DVD & HDD RECORDER

OWNER'S MANUAL

MODEL: RH4820

Before connecting, operating or adjusting this product,
please read this instruction booklet carefully and completely.

FOR THE GUARANTEE TERMS & CONDITIONS,
PLEASE REFER TO BACK COVER OF THIS MANUAL.

Safety Precautions

CAUTION
RISK OF ELECTRIC SHOCK
DO NOT OPEN

CAUTION: TO REDUCE THE RISK
OF ELECTRIC SHOCK
DO NOT REMOVE COVER (OR BACK)
NO USER-SERVICEABLE PARTS INSIDE
REFER SERVICING TO QUALIFIED SERVICE
PERSONNEL.

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

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

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

WARNING: Do not install this equipment in a confined space such as a book case or similar unit.

CLASS 1 LASER PRODUCT
KLASSE 1 LASER PRODUKT
LUOKAN 1 LASER LAITE
KLASS 1 LASER APPARAT
CLASSE 1 PRODUIT LASER

CAUTION:

This recorder employs a Laser System.

To ensure proper use of this product, please read this owner's manual carefully and retain for future reference should the unit require maintenance, contact an authorized service location (see service procedure).

Use of controls, adjustments, or the performance of procedures other than those specified herein may result in hazardous radiation exposure.

To prevent direct exposure to laser beam, do not try to open the enclosure. Visible laser radiation when open. DO NOT STARE INTO BEAM.

CAUTION: The apparatus should not be exposed to water (dripping or splashing) and no objects filled with liquids, such as vases, should be placed on the apparatus.

CE This product is manufactured to comply with the radio interference requirements of EEC DIRECTIVE 89/336/EEC, 93/68/EEC and 73/23/EEC.

POWER: This DVD Recorder operates on a mains supply of 110-240V~, 50/60Hz.

WIRING: This DVD Recorder is supplied with a BSI 1363 approved 13 amp mains plug, fused at 5 amp. When replacing the fuse always use a 5 amp BS 1362, BSI or ASTA approved type. Never use this plug with the fuse cover omitted. To obtain a replacement fuse cover contact your dealer or "LG Electronics U.K.Ltd." If the type of plug supplied is not suitable for the mains sockets in your home, then the plug should be removed and a suitable type fitted. Please refer to the wiring instructions below:

WARNING: A mains plug removed from the mains lead of this DVD Recorder must be destroyed. A mains plug with bared wires is hazardous if inserted in a mains socket.
Do not connect either wire to the earth pin, marked with the letter E or with the earth symbol ⏚ or coloured green or green and yellow.
If any other plug is fitted, use a 5 amp fuse, either in the plug, or at the distribution board.

IMPORTANT: The wires in this mains lead are coloured in accordance with the following codes:
- BLUE: NEUTRAL, BROWN: LIVE - As the colours of the wires in the mains lead of this DVD Recorder may not correspond with the coloured marking identifying the terminals in your plug, proceed as follows: The wire which is coloured blue must be connected to the terminal which is marked with the letter N or coloured black. The wire which is coloured brown must be connected to the terminal which is marked with the letter L or coloured red.

NOTES ON COPYRIGHTS:

It is forbidden by law to copy, broadcast, show, broadcast via cable, play in public, or rent copyrighted material without permission.
This product features the copy protection function developed by Macrovision. Copy protection signals are recorded on some discs. When recording and playing the pictures of these discs on a VCR, picture noise will appear.
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.

SERIAL NUMBER: The serial number is found on the back of this unit. This number is unique to this unit and not available to others. You should record requested information here and retain this guide as a permanent record of your purchase.

Model No. _____

Serial No. _____

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About the symbols for instructions

⚠ Indicates hazards likely to cause harm to the unit itself or other material damage.

Indicates special operating features of this unit.

Indicates tips and hints for making the task easier.

DVD & HDD Recorder Overview

Recordable Discs

DVD-RW	12cm/8cm, single-sided, single layer disc Approx. max. recording time (LQ mode): 240 minutes (4.7GB), 80 minutes (1.46GB)
DVD-R	12cm/8cm, single-sided, single layer disc Approx. max. recording time (LQ mode): 240 minutes (4.7GB), 80 minutes (1.46GB)

Notes

– This recorder cannot record CD-R or CD-RW discs.
– DVD-R/RW and CD-R/RW discs recorded using a personal computer or a DVD or CD recorder may not play if the disc is damaged or dirty, or if there is dirt of condensation on the recorder's lens.
– If you record a disc using a personal computer, even if it is recorded in a compatible format, there are cases in which it may not play because of the settings of the application software used to create the disc. (Check with the software publisher for more detailed information.)

Playable Discs

DVD VIDEO	DVD (8 cm/12 cm disc)
COMPACT disc DIGITAL VIDEO	Video CD (VCD) (8 cm / 12 cm disc)
COMPACT disc DIGITAL AUDIO	Audio CD (8 cm/12 cm disc)

In addition, this unit can play DVD-R/DVD-RW discs; CD-R/CD-RW discs that contain audio titles, MP3 files, or JPEG files; SVCD; and kodak picture CDs.

Notes

– Depending on the conditions of the recording equipment or the CD-R / RW (or DVD–R / RW, DVD+R / RW) disc itself, some CD-R/RW (or DVD–R / RW, DVD+R / RW) discs cannot be played on the unit.
– Do not attach any seal or label to either side (the labeled side or the recorded side) of a disc.
– Do not use irregularly shaped CDs (e.g., heart-shaped or octagonal). Doing so may result in malfunctions.

Regional code of the recorder and DVDs

This recorder is designed and manufactured for playback of Region 2 encoded DVD software. The region code on the labels of some DVD discs indicates which type of the recorder can play those discs. This unit can play only DVD discs labeled 2 or ALL. If you try to play any other discs, the message "Incorrect region code. Can't play back" will appear on the TV screen. Some DVD discs may not have a region code label even though their playback is prohibited by area limits.

Notes on DVDs and Video CDs

Some playback operations of DVDs and Video CDs may be intentionally fixed by software manufacturers. As this unit plays DVDs and Video CDs according to disc content designed by the software manufacturer, some playback features of the unit may not be available or other functions may be added.
Refer also to the instructions supplied with the DVDs and Video CDs. Some DVDs made for business purposes may not be played on the unit.

Disc-related terms

Title (DVD only)

The main film content or accompanying feature content or music album.
Each title is assigned a title reference number enabling you to locate it easily.

Chapter (DVD only)

Sections of a picture or a musical piece that are smaller than titles. A title is composed of one or several chapters. Each chapter is assigned a chapter number to enable you to locate the chapter you want. Depending on the disc, chapters may not be labeled.

Track (Video CD and audio CD only)

Sections of a picture or a musical piece on a video CD or an audio CD. Each track is assigned a track number, enabling you to locate the track you want.

Scene

On a video CD with PBC (Playback control) functions, moving pictures and still pictures are divided into sections called "Scenes". Each scene available is displayed on the Scene menu and assigned a scene number, enabling you to locate the scene you want.
A scene may be composed of one or several tracks.

Types of video CDs

There are two types of video CDs:

Video CDs equipped with PBC (Version 2.0)

PBC (Playback control) functions allow you to interact with the system via menus, search functions, or other typical computer-like operations. Moreover, high resolution still pictures can be played if they are included on the disc.

Video CDs not equipped with PBC (Version 1.1)

Operated in the same way as audio CDs, these discs allow playback of video pictures as well as sound, but they are not equipped with PBC.

DVD & HDD Recorder Overview (Continued)

About DVD-R and DVD-RW disc

How are DVD-R and DVD-RW discs different?
The essential difference between DVD-R and DVD-RW is that DVD-R is a record-once medium, while DVD-RW is a re-recordable/erasable medium. You can re-record/erase a DVD-RW disc approximately 1,000 times.

Can I play my recordable discs in a regular DVD player?
Generally, DVD-R discs and DVD-RW discs recorded in Video mode are playable in a regular DVD player, but they must be 'finalized' first. This process fixes the contents of the disc to make them readable to other DVD players as DVD-Video discs.
DVD-RW discs recorded in VR (Video Recording) mode are playable in some players.

RW COMPATIBLE This indicates a product feature that is capable of playing DVD-RW discs recorded with Video Recording format.

What are 'recording modes'?

There are two recording modes available using this recorder: VR mode and Video mode. When recording to a DVD-R disc, recordings are always in Video mode. DVD-RW discs can be formatted for VR mode recording or Video mode recording.

VR mode recording
- 3 different picture quality/recording time settings available (HQ, SQ, LQ)
- Not playable on regular DVD players
- Recordings can be extensively edited

Video mode recording
- 3 different picture quality/recording time settings available (HQ, SQ, LQ)
- Playable on regular DVD players (after finalizing)
- Limited editing features

Many functions of this recorder are dependent on the recording mode. One or more of the symbols (Video , VR) appear by each function explained in this manual so that you can see at a glance whether it's relevant for the disc loaded.
You can find more information on disc formats and recording modes on page 45.

Note
DVD-Video Format (Video mode) is a new format for recording on DVD-R/RW discs that was approved by the DVD Forum in 2000. You may therefore experience problems playing recordable DVD discs in some players. Symptoms include video artifacts, audio and/or video dropouts and playback suddenly stopping.
Our company cannot take responsibility for problems playing discs recorded on this recorder in other players.

Is editing a DVD like editing a video tape?

No. When you edit a video tape you need one video deck to play the original tape and another to record the edits. With DVD, you edit by making a 'Playlist' of what to play and when to play it. On playback, the recorder plays the disc according to the Playlist.

About word 'Original' and 'Playlist'

Throughout this manual, you will often see the words Original and Playlist to refer to the actual content and the edited version.
- **Original:** content refers to what's actually recorded on the disc.
- **Playlist:** content refers to the edited version of the disc — how the Original content is to be played.

Reset the recorder

If you observe any of the following symptoms...
- The unit is plugged in, but the power will not turn on or off.
- The front panel display is not working.
- The recorder is not operating normally.

...you can reset the recorder as follows:
- Press and hold the POWER button for at least five seconds. This will force the unit to power off.
  Press the POWER button again to turn the unit back on.
- Unplug the power cord, wait at least five seconds, and then plug it in again.

Disc type	Disc format	Recording mode	Functions
DVD-Video	Video format	n/a	Playback only
DVD-RW	Video Recording format (default)	VR mode	Playback, recording, Original/Playlist editing
	Video format	Video mode	Playback, limited recording, limited editing
DVD-R	Video format	Video mode	Playback, limited recording, limited editing

DVD & HDD Recorder Overview (Continued)

About the internal hard disk drive

The internal hard disk drive (HDD) is a fragile piece of equipment. Please use the recorder following the guidelines below to protect against possible HDD failure.
We recommend that you back up your important recordings onto DVD-R/RW discs in order to protect against accidental loss.

- Do not move the recorder while it is on.
- Install and use the recorder on a stable, level surface.
- Do not block the rear vent/cooling fan.
- Do not use the recorder in excessively hot or humid places, or in places that may be subject to sudden changes in temperature. Sudden changes in temperature can cause condensation to form inside the recorder. This can be a cause of HDD failure.
- While the recorder is switched on, do not unplug from the wall socket or switch the electricity off from the breaker switch.
- Do not move the recorder immediately after switching it off. If you need to move the recorder, please follow the steps below:
  1. After the message POWER OFF is shown in the display, wait at least two minutes.
  2. Unplug from the wall socket.
  3. Move the player.
- If there's a power failure while the recorder is on there is a chance that some data on the HDD will be lost.
- The HDD is very delicate. If used improperly or in an unsuitable environment, it is possible that the HDD will fail after a few years of use. Signs of problems include playback unexpectedly freezing and noticeable block noise (mosaic) in the picture.
  However, sometimes there will be no warning signs of HDD failure.

  If the HDD fails, no playback of recorded material will be possible. In this case it will be necessary to replace the HDD unit.

Cards capable of displaying and saving

- SD Memory Card
- Multi Media Card (MMC)
- Memory Stick (MS)

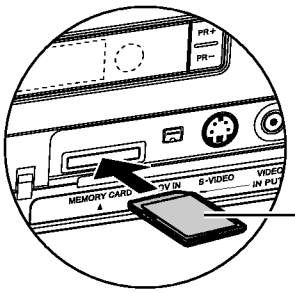
- Compatible with: FAT 12, FAT 16, or FAT 32
- Use this unit to format a memory card when using for the first time. Note that the memory card may no longer be usable on other equipment once formatted on this unit.
- Only use the memory cards recommended above.

Regarding Write Protect

For cards that have a write protect switch, if the switch is on it will not be possible to write, erase or format the card.

Inserting/Removing the Memory Card

We recommend to insert or remove the memory card after turning the unit off.



Insert label side up.

Inserting the card.
Insert straight-in until it fits into place.

Removing the card
Press on the center of the card.

Notes

- Keep the memory card out of reach of children. If swallowed, seek medical advice immediately.
- A memory card may not be used for this recorder

DVD & HDD Recorder Overview (Continued)

Notes on JPEG Recordings

- Depending on the size and number of JPEG files, it may take several minutes for the recorder to read the content. If you don't see an on-screen display after several minutes, some of the files are too big — reduce the resolution of the JPEG files to less than 4 megapixels.
- The total number of files and folders on a media are free but the total number of files and folders on the folder should be less than 1999.
- Some media may be incompatible due to different recording formats or the condition of the media.
- When you are using software such as "Easy CD Creator" to burn JPEG files on a CD-R, ensure that all selected files have the ".jpg" extension before copying them into the CD layout.
- If the files have ".jpe" or ".jpeg" extensions, please rename them as ".jpg" files.
- File names without the ".jpg" extension cannot be read by this DVD player, even though the files are shown as JPEG image files in Windows Explorer®.

Notes on MP3 Recordings

About MP3

- An MP3 file is audio data compressed using the MPEG1 audio layer 3 file-encoding scheme. Files that have the ".mp3" file extension are called "MP3 files".
- The recorder cannot read MP3 files that have file extensions other than ".mp3".

MP3 file compatibility with the recorder is limited as follows:

1. CD-R/RW physical format should be "ISO 9660" and "JOLIET".
2. If you record MP3 files using software which cannot create a FILE SYSTEM (e.g., Direct-CD, etc.), it is impossible to playback MP3 files. "Easy-CD Creator" is recommended.
3. The total number of files and folders on the media are free but the total number of files and folders on the folder should be less than 1999.

This recorder requires discs/recordings to meet certain technical standards in order to achieve optimal playback quality. Pre-recorded DVDs are automatically set to these standards. There are many different types of recordable disc formats (including CD-R containing MP3 files) that require certain pre-existing conditions (see above) to insure compatible playback.

Please note that permission is required in order to download MP3 files and music from the Internet. Our company has no right to grant such permission. Permission should always be sought from the copyright owner.

DVD & HDD Recorder Overview (Continued)

Precautions

Handling the unit

When shipping the unit
The original shipping carton and packing materials come in handy. For maximum protection, re-pack the unit as it was originally packaged at the factory.

When setting up the unit
The picture and sound of a nearby TV, VCR, or radio may be distorted during playback. In this case, position the unit away from the TV, VCR, or radio, or turn off the unit after removing the disc.

To keep the surface clean
Do not use volatile liquids, such as insecticide spray, near the unit. Do not leave rubber or plastic products in contact with the unit for a long period of time. They will leave marks on the surface.

Cleaning the unit

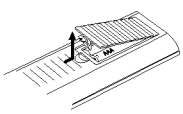
To clean the cabinet
Use a soft, dry cloth. If the surfaces are extremely dirty, use a soft cloth lightly moistened with a mild detergent solution. Do not use strong solvents such as alcohol, benzine, or thinner, as these might damage the surface of the unit.

To obtain a clear picture
The recorder is a high-tech, precision device. If the optical pick-up lens and disc drive parts are dirty or worn, the picture quality will be poor.
Regular inspection and maintenance are recommended after every 1,000 hours of use. (This depends on the operating environment.)
For details, please contact your nearest dealer.

Remote Control Operation Range

Point the remote control at the remote sensor and press the buttons.

Remote Control Battery Installation



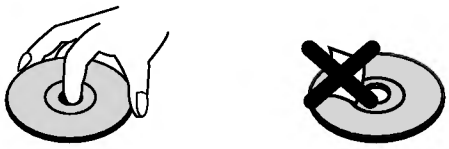
Detach the battery cover on the rear of the remote control, and insert two R03 (size AAA) batteries with ⊕ and ⊖ aligned correctly.

⚠Caution
Do not mix old and new batteries. Never mix different types of batteries (standard, alkaline, etc.).

Notes on Discs

Handling discs

Do not touch the playback side of the disc. Hold the disc by the edges so that fingerprints will not get on the surface. Do not stick paper or tape on the disc.

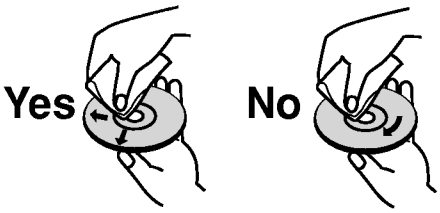


Storing discs

After playing, store the disc in its case.
Do not expose the disc to direct sunlight or sources of heat, or leave it in a parked car exposed to direct sunlight, as there may be a considerable temperature increase inside the car.

Cleaning discs

Fingerprints and dust on the disc can cause poor picture quality and sound distortion. Before playing, clean the disc with a clean cloth. Wipe the disc from the center outward.



Do not use strong solvents such as alcohol, benzine, thinner, commercially available cleaners, or anti-static spray intended for older vinyl records.

About Symbols

About the ⊘ symbol display

" ⊘ " may appear on the TV screen during operation. This icon means the function explained in this owner's manual is not available on that specific disc.

About the disc symbols for instructions

A section whose title has one of the following symbols are applicable only to those discs represented by the symbol.

- HDD Hard Disk Drive
- M/C Memory Card
- Video DVD-R/RW with Video recording mode
- VR DVD-RW with VR recording mode
- DVD DVD-Video disc
- VCD Video CDs
- CD Audio CDs
- MP3 MP3 Discs
- JPEG JPEG Disc

Front Panel

▶▶I/▶▶
Go to NEXT chapter/track.
Press and hold for two seconds for a fast forward search during playback.

STOP (■)
Stops playback or recording.

◀◀/I◀◀
Go to beginning of current chapter/ track or to previous chapter/track.
Press and hold for two seconds for a fast reverse search during playback.

PAUSE (❚❚)
Pause playback or recording temporarily, press again to exit pause mode.

POWER button and indicator
Switches the recorder ON or OFF.
Lights up red when the recorder is in standby mode.

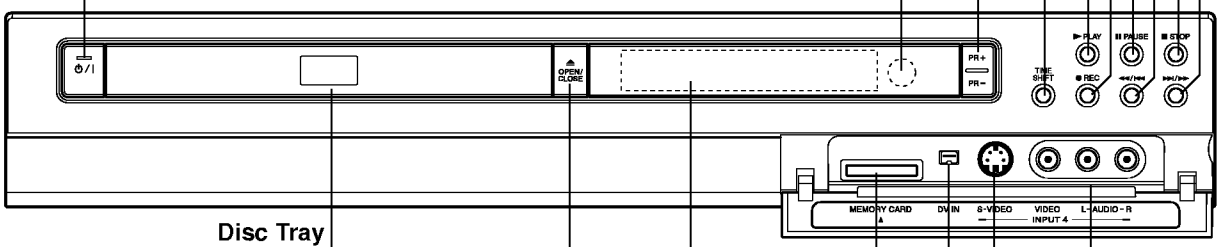
REC (●)
Starts recording. Press repeatedly to set the recording time.

PLAY (►)
Starts playback.

TIMESHIFT
Activates pause live TV/playback (timeshift) for a live TV program.

PR (+/-)
Scans up or down through memorized channels.

Remote Sensor
Point the recorder remote control here.



Disc Tray
Insert a disc here.

OPEN/CLOSE (⏏)
Opens or closes the disc tray.

Display window
Shows the current status of the recorder.

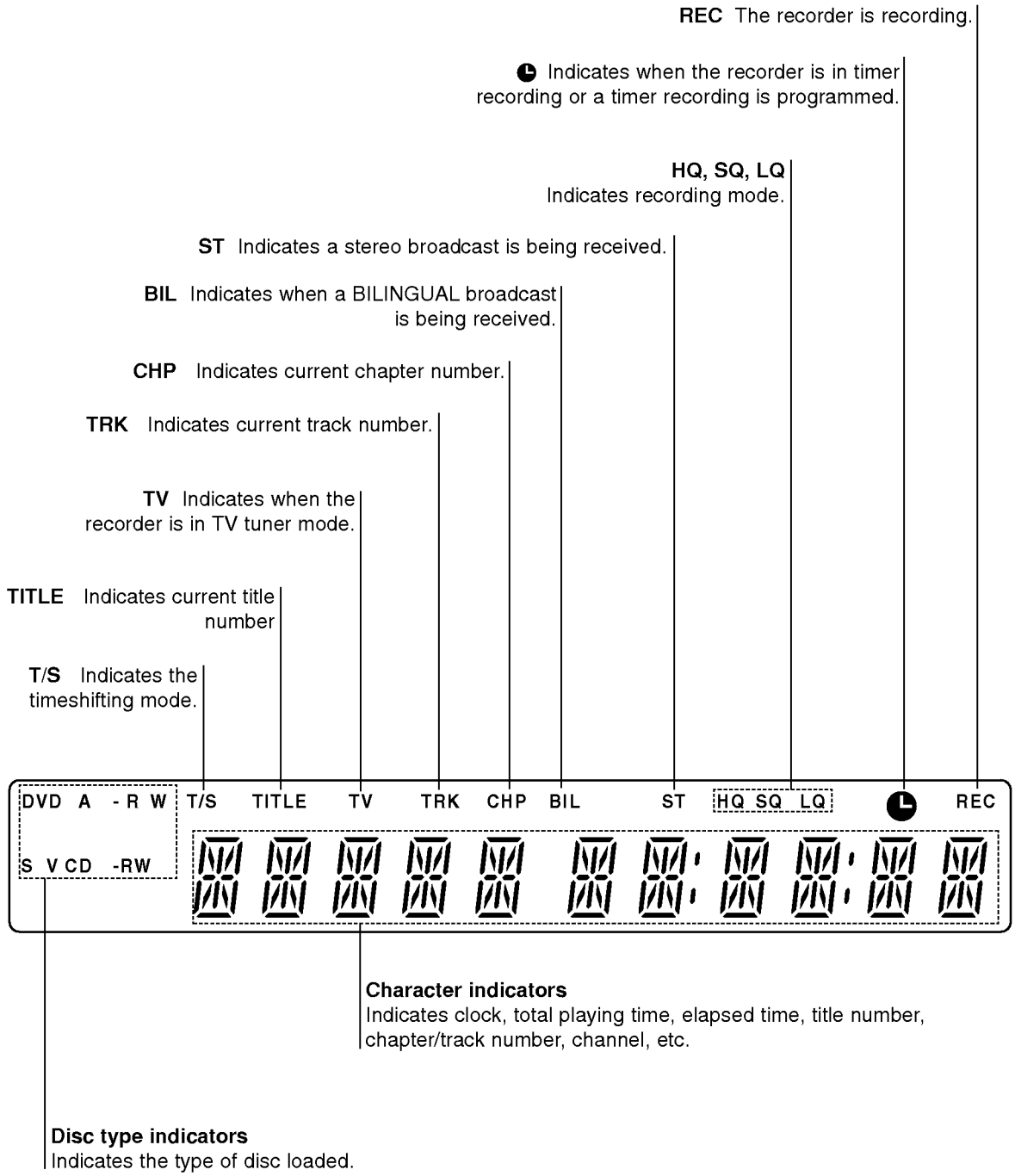
MEMORY CARD Slot
Insert a memory card (SD, MMC or MS).

DV IN
Connect the DV output of a digital camcorder.

INPUT 4 (S-VIDEO IN)
Connect the S-Video output of an external source (TV/ Monitor, VCR, Camcorder, etc.).

INPUT4 (VIDEO IN/AUDIO IN (Left/Right))
Connect the audio/video output of an external source (Audio system, TV/ Monitor, VCR, Camcorder, etc.).

Function Display Window



Remote Control Overview

POWER
Switches the recorder ON or OFF.

TV/DVD
To view channels selected by the recorder tuner or by the TV tuner.

3D SURR.
Selects 3D SURROUND during playback.

PIP
Selects PIP function on or off.

0-9 numerical buttons
Selects numbered options in a menu.

AV
Changes the input to use for recording (Tuner, AV1-4, or DV IN).

AUDIO
Selects an audio language (DVD) or an audio channel (CD).

SUBTITLE
Selects a subtitle language.

ANGLE
Selects a DVD camera angle, if available.

REC (●)
Starts recording. Press repeatedly to set the recording time.

REC MODE
Selects the recording mode: HQ, SQ, or LQ.

TIMER REC
Displays Timer Record menu.

TIMESHIFT
Activates pause live TV/playback (timeshift) for a live TV program.

MARKER
Marks any point during playback.

SEARCH
Displays Marker Search menu.

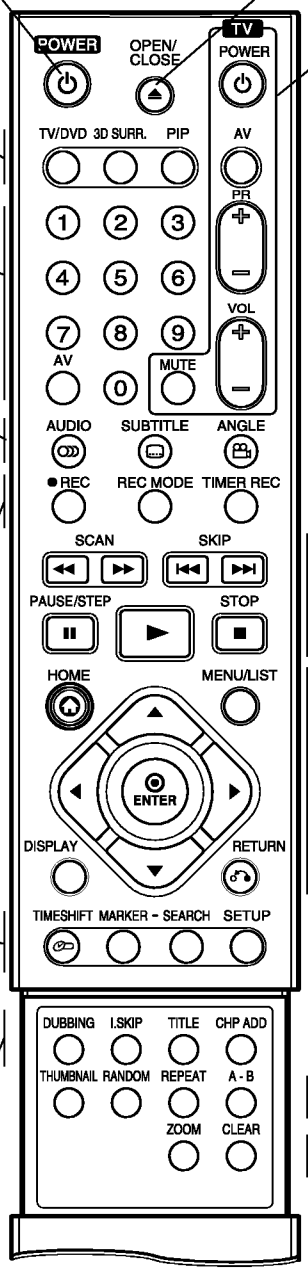
SETUP
Accesses or removes the Setup menu.

DUBBING
Copies DVD to HDD (or HDD to DVD).

I.SKIP (INSTANT SKIP)
Skips 15 seconds forward on the disc (about the length of a typical TV commercial).

TITLE
Displays the disc's Title menu, if available.

CHP ADD
Inserts a chapter marker when playing/ recording a VR mode DVD-RW disc.



OPEN/CLOSE (⏏)
Opens and closes the disc tray.

TV Control Buttons
POWER: Turns the TV on or off.
AV: Selects the TV's source.
PR +/–: Selects TV's channel.
VOL +/–: Adjusts TV's volume.
MUTE: Temporarily turns TV sound OFF, press again to restore.

SKIP (I◄◄ / ►►I)
Go to next chapter or track. Returns to beginning of current chapter or track or go to previous chapter or track.

SCAN (◄◄ / ►►)
Search backward or forward.

PAUSE/STEP (II)
Pause playback or recording temporarily, press again to exit pause mode.

► (PLAY)
Starts playback.

STOP (■)
Stops playback or recording.

HOME
Accesses or removes the HOME menu.

MENU/LIST
Accesses menu on a DVD disc Switches between Title List-Original and Title List-Playlist menu.

ENTER
- Acknowledges menu selection.
- Displays information while viewing a TV program.

◄ / ► / ▲ / ▼ (left/right/up/down)
Selects an option in the menu.

▲ / ▼ (up/down)
Scans up or down through memorized channels.

DISPLAY
Accesses On-Screen Display.

RETURN (↶)
- Removes the menu.
- Displays the menu of a video CD with PBC.

THUMBNAIL
Selects a thumbnail picture for the current title and chapter for use in the Original and Playlist menu.

RANDOM
Plays tracks in random order.

REPEAT
Repeat chapter, track, title, all.

A-B
Repeat sequence.

ZOOM
Enlarges DVD video image.

CLEAR
Removes a track number on the Program List or a mark on the Marker Search menu.

Rear Panel

AERIAL
Connect the aerial to this terminal.

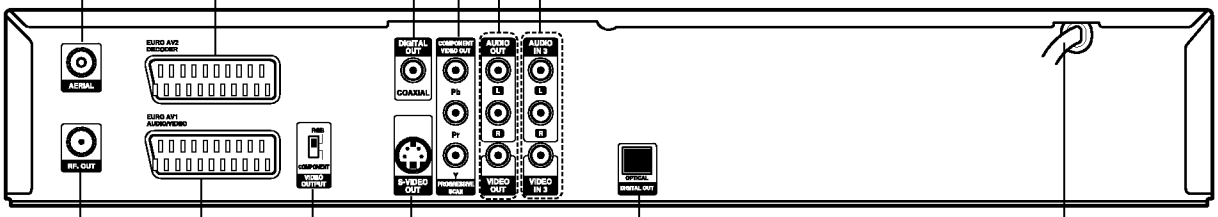
EURO AV 2 DECODER
Connect the audio/video output of an external source (Pay-TV decoder, Set Top Box, VCR, etc.).

COAXIAL (Digital audio out jack)
Connect to digital (coaxial) audio equipment.

COMPONENT VIDEO OUT / PROGRESSIVE SCAN (Y Pb Pr)
Connect to a TV with Y Pb Pr inputs.

VIDEO OUT/AUDIO OUT (Left/Right)
Connect to a TV with video and audio inputs.

VIDEO IN 3 / AUDIO IN 3 (Left/Right)
Connect the audio/video output of an external source (Audio system, TV/Monitor, VCR, Camcorder).



AC Power Cord
Plug into the power source.

OPTICAL (Digital audio out jack)
Connect to digital (optical) audio equipment.

S-VIDEO OUT
Connect to a S-Video Input on TV.

VIDEO OUTPUT Switch
Select either COMPONENT VIDEO OUT / PROGRESSIVE SCAN or RGB signal of EURO AV1 AUDIO/ VIDEO terminal depending on how you connect the recorder to the TV.

EURO AV 1 AUDIO/VIDEO
Connect to a TV with SCART jack.

RF. OUT
Passes the signal from the AERIAL to your TV/monitor

⚠**Caution**
Do not touch the inner pins of the jacks on the rear panel. Electrostatic discharge may cause permanent damage to the unit.

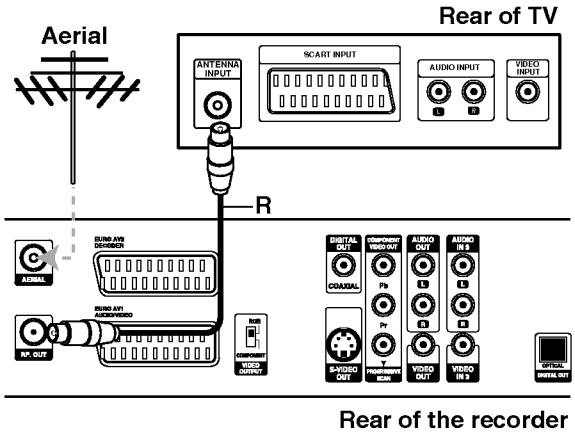
Connections

Connecting to the Aerial

Remove the aerial cable plug from your TV set and insert it into the aerial socket at the back of the recorder. Plug one end of the aerial cable into the TV socket on the recorder and the other end into the aerial input socket on your TV set.

RF coaxial connection

Connect the RF. OUT jack on the recorder to the aerial input jack on the TV using the 75-ohm Coaxial Cable supplied **(R)**. The RF. OUT jack passes the signal through from the AERIAL jack.



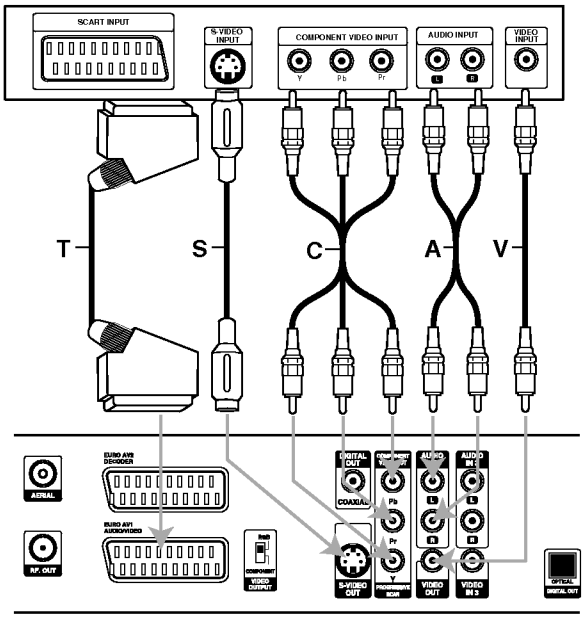
Tips

- Depending on your TV and other equipment you wish to connect, there are various ways you could connect the recorder. Use only one of the connections described below.
- Please refer to the manuals of your TV, VCR, Stereo System or other devices as necessary to make the best connections.

⚠Caution

– Make sure the recorder is connected directly to the TV. Tune the TV to the correct video input channel.
– Do not connect the recorder's AUDIO OUT jack to the phono in jack (record deck) of your audio system.
– Do not connect your recorder via your VCR. The DVD image could be distorted by the copy protection system.

Rear of TV



Rear of the recorder

Connections to Your TV

- Make one of the following connections, depending on the capabilities of your existing equipment.
- When using the COMPONENT VIDEO OUT / PROGRESSIVE SCAN jacks, set the VIDEO OUTPUT switch to COMPONENT. When using the SCART jack, set the VIDEO OUTPUT switch to RGB.

SCART connection

Connect the EURO AV1 AUDIO/VIDEO scart jack on the recorder to the corresponding in jacks on the TV using the scart cable **(T)**.

Video connection

Connect the VIDEO OUT jack on the recorder to the video in jack on the TV using the video cable **(V)**.

S-Video connection

Connect the S-VIDEO OUT jack on the recorder to the S-Video in jack on the TV using the S-Video cable **(S)**.

Component Video connection

Connect the COMPONENT VIDEO OUT / PROGRESSIVE SCAN jacks on the recorder to the corresponding input jacks on the TV using an Y Pb Pr cable **(C)**.

Progressive Scan (ColorStream®Pro) connection

If your television is a high-definition or "digital ready" television, you may take advantage of the recorder's progressive scan output for the highest video resolution possible. If your TV does not accept the Progressive Scan format, the picture will appear scrambled if you try Progressive Scan on the recorder.

Connect the COMPONENT VIDEO OUT / PROGRESSIVE SCAN jacks on the recorder to the corresponding in jacks on the TV using the Y Pb Pr cable **(C)**.

Notes

– Set the Progressive to "On" on the setup menu for progressive signal, see page 23.
– Set the progressive to "Off" by removing any disc from the unit and close the disc tray. See that "no disc" is displayed on the display window. Then press STOP and hold it for five seconds before releasing it.
– Progressive scan does not work with the analog video connections (yellow VIDEO OUT jack) or S-VIDEO connection.

Audio (Left/Right) Connection

Connect the left and right AUDIO OUT jacks of the recorder to the audio left and right IN jacks on the TV using the audio cables **(A)**. Do not connect the recorder's AUDIO OUT jack to the phono in jack (record deck) of your audio system.

Connecting to a cable box or satellite receiver

If you have a cable or satellite receiver with a built-in decoder, connect it to this recorder and your TV as shown on this page. If you are using a separate decoder box for your cable/satellite TV, set up following the instructions on the right.
Using the setup on this page you can:

- Record any channel by selecting it on the cable box/satellite tuner.

1 Connect RF cables as shown.
This enables you to watch and record TV channels.

2 Use the SCART cable to connect the EURO AV1 AUDIO/VIDEO connector to a SCART AV connector on your TV.
This enables you to watch discs.

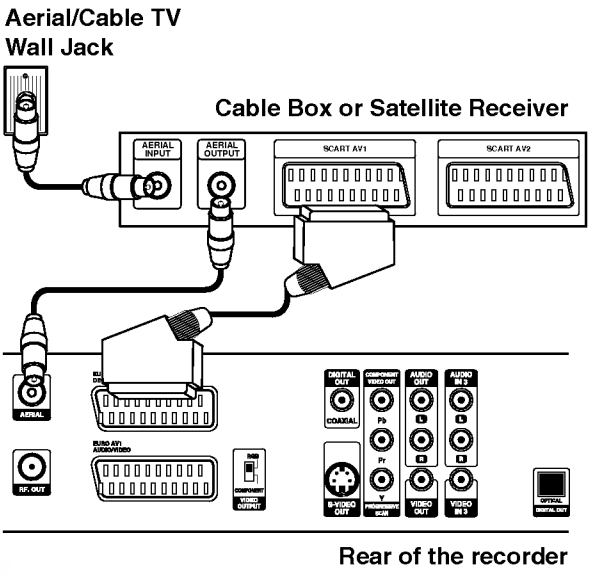
3 Use a SCART cable to connect the EURO AV2 DECODER connector to a SCART AV connector on your satellite/cable box.
This enables you to record scrambled TV channels.

Tip

This recorder has a 'loop through' function. This feature allows you to record a TV program from the built-in TV tuner in this recorder, while watching a satellite or cable channel (see page 48).

⚠ Caution:

Do not connect this recorder 'through' your VCR, satellite receiver or cable box. Always connect each component directly to your TV or AV receiver.



Connecting an external decoder box

If you have an external, dedicated decoder box for your satellite or cable TV system, use the setup described on this page.

1 Connect the cable from the aerial/cable TV outlet to the aerial input on your cable/satellite tuner.

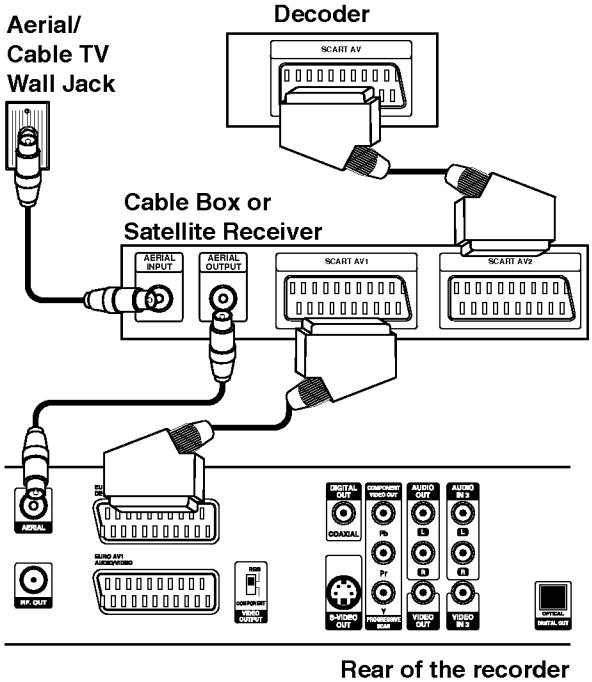
2 Use a SCART cable to connect your decoder to your cable/satellite tuner.
See the manual for your decoder box for more detailed instructions.

3 Use a SCART cable to connect the EURO AV2 DECODER connector to a SCART AV connector on your satellite/cable box.

4 Use the SCART cable to connect the EURO AV1 AUDIO/VIDEO connector to a SCART AV connector on your TV.

⚠ Caution:

- Do not connect your decoder box directly to this recorder.
- Information from the decoder (for example, relating to pay TV services), is only viewable when this recorder is off (in standby).
- For timer recording to work properly on this recorder, the satellite/cable box must also be switched on during recording.
- It is not possible to watch one TV program and record another using this setup.



Connecting to an Amplifier

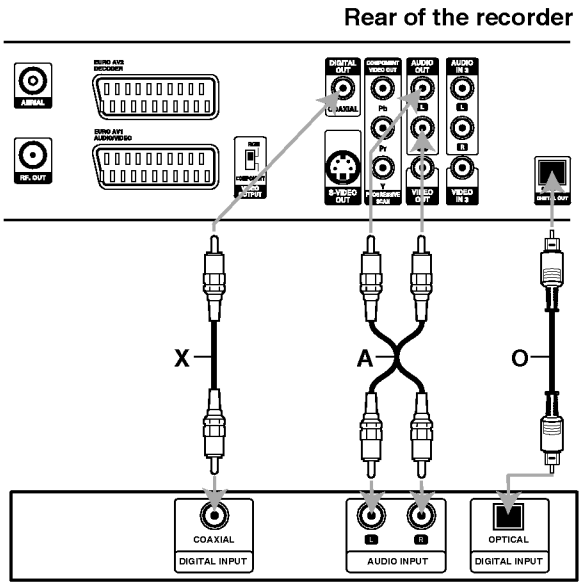
Connecting to an amplifier equipped with two channel analog stereo or Dolby Pro Logic II/ Pro Logic

Connect the Left and Right AUDIO OUT jacks on the recorder to the audio left and right in jacks on your amplifier, receiver, or stereo system, using the audio cables **(A)**.

Connecting to an amplifier equipped with two channel digital stereo (PCM) or to an Audio/ Video receiver equipped with a multi-channel decoder (Dolby Digital™, MPEG 2, or DTS)

1 Connect one of the recorder's DIGITAL AUDIO OUT jacks (OPTICAL **O** or COAXIAL **X**) to the corresponding in jack on your amplifier. Use an optional digital (optical **O** or coaxial **X**) audio cable.

2 You will need to activate the recorder's digital output. (See "Audio" on page 25).



Amplifier (Receiver)

Digital Multi-channel sound

A digital multi-channel connection provides the best sound quality. For this you need a multi-channel Audio/Video receiver that supports one or more of the audio formats supported by your recorder (MPEG 2, Dolby Digital and DTS). Check the receiver manual and the logos on the front of the receiver.

Caution:

Due to the DTS Licensing agreement, the digital output will be in DTS digital out when DTS audio stream is selected.

Notes

– If the audio format of the digital output does not match the capabilities of your receiver, the receiver will produce a strong, distorted sound or no sound at all.
– Six Channel Digital Surround Sound via digital connection can only be obtained if your receiver is equipped with a Digital Multi-channel decoder.
– To see the audio format of the current DVD in the on-screen display, press AUDIO.
– This recorder does not perform internal (2 channel) decoding of a DTS sound track. To enjoy DTS multi channel surround, you must connect this recorder to a DTS compatible receiver via one of this recorder's digital audio outputs.

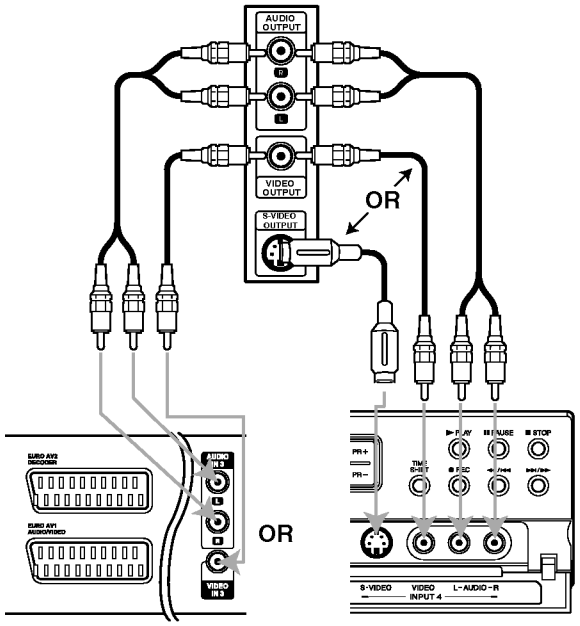
Accessory Audio/Video (A/V) Connections to recorder

Connect the input jacks (AV3, AV4) on the recorder to the audio/video out jacks on your accessory component, using audio/video cables.

Note

If you use the S-VIDEO IN jack on the front panel, the VIDEO IN jack on the front panel is not available.

Jack panel of Accessory Component (VCR, Camcorder, etc.)



Connecting a Digital Camcorder

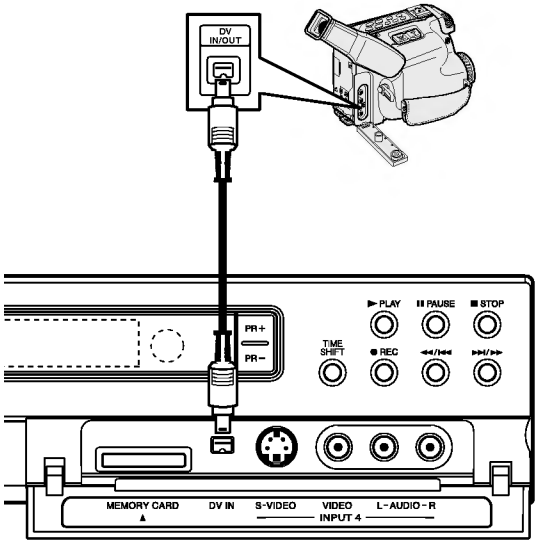
Using the front panel DV IN jack, it is possible to connect a DV digital camcorder and digitally transfer DV tapes or DVD-R/RW discs to DVD-R/RW or HDD.

Use a DV cable (not supplied) to connect the DV in/out jack of your DV camcorder to the front panel DV IN jack of this recorder.

Note

This jack is for connection to DV equipment only. It is not compatible with digital satellite tuners or D-VHS video decks.

DV Digital Camcorder



Front of the recorder

Before Operation

Initial Settings

In this menu system, there are several ways to customize the settings provided. Most menus consist of three levels to set up the options, but some require greater depth for the variety of settings. If you press SETUP, only the first and second level of the menu system will appear on the TV screen. The third level can be displayed by pressing ▶. For navigating the menu levels, you will see "▶" on the right side of the menu label to help you go to the next level.

To bring up and exit the Menu:
Press SETUP to bring up the menu. A second press of SETUP will take you back to initial screen.

To go to the next level:
Press ▶ on the remote control.

To go back to the previous level:
Press ◀ on the remote control.

General Operation

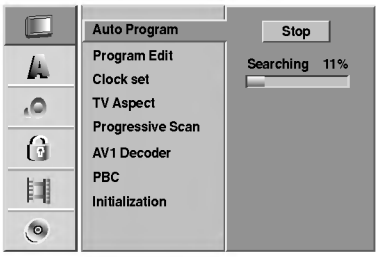
1. **Press SETUP.**
   The Setup menu appears.
2. **Use ▲ / ▼ to select the desired option.**
3. **While the desired item is selected, press ▶ to move to the second level.**
4. **Use ▲ / ▼ to select the second desired option.**
5. **Press ▶ to move to the third level.**
6. **Use ▲ / ▼ to select the desired setting then press ENTER to confirm your selection.**
   Some items require additional steps.
7. **Press SETUP to exit the Setup menu.**

General

Auto Program

This recorder is equipped with a frequency synthesized tuner capable of receiving up to 88 TV channels.

Preparation:
Connect the recorder to the desired type of aerial, as shown in Connecting to the Aerial on page 14.

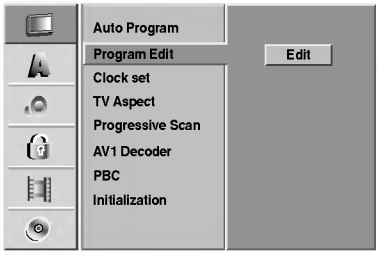


1. **Press SETUP.**
   The Setup menu appears.
2. **Use ▲ / ▼ to select the General option.**
3. **While the General option is selected, press ▶ to move to the second level.**
4. **Use ▲ / ▼ to select the Auto Program option.**
5. **Press ▶ to move to the third level.**
   "Start" icon is highlighted.
6. **Press ENTER to begin the channel search.**
   The tuner will automatically cycle through all available channels in the area and place them in the tuner's memory.

Before Operation (Continued)

Program Edit

You can edit a channel manually (add, delete, name, move, etc.).



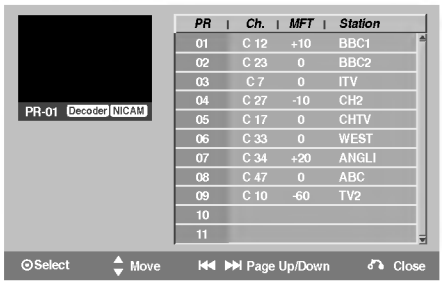
1 **Press SETUP.**
The Setup menu appears.

2 **Use ▲ / ▼ to select the General option.**

3 **While the General option is selected, press ► to move to the second level.**

4 **Use ▲ / ▼ to select the Program Edit option then press ► to move to the third level.**
"Edit" icon is highlighted.

5 **Press ENTER.**
Program List menu appears.



6 **Use ▲ / ▼ to select a PR number then press ENTER.**
Program List options appears on the left side of the menu display.

7 **Use ▲ / ▼ to select an option then press ENTER to confirm.**

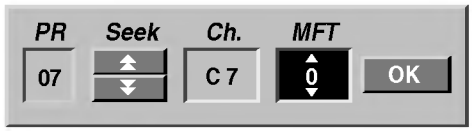
Program Edit	**Program Edit:** Edits the selected program.
Station Rename	**Station Rename:** Edits the station name.
Move	**Move:** Moves the program's location on the program list.
Delete	**Delete:** Deletes the program from program list.
Decoder On / Off	**Decoder On / Off:** Set the decoder for the program to On or Off.
Nicam Auto / Off	**Nicam Auto / Off:** Set the NICAM function to for the program Auto or Off.

8 **Press RETURN (↶) repeatedly to exit Program List menu.**

Program Edit

You can perform a search to select and store TV channels manually.

1. Use ▲ / ▼ to select a program on the Program List menu then press ENTER.
   The menu options appears on the left side of the menu.
2. Use ▲ / ▼ to select 'Program Edit' option from the options then press ENTER.
   Program Edit menu appears.



3. See the descriptions on below to use Program Edit menu.

   ◄ / ► (left/right): Moves the cursor to the previous or next column.

   ▲ / ▼ (up/down): Changes the setting at the current cursor position.

   PR: Indicates program number (display only)

   Seek: Searches a station automatically. Use ◄ / ► to select Seek option then press ▲ / ▼. Searching stops when the recorder tunes in a station.

   Ch.: Changes the channel number to edit. Use ◄ / ► to select Ch. option then press ▲ / ▼.

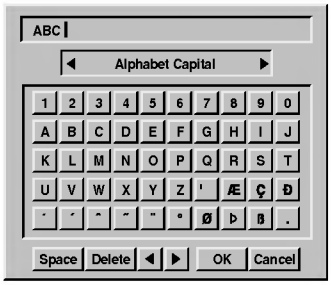
   MFT: Changes the frequency for fine tuning. Use ◄ / ► to select MFT option then press ▲ / ▼.
4. Choose OK then press ENTER to confirm the setting and returns to the Program List menu.

Program Edit (Continued)

Station Rename

You can name stations independently. Names can be up to 5 characters long.

1. Use ▲ / ▼ to select a program on the Program List menu then press ENTER.
   The menu options appears on the left side of the menu.
2. Use ▲ / ▼ to select 'Station Rename' option from the options then press ENTER.
   Keyboard menu appears.



3. Enter a name for the station. Use ◄ / ► / ▲ / ▼ to select a character then press ENTER to confirm your selection.
   - **Alphabet Capital:** Switches the keyboard upper case characters.
   - **Alphabet Small:** Switches the keyboard to lower case characters.
   - **Symbol:** Switches the keyboard to symbol characters.
   - **OK:** Select to finish.
   - **Cancel:** Cancels all entered characters.
   - **Space:** Inserts a space at the cursor position.
   - **Delete:** Deletes the previous character at the cursor position.
   - ◄ / ►: Moves cursor to left or right.

Remote control buttons for entering a name

► **(PLAY):** Inserts a space at the cursor position.

❚❚ **(PAUSE/STEP):** Deletes the after character at the cursor position.

■ **(STOP), CLEAR:** Deletes the previous character at the cursor position.

I◄◄ / ►►I**:** Moves cursor to left or right.

Numbers (0-9): Enters the character of corresponding location on the selected column.

MENU/LIST, DISPLAY: Switches the keyboard type (Alphabet Capital, Alphabet Small, Symbols)

4. Choose 'OK' icon then press ENTER to fix the name and returns to the Program List menu.

Sort TV channels manually

You can sort the program's position on the Program List menu.

1. Use ▲ / ▼ to select a program on the Program List menu then press ENTER.
   The menu options appears on the left side of the menu.
2. Use ▲ / ▼ to select 'Move' option from the options then press ENTER.
3. Use ▲ / ▼ to select a desired position then press ENTER to store.

Deleting a program

You can delete a program on the Program List menu.

1. Use ▲ / ▼ to select a program on the Program List menu then press ENTER.
   The menu options appears on the left side of the menu.
2. Use ▲ / ▼ to select 'Delete' option from the options then press ENTER. The Program is deleted.

Setting the Decoder On/Off

1. Use ▲ / ▼ to select the program you wish to link with the decoder function on the Program List menu then press ENTER.
   The menu options appears on the left side of the menu.
2. Use ▲ / ▼ to select 'Decoder' option from the options then press ENTER. If you select On, 'Decoder' appears on the menu screen.

Setting the NICAM Auto/Off

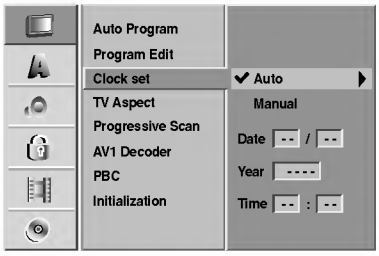
This recorder can receive Hi-Fi sound transmissions in NICAM Stereo. However, if sound distortion occurs, due to poor reception, you can switch Off

1. Use ▲ / ▼ to select a program on the Program List menu then press ENTER.
   The menu options appears on the left side of the menu.
2. Use ▲ / ▼ to select 'Nicam Auto / Off' option from the options then press ENTER. If you select Auto, 'NICAM' appears on the menu screen.

Before Operation (Continued)

Auto Clock Set

When Channel auto search is completed the actual Time and Date are also set automatically. If the time in the recorder display is not correct, the clock must be set manually.



1 **Press SETUP.**
The Setup menu appears.

2 **Use ▲ / ▼ to select the General menu.**

3 **While the General option is selected, press ► to move to the second level.**

4 **Use ▲ / ▼ to select the Clock set option.**

5 **Press ► to move to the third level.**

6 **Use ▲ / ▼ to select the Auto option then press ENTER.**

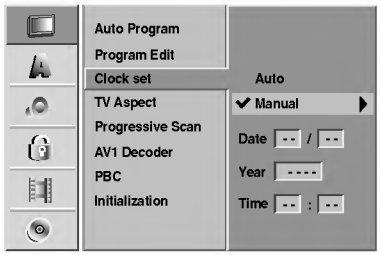
7 **Press SETUP to exit the Setup menu.**

Note
There are cases where the TV station does not send, or sends wrong date and/or time information and the recorder sets the incorrect time.
If this happens, we recommend that you set the clock manually.

Manual Clock Set

1 **Follow steps 1-5 as shown left (Auto Clock Set).**

2 **Use ▲ / ▼ to select the Manual option then press ENTER.**



3 **Enter the necessary information for date and time.**
◄ / ► (left/right): Moves the cursor to the previous or next column.
▲ / ▼ (up/down): Changes the setting at the current cursor position.

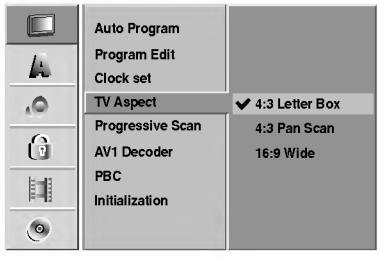
4 **Press ENTER to confirm your setting, then press SETUP to exit the Setup menu.**

Note
After manual clock setting, the clock will be updated automatically but the date will not updated.

TV Aspect

You can choose:

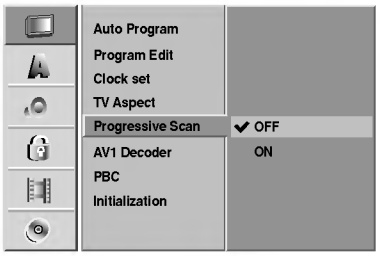
- **4:3 Letter Box:** Select when a standard 4:3 TV is connected. Displays theatrical images with masking bars above and below the picture.
- **4:3 Pan Scan:** Select when a conventional TV set is connected. The video material formatted in the Pan & Scan style is played back in that style (Both sides of the picture are cut off).
- **16:9 Wide:** Select when a 16:9 wide TV is connected.



Before Operation (Continued)

Progressive Scan

Progressive Scan Video provides the highest quality pictures with less flickering.
If you are using the COMPONENT VIDEO OUT / PROGRESSIVE SCAN jacks, but are connecting the recorder to a standard (analog) television, set Progressive Scan to OFF.
If you are using the Component Video jacks for connection to a TV or monitor that is compatible with a progressive scan signal, set Progressive Scan to ON.



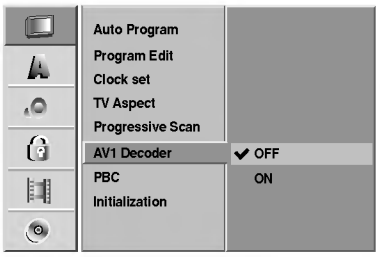
Note
Progressive Scan will not be displayed in the setup menu when the VIDEO OUTPUT switch is set at RGB position.

Caution
Once the setting for progressive scan output is entered, an image will only be visible on a progressive scan compatible TV or monitor. If you set Progressive Scan to On in error, you must reset the unit.

1) Remove any disc from the unit and close the disc tray. See that "NO DISC" is displayed on the display window.
2) Press STOP and hold it for five seconds before releasing it. The video output will be restored to the standard setting and a picture will once again be visible on a conventional analog TV or monitor.

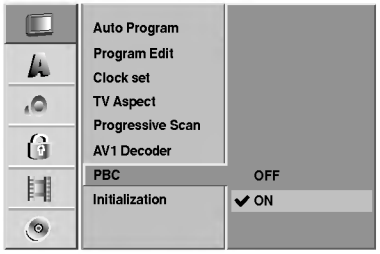
AV1 Decoder

We have already described, how to connect a decoder for pay-TV station on page 16. For viewing or recording of an encoded program from EURO AV1 AUDIO/VIDEO connector, you do not have to control anything. You just select AV1 source by pressing AV button and wait shortly until the decoding will start.
Choose 'ON' if your recorder is connected with a decoder, otherwise leave it set to 'OFF '.



PBC

The PBC setting can be changed. Set Playback Control (PBC) to ON or OFF.
- ON: Video CDs with PBC are played according to the PBC.
- OFF: Video CDs with PBC are played the same way as Audio CDs.

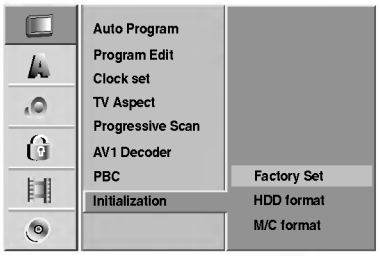


Initialization

You can reset the recorder or initialize the HDD and Memory Card.

1. Press ▲ / ▼ to select the desired option then press ENTER.
   The confirm message will appear.
2. Use ◄ / ► to select "OK" or "Cancel" then press ENTER.

- **Factory Set:** If you need to, you can reset the recorder to all its factory settings. Some options can not be reset. (Rating, Password, and Country Code)
- **HDD format:** Initializes the HDD (Hard Disk Drive): everything recorded on the HDD will be erased.
- **M/C format:** Initializes the M/C (Memory Card): everything recorded on the Memory Card will be erased.



Language

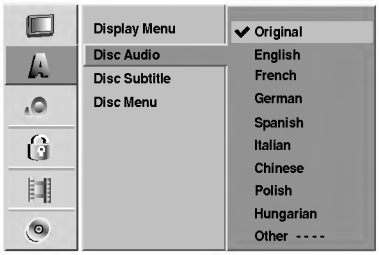
Display Menu

Select a language for the Setup menu and on-screen display.

Disc Language

Select a language for the disc's Menu, Audio, and Subtitle.

- Original: The original language set for the disc is selected.
- Other: To select another language, select Other option then press ENTER. Use the numbered and ENTER buttons to key-in the corresponding 4-digit number according to the language code list on page 64. If you a mistake before pressing ENTER, press ◄ repeatedly to delete one by one and correct it.

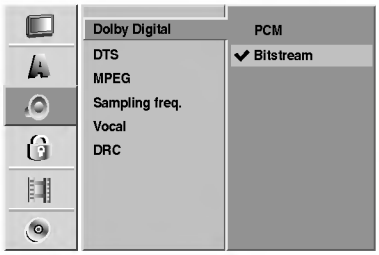


Audio

Each DVD disc has a variety of audio output options. Set the recorder's Audio Output according to the type of audio system you use.

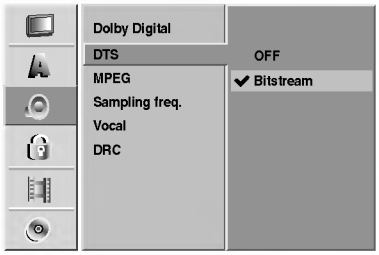
Dolby Digital

PCM: Select when connected to a 2-channel digital stereo amplifier. The recorder's digital audio outputs sounds in the PCM 2ch format when you play a DVD video disc recorded on the Dolby Digital recording system.
Bitstream: Select "Bitstream" if you connected the recorder's DIGITAL OUT jack to a Dolby Digital decoder (or an amplifier or other equipment with a Dolby Digital decoder).



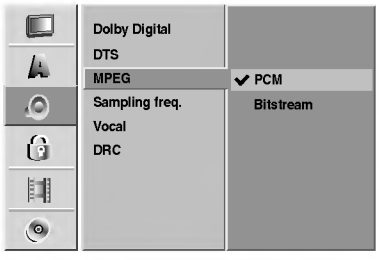
DTS

OFF: If you select "OFF", the DTS signal is not output through the DIGITAL OUT jack.
Bitstream: Select "Bitstream" if you connected the recorder's DIGITAL OUT jack to a DTS decoder (or an amplifier or other equipment with a DTS decoder).



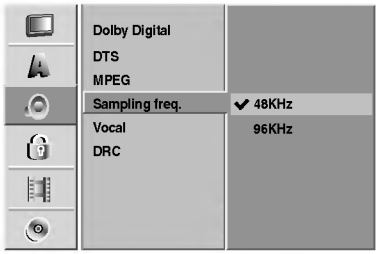
MPEG

PCM: Select when connected to a 2-channel digital stereo amplifier. The recorder's digital audio outputs sounds in the PCM 2ch format when you play a DVD video disc recorded on the MPEG2 recording system.
Bitstream: Select "Bitstream" if you connected the recorder's DIGITAL OUT jack to a MPEG decoder (or an amplifier or other equipment with a MPEG decoder).



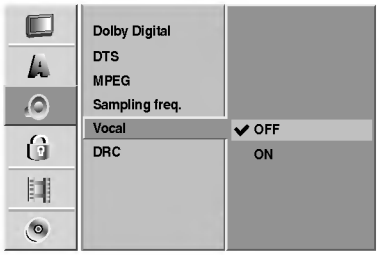
Sampling Frequency

If your receiver or amplifier is NOT capable of handling 96 kHz signals, select 48 kHz. When this choice is made, this unit will automatically convert any 96 kHz signals to 48 kHz so your system can decode them.
If your receiver or amplifier is capable of handling 96 kHz signals, select 96 kHz. When this choice is made, this unit will pass each type of signal through without any further processing.



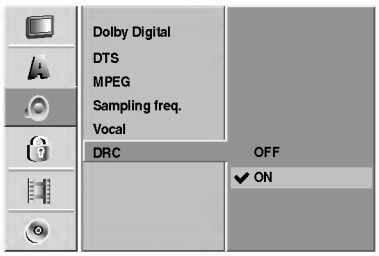
Vocal

Set Vocal to ON only when a multi-channel karaoke DVD is playing. The karaoke channels on the disc will mix into normal stereo sound.



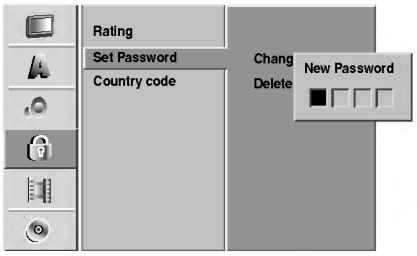
DRC (Dynamic Range Control)

With the DVD format, you can hear a program's sound-track in the most accurate and realistic presentation possible, thanks to digital audio technology. However, you may wish to compress the dynamic range of the audio output (the difference between the loudest sounds and the quietest ones). Then, you may listen to a movie at a lower volume without losing clarity of sound. Set DRC to ON for this effect.



Lock (Parental Control)

Set Password



1 **Press SETUP.**
The Setup menu appears.

2 **Use ▲ / ▼ to select the Lock option.**

3 **While the Lock option is selected, press ► to move to the second level.**

4 **Use ▲ / ▼ to select the Set Password option.**

5 **Press ► to move to the third level.**

6 **When you have not entered a password yet;**
Enter a 4-digit password using the numbered buttons to create a personal 4-digit security password, then press ENTER. Enter the 4-digit password again and press ENTER to verify.
When you have already entered a password;
Enter a 4-digit password using the numbered buttons to confirm the personal 4-digit security password, then press ENTER.

Tip
If you make a mistake before pressing ENTER, press ◄ repeatedly to delete password numbers one by one then correct it.

7 **While "Change" is selected, press ENTER.**
If you select "Delete" then press ENTER. The password is deleted.

8 **Enter a 4-digit password using the numbered buttons to create a personal 4-digit security password then press ENTER.**

9 **Enter the 4-digit password again and press ENTER to verify.**

Tip
If you a mistake before pressing ENTER, press ◄ repeatedly to delete password numbers one by one then correct it.

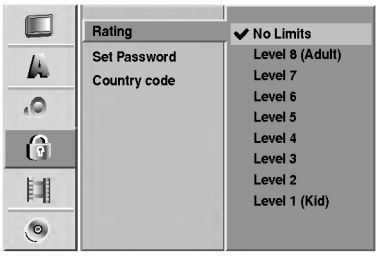
If you forget your 4-digit code

If you forget your password, to clear the current password, follow the procedure below.

1. Press SETUP to display the Setup menu.
2. Use the Number buttons to enter the 6-digit number "210499".
3. Select "OK" then press ENTER. The 4-digit password is cleared. Enter a new code as shown left.

Rating

Movies on DVDs may contain scenes not suitable for children. Therefore, discs may contain Parental Control information that applies to the complete disc or to certain scenes on the disc. These scenes are rated from Level 1 to 8, and alternatively, more suitable scenes are available for selection on some discs. Ratings are country-dependent. The Parental Control feature allows you to prevent discs from being played by your children or to have certain discs played with alternative scenes.



1 **Follow steps 1-3 as shown above to the left (Set Password).**

2 **Use ▲ / ▼ to select the Rating option.**

3 **Press ► to move to the third level.**

4 **Follow step 6 as shown above to the left (Set Password).**

5 **Select a rating from 1 to 8 using the ▲ / ▼ buttons. One (1) has the least playback restrictions. Eight (8) has the most playback restrictions.**
No Limit: *If you select No Limit, Parental Control is not active. The disc will play in full.*
Level 1 to 8: *Some discs contain scenes not suitable for children. If you set a rating for the recorder, all disc scenes with the same rating or lower will be played. Higher rated scenes will not be played unless an alternative scene is available on the disc. The alternative must have the same rating or a lower one. If no suitable alternative is found, playback will stop. You must enter the 4-digit password or change the rating level in order to play the disc.*

6 **Press ENTER to confirm your rating selection, then press SETUP to exit the menu.**

Country Code

Enter the code of a country/area whose standards were used to rate the DVD video disc, referring to the list (See "Country Code List", page 65.).

1 **Press SETUP.**
The Setup menu appears.

2 **Use ▲ / ▼ to select the Lock option.**

3 **While the Lock option is selected, press ► to move to the second level.**

4 **Use ▲ / ▼ to select the Country code option.**

5 **Press ► to move to the third level.**

6 **When you have not entered a password yet;**
Enter a 4-digit password using the numbered buttons to create a personal 4-digit security password, then press ENTER. Enter the 4-digit password again and press ENTER to verify.
When you have already entered a password;
Enter a 4-digit password using the numbered buttons to confirm the personal 4-digit security password, then press ENTER.

Tip
If you a mistake before pressing ENTER, press ◄ repeatedly to delete password numbers one by one then correct it.

7 **Select the first character using the ▲ / ▼ buttons.**

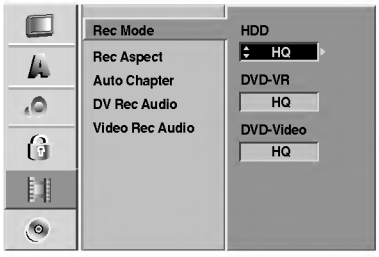
8 **Shift the cursor using ► buttons and select the second character using ▲ / ▼ buttons.**

9 **Press ENTER to confirm your country code selection, then press SETUP to exit the menu.**

Recording

Record Mode

You can set the picture quality for recording; HQ (High Quality), SQ (Standard Quality), LQ (Low Quality).



1 **Press SETUP.**
The Setup menu appears.

2 **Use ▲ / ▼ to select the Recording option.**

3 **While the Recording option is selected, press ► to move to the second level.**

4 **Use ▲ / ▼ to select the Rec Mode Set option.**

5 **Press ► to move to the third level.**
The HDD Mode option is highlighted.

6 **Use ▲ / ▼ to select a desired Record Mode for HDD (HQ, SQ, or LQ)**

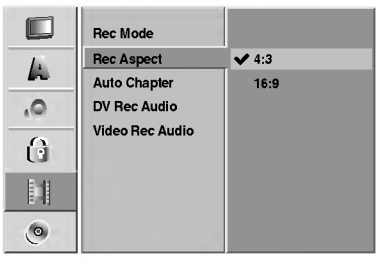
7 **Press ► to move to VR Mode option then use ▲ / ▼ to select a desired Record Mode for DVD-VR disc (HQ, SQ, or LQ)**

8 **Press ► to move to Video Mode option then use ▲ / ▼ to select a desired Record Mode for DVD-Video Mode (HQ, SQ, or LQ).**

9 **Press ENTER to confirm your selection, then press SETUP to exit the menu.**

Record Aspect

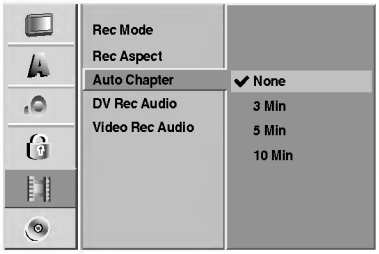
When DVD recording, you can set the recording aspect ratio to suit the material you're recording (16:9 or 4:3).



Before Operation (Continued)

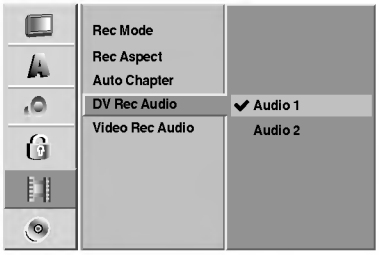
Auto Chapter

When recording in Video mode, chapter markers are put in specified setting. You can change this interval to 3 minutes, 5 minutes or 10 minutes. If you select None, switch off automatic chapter marking altogether with the No Separation setting.



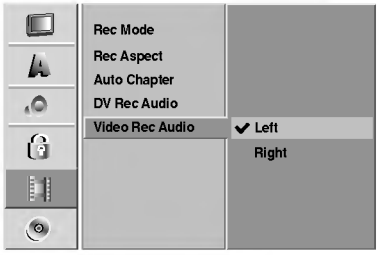
DV Rec Audio

You need to set this if you have a camcorder using 32kHz/12-bit sound connected to the front panel DV IN jack.
Some digital camcorders have two stereo tracks for audio. One is recorded at the time of shooting; the other is for overdubbing after shooting.
On the Audio 1 setting, the sound that was recorded while shooting is used.
On the Audio 2 setting, the overdubbed sound is used.



Video Rec Audio

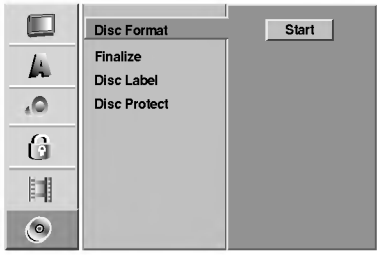
When DVD recording in Video mode and if the broadcast is bilingual, the recorder records left audio (Main language) or right audio (Bilingual language). It prevent to listen to both language simultaneously during playback the disc.



Disc

Disc Format

If you're recording on a DVD-R disc, the recording mode will always be Video mode.
If you are using a DVD-RW disc, by default it will be VR mode. You can change this to Video mode from the Setup menu.



1 **Press SETUP.**
The Setup menu appears.

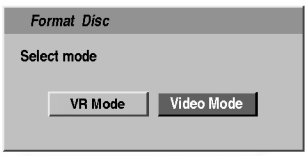
2 **Use ▲ / ▼ to select the Disc option.**

3 **While the Disc option is selected, press ► to move to the second level.**

4 **Use ▲ / ▼ to select the Disc Format option.**

5 **Press ► to move to the third level.**
Start icon is highlighted.

6 **Press ENTER.**
Format Disc menu appears.



7 **Use ◄ / ► to select a desired Mode (VR Mode or Video Mode) then press ENTER.**
Confirm message will appear.

8 **Use ◄ / ► to select "OK" then press ENTER.**
It takes a few moments to initialize the disc.

⚠**Caution**

If you want to change the disc format, everything recorded on the disc will be erased.

9 **Press SETUP to exit the menu.**

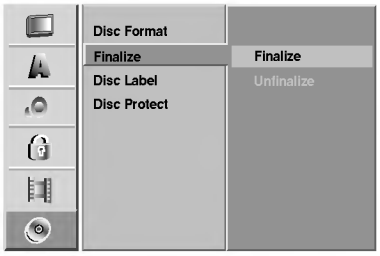
Before Operation (Continued)

Finalize

Finalizing 'fixes' the recordings in place so that the disc can be played on a regular DVD player or computer equipped with a suitable DVD-ROM drive.
Finalizing a Video mode disc creates a menu screen for navigating the disc. This is accessed by pressing MENU/LIST or TITLE.

⚠Caution

- **Once you've finalized a disc recording, you can't edit or record anything else on that disc.**

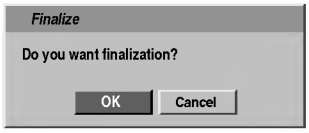


1 **Follow steps 1-3 as shown on page 28 (Disc Format).**

2 **Use ▲ / ▼ to select the Finalize option.**

3 **Press ► to move to the third level.**
Finalize is highlighted.

4 **Press ENTER.**
Finalize menu appears.



5 **Select OK then press ENTER.**
The recorder starts finalizing the disc.

Note

How long finalization takes depends on the type of disc, how much is recorded on the disc, and the number of titles on the disc. A disc recorded can take up to 3-4 minutes to finalize.

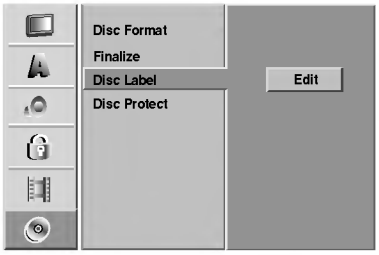
Tip

If you load a DVD-RW that has already been finalized, you can 'unfinalize' it by choosing Unfinalize from the Finalize menu. After doing this, you can edit and re-record onto the disc.

Disc Label

Use this to enter a name for the disc. This name appears when you load the disc and when you display disc information on-screen.

- The disc name can be up to 32 characters long.
- For discs formatted on a different recorder, you will see only a limited character set.

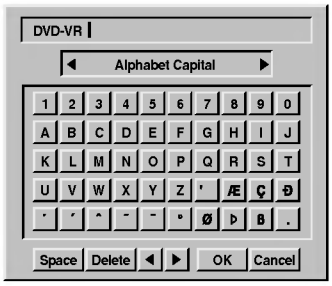


1 **Follow steps 1-3 as shown Disc Format on page 28.**

2 **Use ▲ / ▼ to select the Disc Label option.**

3 **Press ► to move to the third level.**
Edit icon is highlighted.

4 **Press ENTER.**
Keyboard menu appears.



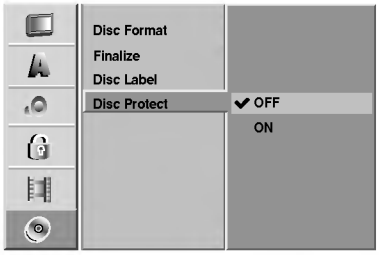
5 **Enter a name for the disc. Use ◄ / ► / ▲ / ▼ to select a character then press ENTER to confirm your selection. Refer step 3 as shown on page 21 (Station Rename).**

6 **Choose OK then press ENTER to fix the name and return to the Setup menu.**

7 **Press SETUP to exit the menu.**

Disc Protect

When recording in VR mode, set to ON to prevent accidental recording, editing or deleting of the disc loaded. If you need to unlock the disc to make edits, select OFF.



Using the Home Menu

From the Home Menu screen you can access all the Media (HDD, DISC, MEMORY CARD) for playback and recording of the recorder.

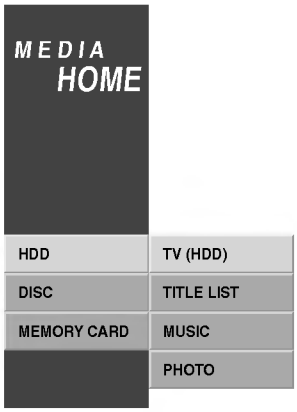
1 **Press HOME to display the Home Menu screen.**

2 **Use the ▲ / ▼ / ◀ / ▶ and ENTER buttons to select the option you want.**

3 **To exit the HOME menu, press HOME.**

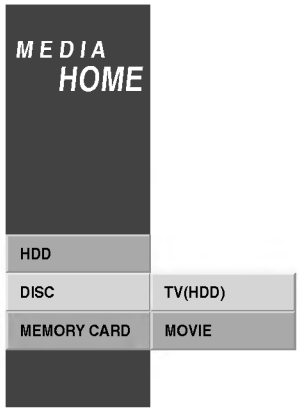
- **TV (HDD):** Returns to live TV viewing for HDD recording.
- **TV (DVD):** Returns to live TV viewing for DVD recording.
- **TITLE LIST:** Displays the Tile List menu.
- **MUSIC:** Displays Music (or Audio CD) menu.
- **PHOTO:** Displays Photo menu.
- **MOVIE:** Plays back the movie of the DVD and Video CD.

HDD

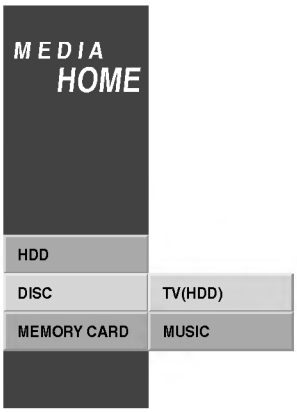


VR Video

DVD VCD

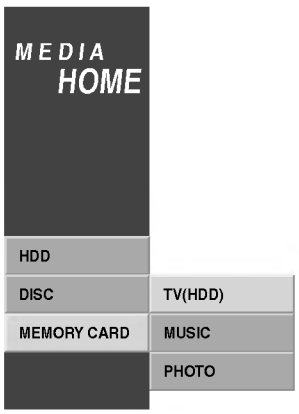


CD



MP3 JPEG

M/C



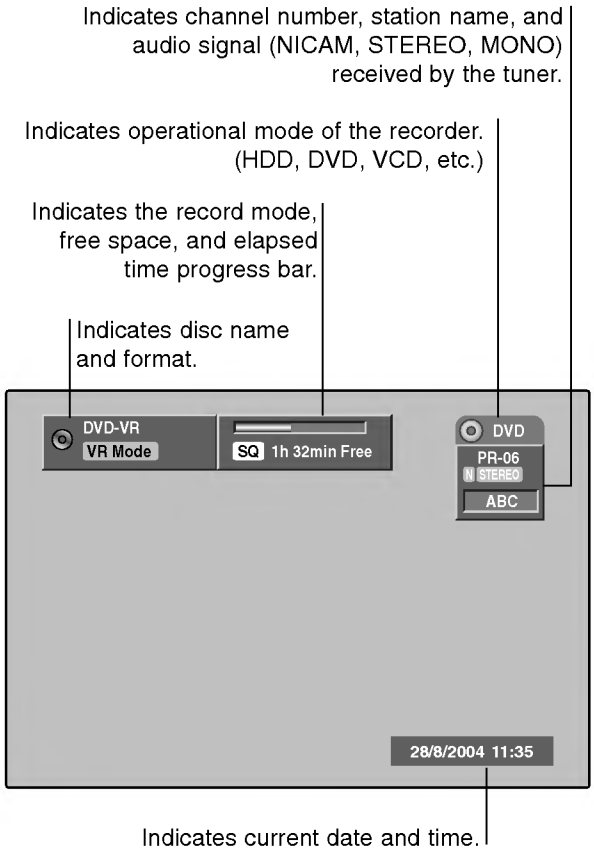
General Explanation of On-Screen Display

This manual gives basic instructions for operating the recorder. Some DVDs require specific operation or allow only limited operation during playback. When this occurs, the symbol ⊘ appears on the TV screen, indicating that the operation is not permitted by the recorder or is not available on the disc.

Displaying Information While Watching TV

During viewing the TV, press ENTER or DISPLAY to display/remove the information displayed on-screen.

e.g., when DVD-RW in VR mode is inserted.



Displaying Disc Information on-screen

You can display various information about the disc loaded on-screen.

1 **Press DISPLAY repeatedly to display/change the information displayed on-screen.**

2 **To remove the on-screen display, press DISPLAY repeatedly until it disappears.**
See the descriptions on next pages for detailed explanation during playing a disc.

Temporary Feedback Field Icons

▮▮■ Resume play from this point

⊘ Action prohibited or not available

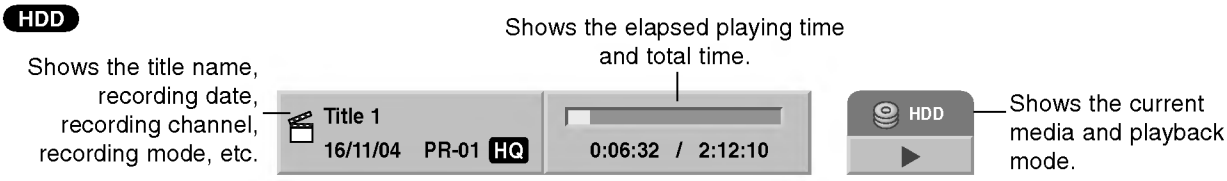
Notes

- Some discs may not provide all of the features on the on-screen display example shown on next pages.
- If no button is pressed for 5 seconds, the on-screen display disappears.

Before Operation

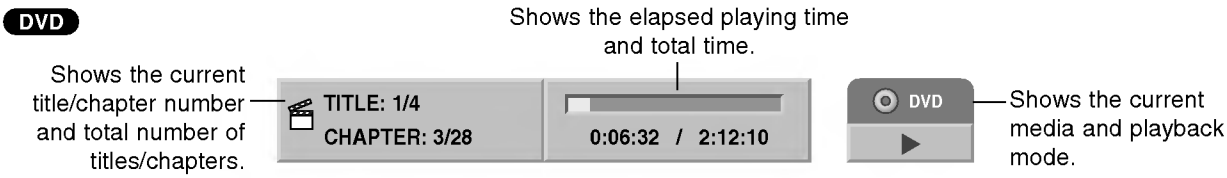
Displaying Disc Information on-screen (Continued)

HDD



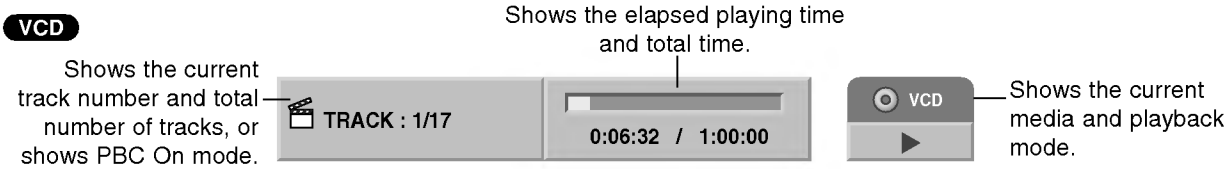
Menu Options		Function (Use ▲ / ▼ to select desired option)	Selection Method
Title Number	1/6	**Shows the current title number and total number of titles and** skip to the desired title number.	◄ / ►, or Numbers, ENTER
Time	0:10:30	**Shows the elapsed playing time, and** searches the point by the elapsed time directly.	◄ / ►, Numbers, ENTER
Audio Channel	Stereo	**Shows the audio channel, and** changes the audio channel.	◄ / ►

DVD



Menu Options		Function (Use ▲ / ▼ to select desired option)	Selection Method
Title Number	1/6	**Shows the current title number and total number of titles, and** skips to the desired title number.	◄ / ►, or Numbers, ENTER
Chapter Number	4/26	**Shows the current chapter number and total number of chapters, and** skips to the desired chapter number.	◄ / ►, or Numbers, ENTER
Time search	0:10:30	**Shows the elapsed playing time, and** searches the point by the elapsed time directly.	◄ / ►, Numbers, ENTER
Audio language and Digital Audio Output mode	1. ENG D 5.1CH	**Shows the current audio soundtrack language, encoding method, and channel number, and** changes the setting.	◄ / ►
Subtitle language	OFF	**Shows the current subtitles language, and** changes the setting.	◄ / ►
Angle	1/3	**Shows the current angle number and total number of angles, and** changes the angle number.	◄ / ►
Sound	3D SUR.	**Shows the current sound mode, and** changes the setting.	◄ / ►

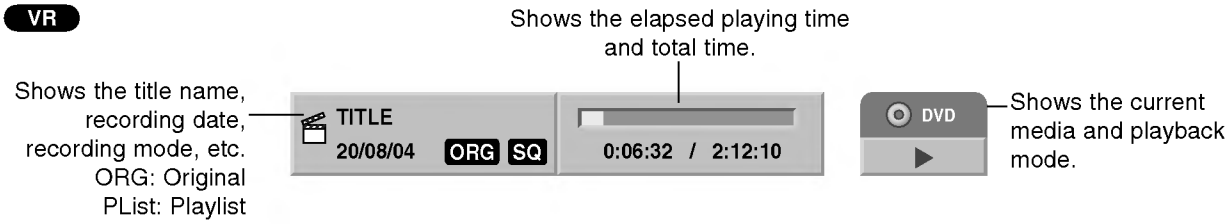
VCD



Menu Options		Function (Use ▲ / ▼ to select desired option)	Selection Method
Track Number	1/4	**Shows the current track number and total number of tracks or PBC On mode, and** skip to the desired track number.	◄ / ►, or Numbers, ENTER
Time	0:10:30	**Shows the elapsed playing time (Display only).**	–
Audio Channel	Stereo	**Shows the audio channel, and** changes the audio channel.	◄ / ►
Sound	3D SUR.	**Shows the current sound mode, and** changes the setting.	◄ / ►

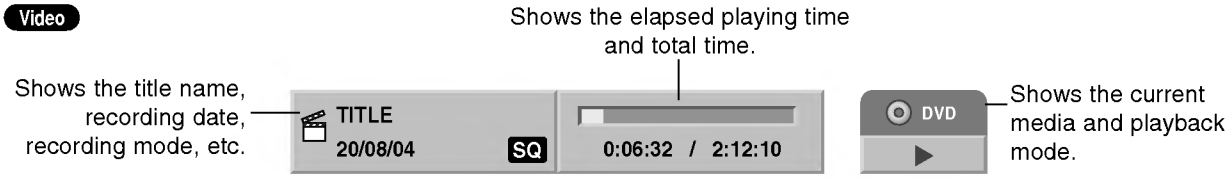
Displaying Disc Information on-screen (Continued)

VR



Menu Options		Function (Use ▲ / ▼ to select desired option)	Selection Method
Title Number	1/6	**Shows the current title number and total number of titles, and** skips to the desired title number.	◄ / ►, or Numbers, ENTER
Chapter Number	4/26	**Shows the current chapter number and total number of chapters, and** skips to the desired chapter number.	◄ / ►, or Numbers, ENTER
Time search	0:10:30	**Shows the elapsed playing time, and** searches the point by the elapsed time directly.	◄ / ►, Numbers, ENTER
Digital Audio Output mode	D 2CH	**Shows the current audio encoding method, and channel number, and** changes the setting.	◄ / ►
Subtitle language	OFF	**Shows the current subtitles language, and** changes the setting.	◄ / ►
Sound	3D SUR.	**Shows the current sound mode, and** changes the setting.	◄ / ►

Video



Menu Options		Function (Use ▲ / ▼ to select desired option)	Selection Method
Title Number	1/6	**Shows the current title number and total number of titles, and** skips to the desired title number.	◄ / ►, or Numbers, ENTER
Chapter Number	4/26	**Shows the current chapter number and total number of chapters, and** skips to the desired chapter number.	◄ / ►, or Numbers, ENTER
Time search	0:10:30	**Shows the elapsed playing time, and** searches the point by the elapsed time directly.	◄ / ►, Numbers, ENTER
Digital Audio Output mode	1. D 2CH	**Shows the current audio encoding method, and channel number, and** changes the setting.	◄ / ►
Subtitle language	OFF	**Shows the current subtitles language, and** changes the setting.	◄ / ►
Angle	1/1	**Shows the current angle number and total number of angles, and** changes the angle number.	◄ / ►
Sound	3D SUR.	**Shows the current sound mode, and** changes the setting.	◄ / ►

Operation with HDD, DVD and Video CD

Playing a HDD, DVD, or Video CD

Playback Setup

- Turn the TV on and select the video input source connected to the recorder.
- Audio system: Turn the audio system on and select the input source connected to the recorder.

1 Choose a media (HDD or DVD) to play using HOME menu. (see page 30).

2 Load your chosen disc in the tray, with the playback side down.

3 Press OPEN/CLOSE (⏏) to close the tray.
READING appears on the display window, and playback starts automatically. If playback does not start, press ► (PLAY).
In some cases, the disc menu might appear instead.

Tip

If a menu screen is displayed

The menu screen may be displayed first after loading a DVD or Video CD which contains a menu.

DVD

Use the ◄ / ► / ▲ / ▼ buttons to select the title/chapter you want to view, then press ENTER to start playback. Press TITLE or MENU/LIST to return to the menu screen.

VCD

- Use the number buttons to select the track you want to view.
  Press RETURN (↶) to return to the menu screen.
- Menu setting and the exact operating procedures for using the menu may differ depending on the disc. Follow the instructions on the each menu screen. You may also set PBC to OFF under Setup menu. See page 23.

Notes

– If Parental Control is set and the disc is not within the Rating settings (not authorized), the 4-digit code must be entered and/or the disc must be authorized (see "Rating", on page 26).
– DVDs may have a Region Code.
Your recorder will not play discs that have a region code different from your recorder. The region code for this recorder is 2 (two).

General Features

Note

Unless stated otherwise, all operations described use the remote control. Some features may also be available on the Setup menu.

Moving to another TITLE

HDD DVD Video VR

When a disc has more than one title, you can move to another title as follows:

- Press DISPLAY twice then use ▲ / ▼ to select the title icon. Then, press the appropriate numbered button (0-9) or ◄ / ► to select a title number.

Moving to another CHAPTER/TRACK

DVD Video VR VCD

When a title on a disc has more than one chapter/track, you can move to another chapter/track as follows:

- Press SKIP (I◄◄ or ►►I) briefly during playback to select the next chapter/track or to return to the beginning of the current chapter/track.
- Press SKIP (I◄◄) twice briefly to step back to the previous chapter/track.
- To go directly to any chapter/track during playback, press DISPLAY twice. Then, use ▲ / ▼ to select chapter icon (or for a Video CD, select track icon). Then, enter the chapter/track number using the numbered buttons (0-9) or press ◄ / ►.

Search HDD DVD Video VR VCD

1 Press SCAN (◄◄ or ►►) during playback.
The recorder will now go into SEARCH mode.
2 Press SCAN (◄◄ or ►►) to select the required speed: ◄ (Reverse play), ◄◄X2, ◄◄X4, ◄◄X8, ◄◄X16, ◄◄X100 (backward) or ►►X2, ►►X4, ►►X8, ►►X16, ►►X100 (forward).
With a Video CD, the Search speed changes: ◄◄X2, ◄◄X4, ◄◄X8 (backward) or ►►X2, ►►X4, ►►X8 (forward).
3 To exit SEARCH mode, press ► (PLAY).

Still Picture and Frame-by-Frame Playback

HDD DVD Video VR VCD

1 Press PAUSE/STEP (❚❚) during playback.
The recorder will now go into PAUSE mode.
2 You can advance or back up the picture frame-by-frame by pressing ◄ / ► repeatedly during PAUSE mode.
3 To exit PAUSE mode, press ► (PLAY).

Note

The picture frame-by-frame in reverse is not available for Video CD.

Tip

You can advance the picture frame-by-frame by pressing PAUSE/STEP (❚❚) repeatedly on the remote control.

General Features (Continued)

Slow Motion

HDD DVD Video VR VCD

1 Press PAUSE/STEP (❚❚) during playback.
The recorder will now go into PAUSE mode.

2 Press SCAN (◀◀ or ▶▶) during PAUSE mode.
The recorder will enter SLOW mode.

3 Use the SCAN (◀◀ or ▶▶) to select the required speed: ◀❚ 1/16, ◀❚ 1/8, ◀❚ 1/4, or ◀❚ 1/2 (backward), or ❚▶ 1/16, ❚▶ 1/8, ❚▶ 1/4, or ❚▶ 1/2 (forward).
With a Video CD, the Slow speed changes: ❚▶ 1/16, ❚▶ 1/8, ❚▶ 1/4 or ❚▶ 1/2 (forward).

4 To exit Slow Motion mode, press ▶ (PLAY).

Note

Slow motion playback in reverse is not possible with Video CDs.

Random Karaoke DVD VCD

1 Press RANDOM during playback.
The unit automatically begins Random Playback and "RANDOM" appears on the TV screen.

2 To return to normal playback, press RANDOM until "NORMAL" appears on the TV screen.

Tip

By pressing SKIP ▶▶❙ during Random playback, the unit selects another title (track) and resumes Random playback.

Note

- This function only works with DVD Karaoke discs or video CDs without PBC.
- On a Video CD with PBC, you must set PBC to OFF in the Setup menu to use the Random function. See page 23.

Repeat HDD DVD Video VR VCD

HDD - Repeat Title/Off

Press REPEAT to select a desired repeat mode.
- TITLE: repeats the current title .
- OFF: does not play repeatedly.

DVD Discs - Repeat Chapter/Title/All/Off

Press REPEAT to select a desired repeat mode.
- CHAPTER: repeats the current chapter.
- TITLE: repeats the current title .
- ALL: repeats the all titles on the disc. (VR mode DVD-RW disc only)
- OFF: does not play repeatedly.

Video CDs - Repeat Track/All/Off

Press REPEAT to select a desired repeat mode.
- TRACK: repeats the current track.
- ALL: repeats the all tracks on the disc.
- OFF: does not play repeatedly.

Note

On a Video CD with PBC, you must set PBC to OFF in the Setup menu to use the Repeat function. See page 23.

Repeat A-B

HDD DVD Video VR VCD

To repeat a sequence in a title:

1 Press A-B at your chosen starting point.
Repeat icon and 'A-' appears on the TV screen.

2 Press A-B again at your chosen end point.
Repeat icon and 'A-B' appears on the TV screen, and the repeat sequence begins.

3 To cancel the sequence, press A-B repeatedly to select OFF.

Time Search HDD DVD Video VR

The Time Search function allows you to start playing at any chosen time on the disc.

1 Press DISPLAY twice during playback. The on-screen display appears on the TV screen.
The Time Search box shows the elapsed playing time of the current disc.

2 Within 5 seconds, use ▲ / ▼ to select the Time Search icon in the on-screen display.
The "0:00:00" appears in the Time Search box.

3 Within 5 seconds, use the number buttons to enter the required start time. Enter hours, minutes, and seconds from left to right in the box.
You can not enter an invalid time.
If you enter the wrong numbers, press ◀ / ▶ to move the under bar (_) to the wrong number. Then enter the correct numbers.

4 Within 5 seconds, press ENTER to confirm the start time.
Playback starts from the selected time on the disc.