Panasonic

DVD Player

DVD-A100EC

Operating Instructions



Before attempting to connect, operate or adjust this product, please read these instructions completely. Please save this manual.

VQT6726

Safety information

Note:

This unit can be used only where the power supply is AC 220-240 V, 50 Hz. It cannot be used elsewhere.

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CAUTION!

DVD PLAYER IS A CLASS 1 LASER PRODUCT. HOWEVER THIS PLAYER USES A VISIBLE LASER BEAM WHICH COULD CAUSE HAZARDOUS RADIATION EXPOSURE IF DIRECTED. BE SURE TO OPERATE THE PLAYER CORRECTLY AS INSTRUCTED.

WHEN THIS PLAYER IS PLUGGED TO THE WALL OUTLET, DO NOT PLACE YOUR EYES CLOSE TO THE OPENING OF THE DISC TRAY AND OTHER OPENINGS TO LOOK INTO THE INSIDE OF THIS PLAYER.

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!

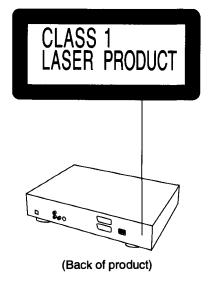
TO REDUCE THE RISK OF FIRE OR ELECTRIC SHOCK, DO NOT EXPOSE THIS EQUIPMENT TO RAIN OR MOISTURE.

TO REDUCE THE RISK OF FIRE OR ELECTRIC SHOCK, AND ANNOYING INTERFERENCE, USE THE RECOMMENDED ACCESSORIES ONLY.

THIS DEVICE IS INTENDED FOR CONTINUOUS OPERATION!

LASER RADIATION WHEN OPEN. Do not stare into beam.
 RAYONNEMENT LASER EN CAS D'OUVERTURE. Ne pas regarder dans le faisceau.
LASERSTRAHLUNG, WENN ABDECKUNG GEÔFFNET. Nicht in den strahl blicken.
I ASERSTRÅLING VED ÅBNING. Se ikke ind i strålen.
LASERSTRÅLING NÅR DEKSEL ÅPNES. Stirr ikke inn i strålen.
LASERSTRÅLNING NÅR DENNA DEL ÅR ÖPPNAD. Stirra ej in i strålen.
AVATTAESSA OLET ALITIINA LASERSÄTEILYLLE. Älä tuijota säteeseen.
ここを開くとレーザー光がでます。 レーザー光をのぞき込まないでください。

(Inside of product) (Intérieur du produit) (Im Inneren des Gerätes) (Indersiden at apparatet) (Produktets Innside) (Apparatens insida) (Tuotteen sisällä) (製品の内部)



Dear Customers

May we take this opportunity to thank you for purchasing this Panasonic DVD player.

We strongly suggest that you carefully study the Operating Instructions before attempting to operate the unit and that you note the listed precautions.

DVD Features

A completely new dimension in video entertainment

- Subtitles may be displayed in one of a maximum of 32 languages*.
- •The audio soundtrack can be heard in up to 8 languages*.
- •The multi-angle function allows you to choose the viewing angle of scenes which were shot from a number of different angles. (Limited to DVD discs recorded with multiple camera angles.)

*The number of the languages recorded is dependent on the software.

High quality digital audio

• With the linear PCM sound of a 48 kHz/16 bit through 96 kHz/20 bit, audio quality exceeding that of audio CDs becomes possible. Also adaptable to surround sound through Dolby Digital Surround audio.

Many convenient features

- Direct access of favorite scenes (title/chapter search)
- Programming of up to 3 scenes in memory (markers)
- •Parental lock settings to prevent play of discs unsuitable for some audiences
- Compatible with PAL DVD discs (video CDs) and NTSC DVD discs (video CDs)
- This DVD player can play discs in either PAL or NTSC format.

However, the DVD player must be connected to a PAL TV which is capable of receiving PAL 525/60 system to play both PAL DVD discs (video CDs) and NTSC DVD discs (video CDs).

Compatible with video CDs and audio CDs as well as DVD

Disc formats supported by this player

The unit can play back discs bearing any of the following marks:



DVD

[8 cm disc/12 cm disc]



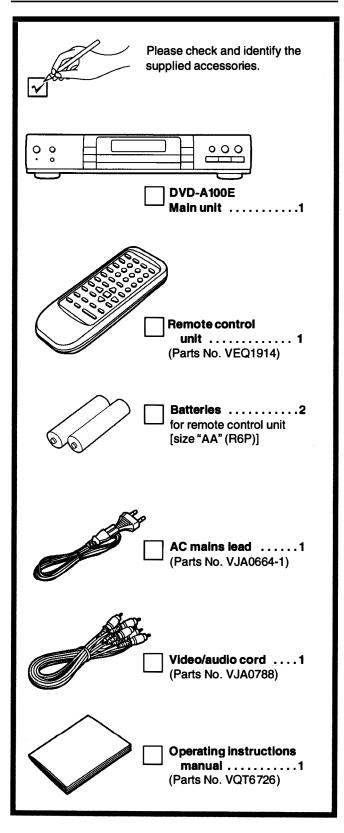
Video CDs [8 cm disc/12 cm disc]



Audio CDs [8 cm disc/12 cm disc]

DVD-A100EC Contents

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Initial Settings:

Initial settings
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DVD

Video CD/Audio CD

Precautions

Please read these precautions before operating this unit.

Mains lead protection

To avoid any malfunctions of the unit, and to protect against electric shock, fire or personal injury, please observe the following.

•Hold the plug firmly when connecting or disconnecting the AC mains lead.

•Keep the AC mains lead away from heating appliances.

- •Never put any heavy object on the AC mains lead.
- Do not attempt to repair or reconstruct the AC mains lead in any way.

Placement

Avoid placing the unit in areas of:

direct sunlight or heating radiators, or closed automobiles.
high temperature (over 35°C) or high humidity (over 90%)
much dust

As the internal parts may be seriously damaged.

Nonuse Periods

When the unit is not being used, switch the unit to the standby mode.

When left unused for a long period of time, the unit should be unplugged from the household AC outlet.

■ No fingers or other objects inside

- Touching internal parts of this unit is dangerous, and may cause serious damage to the unit. Do not attempt to disassemble the unit.
- •Do not put any foreign object on the disc tray.

■ Keep away from water/magnet.

Keep the unit away from flower vases, tubs, sinks, etc. If liquids are spilled into the unit, serious damage could occur.
Never bring a magnet or magnetized object near the unit.

Stacking

Place the unit in a horizontal position, and do not place anything heavy on it.

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.

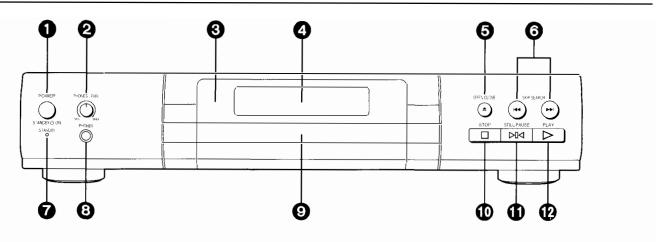
•when the unit is suddenly moved from a cold environment to a warm one.

If moisture forms inside this unit, it may not operate properly. In this case, turn on the power and wait about one hour for the moisture to evaporate.

If there is noise Interference on the TV while a broadcast is being received

Depending on the reception condition of the TV, interference may appear on the TV monitor while you watch a TV broadcast and the unit is left on. This is not a malfunction of the unit or the TV. To watch a TV broadcast, switch the unit to the standby mode.

Control reference guide



Main unit

Page

● POWER, STANDBY ⁽¹⁾ /ON button
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.
PHONES LEVEL control
Remote control signal sensor
O Display window
③ OPEN/CLOSE button

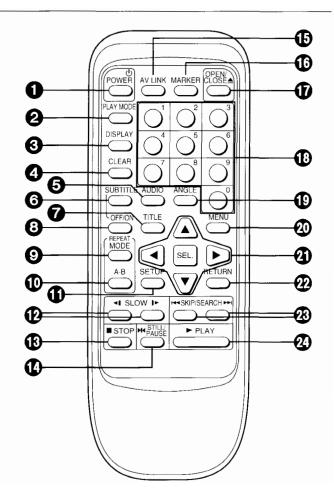
STANDBY indicator

Page

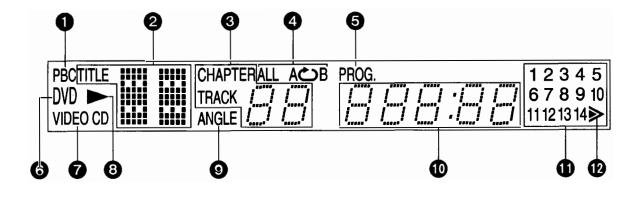
Disc tray
 Disc tray
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SUBTITLE OFF/ON button	
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A-B REPEAT button	
SETUP button	
SLOW buttons	
STOP button	
STILL/PAUSE button	
AV LINK button	
MARKER button	
OPEN/CLOSE button	
Number buttons	
ANGLE button	
MENU button	
Cursor buttons/SEL. button	
RETURN button	
SKIP/SEARCH buttons	
PLAY button	14, 27



Front panel display



The figure above shows the front panel with all the displays on.

Illuminates during menu play

- [Video CD with playback control only] (see page 27) Indicates the title number [DVD only]
 - 00

: Illuminates during still picture (pause) mode (see pages 17 and 30)

 Indicates the chapter number* [DVD] Indicates the track number* [Video CD/Audio CD]
 Illuminates during repeat play

(see pages 21 and 32)



Repeat of title/chapter/track



Repeat of entire disc contents (disc repeat)

ACB

Repeat of a section between two specific points (A-B repeat)

- Illuminates during program play [Video CD/Audio CD] (see page 33)
 Illuminates when a DVD is loaded
- Illuminates when a video CD or an audio CD is loaded
- Illuminates when a video CD of all additional is loaded.
 Illuminates during playback
- Flashes on and off while the RESUME function is ON (see pages 16 and 29)

- Illuminates when it is possible to switch the angle
 [DVD only] (see page 25)
 Indicates the total playing time on a disc
- Indicates the total playing time on a disc [Video CD/Audio CD] Indicates the elapsed playing time from the start of the title/track* Messages OPEN: The disc trav is open

OPEN:	r në disc tray is opën.
CLOSE:	The disc tray is being closed (retracted).
NO DISC:	No disc is loaded.
NO PLAY:	Playback is impossible.
	•DVDs for which playback is prohibited by
	the setup "RATING" (see page 35)
	•DVDs with a Locale No. other than #2
	(see page 42)
Indicates the	list of chapter numbers [DVD]
Indicates the	list of track numbers
[Video CD/Aud	dio CD]
•When playba	ick of a chapter/track is finished, its
correspondin	g number is turned off.
😰 🍉: İllumin	ates for a disc containing 15 or more

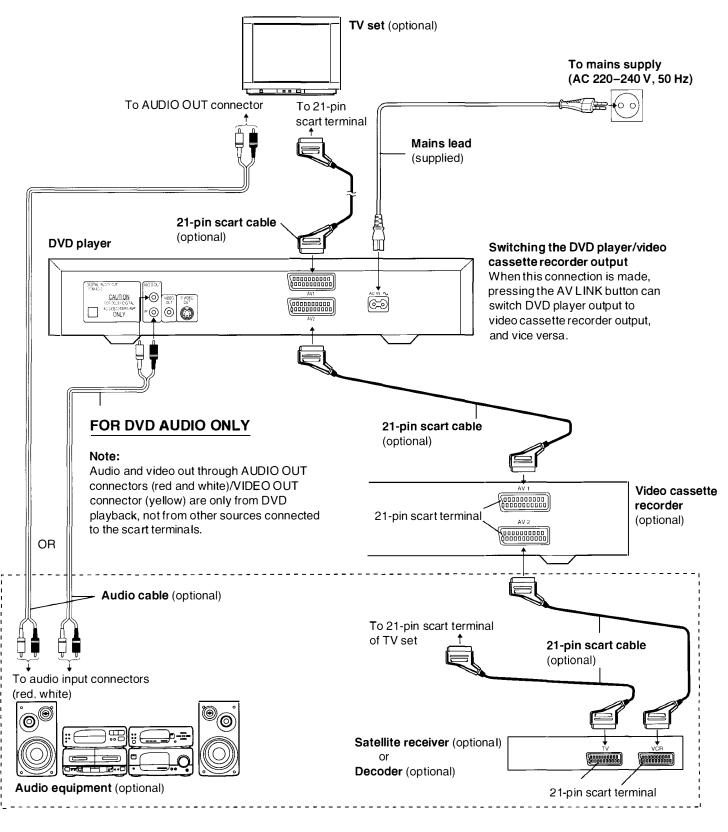
Illuminates for a disc containing 15 or more chapters/tracks

*In the case of some DVDs, the chapter numbers and elapsed playing time may not illuminate on the display. Also, the track numbers and elapsed playing time do not illuminate during video CD menu play (see page 27).

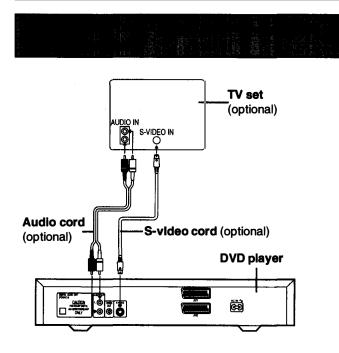
Basic connection

- Set the power switches on the DVD player and equipments to be connected to OFF (STANDBY mode) before connecting.
- Do not block ventilation holes of any of the equipments and arrange them so that air can circulate freely.
- Read through the instructions for the equipments to be connected.
- •Be sure that the colors of the connectors and plugs match up when connecting the cord.

Connecting to a TV set and a video cassette recorder with 21-pin scart terminal



Optional video connections

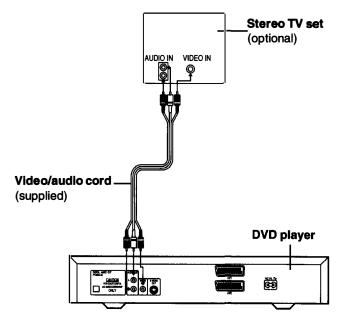


S-video output connector

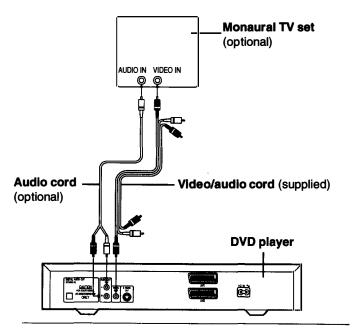
The S (separate) video output connector separates the color (C) and luminance (Y) signals before transmitting them to the TV set in order to achieve a sharper picture.

Use the S-video cord (optional) when connecting the player to a TV set equipped with an S-video input connector for the best picture clarity possible.

■ If the TV set is stereo



If the TV set is monaural

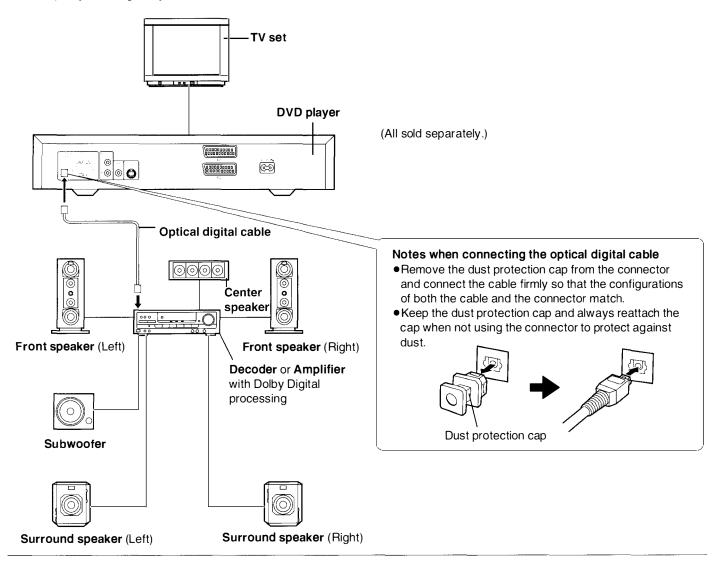


Note:

Audio out through AUDIO OUT connector is only from DVD player, not from other sources connected to the scart terminals.

Connecting to a decoder or amplifier with Dolby Digital (AC-3) processing

When playing discs displaying the Dolby Digital mark, the Dolby Digital bit stream is output by using a decoder or amplifier (not supplied) equipped with a Dolby Digital processor. When playing discs provided with the Dolby Digital or AC-3 logo, you can enjoy theater-quality audio right in your own home.



Caution for the optical digital audio output connector:

- Do not connect an amplifier (with an optical digital input connector) which does not contain the Dolby Digital (AC-3) decoder.
- •Otherwise any attempt to play DVDs may cause such a high level of noise that it may be harmful to your ears and damage your speakers.
- Video CDs and audio CDs can be played as they would normally be played.

Optional audio connections

Concerning the digital audio output

Depending on the disc format, either Dolby Digital (AC-3) sound or Linear PCM sound will be output from the unit's optical digital audio output connector (PCM/AC-3) as shown in the table below.

Disc	Sound recording format	Optical digital audio output from connector
DVD	Dolby Digital	Dolby Digital bit stream
	Linear PCM	Linear PCM (48 kHz sampling only)
Audio CD	Linear PCM	Linear PCM (44.1 kHz sampling)
Video CD	MPEG	Linear PCM (44.1 kHz sampling)

Note:

•For DVDs, sound having 96 kHz sampling is not output from the unit's optical digital audio output connector.

For your reference:

- •Dolby Digital (AC-3) is a digital sound compression technique developed by the Dolby Laboratories Licensing Corporation.
- Supporting 5.1-channel surround sound, as well as stereo (2-channel) sound, this technique enables a large quantity of sound data to be efficiently recorded on a disc.
- •Linear PCM is a signal recording format used in audio CDs. While audio CDs are recorded in 44.1 kHz/16 bit, DVDs are recorded in 48 kHz/16 bit up to 96 kHz/24 bit.
- If you have a Dolby Pro Logic Surround decoder, you will obtain the full benefit of Pro Logic from the same DVD movies that provide full 5.1-channel Dolby Digital soundtracks, as well as from titles with the Dolby Surround mark.

Manufactured under license from Dolby Laboratories Licensing Corporation. "Dolby", "AC-3" and the double-D symbol are trademarks of Dolby Laboratories Licensing Corporation. Copyright 1992 Dolby Laboratories, Inc. All rights reserved.

Battery installation

Insert the batteries while observing the correct (+) and (-) polarities as illustrated at right.

Service life of batteries

- The batteries normally last for about one year although this depends on how often and for what operations the remote control is used.
- If the remote control unit fails to work even when it is operated near the player, replace the batteries.
- Use size "AA", R6P batteries.

Notes:

- Do not use rechargeable (Ni-Cd) batteries.
- •Do not attempt to recharge or short-circuit the batteries.
- Do not drop, step on or otherwise impact the remote control unit. This may damage the parts or lead to malfunctioning.
- •Do not mix old and new batteries.
- If the remote control unit is not going to be used for a long time, remove the batteries. Otherwise, electrolyte may leak which may lead not only to malfunctioning but also to burns if contact is made with the electrolyte.
- •Wipe away any electrolyte leaking inside the remote control unit, and install new batteries.
- If any electrolyte should come into contact with parts of your body, wash it off thoroughly with water.

Remote control operation range 🖸

Point the remote control unit no more than about 7 m from the remote control sensor and within about 60° of the front of the unit.

• The operating distance may vary according to the brightness of the room.

Notes:

- Do not point bright lights at the remote control sensor.
- Do not place objects between the remote control unit and the remote control sensor.
- Do not use this remote control unit while simultaneously operating the remote control unit of any other equipment.

Connecting headphones B

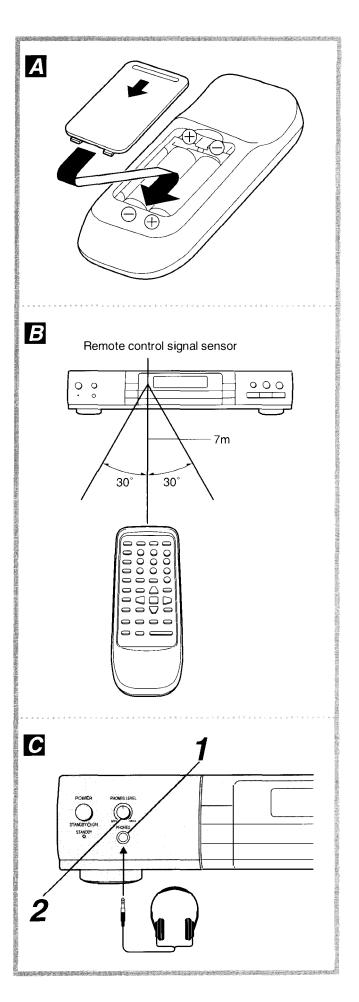
1 Connect the headphones.

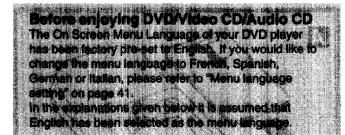
•Headphones with a large stereo plug can be connected.

$m{2}$ Adjust the volume.

Caution:

Avoid listening to sound at levels which may be harmful to your ears.



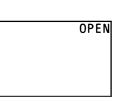


DVD playback

Preparations

- •Switch the TV ON and select the Audio/Video (AV) position, e.g. AV1, AV2, which has been connected to the DVD player.
- •Switch on the stereo system's power if the player has been connected to a stereo system.

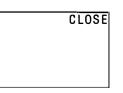
- **1** Switch on the power.
- **2** Press OPEN/CLOSE to open the disc tray.



$\boldsymbol{3}$ Place a disc onto the tray.

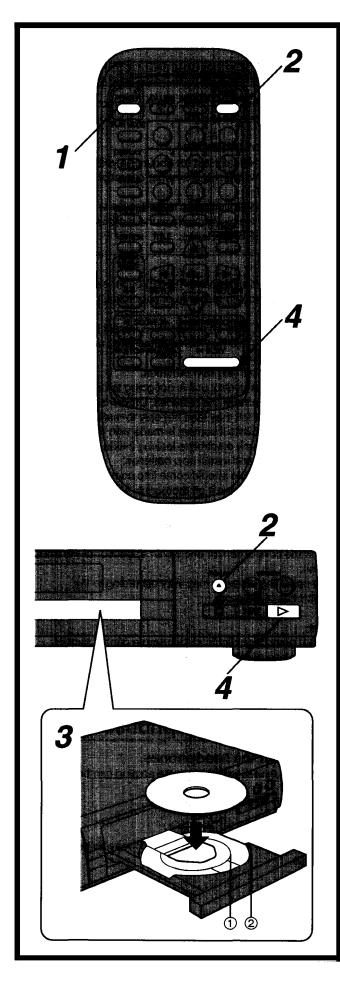
Hold the disc without touching either of its surfaces, position it with the printed title side facing up, align it with the guides, and place it in its proper position.
(1) 8 cm disc
(2) 12 cm disc

4 Press PLAY.



- The disc tray is automatically closed and play commences if the disc does not have any menus recorded on it.
- If the disc has one or more titles recorded on it, a menu screen will appear on the TV monitor after a few moments.

(Continued on the next page)



DVD playback

5 Press </▶/▲/▼ or the number button(s) to select the preferred title.



6 Press SEL.



Play of the selected item now commences.

Stopping play and returning to the menu screen

Press TITLE.

•Play is suspended, and the menu screen is displayed.

After operation

When the unit is not in use, remove the disc and press POWER to switch the power to the standby mode. The power will automatically be switched to the standby mode after 30 minutes or so have elapsed in the stop mode. (Auto power-off function)

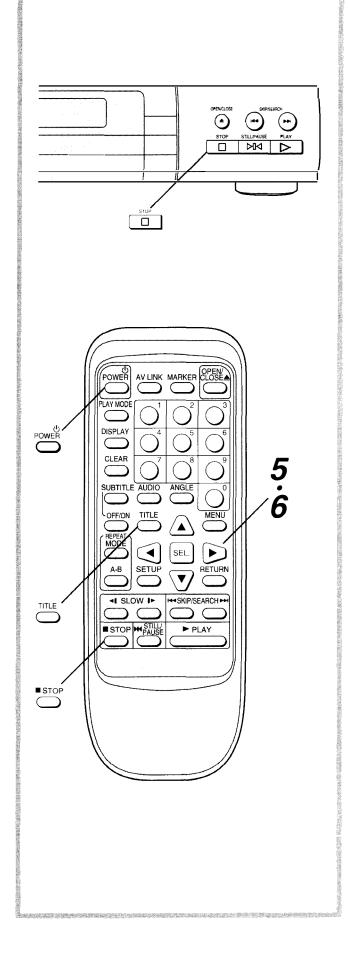
Note:

- The disc continues to rotate while the menu is displayed even after the player has finished playing a particular item. When no further selections are to be played, be sure to press the STOP button to clear the menu display.
- If the disc is placed in upside down (and it is a single sided disc), the DVD display will indicate "NO DISC".
- •When the NTSC DVD disc is played, the playback picture may roll up or down on some TVs; adjust this using the V-HOLD control on the TV. TVs not equipped with a V-HOLD control cannot correct this condition. The playback picture may shrink vertically and black bars may appear both on the top and bottom of the screen, or the picture may be in black and white. This does not indicate a malfunction.

For your reference:

•When "!" appears while a button is being operated, it means that the corresponding operation is prohibited by the player.

When " ${\it !!}$ " appears, it means the operation is prohibited by the disc.



DVD playback

Press STOP.

For your convenience:

•When play is stopped, the unit records the point where STOP was pressed (**RESUME function**). Press PLAY again, and play will resume from this point. When the tray is opened or STOP is pressed again, the RESUME function will be cleared.

The RESUME function works only with discs for which the elapsed playing time appears on the unit's display during playback.

This feature will not be cleared when the power is switched to the STANDBY mode and then returned to ON.

Hold | SKIP/SEARCH or SKIP/SEARCH b) down during play.

Forward direction

Reverse direction

- •The disc is rapidly advanced (or reversed) while the button is held down.
- •Normal play is resumed when the button is released.

For your reference:

•The speed of advance (or reverse) is relatively slow at first and becomes faster after about 5 seconds.

Skipping ahead

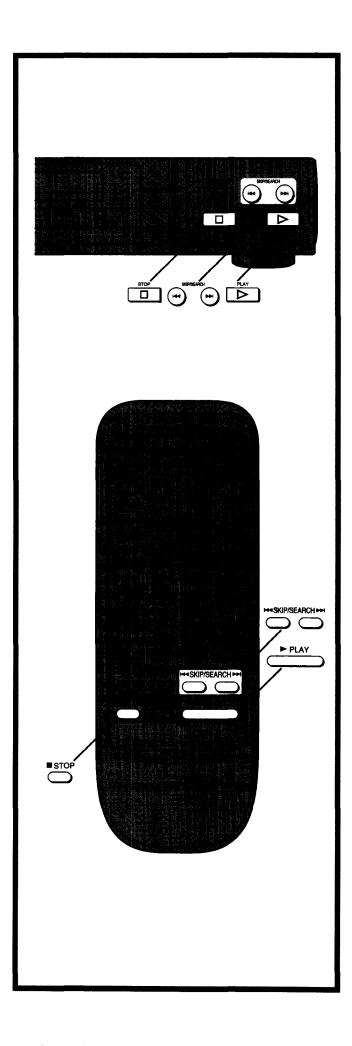
Press SKIP/SEARCH ►► during play.

A chapter is skipped each time the button is pressed.

Skipping back

Press | SKIP/SEARCH during play.

When the button is pressed once midway through a chapter, play returns to the start of that chapter. When it is pressed again, a chapter is skipped each time the button is pressed.



Still picture

Press STILL/PAUSE during play.

STILL

To return to normal play

Press PLAY.



Press STILL/PAUSE in the still picture mode.

The disc is advanced by one frame each time the button is pressed.

To return to normal play

Press PLAY.

Slow-motion play

Press **◄I** SLOW or SLOW I► in the play mode or still picture mode.

<I SLOW I► Forward direction

Reverse direction

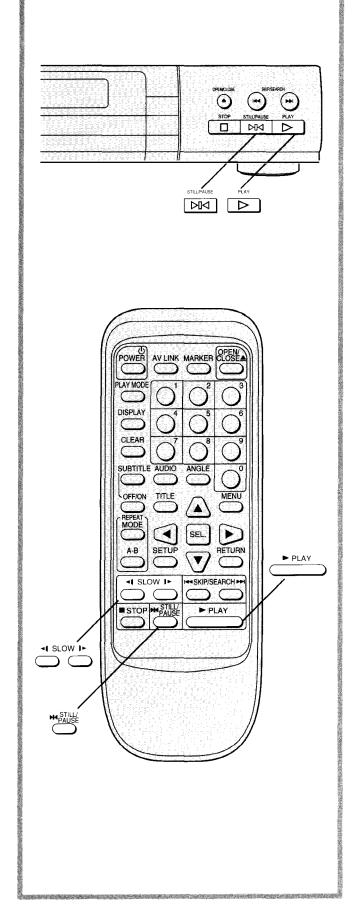
To return to the still picture mode Press STILL/PAUSE.

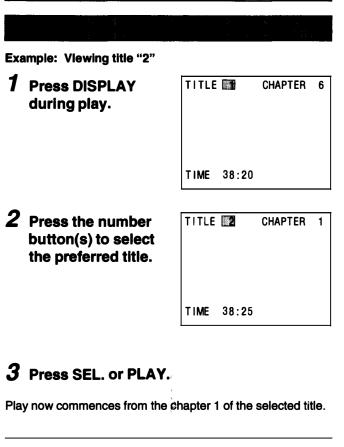
To return to normal play Press PLAY.

Press PLAT.

For your reference:

•When **I** SLOW is pressed during play, slow-motion playback in reverse direction does not provide as clear a picture as forward direction, and the image may appear to "jump".



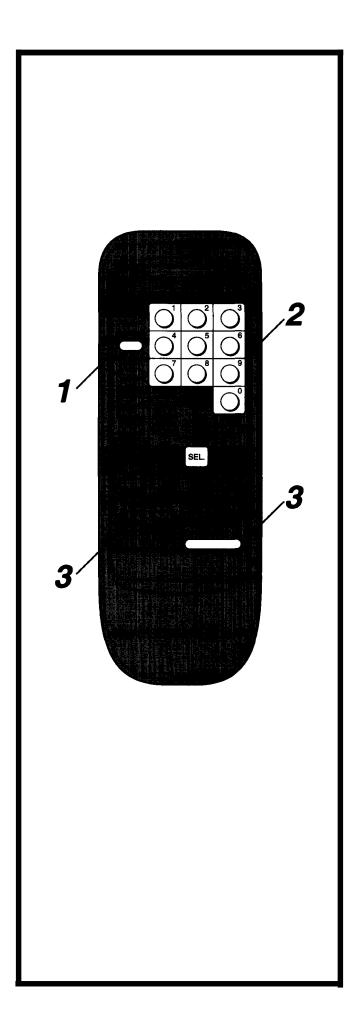


Selecting a double-digit number Example: 10

Press "1" and then "0".

For your reference:

•"NUMBER OUT OF RANGE" appears on the TV monitor if the number selected does not exist on the disc.



Selecting scenes by c	hapte	ər nur	nber
Example: Viewing chapter "1"			
1 Press DISPLAY during play.	TITLE	2	CHAPTER 6
	TIME	38:20	
2 Press ► to move the cursor to the chapter number.	TITLE	2	CHAPTER 6
	TIME	38:30	
3 Press the number button(s) to select the preferred chapter.	TITLE	2	CHAPTER 1
	TIME	38:30	

4 Press SEL. or PLAY.

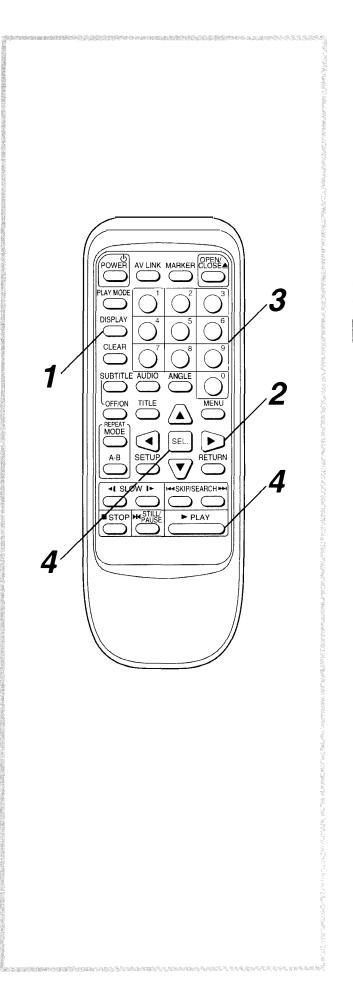
Play now commences from the selected chapter.

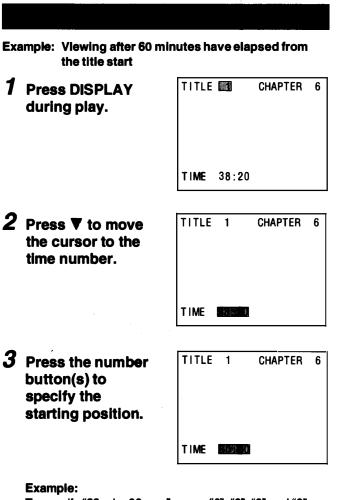
Selecting a double-digit number

Example: 10 Press "1" and then "0".

For your reference:

• "NUMBER OUT OF RANGE" appears on the TV monitor if the number selected does not exist on the disc.





To specify "60 min. 00 sec.", press "6", "0", "0" and "0".

4 Press SEL. or PLAY.

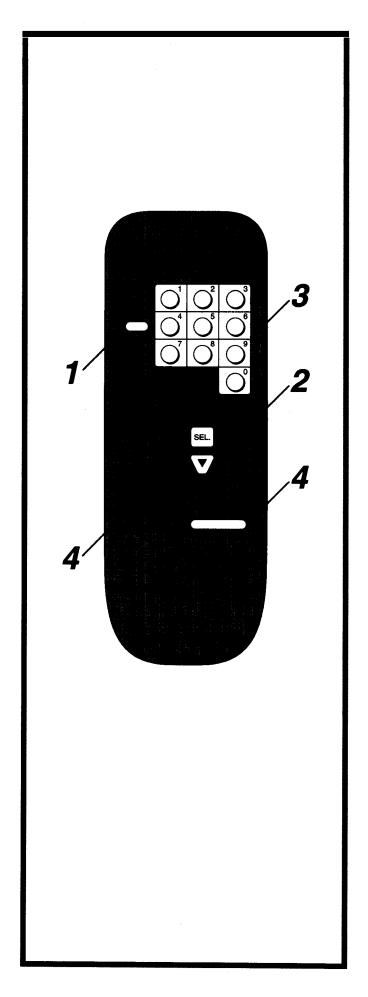
Play now commences from the specified position.

Note:

- •These operations work only with discs for which the elapsed playing time appears on the unit's display during playback.
- •For some discs, play may not start from the specified position even when the steps above have been performed correctly.

For your reference:

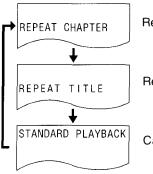
 "NUMBER OUT OF RANGE" appears on the TV monitor if the selected time is invalid.



Repeat viewing

Press REPEAT MODE during play.

Each time this button is pressed, the TV monitor changes as shown below and the disc will repeat a chapter or title.



Repeat of chapter being played

Repeat of title being played

Cancel repeat mode

To return to normal play

Press REPEAT MODE several times until "STANDARD PLAYBACK" is displayed.

Note:

• Repeat play works only with discs for which the elapsed playing time appears on the unit's display during playback.

• Repeat play may not work correctly with some DVDs.

Repeating sections between two specific points (A-B repeat)

1 Press A-B during play at the point where repeat play is to commence (A).

A -			

2 Press A-B again at the point where repeat play is to be concluded (B).

4 - B	REPEAT	

Repeat play of the selection between points A and B starts.

To return to normal play

Press A-B again.

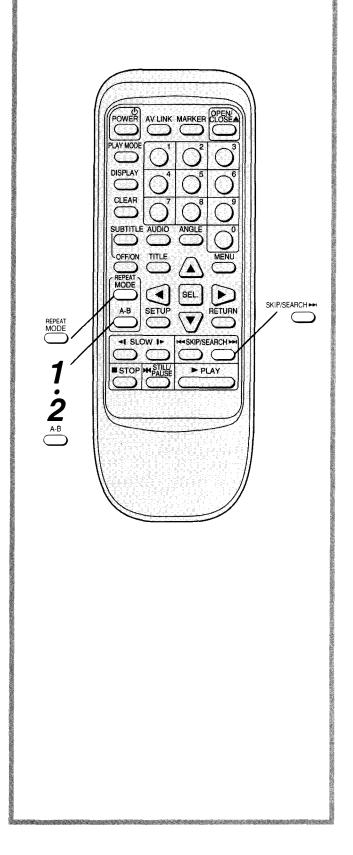
("STANDARD PLAYBACK" appears on the TV monitor.)

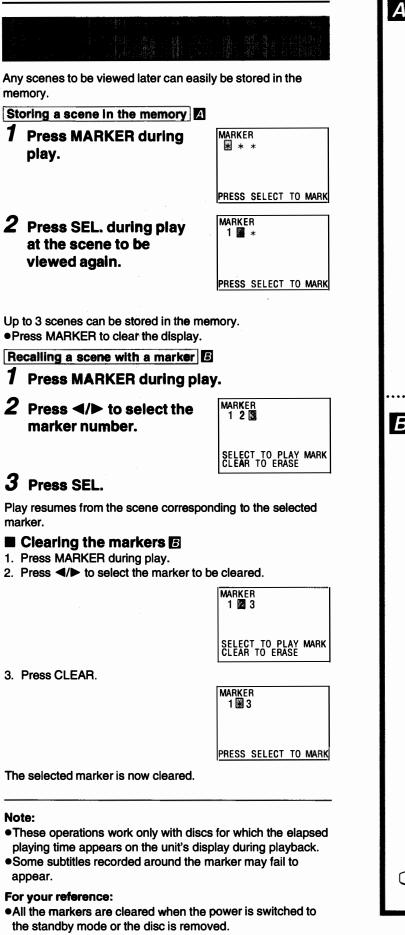
Note:

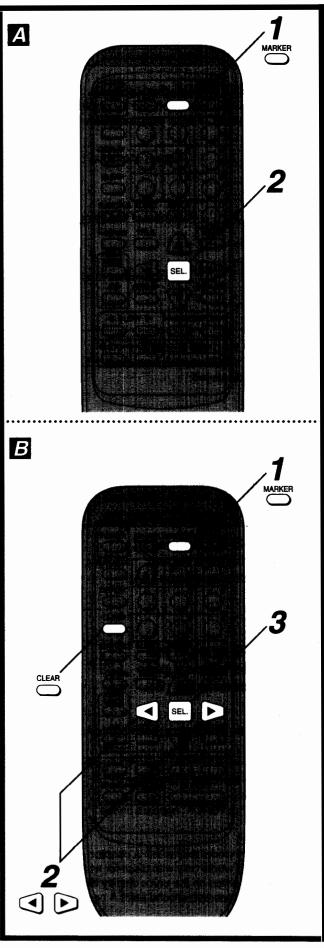
- •A-B repeat play works only within a chapter.
- A-B repeat play works only with discs for which the elapsed playing time appears on the unit's display during playback.
- •Some subtitles recorded around point A or B may fail to appear.

For your reference:

●After step 1 above, pressing SKIP/SEARCH ►► to advance the disc to the point (B) is possible.





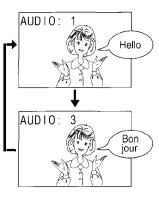


Changing audio soundtrack language 🖪

It is possible to change the audio language from the one selected at the initial settings to a different language, if available. (See page 37.)

(This operation works only with discs on which multiple audio soundtrack languages are recorded.)

- **1** Press AUDIO during play.
- 2 Press ▲/▼ a number of times until the preferred language is selected.

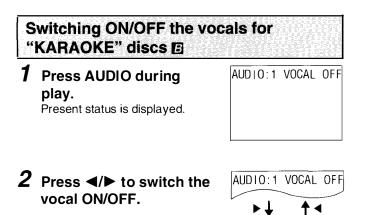


AUDIO:1 VOCAL ON

Press AUDIO to clear the display.

For your reference:

- •When the preferred language is not selected even after pressing the button several times, it means that language is not available on the disc.
- When the power is turned on or the disc is removed, the language heard is the one selected at the initial settings. If this language is not recorded on the disc, only the available language on the disc will be heard.



Press AUDIO to clear the display.

	PLAY MODE PLAY MODE DISPLAY CLEAR 0 0 0 0 0 0 0 0 0 0 0 0 0
B 1 AUDIO 2	POWER AV LINK MARKER CLOSEA PLAY MODE 1 2 3 DISPLAY 4 5 6 CLEAR 7 8 9 SUBTITLE AUDIO ANGLE 0 OFFON TITLE MENU REFEAT MODE SEL. D AB SETUP ELL AB SETUP PLAY

If a disc has subtitles recorded on it, they can either be cleared or displayed on the TV monitor. (This operation works only with discs on which the subtitle language is recorded.)

Press SUBTITLE OFF/ON during play.



When this button is pressed once, the subtitles are cleared; when pressed again, they are displayed.

It is possible to change the subtitle language from the one selected at the initial settings (see page 38) to a different language, if available.

(This operation works only with discs on which multiple subtitle languages are recorded.)

1 Press SUBTITLE during play. When no subtitles are recorded

SUBTITLE: 1 ON

SUBTITLE:

3 ON

2 Press ▲/▼ a number of times until the preferred language is selected.

"* * " will be displayed instead of the language number.

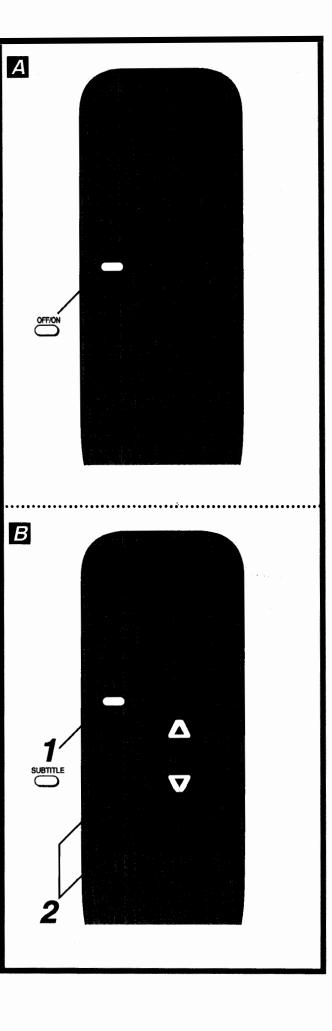
Press SUBTITLE to clear the display.

Note:

• In some cases, the subtitle language is not changed immediately to the selected one.

For your reference:

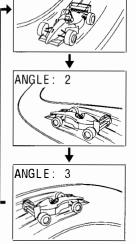
- •When the preferred language is not selected even after pressing the button several times, it means that the language is not available on the disc.
- •When the power is turned on or the disc is removed, subtitles appear in the language selected at the initial settings. If this language is not recorded on the disc, they appear in the disc's priority language.



Viewing from another angle

Some DVD discs may contain scenes which have been shot simultaneously from a number of different angles. For these discs, the same scene can be viewed from each of these different angles using the ANGLE button. (The recorded angles differ depending on the disc used.)

- **1** Press ANGLE during play.
- 2 Press ▲/▼ a number of times until the preferred angle is selected.



ANGLE:

Press ANGLE to clear the display.

Note:

• This function will only work on discs where different angles have been recorded.

("ANGLE" is shown on the unit's display.)

Selection of titles 🖪

Some discs with movies, for example, may be available with two or more titles. If the disc has a title menu recorded on it,

the TITLE button can be used to select the movie title. (The details of operation differ depending on the disc used.)

1 Press TITLE during play.



A list of the titles on the disc is now displayed.

Pressing TITLE again resumes play from the scene when TITLE was first pressed.

2 Press ◄/►/▲/▼ to select the preferred title.

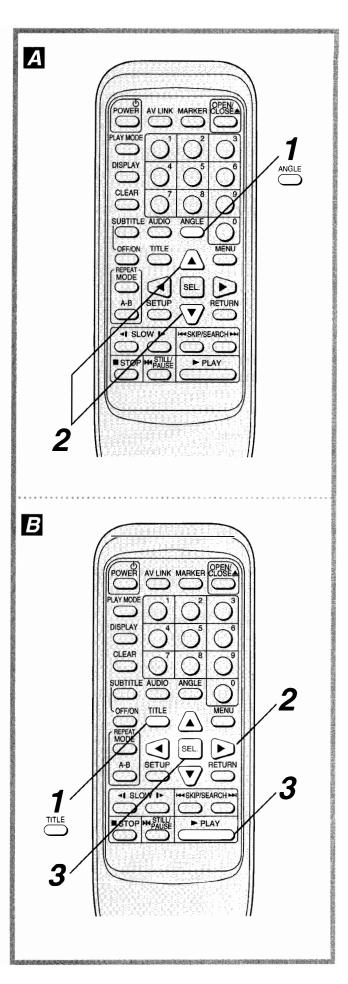
TITLE	MENU
Dogs	Castles
Lovers	Birds

Birds

of the world

 $\boldsymbol{3}$ Press SEL. or PLAY.

The selected title now starts playing.



Some DVD discs have unique menu structures called DVD menus. For example, DVDs programmed with complex contents provide guide menus, and those recorded with various languages provide menus for audio and subtitle language. Although the DVD menu's contents and operation differ from disc to disc, the following explains basic operation when this feature is used.

1 Press MENU during play.

DVD MENU	
2.AUD10	
3.ANGLE	

 Pressing MENU again resumes play from the scene when MENU was first pressed.

2 Press ◄/►/▲/▼ to select the preferred item.

DVD	MENU
	BATLE
2.AU	DIO
3.AN	IGLE

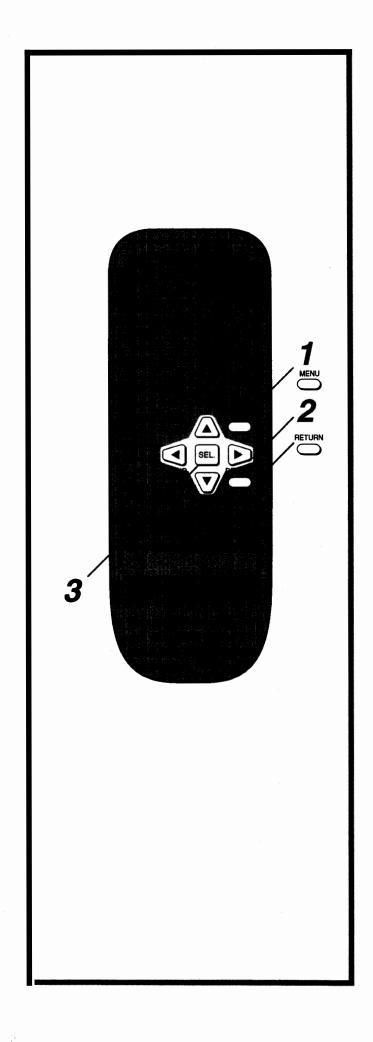
3 Press SEL.

The selected item is now executed.

When the menu continues onto another screen Repeat steps 2 and 3.

To return to the previous menu screen Press RETURN.

To clear the DVD menu Press MENU.



Video CD and audio CD playback

Preparations

- •Switch the TV ON and select the Audio/Video (AV) position, e.g. AV1, AV2, which has been connected to the DVD player.
- Switch on the stereo system's power if the player has been connected to a stereo system.

Basic play



1 Switch on the power.

2 Press OPEN/CLOSE to open the disc tray.



3 Place a disc onto the tray.

Hold the disc without touching either of its surfaces, position it with the printed title side facing up, align it with the guides, and place it in its proper position. (1) 8 cm disc

● 12 cm disc

4 Press PLAY.



For audio CDs and for video CDs without playback control (see page 28): Play is commenced. For video CDs provided with playback control: A menu appears after a few moments.

Menu play [Video CDs]

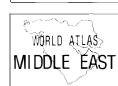
- •This function works only with video CDs with playback control (version 2.0).
- The details differ depending on the disc concerned. Also refer to the instructions accompanying the disc.

After steps 1 to 4 above the menus are displayed on the TV monitor:

Example: Viewing "MIDDLE EAST" on a WORLD ATLAS disc



5 Press the number button(s) to select the preferred item.

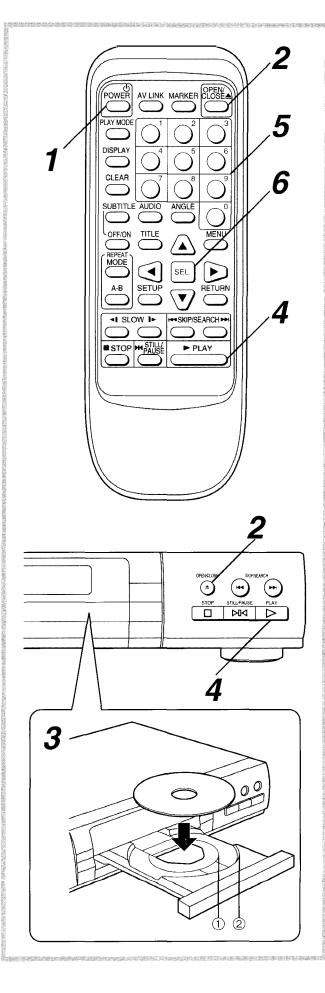


6 Press SEL.

The player now starts to play the selected item.

Note:

 $\langle / \rangle / \rangle / \langle \rangle$ are not effective for selecting items for video CDs.

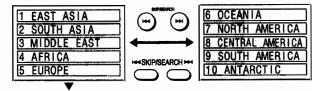


DVD

Video CD and audio CD playback

When the menu continues onto another screen

After step 4 on page 27, press SKIP/SEARCH >> .



•To return to the previous menu screen Press | < SKIP/SEARCH.

Stopping play and returning to the menu screen

Press RETURN.

• Play is suspended, and the menu screen is displayed.

After operation

When the unit is not in use, remove the disc and press POWER to switch the power to the standby mode. The power will automatically be switched to the standby mode after 30 minutes or so have elapsed in the stop mode. (Auto power-off function)

Note:

- •The disc continues to rotate while the menu is displayed even after the player has finished playing a particular item. When no further selections are to be played, be sure to press the STOP button to clear the menu display.
- If the disc is placed in upside down (and it is a single sided disc), the DVD display will indicate "NO DISC".
- When the NTSC video CD is played, the playback picture may roll up or down on some TVs; adjust this using the V-HOLD control on the TV. TVs not equipped with a V-HOLD control cannot correct this condition. The playback picture may shrink vertically and black bars may appear both on the top and bottom of the screen, or the picture may be in black and white. This does not indicate a malfunction.

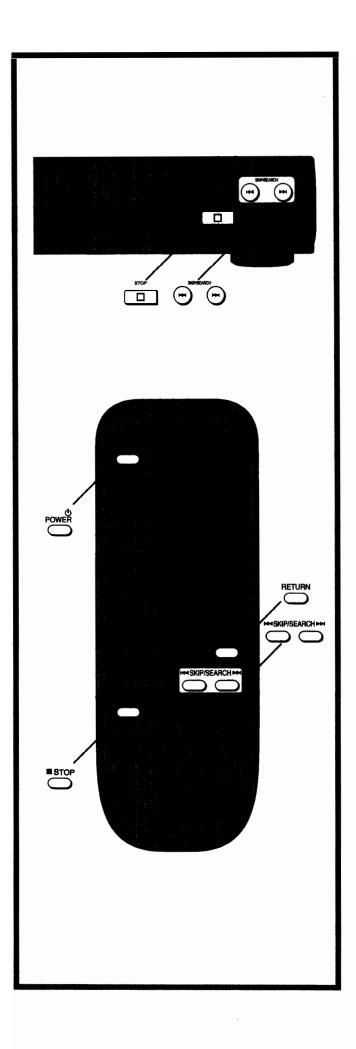
For your reference:

•When "*!*" appears while a button is being operated, it means that the corresponding operation is prohibited by the player.

When "!!" appears, it means the operation is prohibited by the disc.

What is playback control?

If a video CD has "playback control" written on its disc or jacket, it means that particular scenes or information can be selected for viewing interactively with the TV monitor using the menu screen.



Stopping play

Press STOP.

For your convenience:

•When play is stopped, the unit records the point where STOP was pressed (**RESUME function**). Press PLAY again, and play will resume from this point. When the tray is opened or STOP is pressed again, the RESUME function will be cleared.

The RESUME function works only with discs for which the elapsed playing time appears on the unit's display during playback.

This feature will not be cleared when the power is switched to the STANDBY mode and then returned to ON.

Rapid advance (Rapid reverse)

Hold | ◀◀ SKIP/SEARCH or SKIP/SEARCH ►► down during play.

IMASKIP/SEARCH ►►



Forward direction

Reverse direction

- •The disc is rapidly advanced (or reversed) while the button is held down.
- •Normal play is resumed when the button is released.

For your reference:

- •The speed of advance (or reverse) is relatively slow at first and becomes faster after about 5 seconds.
- •When I SKIP/SEARCH ►► is pressed during menu play of video CDs, a menu screen may sometimes be recalled.

Skipping ahead or back to tracks

Skipping ahead

Press SKIP/SEARCH ►► during play.

A track is skipped each time the button is pressed.

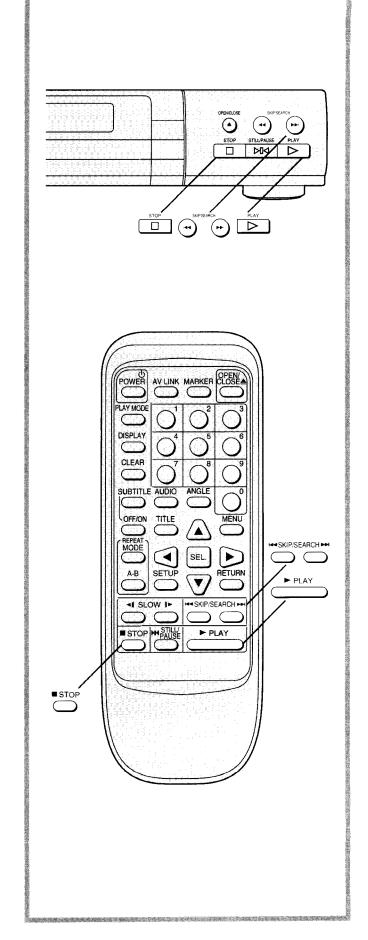
Skipping back

Press |◀◀ SKIP/SEARCH during play.

When the button is pressed once midway through a track, play returns to the start of that track. When it is pressed again, a track is skipped each time the button is pressed.

For your reference:

•When Idd SKIP/SEARCH ►►I is pressed during menu play of video CDs, a menu screen may sometimes be recalled.



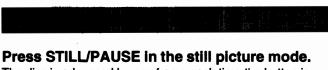
Video CD and audio CD playback

Press STILL/PAUSE during play. Video CD:

The player will be placed in the still picture mode. **Audio CD:** The player will be placed in the pause mode.

To return to normal play

Press PLAY.



The disc is advanced by one frame each time the button is pressed.

To return to normal play

Press PLAY.

Press ◄I SLOW or SLOW I► In the play mode or still picture mode.

← SLOW I► Forward direction

Reverse direction

To return to the still picture mode Press STILL/PAUSE.

To return to normal play

Press PLAY.

For your reference:

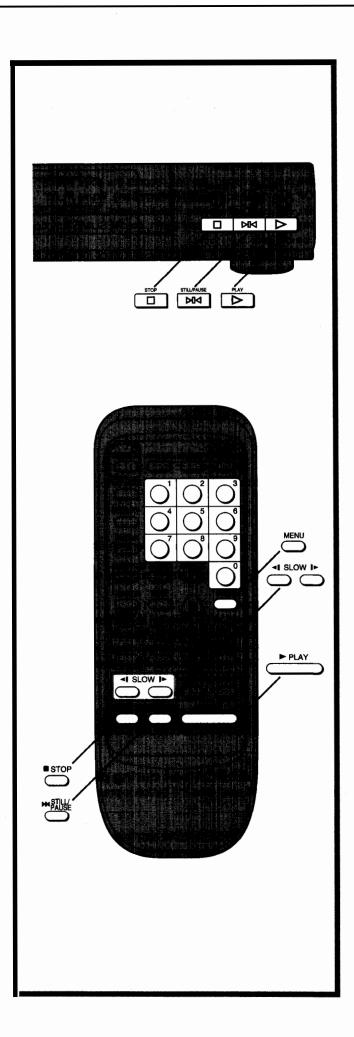
•Slow-motion playback in reverse direction is not possible.

- 1 Press STOP after the menu screen appears (after step 4 on page 27).
 - ("PBC" will be cleared from the unit's display.)
- Press the number button(s) to select the preferred track.
 Press PLAY.
- (Play is commenced.)

To return to menu play

Press STOP to stop playback and press MENU. ("PBC" will light up on the unit's display and the menu screen is resumed.)

Perform steps 5 and 6 on page 27.



Selecting by track number Example: Viewing (listening to) track "3" **1** Press DISPLAY during TRACK 1 play. TIME 3:20 **2** Press the number TRACK 3 button(s) to select the

TIME 3:20

3 Press SEL. or PLAY.

preferred track.

Play now commences from the selected track.

Selecting a double-digit number

Example: 10

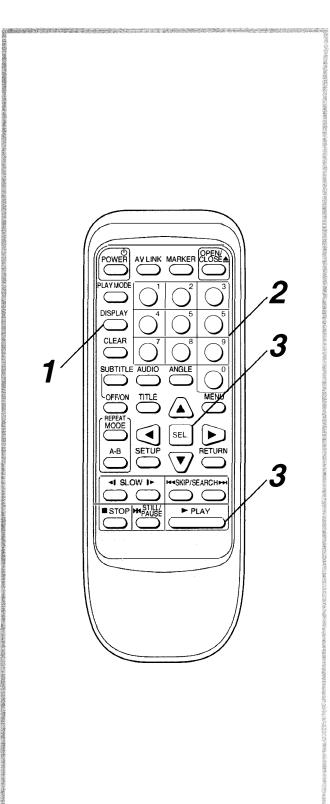
Press "1" and then "0".

Note:

•These operations do not work during menu play of video CDs.

For your reference:

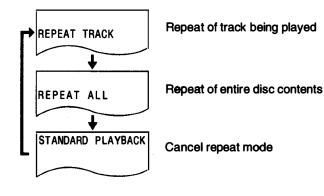
• "NUMBER OUT OF RANGE" appears on the TV monitor if the number selected does not exist on the disc.



Repeat play

Press REPEAT MODE during play.

Each time this button is pressed, the TV monitor changes as shown below and the disc will repeat a track or the entire disc content.



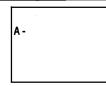
To return to normal play

Press REPEAT MODE several times until "STANDARD PLAYBACK" is displayed.

Note:

 Repeat play works only with discs for which the elapsed playing time appears on the unit's display during playback.

1 Press A-B during play at the point where repeat play is to commence (A).



2 Press A-B again at the point where repeat play is to be concluded (B).

A-B REPEAT

Repeat play of the selection between points A and B starts.

To return to normal play

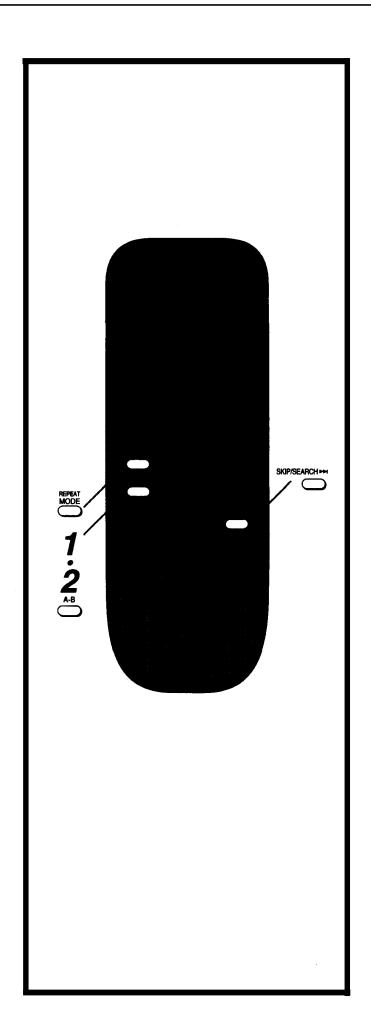
Press A-B again. ("STANDARD PLAYBACK" appears on the TV monitor.)

Note:

•A-B repeat play works only within a track.

For your reference:

● After step 1 above, pressing SKIP/SEARCH ►► to advance the disc to the point (B) is possible.



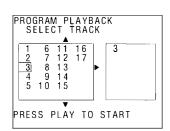
Program play

Example: Playing tracks "3", "1" and "4" in this order

1 Press PLAY MODE in the stop mode.

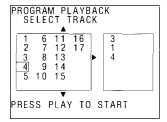


2 Press </▶/▲/▼ to select the preferred track and press SEL.



" ∇ " or " \triangleright " mark means that more tracks exist beyond the mark. They will appear one at a time when ∇ or \triangleright is pressed.

- Press CLEAR to cancel a selected track.
- **3** Repeat step 2 to select another track.



Up to 18 tracks can be programmed.

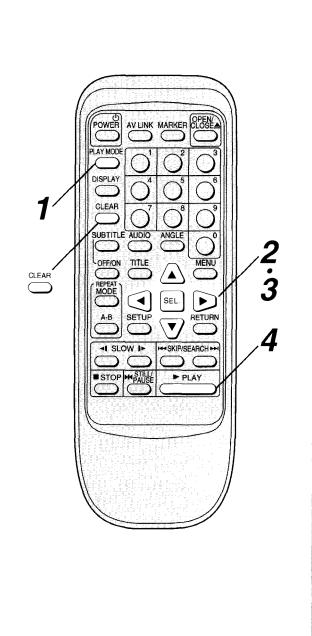
4 Press PLAY.

Play is now commenced in the programmed sequence.

After playback

Play is stopped and the program playback screen is displayed.

(Continued on the next page)



Program play

Returning to normal play

- 1. Press STOP. (Program play is suspended.)
- 2. Press PLAY MODE.
- ("STANDARD PLAYBACK" is displayed.) 3. Press PLAY.
- Normal play is commenced.

(The content of the program is still retained in the memory.)

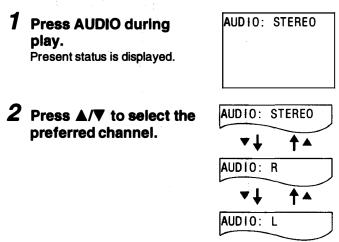
Clearing the program one by one 🛙

- Press STOP twice. (Program playback screen is displayed.)
 Press CLEAR. The last program will be cleared each time CLE
 - The last program will be cleared each time CLEAR is pressed.

Clearing all the programs

The programs are cleared when the power is switched to the STANDBY mode or the disc is removed.

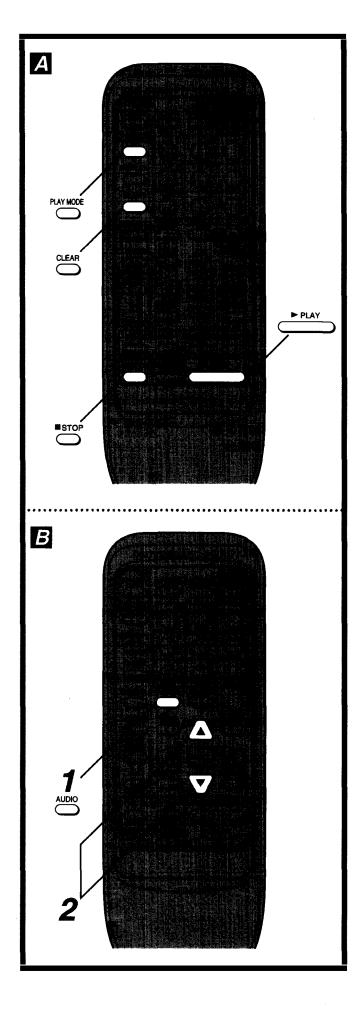
Switching ON/OFF the vocals for "KARAOKE" discs [Video CDs] E



Press AUDIO to clear the display.

Note:

•This operation does not work with audio CDs.



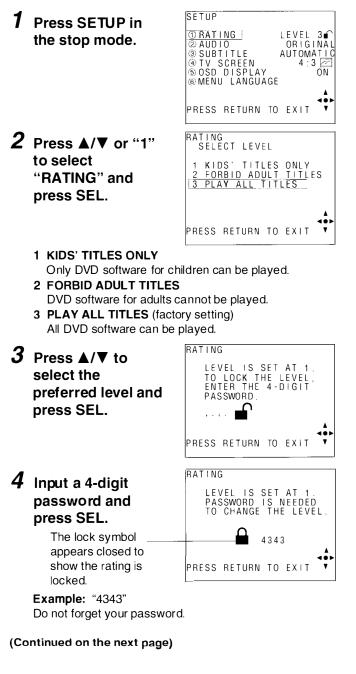
Initial settings

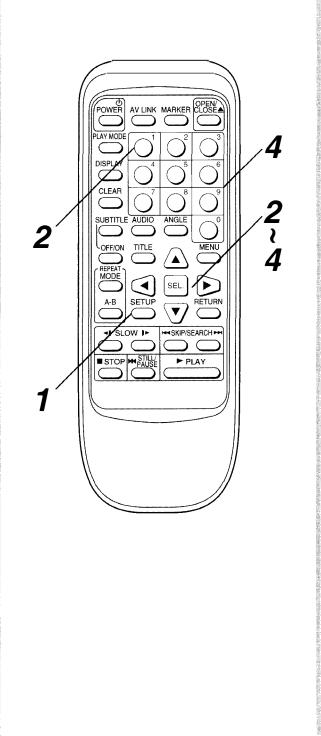
Once the setup has been completed, the player can always be operated under the same conditions (especially with DVD discs).

The settings will be retained in the memory even after switching the power to the STANDBY mode until the settings are changed.

Rating level setting [DVD]

This is to disable the playing of specified discs which are unsuitable for children.





Initial settings

5 Press RETURN.

Setting is finished and the "SETUP" screen is displayed.
The rating is locked and this setting cannot be changed unless the correct password is entered.

If you do not want to lock the setting with a password

Press RETURN after step 3 on page 35. Setting is finished and the "SETUP" screen is displayed.

To release the lock

1. Perform steps $1 \sim 2$ on page 35.



2. Input the 4-digit password which was registered and press SEL.

RATING SELECT LEVEL
2 FORBID ADULT TITLES
3 PLAY ALL TITLES
4
PRESS RETURN TO EXIT

To return the TV monitor to the "SETUP" screen

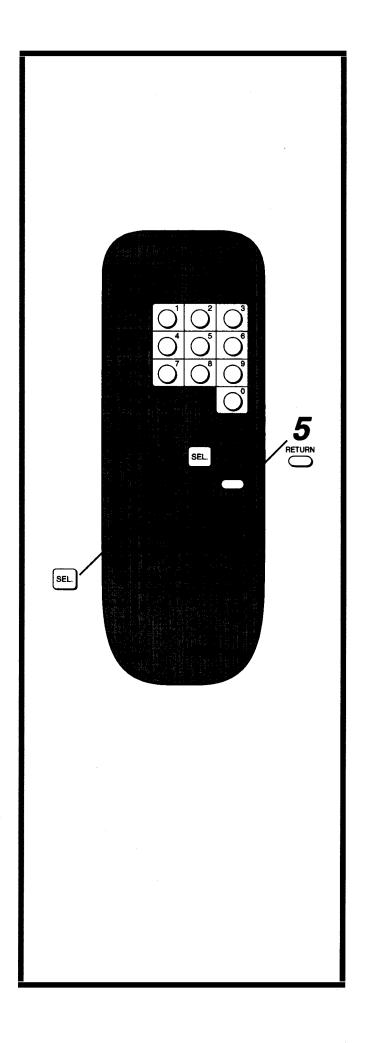
Press RETURN.

To finish the setup operation

Press RETURN when the "SETUP" screen is displayed.

Note:

•Some discs may not be encoded with specific rating level information though its disc jacket says that is for "adults". For those discs, the age restriction will not work.



Initial settings

Audio soundtrack language selection [DVD]

Programs can always be played in the same audio soundtrack language even after the disc is replaced or the power is switched to the STANDBY mode and then returned to ON.

SETUP 1 **Press SETUP in** ① RATING ② AUDIO ③ SUBTITLE the stop mode. @ TV SCREEN ⑤ OSD DISPLAY ⑥ MENU LANGUAGE 2 Press ▲/▼ or "2" to select "AUDIO" and press SEL.

PRESS RETURN TO EXIT AUDIO LANGUAGE PREFERENCE ENGLISH FRENCH SPANISH GERMAN ITALIAN ORIGINAL OTHER

PRESS RETURN TO EXIT

LEVEL

ORIGINAL AUTOMATIC

3

ORIGINAL:

The top-priority language of each disc will be selected. (factory setting)

OTHER ***:

Another language can be selected.

(Refer to the language codes on page 45. Press CLEAR if an incorrect language code is entered.)

\boldsymbol{3} Press $\boldsymbol{A}/\boldsymbol{\nabla}$ to select the preferred language and press SEL.

Setting is finished and the "SETUP" screen is displayed.

To return the TV monitor to the "SETUP"

screen

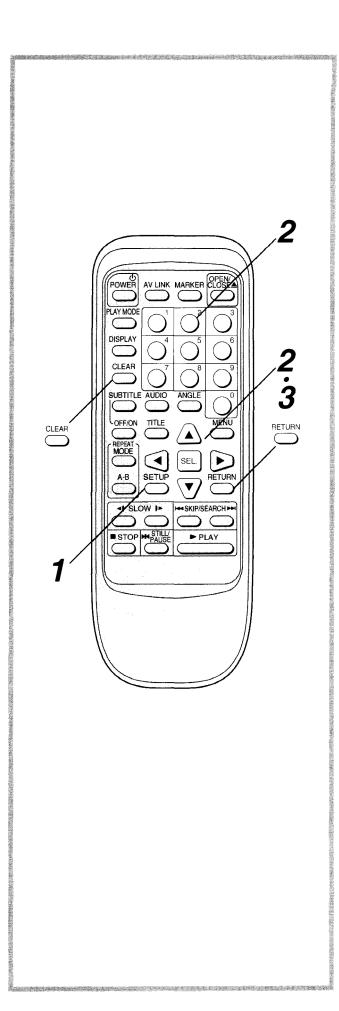
Press RETURN.

To finish the setup operation

Press RETURN when the "SETUP" screen is displayed.

For your reference:

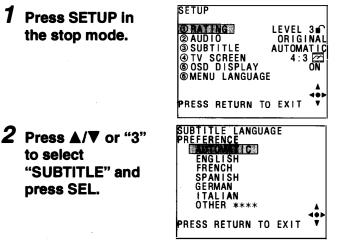
•If the language selected is not available on the disc, the soundtrack will be heard in the top-priority language on the disc.



Initial settings

1

Programs can always be played in the same subtitle language even after the disc is replaced or the power is switched to the STANDBY mode and then returned to ON.



AUTOMATIC:

to select

The same language selected for the "AUDIO" will be selected. (factory setting)

- If the language selected for the "AUDIO" is actually used during playback, the subtitles will not appear.
- If another language is used during playback, the subtitles will appear in the language selected at the setup "AUDIO".

OTHER ****:

Another language can be selected.

(Refer to the language codes on page 45. Press CLEAR if an incorrect language code is entered.)

\boldsymbol{3} Press $\boldsymbol{A}/\boldsymbol{\nabla}$ to select the preferred language and press SEL.

Setting is finished and the "SETUP" screen is displayed.

To return the TV monitor to the "SETUP" screen

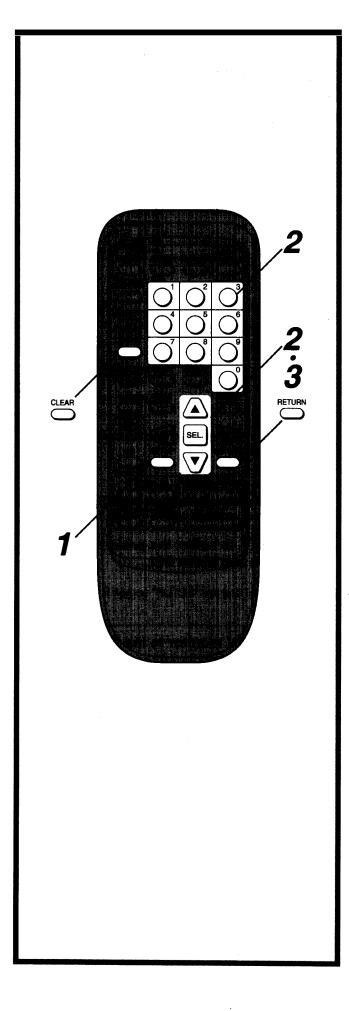
Press RETURN.

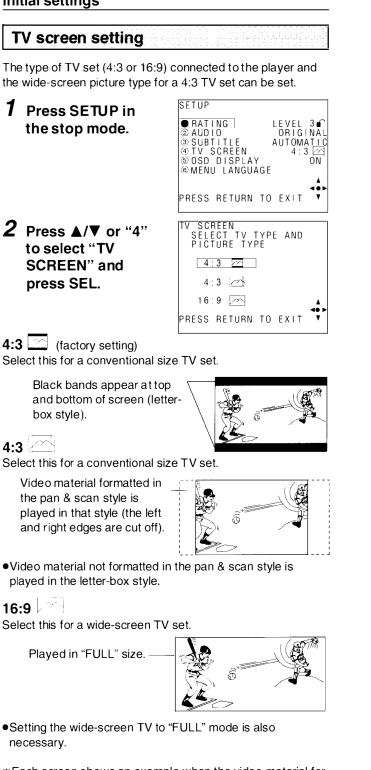
To finish the setup operation

Press RETURN when the "SETUP" screen is displayed.

For your reference:

• If the subtitle language selected is not available on the disc, the top-priority language on the disc will be used.





*Each screen shows an example when the video material for a wide-screen is played.

3 Press \blacktriangle / ∇ to select the screen type and press SEL.

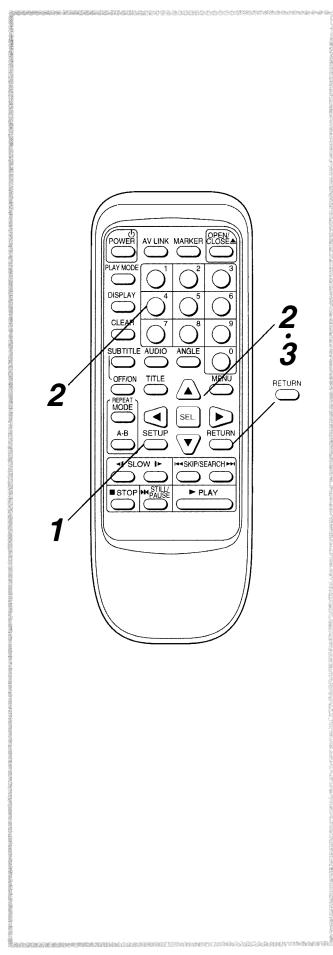
Setting is finished and the "SETUP" screen is displayed.

To return the TV monitor to the "SETUP" screen

Press RETURN.

To finish the setup operation

Press RETURN when the "SETUP" screen is displayed.



Initial settings

You can select whether on screen display messages will be displayed or not when the buttons are operated.

Press SETUP In the stop mode.
 2 Press ▲/▼ or "5" to select "OSD DISPLAY" and press SEL.
 2 Press SEL.

ON: Screen messages are displayed when the buttons are operated. (factory setting)OFF: Screen messages are not displayed.

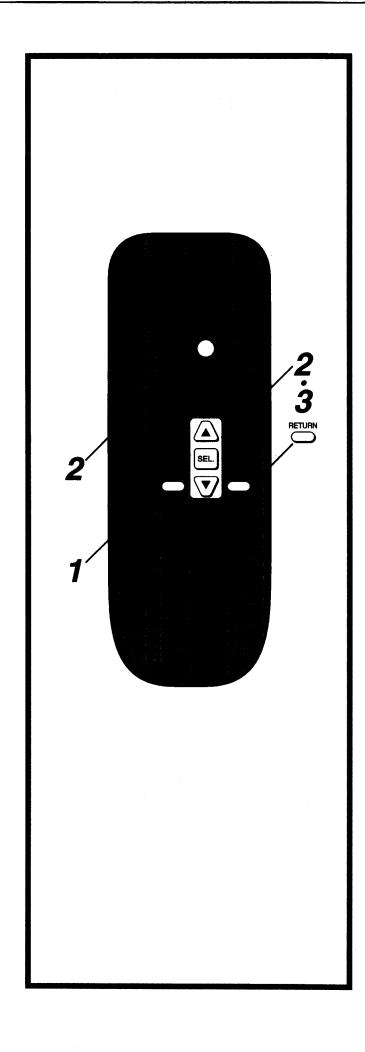
3 Press ▲/▼ to select "ON" or "OFF" and press SEL.

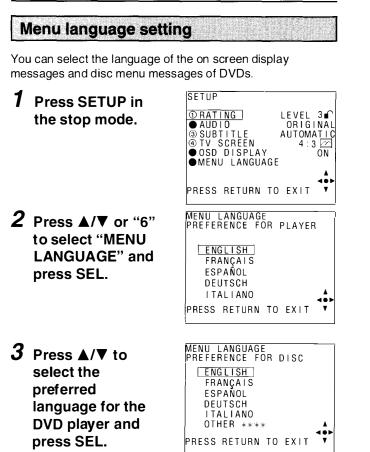
Setting is finished and the "SETUP" screen is displayed.

To return the TV monitor to the "SETUP" screen Press RETURN.

To finish the setup operation

Press RETURN when the "SETUP" screen is displayed.





OTHER * * * *:

Another language can be selected. (Refer to the language codes on page 45. Press CLEAR if an incorrect language code is entered.)

4 Press ▲/▼ to select the preferred language for the DVD discs and press SEL.

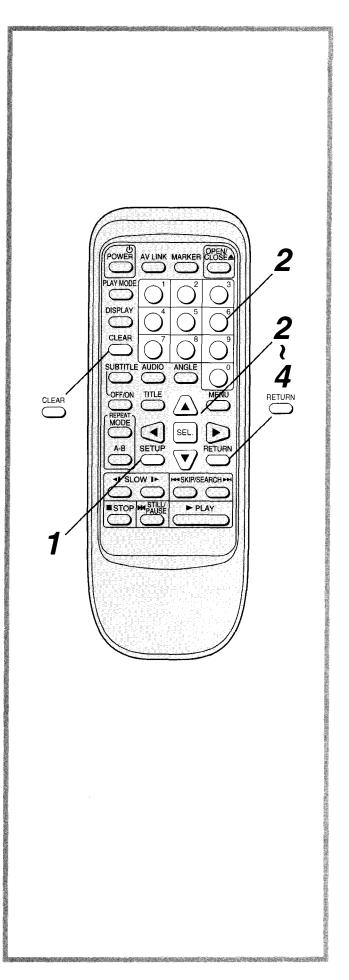
Setting is finished and the "SETUP" screen is displayed.

To return the TV monitor to the "SETUP" screen

Press RETURN.

To finish the setup operation

Press RETURN when the "SETUP" screen is displayed.



Disc handling and maintenance

Handling precautions

- •Hold the disc by the edges so the surface will not be soiled with fingerprints. (A)
- Fingerprints, dirt and scratches can cause skipping and distortion.
- Do not write on the label side with a ball-point pen or other writing utensils.
- •Do not use record cleaning sprays, benzine, thinner, static electricity prevention liquids or any other solvent.
- •Be careful not to drop or bend the disc.
- •Do not install more than 1 disc on the disc tray.
- Do not try to close the disc tray when the disc is not installed properly. (E)
- Be sure to store the disc in its exclusive case when not in use.

If the surface is soiled G

Wipe gently with a soft, damp (water only) cloth. When wiping discs, always move the cloth from the center hole toward the outer edge.

(If you wipe the discs using a circular motion, circular scratches are likely to occur, which will cause noise.)

If the disc is brought from a cold to a warm environment, moisture may form on the disc

Wipe this moisture off with a soft, dry, lint-free cloth before using the disc.

Improper disc storage

You can damage discs if you store them in the following places:

Areas exposed to direct sunlight

Humid or dusty areas

•Areas directly exposed to a heat outlet or heating appliance

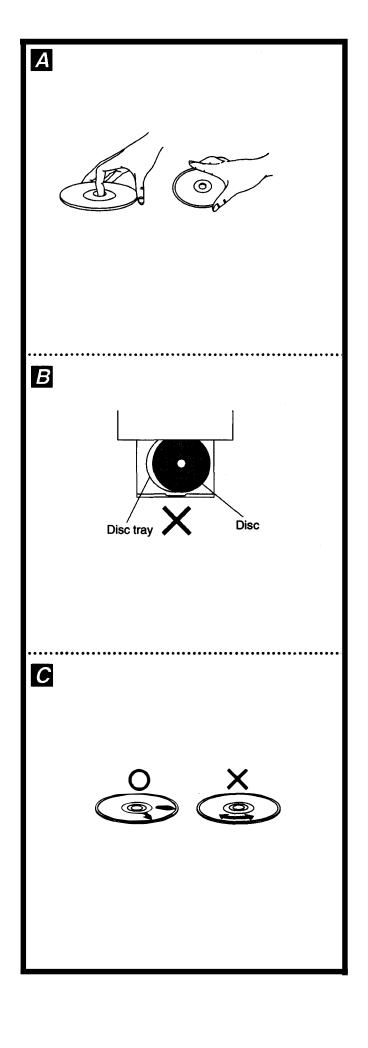
Discs which cannot be played with this player

•CD-ROM

•CDV •CD-G

- DVD with a Locale No. oth
- DVD with a Locale No. other than #2
 Do not try to play Photo CD or CD-R.

- Be sure to switch the power to the STANDBY mode and disconnect the AC mains lead before maintaining the unit.
 Wipe this unit with a dry soft cloth.
- If the surfaces are extremely dirty, wipe clean with a cloth which has been dipped in a weak soap-and-water solution and wrung out thoroughly, and then wipe again with a dry cloth.
- •Never use alcohol, benzine, thinner, cleaning fluid or other chemicals. And do not use compressed air to remove dust.



Troubleshooting

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, consult your dealer for instructions.

		_
ja a t	Symptom (Common) Remedy	

No power.	Insert the AC mains lead securely into the power outlet.
Power is automatically switched to the STANDBY mode.	The power is automatically switched to the STANDBY mode after approx. 30 minutes have elapsed in the stop mode (auto power-off function). Turn the power back on.
 Play fails to start even when PLAY is pressed. Play commences but then stops immediately. 	 Condensation has formed: wait about 1 to 2 hours to allow the player to dry out. This player cannot play discs other than DVDs, video CDs and audio CDs. The disc may be dirty and may require cleaning. Ensure that the disc is installed with the label side up.
No picture.	 Ensure that the equipments are connected properly. Ensure that the input setting for the TV is an Audio/Video (AV) position, e.g. AV1, AV2.
No sound.Distorted sound.	 Ensure that the equipments are connected properly. Ensure that the input settings for the TV and stereo system are proper. No sound is heard during still picture (pause) or slow-motion play.
Picture is distorted during rapid advance or rapid reverse.	The picture will be somewhat distorted at times: this is normal.
No rapid advance (or rapid reverse) play.	Some discs may have sections which prohibit rapid advance (or rapid reverse).
No 4:3 (16:9) picture.	Choose the correct setup "TV SCREEN" item which matches the TV set used.
No on-screen display.	The OFF setting is selected for "OSD DISPLAY": select ON.
No operations can be performed with the remote control.	 Check the batteries are installed with the correct polarities (+ and -). The batteries are depleted: replace them with new ones. Point the remote control unit at the remote control sensor and operate. Operate the remote control unit at a distance of not more than 7 meters from the remote control sensor. Remove the obstacles between the remote control unit and remote control sensor.
No key operation (by the unit and/or the remote control) is effective.	Switch the power to the STANDBY mode and then return to ON. Alternatively, switch the power to the STANDBY mode, disconnect the AC mains lead and then re-connect it. (The player may not be operating properly due to lightning, static electricity or some other external factor.)

Symptom [DVD]		
Play does not commence even when title is selected.	Confirm the "RATING" setting.	

(Continued on the next page)

Troubleshooting

Audio soundtrack and/or subtitle language is not the one selected at the initial settings.	If the audio soundtrack and/or subtitle language does not exist on the disc, the language selected at the initial settings will not be seen/heard.				
The menu is displayed in French (example).	The setup "MENU LANGUAGE" is set to FRANÇAIS: select ENGLISH.				
No subtitles.	 Subtitles appear only with discs which contain them. Subtitles are cleared from the TV monitor. Press SUBTITLE OFF/ON to display the subtitles. 				
Alternative audio soundtrack (or subtitle) languages fail to be selected.	An alternative language is not selected with discs which do not contain more than one language.				
Angle cannot be changed.	This function is dependent on software availability. Even if a disc has a number of angles recorded, these angles may be recorded for specific scenes only.				
The password for age restriction has been forgotten.	While the unit is in the stop mode, hold the unit's H SKIP/SEARCH button and the STILL/PAUSE button down simultaneously and then hold the POWER button down for longer than 3 seconds (until "INITIALIZED" disappears from the TV monitor). The lock will be released and all initial settings will return to the default values.				
	If you have performed the "INITIALIZING" operation When you switch the power to the STANDBY mode and then return to ON for the first time after the "INITIALIZING" operation, the screen message shown on the right appears on the TV monitor so that the On Screen Menu Language can be selected. Press "1" through "5" on the remote control unit to select the preferred menu language.	SELECT MENU LANGUAGE LANGUES DES MENUS ELIJA IDIOMA DEL MENU MENUSPRACHE WAHLEN SELEZIONE LINGUA MENU ENGLISH PRESS ① FRANÇAIS PRESSER ② ESPAÑOL PRESIONE ③ DEUTSCH TASTE ④ ITALIANO PREMERE ⑤			

No menu play.

This function works only for video CDs with playback control.

Self-diagnosis display function

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

Service number	Play er status	Remedy		
U11 Disc is dirty.		Wipe the disc clean.		
HDD	Trouble is likely to have occurred. The number following "H" differs depending on the status of the player.	Switch the power to the STANDBY mode and then return to ON. Alternatively, switch the power to the STANDBY mode, disconnect the AC mains lead and then re-connect it. If the service number fails to be cleared even when the remedial action is taken, ask for the service engineer to repair the player.		

Language code list

Enter the appropriate code number for the initial settings "AUDIO", "SUBTITLE" and/or "MENU LANGUAGE" (see pages 37, 38 and 41).

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

Definition of terms

Angle

Recorded onto some DVD discs are scenes which have been simultaneously shot from a number of different angles (the same scene is shot from the front, from the left side, from the right side, etc.). With such discs, the ANGLE button can be used to view the scene from different angles.

Chapter number

These numbers are recorded on DVD discs. A title is subdivided into many sections, each of which is numbered, and specific parts of video presentations can be searched quickly using these numbers.

DVD

This refers to a high-density optical disc on which highquality pictures and sound have been recorded by means of digital signals. Incorporating a new video compression technology (MPEG II) and high-density recording technology, DVD enables esthetically pleasing full-motion video to be recorded over long periods of time (for instance, a whole movie can be recorded).

DVD has a structure consisting of two 0.6 mm thin discs which are adhered to each other. Since the thinner the disc, the higher the density at which the information can be recorded, a DVD disc has a greater capacity than a single 1.2 mm thick disc. Since the two thin discs are adhered to each other, there is the potential to achieve double-sided play sometime in the future for even longer duration play.

Playback control

This is recorded on a video CD (version 2.0). The scenes or information to be viewed (or listened to) can be selected interactively with the TV monitor by looking at the menu shown on the TV monitor.

Subtitles

These are the printed lines appearing at the bottom of the screen which translate or transcribe the dialogue. They are recorded on DVD discs.

Time number

This indicates the play time which has elapsed from the start of a disc or a title. It can be used to find a specific scene quickly. (It may not work with some discs.)

Title number

These numbers are recorded on DVD discs. When a disc contains two or more movies, these movies are numbered as title 1, title 2, etc.

Track number

These numbers are assigned to the tracks which are recorded on video CDs and audio CDs. They enable specific tracks to be located quickly.

Video CD

This contains recordings of pictures and sound whose quality is on a par with that of videotape. This player also supports video CDs with playback control (version 2.0).

Specifications

Power requirements: AC 220–240 V, 50 Hz Power				
consumption:	(approx. 4 W in STANDBY mode)			
Signal system: Weight:	PAL 625/50, PAL 525/60 3.4 kg			
Dimensions:	430 (W)×87.5 (H)×288 (D) mm (excluding protrusions)			
Operating temperat				
Operating humidity				
Discs played: (1) DVD-video dis				
12 cm single-si 12 cm single-si 12 cm double-si 8 cm single-sid 8 cm single-sid 8 cm double-si	sc ided, single-layer ided, double-layer sided, double-layer (one layer per side) led, single-layer led, double-layer ded, double-layer (one layer per side) c (CD-DA, video CD)			
8 cm disc S-video output connector (separate YC signal output connector):				
	 with 75Ω load, sync, negative polarity) p-p (NTSC)/0.300 Vp-p (PAL) 1 Vp-p (with 75Ω load, sync, negative polarity) 			
Audio signal output Audio signal output DVD linear audio:	: 200 mVrms (1 kHz, -20 dB) characteristics:			
96 kHz sam (2) S/N ratio: 10 (3) Dynamic ran (4) Wow & flutte	oling; 4 Hz to 22 kHz oling; 4 Hz to 44 kHz 06 dB			
 (1) Frequency re (2) S/N ratio: 10 (3) Dynamic ran (4) Wow & flutte 	ge: 96 dB r: Below measurable limits nic distortion: 0.003% 32Ω (30 mW), min. 8Ω matching impedance			
Pickup:	Wave length: 655 nm Laser power: CLASS 2			

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

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Locale management information

Locale Management Information: This DVD player is designed and manufactured to respond to the Locale Management Information that is recorded on a DVD disc. If the Locale number described on the DVD disc does not correspond to the Locale number of this DVD player, this DVD player cannot play this disc.

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