
The lamp next to the button lights.

The video signal is cut off so only the audio signals are output.

AUDIO ONLY is canceled if the button is pressed again or if the unit is turned off.

Note

- Video signals are output while the disc is stopped and when operations such as skipping or searching are performed. The television can appear unusual while video signals are not being output.
- Turn the television off for a better effect if you have connected the VIDEO OUT on this unit through an amplifier.



Groups

DVD-A

Selecting a group

Groups

The tracks on DVD-Audio are divided into groups.

- e.g. Group 1: All tracks
- Group 2: 60s pops
- Group 3: 70s pops

How these groups are played differs with the disc so read the instructions that came with the disc for further details.

Bonus groups

Some discs contain bonus groups. To enjoy these groups you may have to enter a password.

Press [GROUP].



Press [▶] when the required group is selected to start play of that group.

The group changes each time the button is pressed.

To select by number (Remote control only)

1. Press [GROUP].
2. Press the numbered button corresponding to the required group.
3. Press [▶].

Note

Selection may not be allowed in some situations (e.g., while a menu is being displayed).

Playing bonus groups

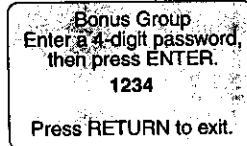
You can play the bonus groups contained on some DVD-Audio by entering a password. The password is written on the instructions that came with the disc.

1 Press [GROUP] to select the bonus group.

2 Press [▶].

3 Enter the 4-digit password with the numbered buttons and press the joystick.

e.g. 1234



If you enter the wrong password, the previous screen will be displayed. Start again from the beginning.

You can erase a number by pressing [CANCEL].

4 Use the joystick to select a track and press to start play.

This operation must also be performed if the group is selected during program or random play.

Some discs will show a menu screen for you to enter your password.

Follow the instructions on the screen.

The bonus group can be played as many times as you like after the password has been entered until the disc is removed from the player.

Playing all the groups in succession

Use this operation if the disc does not give you the choice to play all the groups.

While stopped

- 1 Press [PLAY MODE] to display "All Group".
Each time the button is pressed
All Group → Program → Random → Stop (cancel)

- 2 Press [▶] to start play.

Selecting still pictures - Page Skip

DVD-A

Some DVD-Audio include still pictures. You can select these pictures with the following operation.

During play

Press [PAGE (- or +)].

-: backward

+: forward

Note

There are some cases where the disc does not allow you to select pictures with this feature.

Selecting indexes - Index Skip

DVD-A

DVD-Audio tracks are divided by indexes. You can find a particular position by skipping these indexes.

While playing or paused

Press [INDEX SKIP (- or +)].

-: backward

+: forward

If the disc was playing, it will continue to play from the position you skipped to. If the disc was paused, it will remain paused at the position you skipped to.

Note

Sound is interrupted during this operation.
Some tracks do not have indexes.

Starting play from a specified time - Time Search

DVD-A DVD-V

You can specify times within groups on DVD-Audio, or within titles on DVD-Video.

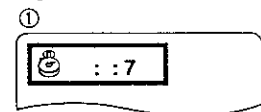
During play

- 1 Press [TIME SEARCH].

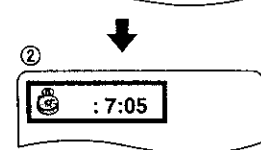


- 2 Specify the time with the numbered buttons.

e.g. 7 minutes 5 seconds



- ② Enter the seconds (05).



Other examples

7 minutes and 30 seconds: [7] → [3] → [0]

1 hour, 2 minutes and 30 seconds: [1] → [0] → [2] → [3] → [0]

If you enter the wrong time, you can start again by pressing [CANCEL].

- 3 Press the joystick to start play.

Note

- You cannot specify a time beyond the current title or group. If the title or group finishes while you are still entering the time, the time search screen is canceled.
- When playing DVD-Audio, the tracks elapsed time is shown on the display after time search is complete.
- Press [TIME SEARCH] to cancel partway through.
- You cannot do time search during random or program play.

Switching time displays - Time Mode

DVD-A VCD CD

Press [TIME MODE].

The display changes each time the button is pressed.

The displays shown depend on the condition of the player.

e.g. When playing DVD-Audio in group mode.

Elapsed time of track → Remaining time of track

← Remaining time of group ←

Note

You can use this feature with Video CD if you cancel playback control (➔ page 13).

Enjoying Virtual Surround Sound (V.S.S.)

DVD-A DVD-V

Use this feature to enjoy a surround-like effect if you are using two speakers or headphones. This effect only works with DVD recorded using Dolby Digital with two or more channels.

During play
Press [V.S.S.] to select the V.S.S. level.

One of the V.S.S. mode indicators lights.

Each time you press the button:
 VSS 1 → VSS 2 → VSS OFF (cancel)

Note

- V.S.S. does not work with DVD recorded in one channel or with karaoke discs.
- Turn V.S.S. off when using more than just the two front speakers. Sound will only come from the two front speakers if V.S.S. 1 or 2 is on.

Enjoying V.S.S. through headphones

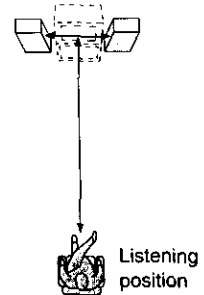
1. Press [DISPLAY] to show the GUI screen on the television and select the V.S.S. icon.
2. Select the headphone mode.
 (→ Page 25 for more details)
 The "PHONES" V.S.S. indicator lights when V.S.S. is on.

Note

Restore **SPEAKERS** mode when you are not using headphones or else the sound from the speakers will sound strange.

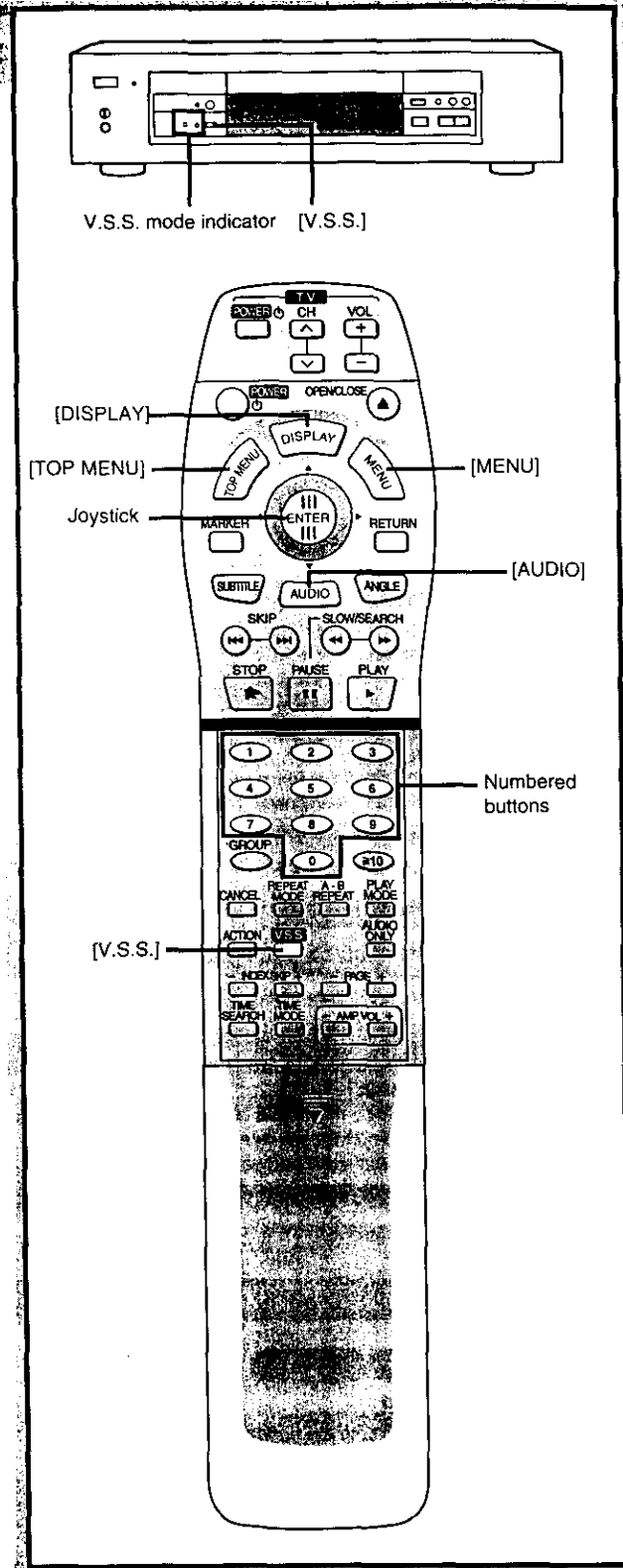
To get the most from V.S.S.

Situate yourself in front of the television approximately 3 to 4 times the distance between the left and right front speakers.



V.S.S. 1 and 2 effects

Mode	Level	V.S.S. 1	V.S.S. 2
SPEAKERS	Level 1	The front speakers sound like they are further apart. If the disc has surround speaker channels recorded on it, then sound appears to come from the sides even if surround speakers aren't being used.	The V.S.S. 1 effects are broadened.
	Level 2		
PHONES	Level 1	Sound appears to come from left and right front speakers.	The V.S.S. 1 effect is broadened.
	Level 2		



Using menus

DVD menus

DVD-V

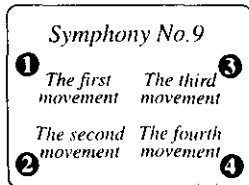
Apart from the main feature, DVDs may have other material recorded on them. Other DVDs require you to use menus to enjoy them. The actual operation of the menus depends on the disc, so here we will explain only the basic steps.

While stopped or playing

- 1 Press [MENU] to display the menu.

Press again to restore the previous condition.

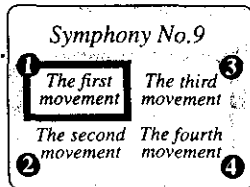
(menu example)



- 2 Use the joystick or numbered buttons to select the required item.

Move the joystick around to highlight the menu items. Press the joystick while the item is highlighted to start play or show the next menu. If you selected the item with the numbered buttons, play starts immediately or the next menu is shown.

(menu example)



Top menu

DVD-A DVD-V

The top menu is used if there are different titles included on the one DVD.

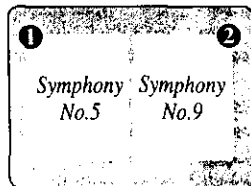
The group menu is displayed if you are playing DVD-Audio.

While stopped or playing

- 1 Press [TOP MENU] to display the title menu.

Press again to restore the previous condition.

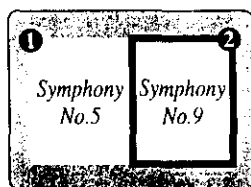
(menu example)



- 2 Use the joystick or numbered buttons to select the required title.

Press the joystick while the item is highlighted to start play or show the next menu. If you selected the item with the numbered buttons, play starts immediately or the next menu is shown.

(menu example)



Changing soundtracks

DVD-A DVD-V

Some DVDs have more than one soundtrack recorded on them, such as multiple languages or PCM, and you can change soundtracks during play.

During play

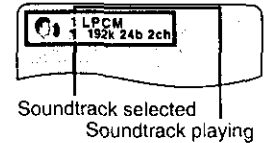
- Press [AUDIO] to change the audio number.

The audio number changes each time you press the button. You can also use the joystick (▲, ▼) to change the number.

When playing DVD-Audio, play starts again from the beginning of the track.

Even if a second soundtrack isn't recorded on a DVD-Audio, two soundtrack numbers will normally be shown when you press [AUDIO]. The soundtrack currently playing is number 1.

(Display example: DVD-Audio)



(Display example: DVD-Video)



To clear the display

Press the joystick.

Note

- You can only select languages or sound formats if they have been recorded on the disc you are playing.
- You can also make language settings before play with the Audio language settings (► Page 26). Some discs are designed to start in a certain language despite any changes you make to the initial settings.

Using this feature with karaoke discs

DVD-V VCD

You can do the following with karaoke discs.

While playing a karaoke disc

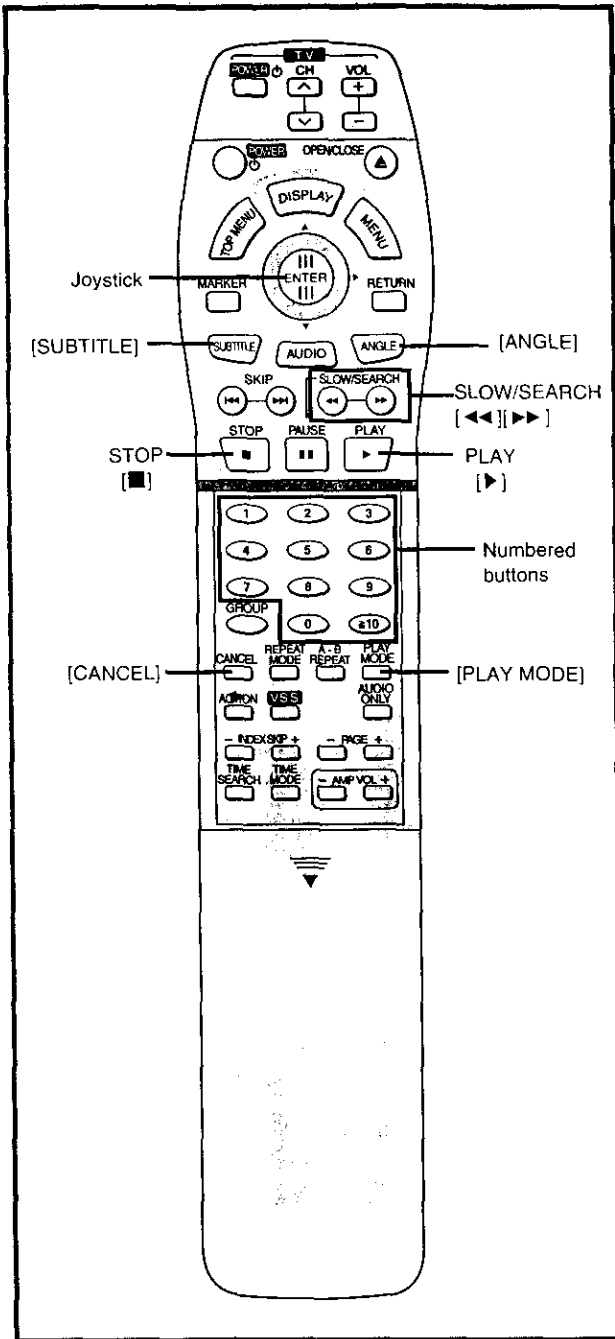
Press [AUDIO] and use the joystick to change the mode. The mode switches each time you press the button.

Move the joystick left and right to turn the vocals on and off.

DVD karaoke disc (Solo)	DVD karaoke disc (Duet)
[---]: Vocal OFF	[---]: Vocal OFF
[ON]: Vocal ON	[1+2]: Vocal 1, 2 ON
	[V1]: Vocal 1 only ON
	[V2]: Vocal 2 only ON

Move the joystick up and down to change the audio mode.

Multi-audio disc (Video CD)
[LR]: Left and right channel sound from each speaker
[L]: Only left channel sound
[R]: Only right channel sound



Changing subtitle language

DVD-A DVD-V

Some DVDs have more than one subtitle language recorded on them, and you can change the language during play.

During play
Press [SUBTITLE] to change the subtitle number.



The subtitle number changes each time you press the button. You can also use the joystick (▲, ▼) to change the number. "—" is displayed if subtitles are not recorded on the disc.

To turn the subtitles on and off.
 Move the joystick left or right (◀, ▶).

To clear the display
 Press the joystick.

Note

- There may be a slight delay before subtitles are shown.
- You can only select languages if they have been recorded on the disc you are playing.
- You can also make language settings before play with the Subtitle language settings (→ Page 26). Some discs are designed to start in a certain language despite any changes you make to the initial settings.

Switching angles

DVD-A DVD-V

Some DVDs allow you to view the same scene from different angles.

"⊞" lights up on the unit's display during scenes with multiple angles recorded to indicate this feature is available.

While playing a scene with multiple angles

Press [ANGLE] to change the current angle number.



The angle number changes each time you press the button. You can also use the joystick (▲, ▼) to change the number.

To clear the display
 Press the joystick.

Note

Some discs allow you to set angles before multi-angle scenes are played. Read the instructions that come with the DVD.

Program play

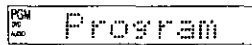
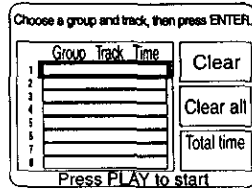
DVD-A VCD CD

You can program up to 100 tracks to play in the order you choose. When playing DVD-Audio, you can program tracks from different groups.

While stopped

- 1** Press [PLAY MODE] to display "Program".

(Display example: DVD-Audio)

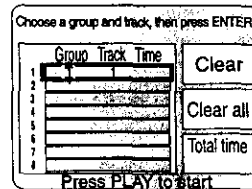


Each time you press the button:

- While playing DVD-Audio
All Group → Program → Random → Stop (cancel)
- While playing Video CDs and CDs
Program → Random → (cancel)

- 2** 1. Press the joystick.
2. Use the joystick to select a group.

(Display example: DVD-Audio)



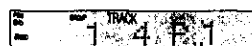
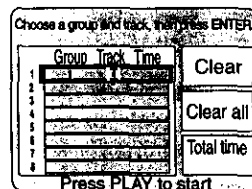
- 3** 1. Press the joystick.
2. Use the joystick to select a track.

Press the joystick to confirm selection.

All the tracks in the group are selected if you select "All". If the program contains more than 100 tracks after the group is entered, the extra tracks are canceled from the program.

It takes some time for the total time to be displayed for DVD-Audio.

(Display example: DVD-Audio)



Programmed order

- 4** Make other selections.

While playing DVD-Audio

Repeat steps 2 and 3.

While playing Video-CDs and CDs

Repeat step 3.

The screen changes automatically if the number of items exceeds eight.

- 5** Press [▶] to start program play.

When program play is finished

The disc stops and the program selection screen is shown. The program you selected is ready to play again, or you can add or erase tracks.

To cancel program play

1. Press [■].
2. Press [PLAY MODE] to select the required mode.
The program remains intact so when you next select program play it is ready to play again.

To change the program

1. Use the joystick to highlight the track (or group) you want to change.
2. Do step 3 (or 2 and 3) to make the changes.

Note

- Press [◀◀] and [▶▶] to turn the pages of the program to make selection quicker.
- You can also use the numbered buttons to select groups and tracks.

Erasing tracks

Use the joystick to highlight the item then press [CANCEL].

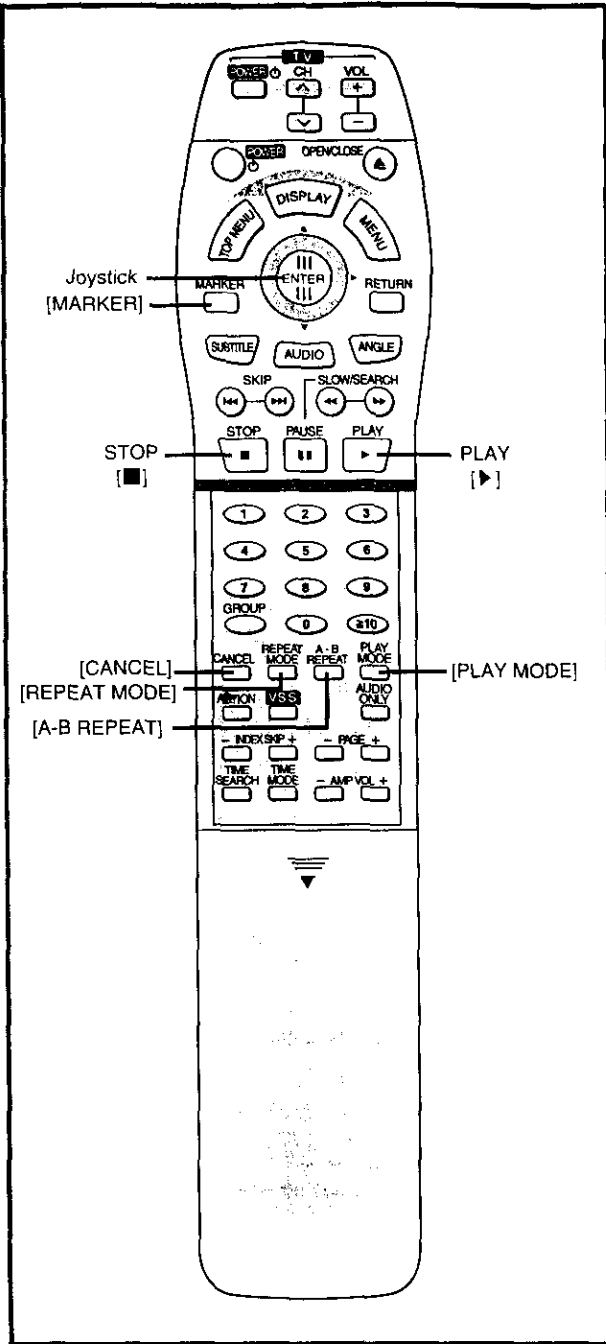
OR

Use the joystick to highlight the items, then highlight "Clear" and press the joystick.

To erase the whole program

Use the joystick to select "Clear all" and press it to erase the entire program.

The program is also canceled if the disc tray is opened.



Random play

DVD-A VCD CD

You can play all the tracks on the disc once each in random order. When playing DVD-Audio, tracks in the groups you specified are played in random order.

While stopped

(Display example: DVD-Audio)

- 1 Press [PLAY MODE] to display "Random".

Random Playback
Choose a group or groups,
then press ENTER.

Group: All 1 2 3 4 5
Press PLAY to start

RND
Random

Each time you press the button:

- While playing DVD-Audio

All Group → Program → Random → Stop (cancel)

- While playing Video CDs and CDs

Program → Random → (cancel)

While playing DVD-Audio

(Display example: DVD-Audio)

- 2 Use the joystick to select a group.

Press the joystick to confirm selection.

Press again to cancel.

You can select more than one group.

Random Playback
Choose a group or groups,
then press ENTER.

*
Group: All 1 2 3 4 5
Press PLAY to start

RND
All ***4*

- 3 Press [▶] to start random play.

When random play finishes

The disc stops and the random play screen is shown.

To cancel random play

1. Press [■].
2. Press [PLAY MODE] to select the required mode.

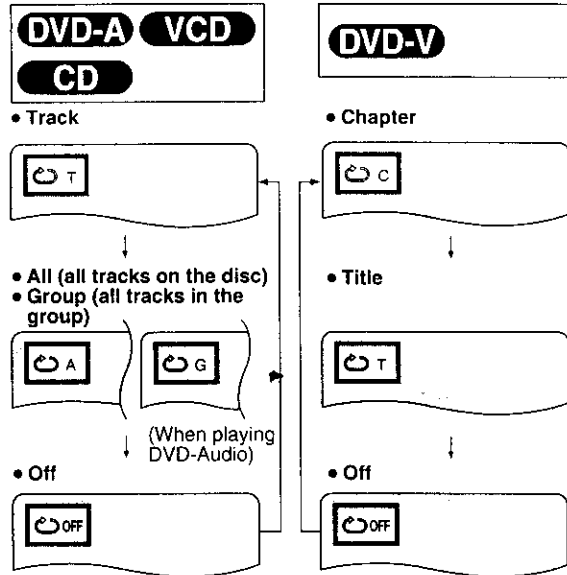
Repeat play

Repeat play

This feature allows you to repeat titles, tracks and chapters. When playing DVD-Audio, the selected group play mode (normal or all groups) is repeated.

Press [REPEAT MODE] during play to select the required repeat play mode.

The mode changes each time you press the button. The modes depend on the type of disc you are playing.



Note

- This feature can not be used with some DVDs or when "PBC" (⇒ Page 13) is on.
- There is no feature to repeat the whole disc for DVD-Video that contain more than one title.
- Track and chapter repeat play are canceled if you select another track or chapter.

To repeat a program

1. Start program play (⇒ Page 19).
2. Press [REPEAT MODE] so "A" is displayed.

A-B repeat

This feature repeats play between two points that you specify.

During play

- 1 Press [A-B REPEAT] at the starting point (A).



- 2 Press [A-B REPEAT] at the finishing point (B).
Play repeats continuously between these two points.



To cancel

Press [A-B REPEAT].

Note

- This feature does not work with some DVDs.
- The unit automatically determines the end of a title or track as point B.
- Subtitles may not appear between A and B.
- Repeat play is canceled when you press [A-B REPEAT].

Marking a position you want to play again: MARKER

This feature allows you to mark a specific point on a disc so you can return to it easily at a later time. It only works if the elapsed playing time of the disc you are playing is shown on the unit's display.

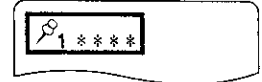
Marking a position

- 1 Press [MARKER] during play.

"*" indicates markers available. Press again to cancel.



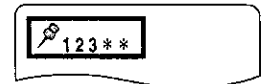
- 2 Press the joystick at the point you want to mark.



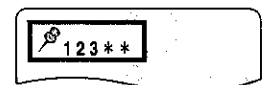
"*" changes to a number. Move the joystick left and right to highlight another available marker. Press [MARKER] to clear the display.

Playing from a marked position

- 1 Press [MARKER].

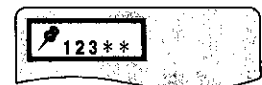


- 2 Use the joystick to highlight the marker.



- 3 Press the joystick to recall the position.

Play resumes from the marked position.

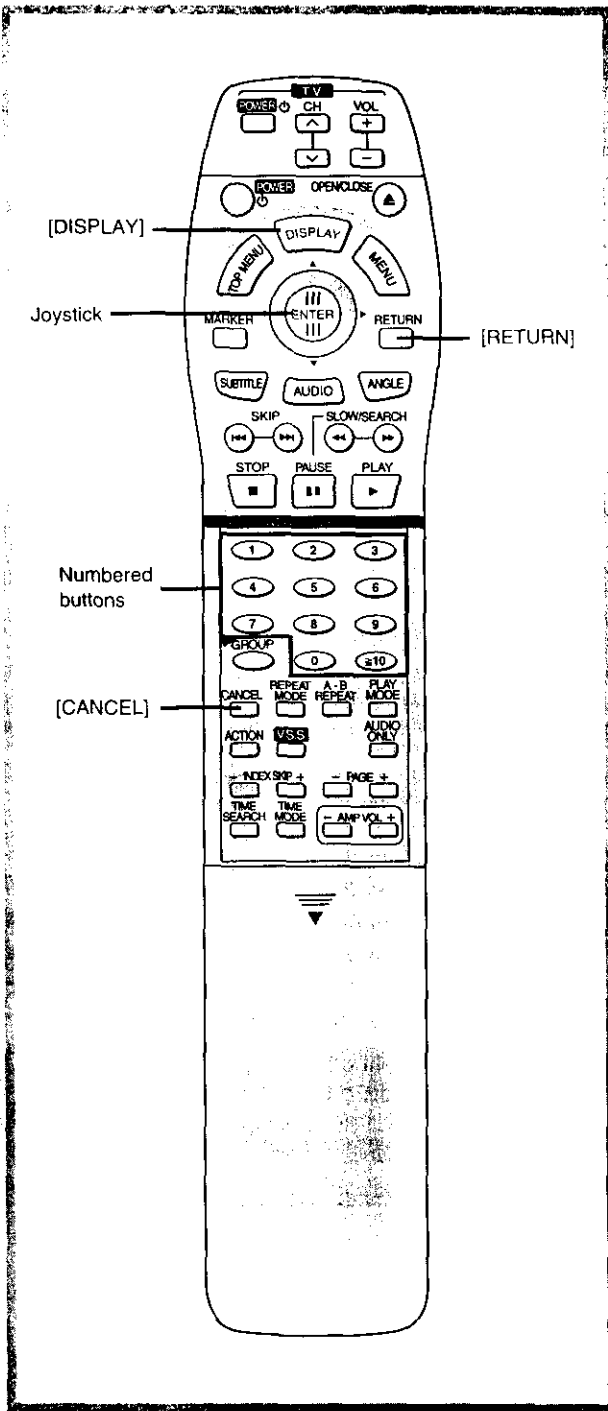


To clear a marker

1. Press [MARKER].
2. Highlight the marker you want to clear and press [CANCEL].

Note

- This feature can not be used with some DVDs or when "PBC" (⇒ Page 13) is on.
- Some subtitles or pictures may fail to appear around the marker (DVD).
- Markers are cleared when you turn off the unit or open the disc tray.



GUI are icons that appear on the screen that allow you to interact with the player. The long thin GUIs that show information about the player and discs are called GUI screens.

Operations you can perform with GUI may be performed with other buttons (➔ see the preceding pages) or they may only be available with GUI.

Operations available only with GUI

- Raising dialogue volume - cinema voice mode
- Picture quality adjustments
- Switching between speaker and headphone V.S.S.
- Master volume adjustments

Basic GUI operation

- 1 Press [DISPLAY] to select the GUI screen.**
 The screen changes each time the button is pressed. See the next page for details.
- 2 Move the joystick to the left and right to select the item.**
- 3 Make your selection and enter it.**
 See pages 23, 24 and 25 for details on operation.
 Most GUIs can be changed by moving the joystick up and down and pressing it to confirm.
 If numbers are used, you can change and confirm with the numbered buttons.
 See the preceding pages for details about operations that can also be performed with other methods.

To clear the GUI screen

Press [CANCEL] or [RETURN].

Note

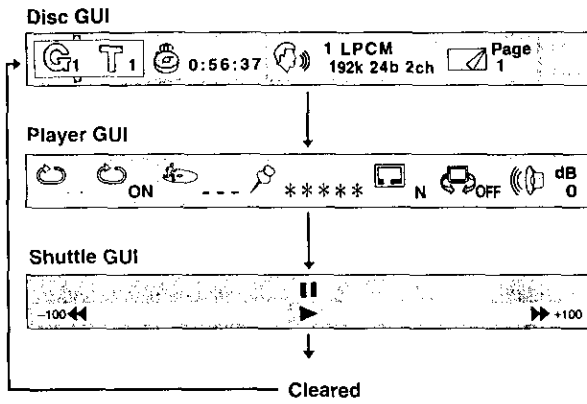
If part of the GUI screen is cut off or fails to appear, go to the initial settings menu to change the position of on-screen messages (➔ page 30).

GUI screens

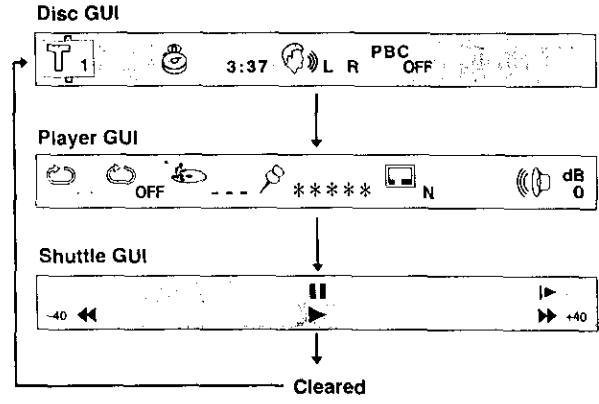
There are three different GUI screens and the contents of each screen depends on the kind of disc being played.
 Disc GUI screen: You can change things like the track or chapter and audio.
 Player GUI screen: You can start repeat play or mark parts you want to play again.
 Shuttle GUI screen: You can fast forward, reverse, or start slow motion play.

Screen examples:

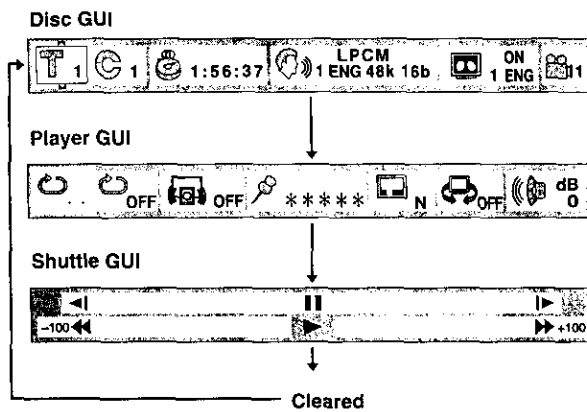
• DVD-Audio



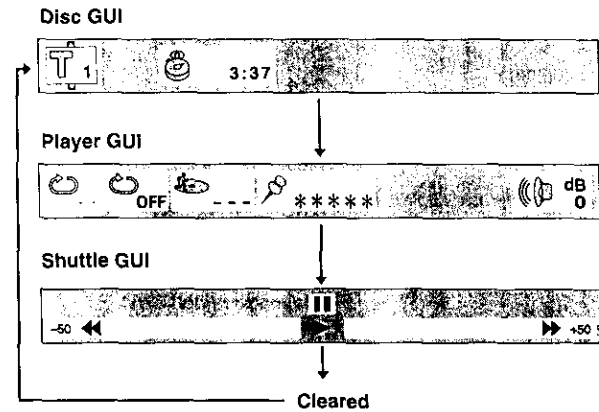
• Video CD



• DVD-Video

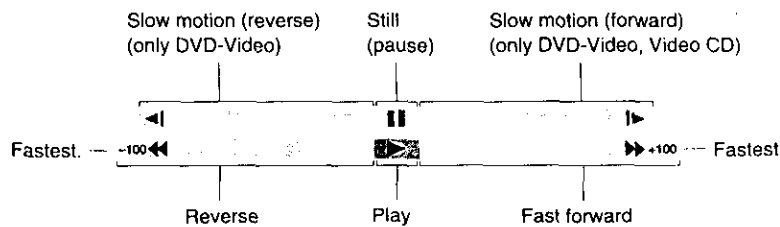


• CD



Similar screens will also appear if you play DVD-Audio in DVD-Video Mode (➔ page 32).

Shuttle GUI



Operation	
	Select the item you want to operate.
	Slow motion, reverse and fast forward
	Move the joystick to select one of 5 speeds.

Advanced operations

Disc GUI screen

Icon	Content you can change	Operation																		
	Group number (DVD-Audio)	Select and press																		
	Track number (DVD-Audio, Video CD and CD) Title number (DVD-Video)	Select and press																		
	Chapter number (DVD-Video)	Select and press																		
	Time (select a position to start play by specifying a time) (DVD), Play time display (DVD-Audio, Video CD and CD) (e.g., Elapsed time of current track → remaining time of current track → remaining time on disc)	Press the numbered buttons and press joystick Select																		
<p>Example 1</p> <p>Example 2</p>	<p>Audio number (DVD-Audio, DVD-Video)</p> <p>Ⓐ Audio number Ⓑ Signal type LPCM - linear PCM/PPCM/DD (Dolby digital)/DTS/MPEG/Vocal Ⓒ Signal data: k (sampling rate)/b (bits)/ch (number of channels) Ⓓ Soundtrack language code</p> <table border="1"> <tr> <td>ENG : English</td> <td>POR : Portuguese</td> </tr> <tr> <td>FRA : French</td> <td>RUS : Russian</td> </tr> <tr> <td>DEU : German</td> <td>JPN : Japanese</td> </tr> <tr> <td>ITA : Italian</td> <td>CHI : Chinese</td> </tr> <tr> <td>ESP : Spanish</td> <td>KOR : Korean</td> </tr> <tr> <td>NLD : Dutch</td> <td>MAL : Malay</td> </tr> <tr> <td>SVE : Swedish</td> <td>VIE : Vietnamese</td> </tr> <tr> <td>NOR : Norwegian</td> <td>THA : Thai</td> </tr> <tr> <td>DAN : Danish</td> <td>* : Others</td> </tr> </table>	ENG : English	POR : Portuguese	FRA : French	RUS : Russian	DEU : German	JPN : Japanese	ITA : Italian	CHI : Chinese	ESP : Spanish	KOR : Korean	NLD : Dutch	MAL : Malay	SVE : Swedish	VIE : Vietnamese	NOR : Norwegian	THA : Thai	DAN : Danish	* : Others	<p> Select</p> <p>When playing Karaoke DVD The vocals change in the following ways. Solo karaoke --- (off) → ON Duet karaoke --- (off) → V1 + V2 (duet) → V1 (vocal 1) → V2 (vocal 2)</p>
ENG : English	POR : Portuguese																			
FRA : French	RUS : Russian																			
DEU : German	JPN : Japanese																			
ITA : Italian	CHI : Chinese																			
ESP : Spanish	KOR : Korean																			
NLD : Dutch	MAL : Malay																			
SVE : Swedish	VIE : Vietnamese																			
NOR : Norwegian	THA : Thai																			
DAN : Danish	* : Others																			
	Audio mode (Video CD) LR → L → R	Select and press																		
	Page number of still picture (DVD-Audio)	Select You will usually return to a menu screen if "Return" appears and you select it.																		
	Subtitles (DVD-Video) Ⓐ Subtitle number Ⓑ Subtitles on or off (→ above for language codes)	Select Ⓐ or Ⓑ Select																		
	Angle number (DVD-Video)	Select																		
	Menu play (version 2.0 Video CDs) Indicates whether menu play (PBC) is on or off	No change can be made with the GUI screen. (→ "Canceling the playback control feature on Video CDs", page 13)																		

Advanced operations

Depending on the condition of the unit (playing, stopped, etc.) and the type of software you are playing, there are some GUI items that cannot be selected or changed.

Unit GUI screen

Icon	Content you can change	Operation
	The start (A) and finish (B) points of A-B repeat	Press at the two points. Press again to cancel.
	Repeat play modes DVD-Audio, Video CD, CD: T (Track) → A (All)/G (Group) → OFF DVD-Video: C (Chapter) → T (Title) → OFF	Select
	Play modes (DVD-Audio, Video CD and CD) --- (Normal)/PGM (Program)/RND (Random)/ALL (All group)	Play modes cannot be changed here.
	Cinema voice mode (Only with DVD where the dialog is recorded in the center channel.) ON (dialog is emphasized) → OFF	Select and press
	Marker Up to five positions can be marked Marker number 1 2 * * *	Press once to highlight a marker Press at the point you want to mark
	To recall a position	Select the number and press
	To clear a marker	Select the number and press [CANCEL]
	Picture modes (DVD, Video CD) N (normal) → U → C → F → S U (user): The following GUI appears allowing you to adjust the picture. <div style="display: flex; justify-content: space-around; align-items: center;"> <div style="text-align: center;"> <p>Contrast (-7 to +7)</p> </div> <div style="text-align: center;"> <p>Sharpness (-1 to +1)</p> </div> </div> <div style="display: flex; justify-content: space-around; align-items: center;"> <div style="text-align: center;"> <p>Color (-7 to +7)</p> </div> <div style="text-align: center;"> <p>Brightness (0 to 15)</p> </div> </div> C (cinema): Picture suited for movie viewing F (fine): Details are sharper S (soft): Soft picture with fewer video artifacts	Select ↓ With the U GUI Press to select "U" ↓ Select the item ↓ Adjust the level and press
	V.S.S. mode (When playing DVD recorded in Dolby Digital with 2 or more channels) (Speaker) → (headphone V.S.S.) Select the V.S.S. level 1 (normal) → 2 (broad) → OFF	Select the mode ↓ Select the level
	Master volume (Analog output only) 0 dB (maximum) ↔ -127 dB (minimum), -∞ (mute) The level can be set differently for DVD, Video CD, and CD	Select

Cinema voice mode raises dialog from the center speaker. It has no effect on dialog in other channels.

Language, display, and ratings settings

Various settings are made at the time of shipment that determine the way DVDs are played and viewed. Some of these settings can be changed during play, and these operations have been described earlier. You can also change the initial settings to suit your individual needs.

Disc Languages (DVD)

(⇒ below)

You can change the languages for the soundtrack, subtitles, and DVD menus.

Ratings (DVD-Video)

(⇒ Page 28)

Some DVDs have ratings recorded on them and you are able to limit play of these DVDs by changing the ratings settings.

Menu Language

(⇒ Page 30)

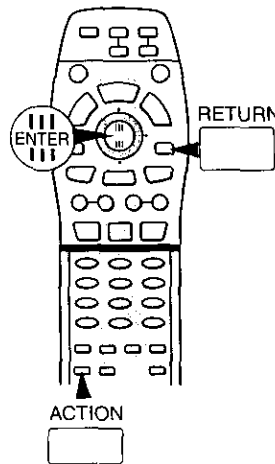
You can change the language used for the on-screen display menus.

Settings

Disc Languages (DVD)

These settings allow you to choose the languages used when a disc is played.

- Audio languages
- Subtitle languages
- DVD menu languages



While stopped, press [ACTION].

ACTION



1	Disc Languages	
2	Ratings	Level 8
3	Menu Language	English
4	On-Screen Messages	
5	FL Display	Bright
6	TV Aspect	4:3
7	Digital Audio Output	
8	Speaker Setting	Multi-channel
9	Other Settings	
Press RETURN to exit		

Initial settings screen

If you select "1 Automatic" in "2 Subtitle"

If the soundtrack language is set to English, then subtitles will not appear if the DVD has an English soundtrack. English subtitles will appear if the soundtrack is in another language.

To return to the previous menu

Press [RETURN].

On-Screen Messages

(⇒ Page 30)

You can choose to display OSD or not, and you can choose their color and position.

FL Display

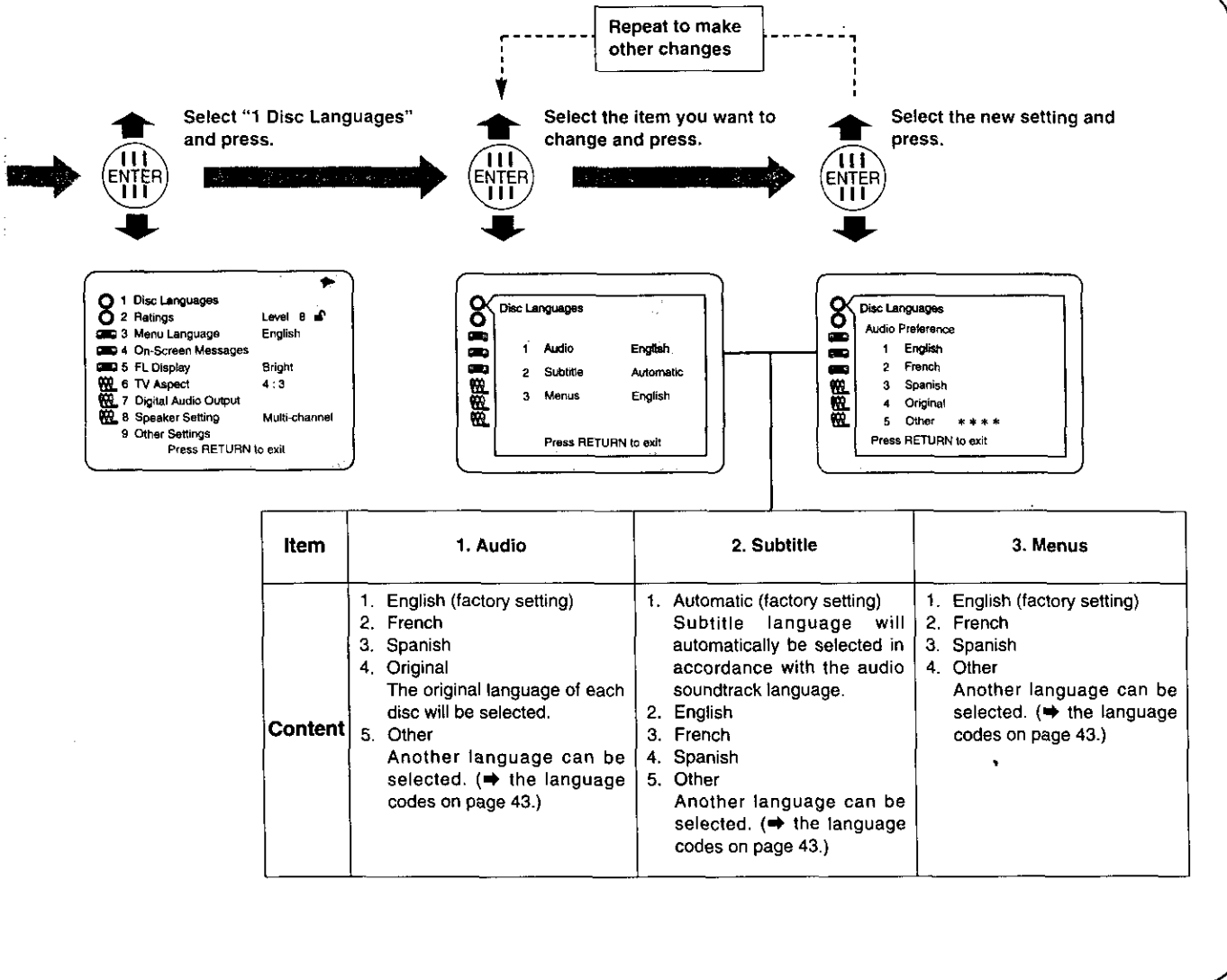
(⇒ Page 30)

You can dim this unit's display.

Other Settings

(⇒ Page 32)

You can choose whether to have sound on or off during fast forward, change the dynamic range setting, and various other settings.

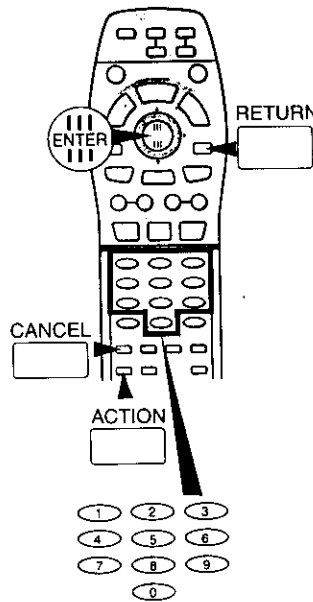


To clear the menus

Press [RETURN] until you return to the previous screen.

Ratings (DVD-Video)

You can limit play of DVDs that have ratings recorded on them by changing this setting. You can also prevent play of all DVDs (such as adult material without ratings recorded on them) by selecting "0 Lock All".



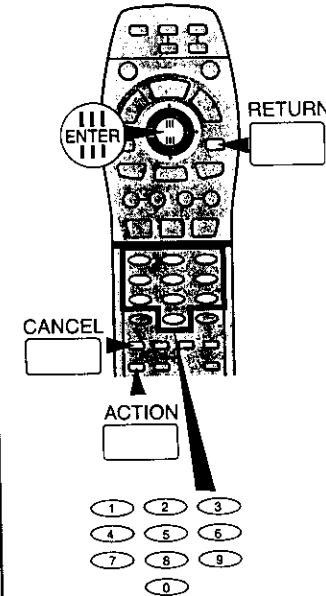
While stopped, press [ACTION].

1	Disc Languages	
2	Ratings	Level B
3	Menu Language	English
4	On-Screen Messages	
5	FL Display	Bright
6	TV Aspect	4:3
7	Digital Audio Output	
8	Speaker Setting	Multi-channel
9	Other Settings	
Press RETURN to exit		

Initial settings screen

Changing the ratings settings

- Unlocking the player
- Changing your password
- Changing the ratings level
- Temporarily unlocking the player - DVD - Video can be played without unlocking the player. This is cancelled if the unit is turned off or if the disc is removed.

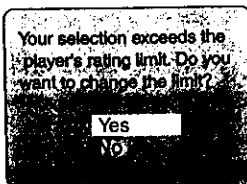


While stopped, press [ACTION].

1	Disc Languages	
2	Ratings	Level 0
3	Menu Language	English
4	On-Screen Messages	
5	FL Display	Bright
6	TV Aspect	4:3
7	Digital Audio Output	
8	Speaker Setting	Multi-channel
9	Other Settings	
Press RETURN to exit		

Initial settings screen

When you insert a DVD that exceeds the ratings level you set The following message appears on the television.

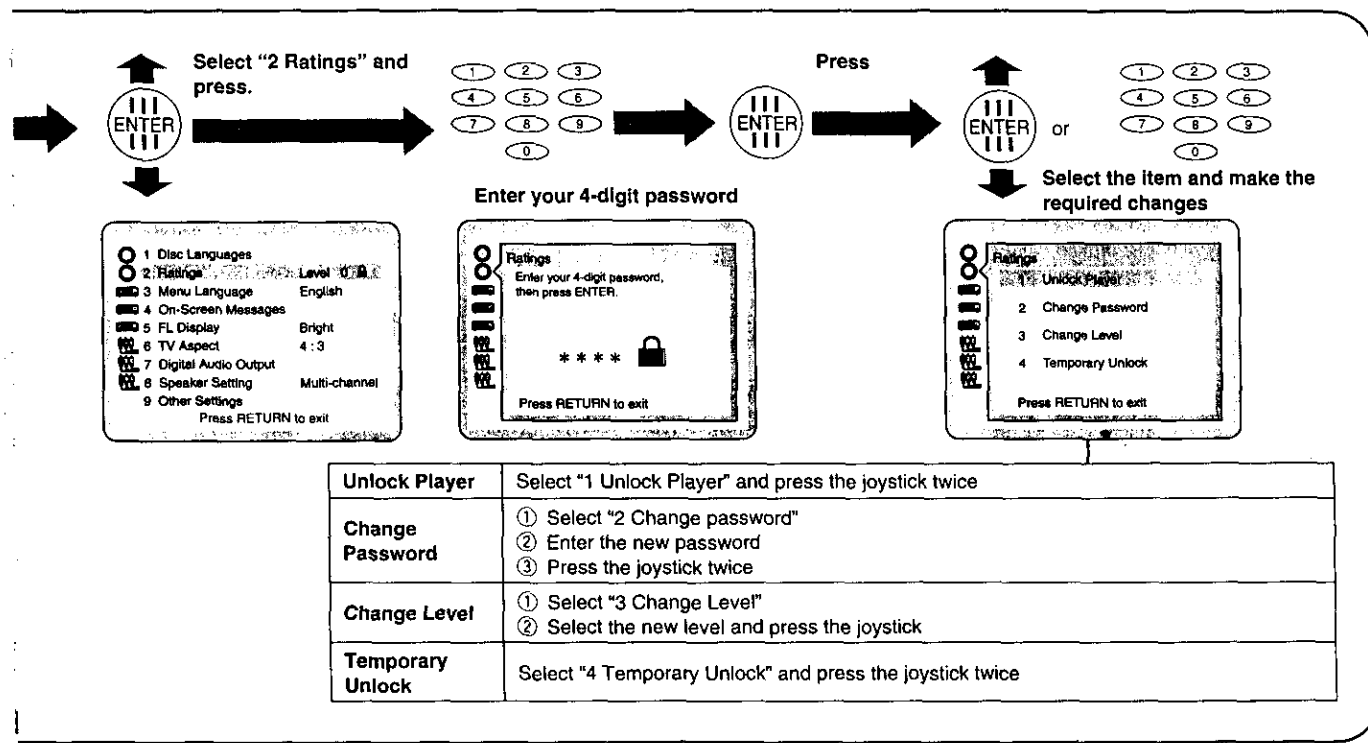
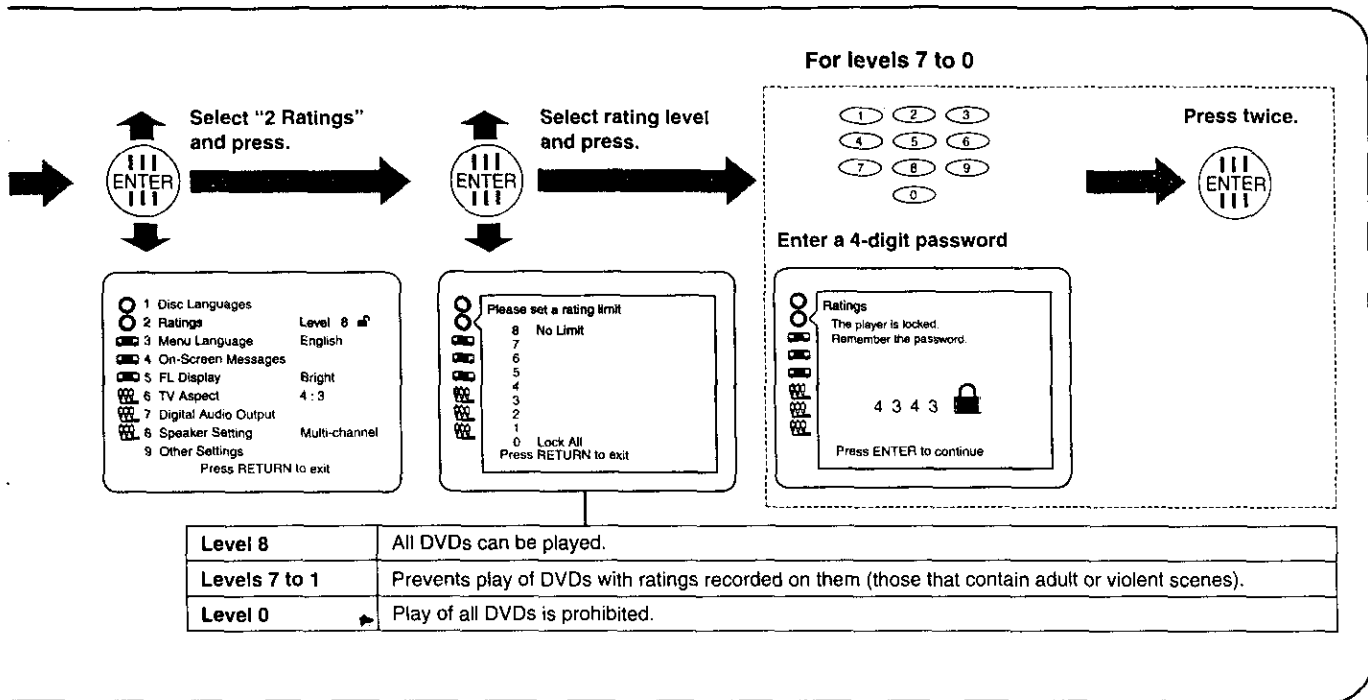


To play the disc

1. Select "Yes" and press [ENTER].
2. Enter your 4-digit password and press [ENTER].
3. Press [ENTER] again to start play.

The unit locks again when the disc tray is opened or the unit is turned off.

Do not forget your password as ratings settings cannot be changed without it.



To return to the previous menu
Press [RETURN].

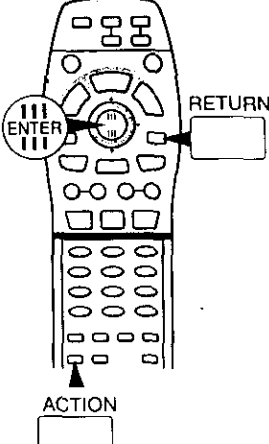
If you make a mistake entering your password
Press [CANCEL] to erase the number.

To clear the menus
Press [RETURN] until you return to the previous screen.


Settings


Menu Language

You can change the language used for menus shown on the television.



While stopped, press [ACTION].

ACTION 

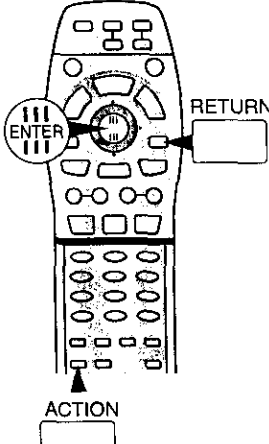
1	Disc Languages	
2	Ratings	Level 8 
3	Menu Language	English
4	On-Screen Messages	
5	FL Display	Bright
6	TV Aspect	4:3
7	Digital Audio Output	
8	Speaker Setting	Multi-channel
9	Other Settings	

Press RETURN to exit


Initial settings screen


On-Screen Messages

You can choose to show or not show the messages that appear on the screen when you perform an operation. You can also change color and position on the television of these messages and GUI screens.



While stopped, press [ACTION].

ACTION 

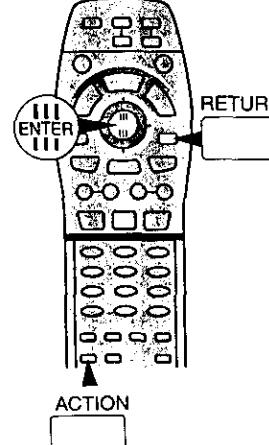
1	Disc Languages	
2	Ratings	Level 8 
3	Menu Language	English
4	On-Screen Messages	
5	FL Display	Bright
6	TV Aspect	4:3
7	Digital Audio Output	
8	Speaker Setting	Multi-channel
9	Other Settings	

Press RETURN to exit


Initial settings screen


FL Display

You can dim the unit's display.



While stopped, press [ACTION].

ACTION 

1	Disc Languages	
2	Ratings	Level 8 
3	Menu Language	English
4	On-Screen Messages	
5	FL Display	Bright
6	TV Aspect	4:3
7	Digital Audio Output	
8	Speaker Setting	Multi-channel
9	Other Settings	

Press RETURN to exit

Initial settings screen

Settings

Select "3 Menu Language" and press.

Select the language and press.

1 Disc Languages
2 Ratings Level 8
3 Menu Language English
4 On-Screen Messages
5 FL Display Bright
6 TV Aspect 4:3
7 Digital Audio Output
8 Speaker Setting Multi-channel
9 Other Settings
Press RETURN to exit

Select the language for these Menus.

1 English
2 Français
3 Español

Press RETURN to exit

1. ENGLISH (factory setting)
2. FRENCH
3. SPANISH

Select "4 On-Screen Messages" and press.

Select the item you want to change and press.

Select the new setting and press.

1 Disc Languages
2 Ratings Level 8
3 Menu Language English
4 On-Screen Messages
5 FL Display Bright
6 TV Aspect 4:3
7 Digital Audio Output
8 Speaker Setting Multi-channel
9 Other Settings
Press RETURN to exit

On Screen Messages

1 On-Screen Messages On
2 Color and Position Blue

Press RETURN to exit

Item	1. On-Screen Messages	2. Color and Position
Content	1. On (factory setting) Messages appear on the television when you perform operations.	1 Blue (factory setting)
	2. Off Messages will not appear.	2 Violet
		3 Green
		4 Blue
		5 Violet
		6 Green

Messages appear slightly lower on the screen.

Select settings 4, 5, or 6 if the messages are cut off at the top of the screen.

Select "5 FL Display" and press.

Select the brightness and press.

1 Disc Languages
2 Ratings Level 8
3 Menu Language English
4 On-Screen Messages
5 FL Display Bright
6 TV Aspect 4:3
7 Digital Audio Output
8 Speaker Setting Multi-channel
9 Other Settings
Press RETURN to exit

FL Display

1 Bright
2 Dim
3 Dim During DVD/VCD Play (Auto)
4 Off During Play (Auto)

Press RETURN to exit

1. Bright (factory setting)
2. Dim
3. Dim During DVD/VCD Play (Auto)
4. Off During Play (Auto)

Settings 3 and 4 are recommended for movie viewing. The display brightens temporarily during some operations such as fast forward and rewind. The unit's lights are also turned off if 3 or 4 is chosen.

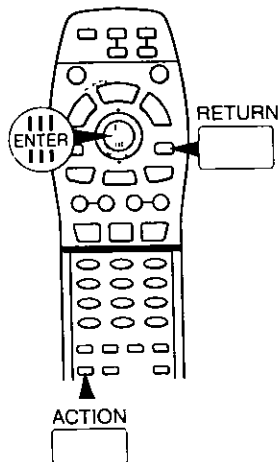
To return to the previous menu
Press [RETURN].

To clear the menus
Press [RETURN] until you return to the previous screen.

Other Settings

Other settings are possible to enhance your viewing experience

- **Still Mode**
Change these settings to eliminate blurring and improve picture quality when the picture is paused
- **Audio during Search**
You can choose to have the sound on or off during search (DVD-Video and Video CD only)
- **TV Mode (4:3)**
You can choose how software made for a widescreen television is displayed on a regular television
- **Dynamic Range Compression**
You can reduce the dynamic range for late night viewing
- **Still Picture Display**
You can choose to show or not show the picture type when the picture is paused
- **Black Level Control**
You can choose the black level of the picture, "Lighter" or "Darker"
- **DVD-Video Mode**
You can decide how the pictures contained on some DVD-Audio discs are shown



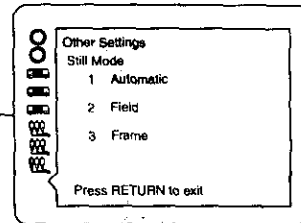
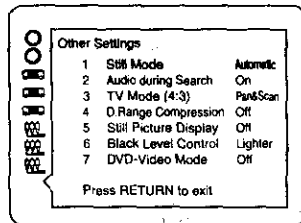
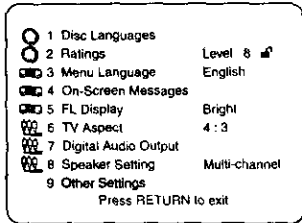
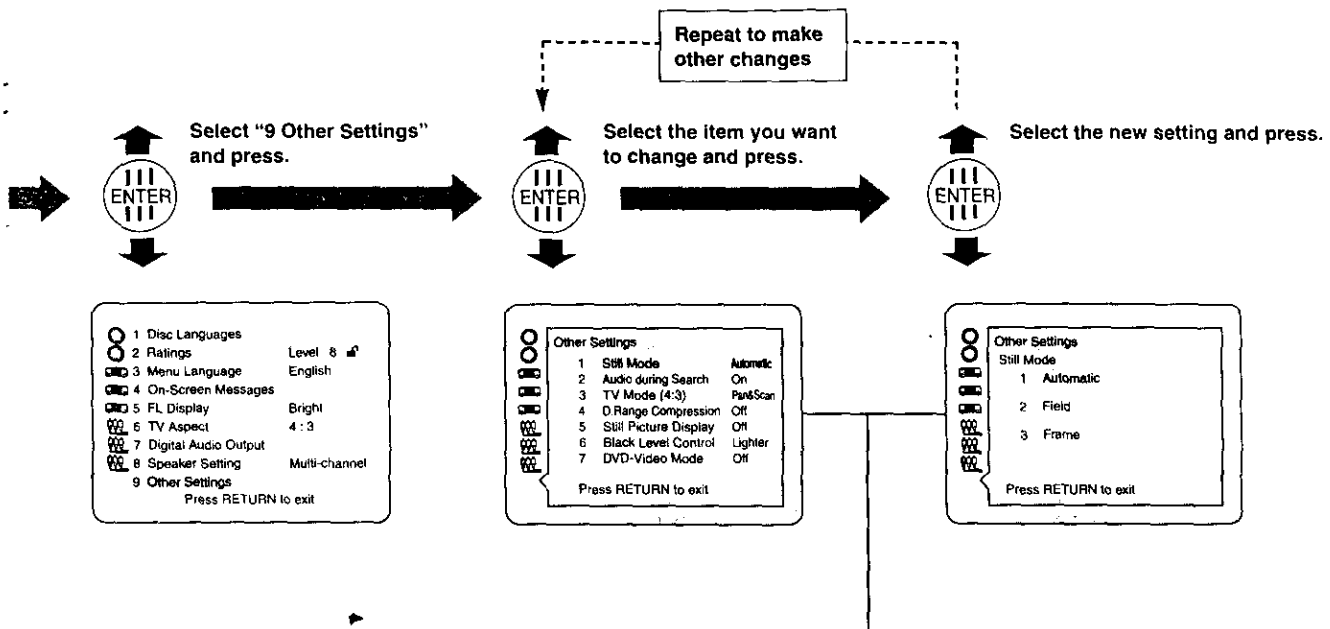
While stopped, press [ACTION].




1	Disc Languages	
2	Ratings	Level 8
3	Menu Language	English
4	On Screen Messages	
5	FL Display	Bright
6	TV Aspect	4:3
7	Digital Audio Output	
8	Speaker Setting	Multi-channel
9	Other Settings	Press RETURN to exit

Initial settings screen

Item	1. Still Mode	2. Audio during Search
Content	<p>1. Automatic (factory setting) The unit automatically selects field still or frame still</p> <p>2. Field The unit shows field stills, which are less blurred Fields contain only half a frame so picture quality is poor</p> <p>3. Frame The unit shows frame stills, which are sharper Frames are composed of two fields so the picture appears blurred</p> <p>Reference See the glossary for more information about fields and frames (➔ Page 45)</p>	<p>1. On (factory setting) Sound is heard during search</p> <p>2. Off Sound is not heard during search (DVD-Video and Video CD only)</p>



3. TV Mode (4:3)	4. Dynamic Range Compression	5. Still Picture Display	6. Black Level Control	7. DVD-Video Mode
<p>1. Pan & Scan (factory setting) During play of software designed for wide-screen televisions on a regular television, the picture is enlarged. This causes the sides of the picture to be cut off, but the screen is filled. Software not designated pan and scan is played as letterbox.</p> <p>2. Letterbox During play of software designed for wide-screen televisions on a regular television, the entire picture is shown. This causes black portions to appear at the top and bottom of the screen.</p>	<p>1. Off (factory setting) Sound is heard at normal volume.</p> <p>2. On Dynamic range is compressed. This only works with software recorded with Dolby Digital. Turning this feature on allows you to have the volume at a level so dialogue is clear, but loud parts of the soundtrack are made softer than usual.</p>	<p>1. Off (factory setting) The picture type is not shown when paused.</p> <p>2. On The picture type (I/P/B) is shown when paused.</p> <p>Reference When this feature is turned on, the following display appears when a picture is paused.</p>  <p>See the glossary for more information about the picture types (→ Page 45).</p>	<p>1. Lighter (factory setting) The black level of the picture is lighter. Select when the unit is connected to a TV set through the VIDEO OUT terminal or S VIDEO OUT terminal.</p> <p>2. Darker The black level of the picture is darker. Select when the unit is connected to a TV set through the COMPONENT VIDEO OUT (Y, P_B, P_R) terminals.</p>	<p>1. Off (factory setting) DVD-Audio discs are played as DVD-Audio discs.</p> <p>2. On DVD-Audio discs are played in a similar fashion to DVD - Video discs.</p> <p>Note The setting reverts to "Off" if the disc tray is opened or the unit is turned off.</p>

To return to the previous menu
Press [RETURN].

To clear the menus
Press [RETURN] until you return to the previous screen.

Adding an amplifier and speakers to your system - Connection and settings

Use the following chart when you wish to add an amplifier and speakers to your system. Further information is given on the following pages.

	Connection*1	Digital output setting (⇒ Page 38)	Speaker setting (⇒ Page 40)
You want to enjoy the 5.1-channel surround sound recorded on DVDs using the unit's built-in decoder.	<ul style="list-style-type: none"> • An amplifier with 5.1-channel input terminals • A 5.1-channel speaker system (⇒ Page 35) 	<ul style="list-style-type: none"> • Set PCM Down Conversion to "No" 	<ul style="list-style-type: none"> • Set all speakers to on (Large, Small or Yes). • Correct output balance • Set delay time
You want to enjoy the 5.1-channel surround sound recorded on DVDs using the decoder in another unit (e.g., a digital sound processor).	<ul style="list-style-type: none"> • A decoder • An amplifier with 5.1-channel input terminals • A 5.1-channel speaker system (⇒ Page 36) 	<ul style="list-style-type: none"> • Set PCM Down Conversion to "Yes" • Set Dolby Digital and DTS Digital Surround to "Bitstream"*2 	<ul style="list-style-type: none"> • No settings required • Make speaker settings on the decoder.
You want to connect a 2-channel analog amplifier (including Dolby Pro Logic amplifiers).	<ul style="list-style-type: none"> • A 2-channel analog amplifier (⇒ Page 37) 	<ul style="list-style-type: none"> • Set PCM Down Conversion to "No" 	<ul style="list-style-type: none"> • No settings required • Some settings are required on Dolby Pro Logic amplifiers
You want to connect a 2-channel digital amplifier.	<ul style="list-style-type: none"> • A 2-channel digital amplifier (⇒ Page 37) 	<ul style="list-style-type: none"> • Set PCM Down Conversion to "Yes" • Set Dolby Digital and DTS Digital Surround to "PCM" 	<ul style="list-style-type: none"> • No settings required
You want to record onto a cassette deck or other analog recording device.	<ul style="list-style-type: none"> • A cassette deck • An amplifier (⇒ Page 37) 	<ul style="list-style-type: none"> • Set PCM Down Conversion to "No" 	<ul style="list-style-type: none"> • No settings required
You want to record onto an MD deck or other digital recording device.*3	<ul style="list-style-type: none"> • An MD deck (⇒ Page 37) 	<ul style="list-style-type: none"> • Set PCM Down Conversion to "Yes" • Set Dolby Digital and DTS Digital Surround to "PCM" 	<ul style="list-style-type: none"> • No settings required
You want to connect 3 speakers.	<ul style="list-style-type: none"> • An amplifier with 5.1-channel input terminals • Your speakers, two front and one center. (⇒ Page 35) 	<ul style="list-style-type: none"> • Set PCM Down Conversion to "No" 	<ul style="list-style-type: none"> • Set center to on (Large or Small). • Set surround to "No". • Correct output balance • Set delay time
You want to connect 4 speakers.	<ul style="list-style-type: none"> • An amplifier with 5.1-channel input terminals • Your speakers, two front and two surround. (⇒ Page 35) 	<ul style="list-style-type: none"> • Set PCM Down Conversion to "No" 	<ul style="list-style-type: none"> • Set surround to on (Large or Small). • Set center to "No". • Correct output balance • Set delay time

*1 Equipment listed are examples.

*2 If your decoder is not able to handle DTS signals, set Dolby Digital to "Bitstream" and DTS Digital Surround to "PCM".

*3 Connect digital equipment that is able to handle a 48 kHz/16 bit sampling rate. You cannot record digitally if there is a copy guard on the disc.

Note

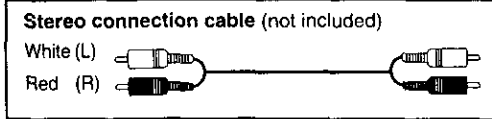
Turn V.S.S. (⇒ page 16) off when you connect more than just the two front speakers. Sound will not be output from the other speakers if V.S.S. is on.

Advanced connections

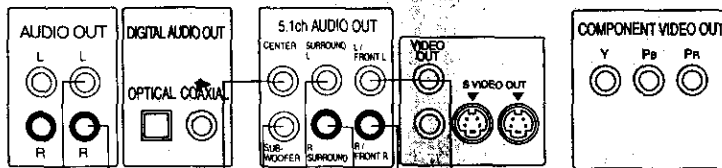
Surround connections

Connecting a basic 5.1-channel surround system

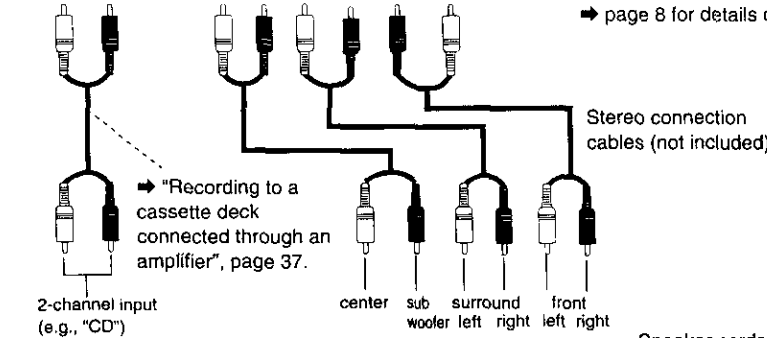
This is the basic system you will need to fully enjoy the high quality sound found on DVD-Audio and to enjoy home theater with DVD-Video.



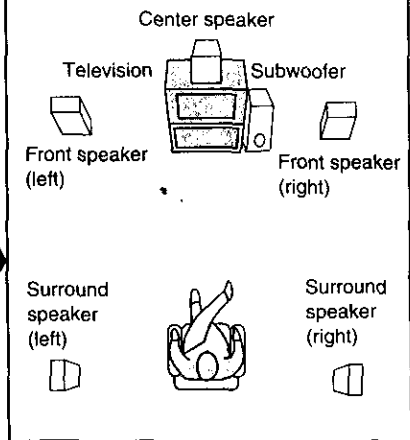
Rear of this unit



→ page 8 for details on how to connect your television.



Positioning of your 5.1-channel speaker system (not included)



Amplifier with 5.1-channel input terminals

Advanced connections

Connecting a surround system through a digital sound decoder

By adding a Dolby Digital and DTS digital decoder to your system, you are able to expand your system's possibilities. A digital surround processor, which has multiple input terminals, is recommended.

Stereo connection cable (not included)

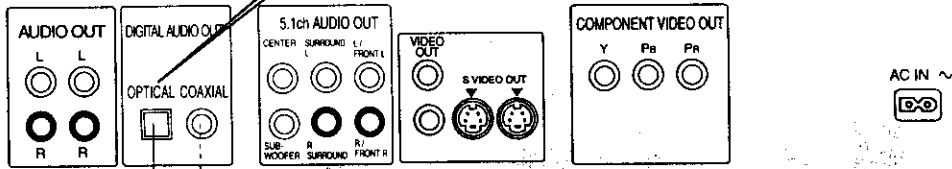
White (L)
Red (R)

Connection with an optical digital cable (not included)

- Do not bend or twist the cable.
- Insert the dust cap when the terminal is not in use.

Remove dust cap

Rear of this unit

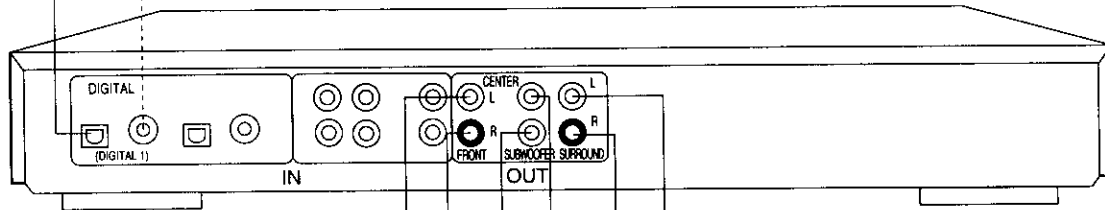


➔ page 8 for details on how to connect your television.

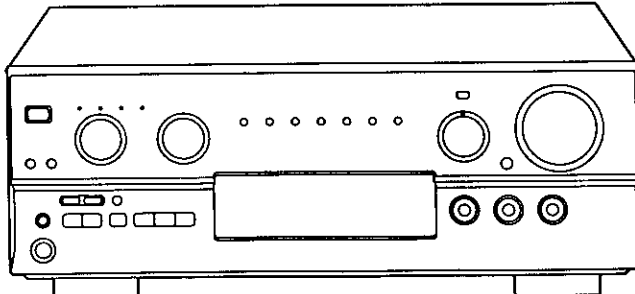
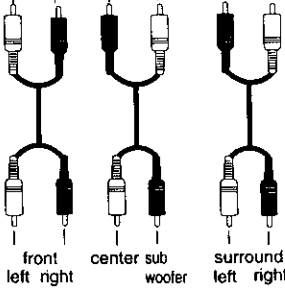
Optical digital cable (not included) Coaxial cable (not included)

Either one of these (The coaxial cable is used if you connect both.)

Dolby Digital/DTS decoder

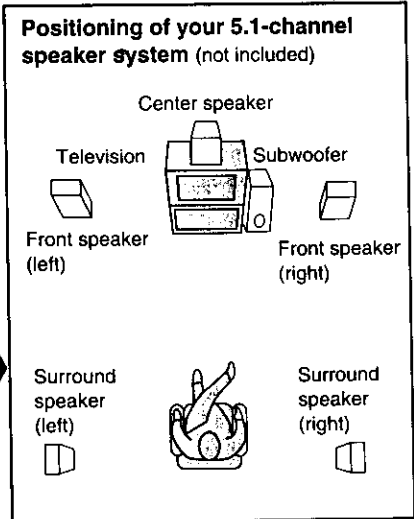


Stereo connection cables (not included)



Amplifier with 5.1-channel input terminals

Speaker cords (not included)



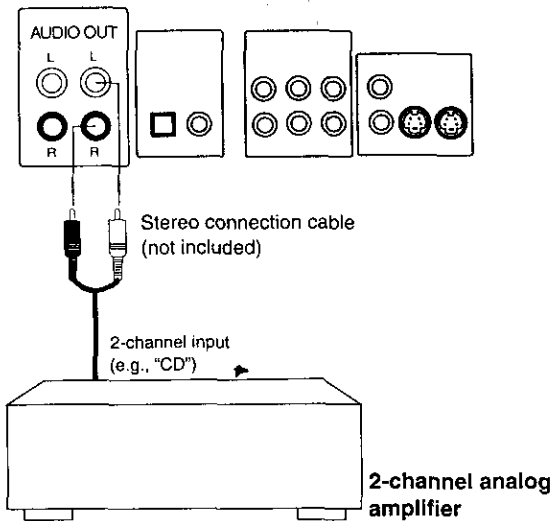
Settings

Other connections

Connecting a 2-channel analog amplifier

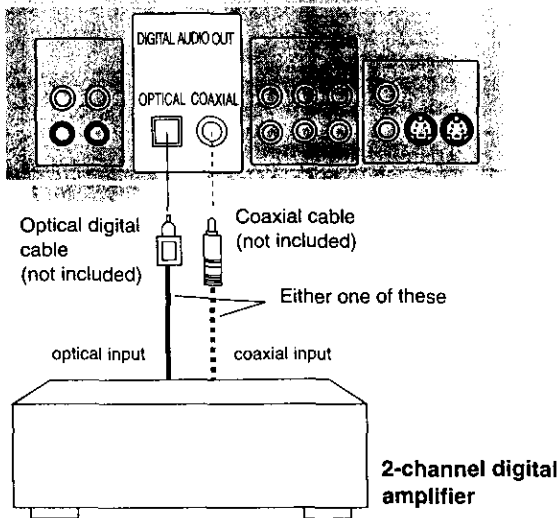
Use one set of the AUDIO OUT terminals. 5.1-channel audio is down mixed to 2 channels when output through these terminals.

Rear of this unit



Connecting a 2-channel digital amplifier

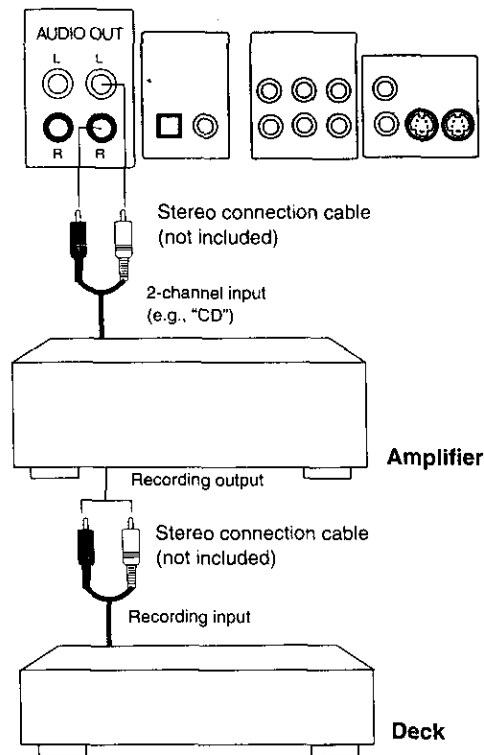
Rear of this unit



Recording to a cassette deck connected through an amplifier

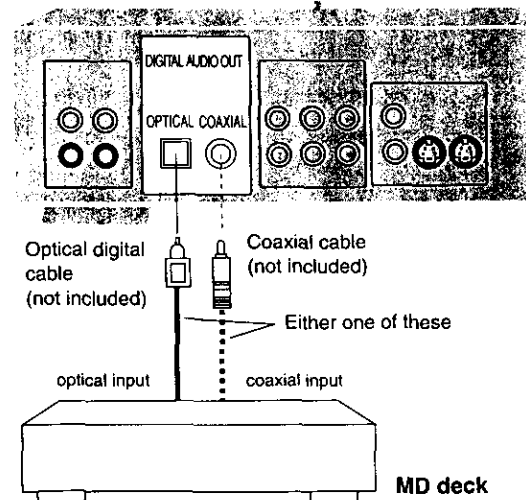
Connect the amplifier to one set of the AUDIO OUT terminals. If you use 5.1-channel connection, only the sound for the front speakers will be recorded.

Rear of this unit



Recording directly to an MD deck

Rear of this unit



Digital Audio Output

You must change the digital output signal settings on this unit to suit the kind of equipment you have connected.

- **PCM Down Conversion**

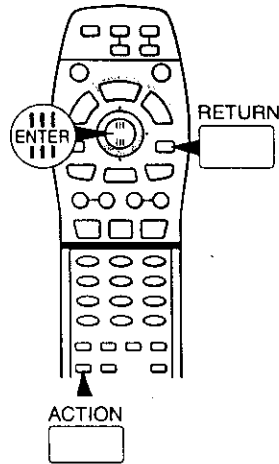
Choose whether or not to convert the 96 kHz signals contained on DVD-Video to 48 kHz/16 bit

- **Dolby Digital**

Choose whether to output Dolby Digital signals as they are (bitstream) or to convert them to PCM 2 channel signals so audio can be heard without passing through a decoder.

- **DTS Digital Surround**

The same choices are available with dts as are available for Dolby Digital.



While stopped, press [ACTION].

ACTION

1	Disc Languages	
2	Ratings	Level 8
3	Menu Language	English
4	On-Screen Messages	
5	FL Display	Bright
6	TV Aspect	4 : 3
7	Digital Audio Output	
8	Speaker Setting	Multi-channel
9	Other Settings	

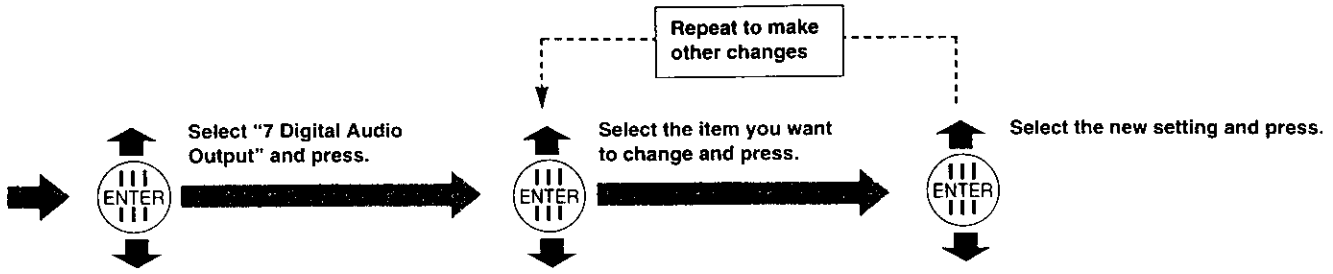
Press RETURN to exit

Initial settings screen

Caution for the optical/coaxial digital audio output connector:

Ensure Dolby Digital and DTS are set to "PCM" if you connect this unit to a digital amplifier without a decoder. If the signals are output as bitstream, "noise" will be output, which can cause harm to your ears and speakers.

To return to the previous menu
Press [RETURN].



- 1 Disc Languages
 - 2 Ratings Level 8
 - 3 Menu Language English
 - 4 On-Screen Messages
 - 5 FL Display Bright
 - 6 TV Aspect 4:3
 - 7 Digital Audio Output
 - 8 Speaker Setting Multi-channel
 - 9 Other Settings
- Press RETURN to exit

- Digital Audio Output
- 1 PCM Down Conversion No
 - 2 Dolby Digital Bitstream
 - 3 DTS Digital Surround PCM
- Press RETURN to exit

- Digital Audio Output
- PCM Down Conversion
- 1 No
 - 2 Yes
- Press RETURN to exit

Item	1. PCM Down Conversion * (DVD-Video only)	2. Dolby Digital	3. DTS Digital Surround
Content	<p>1. No (factory setting)</p> <ul style="list-style-type: none"> • 96 kHz LPCM signals are not output. • 48 kHz signals are output as 48 kHz/16 bit signals. • Signals from DVDs without copyright protection may be output as they are. <p>2. Yes</p> <ul style="list-style-type: none"> • 96 kHz and 48 kHz digital and analog signals are output as 48 kHz/16 bit signals. (This is for copyright protection.) 	<p>1. Bitstream (factory setting)</p> <p>Choose this setting if you have connected this unit to a Dolby Digital decoder.</p> <p>2. PCM</p> <p>Choose this setting if you have connected this unit to a digital amplifier or digital recording device that doesn't have a decoder.</p>	<p>1. PCM (factory setting)</p> <p>Choose this setting if you have connected this unit to a digital amplifier or digital recording device that does not have a decoder.</p> <p>2. Bitstream</p> <p>Choose this setting if you have connected this unit to a DTS decoder.</p>

* When playing DVD-Audio, all digital output is in the down sampled PCM form.

To enjoy high quality 192 kHz or 96 kHz audio, you should use 5.1 channel output connection and set PCM Down Conversion to "No".

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Manufactured under license from Digital Theater Systems, Inc. US Pat. No. 5,451,942 and other world-wide patents issued and pending. "DTS" and "DTS Digital Surround" are trademarks of Digital Theater Systems, Inc. © 1996 Digital Theater Systems, Inc. All rights reserved.

To clear the menus
Press [RETURN] until to return the previous screen.

Speaker Setting

Choose the settings to suit your speaker system.

- **Speaker mode**

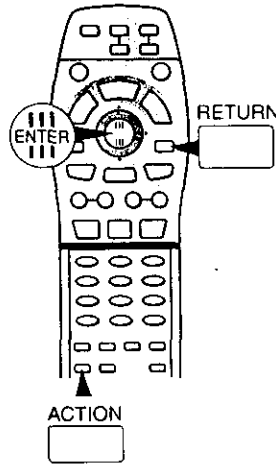
Choose the size of your speakers and whether they are connected or not. If you set a speaker as being not present, sound will not be output from that speaker even if it is connected.

- **Delay time**

Change these settings to make up for differences in the distances between the speakers and the listening position.

- **Test**

Use this test to adjust the volume balance of your speakers. ➔



While stopped, press [ACTION].

ACTION

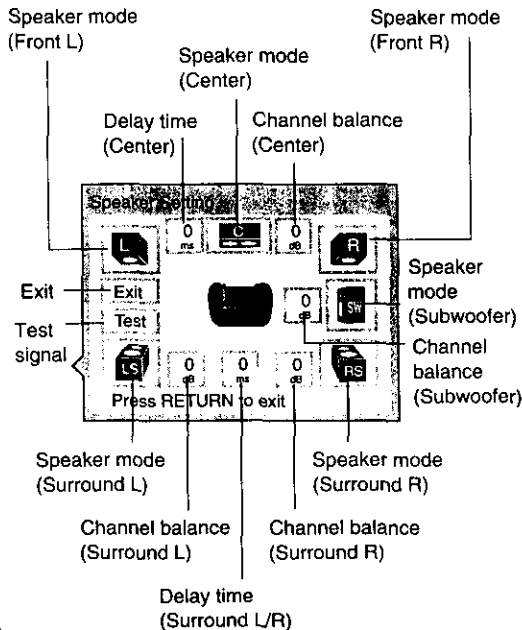
1	Disc Languages	
2	Ratings	Level 8
3	Menu Language	English
4	On-Screen Messages	
5	FL Display	Bright
6	TV Aspect	4:3
7	Digital Audio Output	
8	Speaker Setting	Multi-channel
9	Other Settings	










Press RETURN to exit

Initial settings screen

Settings

Speaker settings screen



Item	Speaker mode																				
	Underlined values are factory settings. "Large" speakers are capable of reproducing sounds below 100 Hz. "Small" speakers are other types.																				
	<table border="0"> <tr> <td><u>Front speakers (L/R)</u></td> <td>Example (LS):</td> </tr> <tr> <td><u>Large/Small</u></td> <td></td> </tr> <tr> <td><u>Center speaker</u></td> <td></td> </tr> <tr> <td><u>Large/Small/No</u></td> <td>• Large</td> </tr> <tr> <td><u>Subwoofer</u></td> <td></td> </tr> <tr> <td><u>Yes/No</u></td> <td></td> </tr> <tr> <td><u>Surround speakers (LS/RS)</u></td> <td>• Small</td> </tr> <tr> <td><u>Large/Small/No</u></td> <td></td> </tr> <tr> <td></td> <td>• No</td> </tr> <tr> <td></td> <td></td> </tr> </table>	<u>Front speakers (L/R)</u>	Example (LS):	<u>Large/Small</u>		<u>Center speaker</u>		<u>Large/Small/No</u>	• Large	<u>Subwoofer</u>		<u>Yes/No</u>		<u>Surround speakers (LS/RS)</u>	• Small	<u>Large/Small/No</u>			• No		
<u>Front speakers (L/R)</u>	Example (LS):																				
<u>Large/Small</u>																					
<u>Center speaker</u>																					
<u>Large/Small/No</u>	• Large																				
<u>Subwoofer</u>																					
<u>Yes/No</u>																					
<u>Surround speakers (LS/RS)</u>	• Small																				
<u>Large/Small/No</u>																					
	• No																				
																					
Content																					
	Note																				
	If you set the subwoofer to "No", set both front speakers to "Large".																				

Note

When playing DVD-Audio, the software settings may override any settings you change here. "P.PCM" appears or "D.MIX" disappears on the main unit.

"2-channel"

Select if you have connected the unit to other equipment with a stereo connection cable through the front left and right terminals of the 5.1-channel connection terminals. You will return to the initial settings menu when you press [ENTER].

Summary of initial settings


















This is a list of items you are able to change before playing discs (initial settings).
See the relevant pages for more details. Underlined values are factory settings.

Settings	Item and content		Page	
1. Disc Languages	Audio	<u>English</u> /French/Spanish/Original/Other	26	
	Subtitle	<u>Automatic</u> /English/French/Spanish/Other		
	Menus	<u>English</u> /French/Spanish/Other		
2. Ratings	8 No Limit/7/6/5/4/3/2/1/0 Lock All		28	
3. Menu Language	<u>English</u> /Français/Español		30	
4. On-Screen Messages	On-Screen Messages	<u>On</u> /Off	30	
	Color and Position	<u>Blue</u> /Violet/Green/Blue (slightly lower)/Violet (slightly lower)/ Green (slightly lower)		
5. FL Display	<u>Bright</u> /Dim/Dim During DVD/VCD Play (Auto)/Off During Play (Auto)		30	
6. TV Aspect	<u>4:3</u>	<u>Standard</u> (Direct View TV)/CRT Projector/LCD Projector/ Projection TV	10	
	16:9	<u>Standard</u> (Direct View TV)/CRT Projector/LCD Projector/ Projection TV		
7. Digital Audio Output	PCM Down Conversion	<u>No</u> /Yes	38	
	Dolby Digital	<u>Bitstream</u> /PCM		
	DTS Digital Surround	<u>PCM</u> /Bitstream		
8. Speaker Setting	Multi-channel	Speaker mode	40	
		Delay time		Center speaker: <u>0</u> /1.3/2.6/3.9/5.3 ms Surround speaker: <u>0</u> /5.3/10.6/15.9 ms
		Channel balance		All channel: <u>0</u> /±6 dB
	2-channel			
9. Other Settings	Still Mode	<u>Automatic</u> /Field/Frame	32	
	Audio during Search	<u>On</u> /Off		
	TV Mode (4:3)	<u>Pan & Scan</u> /Letterbox		
	D.Range Compression	<u>Off</u> /On		
	Still Picture Display	<u>Off</u> /On		
	Black Level Control	<u>Lighter</u> /Darker		
	DVD-Video Mode	<u>Off</u> /On		

How different kinds of software appear on your television

DVD software is recorded in a variety of picture formats, and how they appear on your TV depends on the software, the kind of TV you have, and the picture mode your TV is set to.

- Letterbox refers to pictures where black bands appear at the top and bottom.
- Pan and scan refers to pictures where part of the picture is cut off so it fills the whole screen.

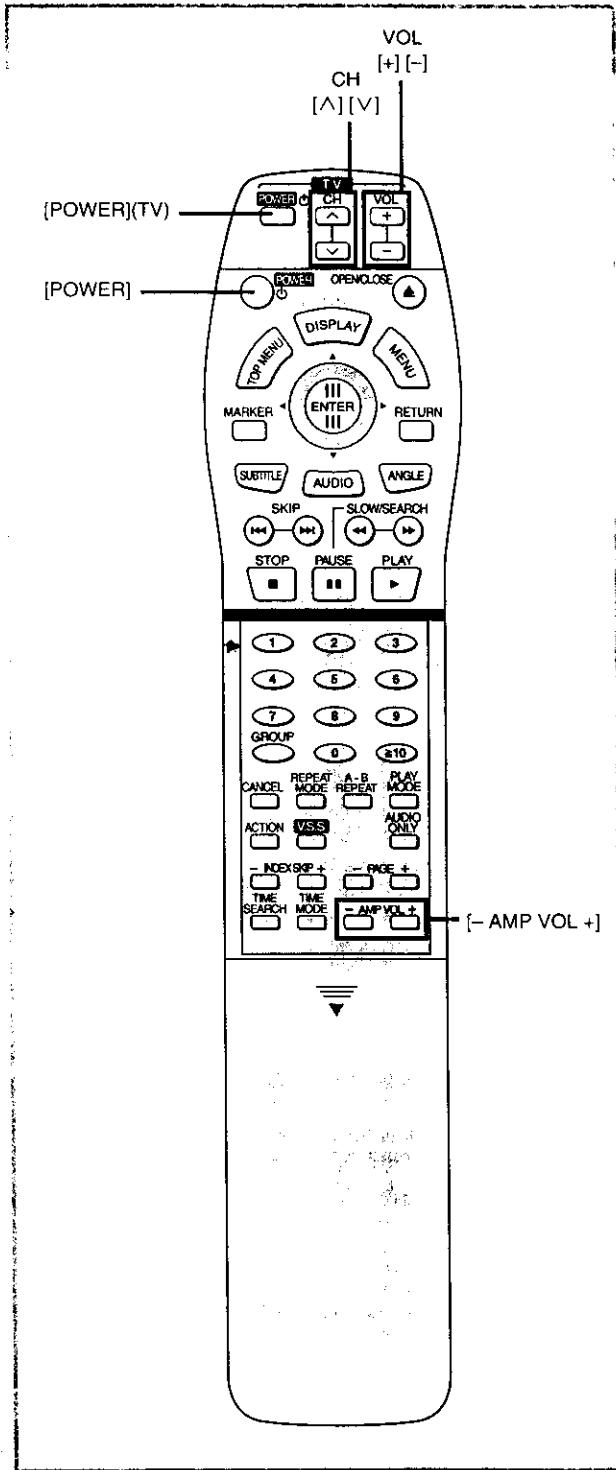
Television and picture mode / Software format	4:3	16:9 full mode	16:9 zoom mode	16:9 auto mode
Wide screen, pan and scan 	Edges cut off 	Full screen 	Top and bottom cut off 	Full screen 
Wide screen, non-pan and scan 	Letterbox 			
Regular (4:3) 	Full screen 	Screen stretched horizontally 	Top and bottom cut off 	Full screen with black bands on the left and right 
Regular (4:3) letterbox 	Letterbox 	Letterbox with screen stretched horizontally 	Full screen 	Letterbox with extremities of picture stretched 

- The names given to the television picture modes depend on the make of your television. There may also be slight differences in how the pictures appear on the screen. Refer to your television's operating instructions for details.

Language code list

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

Operating your television or amplifier



You can use the remote control to operate your television and to control the volume of amplifiers manufactured by Technics.

Television operation

First enter the code for your television.

Press and hold the [POWER] button for this unit and enter the two-digit code.

Refer to this chart for the code for your television.

Code	Manufacturer	Code	Manufacturer
00	GE (OLD)	08	TOSHIBA 2
01	RCA	09	SAMSUNG
02	ZENITH	10	JVC
03	SONY	11	PANASONIC 1
04	MAGNAVOX	12	MITSUBISHI
05	TOSHIBA 1/SANYO	13	SHARP
06	CURTIS MATHES	14	HITACHI
07	SEARS	15	PANASONIC 2

- If there is more than one code for the manufacturer of your television, try each code until you find the correct one.
- You must repeat this procedure after you change the remote control's batteries.

To turn the television on and off

Press [POWER] (TV).

To change channels

Press [^] or [V].

To control the volume

Press [-] to decrease the volume or [+] to increase the volume.

To control the volume of a Technics Amplifier

Press [AMP VOL (- or +)].

-: decreases volume

+: increases volume

Note

There are some televisions and amplifiers that cannot be operated with this remote control.

Video

Frame

Frames are the still pictures that go together to make a moving picture.

There are about thirty frames shown each second.

Field

One frame is made up of two fields.

A regular television shows these fields one after the other to create frames.

Frame still and field still

A still is shown when you pause a moving picture.

A frame still is made up of two alternating fields, so the picture may appear blurred, but overall quality is high.

A field still is not blurred, but it has only half the information of a frame still so picture quality is lower.

I/P/B

MPEG 2, the video compression standard adopted for use with DVD, codes frames using these three picture types.

I: Intra coded picture (I-picture)

This is the standard picture and is a complete picture in itself. This means it has the best picture quality and is the best to use when adjusting the picture.

P: Predictive coded picture (P-picture)

This picture is calculated based on past I and P-pictures.

B: Bidirectionally-predictive coded picture (B-picture)

This picture is calculated by comparing past and future I and P-pictures so it has the lowest volume of information.

Digital audio

Decoder

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

Dolby Digital

This is a method of coding digital signals developed by Dolby Laboratories. The signals are highly compressed, enabling a large amount of information to be recorded on one disc.

Digital Theater Systems (DTS) Digital Surround

This is a method of coding digital signals developed by Digital Theater Systems. The signals are compressed at a low ratio to maintain sound quality.

Sampling rate

This is the number of samples of sound taken per second during conversion to a digital signal. Sampling frequency is expressed in kilohertz (kHz). A high sampling frequency results in a sound close to the original when played back.

Linear PCM (pulse code modulation)

PCM is the usual digital method used for music CDs. DVDs have a greater volume so they use linear PCM, which has a higher sampling rate.

The compressed version of this is called Packed PCM.

Bitstream

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

Other

Track

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

Index

Indexes are included on some DVD-Audio to further divide tracks into smaller sections.

Chapter

This is the smallest division on DVD-Video and is roughly equivalent to a track.

Group

The tracks on DVD-Audio are divided up into groups. The method of grouping depends on the disc.

Title

This is the largest division on DVD-Video.

Playback control (PBC)

This method of controlling disc play is included on version 2.0 Video CDs. You are able to interact with the disc through menus.

Troubleshooting guide

Before requesting service for this unit, check the chart below for a possible cause of the problem you are experiencing. Some simple checks or a minor adjustment on your part may eliminate the problem and restore proper operation.

If you are in doubt about some of the check points, or if the remedies indicated in the chart do not solve the problem, refer to the directory of Authorized Service Centers (enclosed with this unit) to locate a convenient service center, or consult your dealer for instructions.

For detailed instructions, contact an authorized servicenter in the U.S.A. and Panasonic Canada Inc. Customer Care Centre in Canada. In the U.S.A., call 1-800-211-7262, e-mail consumerproducts@panasonic.com, or visit www.panasonic.com in Canada, call 1-800-561-5505 or visit www.panasonic.ca

Symptom	Remedy	Page
Unit turns off automatically.	<ul style="list-style-type: none"> The unit switches to standby after it has been stopped for about thirty minutes to conserve power. Press [POWER] again. 	–
Play fails to start or stops soon after starting.	<ul style="list-style-type: none"> Condensation may have formed inside the player. Wait for one hour for it to clear. This unit cannot play discs other than those specified. 	–
No video or size of picture is unusual.	<ul style="list-style-type: none"> Check the settings on the television. If "PAL Disc Audio Only" is on the unit's display, then you have loaded a PAL system DVD-Audio and only the audio portion of the disc can be played. 	8–10 2
No audio or unusual audio.	<ul style="list-style-type: none"> If you are playing DVD-Audio with multiple channels and "D.MIX" does not light on the unit's display, the unit cannot play the audio correctly unless you have connected the speakers specified by the software. Turn V.S.S. off or select the appropriate V.S.S. mode. "Error Track" on the unit's display indicates that the track playing has been recorded with a nonstandard system. Due to the specifications on some types of televisions, both video and audio may be cut off when you turn the AUDIO ONLY feature on. 	34 16 – –
The unit does not respond when buttons are pressed.	<ul style="list-style-type: none"> Some discs prohibit certain operations. If there is no response at all, the unit may have been affected by lightning or static electricity. Try turning the unit off and on again. 	–
Messages do not appear on the television.	<ul style="list-style-type: none"> Go to the initial settings menu and turn the On-Screen Messages on. 	30
GUI icons are cut off at the top of the screen.	<ul style="list-style-type: none"> Go to the initial settings menu and change the position of the GUI icons. 	30
The unit's display is dim.	<ul style="list-style-type: none"> Go to the initial settings menu and change the display settings. 	30
The picture is disrupted during fast forward and reverse, and briefly when AUDIO ONLY is canceled.	<ul style="list-style-type: none"> Some disruption will occur. This is not a malfunction. 	–
There is noise from the tuner or disturbance on the TV screen.	<ul style="list-style-type: none"> Use the unit further away from the tuner or TV. If the tuner or TV's antenna is an indoor type, use an outdoor one. 	–
The remote control does not work.	<ul style="list-style-type: none"> Check the batteries are inserted correctly. Aim the remote control at the main unit and remove obstacles between them. If the remote control doesn't operate the television, try changing the code. This remote control cannot operate some televisions. 	7 44
Play does not start after selecting a title.	<ul style="list-style-type: none"> Some titles cannot be played if you have set a ratings level. 	28
Subtitles not shown.	<ul style="list-style-type: none"> Subtitles appear only if they are recorded on the DVD. Turn the subtitles on. 	18
The soundtrack or subtitle language cannot be changed.	<ul style="list-style-type: none"> Languages can only be selected if they are recorded on the DVD. Some DVDs require you to change the languages through menus. Read the instructions that came with the DVD. 	26
Angles cannot be changed.	<ul style="list-style-type: none"> There may be parts of multi-angle DVDs where different angles are not recorded. "Ⓜ" lights up on the unit's display to indicate this feature is available. An indication may also appear on the television. 	18
Languages you selected in the initial settings menu are not used for the soundtrack and subtitles.	<ul style="list-style-type: none"> The selected languages are not recorded on the DVD. 	–
You have forgotten your ratings password.	<ul style="list-style-type: none"> Reset the unit to its original factory settings. Do the following to restore the unit to the condition it was in at the time of shipment. This clears the ratings settings. Press [◀◀ / ◀◀], [], and [▲] (OPEN/CLOSE) on the main unit at the same time for about 3 seconds until the message "Initialized" disappears from the television screen. 	–

Self-diagnosis display function

When an error or trouble is detected during operation, a service number appears in the FL display.
When a service number appears, check out the details given below.

Service number	Player status	Remedy
Check Disc	Disc is dirty.	• Wipe the disc clean.
H□□ □□ stands for a number.	Trouble may have occurred. The number following "H" differs depending on the status of the player.	• Press [POWER] to set the player to the standby mode and then back to ON. Alternatively, press [POWER] to set the player to the standby mode, disconnect the AC plug, and then reconnect it.

- If the service number fails to be cleared even when the remedial action is taken, ask a service technician to repair the player.

Listening caution



Selecting fine audio equipment such as the unit you've just purchased is only the start of your musical enjoyment. Now it's time to consider how you can maximize the fun and excitement your equipment offers. This manufacturer and the Electronic Industries Association's Consumer Electronics Group want you to get the most out of your equipment by playing it at a safe level. One that lets the sound come through loud and clear without annoying blaring or distortion-and, most importantly, without affecting your sensitive hearing.

We recommend you to avoid prolonged exposure to excessive noise.

Sound can be deceiving. Over time your hearing "comfort level" adapts to higher volumes of sound. So what sounds "normal" can actually be loud and harmful to your hearing. Guard against this by setting your equipment at a safe level **BEFORE** your hearing adapts.

To establish a safe level:

- Start your volume control at a low setting.
- Slowly increase the sound until you can hear it comfortably and clearly, and without distortion.

Once you have established a comfortable sound level:

- Set the dial and leave it there.

Taking a minute to do this now will help to prevent hearing damage or loss in the future. After all, we want you listening for a lifetime.

Maintenance

To clean this unit, wipe with a soft, dry cloth.

If the surfaces are extremely dirty, use a soft cloth dipped in a soap-and-water solution or a weak detergent solution.

- Never use alcohol, paint thinner or benzene to clean this unit.
- Before using chemically treated cloth, read the instructions that came with the cloth carefully.

Product service

Do not attempt to remove the cover(s) or repair the unit yourself. Refer servicing to qualified personnel only.

Product information

For product service, product information or assistance in product operation, refer to the servicenter directory.

Specifications

POWER

requirements: AC 120 V, 60 Hz
POWER consumption: 22 W
Signal system: NTSC
Mass: 8.6 lb (3.9 kg)
Dimensions: 16 15/16"(W)×10 13/16"(D)×4 15/16"(H)
[430 (W)×275 (D)×99 (H) mm]
(excluding protrusions)

Operating temperature range:
+41 to +95°F (+5 to +35°C)

Operating humidity range:
5 to 90% RH (no condensation)

Discs played:
DVD disc
5" (12 cm) single-sided, single-layer
5" (12 cm) single-sided, dual-layer
5" (12 cm) double-sided, single-layer
3" (8 cm) single-sided, single-layer
3" (8 cm) single-sided, dual-layer
3" (8 cm) double-sided, single-layer

Compact disc (CD- DA, Video CD)
5" (12 cm) disc
3" (8 cm) disc

Component video output:
Output connector: Pin jack (Y: green, Pb: blue, Pr: red)

S video output:
Y output level: 1 Vp-p (NTSC/75 Ω)
C output level: 0.286 Vp-p (NTSC/75 Ω)
Output connector: S terminal
Number of connectors: 2 systems

Video output:
Output level: 1 Vp-p (75 Ω)
Output connector: Pin jack
Number of connectors: 2 systems

Audio output:

Output level (1 kHz): 200 mVrms (10 kΩ, -20 dB)
Output connector: Pin jack
Number of connectors: 2 systems (2ch mixed output)
1 system (6ch discrete output)

Audio signal output characteristics:

Frequency response:
• DVD-Audio: 2 Hz-88 kHz
• DVD-Video: 2 Hz-44 kHz
• CD: 2 Hz-20 kHz

S/N:
• CD: 115 dB (EIAJ)

Dynamic range:
• DVD (LPCM): 106 dB
• CD: 100 dB (EIAJ)

Total harmonic distortion:
• DVD (LPCM): 0.0012%
• CD: 0.0017% (EIAJ)

Digital audio output:

Optical digital output: Optical terminal
Coaxial digital output: Pin jack

PHONES jack:

Output connector: 6.3 mm stereo jack
Output level: 180 mVrms (32 Ω, -20 dB)

Pickup:

Wave length: 665 nm
Laser power: CLASS II

Power consumption in standby mode: 1.5 W


Specifications are subject to change without notice.
Mass and dimensions are approximate.

Apparatus Claims of U.S. Patent Nos. 4,631,603, 4,577,216, and 4,819,098, licensed for limited viewing uses only.

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Panasonic Consumer Electronics
Company, Division of Matsushita
Electric Corporation of America
One Panasonic Way Secaucus,
New Jersey 07094
<http://www.panasonic.com>

Panasonic Sales Company,
Division of Matsushita Electric of
Puerto Rico, Inc. ("PSC")
Ave. 65 de Infantería, Km. 9.5
San Gabriel Industrial Park, Carolina,
Puerto Rico 00985

Panasonic Canada Inc. 
5770 Ambler Drive
Mississauga, Ontario
L4W 2T3
www.panasonic.ca