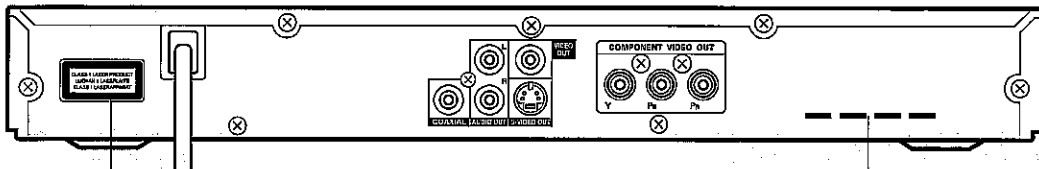




# PRECAUTIONS



CLASS 1 LASER PRODUCT  
LUOKAN 1 LASERLAITE  
KLASS 1 LASERAPPARAT

CAUTION – INVISIBLE LASER RADIATION WHEN OPEN AND INTERLOCKS DEFEATED. AVOID EXPOSURE TO BEAM.	
ADVARSEL – USYNLIG LASER STRÅLING VED ÅBNING, NÅR SIKKERHEDSAFBRYDERE ER UDE AF FUNKTION, UNDGÅ UDSÆTTELSE FOR STRÅLING.	
VARNING – OSYNLIG LASER STRÅLNING NÅR DENNA DEL ÄR ÖPPNAD OCH SPÄRR ÄR URKOPPLAD. STRÅLEN ÄR FARLIG.	
VORSICHT – UNSICHTBARE LASERSTRAHLUNG TRITTS AUS, WENN DECKEL GEÖFFNET UND WENN SICHERHEITSVERRIEGELUNG ÜBERBRÜCKT IST. NICHT, DEM STRAHL AUSSETZEN.	
VARO – AVATTAESSA JA SUOJALUKITUS OHITETTAESSA OLET ALTTIINA NÄKYMÄTTÖMÄLLE LASERSÄTEILYLLE. ÄLÄ KATSO SÄTEESEEN.	

**CAUTION** – USE OF CONTROLS OR ADJUSTMENT OR PERFORMANCE OF PROCEDURES OTHER THAN THOSE SPECIFIED HEREIN MAY RESULT IN HAZARDOUS RADIATION EXPOSURE.

THIS PRODUCT SHOULD NOT BE ADJUSTED OR REPAIRED BY ANYONE EXCEPT QUALIFIED SERVICE PERSONNEL.

- The apparatus shall not be exposed to dripping or splashing.
- No objects filled with liquids, such as vases, shall be placed on the apparatus.
- Do not use where there are extremes of temperature (below 5 °C or exceeding 35 °C) or where direct sunlight may strike it.
- Because of the DVD player extremely low noise and wide dynamic range, there is a tendency to set the volume on the amplifier higher than necessary. Doing so may produce an excessively high output from the amplifier which can cause damage to your speakers. Please be careful in this regard.
- Sudden changes in the ambient temperature may cause condensation to form on the optical lens inside the unit. If this happens, take out the disc, leave the unit for about 1 hour, and then proceed to operate.
- When carrying the unit, be sure to remove a disc which may be inside and turn the power off. Then unplug the power cord from the AC outlet after 10 seconds. Carrying the unit with a disc inside may damage the disc and/or the unit.
- Do not install this equipment in a confined space, such as a book case or built in cabinet.
- The unit is not completely disconnected from the mains when the  $\odot$ /ON button is set to the  $\odot$  position.

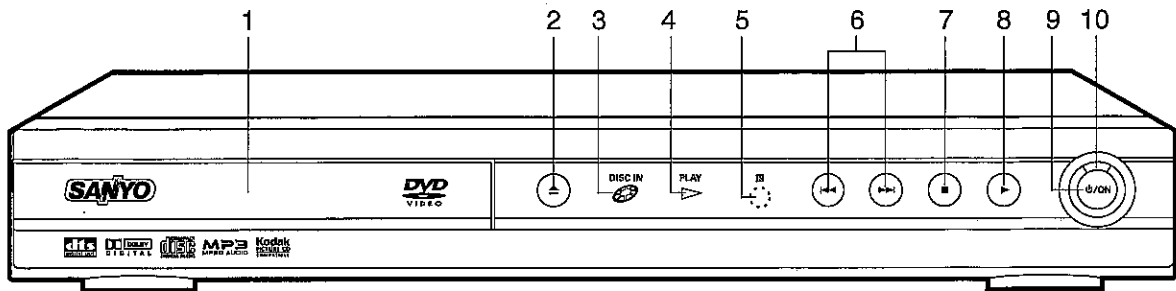
**Important information:**

To connect this unit to a TV, TV must have a set of Audio/Video composite input sockets at least. You cannot use an RF input socket or aerial terminal to connect this unit.

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

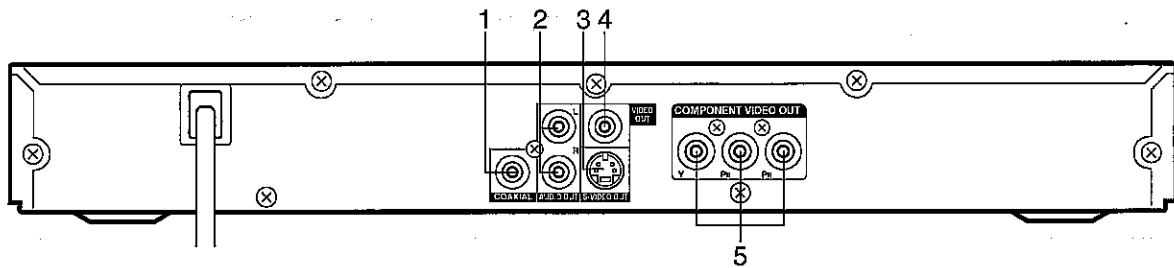
# CONTROLS

## Front Panel



1. Disc tray
2. Open/Close button (▲)
3. Disc-in indicator (DISC IN)
4. Play indicator (PLAY)
5. Remote sensor (IR)
6. Skip/Next/Previous buttons (◀▶)
7. Stop button (■)
8. Play button (▶)
9. Power button (⏻/ON)
10. Power indicator

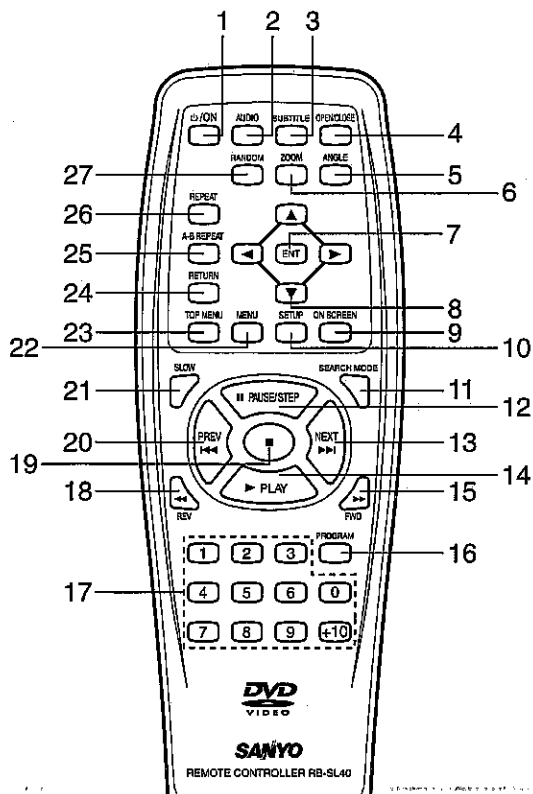
## Rear Panel



1. Coaxial digital output socket (COAXIAL DIGITAL OUT)
2. Audio output sockets (AUDIO OUT)
3. S-Video output socket (S-VIDEO OUT)
4. Video output socket (VIDEO OUT)
5. Component video output sockets (COMPONENT VIDEO OUT)

# REMOTE CONTROL

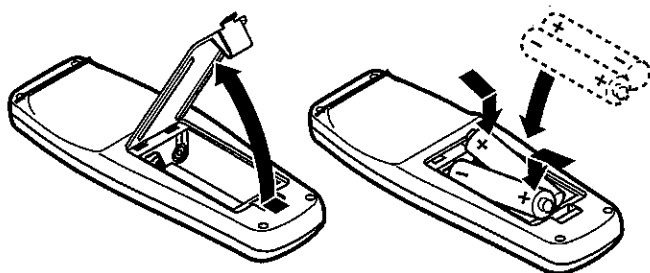
## Controls



1. Power button (ON/OFF)
2. Audio button (AUDIO)
3. Subtitle change button (SUBTITLE)
4. Open/Close button (OPEN/CLOSE)
5. Angle button (ANGLE)
6. Zoom button (ZOOM)
7. Enter button (ENT)
8. Directional arrow buttons (▲, ►, ▼, ◀)
9. On screen display button (ON SCREEN)
10. Setup button (SETUP)
11. Search mode button (SEARCH MODE)
12. Pause/Step button (|| PAUSE/STEP)
13. Skip/Next button (NEXT ►►|)
14. Play button (► PLAY)
15. Forward button (FWD ►►)
16. Program button (PROGRAM)
17. Number buttons (1-9, 0, +10)
18. Reverse button (REV ◀◀)
19. Stop button (■)
20. Skip/Previous button (PREV ◀◀)
21. Slow button (SLOW)
22. Menu button (MENU)
23. Top menu button (TOP MENU)
24. Return button (RETURN)
25. A-B repeat button (A-B REPEAT)
26. Repeat button (REPEAT)
27. Random play button (RANDOM)

## Inserting batteries

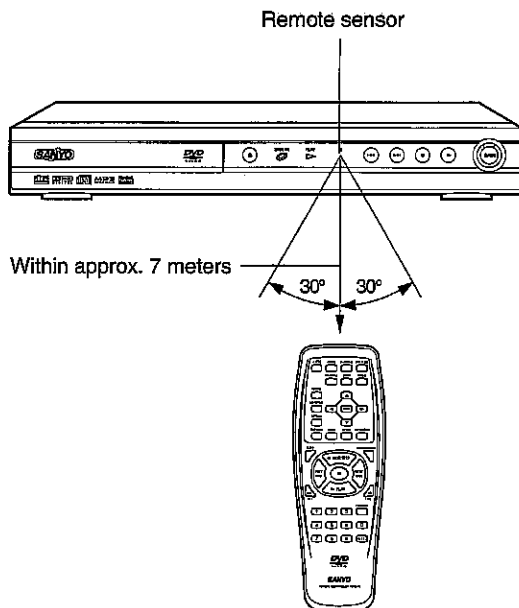
Install two "R6/AA" batteries (not supplied).



### Note:

Remove the batteries if the remote control is not to be used for a month or more. Batteries left in the unit may leak and cause damage.

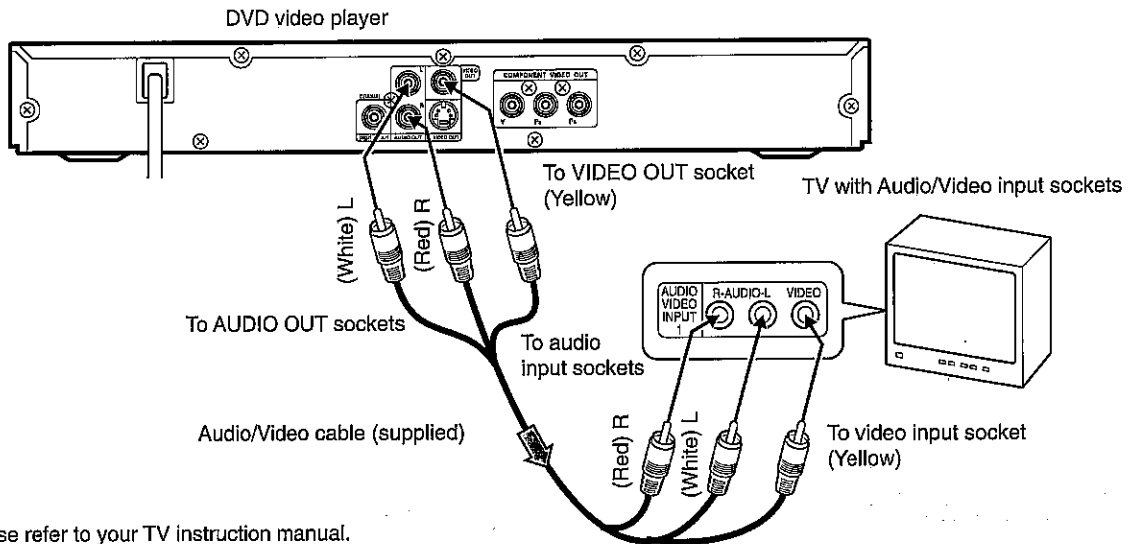
## Remote control range



# BASIC CONNECTIONS

## Connecting to a Conventional TV (Example 1)

Connect the DVD video player to your TV.



### Notes:

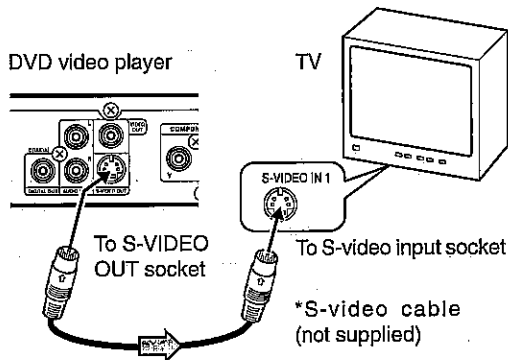
- Please refer to your TV instruction manual.
- When you connect the DVD video player to your TV, be sure to turn off the power and disconnect both units from the wall outlet until all the connections have been made.
- If your TV has one audio input socket, connect the AUDIO OUT sockets of the DVD video player to a Y-cable adapter (not supplied), then connect it to the TV Audio input. Please consult your local audio/video dealer.
- Do not connect the DVD video player to a VCR directly. The playback picture will be distorted because DVD video discs are copy protected.

### Using the S-VIDEO OUT socket

#### Note:

Please follow the steps before turn on the power.

1. If your TV has the S-video input socket, connect the DVD video player with the S-video cable (not supplied). (The VIDEO OUT socket connection is not necessary.) You can enjoy clearer picture playback.
2. You also need to connect the left and right audio cables (not supplied) to the AUDIO OUT sockets of DVD video player and the Audio input sockets of the TV.



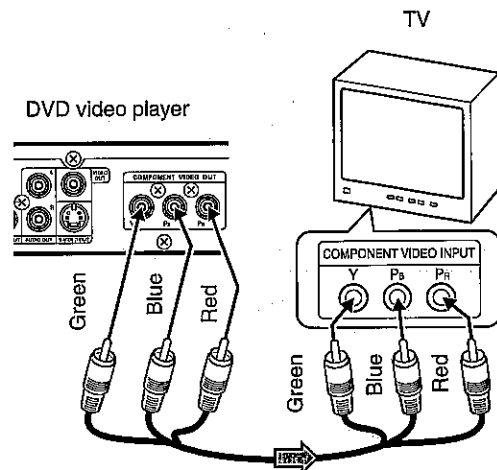
\*Please consult your local audio/video dealer.

### Using the COMPONENT VIDEO OUT sockets

#### Note:

Please follow the steps before turn on the power.

1. If your TV has the component video input sockets, connect the DVD video player to these sockets. (The VIDEO OUT or S-VIDEO OUT socket connection is not necessary.) You can enjoy high quality picture playback.
2. You also need to connect the left and right audio cables (not supplied) to the AUDIO OUT sockets of DVD video player and the Audio input sockets of the TV.

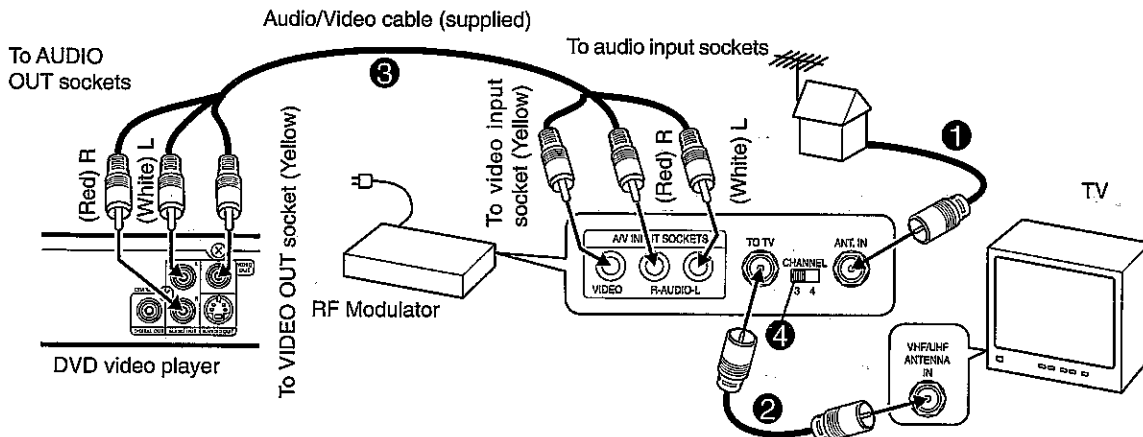


\*Component video cable (not supplied)

### Using RF Modulator

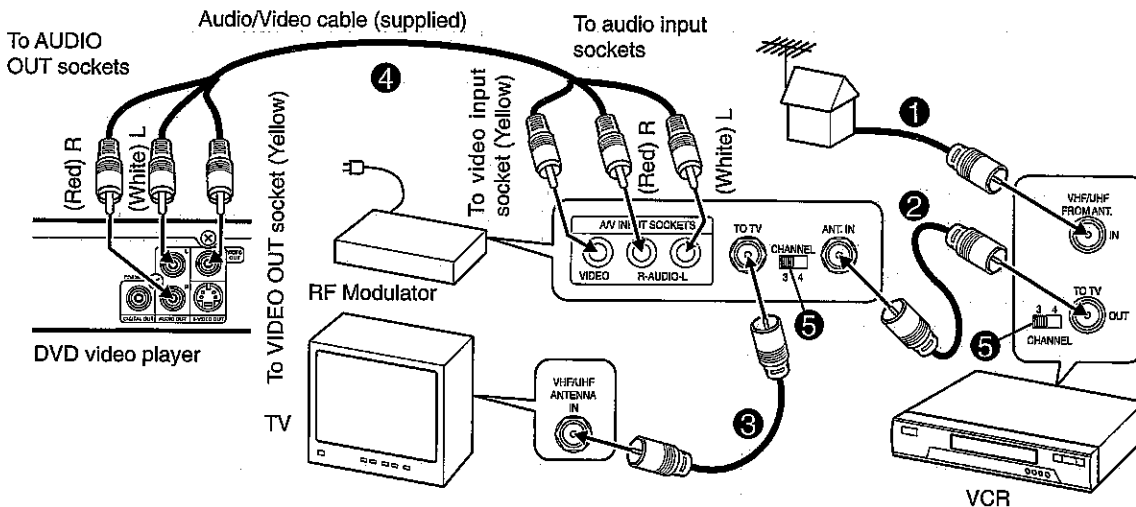
If your TV does not have a Video input socket and has an antenna terminal only, please purchase the \*RF Modulator (not supplied).  
 (\*Please consult your audio/video dealer.)

Example: DVD video player, TV and RF Modulator connections



1. Connect the antenna cable (not supplied) to the ANT. IN terminal of the RF Modulator.
  2. Connect the 75-ohm coaxial cable (not supplied) between the TO TV terminal of the RF Modulator and the VHF/UHF ANTENNA IN terminal of the TV.
  3. Connect the Audio/Video cable (supplied) between the AUDIO OUT and VIDEO OUT sockets of the DVD video player and the AUDIO INPUT and VIDEO INPUT sockets of the RF Modulator.
  4. Turn on the TV, and set the channel number (CHANNEL3 or CHANNEL4) on both TV and RF Modulator, whichever is not used for regular broadcast in your area.
- Note:  
 For more details, please refer to the instruction manual of the RF Modulator.

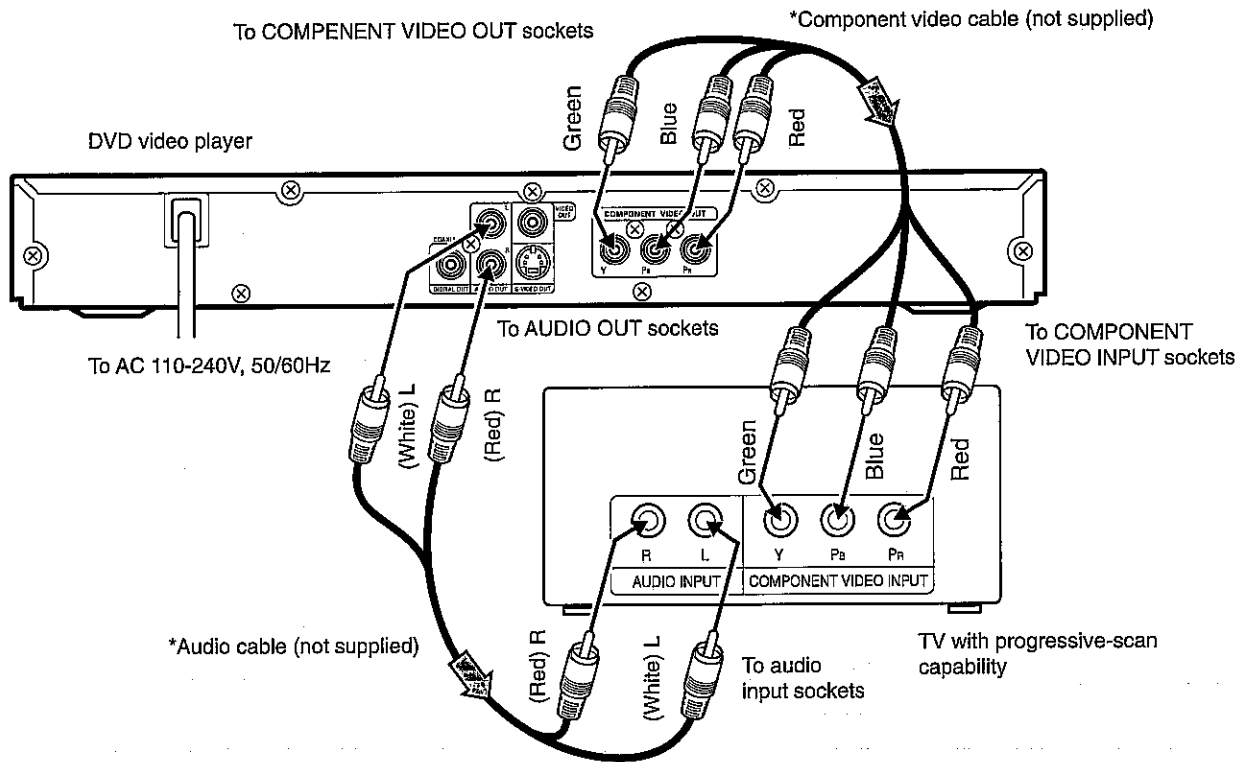
Example: DVD video player, VCR, TV and RF Modulator connections



1. Connect the antenna cable (not supplied) to the VHF/UHF FROM ANT IN terminal of the VCR.
  2. Connect the 75-ohm coaxial cable (not supplied) between the TO TV OUT terminal of the VCR and the ANT. IN terminal of the RF Modulator.
  3. Connect the 75-ohm coaxial cable (not supplied) between the TO TV terminal of the RF Modulator and the VHF/UHF ANTENNA IN terminal of the TV.
  4. Connect the Audio/Video cable (supplied) between the AUDIO OUT and VIDEO OUT sockets of the DVD video player and the AUDIO INPUT and VIDEO INPUT sockets of the RF Modulator.
  5. Turn on the TV, and set the channel number (CHANNEL3 or CHANNEL4) on all TV, VCR and RF Modulator, whichever is not used for regular broadcasts in your area.
- Note:  
 For more details, please refer to the instruction manual of the RF Modulator.

## Connecting to a TV with Progressive-scan Capability (Example 2)

Your TV must be capable of handling progressive scanning and have component video input capability.



\*Please consult your local audio/video dealer.

1. Connect the DVD video player to the component video input jacks of the TV. (The VIDEO OUT or S-VIDEO OUT socket connection is not necessary.)
2. You also need to connect the left and right audio cables (not supplied) to the AUDIO OUT socket of DVD video player and the Audio input sockets of the TV.
3. Set the DVD video player to the **PROGRESSIVE** position. See page E15.

### Notes:

- Please refer to your TV instruction manual.
- When you connect the DVD video player to your TV, be sure to turn off the power and disconnect both units from the wall outlet until all the connections have been made.
- Do not connect the DVD video player to a VCR directly. The playback picture will be distorted because DVD video discs are copy protected.

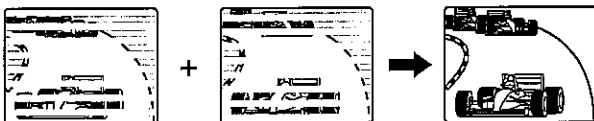
### Progressive Scanning

While interlaced scanning produces one frame of video in two fields, progressive scanning creates one frame in one field.

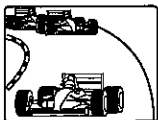
Conventional interlaced scanning constitutes one second with 30 frames (60 fields), but progressive scanning constitutes it with 60 frames from scratch. Progressive scanning can reproduce sharper picture with high resolution for still image or other picture containing long texts or horizontal lines.

This model has compliance with 525p (progressive) system.

### Interlaced scanning



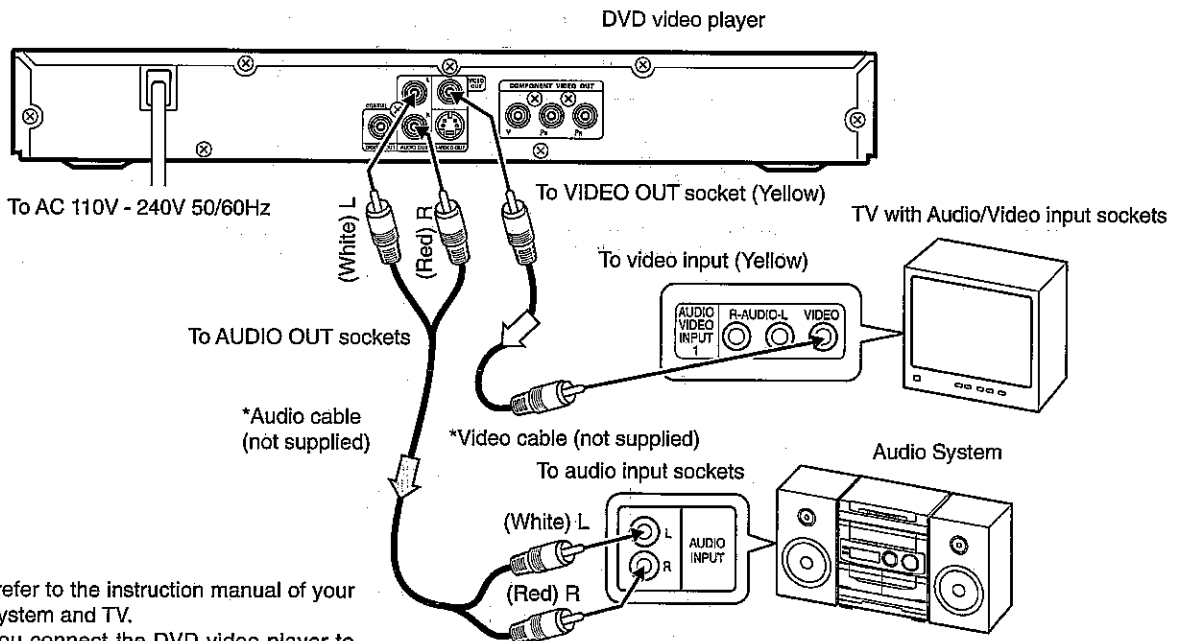
### Progressive-scanning



# ADDITIONAL CONNECTION EXAMPLES

## Connecting to an Audio System and TV (Example 3)

Connect the DVD video player to an Audio System and a TV.



\*Please consult your local audio/video dealer.

### Notes:

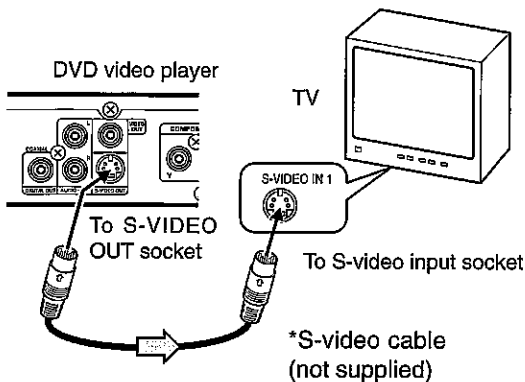
- Please refer to the instruction manual of your Audio System and TV.
- When you connect the DVD video player to other equipment, be sure to turn off the power and disconnect all of the equipment from the wall outlet until all the connections have been made.
- Do not connect the DVD video player to a VCR directly. The playback picture will be distorted because DVD video discs are copy protected.

### Using the S-VIDEO OUT sockets

#### Note:

Please follow the steps before turn on the power.

1. If your TV has the S-video input socket, connect the DVD video player with the S-video cable (not supplied). (The VIDEO OUT socket connection is not necessary.) You can enjoy clearer picture playback.
2. You also need to connect the left and right audio cables (not supplied) to the AUDIO OUT socket of DVD video player and the Audio input socket of the Audio System.



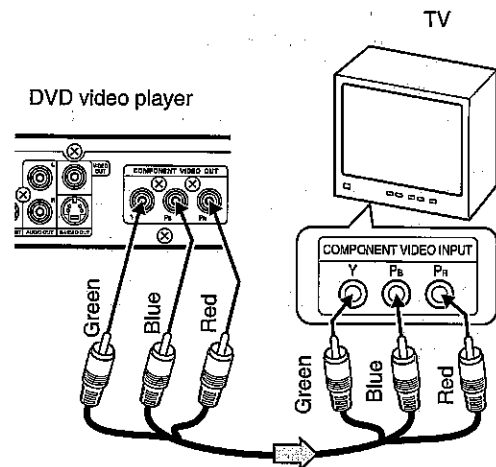
\*Please consult your local audio/video dealer.

### Using the COMPONENT VIDEO OUT sockets

#### Note:

Please follow the steps before turn on the power.

1. If your TV has the component video input sockets, connect the DVD video player to these sockets. (The VIDEO OUT or S-VIDEO OUT socket connection is not necessary.) You can enjoy high quality picture playback.
2. You also need to connect the left and right audio cables (not supplied) to the AUDIO OUT socket of DVD video player and the Audio input socket of the Audio System.



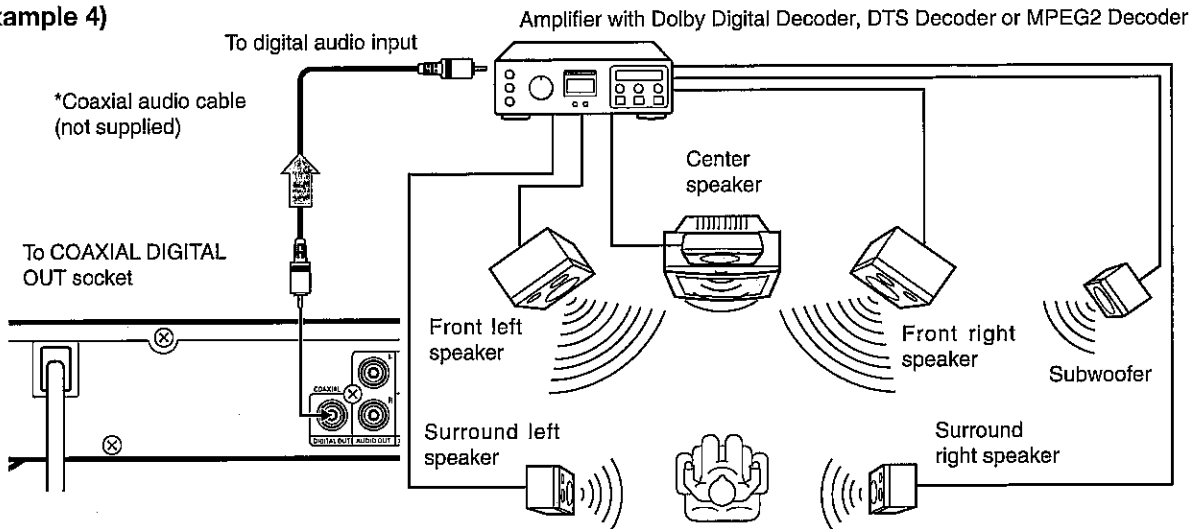
\*Component video cable (not supplied)



**Notes:**

- For VIDEO connection, please refer to "BASIC CONNECTIONS".
- Please refer to the instruction manual of your amplifier.
- When you connect the DVD video player to your amplifier, be sure to turn off the power and disconnect both units from the wall outlet until all the connections have been made.

**Connecting to an Amplifier with Dolby Digital Decoder, DTS Decoder or MPEG2 Decoder (Example 4)**



**To enjoy Dolby Digital sound**  
 Select "DOLBY DIGITAL BITSTREAM" in "Setting Digital Out" on the INITIAL SETTINGS.

**To enjoy DTS sound**  
 Select "DTS ON" in "Setting Digital Out" on the INITIAL SETTINGS.

**To enjoy MPEG2 sound**  
 Select "MPEG BITSTREAM" in "Setting Digital Out" on the INITIAL SETTINGS.

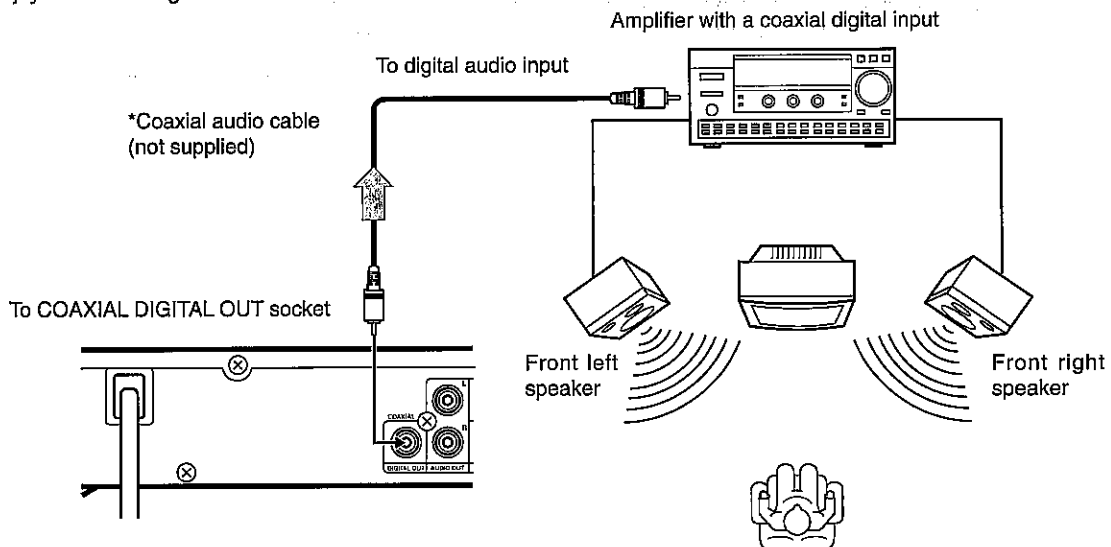
\*Please consult your local audio/video dealer.

Manufactured under license from Dolby Laboratories. "Dolby", "Pro Logic" and the double-D symbol are trademarks of Dolby Laboratories.

"DTS" and "DTS Digital Out" are trademarks of Digital Theater Systems, Inc.

**Connecting to a Digital Amplifier (Example 5)**

You can enjoy 2 Channel Digital Stereo Sound.

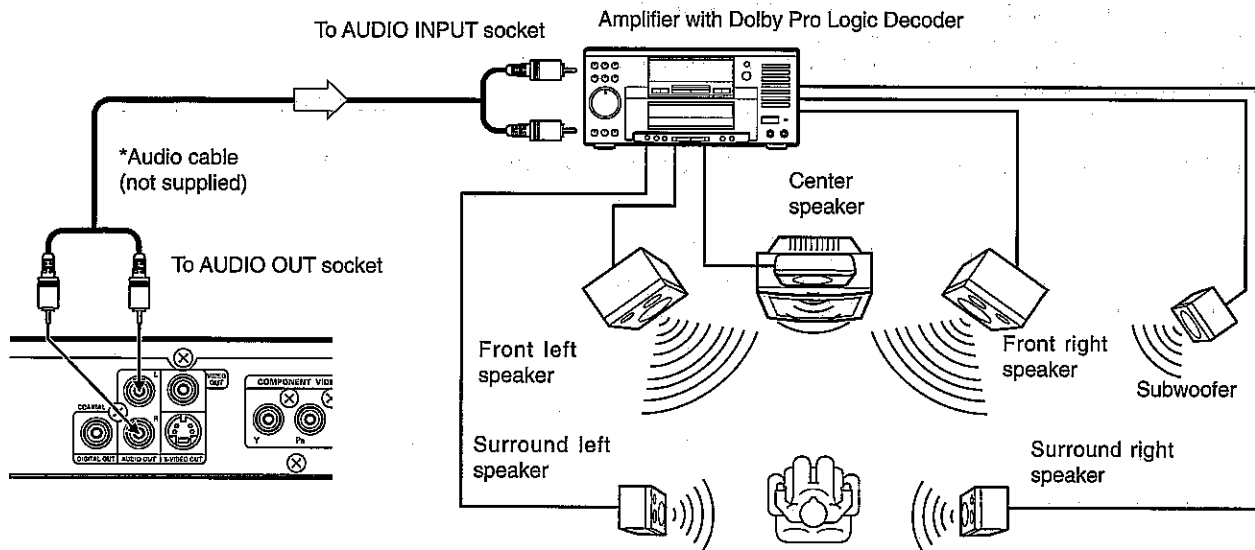


**To enjoy 2 Channel Digital Stereo sound**  
 Select "DOLBY DIGITAL LPCM", "MPEG LPCM", and "DTS OFF" in "Setting Digital Out" on the INITIAL SETTINGS.

**Note:**  
 If "DTS ON" is selected, loud noise will occur.

\*Please consult your local audio/video dealer.

## Connecting to an Amplifier with Dolby Pro Logic Decoder (Example 6)



Note:  
Please refer to your amplifier instruction manual.

\*Please consult your local audio/video dealer.



## FOR SAFE AND EFFICIENT OPERATION

- Do not damage the power cord.
- When not in use, disconnect the power cord from the outlet. Grasp the plug, not the cord, when disconnecting the unit.
- If water should enter the unit, electrical shock or a malfunction may result. Use in an area where there is low humidity and little dust.
- Do not disassemble or alter the unit in any way.
- Do not use the unit in areas where extremes in temperature occur (below 40°F (5°C) or exceeding 95°F (35°C)), or where it may be exposed to direct sunlight.
- Because of the DVD video player extremely low noise and wide dynamic range, there is a tendency to set the volume on the amplifier higher than necessary. Doing so may produce an excessively high output from the amplifier which can cause damage to your speakers. Please be careful in this regard.
- Sudden changes in the surrounding temperature can cause dew to form on the optical pickup lens inside the unit. Under this condition the unit may be unable to operate properly. If this should occur, remove the disc and allow the unit to adjust to the surrounding temperature.
- **When carrying the unit, be sure to remove a disc which may be inside and turn the power off. Then unplug the power cord from the AC outlet after 10 seconds. Carrying the unit with a disc inside may damage the disc and/or the unit.**
- The unit is automatically set to the Screen Saver mode after approximately 5 minutes have elapsed under the stop or pause mode.
- The unit is automatically set to the standby mode after approximately 30 minutes have elapsed under the complete stop mode.
- Do not install this equipment in a confined space, such as a book case or built in cabinet.

Press the **▲** button (or the OPEN/CLOSE button on the remote control) when closing the disc tray. Do not push the disc tray.

# PLAYABLE DISCS

The following types of discs can be played on the unit.

Disc type and logo mark	
DVD-Video	
Audio CD	

**Note:**

- Only the above types of discs can be played on this unit. DVD-Audio, DVD-ROM, DVD-RAM, DVD-RW (VR Mode), CD-ROM, CVD, SACD, etc. cannot be played.
- This unit can play back the Video CD (VCD).
- Some DVD-R, DVD-RW (Video mode), DVD+R, DVD+RW and SVCD discs may be played back.
- This unit is to be used exclusively with the PAL (or NTSC) color system discs. The video output signal format can be selected ("PAL 60" or "NTSC") when playing back the NTSC discs.
- For MP3 CD, please see page 16.
- For Picture/JPEG CD, please see pages 17.

**Region Number**

Region number (Regional restriction code) is built-in to the unit and DVD video discs.

There is a region number on the rear of the unit.

The same region number or region number "ALL" of DVD discs can be used on the unit.

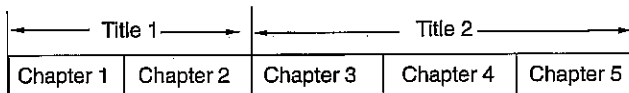
**DVD disc**

There are the marks on some DVD disc packages.

Example:

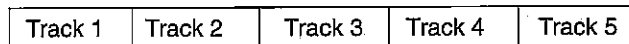


DVD discs are divided into titles, and the titles are sub-divided into chapters.



**Video CD/Audio CD disc**

Video CD/Audio CD discs are divided into tracks.



**Notes on handling discs**

- Do not expose the disc to direct sunlight, high humidity or high temperatures for extended periods of time.
- Discs should be returned to their cases after use. Do not apply paper or write anything on the disc surface.
- Handle the disc by its edge. Do not touch the playing surface (glossy side).
- Fingerprints and dust should be carefully wiped off the playing surface of the disc with a soft cloth. Wipe in a straight motion from the centre to the outside of the disc.
- Never use chemicals such as record cleaning sprays; antistatic sprays or fluids, benzene or thinner to clean discs.

# BASIC OPERATION

## Important Note:

- This instruction manual explains the basic instruction of this unit using the remote control.
- Some DVD video discs have different functions that may not be explained in this instruction manual. You may need extra instruction. In this case, please follow the instructions displayed on the TV screen or jacket or case of the disc.
- "⊘" may appear on the TV screen during operation. This icon means that the function is not available on the disc now.

## Preparations

- Turn on the TV and select the video input for this unit. Select the playback picture size according to the aspect ratio of the TV. (See "Setting display" on Page 19.)
- Turn on the AV amplifier, etc. and select the audio input for this unit.
- Select the desired language for the on-screen menus if required. The following languages can be selected.  
English (default), Spanish, French, German, Portuguese.  
(See "Setting Language" on Page 18).

### Notes:

- Do not touch the disc tray while it is moving.
- Never place anything except a disc on the disc tray. Foreign objects can damage the unit.
- Do not apply excessive force to the disc tray.
- Discs must be placed on the disc tray one at a time.
- To open or close the disc tray, be sure to use the OPEN/CLOSE (or ▲ on the main unit) button. Do not press the disc tray with your hand.

When operation buttons are pressed, that operation is displayed on the TV screen for several seconds.

1. Press the ⏻/ON button. "SANYO" logo appears on the TV screen. The power indicator lights on the front panel.
2. Press the OPEN/CLOSE button: "▲" appears on the TV screen and the disc tray opens. The DISC IN indicator blinks on the front panel.
  - When using the main unit, use the ▲ button.
3. Place the disc with the label facing up on the disc tray.

12 cm disc



8 cm disc



4. Press the OPEN/CLOSE button again. The disc tray closes.
5. Press the ► PLAY button (or PLAY button on the unit) to start playback.
  - The PLAY indicator lights on the front panel. "►" appears briefly on the TV screen.

### Note:

Some discs may start playback automatically.

## Starting play

Press the ► PLAY button.

- When using the main unit, use the PLAY button.

### Notes:

- If the disc is loaded with the label side downward (and it is a single sided disc), or if a badly scratched disc is loaded, "NO DISC" or "NO PLAY" appears on the TV screen. If this occurs, load the disc correctly or replace the disc.

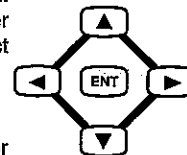
## If a menu screen appears on the TV screen...

Press the ▲, ►, ▼ or ◀ button (or the number buttons), then press the ENT button to select the desired menu.

Playback of the selected menu starts.

### Note:

For more details, please refer to the jacket or case of the disc.



## Stopping Playback

### [DVD]

- Press the ■ button once.  
When you press the ► PLAY button, play starts automatically from the point where you stopped.  
Note:  
Some discs may not resume playback. "RESUME ■" appears briefly on the TV screen. The PLAY indicator blinks on the front panel.
- Press the ■ button twice. The unit stops completely and "STOP" appears on the display.  
When you press the ► PLAY button, play starts from the beginning of the disc.

### [CD] [VCD]

- Press the ■ button. The unit stops completely.

To turn off the power, press the ⏻/ON button.

# VARIOUS PLAYING FUNCTIONS

"⊘" may appear on the TV screen during operation. This icon means that the function is not available on the disc now.

## Selecting a DVD Menu [DVD]

1. Press the MENU button. The main menu screen will appear.  
Note: Press the MENU button again to resume playback.
2. Press the ▲, ▼, ◀ or ▶ button (or the number buttons) to select the desired menu, then press the ENT button. The selected menu play starts.

## Selecting a Top Menu [DVD]

1. Press the TOP MENU button. The top menu appear .
2. Press the ▲, ▼, ◀ or ▶ button (or the number buttons) to select the desired menu, then press the ENT button. The selected menu play starts.

Note:

Selecting a menu operation may differ depending on the disc used and may not be possible on some discs.

## Return button (RETURN) for VCD

Normally, it returns to the previous menu when the RETURN button is pressed during play.

Note:

The operation differs according to the content of the VCD.

## Chapter (Track) Skip



### Skipping forward

Press the NEXT ►► button during play to skip to the next chapter (or track). A chapter (or track) is skipped each time the button is pressed.

- When using the main unit, use the ►► button.

### Skipping backward

Press the PREV ◀◀ button during play to skip back to the beginning of the chapter (or track) currently play.

Press the button again immediately to skip back to the beginning of the previous chapter (or track).

- When using the main unit, use the ◀◀ button.

Note:

You can skip only through the chapters, not over the title on the DVD disc.

## Title or Chapter Search [DVD]

1. Press the SEARCH MODE button once during play or in the stop mode. The title search screen appears on the TV screen.

Example:

TITLE 01/28 CHAPTER 015 /035

2. Press the ► or ◀ button to select "TITLE" or "CHAPTER".
3. Press the number button(s) to enter the title or chapter number.

Example:

To select "3", press 3.

To select "10", press +10, then 0.

To select "24", press +10, +10, then 4.

4. Press the ► PLAY button, playback starts from the selected title (or chapter).

## Track search [VCD] [CD]

Note: If "PBC ON" appears, press the MENU button to select "PBC OFF".

Press the number buttons during play or in the stop mode.

Example:

To select Track No.3, press 3.

To select Track No.10, press +10.

To select Track No.24, press +10, +10, then 4.

Play starts from the selected chapter.

## Time Search [DVD]

1. Press the SEARCH MODE button three times during play. The time search screen appears on the TV screen.

Example:

TITLE 01/02 TIMER --:--:--

2. Press the number buttons to enter the time.

Example:

3 minutes 40 seconds: Press 0, 0, 0, 3, 4, then 0.

20 minutes 5 seconds: Press 0, 0, 2, 0, 0, then 5.

42 minutes 39 seconds: Press 0, 0, 4, 2, 3, then 9.

1 hour 4 minutes 35 seconds: Press 0, 1, 0, 4, 3, then 5.

3. Press the ► PLAY button. Play starts from the searched time.

## [CD] [VCD]

1. Press the SEARCH MODE button once during play. The time search screen appears.

2. Press the number buttons to enter the time.

Example:

2 minutes 5 seconds: Press 0, 2, 0, then 5.

42 minutes 39 seconds: Press 4, 2, 3, then 9.

Play starts from the searched time in the track.

## Fast Play

Press the ►► FWD or ◀◀ REV button repeatedly to select the fast speed forward or reverse play (up to 200 times normal speed in DVD).

### [DVD] [VCD]

►► 1", ►► 2", ►► 3", ►► 4" or ◀◀ 1", ◀◀ 2", ◀◀ 3", ◀◀ 4"

### [CD]

►► 1", ►► 2" or ◀◀ 1", ◀◀ 2"

Press the ► PLAY button to return to normal playback.

## Slow Motion Play

[DVD]: Forward/Reverse slow play, [VCD]: Forward slow play only  
Press the FWD SLOW ► button or REV SLOW ◀ button repeatedly to select the forward slow speed play.

► 1", ► 2", ► 3", ► 4" or ◀ 1", ◀ 2", ◀ 3", ◀ 4"

Press the ► PLAY button to return to normal playback.

Note:

The sound is muted during slow motion play.

## Still picture (Pause)

[DVD] [VCD]: Still picture mode, [CD]: Pause mode

Press the || PAUSE/STEP button during play.

Press the ► PLAY button to return to normal play. "||" appears briefly on the TV screen.

Note: The sound is muted.

## Frame by Frame Advance Playback [DVD] [VCD]

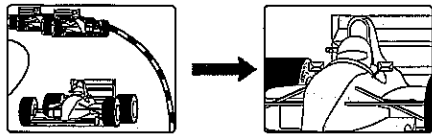
Press the **II PAUSE/STEP** button during play. Each time the button is pressed, the picture advances one frame.

Press the **▶ PLAY** button to return to normal play.

Note:

- The sound is muted.
- Frame playback is operated forward only.

## Picture Zoom (Pin Point Zoom) [DVD]



Press the **ZOOM** button during normal/slow playback or still picture. The central part of the picture is magnified, and "Q 1" appears on the TV screen.

- Each time you press the **ZOOM** button, the zoom mode will be changed as follows:

Q 1 → Q 2 → Q 3 → Q OFF

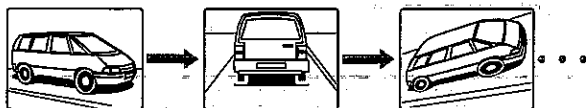
- Press **▲**, **▶**, **▼** or **◀** to change the zoom point.

To return to the original screen, select "Q OFF".

Note:

Picture Zoom may not work on some discs.

## Viewing from a Desired Camera Angle (Multi-Angle) [DVD]



Some DVD video discs may contain scenes which have been shot simultaneously from a number of different camera angles. The jacket or case of discs that are recorded with angles will be marked.

Example:



Note: The recorded angles differ depending on the disc used.

1. Play the disc that is recorded with angles.
2. Press the **ANGLE** button repeatedly until the desired angle appears.

Example:



## Repeat Playback

Press the **REPEAT** button during playback (or programmed playback) of the title (or track) you want repeat.

Each time the button is pressed, the repeat mode will be changed as follows.

[DVD]

↻ CHAPTER: Repeat of chapter being played

↻ TITLE: Repeat of title being played

↻ OFF: Normal playback mode

[VCD] [CD]

↻ T: Repeat of track being played

↻ ALL: Repeat all tracks

↻ OFF: Normal playback mode

Note:

When using Video CD, press the **MENU** button to select "PBC OFF".

## Designated Range Repeat Playback (A-B Repeat)



1. Press the **A-B REPEAT** button during playback at the beginning of the section you want to repeat (Point A). "A-" appears on the TV screen.
2. Press the **A-B REPEAT** button again at the end of the section you want to repeat (Point B). "A-B" appears briefly on the TV screen. The section between points A and B is played repeatedly.
3. To return to normal playback, press the **A-B REPEAT** button again. "OFF" appears briefly on the TV screen.

Note:

Repeat playback or A-B repeat playback mode may not work correctly with some discs.

## Random play [CD]

1. Press the **RANDOM** button once in the stop mode. "RANDOM ON" appears briefly on the TV screen.
2. Press the **▶ PLAY** button to begin random play. The unit will automatically select tracks at random.

Note:

The stop random playback, press the **■** and **RANDOM** button, "RANDOM OFF" appears briefly.

## Programmed Play [CD]

Up to 32 selections can be programmed.

### Programming procedure

1. Press the PROGRAM button in the stop mode.
  - "PROGRAM P00:00" appears on the TV screen.
2. Press the number buttons to select the track number.  
Example:
  - To select Track No.3, press 3.
  - To select Track No.10, press +10, then 0.
  - To select Track No.24, press +10, +10, then 4.

Example:

PROGRAM P01:03  
(The track No.3 is set to the first programmed number.)

3. Repeat step 2 as above to select another track.

Example:

PROGRAM P02:10  
PROGRAM P03:24

4. Press the ► PLAY button to start programmed playback.  
When all programmed selections have played, the unit stops automatically.
  - The programmed contents are retained in memory. If the ► PLAY button is pressed again, programmed playback starts.

Note:

To cancel the program, do one of the following:

- Press the ■ button twice.
- Press the PROGRAM button. ("PROGRAM P00:00" appears.)

## Selecting subtitle language [DVD]

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

1. Press the SUBTITLE button during playback.  
The subtitle language mark appears.  
(Example: 01/03: EN)  
If "OFF" appears, press the button again.
2. Press the SUBTITLE button repeatedly until the desired subtitle language appears on the TV screen.

Example:

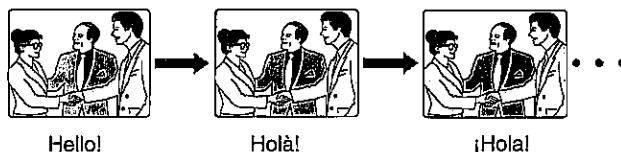
03/03: FR

After a few seconds, "OFF" disappears.

Notes:

- In some cases, the subtitle language is not changed to the selected one.
- When a disc supporting closed caption is played, the subtitle and the closed caption may overlap each other on the TV screen. In this case, turn the subtitle off.
- When the desired language is not selected even if the button is pressed, the language is not available on the disc.
- When the power is turned on or the disc is replaced, select the subtitle language again.
- If the subtitle language is not necessary, press the SUBTITLE button to select "OFF".

## Selecting Audio Soundtrack Language (Multi-Language) [DVD]



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

1. Press the AUDIO button during playback.
2. Press the AUDIO button repeatedly until the desired language appears on the TV screen.

Examples:

01/04 DOLBY D 2CH EN

02/04 DTS 5.1CH EN

- If using an amplifier with DTS decoder, the DTS sound will be heard.

Notes:

- When the desired language is not selected even if the button is pressed, the language is not available on the disc.
- When the power is turned on or the disc is replaced, select the language again.
- If the language is not recorded on the disc, only the available language on the disc will be heard.

## Changing the audio channel output [VCD] [Audio CD]

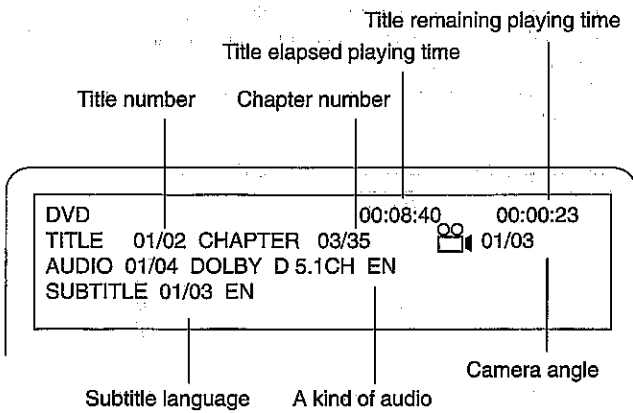
During VCD play, press the AUDIO button to select an audio channel.  
L - MONO → R - MONO → STEREO → ...

## Selecting on-screen information

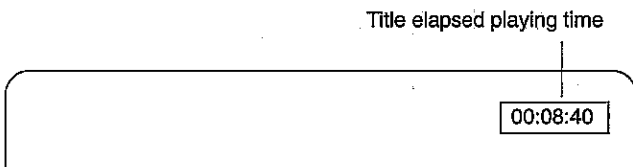
Press the ON SCREEN button repeatedly to show the disc information (Title, Chapter, Title elapsed playing time, Language, etc.).

### Example for DVD:

1. Press the ON SCREEN button during play.



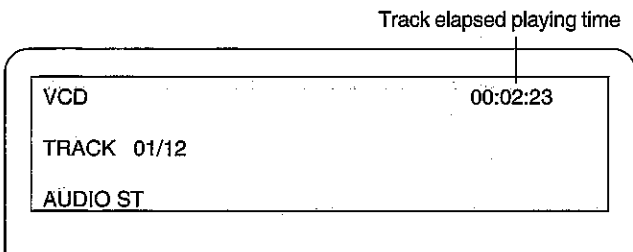
2. Press the ON SCREEN button again.



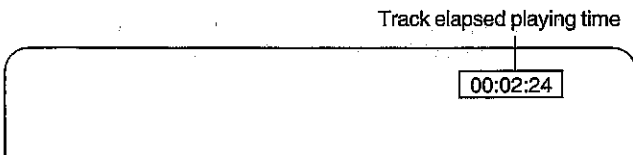
3. Press the ON SCREEN button to close the disc information.

### Example for VCD:

1. Press the ON SCREEN button during play.



2. Press the ON SCREEN button again.



3. Press the ON SCREEN button to close the disc information.

Note:

For Audio CD, please refer to "Example for VCD" as above.



# MP3 OPERATION

## Before Starting

This unit can play back the CD that has recorded music data, MP3 files.

- The file system is ISO9660 Level 1 and Level 2.
- If the CD has both audio CD tracks and MP3 files, only audio CD tracks are played.
- It would take 30 seconds or more for this unit to read MP3 files depending on its structure.
- This unit can recognize up to 256 files or folders per disc. The CD with 257 files or folders and over is not available to this unit.
- MP3 CDs may not be played in the recorded order.
  1. Please use the MP3 software with the function that can record data alphabetically or numerically.
  2. Please refrain from making many sub-folders by preference.

However, some CD-R/RWs and MP3 CDs cannot be played back depending on the recording conditions.

Before playing back MP3 files, please read the following.

## MP3 CD

- MP3 files must have the extension letters, ".MP3" or ".mp3".
- Standard, sampling frequency, and the bit rate:  
MPEG-1 Audio  
32kHz, 44.4kHz, 48kHz  
32kbps ~ 320kbps (constant bit rate or variable bit rate)
- The recommended recording setting for a high-quality sound is 44.1kHz of sampling frequency and 128kbps of constant bit rate.

Microsoft, Window Media, and Windows Logo are trademarks or registered trademarks of Microsoft Corporation in both the United States and other countries.


## Limitation on display

- Available letters for display are the following: capital or small alphabets of A through Z, and numbers of 0 through 9.
- Other letters than those above are replaced in "-" (hyphen).

Note:

This CD has no music data or non-MP3 files cannot be playback back.

## MP3 CD Playback

1. Load the disc with the label facing up on the disc tray.  
"FILE" screen appears.
2. To select the folder or file, do one of the following:
  - Press the number button(s).Example:  
To select No.3, press 3.  
To select No.10, press +10, then 0.  
To select No.24, press +10, +10, then 4.
  - Press ▼ button to select the folder or file, and press the ENT button.
  - The file menu of the selected folder appears.
  - If the file is selected, the selected file playback starts.
3. Repeat step 2 to select the file in the file menu, Playback starts.

To stop play, press the ■ button.

## Pause

Press the II PAUSE/STEP button during playback.

- "II" appears on the TV screen.
- The PLAY indicator blinks on the unit.

Note:

The sound is muted.

Press the ► PLAY button to return to normal playback.

## File Skip

### Skipping forward

Press the NEXT ►► button during playback to skip to the next file. "►►" appears briefly on the TV screen.

### Skipping backward

Press the PREV I◀◀ button during playback to skip back to the beginning of the file currently play.

"I◀◀" appears briefly on the TV screen.

Press the button again immediately to skip back to the beginning of the previous file.

## Repeat Playback

Press the REPEAT button during playback.

Each time the button is pressed, the repeat mode will be changed as follows:

- ↻ T: Repeat of file being played
- ↻ FOLDER: Repeat all files in the folder
- ↻ ALL: Repeat all files (and all JPEG)
- ↻ OFF: Normal playback mode

## To Check the Elapsed Playing Time

Press the ON SCREEN button during playback.

- The current file elapsed playing time appears.
- Press the button again to turn it off.

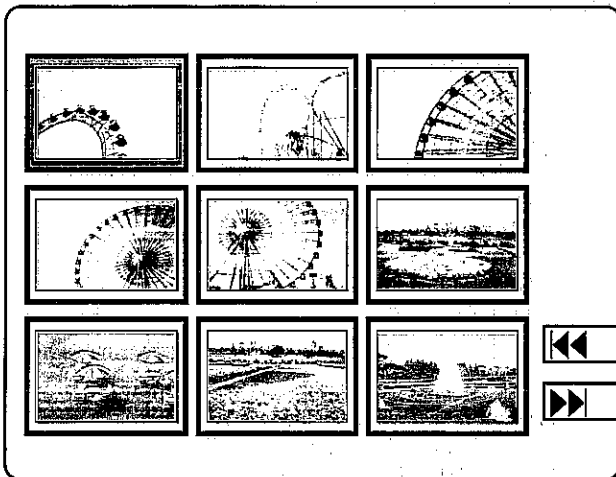
# PICTURE CD OPERATION

## KODAK Picture CD Playback

With KODAK Picture CD, it is easy to turn film into pictures you can email from your PC and view on the unit.

Just bring your film in for processing, and check the box for KODAK Picture CD. You'll get back your prints and negatives as usual-plus you will get a special CD that contains your pictures along with software that lets you view, enhance, share, and print your pictures from your PC and view them on the unit.

1. Load the KODAK Picture CD.  
The first thumbnail pictures (maximum 9-picture) appear on the screen,  
Example:



2. Press the **▲**, **▶**, **▼** or **◀** button to move the cursor to the desired picture.  
- To go to the next or previous thumbnail pictures, press **NEXT ▶▶** or **PREV ◀◀** button.

3. Press the **ENT** or **▶ PLAY** button to start the slide show from the selected picture.

If you press the **|| PAUSE/STEP** button during the slide show to pause.

Press the **▶ PLAY** (or **NEXT ▶▶**) button to continue.

- If the picture appears upside down, sideways, etc...

Press **▲**, **▶**, **▼** or **◀** button as follows:

- ▶: Rotate it 90 degrees clockwise.
- ◀: Rotate it 90 degrees counterclockwise.
- ▲: Change it to the mirrored image picture upside down.
- ▼: Change it to the mirrored right-and-left reversed image picture.

- If you press the **NEXT ▶▶** button or the **PREV ◀◀** button during the slide show, it skips to the next picture or previous picture.



- To stop the slide show, press the **■** button. The thumbnail pictures appear.

### Notes:

- If the disc is loaded with the label side downward, or if a badly scratched disc is loaded, "NO DISC" or "NO PLAY" appears on the TV screen. If this occurs, load the disc correctly or replace the disc.
- The file system is ISO9660 Level 1 and Level 2.
- This unit can recognize up to 256 files or folders per disc. The CD with 257 files or folders and over is not available to this unit.

- FUJICOLOR CD can be used.
- Some discs cannot be played back depending on the recording conditions.
- It would take 30 seconds or more for this unit to read KODAK Picture CDs depending on its structure.

KODAK and Picture CD are registered trademarks of Eastman Kodak company.

## JPEG CD Playback

You can also view digital images from JPEG files on disc created by your PC.

- It would take 30 seconds or more for this unit to read the JPEG files depending on its structure.
- Some JPEG files cannot be played back depending on the recording conditions.

1. Load the JPEG CD.  
"FILE" screen appears.
2. To select the file, do one of the following:
  - Press the number button(s).  
Example:  
To select No.3, press 3.  
To select No.10, press +10, then 0.  
To select No.24, press +10, +10, then 4.
  - Press **▼** to select the file, and press the **ENT** button.



The slide show starts.

### If the picture appears upside down, sideways, etc...

Press **▲**, **▶**, **▼** or **◀** as follows:

- ▶: Rotate it 90 degrees clockwise.
- ◀: Rotate it 90 degrees counterclockwise.
- ▲: Change it to the mirrored image picture upside down.
- ▼: Change it to the mirrored right-and-left reversed image picture.

The file list appears after the last file has displayed.

- To stop the slide show, press the **■** button. The file list appears.

### Notes:

- To stop the slide show, press the **■** button.
- If the disc is loaded with the label side downward, or if a badly scratched disc is loaded, "NO DISC" or "NO PLAY" appears on the TV screen. If this occurs, load the disc correctly or replace the disc.
- The file system is ISO9660 Level 1 and Level 2.
- This unit can recognize up to 256 files or folders per disc. The CD with 257 files or folders and over is not available to this unit.
- JPEG resolution up to 5120 x 3840.
- Some discs cannot be played back depending on the recording conditions.

### Picture zoom

1. Press the **|| PAUSE/STEP** button at the desired picture (KODAK Picture CD and JPEG CD).
2. Press the **ZOOM** button to select "Q".
3. Press the **FWD ▶▶** or **REV ◀◀** button to select the desired picture size.
  - To return to the original size, select "Q OFF".
  - Press the **▶ PLAY** button to resume the slide show.

### If the disc is mixed with MP3 and JPEG files...

The files will be played back in alphabetical order.

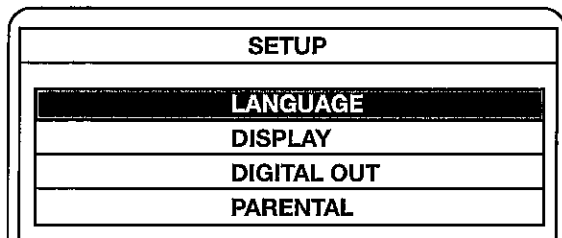
# INITIAL SETTINGS FOR DVD

Once the initial settings have been completed, the unit can always be operated under the same conditions.

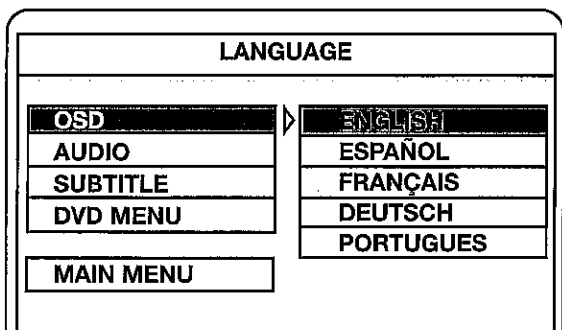
The settings will be retained in the memory until they are changed, even if the power is turned off.

## Setting Language

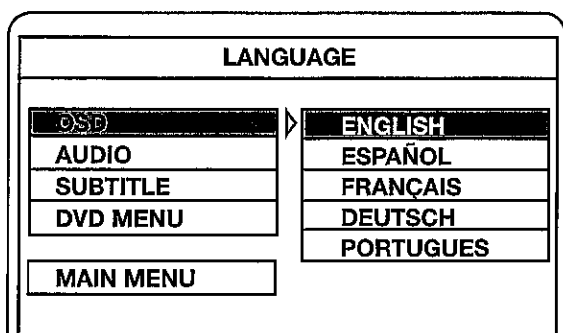
1. Press the SETUP button in the stop mode. The setup screen appears and "Language" is highlighted.



2. Press the ENT button.  
"LANGUAGE" screen appears.  
"OSD (on-screen display)" is highlighted.



3. Press the ► button to select the submenu of "OSD".
4. Press the ▼ or ▲ button to select the language (highlighted).
5. Press the ENT button.  
The OSD language is set.  
(In this example, "OSD" is English.)



6. Press the ◀ button to skip back to "OSD".
7. Press the ▼ button to select "AUDIO".  
The sub menu ("DISC", "ENGLISH", "SPANISH", "FRENCH", "GERMAN" or "PORTUGUESE") appears.

8. Press the ► button to select the submenu of "AUDIO".
9. Press the ▼ or ▲ button to select the language (highlighted).
10. Press the ENT button.  
The AUDIO language is set.
11. Press the ◀ button to skip back to "AUDIO".
12. Repeat steps 7 ~ 11 to set "SUBTITLE" and "DVD MENU".
13. Press the SETUP button to close the screen.

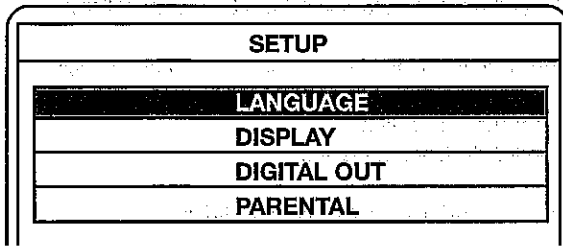
### Notes:

- You cannot switch audio sound track languages if there is only one language recorded on the disc.
- When you play back a DVD disc, the unit automatically displays the pre-selected subtitle language if it is included on the disc.

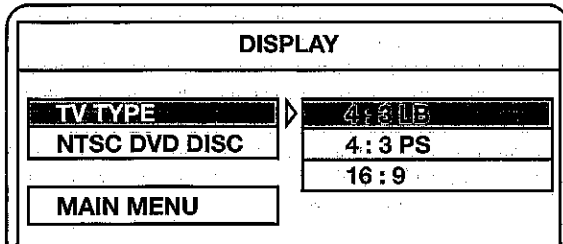
- In this instruction manual, the language in on-screen display is English. If you change the language, please follow the selected language in on-screen display.
- For improvement, on-screen displays subject to change without notice.

## Setting Display

1. Press the SETUP button in the stop mode.  
"SETUP" screen appears.



2. Press the ▼ button to select "DISPLAY".
3. Press the ENT button.  
"DISPLAY" screen appears.



4. Press the ► button to select the submenu of "TV TYPE".
5. Press the ▼ or ▲ button to select the appropriate setting for your TV screen size ("4:3 LB", "4:3 PS" or "16:9").
6. Press the ENT button.  
The TV type is set.
7. Press the ◀ button to skip back to "TV TYPE".
8. Press the ▼ button to select the submenu of "NTSC DVD DISC".  
The submenu appears.
9. Repeat steps 4 - 7 for this item.
10. Press the SETUP button to close the screen.

### Note:

To return to the "SETUP" screen, press the ▼ button to select "MAIN MENU", and press the ENT button.

### TV Type:

Select the appropriate setting for your TV screen size.

#### 4:3 LB (Letterbox):

Select when a conventional TV set is connected. When the wide screen disc is played, the black bands appear at the top and bottom of screen.



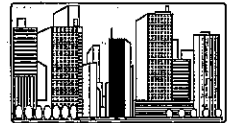
#### 4:3 PS (Panscan)

Select when a conventional TV set is connected. When the wide screen disc is played back, it displays picture cropped to fill your TV screen. The left and right edges are cut off.



#### 16:9

Select when a wide screen TV set is connected. Played in "FULL" size. (Setting the wide screen TV to "FULL" mode is also necessary.)



### Note:

- The screen size may differ depending on the DVD discs.
- If you select "16:9" to get rid of the black bands on screen when wide screen disc is played, picture may be slightly distorted.
- In some discs, even if "4:3 PS" is selected, the black bands may remain on the screen.

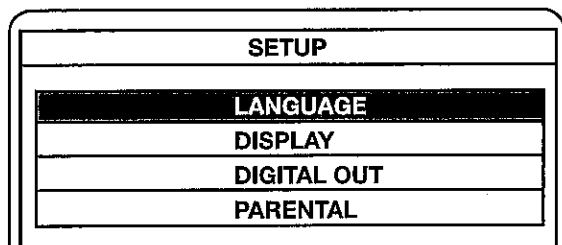
### NTSC Disc:

Select the video output signal format to "PAL 60" or "NTSC" when playing back the NTSC discs.

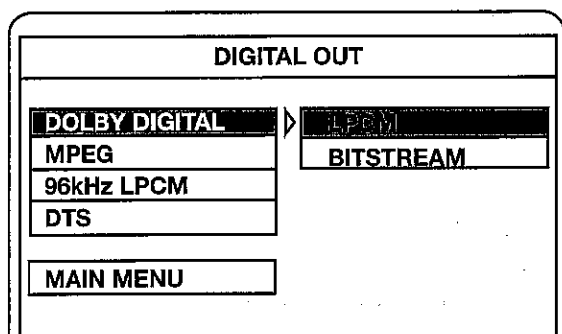
## Setting digital out

If the COAXIAL DIGITAL OUT socket is connected to the amplifier, you must set as follows.

1. Press the SETUP button in the stop mode.  
"SETUP" screen appears.



2. Press the ▼ button to select "DIGITAL OUT".
3. Press the ENT button.  
"DIGITAL OUT" screen appears.



4. Press the ► button to select the submenu.
5. Press the ▼ or ▲ button to select "LPCM" or "BITSTREAM".

### DOLBY DIGITAL:

If your amplifier has Dolby Digital Decoder, select "BITSTREAM". If not, select "LPCM".

6. Press the ENT button.  
The submenu is set.
7. Press the ◀ button to skip back to "DOLBY DIGITAL".
8. Repeat steps 2 - 7 to set other items ("MPEG", "96kHz LPCM" and "DTS").
9. Press the SETUP button to close the screen.

### Dolby Digital:

If your amplifier has Dolby Digital Decoder, select "BitStream". If not, select "LPCM".

### MPEG (Moving Picture Expert Group):

If your amplifier has MPEG2 Decoder, select "BitStream". If not, select "LPCM".

### DTS:

If your amplifier has DTS Decoder, select "ON". If not, select "OFF".

### 96kHz LPCM (96kHz Liner Pulse Code Modulation):

If your amplifier is available for 96kHz sampling, select "96kHz LPCM". If not, select "48kHz LPCM".

### Notes:

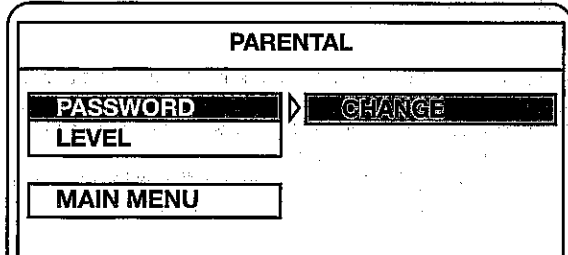
- When "48kHz LPCM" is set, there are 48kHz LPCM audio signals from the AUDIO OUT jacks, not 96kHz LPCM audio signals.
- When playing back the DVD video disc which recorded with 96kHz LPCM, there is no digital output.
- However playing back the DVD video disc with no copyright protection, the sound is original recorded sound.

## Setting Parental

### Note:

The PASSWORD is set to "0000" before shipping from the factory.

1. Press the SETUP button in the stop mode.  
"SETUP" screen appears.
2. Press the ▼ button to select "PARENTAL".
3. Press the ENT button.  
"PARENTAL" screen appears.



4. Press the ► button to select "CHANGE".
5. Press the ENT button.  
"PASSWORD CHANGE" screen appears.
6. Press the number buttons to enter the 4 digits password in "OLD PASSWORD".



"NEW PASSWORD" is highlighted.

### Note:

If you change the password for first time, enter 0, 0, 0, 0.  
Because the initial password is set to "0000" before shipping from the factory.

7. Press the number buttons to enter a new 4 digits password in "NEW PASSWORD".



"CONFIRM" is highlighted.

8. Enter the same password in "CONFIRM".
9. Press the ENT button.  
The password is set.  
"PARENTAL" screen returns.
10. Press the ◀ button to skip back to "PASSWORD".
11. Press the ▼ button to select "LEVEL".  
The submenu appears.
12. Press the ► button to select the submenu of "LEVEL".
13. Press the ▼ button or the ▲ button to select the parental lock level ("OFF" ~ "8").
14. Press the ENT button.  
The password confirmation screen appears.

15. Enter the same password in the box.

16. Press the ENT button.  
The parental lock level is set.  
"PARENTAL" screen returns.

17. Press the ◀ button to skip back to "LEVEL".

18. Press the SETUP button to close the screen.

### Note:

To return to the "SETUP" screen, press the ▼ button to select "MAIN MENU", and press the ENT button.

## Parental Control

MPAA (Motion Picture Association of America) Guideline is a rating system that provides advanced cautionary information to parent about the content of movie programs.

The parental lock level is equivalent to the following MPAA Rating System.

Level 7: NC-17 (No one 17 and under admitted)

Level 6: R (Restricted)

Level 4: PG-13 (Parents strongly cautioned)

Level 3: PG (Parental guidance suggested)

Level 1: G (General audiences)

Some DVD discs contain a restriction level which enables parents to prevent playback of discs by children. This unit is equipped with a password designed to prevent children changing the level.

You cannot play DVD video discs rated higher than the level you selected unless you cancel the parental lock function.

For example, when you select level "5", the unit will not play discs with ratings of "6", "7" or "8". The information will appear on the TV screen.

### If you forget the password...

Enter +10, +10, +10, +10, even if 4 digits "xxxx" appears. It returns to "0000" (Initial setting).

See the left column to set the password and parental lock level again.

### Note:

DVD video discs may or may not respond to the parental lock settings. Make sure this function works with your DVD video discs.

# TROUBLESHOOTING GUIDE

If you have followed the instructions and are having difficulty operate the unit, locate the SYMPTOM in the left column below. Check the corresponding POSSIBLE CAUSE and CORRECTIVE ACTION columns to locate and remedy the problem.

SYMPTOM	POSSIBLE CAUSE	CORRECTIVE ACTION
No picture.	No disc is loaded.	Load a disc.
	An unplayable disc is loaded.	Load a playable disc. (Check the disc logo, type, color system and regional code.)
	The TV is not set to receive signal from the player.	Select the correct input function on the TV.
	No video connection.	Connect the video lead to the appropriate socket.
No sound.	No audio connection.	Connect the audio leads to the appropriate sockets.
The playback picture is poor.	An unplayable disc is loaded.	Load a playable disc. (Check the disc logo, type, colour system and regional code.)
"ⓧ" appears on the TV screen.	The selected function does not operate on the disc now.	The feature or action cannot be completed at this time because: <ul style="list-style-type: none"> <li>- The feature is not available at the moment.</li> <li>- The DVD software restricts it.</li> <li>- The DVD software does not support the feature (e.g., angles).</li> </ul>
No start play.	No disc is loaded.	Load a disc.
	An unplayable disc is loaded.	Load a playable disc. (Check the disc logo, type, colour system and regional code.)
	The disc is loaded with the label side down.	Load the disc on the disc tray correctly.
	The disc is dirty.	Clean the disc or replace it.
	"PARENTAL" is set.	Cancel the parental lock function or change the rating level. Reset it after play.
The operation or display is not normal.	The unit must be reset.	<ol style="list-style-type: none"> <li>1. Disconnect the mains lead.</li> <li>2. Reconnect the mains lead.</li> <li>3. Resume operation.</li> </ol>
"NO PLAY" appears on the TV screen.	An unplayable disc is loaded.	Load a playable disc. (Check the disc logo, type, color system and region number. See page 10.)
	"PARENTAL" is set.	Cancel the parental lock function or change the rating level. Reset it after play. (See page 21.)
The remote control does not work properly.	The disc may not have the correct file or data.	Load a playable disc. window,
	The batteries in the remote control are weak, or installed incorrectly.	Check the battery polarity (+ or -). Replace the batteries.
	The remote control is not aimed at the remote sensor window.	Aim the remote control at the remote sensor.

## CLEANING THE UNIT

Clean the outside of the unit with a clean soft cloth moistened with lukewarm water. Do not use benzene or alcohol since they will mar the finish of the surfaces.

# SPECIFICATIONS

**Playback standard:**

PAL or NTSC

**Laser:**

Semiconductor laser, wavelength: 650/790 nm

Laser output (Continuous wave max.):

1mW (DVD), 0.5 mW (CD)

**Frequency range (digital audio):**

4 Hz to 44 kHz (DVD fs: 96 kHz)

**Signal to noise ratio:**

More than 105 dB

**Harmonic distortion (digital audio):**

0.003 %

**Wow and flutter:**

Below measurable level

**Outputs:**

**S-VIDEO OUT:**

Y: 1.0 V<sub>p-p</sub> (75 Ω)

C: 0.286 V<sub>p-p</sub> (75 Ω)

**COMPONENT VIDEO OUT:**

Y: 1.0 V<sub>p-p</sub> (75 Ω)

P<sub>B</sub>: 0.7 V<sub>p-p</sub> (75 Ω)

P<sub>R</sub>: 0.7 V<sub>p-p</sub> (75 Ω)

**AUDIO OUT:**

2 V rms

**VIDEO OUT:**

1.0 V<sub>p-p</sub> (75 Ω)

**DIGITAL OUT:**

Coaxial

**Power requirements:**

AC 110 ~ 240 V, 50/60 Hz

**Power consumption:**

14W

**Dimensions:**

360(W) x 50(H) x 250(D) mm

**Weight:**

1.94kg

**IMPORTANT INFORMATION**

Because its products are subject to continuous improvement, SANYO reserves the right to modify product designs and specifications without notice and without incurring any obligation.



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